Large Production Wells and Wells for Large Community Water Systems

Drinking Water and Groundwater Bureau

Rule: Env-Dw 302

REPORT COVER PAGE

PROJECT NAME	**Weare Road Well A and Well B**
PROJECT TOWN	**Seabrook, NH**
PWS ID	**2111010**

APPLICANT (Project/Water System Owner)

Name	**Town of Seabrook**
Mailing Address	**550 Route 107 Seabrook, NH 03847**
Daytime Phone Number	**(603) 474-9921**
Email Address	**cslayton@seabrooknh.org**

WELL SITE OWNER (Property Owner)

Name	**Town of Seabrook**
Mailing Address	**550 Route 107 Seabrook, NH 03847**
Daytime Phone Number	**(603) 474-9921**
Email Address	**cslayton@seabrooknh.org**

PROJECT CONTACT/REPORT PREPARER

Name	**Raymond W. Talkington, Ph.D., P.G. (NH P.G. #86)**
Company Name	**Geosphere Environmental Management, Inc.**
Mailing Address	**51 Portsmouth Avenue, Exeter, NH, 03833**
Daytime Phone Number	**(603) 773-0075 ext. 11**
Email Address	**rtalkington@geospherenh.com**

PUMPING TEST PERFORMER/CONTACT

Name	**Raymond W. Talkington, Ph.D., P.G. (NH P.G. #86)**
Mailing Address	**51 Portsmouth Avenue, Exeter, NH, 03833**
Daytime Phone Number	**(603) 773-0075 ext. 11**
Email Address	**rtalkington@geospherenh.com**

SUBMITTAL INFORMATION

1. Project Type:
   - a. ☐ New well(s) for New System.
   - b. ☒ New well(s) for Existing System.
   - c. ☐ Replacement well(s) for Existing System.
   - d. ☐ Hydrofractured or Deepened well(s) for Existing System.

2. Proposed permitted production volume in gallons per day: **288,000**

REPORT CERTIFICATION STATEMENT

By signing this report, the signer certifies that the information contained in or otherwise submitted with this report is true, complete and not misleading to the best of the signer's knowledge and belief.

By signing this report, the signer understands that submission of false, incomplete or misleading information is grounds for:

- Not approving the report;
- Revoking any approval that is granted based on the information;
- Suspending or revoking the professional license held by the signer if the department is the licensing authority or referring the matter to the appropriate licensing authority for potential action against the professional license held by the signer if other than the department; and
- If the signer is acting as or on behalf of a listed engineer as defined in Env-C 502.10, debarring the listed engineer from the roster.

By signing this report, the signer understands that they are subject to the penalties specified in New Hampshire law, currently RSA 641:3, for making unsworn false statements.

By signing this report, the signer and applicant agree to comply with all applicable rules and conditions of the approval, if one is issued.

SIGNATURES

APPLICANT	Curt Slayton	**DATE**	3/6/23
PRINTED NAME	Curtis Slayton		
***REPORT PREPARER**	Raymond Talkington	**DATE**	3/6/23
PRINTED NAME	Raymond Talkington		
PROFESSIONAL LICENSE TYPE	Geology		
PROFESSIONAL LICENSE NUMBER	Professional Geology #86		

**This cover page must bear the stamp or seal of the NH-licensed Professional Engineer (P.E.) or Professional Geologist (P.G.) who prepared the report.*

STATE OF NEW HAMPSHIRE RAYMOND W. TALKINGTON No. 086 LICENSED PROFESSIONAL GEOLOGIST

For additional information contact NHDES' Community Well Siting program manager at (603) 271-8866.

LARGE GROUNDWATER WITHDRAWAL PERMIT APPLICATION NOTIFICATION FORM

Drinking Water and Groundwater Bureau

Notice of Submittal to the New Hampshire Department of Environmental Services

RSA 485-C:21, Env-Wq 403

PROJECT LOCATION

Site Name and Owner (if different than Applicant)	**Town of Seabrook Weare Road Well A and Well B**
Address	**121 Weare Rd, Seabrook, NH 03874**
Tax Map/Lot Number	**Map 1 / Lot 18**
Municipality(s) in Potential Impact Area	**Seabrook, Hampton Falls, South Hampton, Kensington**
Community Water Supplier(s) in Potential Impact Area	**Seabrook Water Department**

APPLICANT

Name	**Town of Seabrook c/o Curtis Slayton**
Affiliation	**Water Superintendent – Town of Seabrook**
Mailing Address	**550 Route 107 Seabrook, NH 03847**
Phone Number	**(603) 474-9921**
Email Address	**cslayton@seabrooknh.org**

APPLICATION PREPARER (provide imprint of professional license stamp)

Name	**Raymond W. Talkington, Ph.D., P.G. (NH P.G. #86)**
Company Name	**Geosphere Environmental Management, Inc.**
Mailing Address	**51 Portsmouth Avenue, Exeter, NH 03833**
Phone Number	**(603) 773-0075 ext. 11**
Email Address	**rtalkington@geospherenh.com**

*Notice to application preparer: Provide copies of certified mail receipts to NHDES immediately following each submittal.

SUBMITTAL INFORMATION

SUBMITTAL TYPE **DATED:** _____

- ☒ Preliminary Application
- ☐ Preliminary Application – Supplemental Information
- ☐ Final Report
- ☐ Final Report – Supplemental Information
- ☐ Permit Renewal Application
- ☐ Other: _____

PROJECT TYPE

- ☒ Public Water Supply
- ☐ Bottled/Bulk Water Supply
- ☐ Irrigation Water Supply
- ☐ Process Water Supply
- ☐ Other: _____

1. Type of proposed water source: _X_ Bedrock well(s), _____ Overburden well(s), _____ Spring
2. Number of proposed water sources: _2_
3. Proposed cumulative withdrawal volume in gallons per day: **288,000**

Project Summary: (please provide a brief description of your proposed project in the space below)
The Town of Seabrook is seeking a Large Groundwater Withdrawal Permit for two new bedrock public water supply wells located on tax parcel 1-18 located at 121 Weare Rd, Seabrook, NH. A preliminary pumping test of the proposed new bedrock wells indicates a potential yield of 288,000 gallons per day (gpd) when both Well A and Well B are pumped simultaneously. The Town of Seabrook is looking to replace their aging water supply sources and meet increasing water supply demands due to commercial development within the Town.

LargeGW@des.nh.gov or phone (603) 271-8866
PO Box 95, Concord, NH 03302-0095
www.des.nh.gov

NOTE: Per RSA 485-C:21, the deadline to request a public hearing for this project is fifteen (15) days following receipt of the Preliminary Application or Final Report. For more information, see the NHDES fact sheet WD-DWGB-22-15 regarding the Large Groundwater Withdrawal permitting process.

REPORT CERTIFICATION STATEMENT

By signing this report the signer certifies that the information contained in or otherwise submitted with this report is true, complete and not misleading to the best of the signer's knowledge and belief.

By signing this report the signer understands that submission of false, incomplete or misleading information is grounds for:

- Not approving the report;
- Revoking any approval that is granted based on the information;
- Suspending or revoking the professional license held by the signer if the department is the licensing authority or referring the matter to the appropriate licensing authority for potential action against the professional license held by the signer if other than the department; and
- If the signer is acting as or on behalf of a listed engineer as defined in Env-C 502.10, debarring the listed engineer from the roster.

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By signing this report, the signer and applicant agree to comply with all applicable rules and conditions of the approval, if one is issued.

SIGNATURES

APPLICANT/CONTACT PERSON: Curtis Slayton	**DATE**	3/6/23
PRINTED NAME: Curtis Slayton		
***REPORT PREPARER:**	**DATE**	3/6/23
PRINTED NAME: Raymond Talkington		
PROFESSIONAL LICENSE TYPE: Professional Geology #86		
PROFESSIONAL LICENSE NUMBER: #86		

**This cover page must bear the stamp or seal of the NH-licensed Professional Engineer (P.E.) or Professional Geologist (P.G.) who prepared the report.*

STATE OF NEW HAMPSHIRE
RAYMOND W. TALKINGTON
No. 086
LICENSED
PROFESSIONAL GEOLOGIST

March 1, 2023

PRELIMINARY REPORT
In Support of Large Groundwater Withdrawal Permit Application
Town of Seabrook Water Department
Weare Road Well A and Well B
Seabrook, NH

GEOSPHERE
ENVIRONMENTAL MANAGEMENT INC.

51 Portsmouth Avenue, Exeter, NH 03833
Phone: 603-773-0075 Fax: 603-773-0077
www.geospherenh.com

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1.0 INTRODUCTION

On behalf of the Town of Seabrook, New Hampshire, Geosphere Environmental Management, Inc. (GEOSPHERE) is pleased to present this Preliminary Hydrogeological Report (Preliminary Report) in support of a Large Groundwater Withdrawal Permit Application (LGWPA) to add two bedrock water supply wells (Well A and Well B) to the Town of Seabrook's existing public water system. The wells proposed for permitting are located on undeveloped property along Weare Road in Seabrook, New Hampshire (see **Figure 1** for Site Locus).

This report was prepared on behalf of the following applicant:

Applicant: Town of Seabrook, NH
c/o Mr. Curtis Slayton, Water Superintendent
550 Route 107
Seabrook, NH 03847
(603) 474-9921
cslayton@seabrooknh.org

Consultant: Raymond Talkington, Ph.D., P.G. (NH P.G. #86)
Geosphere Environmental Management, Inc.
51 Portsmouth Avenue
Exeter, NH 03833
(603) 773-0075 x 11

The proposed wells will be used as a source of supply for municipal distribution. The Town of Seabrook, New Hampshire (Seabrook, the Town) is currently experiencing rapid growth and commercial development, which is expected to continue. As a result, the demand for drinking water has increased and is expected to continue to increase for the foreseeable future. Additionally, the Town's current water supply wells are aging, requiring costly maintenance and generating decreasing well production yields. The combination of increased demand for water and the aging water supply sources has resulted in the need to develop new groundwater sources that can meet growing demand and add redundancy to the Seabrook system. The Town has estimated a need of an additional 1 million gallons per day (MGD) to the water treatment facility at 550 Route 107 to meet growing demands and New Hampshire Department of Environmental Services (NHDES) redundancy requirements.

This Preliminary Report was prepared in accordance with NHDES rules Part Env-Dw 302: Large Production Wells and Wells for Large Community Water Systems, and Part Env-Wq 403: Large Groundwater Withdrawals. Env-Wq 403.02(a)(4) applies to new extractions that equal or exceed 57,600 gallons per day. Based on preliminary testing, Well A is expected to yield 230,400 gallons per day (gpd) or 160 gallons per minute (gpm) when pumped individually; and Well B is expected to yield more than 72,000 gpd or 50 gpm when pumped individually. Well A and Well B, when pumped simultaneously, are expected to yield a combined rate of 288,000 gpd or 200 gpm.

2.0 SITE CHARACTERIZATION AND HISTORY

The proposed wells are located on recreational land, owned by the Town of Seabrook, adjacent to Weare Road in the northwest portion of Seabrook, west of the Interstate 95 corridor (see **Figure 1**). Identified as Seabrook Assessor's Tax Map 1, Lot 18 the property is a 21.4-acre plot that is predominately wooded and currently undeveloped and unused by the Town (see **Figure 2**). The project area and all abutting properties are zoned as "rural" according to the 2015 Town of Seabrook Zoning Map. Property use in the area is primarily residential or undeveloped.

2.1 Site Description and Use

The wells proposed for permitting, Wells A and B, are located on undeveloped Town of Seabrook-owned property located adjacent to Weare Road in Seabrook, New Hampshire, referred to in this report as the "Weare Road Property" or "the Property". The Weare Road Property was donated to the Town of Seabrook by the previous owners (Susan Synodis, Carol Schwanhausser, Diane Schenberger, and Cathy Merriman Cygan) in July 2022 (see Assessor's Card in **Appendix A**). The land was donated under the stipulation that the Property be used for recreational use. Current plans for the Property entail developing the land as a Frisbee-golf course for recreational use sometime in the near future. Permission was granted by the donors to allow the Seabrook Water Department to first explore potential water resources at the Weare Road Property before the land is utilized as a recreational area.

<u>Weare Road Parcel: (21.4 acres)</u>
Seabrook Assessor's Map: 1 Lot: 18
121 Weare Road, Seabrook, NH
Ownership: Town of Seabrook

According to the Town of Seabrook Assessor's database, the Weare Road parcel is described as 21.4 acres of undeveloped land, which borders the Seabrook-Hampton Falls town line. The Weare Road parcel is identified as Tax Map 1, Lot 18 in the Seabrook Assessor's database.

The Weare Road Property is abutted to the north by Weare Road, where the north side of Weare Road is the Seabrook/Hampton Falls town line. On the north side of the town line, across from Weare Road, the site is abutted by undeveloped land owned by private owners (Hampton Falls Map 1, Lot 32) and private residences (Hampton Falls Map 1, Lot 32-1 through 32-3 and Lots 31 and 29). To the east and west, the abutting lots are residentially zoned parcels (Town of Seabrook Assessor's records as Map 1, Lots 11-3, 19, 18-12, and 18-11) and an undeveloped parcel in the southwest corner owned by Eversource Energy (Map 1, Lot 17-1). To the south a power transmission line and easement crosses the southern portion of the Weare Road property, and an industrial warehouse abuts the southern portion of the property immediately south of the easement/right-of-way. The industrial warehouse (Map 2, Lot 39 located at 344 Route 107, Seabrook, NH) is occupied by Fairview Building and Remodeling Materials, a manufacturer and supplier of building materials (windows, decking, etc.).

2.2 Site Ownership and History

In communications with Diane Shenberger (included as **Appendix B**), one of the four donors of the Weare Road Property, the lot has been in the Weare family since the early 1900's. The Weare Road Property was referred to as the "potato field", named after the original use of the vacant lot by the Weare Family. The "hayfield" associated with the farm house was the lot located to the north of the farm house, which is now developed by apartments/condos (Map 1 / Block 19, 47 Weare Road). Between 1964 and 2003, the residence at 33 Weare Road was used primarily as a summer home. In 2003/2004 the lot was subdivided and the house was sold. A dug well that serviced the residence at 33 Weare Road is located on the subject property. However, it was filled-in in the 1970's when Nancy and Robert Merriman opted to connect to town water.

2.3 Topography and Drainage

Well A and Well B are located approximately 150 feet apart from each other, in an upland area near a local topographic high in the southwestern portion of the Weare Road Property. The topography of the property slopes down from the power line easement (south) to Weare Road (north). According to the U.S.G.S. Topographic Map (**Figure 1**), the ground elevation decreases from approximately 35 meters (114 feet) to 25 meters (82 feet) above vertical datum from south to north. Generally, surface water flows from the southwest portion of the Property to the topographically lower northeastern corner.

3.0 WELL LOCATION RELATIVE TO SURFACE WATER

3.1 Location of Surface Waters

Wells A and B are located approximately 700 feet south of the Hampton Falls River where Winkley Brook flows south and drains into the Hampton Falls River (see **Figure 2** and **Figure 3**). The Hampton Falls River is the only surface water feature located within an approximate 1000-foot radius of Wells A and B. The Hampton Falls River flows east northeast to the north of the Weare Road Property and under Weare Road and Route 107 where it feeds a wetlands complex approximately 1500 feet west of Wells A and B.

3.2 Location of 100-Year Flood Plain

According to New Hampshire's state-wide GIS system GRANIT (Geographically Referenced Analysis and Information Transfer) (**Figure 4**) and the Federal Emergency Management Administration (FEMA) National Flood Map 33015C0420F, effective 1/29/2021, the proposed wells are located in mapped Zone X Area - defined as 'areas of minimal flooding' (see **Appendix C** for FEMA National Flood Hazard Map).

3.3 Location of Wetlands

According to Env-DW 302.09 (b) *"No well shall be located closer than 50 feet from wetlands that are inundated with standing or flowing water for more than 30 continuous days."* As shown on **Figure 3**, the closest mapped wetlands are located on the north side of Weare road

approximately 450 feet north of Wells A and B which is connected to the Hampton Falls River. A small seasonal wetland area was identified about 140 ft from Well A located in the far northeast corner of the Weare Road Property. There are no other known wetlands within 1000-feet of Well A and B.

4.0 SANITARY PROTECTIVE AREA

In accordance with the Env-Dw 302.10, since the proposed maximum withdrawal volume is greater than 144,000 gallons in a 24-hour period, the Sanitary Protective Radius (SPR) for each well is defined as 400 feet. The area encompassed by the SPA for each proposed well is shown on **Figure 2** and **Figure 3.** Current land use within the SPA consists of undeveloped forested land and a powerline easement. Approximately 95% of the SPA is comprised of Map 1 Lot 18. The remainder of the SPA encompasses portions of three additional parcels. Parcels within the SPA are listed below:

Seabrook Assessor's Map	**Lot #**	**Owner**
1	18-0	Town of Seabrook
1	19-0	Windjammer Apartments
2	39-0	Woodbine Group Realty Trust
Hampton Falls Assessor's Map	**Lot #**	**Owner**
1	23-1	Neal and Ellen Pond

Easements, or legal ownership, of the portions of the private land within the SPA will need to be obtained in order for Seabrook to maintain control and natural state of the SPA in accordance with Env-Dw 302.10(d-f). Due to the nature, and inherent error sometimes involved in delineating and transferring property boundaries to GIS data layers, the SPA may or may not encroach on the Hampton Falls property identified as Map 1 Lot 23-1 as shown on **Figure 2** and **Figure 3**. Because of this, a physical survey will be required to determine if the 400-foot radius of the SPA for Well A intersects this property.

5.0 WATER CONSERVATION PLAN

Per Env-Wq 403.06 (a)(3), a water conservation plan has been prepared by the Town of Seabrook Water Department in accordance with Env-Wq 2101. The draft water conservation plan was submitted to Kelsey Vaughn, Water Conservationist, with the NHDES Drinking Water and Groundwater Bureau for review on April 12, 2023. A copy of the draft water conservation plan is included in **Appendix D**.

6. 0 CONCEPTUAL HYDROLOGIC MODEL (ENV-WQ 403.09)

In the project area, groundwater occurs in four geologic units: overburden (or *surficial)* glacial till, stratified-drift deposits, freshwater wetland complex and the underlying bedrock crystalline meta-sedimentary or intrusive bedrock. According to Mack (2009), the stratified-drift aquifers of the region were essentially fully utilized by the 1990s, and stratified-drift at the Site (which, for the purpose of this study will be defined as a 1,000-foot radius around the wells), is largely comprised of glacial till. Thus, the bedrock aquifer is the remaining water source to be explored.

As required by the LGWPA regulations, a preliminary conceptual hydrologic model (CHM) was prepared to describe the components of the hydrologic system associated with the proposed withdrawal. The CHM is intended to:

1. Describe the geology of the region, per Env-Wq 403.09 (e) (1),
2. Including geologic cross-sections; per Env-Wq 403.09 (e) (2).
3. Summarize the results of hydrogeologic investigations conducted to date;
4. Estimate a potential impact area for the withdrawal, which includes the maximum extent of the cone of depression for the withdrawal, the recharge area for the withdrawal, and the downgradient area of the withdrawal per Env-Wq 403.09 (e) (3) and (h);
5. Describe the hydrologic cycle for the potential impact area; per Env-Wq 403.09 (i);
6. Prepare a water budget calculation for the potential impact area;
7. Provide a comprehensive description of the groundwater flow regime for the withdrawal, per Env-Wq 403.09 (j); and
8. Identify data gaps needed for refinements to meet Env-Wq 403.16, .17 and 403.20 per Env-Wq 403.09 (f), (g) and (k).

6.1 Regional Surficial Geology

Information pertaining to the overburden geology in the project area was derived from the *Surficial Geologic Map of the Exeter Quadrangle, Rockingham County, New Hampshire* (Goldsmith, 2001), prepared by NHDES in cooperation with the USGS. As shown on **Figure 5**, the surficial geology data layer available from GRANIT presents similar data, but does not distinguish between formation facies (i.e., the clay and sand facies of the glacio-marine Presumpscot Formation) or between the Kensington and Seabrook sand and gravel deltaic deposits to the southwest of the site and the Presumpscot Formation.

The surficial deposits at the Site consist primarily of glacial till with pockets of coarse-grained Presumpscot Formation immediately east and finer-grained Presumpscot Formation due north and west. Looking at the larger project area, notable upland features are drumlins: Great Hill and Newfound Hill in Hampton Falls lie to the north and northwest of the Site, with New Zealand Hill located southwest of Wells A and B. The valley between local uplands is lined with the silts and clays of the Presumpscot Formation.

Ranging from 3,000 feet south of the Site to 8,000 feet northwest of the Site, an extensive, sand and gravel deposit extends for approximately 2.5 miles, in a northwest/southeast orientation, from Lamprey Corners in Kensington to the southwest corner of Seabrook. The deposit has been extensively excavated for sand and gravel resources, and is tapped by several private and public water supply wells, including Seabrook's Well #3, #4, and #7 public water supply wells located near the southern end of the deposit. The Town of Salisbury, MA also utilizes these deposits for public water supply with its Well 7, located 1000 feet southwest of Seabrook's Wells #3, #4, and #7. These deposits have been assessed for their capacity to source an additional public supply well; however, with the combined yields from existing public water supply wells, additional wells in this area were not considered viable and therefore not pursued.

6.2 Geologic Cross-Sections

Surficial Geology

Site-specific data, including drilling logs for Wells A and B, and logs for two private bedrock wells located southwest and northeast of the Site (accessed on the NHDES Water Well Board Database) were used to create conceptual geologic cross-section (A-A') depicting the subsurface geology of the Site (see **Figure 3** and **Figure 6**). As seen in the conceptual cross-section, and as identified in the corresponding well logs, the overburden at the southwest and northeast private wells consists of a thin layer of sand and gravel which is underlain by the clays and silts of the Presumpscot Formation. Based on the well logs for the two private wells, clay thickness was observed to be approximately 19 feet at the northeast private well and 41 feet at the southwest private well. At Wells A and B, driller's logs indicate the presence of "sandy, bony, gravel" to depths of 30 feet and 28 feet, respectively, followed by "hard packed gravel (presumably till) to depths of 39 feet and 55 feet respectively. The lack of additional exploratory borings at the Site limits the current understanding of the overburden materials in this area.

Bedrock Geology

Information pertaining to the local bedrock geology was obtained from the *Bedrock Geological Map of New Hampshire* (Lyons et al., 1997) and *Bedrock Geology of the Exeter and Hampton 7.5-Minute Quadrangles, Southeastern, NH* (Escamila-Casas, 2003) (see **Appendix E**). Additionally, **Figure 7** presents the bedrock types and contact boundaries relative to the study area of the proposed production Wells A and B.

The Kittery Formation of the Pre-Silurian Merrimack group underlies most of the project area. The Merrimack Group consists of schists, calcium-silicates and quartzites (Stekl and Flanagan, 1992). Bedrock in the project area is described as intercalated light brown and light gray metasandstone and black phylite. The Exeter Diorite is mapped as intruding the Kittery formation approximately 1000 feet northeast of Wells A and B (see **Figure 7**). The Exeter Diorite (or Exeter Pluton) is described as light to dark gray, medium grained hornblende diorite with minor granite and gabbro. Drill cuttings throughout the drilling of Wells A and B confirmed the presence of the Kittery Formation and the Exeter Diorite, with the Kittery Formation and Exeter Diorite being interlayered at various depths.

According to a lineament map obtained and compiled by the USGS (Ferguson et al. 1997) and digitized by NHDES, several lineaments have been identified in the study area. In addition to the USGS published lineaments, GEOSPHERE performed an independent fracture trace analysis (FTA) in the project area. The USGS lineaments and GEOSPHERE FTA results are depicted in **Figure 8**.

6.3 Summary of Hydrogeologic Investigations

Drilling of Wells A and B confirmed the presence of glacial till deposits (described by the driller as "sandy boney gravel") to a depth of approximately 28 – 30 feet bgs, and underlain by glaciomarine sand and gravel deposits (described by the driller as "hard packed gravel") from 28

– 30 feet bgs to 39 – 55 feet bgs. Well driller logs of Wells A and B (referred to in the well driller logs as BOREHOLE #2 and BOREHOLE #1, respectively) are included in **Appendix F**. The bedrock encountered during the installation of each well was identified as the Kittery Formation (described as calcareous metasandstone and purple-green phylite) intruded by Exeter Diorite (described as pyroxene and pyroxene-hornblende diorite and gabbro, along with minor granodiorite and granite).

6.3.1 Fracture Trace Analysis

FTA is a remote sensing technique using aerial photographs to identify photolinears, which are linear surficial features that could represent a fracture in bedrock, i.e., "fracture traces". In 2020, customized high-quality aerial photographs were obtained and a FTA was performed for the Site area in an attempt to optimize bedrock well siting locations.

An integral part of FTA is the review of existing topographic maps, surficial geology maps, and bedrock geology maps. These maps can aid in validating photolinear features interpreted from aerial photographs and enhance confidence in the features as representative of a fracture trace. Because groundwater in bedrock flows through open fractures, the goal of the FTA is to identify areas on aerial photographs that contain a high concentration of photolinears (i.e., potential bedrock fractures) that may yield large amounts of groundwater to pumping wells.

Because water is one of the major weathering agents in rock, flow of water through open fractures, in general, causes increased weathering and weakening of the bedrock along the fractures. This increased weathering causes geomorphic and soil moisture changes as wells as changes in soil color, supporting biological processes and vegetation. The weathering process may manifest as straight stream segments, an abrupt change in the course of a stream, alignments in a vegetation pattern, and alignment of topographic features. The most favorable locations for high yield bedrock wells are at intersections of multiple photolinears (fracture traces).

6.3.2 Very Low Frequency Geophysical Survey

To supplement the FTA, in December 2020, GEOSPHERE contracted Hager Richter Geoscience, Inc., of Salem, NH to complete a very low frequency (VLF) geophysical survey. VLF is a method which detects broadcast signal fields in the 15 to 28 kHz frequency range. This frequency field propagates thousands of miles over the Earth's surface and penetrates to depths of several hundred feet. A VLF receiver can detect and measure VLF signals, and therefore map the contrast between a high-strength signal from a conductive water-bearing fracture zone and a low strength signal over the non-fractured (solid) portion of the crystalline rock mass. Any other linear conductive body, in addition to water-bearing fractures, will also be detected by a VLF receiver.

The results of the FTA and VLF mapping yielded two promising fracture intersection locations: A and B, as illustrated on **Figure 9**. Location A revealed the greatest number of intersecting fractures, four (4) from the FTA method and none from the VLF method. Location B had three (3) from the FTA method and one (1) from the VLF method. The accessibility to locations A and B, and their proximity to the abutting properties (i.e. 400-foot SPR), were determining

factors in electing to explore bedrock sources of water supply at those two sites though the installation of Well A and Well B (see **Appendix G** for the VLF survey report).

6.3.3 Exploration Drilling

Well B Installation

In March 2021, GEOSPHERE supervised the installation of 8-inch diameter bedrock well, Well B by Cushing and sons, Inc. of Keene, NH (CUSHING). The well was completed to a depth of 616 feet bgs. The well was constructed with a 12-¼-inch diameter socket hole drilled approximately 20 feet into competent bedrock to a depth of 77 feet bgs. Bedrock was encountered at 55 feet bgs. Ten-inch diameter, ¼-inch thick steel casing was advanced to a depth of 77 feet bgs; the casing was tremie-grouted in place with a combination of Portland cement and bentonite in the annulus between the 10-inch diameter casing and the 12 ¼-inch diameter socket hole.

During drilling, five water bearing fracture zones were identified at 115 – 116 feet bgs, 216 – 217 feet bgs, 259 – 260 feet bgs, 497 – 498 feet bgs, and 615 – 616 feet bgs. During advancement of the 8-inch open borehole, airlift tests were performed just below each of these fracture zones and flow rates were measured with a 5-gallon bucket and stopwatch. A yield of 30 gpm was measured at 115-116 feet, 15 gpm at 216-217 feet, 35 gpm at 259-260 feet, 30 gpm at 497-498 feet, and 110 gpm at 615-616 feet. A final airlift bucket test was performed once the well was completed to a depth of 616 feet bgs a total yield of 215 gpm was measured. The static water level following drilling was approximately 25 feet below top of casing (btoc) on March 8, 2021.

Well A Installation

Also in March 2021, GEOSPHERE supervised the installation of the 10-inch diameter bedrock well, Well A. The well was completed to a depth of 600 feet bgs. The well was constructed with a 12 ¼-inch diameter socket hole drilled approximately 25 feet into competent bedrock to a depth of 64 feet bgs. Bedrock was encountered at 39 feet bgs. Ten-inch diameter, ¼-inch thick steel casing was advanced to a depth of 64 feet bgs; the casing was tremie-grouted in place with a combination of Portland cement and bentonite in the annulus between the 10-inch diameter casing and the 12 ¼-inch diameter socket hole.

During drilling, nine water bearing fracture zones were identified at 92 – 93 feet bgs, 112 – 113 feet bgs, 115 – 116 feet bgs, 134 – 136 feet bgs, 172 – 173 feet bgs, 272 – 275 feet bgs, 328 – 330 feet bgs, 510 – 512 feet bgs, and 530 – 600 feet bgs. During advancement of the 8-inch open borehole, airlift tests were performed just below each of these fracture zones and flow rates were measured with a 5-gallon bucket and stopwatch. A yield of 5 gpm was measured at 92-93 feet, 15 gpm at 112-113 feet, 50 gpm at 115-116 feet, 30 gpm at 134-136 feet, 10 gpm 172-173 feet, ~100 gpm at 272-275 feet, ~10 gpm at 328-330 feet, 20 gpm at 510-512 feet, and 30 gpm at 530-600 feet. Once the well was completed to a depth of 600 feet a total yield of approximately 300 gpm was measured. CUSHING opened the borehole from 8-inch diameter to 10-inch diameter to attempt to further increase the potential yield of Well A. Once the borehole was

increased to 10-inches in diameter, the estimated potential yield of Well A increased to approximately 450 gpm.

6.3.4 April 28, 2021 Step-Drawdown Test on Well A

On April 28, 2021, GEOSPHERE supervised the performance of a step-drawdown withdrawal test on bedrock Well A. Because of the close proximity of Well A and Well B, and the likelihood of these wells being hydraulically connected by water bearing fractures, the step-test was only performed on Well A to determine what impacts would occur in Well B by the pumping of Well A. The step-drawdown test on Well A was run at four increasing rates of discharge: 160 gpm, 226 gpm, 319-326 gpm, and 415 gpm, over a 12-hour period. The purpose of the step-drawdown test was to estimate the well's sustainable pumping rate in anticipation of a long-term sustained-rate pumping test which would quantify the aquifer's potential as a reliable source of potable water for Seabrook. Water levels in Well A and Well B were collected utilizing electronic pressure transducers.

Time-drawdown graphs of Well A and Well B during the step-drawdown test are presented in **Appendix H**. These graphs also show static groundwater levels of Well A (13.81' btoc) and Well B (24.61' btoc), all identified fracture zones of Well A and Well B, and the pump intake depth of Well A (381' btoc).

Analysis of the step-drawdown pumping test results indicates that the flow rate of 160 gpm is the most reasonable pumping rate for Well A that will not dewater the uppermost water bearing fractures with prolonged pumping. As shown on the time-drawdown graph in **Appendix H**, the uppermost water bearing fractures between 112 and 136 feet bgs have a cumulative yield of approximately 95 gpm. Dewatering of these uppermost water bearing fractures could cause adverse impacts to the surrounding bedrock aquifer with sustained pumping. As shown in the semi-log graph in **Appendix H**, the 180-day water level projection of the 160 gpm flow rate results in a pumping level of approximately 180 feet. This projection is likely not representative of true drawdown conditions at this rate, over this time period, as this flow rate was only used for approximately 2 hours throughout the course of the step-test. Fitting the projected trend line to this early time series will cause an overestimated drawdown projection than if the water level was allowed to stabilize at later log cycles.

Over the course of the Well A step-test, Well B demonstrated minor impacts due to the pumping of Well A with a maximum drawdown of 77.41 feet by the end of the 12-hour test. The drawdown in Well B indicates some connection between Well A and Well B, but, as shown on the linear graph in **Appendix H**, the drawdown curve in Well B did not demonstrate a substantial steepening of the curve as the flow rate was increased in Well A. This indicates that the pumping of Well A and B, individually and combined, is feasible over prolonged pumping conditions. However, this will be confirmed during the prolonged pumping tests.

As part of the 12-hour step-drawdown test, water samples were collected to analyze water quality for all parameters in NHDES requirements for community public water systems for Well A, only. Arsenic was detected at a concentration of 0.027 mg/L which exceeds the NHMCL of 0.010 mg/L. Manganese was detected at a concentration of 0.082 mg/L which exceeds the NH

SMCL of 0.05 mg/L. No other exceedances of the primary drinking water standards were reported. **Table 1** summarizes the results of the water quality analysis, laboratory reports can be found in **Appendix I**.

6.3.5 May 19, 2021 Short-Term Low-Flow Test on Well B

GEOSPHERE returned to the site on May 19, 2021 to conduct a "miniature" pumping test on Well B to collect water samples for analysis of all parameters in NHDES requirements for community public water systems, as well as gather limited hydrogeologic data to estimate the well's sustainable pumping rate in anticipation of a long-term sustained-rate pumping test. A short-term, 6-hour pumping test was run on Well B, with a continuous flow rate of 50 gpm. Water levels in Well B were collected utilizing an electronic water transducer. Time-drawdown graphs of Well B during the short-term pumping test are presented in **Appendix H**. These graphs also show static groundwater levels of Well B (25.25' btoc), all identified fracture zones of Well A and Well B, and the pump intake depth of Well B (102' btoc).

Analysis of the short-term pumping test results indicate that the flow rate of 50 gpm has potential to stabilize to a level well above the uppermost water bearing fracture zone (located between 110 – 116 feet bgs) over longer periods of pumping, as shown on the time-drawdown graphs in **Appendix H**. As shown in the semi-log graph in **Appendix H**, the 180-day water level projections of the 50 gpm flow rate results in a pumping level of approximately 67.8 feet, or 42 feet above the uppermost water bearing fracture. Based on these preliminary withdrawal testing results, it is anticipated that Well B, when pumped independently, is capable of sustaining a greater withdrawal rate for a long-term pumping test. In addition, as evidenced by the Well A step-drawdown test, Well B appears capable of stabilizing above the uppermost water bearing fracture when pumped in conjunction with Well A during a long-term pumping test. It is anticipated that the combined withdrawal rate from Well A and Well B, when pumped simultaneously, will be capable of sustaining a withdrawal rate greater than 200 gpm.

However, the maximum withdrawal volume of Well B will be determined by performing a 12-hour step-test prior to the long-term pumping tests (discussed further in Section 10.2 *Proposed Pumping Test Rates*). The maximum withdrawal rate of Well B, as determined during the step-test, and the optimal combined withdrawal rates of Well A and Well B will be confirmed during the long-term pumping tests.

As part of the 6-hour short-term pumping test, water samples were collected to analyze water quality for all parameters in NHDES requirements for community public water systems for Well B. Arsenic was detected at a concentration of 0.022 mg/L which exceeds the NHMCL of 0.010 mg/L. Manganese was detected at a concentration of 0.085 mg/L which exceeds the NH SMCL of 0.05 mg/L. No other exceedances of the primary drinking water standards were reported. **Table 1** summarizes the results of the water quality analysis, laboratory reports can be found in **Appendix I**.

6.4 Proposed Potential Impact Area Delineation

As part of the CHM, Env-Wq 403.09 requires that a Potential Impact Area (PIA) for the withdrawal be delineated. The PIA is the area where water resources may be adversely impacted by the withdrawal operating continuously for 180-days at maximum volumes without recharge from rainfall or snowmelt, and includes the following three components:

1. The maximum extent of the cone of depression created by the withdrawal;
2. The maximum extent of the recharge area for the withdrawal; and
3. The downgradient area of the withdrawal.

A conservative estimate of the preliminary 180-day cone of depression (COD) was developed using information obtained during the step-drawdown test of Well A on April 28, 2021 and data from the existing Seabrook production wells. Cooper-Jacob analysis of water level data obtained during the step-drawdown test of Well A yielded an hydraulic conductivity value of 0.25 feet/day (see **Attachment A**), which is within the range of published hydraulic conductivity values for fractured igneous and metamorphic rock (Freeze and Cherry, 1979). A specific storage value of 1.58×10^{-5} 1/foot was chosen from a published list of values for fissured rock (Domenico and Mifflin, 1965). Applying the previous hydrogeologic parameters to the Cooper-Jacob equation for drawdown (Bear, 1979) leads to a radius of influence of 2,529 feet. Long term monitoring of Well A and Well B shows no signs of drawdown due to the pumping of any of Seabrook's active production wells, the closest of which (BRW #5) is located 2,681 feet away (see **Attachment A**). The estimated PIA encompasses approximately 4.00 mi^2 in area, as depicted in **Figure 10**. The estimated cone of depression lies within the towns of Seabrook and Hampton Falls, NH. The long-term steady-state aquifer pumping test proposed below is expected to provide additional information to support a more precise COD for Well A and Well B under the prescribed conditions set forth in Env-Wq 403.

A representative selection of bedrock and overburden wells throughout the PIA will be monitored as part of the proposed withdrawal testing program. The array of private wells selected for monitoring will be distributed radially from the proposed well field. The wells available for potential monitoring were acquired from NHDES database files with preliminary search results depicted on **Figure 11**.

A "Request to Monitor letter" and questionnaires will be mailed to selected properties within the PIA, seeking permission to monitor changes to water table elevation. A sample *Request to Monitor Letter* and *Water Well Questionnaire* are included in **Appendix J**.

The final selection of private water supply wells to be included in the withdrawal testing program will be determined based upon obtaining permission to monitor, with the goal of establishing a monitoring network that reflects bedrock aquifer response conditions throughout the PIA. Further details concerning the proposed withdrawal testing monitoring network are presented in Section 10 *Proposal for Pumping Test Program*. In addition, one unused bedrock monitoring well outside the PIA has been identified as the ambient well, reflecting natural groundwater table fluctuations, in the absence of pumping.

6.4.1 Recharge Area

The recharge area was delineated based on site-specific data; primarily the watershed basin boundaries for the Hampton Falls River, the USGS mapped lineaments, the fractures identified via FTA and VLF survey, and surficial and bedrock geology. As delineated, this recharge area, also defined as the preliminary Wellhead Protection Area (WHPA), is considered to be conservative for the proposed withdrawals. As shown in the water budget analysis (Section 6.6), the recharge area is sufficient to account for the water requirements of the proposed withdrawals. The preliminary recharge area/WHPA coincides with the eastern portion of the watershed boundary, which is beyond the estimated 2,529-foot COD, as depicted on **Figure 10**.

6.4.2 Downgradient Area

According to the requirements of RSA 485-C:21, V-e. the downgradient area of the withdrawal shall include the following:

1. The area where water taken by the withdrawal would flow if the withdrawal did not operate;
2. The area that will provide water to the downgradient area when the withdrawal is operating; and
3. The point where the amount of water to be withdrawn is negligible when compared to the amount of water crossing the boundary using the following methods:
    a. An existing or new delineation of a watershed large enough so that the size of the entire potential impact area for the withdrawal is at least 10 times the size of the recharge area for the withdrawal;
    b. An existing or new delineation of a watershed where the amount of water crossing the downgradient boundary, that is, leaving the potential impact area, under current conditions, is at least 10 times the amount to be withdrawn; or
    c. An alternative method of estimating a potential impact potential impact area provided it relies on conservative assumptions, is demonstrated as appropriate for the property by test results, and is clearly explained and justified.

The proposed PIA was delineated by following the requirements of RSA 485-C:21, V-e. (3) (c), where an alternative method of estimating the potential impact area, based upon conservative assumptions and site-specific data, was pursued.

The data utilized to delineate the PIA, in particular the downgradient area, was based upon the conservative estimate of the COD, and bedrock lineament and FTA information, recognizing that the extensive local clay unit present in the WHPA/PIA would direct local precipitation to surface water rather than directly recharging the overburden or bedrock aquifers.

The delineation of the downgradient portion of the PIA was based upon the watershed boundaries and mapped bedrock lineaments within the vicinity of the proposed bedrock well. As shown on **Figure 8**, the photolinears identified in the FTA that intersect the location of the proposed withdrawal locations are encompassed entirely within the delineated COD. A majority of USGS-mapped lineaments are captured within the COD and PIA, see **Figure 10**. It is not

anticipated that potential adverse impacts will occur outside the delineated cone of depression. The delineated extent of the PIA, both upgradient and downgradient of the proposed bedrock aquifer withdrawal, is considered to be conservative for the amount of water proposed to be withdrawn. The proposed PIA encompasses an area of 4.0 mi^2. The estimated annual recharge to this area, after existing water user withdrawals, is 1.11×10^9 gallons per year (gpy), (see Sections 6.6 and 6.7).

The estimated withdrawal from the bedrock aquifer for the maximum-proposed pumping rate of Wells A and B is 1.05×10^8 gpy (or 105 million gpy); the estimated recharge is approximately 10.48 times greater than the proposed maximum pumping rate of Wells A and B.

Figure 10 depicts the preliminary PIA. As shown, the area encompassed by the preliminary PIA is calculated to be 4.0 mi^2 and is considered to be conservative for the proposed withdrawal.

6.5 Hydrologic Cycle

The hydrologic cycle involves the following six processes: 1) condensation, 2) precipitation, 3) infiltration (water from precipitation which seeps into the soil), 4) runoff (water from precipitation which does not infiltrate the soil and flows overland into streams, rivers, and lakes), 5) evaporation (water released back into the atmosphere by evaporation from rivers and lakes; and 6) transpiration (water taken in by plant roots and released back to the atmosphere by vegetation).

The major source of recharge to the unconsolidated materials in the study area is through precipitation directly to the land surface. According to data collected by the National Oceanic and Atmospheric Administration National Climatic Data Center, the New Hampshire seacoast receives approximately 45 to 50 inches of precipitation during a normal year. The North Hampton weather station (USC00276070), located approximately 5 miles northeast of the project area, reports a mean precipitation value of 54.98 inches of precipitation for its period of record (2005-2020).

Seasonal and annual recharge rates were estimated by Flynn and Tasker (2004) for the Hampton Falls River sub-watershed in which the withdrawals are proposed. Based on these recharge rates, a study conducted by Thomas J. Mack, *Assessment of Ground-Water Resources in the Seacoast Region of New Hampshire* (Mack, 2009) estimated an average annual recharge rate of 22.2 inches/year for the Hampton Falls River Watershed. For the purpose of this permit application, the average recharge estimate of 22.2 inches/year of recharge was used to develop a water budget for the site. The annual precipitation not contributing to groundwater recharge is lost through either evapotranspiration (evaporation and plant transpiration), and surface water runoff.

6.6 Water Budget

Total land area of the PIA -	4.0 square miles ($1.12x10^8$ ft^2)
Average thickness of overburden materials - (Depths to bedrock used in averaging were taken from NHDES Well Inventory for wells used in cross-section (see **Figure 6**))	38.5 feet
Average thickness of bedrock aquifer in PIA - (Using deepest well drilled of Well A and B, minus the average thickness of overburden materials: [620 ft – 38.5 ft = 581.5 ft])	581.5 feet
Average depth to groundwater in overburden wells in PIA - (Average depth to water was taken from overburden monitoring wells located at the former Gruhn remediation site on March 22, 2016, located approximately 2,000 feet northwest of Wells A and B. All wells at the Gruhn remediation site were decommissioned in May, 2018)	9.53 feet
Depth to groundwater in bedrock wells in PIA - (Average static water level of Wells A and B after drilling were approximately 21.5 feet.)	21.5 feet
Average saturated thickness of overburden - aquifer (38.5 ft – 9.53 ft)	28.97 feet
Average saturated thickness of bedrock - aquifer (581.5 – 21.5 feet)	560 feet
Estimated average overburden porosity - Based on average porosity of overburden materials (Mack, 2009)	37.5% (0.375)
Estimated porosity of bedrock aquifer - Based on average porosity of Kittery Formation and Exeter Diorite (Mack, 2009)	0.05% (0.0005)
Average yearly precipitation - (Average annual precipitation from NOAA station USC00276070 North Hampton, NH from years 2005 – 2020)	54.98 inches
Amount of precipitation recharging Groundwater - (Mack, 2009)	22.2 inches (1.85 feet)
Proposed Maximum Withdrawal Volume	

of Wells A and B (gallons per minute) -	200 gpm
(million gallons per day)	(0.288 MGD)
(million gallons per year)	(1.05×10^8 GPY)
Average annual withdrawals of Seabrook's wells -	4.06×10^8 GPY
(Average annual withdrawals derived from from Seabrook's twelve active production wells from January 2016 – December 2020)	
Estimate of all other withdrawals by water users in Potential Impact Area -	3.59×10^7 GPY
164 private wells (**Appendix K**) (= 164 * 600 gpd * 365 days)	

Water in Storage in Overburden Aquifer in PIA

Using an area of 4.0 mi^2 (1.12×10^8 ft^2) for the PIA, the total volume of water in storage was calculated as:

(1.12×10^8 ft^2) x (28.97 ft)	=	3.23×10^9 ft^3 of saturated thickness of overburden aquifer
(3.25×10^9 ft^3) x (0.375)	=	1.21×10^9 ft^3 of void space containing water
1.21×10^9 ft^3 x 7.481 gallons/ft^3	=	**9.06×10^9 gallons of water in storage in overburden materials**

Water in Storage in Bedrock Aquifer in PIA

(1.12×10^8 ft^2) x (560 ft)	=	6.25×10^{10} ft^3 of saturated thickness of bedrock aquifer
(6.25×10^{10} ft^3) x (0.0005)	=	3.12×10^7 ft^3 of void space containing water (0.05% bedrock porosity)
3.12×10^7 ft^3 x 7.481gallons/ft^3	=	**2.34×10^8 gallons of water in storage in bedrock aquifer**

Total Water in Storage in PIA

9.06×10^9 gallons of water in storage in overburden aquifer +

2.34×10^8 gallons of water in storage in bedrock aquifer =

<u>9.30×10^9</u> gallons of water combined in the overburden and bedrock aquifers within the PIA.

Recharge to the PIA

(1.85 ft) x (1.12×10^8 ft^2 area of PIA)	=	2.06×10^8 ft^3 of recharge
(2.06×10^8 ft^3) x (7.481gallons/ft^3)	=	1.54×10^9 gallons of recharge within the PIA

Remaining Recharge after Existing Water User Withdrawals

1.54×10^9 gpy – 4.42×10^8 gpy	=	1.10×10^9 gallons per year of recharge remaining after existing water user withdrawals

6.7 Discussion

The estimated maximum proposed daily production volume of 0.288 MGD from Wells A and B yields a maximum yearly withdrawal volume of 105 million gallons per year (MGY), (or 1.05 x 10^8 gpy).

The ratio of remaining annual recharge after existing water users: 1.10×10^9 gpy
to the maximum proposed yearly production volume: 1.05×10^8 gpy

is 10.48: $(1.10 \times 10^9) / (1.05 \times 10^8) = 10.48$

Thus, the annual recharge volume within the PIA, after other existing withdrawals, is conservatively estimated to be 10.48 times greater than the proposed withdrawal volume. With this surplus of groundwater, the proposed groundwater withdrawals should not adversely impact water resources within the PIA.

6.8 Surface Water

Surface water on the site is limited to an ephemeral stream which is located within 200 ft of Well B. When flowing, the stream drains to a small seasonal wetland area located in the far northeast corner of the Weare Road Property that is located about 140 ft from Well A. During wetter times of the year or following heavier precipitation events, any water that flows to or collects in this wetland area flows north through a culvert under Weare Road and off site before connecting with the Hampton Falls River approximately 400 feet north of the northern boundary of the property.

6.9 Groundwater Flow Regime

The general direction of groundwater flow in overburden deposits can be determined by observation of the land surface topography and surface water hydrology. The driving force of groundwater flow is gravity (i.e. groundwater flows from higher elevations to lower elevations where it discharges to streams, ponds, and lakes). As a result, the water table generally is a subdued image of the land surface topography. Therefore, examination of topographic maps, and surface water hydrology can give fairly reliable information regarding the direction of groundwater flow for a specified area. Furthermore, bedrock surface topography may play a role in directing regional groundwater flow direction. As mentioned previously, the site sits on the eastern flank of a northern- trending bedrock ridge (see **Appendix E)**. Due the presence of the extensive clay unit in the area, the overburden aquifer is subject to artesian pressure. Based upon the foregoing, groundwater in the vicinity of the project area is expected to flow in a general easterly-northeasterly direction in the shallow overburden deposits.

Groundwater flow in fractured crystalline bedrock occurs primarily through interconnected fractures but generally follows the same rule of flow as that of overburden aquifers, i.e., flow is from areas of higher land elevations to areas of lower elevations. A review of the USGS lineament map and the FTA performed in the vicinity of the property indicates the presence of numerous lineaments in the area, indicating the possible presence of faults and fractures. A

contact between the meta-sedimentary Kittery Formation and igneous Newburyport Complex has been mapped approximately 500 feet from the study area. The hydrogeologic features of this contact, and potential influence on regional bedrock aquifer dynamics are undocumented. During the withdrawal program, at least one off-site monitoring well will be selected with the purpose of monitoring conditions in this region.

Several of the USGS-mapped lineaments in the study area trend northwest/southeast across the study area. The fractures identified in GEOSPHERE's FTA, are predominantly oriented to the northeast-southwest, or east-northeast, west-southwest, see **Figure 8** or **Figure 9**. Furthermore, the presence of the extensive clay unit in the project area has manifested in artesian (flowing well) conditions at several bedrock test wells located approximately 1 mile east of the Site.

Established WHPAs for the existing Town of Seabrook wells, including high yielding BRW #5 indicate that the bedrock aquifer recharges from the west. Based upon a review of the foregoing, groundwater within the bedrock aquifer in the vicinity of the project area is expected to flow in a general easterly direction.

7.0 PRELIMINARY ESTIMATE OF THE WELLHEAD PROTECTION AREA AND PROPOSED REFINEMENT FOR LARGE PRODUCTION WELLS (ENV-DW 302.11)

A Wellhead Protection Area (WHPA) has been preliminarily defined for the proposed groundwater withdrawals at the property. The WHPA was derived by mapping the existing sub-watershed for the Hampton Falls River, and overlaying both USGS lineaments and GEOSPHERE's fracture traces. Keeping in mind the surficial geology, where a lineament or fracture trace crossed the drainage divide, the WHPA was extended; this was the case primarily in the eastern portion of the preliminary WHPA, where the estimated COD and WHPA coincide, see **Figure 10**.

As described in previous sections, the COD, PIA and WHPA were delineated based on site-specific data; primarily

- the USGS mapped lineaments (Ferguson, et al. 1997);
- the fracture traces identified in GEOSPHERE's Fracture Trace Analysis (FTA);
- USGS surficial and bedrock geological maps and reports;
- hydrologic and topographic data, and;
- onsite hydrogeologic investigations GEOSPHERE and Hager-Richter, (including step-drawdown test results).

The preliminary WHPA has been delineated as the eastern portion of the Hampton Falls River watershed. The preliminary WHPA is considered conservative as several areas of the WHPA extend beyond the boundary of the 2,529-foot estimated cone of depression; this approach was followed to allow for maximum protection for the proposed public water supply wells relative to potential contamination sources and to ensure ample recharge within the WHPA. The total area of the preliminary WHPA is mapped at 2,560 acres or 4.0 mi^2. The preliminary WHPA is located within portions of the Towns of Seabrook and Hampton Falls, NH, see **Figure 10**.

The preliminary WHPA will be refined upon completion of the proposed withdrawal test program and analysis, as required by Env-Wq 403.17. The refinement will take into consideration the results of the prolonged pumping test.

More specifically, the understanding of hydraulic influences such as:

- existing overburden supply wells;
- the potential that the ice contact deposits west of the site may act as a recharge zone to bedrock aquifer;
- the extensive clay deposit and its role as a confining or leaky confining unit;
- connections, if any, with existing bedrock supply wells (both private and public);
- bedrock distance-drawdown relationships as they correlate to mapped bedrock lineaments; and,
- the influence, if any, on region hydrogeology due to the contact zone between the Kittery Formation and the Newburyport Complex immediately south of the project area.

A refined WHPA will be submitted as part of the final report, as required by Env-Wq 403.20.

8.0 PRELIMINARY CONTAMINATION SOURCE AND WATER RESOURCE AND USE INVENTORIES

The purpose of the preliminary inventory of contamination sources is to identify Potential Contamination Sources (PCSs) located within the WHPA having the potential to impact the water quality of the withdrawal. Known and potential contaminant sources are required to be inventoried and the resulting data used to estimate withdrawal effects, in accordance with Env-Wq 403.12.

8.1 Preliminary Contamination Source Inventory - Env-Wq 403.06(a)(7)

A requirement of Seabrook's 2017 reclassification of their WHPA to GAA status is the performance of a triennial PCS inventory and Best Management Practices (BMP) inspections of known and previously undocumented potential contamination sources. A full PCS inventory and BMP inspection program was completed in April 2021 for the Towns of Seabrook, Hampton Falls, and South Hampton, NH, of which Seabrook and Hampton Falls make up the proposed preliminary impact area for the Weare Road bedrock wells.

In order to meet the PCS inventory/BMP inspection requirements of the GAA reclassification, an initial inventory was prepared on January 24, 2020 by the NHDES Drinking Water and Groundwater Bureau and included the following databases:

- Source Water Hazard Inventory Sites;
- Aboveground Storage Tank Facilities;
- Underground Storage Tank Facilities;
- Automobile Salvage Yard Facilities;
- Local Potential Contamination Source Inventory Sites;

- Point / Non-point Potential Pollution Sources; and
- Resource Conservation & Recovery Act (RCRA) Sites.

Due to the COVID-19 pandemic, and subsequent delay in completing the GAA PCS/BMP program, the initial inventory was updated in January 2021 using the resources available on NHDES OneStop and OneStop Data Mapper. Following the compilation of PCSs on record with NHDES, a windshield survey was conducted in 2021 in Seabrook, Hampton Falls, and South Hampton to identify any additional PCSs not previously captured in the NHDES inventory. In total, 119 PCSs were identified and inspected in the Seabrook, Hampton Falls, and South Hampton area with all 119 establishments meeting compliance with Best Management Practices for Groundwater Protection Env-Wq 401 standards. The full report of the PCS/BMP activities completed, *2021 Potential Contamination Source Management Program for the Town of Seabrook Water Department GAA Classified Wellhead Protection Area* (Geosphere Environmental Management, Inc., 2021), was submitted to the NHDES Drinking Water Source Protection Program department on May 25, 2021.

Due to the time gap that exists between the completion of 2021 PCS inventory and the start of the forthcoming withdrawal test for the Weare Road bedrock wells, a new NHDES PCS inventory database was requested and received from NHDES on February 1, 2023. Additionally, NHDES OneStop Data Mapper was queried on January 30, 2023 for the 7 PCS categories listed above. A table of the results of the 2021 PCS/BMP project, the updated NHDES PCS inventory database and maps, and the updated results of the OneStop data query are included in **Appendix L**.

The closest PCSs to the proposed withdrawal are identified as Windjammer Apartments (1,000 feet east) due to the presence of maintenance materials storage, Fairview Millwork (1,000 feet south), a retail building materials supplier, John Chase Paving (1,700 feet southeast) a paving contractor, and The Brook (2,500 feet south), a gaming center with USTs on the premises.

8.2 Preliminary Water Resource and Use Inventory

A preliminary water resource and use inventory was conducted for the WHPA and the PIA in accordance with Env-Wq 403.11. The purpose of the preliminary water resource and use inventory is to estimate the effects of the proposed new withdrawals on the water resources and uses located within the WHPA and PIA.

An inventory of water resources within the PIA, plus the area within 1,000 feet of the PIA, was acquired from NHDES on March 27, 2023 with data being sourced from the following databases:

- NHDES OneStop;
- NHDES OneStop DataMapper and GIS; and
- NHDES Water Well Board,

and included the following data types:

- Public Water Supply Sources;
- Registered Water Users; and
- All drilled wells, bedrock or overburden, classified as domestic, irrigation, agricultural, geothermal, commercial, test, monitoring, observation, etc.

Wells classified by NHDES as "domestic" wells within the PIA plus 1,000 feet are shown in the on **Figure 12** and listed in **Appendix K**. Twelve Seabrook Water Department public water supply wells are also present within the PIA.

8.3 Registered Water Users

According to the NHDES Water User Map and Inventory, the only registered water user within the estimated COD or the PIA is the Town of Seabrook Water Department.

8.4 Rare and Endangered Species

A New Hampshire Natural Heritage Bureau (NH NHB) query was conducted by GEOSPHERE for the Weare Road property, in accordance with Env-Wq 403.11(C)(2). The query revealed Natural Heritage Bureau records (e.g., rare wildlife, plant, and/or natural community) present in the project area. It was determined that, although there was a NHB record present in the vicinity, NH NHB does not expect that it will be impacted by the proposed project. The results of the query are provided in **Appendix M**.

9.0 ESTIMATION OF WITHDRAWAL EFFECTS ON WATER RESOURCES AND USES

The estimate of the effects of the withdrawal on water resources and users in the potential impact area is based on:

- the preliminary conceptual hydrologic model;
- the estimated extents of the:
    - potential impact area;
    - cone of depression; and
    - preliminary WHPA.
- the results of the short-term pumping tests.

Based on this information, GEOSPHERE estimates the following effects on water resources and uses.

9.1 Surface Water

The degree of interaction between surface hydrology, overburden aquifer and bedrock groundwater regimes in the area of the recharge zone is not currently well understood. Based upon the lithology and observed draw-downs during the step-drawdown testing of the proposed wells, it is anticipated that the proposed withdrawals will not cause adverse effects to limited instances of surface water near the proposed withdrawal. Nevertheless, during the proposed withdrawal testing program, wetland areas and surface water in nearby stream channels will be

monitored in order to assess potential adverse impacts. A Site visit by GEOSPHERE personnel on February 15, 2023 revealed standing water in a wetland area within 200 feet of Well A. Additionally, Well B is located within 200 feet of an intermittent stream channel. During the pumping test proposed in this report, if surface water is present within 200 feet of either proposed production well, microscopic particulate analysis will be performed at that proposed production well, per Env-Dw 302.15 (e). The proposed surface water monitoring program is further detailed in Section 10.6 *On-Site and Off-Site Piezometer/Staff Gauge Couplets*.

9.2 Wetlands

As noted above, the degree of interaction between surface hydrology, overburden aquifer, and bedrock groundwater regimes in areas of the recharge zone is not currently well understood. During short-term pumping tests, changes to hydrologic conditions in freshwater wetlands were not monitored. During the proposed withdrawal testing program, a network of shallow piezometers and staff gauges will be deployed in nearby wetland areas to assess potential adverse impacts from pumping, as detailed in Section 10.6 *On-Site and Off-Site Piezometer/Staff Gauge Couplets*.

9.3 Water Users

There are no NHDES registered water users within 1,000 feet of the proposed withdrawal wells. The nearest NHDES registered water user is Seabrook's Route 107 wellfield, located 2,500 to 3,500 feet west (see **Figure 12**).

In addition to the 12 active Seabrook public water supply wells located within the WHPA, 164 wells with uses identified as "domestic," according to various NHDES databases, are located within the WHPA. Of these 164 wells, 2 are located within the estimated 2,681-foot cone of depression (see **Figure 12**). The complete list of the 164 water users and well information is included in **Appendix K.** The water users identified in **Figure 12** and **Appendix K** will be used to develop the private well monitoring plan which will is detailed in Section 10.7 *Selection of Privately-owned Bedrock Wells.*

10.0 PROPOSAL FOR PUMPING TEST PROGRAM (ENV-DW 302.14)

The proposed withdrawal testing program for the proposed new source wells will be performed in accordance with NHDES Code of Administrative Rules Env-Dw 302 *Large Production Wells For Community Water Systems* and Env-Wq 403 *Large Groundwater Withdrawal*, specifically, Env-Dw 302.14 *Proposal for Pumping Test* and Env-Wq 403.13 *Withdrawal Testing Program Design.* On behalf of the Town of Seabrook, the following individual is responsible for performing the pumping test:

Raymond W. Talkington, Ph.D., P.G. (NH P.G. #86)
Principal Hydrogeologist
Geosphere Environmental Management, Inc.
51 Portsmouth Avenue
Exeter, NH 03833

10.1 Proposed Pumping Wells

The Town of Seabrook proposes to perform the withdrawal test on two proposed bedrock wells: Well A and Well B. In addition, in accordance with Env-Dw 302.14(e)(6), the system's other wells shall be operated continually, at constant rates during the withdrawal period, unless data is provided which shows these wells will not affect aquifer response to pumping the proposed production wells. GEOSPHERE is currently collecting water level data at Wells A and B, with electronic pressure transducers, to determine if these proposed bedrock production wells are hydraulically connected to any of Seabrook's existing production wells. Based on the results of this water level monitoring, a proposal will be submitted to NHDES, at least 1 week prior to initiating the antecedent monitoring period, for the operating schedule of Seabrook's existing production wells throughout the long-term pumping tests.

10.2 Proposed Pumping Test Rates

Seabrook intends to install submersible pumps in each of the proposed supply wells. Each pump will be sized to be capable of pumping the maximum estimated flow rate for each proposed well, as outlined in **Table B**, below. The final pumping rate at each well will be determined and established during the first 72 hours of pumping. Because the short-term pumping test conducted on Well A demonstrated that Wells A and B are hydrologically connected, GEOSPHERE is proposing to conduct three individual long-term pumping tests where each well will be pumped individually and one test where they are pumped together.

Table B

Production Well ID	Well Depth (ft. bgs)	Depth of Uppermost Water-Bearing Fracture Zone (ft. bgs)	Air Lift Yield of Zone (gpm)	Step Test Yield (gpm) and Drawdown (dd)	Proposed Long Term Pumping Test Flow Rate (gpm)
Well A	600	112 - 136	95	160 gpm = 66.72 ft dd (2021)	160
Well B	620	110 - 116	30	50 gpm = 21.30 ft dd (2021)	50*

*The withdrawal rate for the Well B 7-day pumping test will be determined based on a 12-hour step-test performed on Well B which will occur after the 7-day antecedent period and preceding the 7-day pumping tests. In accordance with Env-Wq 403.13(d) the pumping test rate of Well B will equal or exceed the proposed long-term pumping test rate.

In accordance with Env-Dw 302.14(e)(5), each proposed well shall be pumped at a single, constant rate that, when multiplied by 24 hours, produces the proposed permitted production volume. Based on the results of the air-lift testing performed during well drilling, the step-drawdown test performed on Well A, and the short-term low-flow test conducted on Well B, GEOSPHERE proposes the following withdrawal rates for the three long-term pumping tests:

- A proposed individual pumping test rate of 50 gpm (72,000 gpd) for Well B;
- A proposed individual pumping test rate of 160 gpm (230,400 gpd) for Well A; and

- A proposed combined pumping test rate of 200 gpm (288,000 gpd).

Limited withdrawal testing has been conducted on Well B thus far. Therefore, GEOSPHERE intends to run a 12-hour step-test on Well B prior to initiating the long-term pumping tests to accurately determine Well B's maximum withdrawal rate. This 12-hour step-test will be performed after the 7-day antecedent period. Once the step-test has been performed, Well B will be allowed to recover to 95% of its initial static water level before initiating the Well B individual 7-day pumping test. At the conclusion of the 12-hour step-test on Well B, GEOSPHERE will submit its findings to NHDES along with the intended withdrawal rate of Well B for the long-term pumping test which will meet or exceed the proposed pumping test withdrawal rate of Well B listed above. In addition, the 12-hour step-test will provide additional hydrogeological data to better determine the optimal withdrawal rate balance between Well A and Well B during the combined 7-day pumping test.

10.3 Monitoring Points

In addition to the two proposed withdrawal wells, Well A and Well B, GEOSPHERE proposes to monitor four (4) staff gauge/piezometer couplets, up to fourteen (14) Seabrook-owned bedrock test wells/observation wells, a still-to-be-determined number of residential bedrock wells, two (2) Seabrook owned overburden test wells/observation wells, and production wells that are currently operating within the wellhead protection area. The locations of the existing overburden observation wells, bedrock observation wells, and bedrock and overburden production wells, are shown on **Figure 13**. Refer to **Appendix N** for a summary of monitoring points.

10.4 Bedrock Observation Wells

GEOSPHERE selected fourteen (14) Seabrook-owned wells to monitor during the long-term pumping test. These wells were selected based on distance and direction from Well A and Well B, accessibility, condition, and proximity to other Seabrook production wells. Of these fourteen (14) wells, the Batchelder Road Bedrock Test Well (BTW) located approximately 7,900 feet southeast of the Site, has been selected as the ambient well for the long-term pumping tests. A list of these proposed bedrock monitoring locations is included in **Appendix N** which summarizes the proposed monitoring locations, which are shown on **Figure 13**.

10.5 Overburden Observation Wells

At present, there exist no overburden wells on the Weare Road property. The nearest overburden wells within the PIA are located at the Route 107 wellfield, the location of the Seabrook Groundwater Treatment facility, roughly 3,000 feet west of the well site. However, in a site visit conducted by GEOSPHERE and Seabrook, most of the overburden wells were found to be decommissioned, non-existent, inaccessible or in poor condition. In addition, although included in the various NHDES databases, and depicted on **Figure 13**, the Gruhn Property monitoring wells (northwest of the Weare Road site), were decommissioned in 2018. Therefore, GEOSPHERE proposes to monitor the Seabrook production well GPW-6 (taken offline in 2009) and observation well OW 33A, located approximately 3,000 feet east of the Site. These wells are included in **Appendix N** and are shown on **Figure 13**.

10.6 On-Site and Off-Site Piezometer/Staff Gauge Couplets

A network of piezometer/staff gauge couplets will be installed to monitor changes to nearby surface waters and/or wetland areas within 2,000 feet of the proposed withdrawal wells. One piezometer/staff gauge couplet will be installed in an unmapped wetland area, adjacent to Weare Road, at the northern boundary of the well site. This wetland area drains to the north by way of a small tributary that joins the Hampton Falls River approximately 300 feet north of Weare Road. A piezometer/staff gauge couplet is also proposed to be installed in the upgradient and downgradient directions along the Hampton Falls River, as well as a couplet installed along Winkley Brook which flows south into the Hampton Falls River (see **Figure 13**).

The proposed piezometers to be installed by GEOSPHERE personnel will be constructed of 1 ¼-inch diameter galvanized steel pipe with a 2-foot section of stainless-steel wound screen (slot size = 0.010 inches or narrower), and hand driven using a slide hammer. To prevent siltation, a hand auger may be used initially to excavate a cylindrical void, and the void filled with filter sand prior to driving the piezometer through the filter pack. The screened interval will be installed to an estimated depth of approximately 5 feet bgs. Staff gauges will be installed adjacent to piezometers to evaluate changes in surface water elevation during the withdrawal program. The location and elevation of each piezometer-and-staff gauge couplet will be finalized based on field accessibility. All monitoring points, including piezometers and staff gauges, will be surveyed to integrate the data into the final site plan and elevation datasets. The estimated location of the PZ/SG couplets is shown on **Figure 13**.

10.7 Selection of Privately-Owned Bedrock Wells

GEOSPHERE is proposing a private well monitoring plan in accordance with Env-Dw 302.14(h), which states that water levels in private and public wells shall be monitored, and that request to monitor letters be delivered to:

a) The owner of each private well and each public well located within 1,000 feet of the proposed new source; and

b) The owners of representative wells within 1,000 feet of the PIA based on the conceptual hydrogeologic model.

As it pertains to a): No private wells have been documented within 1,000 of each of the two proposed wells.

As it pertains to b): GEOSPHERE has delineated an estimated PIA and has included an additional 1,000-foot buffer around the PIA.

GEOSPHERE has requested and obtained all the well databases for all towns that border Seabrook (Hampton Falls, Kensington, and South Hampton) currently available from NHDES. After parsing the databases to remove duplicate wells, wells that fall outside of the PIA, wells in towns not located within the PIA, and geolocating wells that did not previously contain coordinate data, GEOSPHERE identified a total of 233 wells, as shown on **Figure 11** and as

tabulated in **Appendix K**. It is noted that approximately 50 wells in Seabrook and Hampton Falls were not able to be located due to insufficient location data. A list of these wells is included in **Appendix K.** Of the 233 wells listed in NHDES databases, 211 are classified as bedrock wells.

GEOSPHERE has compiled a list of 69 private wells, included as **Appendix O**, the owners of which, will be contacted with a request to monitor. The selected private wells are highlighted on **Figure 13** as potential monitoring locations. Many domestic wells are clustered together in a small geographic location. In the event that multiple owners respond to the Request to Monitor letter within a cluster, only some wells will be monitored. Of the domestic wells, and clusters of wells, that respond to the Request to Monitor letter, priority to monitor will be given to wells:

- Closest to the wellfield;
- That are in major cardinal directions, especially in the northeast and southwest direction, from the wellfield;
- That run linearly, in tandem with other domestic wells, to the wellfield;
- Located on or near a lineament, and;
- Wells that are far from the wellfield but have deeper wells relative to their neighbors.

Wells at all compass points relative to the proposed withdrawal wells will be pursued for permission to monitor, to evaluate the extent of the PIA in all directions. A copy of the draft Request to Monitor letters and questionnaire is included in **Appendix J**. A final private well monitoring plan will not be prepared until request to monitor letters approving monitoring are received. GEOSPHERE will submit the final private well monitoring plan to NHDES for approval.

10.8 Pumping Test Performance

The pumping tests will be performed in accordance with Env-Dw 302.11 and shall consist of three periods, as follows:

1. *Antecedent Period:* 7-day Antecedent Monitoring;

2. *Pumping Period:* A 7-day withdrawal test on proposed wells: Well A individually, Well B individually, and Well A and Well B combined, until stabilization has been achieved, as described below;
3. *Recovery Period:* Recovery of each well to at least 95% of pre-pumping water levels prior to each consecutive test.

At least one week prior to the start of the antecedent period of the withdrawal testing, GEOSPHERE will notify NHDES of the withdrawal testing program start date.

10.9 Antecedent Period

Antecedent monitoring will commence 7 days immediately preceding the start of pumping and will continue until the start of pumping to establish static conditions and diurnal changes in water

levels. Both manual measurements using electronic water level indicators and automatic water level measurements from in-well pressure transducers will be recorded at the frequencies outlined in the Env-Dw 302.14(f). Prior to the start of the antecedent period, electronic transducers will be programmed to collect water levels (accurate to 0.01 feet) every minute. Hand measurements will also be recorded (using an electronic water level meter) at monitoring points located on or near the well site property.

10.10 Pumping Period

The pumping period will commence immediately following the antecedent period and the 95% recovery of the static water level prior to the 12-hour step-test of Well B. In accordance with Env-Dw 302.14(e) 5, each pumping well will be pumped at a single, constant rate for the final 3 days of the pumping test that, when multiplied by 24 hours, produces the proposed permitted production volume.

In accordance with Env-Dw 302.14 (e)(6), during the pumping period, all Seabrook production wells should be operating: "*continually at their production volumes or established capacities, unless data is provided to demonstrate that the wells will not affect aquifer response to pumping the proposed productions wells.*"

Due the volumes of water involved, the Seabrook system does not have the storage capacity to pump all 12 of its active, existing production wells within the Preliminary WHPA simultaneously throughout the duration of the long-term pumping tests. However, automatic pressure-transducers are currently deployed in Wells A and B to determine if these proposed wells have any hydraulic connection to the 12 existing Seabrook production wells. The water level data currently being collected at Wells A and B will be compared to the schedules of the Seabrook production wells. If impacts are observed at Wells A and B from specific production wells or wellfields, these identified wells will be operated in accordance with Env-Dw 302.14(e)(6). At least 1 week prior to initiating the antecedent monitoring period, GEOSPHERE will submit its findings to NHDES with the proposed operating schedule of the Seabrook production wells.

Regardless of the proposed operating schedule of the Seabrook production wells, all water levels and withdrawal rates (based on the proposed operating schedule) for all Seabrook production wells located within the Preliminary WHPA will be collected and presented against the long-term pumping test data.

Automatic water level measurements from in-well pressure transducers will be recorded at monitoring locations at one-minute intervals, as well as for the two pumping wells, for each of the three proposed pumping tests which is in compliance with Env-Dw 302.14(f) 3, 4 and 5, respectively.

The proposed withdrawal period shall be conducted for 7-days unless, in accordance with Env-DW 302.14(d) 2b, after at least 5 days the following stabilization condition exists: The average change in water level in the pumping well(s) (Well A and Well B) is 0.5 feet or less over a period of at least 24 hours.

10.11 Recovery Period

Recovery monitoring will commence immediately preceding the end of each pumping period and will continue until the water level in each of the two pumping wells has recovered to 95% of the pre-pumping water levels. Manual measurements of recovery water levels will be made using electronic water level indicators and automatic down-hole pressure transducers at all monitoring locations at one-minute intervals. During the recovery period, Well A and Well B will not be operating.

10.12 Permits

A temporary groundwater discharge permit will be required for the withdrawal testing. As shown on **Figure 13**, the proposed discharge location is located in the northeastern corner of the Weare Road property. This discharge location was selected as this portion of the property is the local topographic low and contains a culvert pipe that runs underneath Weare Road. This culvert pipe discharges to an unnamed and unmapped ephemeral stream on the opposite side of Weare Road that connects to the Hampton Falls River approximately 300 feet to the north. GEOSPHERE will submit a temporary groundwater discharge permit application to NHDES at least 1 week prior to initiating the antecedent period of the long-term pumping tests.

10.13 Discharge/Flow Measurement

In accordance with Env-Dw 302.14(e) 3, the discharge rate will be measured by an in-line totalizing magnetic flow meter (calibrated to manufacturers specifications within 5% error prior to the pumping test) at the start of pumping, every 15-minutes for the first hour and every hour after that (frequency may increase or decrease as determined by the supervising hydrogeologist). A calibration test report for the flow meter used during the pumping test will be available during the pumping test and, in accordance with Env-Dw 302.14(e) 3 b. 2.

Prior to conducting the pumping test, documentation that the flow meters chosen to measure discharge from both pumping wells have been calibrated in accordance with manufacturer specifications within one year prior to the start of the pumping test date will be provided to NHDES. Additionally, a copy of this documentation will be included in the Final Hydrogeological Report.

10.14 Correction for Barometric Pressure

Barometric pressure to the nearest 0.001 psi (0.05% accuracy) will be recorded at the ambient well. Water levels collected using pressure transducers (LevelTROLL 400™) will be corrected by removing the effects associated with barometric pressure changes recorded at the ambient well using the barometric pressure transducer (BaroTROLL™).

10.15 Precipitation

For the hydrological analysis of the pumping test data, precipitation data collected at the North Hampton, NH NOAA station (USC00276070) will be utilized. This station is located approximately 5 miles northeast of the site.

10.16 Background/Ambient Well

The Env-Dw 302 *Large Production Wells For Community Water Systems* regulations require that water level measurements in a background well outside the expected influence be monitored. One unused bedrock monitoring well outside the PIA has been identified as the ambient well to reflect natural groundwater table fluctuations outside the influence of the pumping wells. This proposed ambient bedrock monitoring well is located approximately 7,900 feet southeast of the Weare Road property (see **Figure 13**).

11.0 PROPOSAL FOR WATER QUALITY TESTING

On behalf of Seabrook the following individual is responsible for the water quality-sampling program:

Raymond Talkington, PhD, P.G. (NH P.G. #86)
Principal Hydrogeologist
Geosphere Environmental Management, Inc.
51 Portsmouth Avenue
Exeter, NH 03833
Phone: (603) 773-0075 ext. 11

During and at the end of the withdrawal testing, water quality samples will be collected from the pumping wells in accordance with Env-Dw 302.15. The water quality samples collected will be analyzed for those parameters required to be monitored in groundwater systems per Env-Dw 302.15(c), with the addition of radon.

Water quality samples from the wells will be collected directly from a sample port installed with the wellhead assembly at each of the two pumping wells, in line with the discharge hoses and flow meter. Water quality samples will be collected at the following times:

1) between the first and the fifth hour of the pumping period;
2) midway through the pumping period; and,
3) within the last 3 hours of the pumping period.

The first 2 water quality samples collected shall be analyzed for the following parameters at a minimum, where Seabrook may choose to expand this analytical suite to include additional parameters at the supervising hydrogeologists' discretion:

- Volatile organic compounds
- Iron
- Manganese

- pH
- Specific conductance
- Hardness
- Chloride
- Sodium
- Nitrate

The third sample shall be analyzed for those parameters required to be monitored in groundwater systems per Env-Dw 707 through Env-Dw 713, as well as perfluorinated alkyl substances (PFAS), 1,4-Dioxane and Radon. In accordance with Env-Dw 302.15(h), all analyses shall be performed by a laboratory that is accredited for all applicable drinking water categories and methods in accordance with Env-C 300. A microscopic particulate analysis will be conducted if there is surface water present in the ephemeral stream and wetland areas within 200 feet of the well at the time of the pumping test.

11.1 Preliminary Groundwater Quality Results

On April 28, 2021 prior to shutdown of a short-term step-drawdown withdrawal test at Well A, GEOSPHERE collected groundwater samples from Well A for laboratory water quality analysis of: inorganic compounds, secondary contaminants, metals, radionuclides, volatile organic compounds (VOCs), Synthetic Organic Compounds (SOCs) and perfluorinated compounds. The samples were transported to Eastern Analytical Laboratories of Concord, New Hampshire under proper chain of custody protocols.

Similarly, on May 19, 2021 prior to shutdown of a short-term withdrawal test at Well B, GEOSPHERE collected groundwater samples from Well B for laboratory water quality analysis of the same suite of: inorganic compounds, secondary contaminants, metals, radionuclides, VOCs, SOCs and perfluorinated compounds as was executed for water samples from Well A. These samples were also transported to Eastern Analytical Laboratories of Concord, New Hampshire under proper chain of custody protocols.

The laboratory water quality analysis results are tabulated in **Table 1** and analytical reports are included in **Appendix I**. As shown, the water quality analysis results are favorable with only arsenic and manganese slightly exceeding the applicable New Hampshire Maximum Contaminant Level (NHMCL) and New Hampshire Secondary Maximum Contaminant Level (NHSMCL) limits for both Wells A and B. No other detected compounds exceeded the NHMCL or NHSMCL limits for both Wells A and B. Additionally, none of the four polyfluorinated alkyl substances currently regulated by NHDES were detected above laboratory detection limits. 1,4-dioxane was also not detected at levels above the laboratory detection limits.

12.0 PUBLIC NOTIFICATION

In accordance with RSA 485-C:21, II, copies of the Preliminary Report, the Application Form, and any subsequent materials submitted to the NHDES shall be forwarded by certified mail by the applicant to the governing bodies of each municipality, and each supplier of water within the estimated potential impact area of the proposed withdrawal. The municipalities located within

the estimated potential impact area include the Towns of Seabrook (applicant) and Hampton Falls, New Hampshire. The active water suppliers located within the potential impact area include only the applicant, Seabrook. The names and addresses of the contact persons for the municipalities to be notified are as follows:

1. Town of Seabrook, NH, c/o Seabrook Water Department, Curtis Slayton, Water Superintendent, 550 NH-107, Seabrook, NH, 03874
2. Town of Hampton Falls, NH, c/o Town Administrator, Karen Anderson, 1 Drinkwater Road, Hampton Falls, NH 03844;

13.0 CONCEPTUAL MODEL AND WELLHEAD PROTECTION AREA REFINEMENT (ENV-WQ 403.09)

The conceptual hydrologic model and preliminary estimate of the Potential Impact Area, prepared in accordance with Env-Wq 403.09, as presented in this report, will be refined based on the results of the 7-day withdrawal tests. The results of the refinement will be included in the Final Report prepared in accordance with Env-Wq 403.20 and Env-Dw 302.27-29.

The preliminary estimate of the wellhead protection area will be refined upon completion of the proposed prolonged pumping tests. The refinement will take into consideration the results of the prolonged pumping tests, more specifically, the understanding of hydraulic influences such as existing overburden supply wells and surface water influences, existing bedrock supply wells and bedrock distance-drawdown relationships as they correlate to mapped bedrock lineaments. The refined Wellhead Protection Area will be submitted as part of the Final Report in accordance with Env-Dw 302.27-29.

14.0 POTENTIAL CONTAMINATION SOURCE AND WATER RESOURCE AND USE INVENTORY

The preliminary potential contamination source inventory and water resource and use inventory will be updated if the inventory is more than 90 days old at the time the final report is prepared. The preliminary inventory will be revised to reflect any expansion or decrease in the size of the refined potential impact area. The results of the updated inventory will be included in the Final Report in accordance with Env-Dw 302.27-29.

15.0 WITHDRAWAL TESTING RESULTS AND IMPACT DESCRIPTION

Upon completion of withdrawal testing, the withdrawal test data will be analyzed to estimate the impact of the withdrawal on water resource and use. Impacts will be defined based on the refined conceptual hydrologic model withdrawal conditions and the updated potential contamination survey water resource and use inventory. Impacts will be quantified to determine if adverse impacts might occur. If it is determined that adverse impacts may occur, a monitoring and reporting program will be developed to accompany the operation of the proposed withdrawal in order to provide data that will assess whether adverse impacts are or will occur.

If it is determined that adverse impacts are occurring as a result of the proposed withdrawal, mitigation measures will be developed in accordance with Env-Wq 403.31, which describes the procedures and criteria to be used for impact mitigation. Any unmitigated adverse impacts will be reported to the NHDES within 5 days of discovery in accordance with Env-Wq 403.25, which describes the procedures for adverse impact reporting and responses. If necessary, a program will be developed to provide an alternative water supply to water sources that are adversely impacted by the withdrawal in accordance with Env-Wq 403.31, which describes the procedures and criteria for source replacement.

16.0 CONTAMINATION CONTROL PROGRAM (ENV-DW 302.24) AND WELLHEAD PROTECTION PROGRAM (ENV-DW 302.25)

In accordance with Env-Dw 302.24 and 302.25, a contamination control program and wellhead protection program will be prepared and submitted with the final report.

17.0 CONSTRUCTION DESIGN (ENV-DW 302.26)

Well A and Well B were installed in accordance with Env-Dw 302.26; well construction complies with the standards established by the New Hampshire Water Well Board pursuant 482-B at both wellheads. A copy of the well completion report for each of the two proposed wells is provided in **Appendix F**.

18.0 REFERENCES

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Tables

TABLE 1

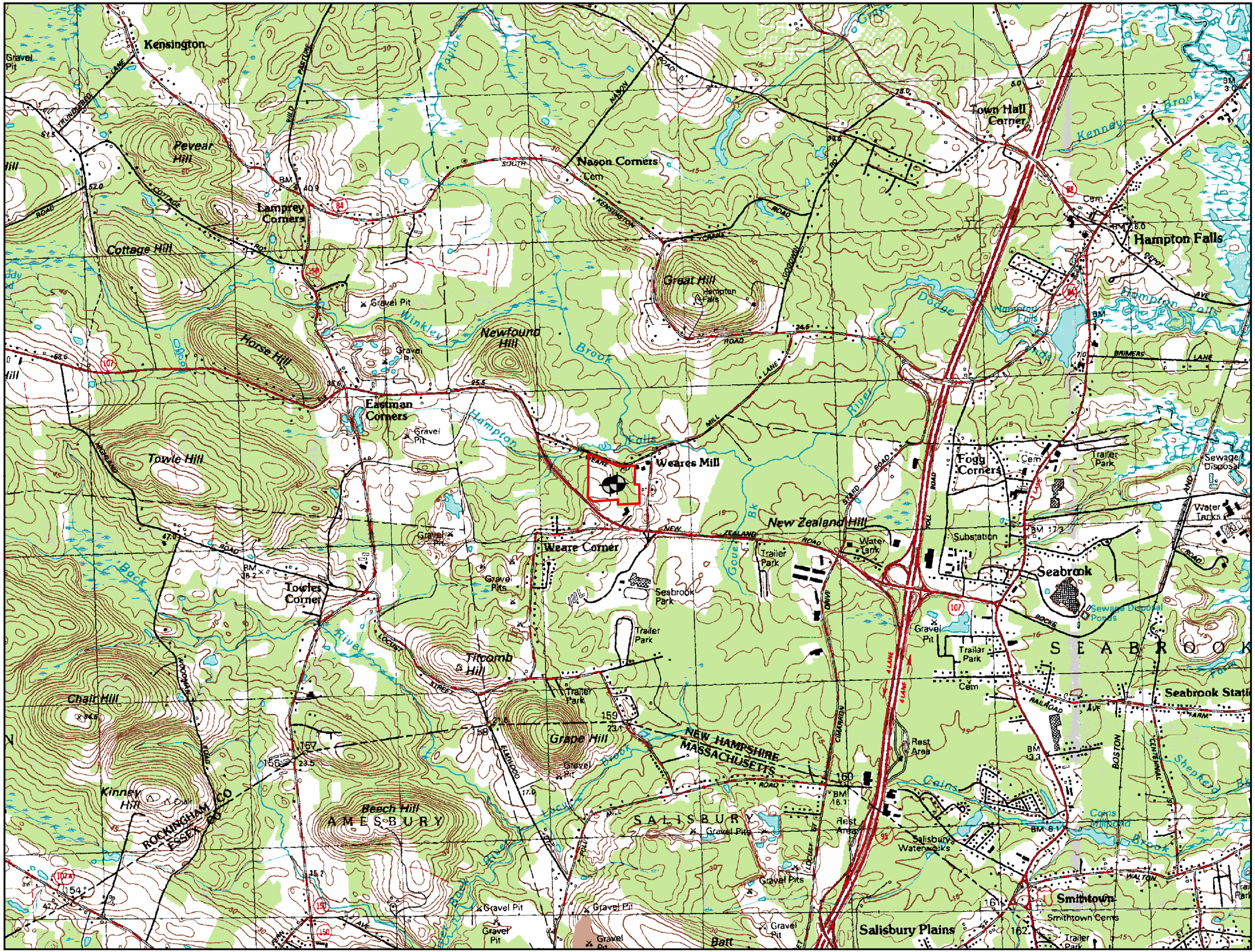
Summary of Water Quality Analysis Results
Short-Term Step-Drawdown Tests 2021
Seabrook Bedrock Test Wells
Weare Road

Compound	Units	Well A	Well B	NHMCLs (mg/L)
		4/28/2021	5/19/2021	
Inorganics				
Solids Dissolved		**180**	**140**	500 mg/L
Fluoride	mg/L	**0.18**	**0.23**	4 / 2* mg/L
Chloride	mg/L	**6.5**	**7**	250* mg/L
Nitrate	mg/L	<0.5	<0.5	10 mg/L
Nitrite	mg/L	<0.5	<0.5	1 mg/L
Total Metals				
Antimony	mg/L	<0.001	<0.001	0.006 mg/L
Arsenic	mg/L	**0.027**	**0.022**	0.010 mg/L
Barium	mg/L	**0.0086**	**0.0082**	2 mg/L
Beryllium	mg/L	<0.001	<0.001	0.004 mg/L
Cadmium	mg/L	<0.001	<0.001	0.005 mg/L
Chromium	mg/L	<0.001	<0.001	0.1 mg/L
Copper	mg/L	**0.0015**	<0.001	1* mg/L
Iron	mg/L	**0.058**	<0.05	0.3* mg/L
Lead	mg/L	<0.001	<0.001	0.015 mg/L
Manganese	mg/L	**0.082**	**0.085**	0.05* mg/L
Mercury	mg/L	<0.0001	<0.0001	0.002 mg/L
Nickel	mg/L	<0.001	<0.001	NS
Selenium	mg/L	<0.001	<0.001	0.05 mg/L
Sodium	mg/L	**35**	**34**	100-250*
Thallium	mg/L	<0.001	<0.001	0.002 mg/L
Zinc	mg/L	**0.0056**	<0.005	5** mg/L
Calcium	mg/L	**15**	**16**	NE
VOCs - Volatile Organic Compounds (Method 524.2 and others)				
1, 4 - Dioxane (Method 8260B)	ug/l	<0.2	<0.2	NE
1, 2 - Dibromoethane (EDB)	ug/l	<0.2	<0.5	0.05 ug/L
Dibromochloropropane (DBCP)	ug/l	<0.02	<0.02	0.2 ug/L
Tolulene	ug/l	<0.5	<0.5	1000 ug/L
All other VOCs	ug/l	ND	ND	Various
SOCs - Synthetic Organic Compounds (Various methods)				
SOCs	ug/l	ND	ND	Various
SOC - Chlorinated Herbicides (Method 515.4)				
Pentachlorophenol	ug/l	<1	<1	1 ug/L
2,4-D	ug/l	<5	<5	70 ug/L
2,4,5-TP (Silvex)	ug/l	<5	<5	50 ug/L
Picloram	ug/l	<5	<5	500 ug/L
Dinoseb	ug/l	<5	<5	7 ug/L
SOC - Chlorinated Pesticides (Method 505)				
Chlordane	ug/l	<0.5	<0.5	2 ug/L
Toxaphene	ug/l	<2	<2	3 ug/L
N-Methylcarbamoyloximes (Method 531.2)				
Aldicarb	ug/l	<0.5	<0.5	3 ug/L
Aldicarb Sulfone	ug/l	<0.5	<05	2 ug/L
Aldicarb Sulfoxide	ug/l	<0.5	<0.5	4 ug/L
Carbaryl	ug/l	<0.5	<0.5	NE
Carbofuran	ug/l	<0.5	<05	40 ug/L
3-Hydroxycarbofuran	ug/l	<0.5	<0.5	NE
Methiocarb	ug/l	<0.5	<0.5	NE
Methomyl	ug/l	<0.5	<0.5	NE
Oxamyl	ug/l	<0.5	<0.5	200 ug/L
Propoxur	ug/l	<0.5	<0.5	NE
Radionuclides				
Gross Alpha	pCi/l	**4.5 ± 1.3**	**5.1 ± 1.3**	15
Gross Beta	pCi/l	**4.6 ± 1.7**	**5.2 ± 2.0**	4 mrem/year
Radium 226	pCi/l	**0.5 ± 0.2**	**0.9 ± 0.3**	5 Total
Radium 228	pCi/l	**0.2 ± 0.6**	**0.0 ± 0.5**	
Radon	pCi/l	**968**	**2,970**	NE
Uranium	ug/L	**2.6**	**1.2**	30 ug/L
PFAS (Method 537.1)				
NEtFOSAA	ng/l	NA	NA	NE
NMeFOSAA	ng/l	NA	NA	NE
perfluorooctanoic acid (PFOA)	ng/l	<2	<2.07	12 ng/L
perfluorononanoic acid (PFNA)	ng/l	<2	<2.07	11 ng/L
perfluorodecanoic acid	ng/l	NA	NA	NE
perfluoroundecanoic acid	ng/l	NA	NA	NE
perfluorododecanoic acid	ng/l	NA	NA	NE
perfluorotridecanoic acid	ng/l	NA	NA	NE
perfluorotetradecanoic acid	ng/l	NA	NA	NE
perfluorohexanoic acid	ng/l	NA	NA	NE
perfluoroheptanoic acid (PFHpA)	ng/l	NA	NA	NE
perfluorobutane sulfonate (PFBS)	ng/l	NA	NA	NE
perfluorohexane sulfonate (PFHxS)	ng/l	<2	<2.07	18 ng/L
perfluoro-octane sulfonate (PFOS)	ng/l	<2	<2.07	15 ng/L
Secondary Contaminants				
Alkalinity Total (CaCO3)	mg/L	**110**	**98**	NE
Langelier Corrosivity	SI	**0.06**	**0.25**	Non-Corrosive
Total Hardness (as CaCO3)	mg/L	**59**	**61**	NE
pH	SU	**8.19**	**8.39**	6.5-8.5*
Sulfate	mg/l	**22**	**23**	250* mg/L
Glyphosate	ug/L	<4.2	<4.2	700 ug/L

Notes:

2. (J) = The estimated value was greater than the Method Detection Limit and less than the Limit of Quantitation
3. NA = Not analyzed
4. ND = Not detected
5. NE = Not established
6. < = Less than reporting / detection limit shown
7. NHMCL = New Hampshire Maximum Contaminant Level
8. * = New Hampshire Secondary Maximum Contaminant Level
9. ** = U.S. EPA Health Advisory Level (70 ng/l for PFOA + PFOS)
10. Bold = detected above laboratory detection limit
11. Shaded = Exceeds Maximum Contaminant Level (MCL)
12. Only detected VOCs and SOCs are listed, with exception of specific additional analysis of VOCs.

Figures



N
W E
S

0 1,000 2,000 4,000
Feet

Legend

Proposed Bedrock Production Wells

Wellfield Location

TOWN of SEABROOK N.H. INCORPORATED 1768

GEOSPHERE
ENVIRONMENTAL MANAGEMENT INC.

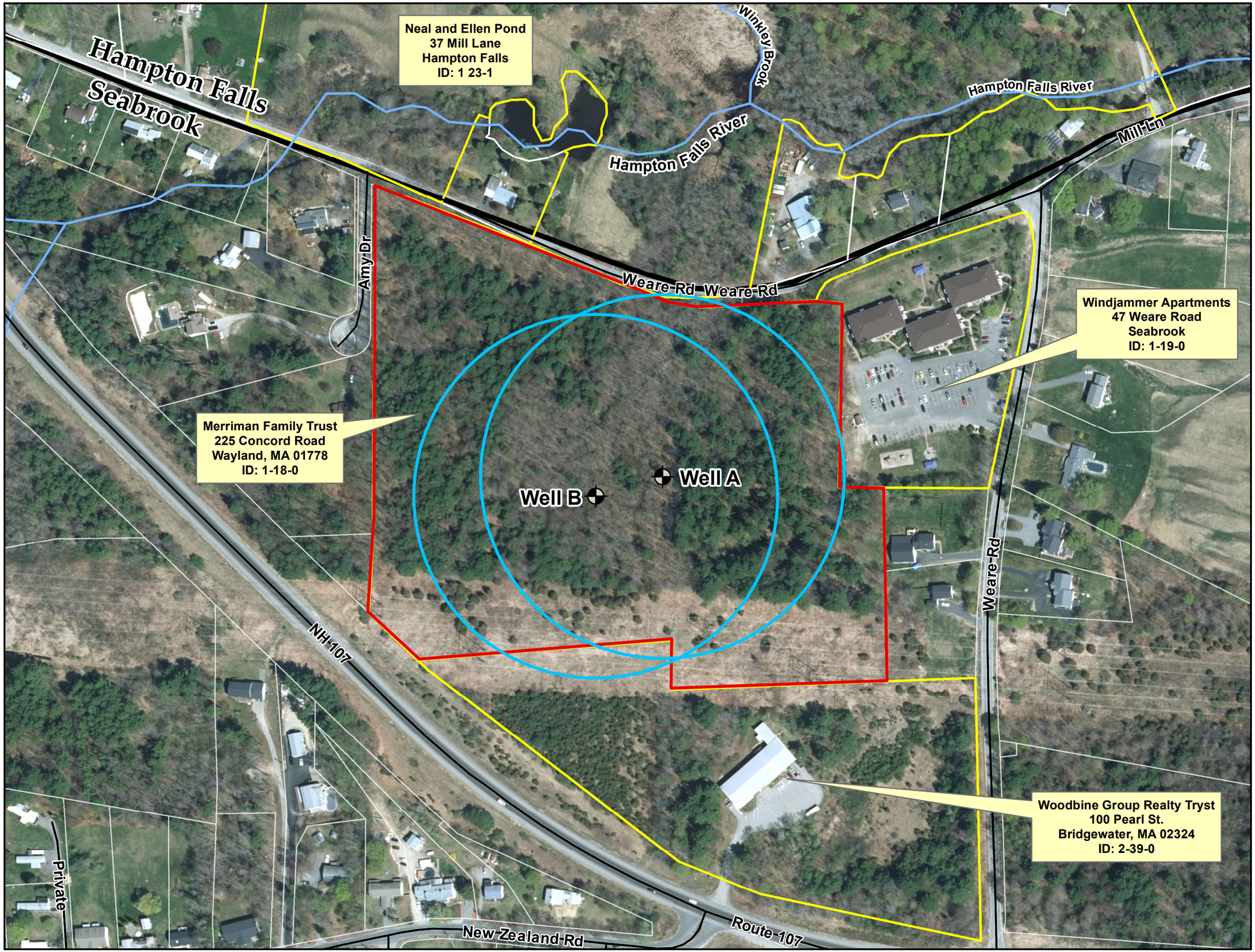
FIGURE 1

SITE LOCUS

Weare Road Property Wellfield
Seabrook Water Department
Seabrook, NH

CREATED BY:	CHECKED BY:	PROJECT:
Matt Krapf 7/20/2021	Ray Talkington 7/20/2021	20216\Figures\ Preliminary Report

Data Source: NH GRANIT, Earth Systems Research Center - University of New Hampshire.
USGS Quad Exeter, NH. 1:24000, 3 meter contour interval



N
W E
S

0 100 200 400
Feet

Legend

- Proposed Bedrock Production Wells
- 400-ft. Sanitary Protective Radius (SPR)
- Wellfield Property
- SPR Abutting Parcels

TOWN of SEABROOK N.H.
INCORPORATED 1768

GEOSPHERE
ENVIRONMENTAL MANAGEMENT INC.

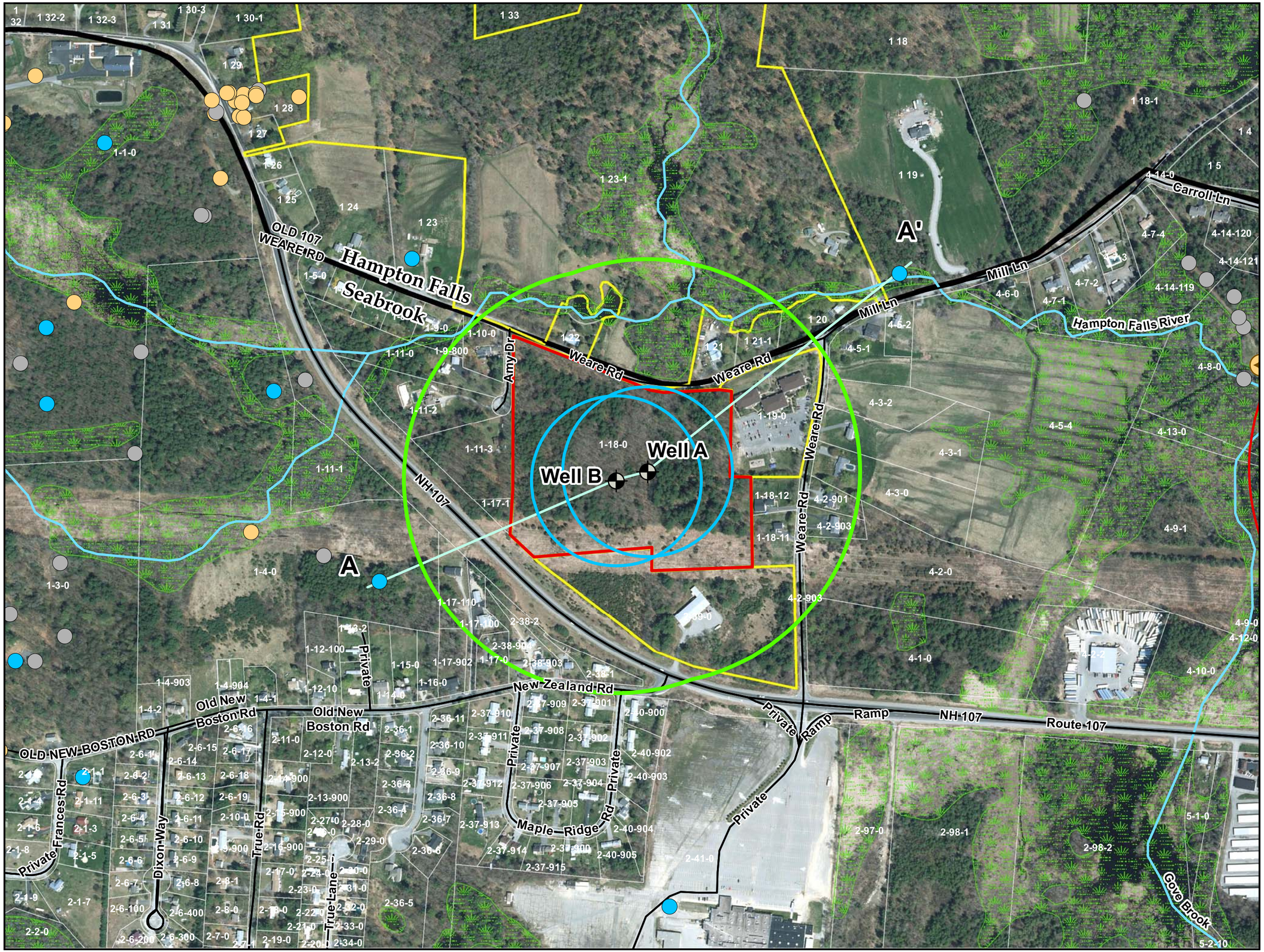
FIGURE 2

MAP AND LOT DETAIL with
SANITARY PROTECTIVE RADIUS

Weare Road Property Wellfield
Seabrook Water Department
Seabrook, NH

CREATED BY:	CHECKED BY:	PROJECT:
Matt Krapf 7/26/2021	Ray Talkington 7/26/2021	16213\Figures\ Preliminary Report

Data Source: NH GRANIT, Earth Systems Research Center - University of New Hampshire, USGS Quad Exeter, NH. 1:24000, 3 meter contour interval



N
W E
S

0 200 400 800
Feet

Legend

- 1,000-ft. Radius
- 400-ft. Sanitary Protective Radius (SPR)
- Proposed Bedrock Production Wells

Seabrook Monitoring Wells

- Bedrock
- Overburden
- Private Wells
- Line of Geologic Cross Section (A-A')
- Wellfield Property
- Wetlands
- SPR Abutting Parcels

TOWN of SEABROOK N.H. INCORPORATED 1768

GEOSPHERE ENVIRONMENTAL MANAGEMENT INC.

FIGURE 3

SITE PLAN of PROJECT AREA with GEOLOGIC CROSS-SECTIONS

Weare Road Property Wellfield
Seabrook Water Department
Seabrook, NH

CREATED BY:	CHECKED BY:	PROJECT:
Matt Krapf 7/26/2021	Ray Talkington 7/26/2021	20216\Figures\ Preliminary Report

Data Source: NH GRANIT, Earth Systems Research Center - University of New Hampshire. USGS Quad Exeter, NH. 1:24000, 3 meter contour interval

N
W E
S

0 200 400 800
Feet

Legend

Rivers/Streams

Proposed Bedrock Production Wells

FIRM Map Zones

500-year Floodplain

100-year Floodplain

TOWN of SEABROOK N.H. INCORPORATED 1768

GEOSPHERE ENVIRONMENTAL MANAGEMENT INC.

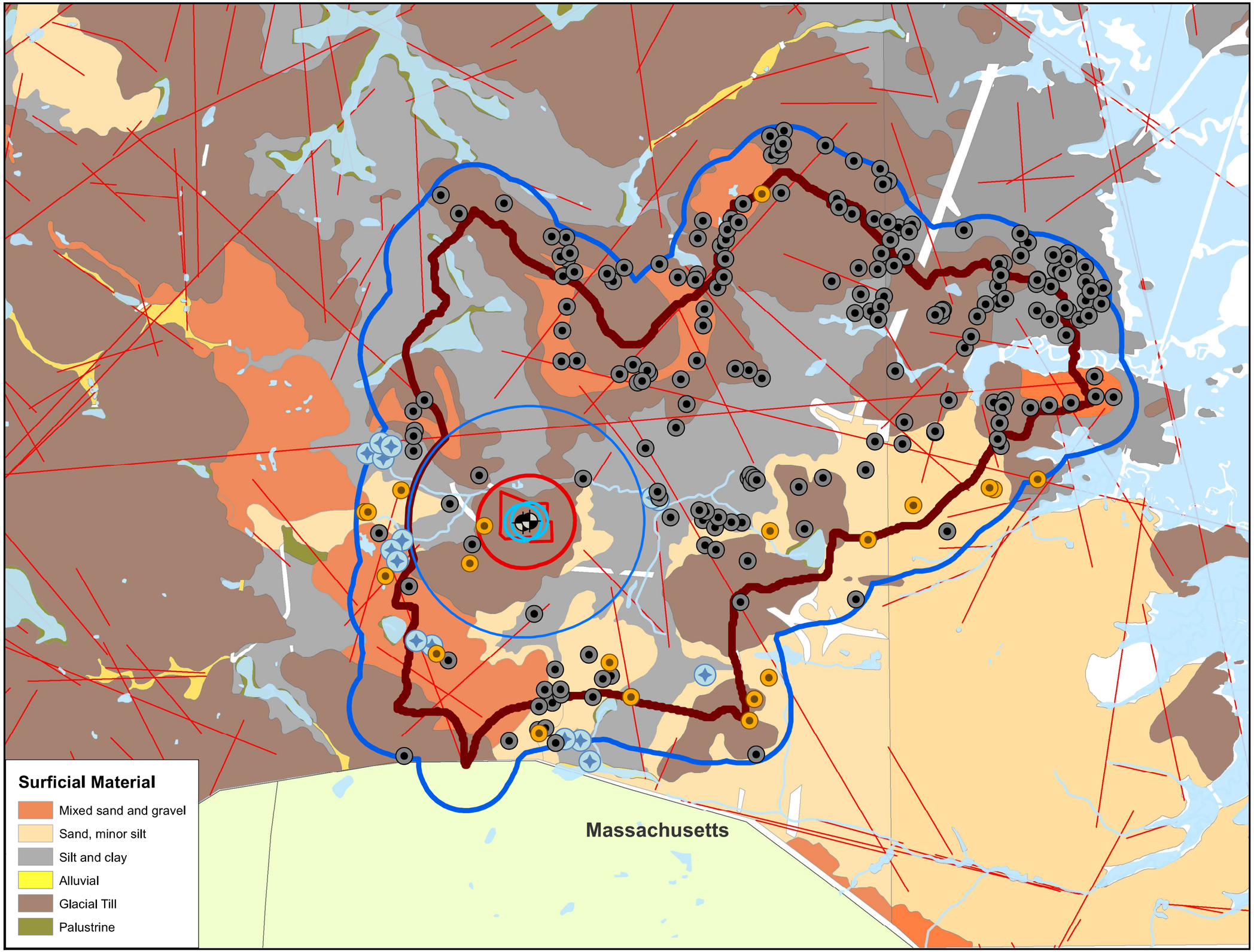
FIGURE 4

FLOODPLAIN MAP

Weare Road Property Wellfield
Seabrook Water Department
Seabrook, NH

CREATED BY:	CHECKED BY:	PROJECT:
Matt Krapf 7/26/2021	Ray Talkington 7/26/2021	20216\Figures\ Preliminary Report

Data Source: Digital Flood Insurance Rate Map (DFIRM) Database accessed from NH GRANIT, Earth Systems Research Center - University of New Hampshire.



N
W E
S

0 2,000 4,000
Feet

Legend

- Proposed Bedrock Production Wells
- Seabrook PWS Wells

NHDES Well Inventories

- Bedrock
- Overburden
- Preliminary PIA and WHPA
- PIA 1,000-ft. Buffer
- Cone of Depression (2,529-Ft. Radius)
- 400-ft. Sanitary Protective Radius (SPR)
- 1,000-ft. Well Radius
- Wellfield Property
- Pond/River/Stream
- USGS Lineaments

TOWN of SEABROOK N.H. INCORPORATED 1768

GEOSPHERE ENVIRONMENTAL MANAGEMENT INC.

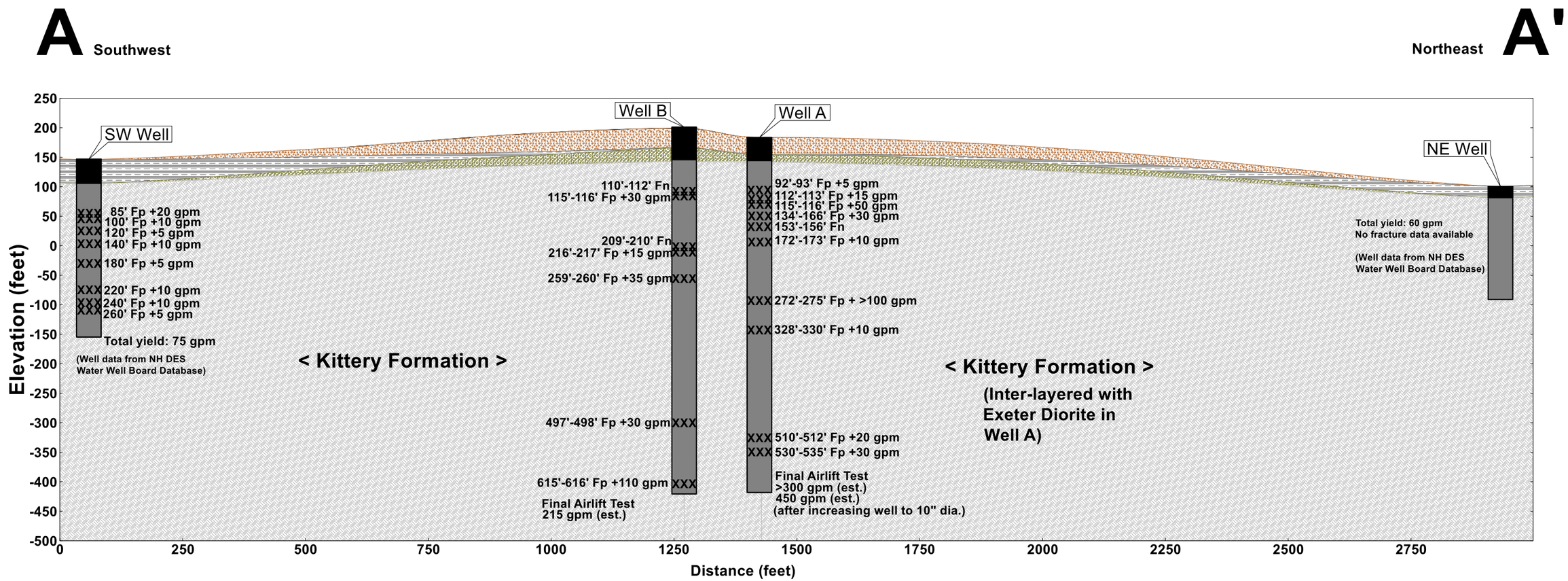
FIGURE 5

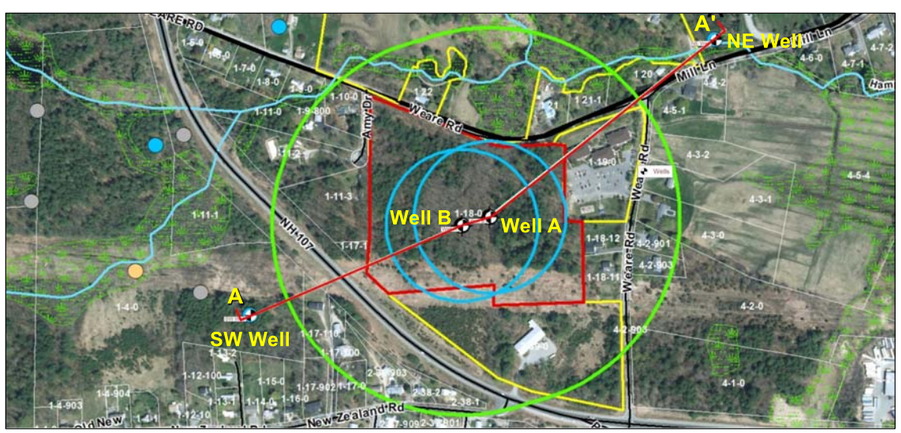
SURFICIAL GEOLOGY MAP

Weare Road Property Wellfield
Seabrook Water Department
Seabrook, NH

CREATED BY:	CHECKED BY:	PROJECT:
Matt Krapf 4/11/2023	Ray Talkington 4/11/2023	20216\Figures\ Preliminary Report

Data Source: NH GRANIT, Earth Systems Research Center - University of New Hampshire. USGS Quad Exeter, NH. 1:24000, 3 meter contour interval





Stratigraphy

- Sand and Gravel
- Clay
- Till
- Bedrock

Bedrock Wells

- Well Casing
- Open Borehole

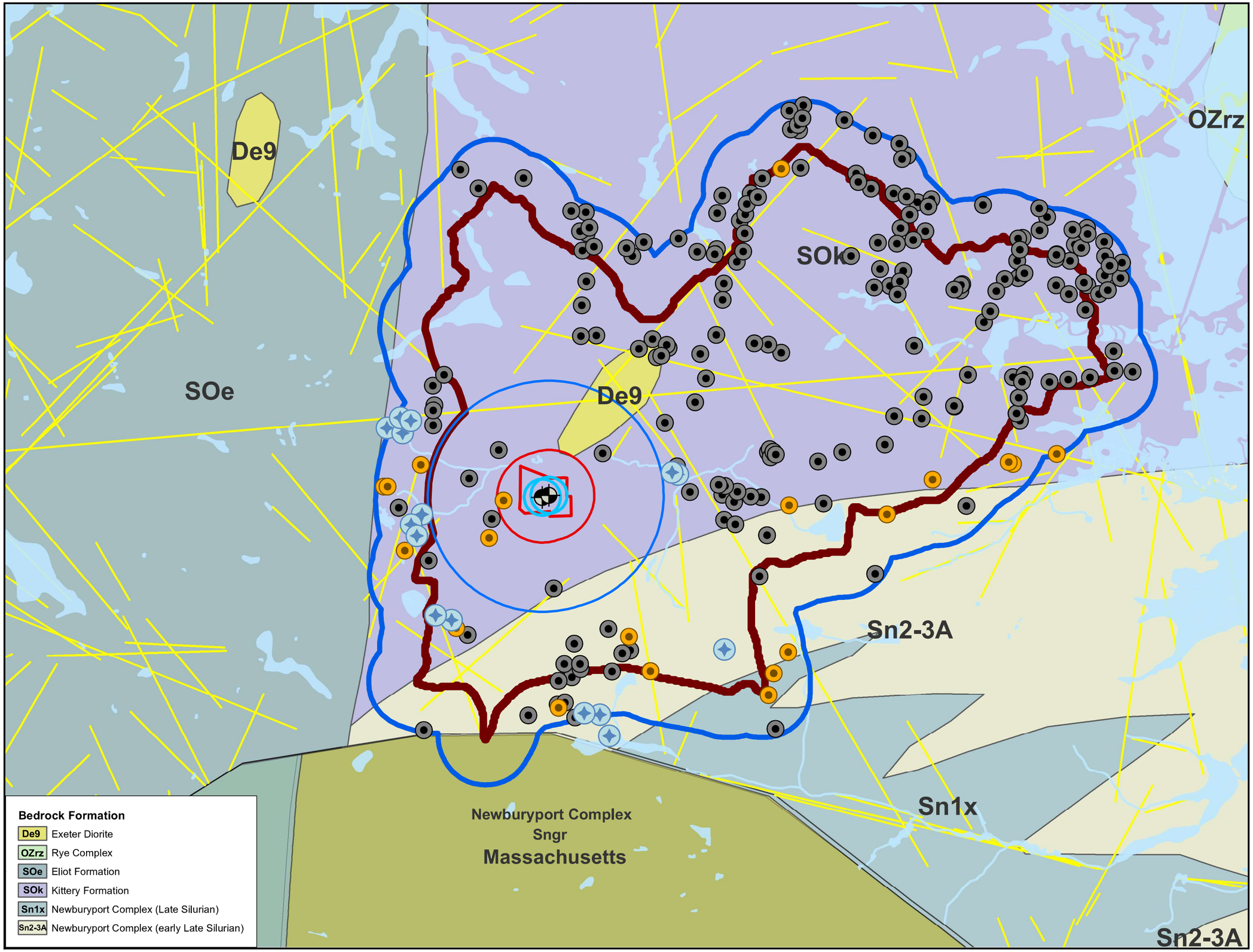
GEOSPHERE
ENVIRONMENTAL MANAGEMENT INC.

FIGURE 6

GEOLOGIC CROSS SECTION A - A'

Weare Road Property Wellfield
Seabrook Water Department
Seabrook, NH

CREATED BY:	CHECKED BY:	PROJECT:
Matt Krapf September 9, 2021	Ray Talkington September 9, 2021	20216\FIGURES\ Preliminary Report



N
W E
S

0 2,000 4,000
Feet

Legend

- Proposed Bedrock Production Wells
- Seabrook PWS Wells

NHDES Well Inventories

- Bedrock
- Overburden
- Preliminary PIA and WHPA
- PIA 1,000-ft. Buffer
- Cone of Depression (2,529-Ft. Radius)
- 400-ft. Sanitary Protective Radius (SPR)
- 1,000-ft. Well Radius
- Wellfield Property
- Pond/River/Stream
- USGS Lineaments

TOWN of SEABROOK N.H. INCORPORATED 1768

GEOSPHERE ENVIRONMENTAL MANAGEMENT INC.

FIGURE 7

BEDROCK GEOLOGY

Weare Road Property Wellfield
Seabrook Water Department
Seabrook, NH

CREATED BY:	CHECKED BY:	PROJECT:
Matt Krapf 4/11/2023	Ray Talkington 4/11/2023	20216\Figures\ Preliminary Report

Data Source: NH GRANIT, Earth Systems Research Center - University of New Hampshire. USGS Quad Exeter, NH. 1:24000, 3 meter contour interval

N
W E
S

0 1,000 2,000 3,000 4,000
Feet

Legend

- Proposed Bedrock Production Wells
- Geosphere Fracture Trace Lineaments
- Hager-Richter VLF Survey Lineaments
- USGS Lineaments
- Cone of Depression (2,529-Ft. Radius)
- Preliminary PIA and WHPA
- Hampton Falls River Watershed
- Wellfield Property

TOWN of SEABROOK N.H. INCORPORATED 1768

GEOSPHERE
ENVIRONMENTAL MANAGEMENT INC.

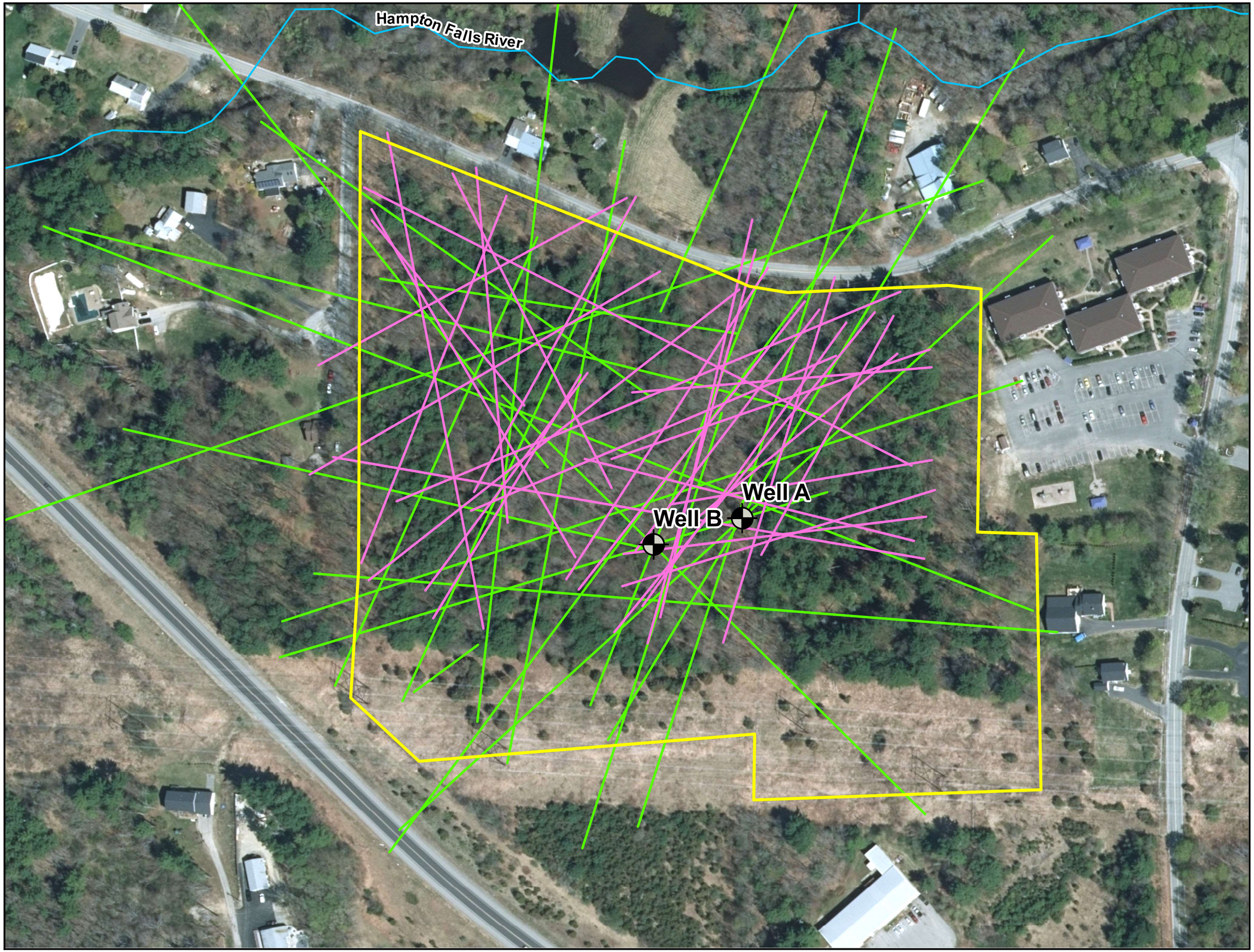
FIGURE 8

FRACTURE TRACE ANLYSIS, VLF SURVEY, and USGS LINEAMENTS

Weare Road Property Wellfield
Seabrook Water Department
Seabrook, NH

CREATED BY:	CHECKED BY:	PROJECT:
Matt Krapf 4/11/2023	Ray Talkington 4/11/2023	20216\Figures\ Preliminary Report

Data Source: NH GRANIT, Earth Systems Research Center - University of New Hampshire. USGS Quad Exeter, NH. 1:24000, 3 meter contour interval



N
W E
S

0 75 150 300
Feet

Legend

- Proposed Bedrock Production Wells
- Hager-Richter VLF Survey Lineaments
- Geosphere Fracture Trace Lineaments
- Rivers & Streams
- Wellfield Property

TOWN of SEABROOK N.H. INCORPORATED 1768

GEOSPHERE ENVIRONMENTAL MANAGEMENT INC.

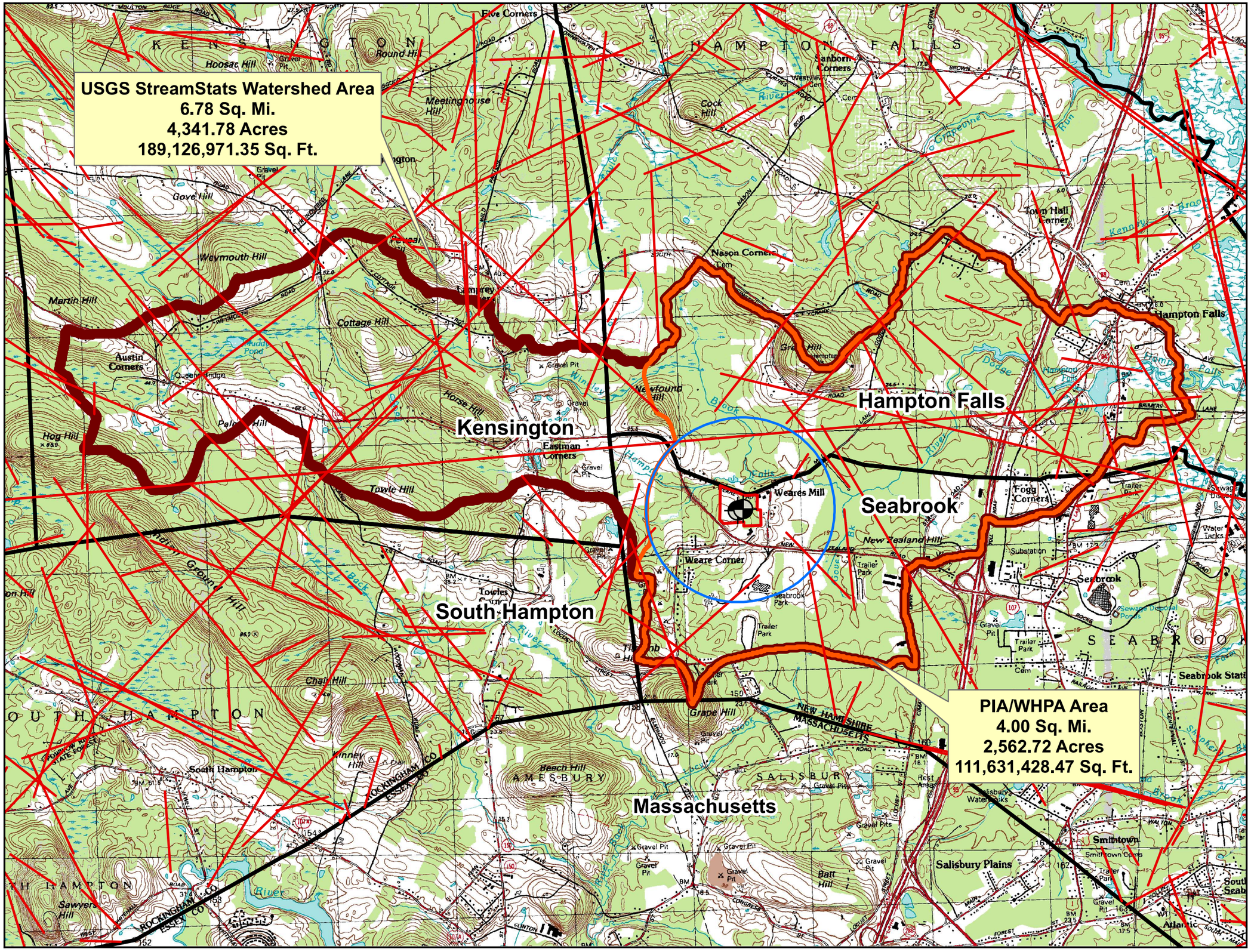
FIGURE 9

FRACTURE TRACE ANLYSIS and VLF SURVEY (Large Scale)

Weare Road Property Wellfield
Seabrook Water Department
Seabrook, NH

CREATED BY:	CHECKED BY:	PROJECT:
Matt Krapf 7/27/2021	Ray Talkington 7/27/2021	20216\Figures\ Preliminary Report

Data Source: NH GRANIT, Earth Systems Research Center - University of New Hampshire. USGS Quad Exeter, NH. 1:24000, 3 meter contour interval



GEOSPHERE
ENVIRONMENTAL MANAGEMENT INC.

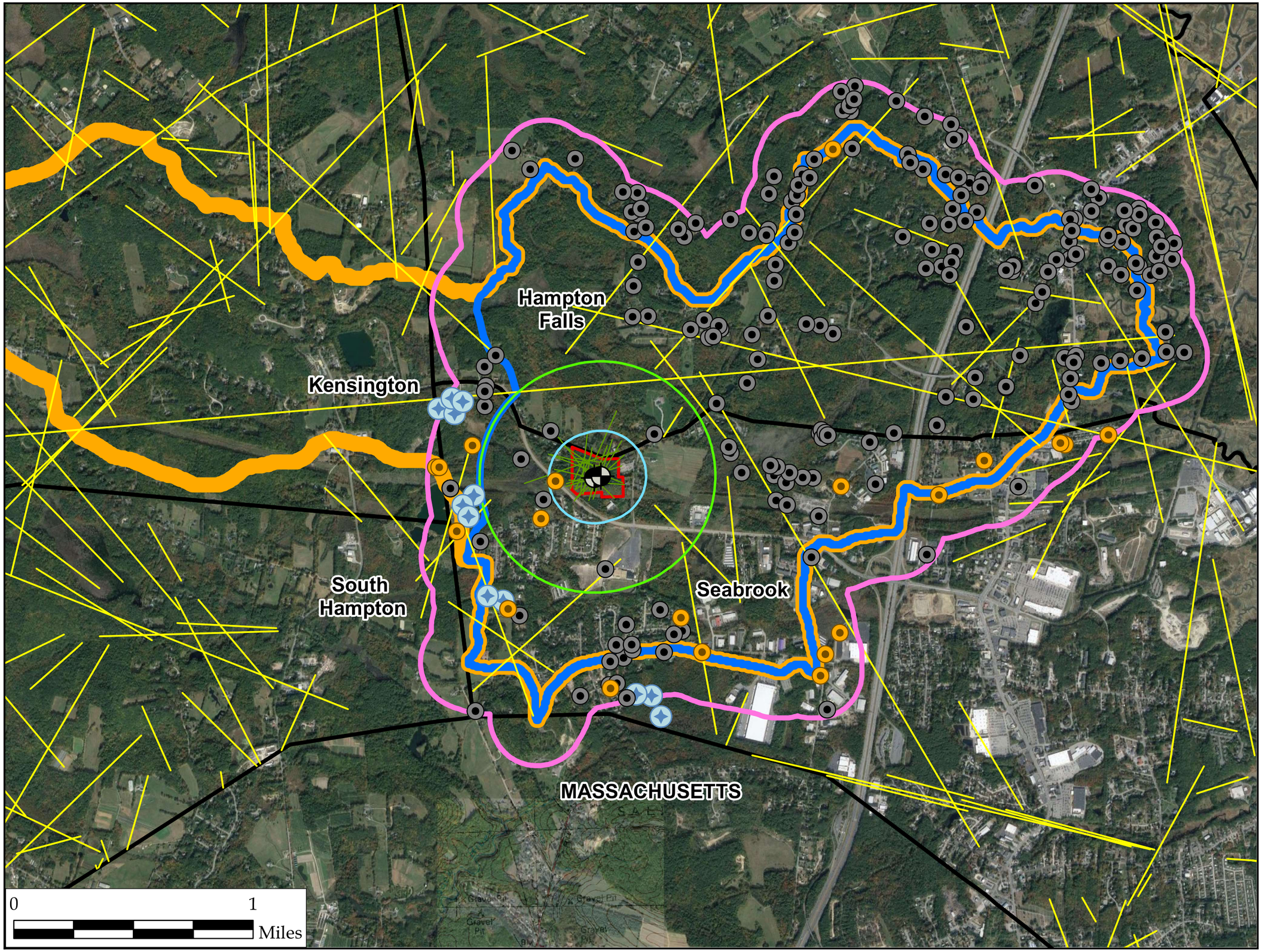
FIGURE 10

WATERSHED MAP SHOWING COD, PIA, and PRELIMINARY WHPA

Weare Road Property Wellfield
Seabrook Water Department
Seabrook, NH

CREATED BY:	CHECKED BY:	PROJECT:
Matt Krapf 3/28/2023	Ray Talkington 3/28/2023	20216\Figures\ Preliminary Report

Data Source: NH GRANIT, Earth Systems Research Center - University of New Hampshire. USGS Quad Exeter, NH. 1:24000, 3 meter contour interval. New Hampshire Geological Survey.



N
W
E
S

Legend

- Proposed Bedrock Production Wells

NHDES Well Inventories

- Bedrock
- Overburden
- Seabrook PWS Wells
- 1,000-ft. Well Radius
- Cone of Depression (2,529-Ft. Radius)
- Preliminary PIA and WHPA
- PIA 1,000-ft. Buffer
- Hampton Falls River Watershed
- Geosphere Lineaments
- USGS Lineaments
- Wellfield Property

TOWN of SEABROOK N.H. INCORPORATED 1768

GEOSPHERE ENVIRONMENTAL MANAGEMENT INC.

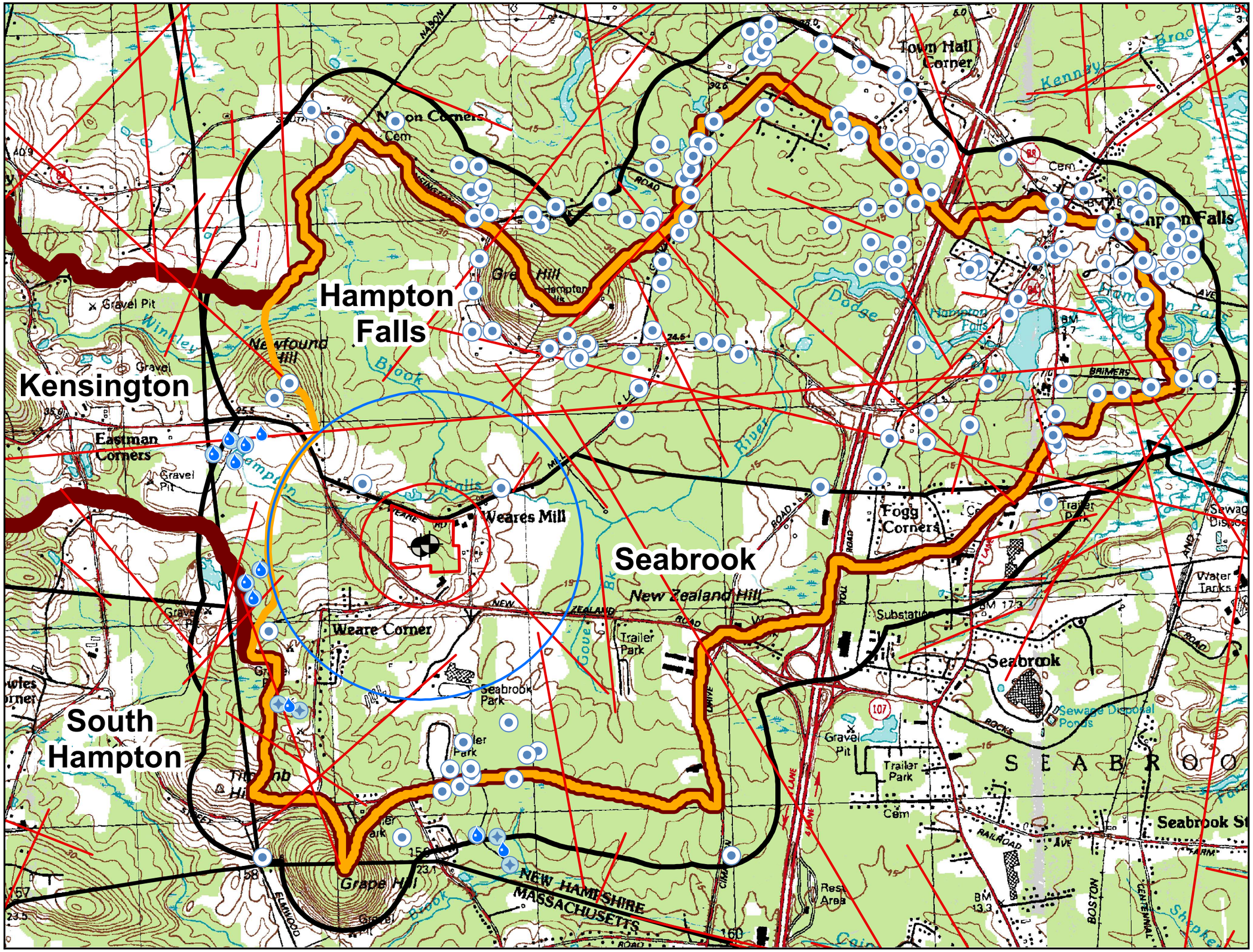
FIGURE 11

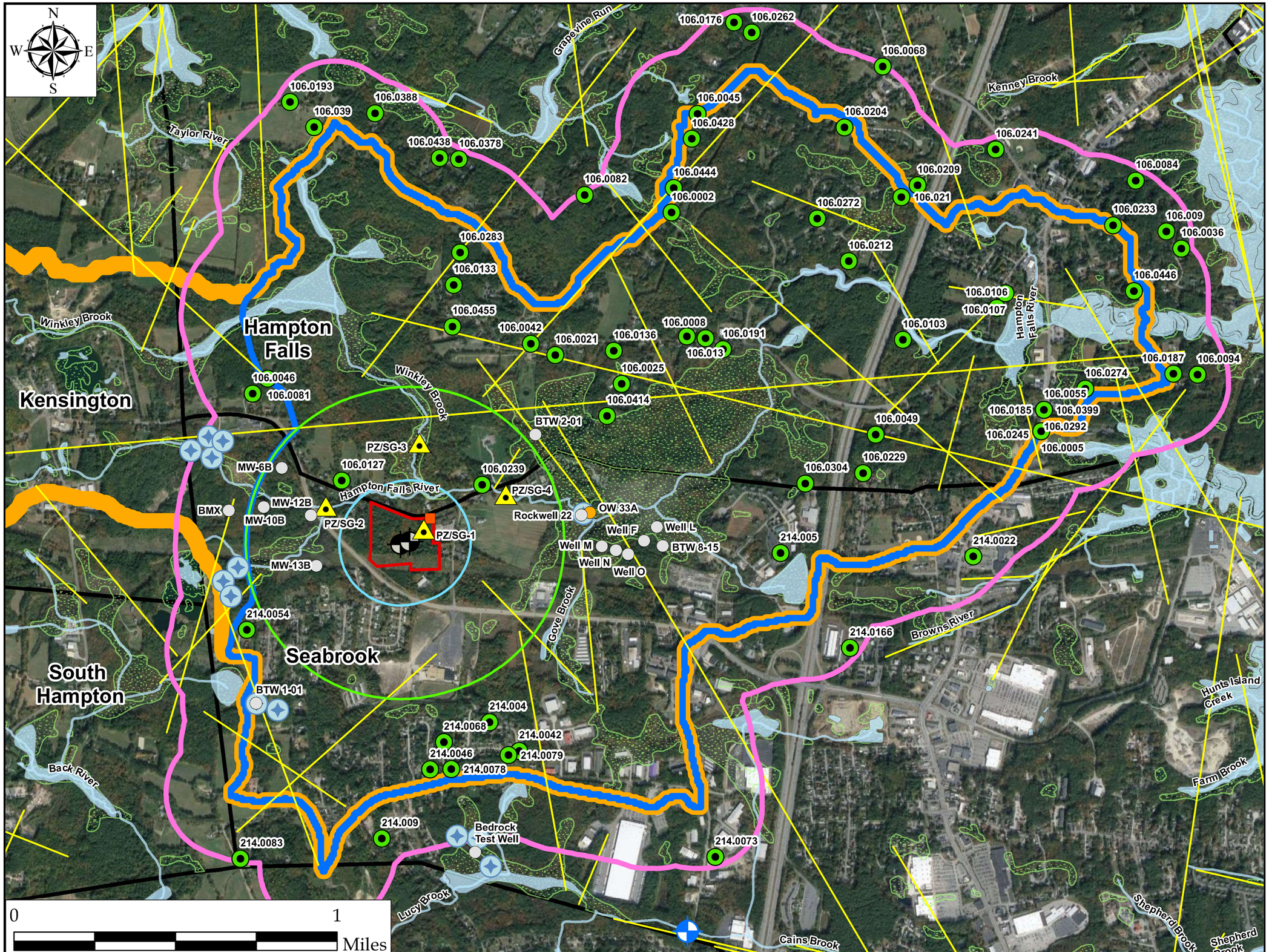
WATER WELL INVENTORY of WELLS WITHIN 1,000 FEET of PIA

Weare Road Property Wellfield
Seabrook Water Department
Seabrook, NH

CREATED BY:	CHECKED BY:	PROJECT:
Matt Krapf 3/29/2023	Ray Talkington 3/29/2023	20216\Figures\ Preliminary Report

Data Source: NH GRANIT, Earth Systems Research Center - University of New Hampshire. USGS Quad Exeter, NH. 1:24000, 3 meter contour interval. New Hampshire Geological Survey.


Kensington
Hampton Falls
Seabrook
South Hampton
Weares Mill
Weare Corner
Eastman Corners
Noon Corners
Town Hall Corner
Fogg Corners
Seabrook Park
Trailer Park
Sewage Disposal Ponds
Water Tanks
Substation
Gravel Pit
Cem
Grape Hill
New Zealand Hill
Newfound Hill
Great Hill
Dodge
Winnicut River
Kenney Brook
Hampton Falls River
Seabrook St
NEW HAMPSHIRE
MASSACHUSETTS
Rest Area
N
S
E
W
0
1,500
3,000
Feet
Legend
NHDES Database Wells Classified as Domestic
Proposed Bedrock Production Wells
PWS Wells
Registered Water Users (Seabrook Water Dept.)
Cone of Depression (2,529-Ft. Radius)
1,000-ft. Well Radius
USGS Lineaments
Preliminary PIA and WHPA
Hampton Falls River Watershed
PIA 1,000-ft. Buffer
Wellfield Property
TOWN of SEABROOK N.H.
INCORPORATED 1768
GEOSPHERE
ENVIRONMENTAL MANAGEMENT INC.
FIGURE 12
NHDES DOMESTIC WATER SUPPLY WELLS AND REGISTERED WATER USERS
Weare Road Property Wellfield
Seabrook Water Department
Seabrook, NH
CREATED BY: Matt Krapf 3/30/2023
CHECKED BY: Ray Talkington 3/30/2023
PROJECT: 20216\Figures\ Preliminary Report
Data Source: NH GRANIT, Earth Systems Research Center - University of New Hampshire. USGS Quad Exeter, NH. 124000, 3 meter contour interval. New Hampshire Geological Survey.



Legend

- Proposed Bedrock Production Wells
- Proposed Ambient Monitoring Well
- SWD PWS Wells
- Proposed Domestic Monitoring Wells
- SWD Bedrock MWs
- SWD Overburden MWs
- 1,000-ft. Well Radius
- Cone of Depression (2,529-ft. Radius)
- Preliminary PIA and WHPA
- PIA 1,000-ft. Buffer
- Hampton Falls River Watershed
- Proposed PZ/SG
- Discharge Location
- NWI Wetlands
- USGS Lineaments
- Wellfield Property

TOWN of SEABROOK N.H. INCORPORATED 1768

GEOSPHERE ENVIRONMENTAL MANAGEMENT INC.

FIGURE 13

POTENTIAL MONITORING LOCATIONS

Weare Road Property Wellfield
Seabrook Water Department
Seabrook, NH

CREATED BY:	CHECKED BY:	PROJECT:
Matt Krapf 4/5/2023	Ray Talkington 4/5/2023	20216\Figures\ Preliminary Report

Data Source: NH GRANIT, Earth Systems Research Center - University of New Hampshire. USGS Quad Exeter, NH. 1:24000, 3 meter contour interval. New Hampshire Geological Survey.

Appendix A

Assessors Card of Weare Road Property

121 WEARE RD

Location	121 WEARE RD	**Mblu**	1/ 18/ / /
Acct#	01018000	**Owner**	SCHWANHAUSSER CAROL & CYGAN CATHY MERRIMAN &
Assessment	$800	**PID**	34
Building Count	1		

Current Value

Assessment			
Valuation Year	**Improvements**	**Land**	**Total**
2020	$0	$800	$800

Owner of Record

Owner	SCHWANHAUSSER CAROL & CYGAN CATHY MERRIMAN &	**Sale Price**	$0
Co-Owner	SHENBERGER DIANE & SYNODIS SUSAN	**Book & Page**	6017/0453
Address	225 CONCORD RD WAYLAND , MA 01778	**Sale Date**	07/16/2019

Ownership History

Ownership History			
Owner	**Sale Price**	**Book & Page**	**Sale Date**
SCHWANHAUSSER CAROL & CYGAN CATHY MERRIMAN &	$0	6017/0453	07/16/2019
MERRIMAN FAMILY TRUST	$0	3074/1290	10/11/1994

Building Information

Building 1 : Section 1

Year Built:
Living Area: 0
Replacement Cost: $0
Building Percent Good:
Replacement Cost
Less Depreciation: $0

Building Attributes	
Field	**Description**
Style:	Vacant Land
Model	
Grade:	
Stories:	
Occupancy	
Exterior Wall 1	
Exterior Wall 2	
Roof Structure:	
Roof Cover	

Building Photo

(http://images.vgsi.com/photos/SeabrookNHPhotos//default.jpg)

Building Layout

(ParcelSketch.ashx?pid=34&bid=34)

Building Sub-Areas (sq ft)	Legend

Interior Wall 1	
Interior Wall 2	
Interior Flr 1	
Interior Flr 2	
Heat Fuel	
Heat Type:	
AC Type:	
Total Bedrooms:	
Total Bthrms:	
Total Half Baths:	
Total Xtra Fixtrs:	
Total Rooms:	
Bath Style:	
Kitchen Style:	
Num Kitchens	
Cndtn	
Location:	
MHP	
Num Park	
Fireplaces	
Fndtn Cndtn	
Basement	

No Data for Building Sub-Areas

Extra Features

Extra Features	Legend
No Data for Extra Features	

Land

Land Use

Use Code	7034
Description	CU -FOR-OTHER -3

Land Line Valuation

Size (Acres)	21.4
Assessed Value	$800

Outbuildings

Outbuildings	Legend
No Data for Outbuildings	

Valuation History

Assessment			
Valuation Year	**Improvements**	**Land**	**Total**
2020	$0	$800	$800
2019	$0	$800	$800

Appendix B

Communications with Previous Property Owner

Lauren Kaehler

From: Diane Shenberger <jedielni@hotmail.com>
Sent: Wednesday, September 2, 2020 9:18 AM
To: David Niemeyer
Cc: 'William Manzi'
Subject: Re: 121 Weare Road, Seabrook

David,

I was on the land last September and it was still there, so should not be buried. It is located between on the apartment side of the land (further from Amy court). There should be a partial stone wall which divides the land into 1/3 and 2/3 pieces. Th first third (closer to the apartments) is where the well is located; I believe it is about halfway between road frontage and power lines/back of lot. It should have a cement cover on or nearby.

Hope this helps.

Thanks
Diane

From: David Niemeyer <dniemeyer@geospherenh.com>
Sent: Wednesday, September 2, 2020 8:27 AM
To: 'Diane Shenberger' <jedielni@hotmail.com>
Cc: 'William Manzi' <wmanzi@seabrooknh.org>
Subject: RE: 121 Weare Road, Seabrook

Diane,
Do you think you can describe approximately where the old well is, and what type and condition is it in, (i.e., dug well, drilled/artesian well), and is it completely buried?

Thank you,
This is most helpful!

David Niemeyer, P.G
V.P., Director of Environmental Compliance
Geosphere Environmental Management, Inc.
51 Portsmouth Avenue
Exeter, New Hampshire 03833
603-773-0075 x 12
603-773-0077 fax
603-475-2977 cell
Professional Consultants Providing Groundwater and Environmental Solutions
Use the Earth's Resources Wisely - Please Reduce, Reuse, and Recycle !

From: Diane Shenberger [mailto:jedielni@hotmail.com]
Sent: Tuesday, September 01, 2020 4:04 PM
To: David Niemeyer <dniemeyer@geospherenh.com>
Cc: 'William Manzi' <wmanzi@seabrooknh.org>
Subject: Re: 121 Weare Road, Seabrook

Hi David,

I got your voice mail when I called so thought I would email what I could then we could address any additional questions you may have.

The 21.4 acres of property on Weare Rd was part of our family "farm" which included this land plus the house with 2 acres at 33 Weare Rd. The property was split sometime prior to the sale of 33 Weare Rd around 2003. The "farm" had been in my family since the early 1900's. My grandfather (John Carpenter Weare) lived there for most of his elementary, middle and high school years before moving to NY. Fred Weare (John's father) granted ownership of the farm to Joh Weare (while John lived in NY) and we summered there with my grandparents (John & Ina Weare) from 1964 until 2003. The open land in the back (21.4 acres) was often referred to as the "potato field" named after its original use but we usually went there to play in the woods and pick wild blueberries.

Part of the property housed the well for our home at 33 Weare Rd. After the "hay field" next door was sold and developed into the apartments, the well sustained damage from garbage being thrown into it. At this point, my parents (Nancy and Robert Merriman) were owners and they opted to connect to town water; I do not recall the year this happened but sometime between 1970-1975. The well is no longer operational.

We continued to summer at 33 Weare Rd until 2003. Since 2003, the 21.4 acres has been vacant land. In 2011, my parents passed away and the land was inherited by my 3 sisters and myself. We visit periodically and walk the land but it has not been used for any other purpose. Since our family has strong heritage in NH (we are decendants of Micaik Weare) and we enjoyed the property ourselves for so many years, we felt a donation to the Town of Seabrook for recreational purposes supported everyone's wishes and made sense environmentally.

I hope this addresses your questions but am happy to talk further if you have other questions.

Best,
Diane
717-798-5091

From: David Niemeyer <dniemeyer@geospherenh.com>
Sent: Tuesday, September 1, 2020 11:22 AM

To: 'Diane Shenberger' <jedielni@hotmail.com>
Cc: 'William Manzi' <wmanzi@seabrooknh.org>
Subject: RE: 121 Weare Road, Seabrook

Diane,

To complete our environmental review of the property, would you be able to e-mail or call me and let me know what you know about the history of the property?

It can be as simple as: "As far as I know the lot was only ever used for _____" and "it has been in our family since _____"

Thank you!

David Niemeyer, P.G
V.P., Director of Environmental Compliance
Geosphere Environmental Management, Inc.
51 Portsmouth Avenue
Exeter, New Hampshire 03833
603-773-0075 x 12

Appendix C

FIRM Map

National Flood Hazard Layer FIRMette

FEMA

70°54'35"W 42°54'18"N

70°53'57"W 42°53'52"N

Feet 1:6,000

0 250 500 1,000 1,500 2,000

Basemap: USGS National Map: Orthoimagery: Data refreshed October, 2020

Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS

- Without Base Flood Elevation (BFE) *Zone A, V, A99*
- With BFE or Depth *Zone AE, AO, AH, VE, AR*
- Regulatory Floodway

OTHER AREAS OF FLOOD HAZARD

- 0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile *Zone X*
- Future Conditions 1% Annual Chance Flood Hazard *Zone X*
- Area with Reduced Flood Risk due to Levee. See Notes. *Zone X*
- Area with Flood Risk due to Levee *Zone D*

OTHER AREAS

- NO SCREEN Area of Minimal Flood Hazard *Zone X*
- Effective LOMRs
- Area of Undetermined Flood Hazard *Zone D*

GENERAL STRUCTURES

- Channel, Culvert, or Storm Sewer
- Levee, Dike, or Floodwall

OTHER FEATURES

- B 20.2 Cross Sections with 1% Annual Chance
- 17.5 Water Surface Elevation
- 8 Coastal Transect
- 513 Base Flood Elevation Line (BFE)
- Limit of Study
- Jurisdiction Boundary
- Coastal Transect Baseline
- Profile Baseline
- Hydrographic Feature

MAP PANELS

- Digital Data Available
- No Digital Data Available
- Unmapped

N

The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 6/14/2021 at 2:26 PM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.

Appendix D

Water Conservation Plan

C. Water Conservation Plan Guidance Document
for Existing Large Community Water Systems

WATER CONSERVATION PLAN: **Seabrook Water Department**

A community water system seeking authorization for a new source of water must submit a water conservation plan to the New Hampshire Department of Environmental Services (NHDES) for approval demonstrating how the water system proposes to comply with water conservation standards pursuant to Env-Wq 2101, *Water Conservation* rules. **Seabrook Water Department** is an existing large community water system.

Activities outlined in the water conservation plan will be completed by water system personnel under the supervision of a certified water system operator.

I. Introduction

A. Contact Information

1. Name and location of system: **Seabrook Water Department – Seabrook, NH**

2. Current owner of system and mailing address:

William Manzi III, Town Manager

Town of Seabrook

PO Box 456

99 Lafayette Road

Seabrook, NH 03874

3. Name and mailing address of preparer of water conservation plan:

Curtis Slayton, Water and Sewer Superintendent

Town of Seabrook

PO Box 456

550 Route 107

Seabrook, NH 03874

B. System Overview

1. Description of the community being served (ex. number of units, apartments, partially attached condos, individual homes, shared common facilities, population, etc.):

The Town of Seabrook Water system serves 14,000 people to include 3440 residential and 340 commercial/industrial accounts to include the NextEra power station. Nearly 100% of the town receives water from the Seabrook system. 381 million gallons of water was pumped to

the distribution system in 2022. Residential accounted for 52%. Commercial 32% ,14% for the power station and 2% for town and church buildings.

2. Description of water sources, including water sources to be developed for non-potable uses such as irrigation:

   The Seabrook Water System is supplied by groundwater from five gravel-packed wells and seven bedrock wells located in the western part of town. The gravel-packed wells range from 50 to 125 feet deep and the bedrock wells range from 400 to 500 feet deep.

3. Name designation of each proposed water source and any existing sources:

   Proposed:

   Well A
   Well B

   Well F
   Well L
   BTW 8-15

   Existing:

	EPA ID#/(Seabrook ID)	
2111010-001/(GPW 1)	2111010-006/(BRW 1)	2111010-011/(BRW 5)
2111010-002/(GPW 2)	2111010-007/(BRW 2)	2111010-012/(GPW 7)
2111010-003/(GPW 3)	2111010-008/(BRW 3)	2111010-014/(BRW 5.1)
2111010-004/(GPW 4)	2111010-009/(BRW 4)	2111010-015/(BRW 5.2)

4. Number of connections proposed for each of the following classes:
   a) Residential: **3440**
   b) Industrial/Commercial/Institutional: **340**
   c) Municipal/Church: **46**

5. The water system does not provide water to any consecutive water systems or privately owned redistribution systems.

6. Description of any connections that receive more than 20,000 gpd:

   NextEra Energy Power Station - 626 Lafayette Road

   Car Wash Group (aka Raccoon Car Wash) - 495 Lafayette Road

7. Please provide the following information based on metered source withdrawal volumes from the last complete year. Please report in gallons.

   Year: **2022**
   Average daily use (ADU): **1,044,608** gpd
   Lowest ADU in the winter: **612,012** gpd
   Highest ADU in the summer: **1,664,000** gpd

C. Transfer of Ownership
The system ownership is not proposed to be transferred.

II. System Side Management

A. Water Meter

1. Source and Other System Side Meters

a) No later than the source activation date, meters will be installed on each new and any existing water source.

b) No later than the source activation date:
All water-consuming processes prior to distribution, such as backwash, treatment process water, and continuous analyzers will be metered.

c) **An irrigation well is not proposed.**

d) Meter information for each proposed and existing water source and other system side meters:

Source Name/Meter Type Description (ex. Distribution, Process): **Gravel-Packed Well #1**
Meter Size: **6-inch**
Meter Make: **Foxboro**
Meter Model: **Imt25**
Meter Flow Range: **0-600 gpm**
Meter Installation Date:
Last Meter Test/Calibration Date: **10/22**

Source Name/Meter Type Description (ex. Distribution, Process): **Gravel-Packed Well #2**
Meter Size: **4-inch**
Meter Make: **Foxboro**
Meter Model: **Imt25**
Meter Flow Range: **0-275 gpm**
Meter Installation Date: **2006**
Last Meter Test/Calibration Date: **10/22**

Source Name/Meter Type Description (ex. Distribution, Process): **Gravel-Packed Well #3**
Meter Size: **4-inch**
Meter Make: **Foxboro**
Meter Model: **Imt25**
Meter Flow Range: **0-400 gpm**
Meter Installation Date: **2014**
Last Meter Test/Calibration Date: **10/22**

Source Name/Meter Type Description (ex. Distribution, Process): **Gravel-Packed Well #4**
Meter Size: **4-inch**
Meter Make: **Foxboro**
Meter Model: **Imt25**
Meter Flow Range: **0-500 gpm**
Meter Installation Date: **2006**
Last Meter Test/Calibration Date: **10/22**

Source Name/Meter Type Description (ex. Distribution, Process): **Gravel-Packed Well #7**
Meter Size: **4-inch**
Meter Make: **Foxboro**
Meter Model: **Imt25**
Meter Flow Range: **0-400 gpm**
Meter Installation Date: **2014**
Last Meter Test/Calibration Date: **10/22**

Source Name/Meter Type Description (ex. Distribution, Process): **Bedrock Well #1**
Meter Size: **4-inch**
Meter Make: **Foxboro**
Meter Model: **Imt25**
Meter Flow Range: **0-225 gpm**
Meter Installation Date: **2006**
Last Meter Test/Calibration Date: **10/22**

Source Name/Meter Type Description (ex. Distribution, Process): **Bedrock Well #2**
Meter Size: **4-inch**
Meter Make: **Foxboro**
Meter Model: **Imt25**
Meter Flow Range: **0-275 gpm**
Meter Installation Date: **2006**
Last Meter Test/Calibration Date: **10/22**

Source Name/Meter Type Description (ex. Distribution, Process): **Bedrock Well #3**
Meter Size: **4-inch**
Meter Make: **Krohne**
Meter Model: **IFC050**
Meter Flow Range: **0-500 gpm**
Meter Installation Date: **5/21**
Last Meter Test/Calibration Date: **10/22**

Source Name/Meter Type Description (ex. Distribution, Process): **Bedrock Well #4**
Meter Size: **4-inch**
Meter Make: **Foxboro**
Meter Model: **Imt25**
Meter Flow Range: **0-300 gpm**
Meter Installation Date: **2006**
Last Meter Test/Calibration Date: **10/22**

Source Name/Meter Type Description (ex. Distribution, Process): **Bedrock Well #5.1**
Meter Size: **4-inch**
Meter Make: **Foxboro**
Meter Model: **Imt25**
Meter Flow Range: **0-200**
Meter Installation Date: **2010**
Last Meter Test/Calibration Date: **10/22**

Source Name/Meter Type Description (ex. Distribution, Process): **Bedrock Well #5.2**
Meter Size: **4-inch**
Meter Make: **Foxboro**
Meter Model: **Imt25**
Meter Flow Range: **0-400 gpm**
Meter Installation Date: **2010**
Last Meter Test/Calibration Date: **10/22**

Source Name/Meter Type Description (ex. Distribution, Process): **Bedrock Well #5**
Meter Size: **4-inch**
Meter Make: **Foxboro**
Meter Model: **Imt25**
Meter Flow Range: **0-200 gpm**
Meter Installation Date: **2010**
Last Meter Test/Calibration Date: **10/22**

Source Name/Meter Type Description (ex. Distribution, Process): WTF Filter #1
Meter Size: **4-inch**
Meter Make: **Foxboro**
Meter Model: **Imt25**
Meter Flow Range: **0-750 gpm**
Meter Installation Date: **2010**
Last Meter Test/Calibration Date: **10/22**

Source Name/Meter Type Description (ex. Distribution, Process): **WTF Filter #2**
Meter Size: **4-inch**
Meter Make: **Foxboro**
Meter Model: **Imt25**
Meter Flow Range: **0-750 gpm**
Meter Installation Date: **2010**
Last Meter Test/Calibration Date: **10/22**

Source Name/Meter Type Description (ex. Distribution, Process): **WTF Filter #3**
Meter Size: **4-inch**
Meter Make: **Foxboro**
Meter Model: **Imt25**
Meter Flow Range: **0-750 gpm**
Meter Installation Date: **2010**
Last Meter Test/Calibration Date: **10/22**

Source Name/Meter Type Description (ex. Distribution, Process): **WTF Filter #4**
Meter Size: **4-inch**
Meter Make: **Foxboro**
Meter Model: **Imt25**
Meter Flow Range: **0-750 gpm**
Meter Installation Date: **2010**
Last Meter Test/Calibration Date: **10/22**

Source Name/Meter Type Description (ex. Distribution, Process): **WTF Filter #5**
Meter Size: **4-inch**
Meter Make: **Foxboro**
Meter Model: **Imt25**
Meter Flow Range: **0-750 gpm**
Meter Installation Date: **2010**
Last Meter Test/Calibration Date: **10/22**

Source Name/Meter Type Description (ex. Distribution, Process): **WTF Backwash Flow**
Meter Size: **8-inch**
Meter Make: **Foxboro**
Meter Model: **Imt25**
Meter Flow Range: **0-1700 gpm**
Meter Installation Date: **2010**
Last Meter Test/Calibration Date: **10/22**

Source Name/Meter Type Description (ex. Distribution, Process): **WTF Finish Water**
Meter Size: **8-inch**
Meter Make: **Foxboro**
Meter Model: **Imt25**
Meter Flow Range: **0-3500 gpm**
Meter Installation Date: **2010**
Last Meter Test/Calibration Date: **10/22**

Source Name/Meter Type Description (ex. Distribution, Process): **WTF Raw Water**
Meter Size: **8-inch**
Meter Make: **Foxboro**
Meter Model: **Imt25**
Meter Flow Range: **0-3500 gpm**
Meter Installation Date: **2010**
Last Meter Test/Calibration Date: **10/22**

e) No later than the source activation date, source meters and other system side meters will be read: **Daily**.

2. Service Meter Installation, Reading, and Maintenance

a) Service meters are already installed on all service connections, including public sector service connections and all points of transfer to consecutive water systems and privately owned redistribution systems.

b) Summary of service meter makes, models, sizes, and dates of installation: **Sensus meters 5/8 to 6 inch meters installed mostly 2004 to present.**

c) Service meters will be read: **Monthly**.

d) Service meters will be read by: **Drive by Read**

e) It is expected it will take **2 days** to read all service meters.

f) Service meters will be maintained in accordance with II.A.3.e), below.

3. Meter Selection, Installation, and Maintenance

a) All meters will be American Water Works Association (AWWA) certified.

b) The selected size of the meters will be based on projected flow rates.

c) Meters will be installed as specified by the manufacturer, including requirements for horizontal or vertical placement, distance of straight run of pipe upstream and downstream of the meter, and strainer installation. If the manufacturer does not supply installation specifics, meters will be installed in accordance with the "Manual of Water Supply Practices M6, Water Meters-Selection, Installation, Testing, and Maintenance" (AWWA, 2012).

d) The following meter testing and calibration schedule or meter change-out schedule will be implemented. If the manufacturer's accuracy warranty extends beyond the schedule below, the meter will be tested or changed-out no later than the warranty expiration date.

Meter Size (inches)	Testing Rate (years)
<1"	10 yrs
1" - 2"	4 yrs
3"	2 yrs
>3"	1 yr

e) A log of the date meters were installed, tested, calibrated, repaired, and replaced will be maintained. **Calibration certificates will be kept on file.**

B. Water Balance and Water Audit

1. The system currently has service meters installed. The previous year's water balance (system input volume – authorized metered consumption) is attached to this WCP and will continue to be reported to NHDES annually.

2. No later than March 1 of each year, a water balance for the previous year will be reported to NHDES using the NHDES online water balance reporting tool. The electronic reporting form is located on the Water Conservation homepage of the NHDES website.

3. If the water balance calculated in II.B.1., above is more than 15% of the system input volume, the water system will prepare a water audit and response plan and submit them with the water balance.

    a) The water audit will be completed in accordance with the "Manual of Water Supply Practices M36, Water Audits and Loss Control Programs" (AWWA, 2016).

    b) The response plan will be based on the findings of the water audit and will identify how the water system intends to reduce the water balance to below 15% within two years.

C. Leak Detection and Repair

1. Description of the system's leak detection program (ex. acoustic leak detection, zone meters, night flow analysis) to be implemented within one year of source approval: **The complete system was surveyed by acoustic leak detection in 2003 and 2016. In 2009 34 miles of A/C pipe was completed by acoustic leak detection.**

2. Non-metal pipes will either be GPS located and stored in a GIS system or equipped with detectable tracer tape or detectable tracer wire during new installation.

3. Leak detection will be conducted in accordance with the "Manual of Water Supply Practices M36, Water Audits and Loss Control Programs" (AWWA, 2016).

4. Leaks will be repaired within 60 days of discovery unless a waiver is obtained in accordance with Env-Wq 2101.23.

5. A log of all leaks will be maintained, including the date the leak was discovered, the date the leak was repaired, the type of leak (ex. service, main, hydrant, valve), the size of the leak (gpm), and the nearest street address to the leak.

D. Pressure Management

1. The design pressures of the system are from **50** psi to **85** psi.

III. Consumption Side Management

A. Conservation Rate Structure and Billing

1. Within two years of installing all service meters or within five years of source approval, whichever is earlier, a conservation rate structure will be implemented. Customers will be charged based on usage, and the rate per unit of water for residential connections will be uniform (ex. $4.00/1000 gallons of water) or increase with usage (ex. $4.00/0-500 gallons of water, $4.50/501-1000 gallons of water).

2. The rate structure will be as follows: **See Attached**

3. Irrigation water will be billed at: **the same rate.**

4. The irrigation rate structure will be as follows: **Not Applicable**

5. Upon implementation of the rate structure, customers will be billed:
Quarterly with 100 larger accounts billed monthly.

B. Educational Outreach Initiative

1. No later than the source activation date, the following informative billing practices will be used:

   a) Usage will be represented in gallons on water bills; and

   b) At least 13 months of historical usage will be included in a table or in a graph with the bill for comparison; and

   c) A link to the WaterSense website or other water efficiency website will be included on the bill with a tip for saving water.

2. The system will maintain a log indicating how the system has complied with III. B.1., above. The log will include dates the outreach and education actions were taken and what was done.

IV. Reporting and Implementation

A. Upon installation of all service meters, and by no later than March 1 of each year, a water balance for the previous year will be submitted to NHDES using the electronic reporting form located on the Water Conservation homepage of the NHDES website (www.des.nh.gov).

B. Upon source approval and receiving a Water Use Identification Number from NHDES, the water system will report monthly production volumes, quarterly to the NHDES Water Use Registration and Reporting Program. Monthly means once every calendar month, but no sooner than 27 days after and no later than 33 days after the previous reading.

C. The water system will submit a form supplied by NHDES once every three years from the date of the water conservation plan approval documenting how compliance with the requirements of Env-Wq 2101, Water Conservation rules, is being achieved.

Appendix A
Definitions

Authorized metered consumption: billed metered water plus unbilled metered water.

Community water system (CWS): a public water system which serves at least 15 service connections used by year-round residents or regularly serves at least 25 year-round residents.

Consecutive water system: a public water system that buys or otherwise receives some or all of its finished water from one or more wholesale systems for at least 60 days per year.

Final source approval: the date of final well siting approval or the date of issuance of the large groundwater withdrawal permit.

Large community water system: a community water system that serves more than 1,000 persons.

Privately owned redistribution system (PORS): A system for the provision of piped water for human consumption which does not meet the definition of a public water system and meets all of the following criteria:

> (1) Obtains all of its water from, but is not owned or operated by, a public water system; (2) serves a population of at least 25 people, 10 household units or 15 service connections, whichever is fewest, for at least 60 days per year; and (3) has exterior pumping facilities, not including facilities used to reduce pressure, or exterior storage facilities which are not part of building plumbing.

Public water system (PWS): a system for the provision to the public of piped water for human consumption, if such system has at least 15 service connections or regularly serves an average of at least 25 individuals daily at least 60 days out of the year.

Small community water system: a community water system that serves 1,000 people or less.

Source activation date: the date the source is placed into use.

System input volume: the volume of water input to the water supply system after treatment, analysis, and storage.

Water balance: the difference between the system input volume and authorized metered consumption.

Water conservation: any beneficial reduction in water losses, waste or use.

Wholesale system: a public water system or an industrial, commercial or institutional (ICI) water user that treats source water and then sells or otherwise delivers finished water to a consecutive water system or privately owned distribution system.

Appendix C
Notification Process

Public Notification Instructions
Once a final draft of the water conservation plan is agreed upon by the applicant and NHDES, NHDES will send a signature line to the applicant for addition to the plan along with a summary of the requirements of Env-Wq 2101, which may be found at http://des.nh.gov/organization/divisions/water/dwgb/water_conservation/index.htm.

Within 10 working days of receiving the summary from NHDES, the applicant is required to provide a copy of the water conservation plan and rules summary via certified mail with return receipt requested to:

- the governing board of the municipality in which a proposed source is located,
- the governing board of all municipalities that receive water from the water system (if any),
- the governing board of all wholesale customers of the water system (if any), and
- the regional planning commission serving the location of the proposed source.

The applicant must also request that the governing board amend local site planning requirements to reflect the requirements of Env-Wq 2101 and to promote water conservation landscaping for new projects.

All signed copies of the certified mail return receipts (the green cards) must be forwarded to NHDES along with the final, signed water conservation plan before approval of the water conservation plan will be issued.

Notification of Consecutive Water Systems and Privately Owned Redistribution Systems
Within 5 working days of obtaining final approval of the source from NHDES, the system is required to notify any consecutive water system or privately owned redistribution system receiving water from the system of the following:

- The projected source activation date; and
- The system will be subject to Env-Wq 2101 as of the source activation date, pursuant to Env-Wq 2101.13 and should contact the NHDES Water Conservation Program using the contact information below.

Kelsey Vaughn, Water Conservationist
New Hampshire Department of Environmental Services
Drinking Water and Groundwater Bureau
PO Box 95
Concord, NH 03302-0095
kelsey.vaughn@des.nh.gov
Phone: (603) 271-0659
Fax: (603) 271-0656

NEW WATER FEES 2023

RESIDENTIAL METERS Quarterly		
5/8" Meter	Water = 16.27	Sewer = 16.27
3/4" Meter	Water = 24.36	Sewer = 24.36
1" Meter	Water = 40.62	Sewer = 40.62

New Fees/Increases/Changes

Cost of parts +10%
Backflow permits 100.00 - Non-transferable
Backflow renewal fee ----50.00 every 5 years
Turn On's / Shut Off's during hours -----50.00
Turn On's / Shut Off's after hours at cost +10%
Meter Installation/Removals ------ 50.00
Service Calls non water dept issues - $100.00
Service Calls after hours non water dept issues - at Cost +10%
Contracted Services -----at cost +10%
Final Reads 50.00
Missed Appointments ---50.00
Pressure & Leak Tests ---150.00
Meter Testing ----at cost +10%

COMMERCIAL METERS Quarterly or divide by 3 for Monthly			
5/8" Meter	Water = 16.26	Sewer = 16.26	5.42 / 5.42
3/4" Meter	Water = 24.36	Sewer = 24.36	8.12 / 8.12
1" Meter	Water = 40.62	Sewer = 40.62	13.54 / 13.54
1-½" Meter	Water = 81.21	Sewer = 81.21	27.07 / 27.07
2" Meter	Water = 129.90	Sewer = 129.90	43.30 / 43.30
3" Meter	Water = 259.80	Sewer = 259.80	86.60 / 86.60
4" Meter	Water = 405.93	Sewer = 405.93	135.31 / 135.31
6" Meter	Water = 811.83	Sewer = 811.83	270.61 / 270.61
8" Meter	Water = 1,298.91	Sewer = 1298.9	432.97 / 432.97

Industrial Pretreatment Permits
Class I $50 Class II $25 Class III $10

Residential Rate

Tier	Quarterly Usage	Usage	Water	$ Amt	Sewer	$ Amt	W&S Total
1	1 - 5,000	5,000	1.14	5.70	0.64	3.20	8.90
2	5,001 - 13,500	8,500	2.96	25.16	1.64	13.94	39.10
3	13,501 - 25,000	11,500	4.81	55.32	2.65	30.48	85.79
4	25,001 - 250,000	225,000	6.65	1,496.25	3.65	821.25	2,317.50
5	over 250,000		8.48		4.66		

Prices - Per One Thousand Gallons

Final Reads - 5/8"

mos.	W	S	Total
1	5.42	5.42	10.84
2	10.84	10.84	21.68
3	16.26	16.26	32.52
4	21.68	21.68	43.36

Commercial Rates

Tier	Comm Quarterly	Monthly	Usage	Water	Sewer
1	1 - 5,000	1 - 1667	1667	1.69	0.92
2	5,001 - 13,500	1,668 - 4,500	2833	4.44	2.44
3	13,501 - 25,000	4,501 - 8,333	3833	7.20	3.96
4	25,001 0 250,000	8,334 - 83,333	74999	9.96	5.48
5	over 250,000	over 83,000		12.71	6.99

Prices - Per One Thousand Gallons

Seabrook Water Usage Statistics Report 2010 to Present - WARRANTS

Accounts	Year	Actual Gals 1QTR	Actual Gals 2QTR	Actual Gals 3QTR	Actual Gals 4QTR	Final Bills	Final Bills Curr Yr	Annual & Overage Billings	Misc. & Estimates (Broken Meters)	Grand Total Usage
Actual Pumped-Per George		**Total Usage**	Unmetered activities		Diff					**% Lost**
	2023		-	-	-					#DIV/0!
381,282,000	2022	319,893,512	-	319,893,512	61,388,488					16.10%
365,947,000	2021	327,922,740	-	327,922,740	38,024,260					10.39%
367,483,000	2020	327,318,407	2,900,000	330,218,407	37,264,593					10.14%
360,113,000	2019	298,749,251	2,665,755	301,415,006	58,697,994					16.30%
372,143,850	2018	317,166,280	61,642.00	317,227,922	54,915,928					14.76%
353,049,000	2017	313,245,036	3,945,596	317,190,632	35,858,368					10.16%
355,609,000	2016	310,400,029	2,147,590	312,547,619	43,061,381					12.11%
384,297,000	2015	335,035,006	2,484,947	337,519,953	46,777,047					12.32%
358,329,610	2014	307,090,018								14.30%
343,675,800	2013	310,021,185								9.79%
318,129,412	2012	294,090,738								7.56%
335,031,922	2011	308,077,265								8.05%
358,735,025	2010	304,443,225								15.13%

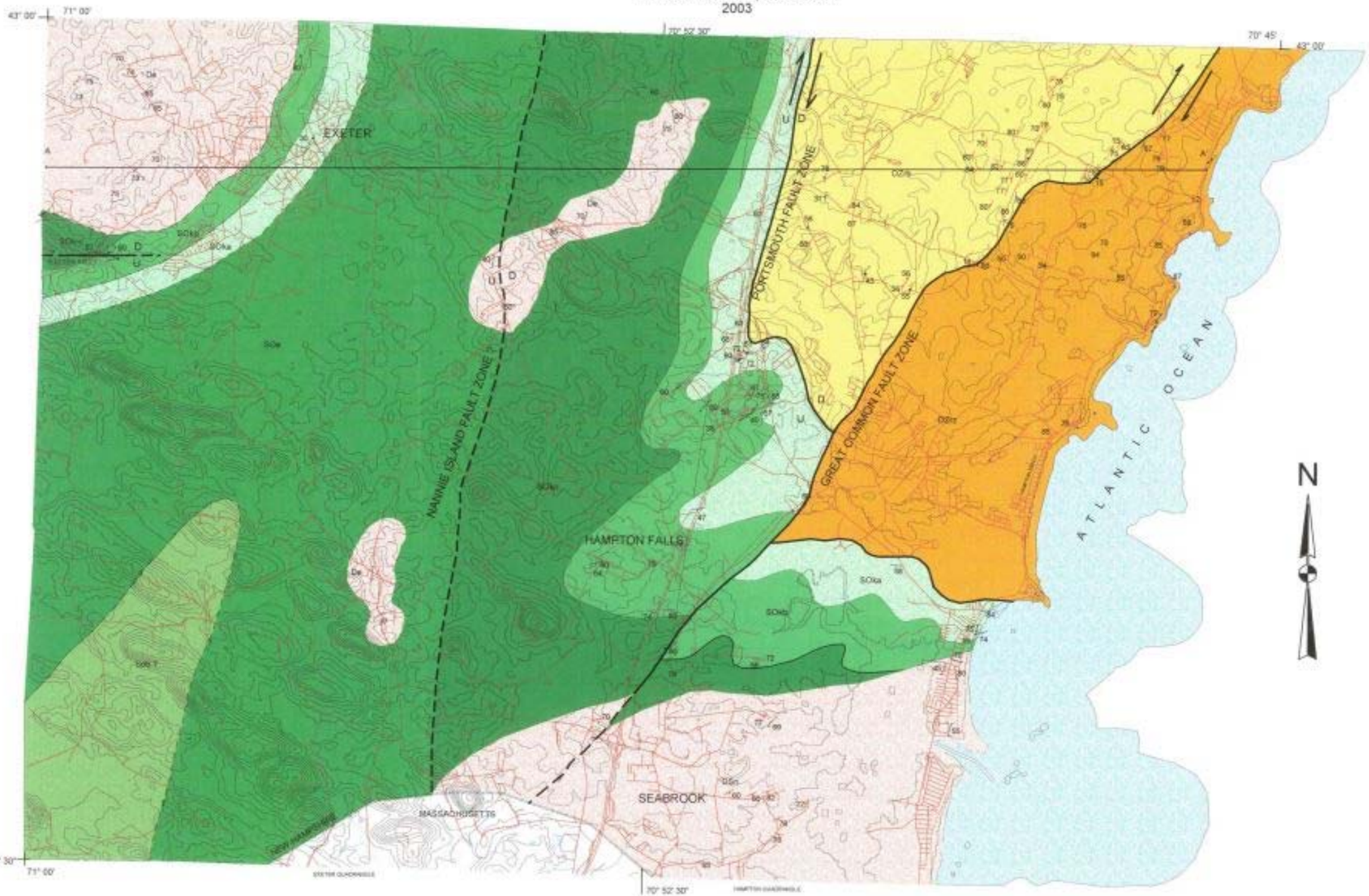
Other:	32,457
Hydrant Flushing:	2,900,000
Church/municipal:	4,984,013
Residential:	165,316,383
C/I:	146,660,659
Water accounted for:	319,893,512
Less Pumped (per George):	-381,282,000
	-61,388,488
	16.10%

Appendix E

Bedrock Geology and Bedrock Surface Topography (USGS, OF-186, 2003)

BEDROCK GEOLOGY OF THE EXETER AND HAMPTON 7.5- MINUTE QUADRANGLES, SOUTHEASTERN NEW HAMPSHIRE

Jose C. Escamilla-Casas
Department of Earth Sciences
University of New Hampshire
Durham, New Hampshire 03824
2003



SCALE 1:48 000 Contour interval 10 ft

0 3 6 Kilometers

0 1 2 3 4 Miles

MAP SYMBOLS

- Strike and dip of bedding
- Strike and dip of beds showing polarity
- Strike and dip of gneissic foliation (compositional layering)
- Lineation
- Trend and plunge of asymmetrical fold axis
- Fault, dashed where inferred. U on upthrown block, D on downthrown block
- Fault zone, arrows indicate the shear sense
- Strike and dip of joint, showing dip value
- Vertical joint
- Lithologic contact, dashed where approximate, querried where inferred
- Walked traverse
- Topographic contour
- Roads
- River
- Field station

For cross-section

- Direction of displacement
- Block toward observer
- Block away from observer

MAP UNITS

Igneous Rocks

- Mesozoic dikes. Aphanitic to porphyritic diabase
- De — Exeter Pluton. Light to dark gray, medium grained hornblende diorite with minor granite and gabbro (Early Devonian. 406 ±1 U/Pb, Lyons et al., 1997)
- DSn — Newburyport Complex. Light gray medium to coarse porphyritic granite to granodiorite (Late Silurian-Early Devonian. 418 ± 1 U/Pb, Lyons et al., 1997)

Metamorphic Rocks

Merrimack Group (Silurian ? to Ordovician ?)

Kittery Formation

- SOkc — Unit C. Intercalated light brown and light gray metasandstone and black phyllite (ratio 3:1)
- SOkb — Unit B. Light brown slightly calcareous metasandstone intercalated with thinly laminated phyllite (ratio 4:1)
- SOka — Unit A. Intercalated light brown metasandstone and phyllite with common primary structures and biotite phyllite (ratio 2:1); local rusty weathering metasandstone and phyllite (ratio 3:2) lack primary structures.
- SOe — Eliot Formation. Gray to green calcareous metasandstones intercalated with thin layers of dark brown to black phyllite (2:1 to 1:1)
- Sob — Berwick Formation. Purplish gray biotite granofels locally intercalated with calcsilicate layers.

Rye Complex (Ordovician to Late Proterozoic)

- OZrb — Breakfast Hill. White to light gray peraluminous granitic schist and gneiss
- OZrz — Rye Formation. Mylonitized and polymetamorphosed locally calcareous metasandstones, variably migmatized metapelites, and amphibolites

Appendix F

Driller's Log and Well Completion Reports

Cushing & Sons
Water Wells and Systems
www.cushingandsons.com

Geosphere, Inc. 3.22.21
ATTN: Mr. Ray Talkington
51 Portsmouth Avenue
Exeter, NH 03833 Email: rtalkington@geosprerenh.com ph 508-944-8765

RE: Drill logs – Weare Road, Seabrook

Well B (BOREHOLE #1/Upper) 77 ft. 10" Sch 40 casing, grouted

0- 28'	Sandy boney gravel	8" finish diameter
28- 55'	Hard packed gravel	25 ft. static level (3/8/21)
55-620'	Granite	

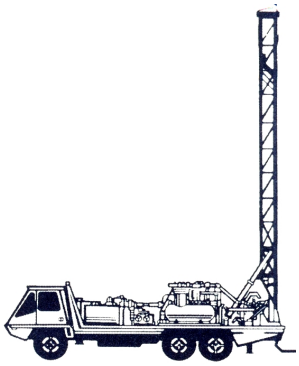
Depth	Yield gpm	Total Yield gpm
110-112'		
115-116'	30	30
209-210'		
216-217'	15	45
259-260'	35	80
497-498'	30	110
580-581'		
615-616'	110	215

Well A (BOREHOLE #2/Lower) 64 ft. 10" Sch 40 casing, grouted

0- 30'	Sandy boney gravel	10" finish diameter
30-39'	Hard packed gravel	18 ft. static level (3/19/21)
39-600	Granite with quartz	

Depth	Yield (gpm)	Total Yield (gpm)
92- 93'	5	5
112-113'	15	20
115-116'	50	70
134-136'	30	100
153-156'		

Office: 631 Rt. 12N, Keene, NH 03431 Mailing: PO Box 668, Walpole, NH 03608
Phone: 800-831-8883 603-352-8866 Fax: 603-357-8572



Cushing & Sons
Water Wells and Systems
www.cushingandsons.com

172-273’	10	110
272-275’	100+	250
328-330’	10+	260
510-512’	20	280
530-535’	30	300+

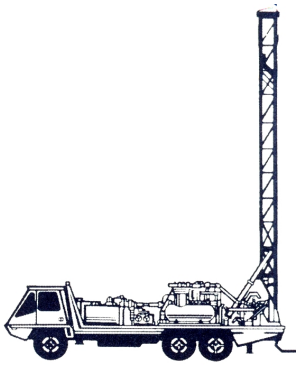
After hole opening from 8” to 10”, well yield estimated at 450gpm

Driller: Maurice LeClair
Rigs utilized: Reichdrill 690WS and Reichdrill 650WS Legend

Submitted,

Bart C. Cushing
NH Lic.# 249

Office: 631 Rt. 12N, Keene, NH 03431 Mailing: PO Box 668, Walpole, NH 03608
Phone: 800-831-8883 603-352-8866 Fax: 603-357-8572



Water Well Report

Well Id (WRB#):	**214.0159**	Date Completed:	**3/8/2021**
Name and Location:	**TOWN OF SEABROOK** **121 WEARE RD** **SEABROOK**	Total Depth:	**620 ft**
Mapit		Depth to Bedrock:	**55 ft**
Tax Map No:	**1**	Casing:	**77 ft**
Lot No:	**18-0**	Tested Yield:	**215 gal/min**
Type:	**BEDROCK (DRILLED)**	Static Water Level:	**25 ft**
Use:	**TEST / EXPLORATION; OTHER,PUBLIC WATER SUPPLY**	Measured Yield After Development:	

Well Driller

Driller License No:	**249**	Driller Well Id:	**1 WR**
Name and Address:	**CUSHING & SONS, INC.** **631 ROUTE 12** **WALPOLE NH 03608**	Current License Status:	**Active**
Email:	**BART@CUSHINGANDSONS.COM**	Phone Number:	**603-352-8866**

Water Well Report

Well Id (WRB#):	**214.0160**	Date Completed:	**3/19/2021**
Name and Location:	**TOWN OF SEABROOK** **121 WEARE RD** **SEABROOK**	Total Depth:	**600 ft**
Mapit		Depth to Bedrock:	**39 ft**
Tax Map No:	**1**	Casing:	**64 ft**
Lot No:	**18-0**	Tested Yield:	**450 gal/min**
Type:	**BEDROCK (DRILLED)**	Static Water Level:	**18 ft**
Use:	**TEST / EXPLORATION; OTHER,PUBLIC WATER SUPPLY**	Measured Yield After Development:	

Well Driller

Driller License No:	**249**	Driller Well Id:	**2 WR**
Name and Address:	**CUSHING & SONS, INC.** **631 ROUTE 12** **WALPOLE NH 03608**	Current License Status:	**Active**
Email:	**BART@CUSHINGANDSONS.COM**	Phone Number:	**603-352-8866**

Appendix G

VLF Survey Report

HAGER-RICHTER
GEOSCIENCE, INC.

VLF-EM SURVEY
121 WEARE ROAD
SEABROOK, NEW HAMPSHIRE

Prepared for:

Geosphere Environmental Management, Inc.
51 Portsmouth Ave.
Exeter, New Hampshire 03833

Prepared by:

Hager-Richter Geoscience, Inc.
8 Industrial Way - D10
Salem, New Hampshire 03079

File 20MH32
December 2020

HAGER-RICHTER
GEOSCIENCE, INC.

GEOPHYSICS FOR THE ENGINEERING COMMUNITY
SALEM, NEW HAMPSHIRE
Tel: 603.893.9944
FORDS, NEW JERSEY
Tel: 732.661.0555

December 22, 2020
File 20MH32

Matt Krapf, M.S.
Sr. Field Technician/GIS Specialist
Geosphere Environmental Management, Inc.
51 Portsmouth Ave.
Exeter, NH 03833

Phn: 603-773-0075, ext-17
Cell: 603-205-3403
Email: mkrapf@geospherenh.com

RE: VLF-EM Survey
121 Weare Road
Seabrook, New Hampshire

Dear Mr. Krapf:

In this report, we summarize the results of a very low frequency electromagnetics (VLF-EM) survey conducted by Hager-Richter Geoscience, Inc. (HRGS) at the above referenced site in Seabrook, New Hampshire for Geosphere Environmental Management, Inc. (GEM). The scope of work and area of interest were specified by GEM.

INTRODUCTION

The site is an undeveloped 21-acre parcel of land located at 121 Weare Road in Seabrook, New Hampshire. The general site location is shown in Figure 1. As part of a hydrogeologic investigation of the site, GEM requested a VLF-EM survey at the property to detect bedrock fracture zones for siting water supply wells at the site. GEM provided the results of a fracture trace analysis conducted of the parcel and described bedrock geology at the site and in the local vicinity.

OBJECTIVE

The objective of the surface geophysical survey was to detect, if possible, water-bearing bedrock fracture zones at the site.

THE SURVEY

The geophysical survey consisted of very low frequency electromagnetics (VLF-EM) and magnetic total field (Mag) measurements acquired along eleven (11) traverses totaling approximately 7,600 linear feet. The project was coordinated with Mr. Matt Krapf of GEM. Mr. Shawn Case, also of GEM, was present for the duration of the survey and specified the locations of the traverses. The traverses were cleared of brush and obstructions by GEM prior to the survey.

Michael Howley, P.G., of HRGS conducted the survey on December 2, 2020. Data analysis and interpretation were completed at the HRGS offices. Original data and field notes reside in the HRGS files and will be retained for a minimum of three (3) years.

The positions of the VLF-EM and Mag data stations were recorded using an integrated GPS receiver in the VLF-EM/Mag instrument. The locations of the VLF-EM and Mag survey lines are shown on Figure 2 relative the NH State Plan, NAD83 Datum in US survey feet.

EQUIPMENT & PROCEDURES

The geophysical survey was conducted using a GEM Systems GSM-19V VLF receiver equipped with an omni-directional Overhauser magnetometer. This unit is a microprocessor- controlled instrument that measures both the real and imaginary (analogous to in-phase and quadrature or tilt angle and ellipticity) components of the secondary magnetic field for the VLF- EM measurements. The GSM-19V measures the distortion of the three components of the secondary magnetic field from up to three VLF frequencies at the same time to calculate the real and imaginary values. Magnetic field measurements were recorded along with the VLF-EM data for detecting large-scale magnetic anomalies caused by changes in bedrock lithology, as well as the possible presence of conductive cultural features (barbed wire fences, buried pipes, etc.) VLF-EM and Mag data were recorded at stations spaced approximately 20 feet apart along the survey lines.

VLF-EM. The principle of VLF-EM subsurface exploration is simple. An excellent discussion of the physics of the VLF method is given by McNeill and Labson.[1] At distances greater than a few tens of miles from a transmitter, the magnetic field lines due to the radio wave transmission are concentric circles about the transmitter. In one theory, the magnetic fields cause electric currents to flow in subsurface conductors. In another, more recent, theory, the subsurface currents flow along interfaces between bodies of differing conductivity. (The interpretation, however, is much the same for both theories.) Such induced currents, in turn, produce secondary magnetic fields which can be measured and interpreted in terms of the spatial variation of electrical conductivity. The strength of the incident, also called primary, magnetic field in the earth decreases with

1 McNeill JD and Labson VF, Geological Mapping Using VLF Radio Fields, in Nabighian MN, editor, Electromagnetic Methods in Applied Geophysics, Vol 2, Application, Part B, pp 521-640, published by Soc. of Exploration Geophysicists, Tulsa, Oklahoma, 1987.

depth, and, therefore, the induced currents decrease with depth. Thus, the method is sensitive to conductivity changes to depths of about 100 to several hundred feet — and the exact value depends on the frequency of the signal and the electrical conductivity of the subsurface.

VLF-EM is a good geophysical method to explore for fracture zones because water - bearing, mineralized, or clay filled fracture zones are electrically conducting. The electrical conductivity of bedrock depends on the porosity and electrical conductivity of the fluid filling the pores. In bedrock, the rock outside fracture zones is highly resistive, commonly >3,000 Ohm- m, whereas that of a saturated or mineralized fracture zone is commonly no more than a few Ohm-m.

Several radio transmitters operate throughout the world in the so-called very low frequency (VLF) range, 15-40 kHz, and are used for marine navigation, communication with submersed submarines, and other purposes. Prior to acquiring data in each area, the frequency spectrum is scanned to detect stations operating with sufficient signal strength to acquire VLF- EM data. The VLF station that is emitting the strongest signal in a direction that is suitable for data acquisition is chosen. For this project, three VLF-EM transmitters were used, a U.S. Navy transmitter located in Cutler, Maine operating at a frequency of 24.0 kHz (call sign NAA), a U.S. Navy transmitter located in Jim Creek, Washington operating at a frequency of 24.8 kHz (call sign NLK), and a U.S. Navy transmitter located in Aguada, Puerto Rico operating at a frequency of 40.8 kHz (call sign NAU).

The real and imaginary components (analogous to in-phase and quadrature or tilt angle and ellipticity) of the VLF-EM field are used for the detection of water bearing bedrock fractures. The data are filtered using the filter described by Fraser[2] and are plotted in profile format. The Fraser filter phase shifts the VLF anomalies by 90 degrees to place an anomaly peak over the location of the anomaly-causing conductive object. Thus, the positions of conductive anomalies are recognized in Fraser filtered VLF-EM data by positive peaks in the filtered real (in-phase or tilt angle) component. Such anomalies indicate subsurface regions along a VLF survey line as having increased electrical conductivity. The 'highs' are then correlated between VLF survey lines and connected to form zones of increased conductivity. Because fracture zones of increased hydraulic permeability or mineralized fracture zones in bedrock are likely to have increased electrical conductivity, such anomalies are excellent guides to such zones.

The imaginary (quadrature-phase or ellipticity) component of the VLF-EM field is used to help determine the type of conductive body present. In general, a filtered peak in the imaginary component corresponding to a filtered positive peak in the real component indicates a conductive feature, possibly a mineralized or clay filled fracture. A filtered low in the imaginary component corresponding to a filtered positive peak in the real component indicates a possible water-bearing fracture.

Mag. The magnetic survey was conducted using an omni-directional Overhauser magnetometer sensor coupled to the GSM-19V. The Overhauser magnetometer has a sensitivity of 0.022 nT @

2 Fraser DC, 1969, Contouring of VLF-EM Data, Geophysics 34, 958.

1 Hz, a resolution of 0.01 nT, and an absolute accuracy of +/- 0.1 nT. The total magnetic field strength is measured by the instrument at each VLF-EM data station. Magnetic field data are most commonly presented as contour maps.

A Mag survey measures lateral variations in the earth's magnetic field which can be caused by the presence of ferrous metal objects, geological changes, and man-made magnetic fields. High-frequency variations in the total magnetic field caused by geomagnetic storm activity on time periods of seconds to tens of minutes as well as diurnal variations in the total magnetic field at 12 to 24 hour time periods can introduce unwanted noise in the Mag data. For the purposes of this project (detecting possible geologic changes), the noise caused by diurnal variations and geomagnetic fluctuations was considered relatively minor and was not corrected for.

LIMITATIONS OF THE METHODS

VLF-EM. VLF-EM data are subject to interference from such cultural features as buildings, fencing, underground pipelines, and other subsurface conductors, and underground and overhead power lines. Thus, for some settings, the use of this method might be difficult if not inappropriate. For the subject sites, few cultural interferences were present, but where present, they are marked on the individual profiles.

There is a "trade off" to be done to obtain the best orientation of the survey lines. One "requirement" is that the lines be roughly perpendicular to the fracture zone identified in the fracture trace analysis or identified by any other means. The other "requirement" is that the survey lines be roughly perpendicular to the direction of the source transmitter from the site. In practice, one can usually meet these "requirements" within 30o, and that requirement was met for the subject site.

Survey lines should be located with a precision of at least 5 feet to relate the data obtained along any line to the other data and to place the data on the ground. With this precision, the locations of any fractures detected can be recovered to about 5 feet along the lines.

Mag. The data recorded in magnetic surveys are affected by all ferrous metal objects. Steel objects above ground, such as trailers, fences, and buildings, can so influence the magnetic field that the effects of buried metal objects, if any, at the same location are "masked." Thus, where magnetic anomalies can be attributed to surface objects, the presence or absence of buried metal objects cannot be determined from the magnetic data alone.

Detection and identification should be clearly differentiated. Detection is the recognition of the presence of a magnetic object, and the magnetic method is excellent for such purposes.

Identification, on the other hand, is determination of the nature of the causative body (i.e., what is the body -- a cache of drums, UST, automobile, white goods, etc.?), and the magnetic method cannot identify the buried metal object.

RESULTS

The surface geophysical survey consisted of eleven (11) very low frequency electromagnetics (VLF-EM) and magnetic (Mag) profiles totaling approximately 7,600 linear feet. VLF-EM and Mag data stations were recorded at approximately 20-foot intervals along the eleven profiles. Figure 2 shows the locations of the data stations on an aerial photo of the property. Plate 1 shows color contour plots of the Fraser-filtered VLF-EM data acquired along the N-S and WNW-ESE oriented profiles for the three transmitting stations. Figure 3 is a color contour plot of the total magnetic field measurement and the integrated interpretation of possible bedrock fracture zones. Figure 4 shows the integrated interpretation of the VLF-EM and Mag data along with the fracture trace analysis (FTA) of the site provided by GEM.

The upper portion of Plate 1 shows a map-view of color-contoured Fraser-filtered VLF-EM real component data on the N-S oriented and WNW-ESE oriented profiles for the three transmitting stations located in Jim Creek, Washington (24.8 kHz – NML), Aguada, Puerto Rico (40.8 kHz – NAU), and Cutler, Maine (24.0 kHz – NAA). The compass shown on the three panels of Plate 1 indicates the orientation of the transmitting station relative to the site, the orientations of theoretically detectable bedrock fracture zones for the transmitting station (white areas), and the orientations of bedrock fracture zones not usually detectable for the transmitting station (red hatched areas).

As discussed above, the positions of conductive anomalies are recognized in Fraser filtered VLF-EM data by positive peaks in the filtered real component. Such anomalies indicate subsurface regions of increased electrical conductivity, generally indicative of possible bedrock fracture zones in the upper 500 feet. Whether the detected fractures zones are water-bearing at depths greater than 500 feet cannot be determined by the method.

Several possible bedrock fracture zones were detected based on VLF-EM data. Thirty (30) possible water-bearing bedrock fracture zones are detected on the basis of the VLF-EM data and are indicated on the color-contour plot of Fraser-filtered real component data shown in Plate 1 on the N-S and WNW-ESE oriented transects for each of the three frequencies monitored, as well as in the integrated interpretations shown in Figures 3 and 4. Areas of interference in the VLF-EM data are attributed to the high-voltage power lines located south of the site. Areas where the VLF-EM data was interpreted to be significantly impacted are shown on Plate 1 for each orientation and transmitting station.

Two prominent trends in the total magnetic field data not attributed to surface or subsurface metal are evident in the study area, as shown in Figure 3, left side. The magnetic anomalies trend NE-SW and are coincident with or close to possible fracture zones identified based on the VLF-EM data. The magnetic anomalies are attributed to either a possible geologic contact between two lithologies with different magnetic properties, or the presence of intrusive dikes. The locations of the magnetic anomalies are shown in Figure 3, right side as well as well as on the FTA provided by GEM shown in Figure 4.

CONCLUSIONS

Based on the results of a very low frequency electromagnetics (VLF-EM) survey conducted by Hager-Richter Geoscience, Inc. (HRGS) at a property located at 121 Weare Road in Seabrook, New Hampshire for Geosphere Environmental Management, Inc., we conclude that:

- Thirty (30) possible bedrock fracture zones were detected based on VLF-EM data. The possible bedrock fracture zones are most commonly oriented NE-SW (n=17), with several NW-SE, E-W, and N-S features also detected.

- Two magnetic anomalies not attributed to the presence of metal objects are interpreted to be caused by a possible geologic contact between two different lithologies or the presence of intrusive dikes.

LIMITATIONS ON USE OF THE REPORT

This Report was prepared for the exclusive use of Geosphere Environmental Management, Inc. (Client). No other party shall be entitled to rely on this Report or any information, documents, records, data, interpretations, advice, or opinions given to Client by Hager-Richter Geoscience, Inc. (HRGS) in the performance of its work. The Report relates solely to the specific project for which HRGS has been retained and shall not be used or relied upon by Client or any third party for any variation or extension of this project, any other project or any other purpose without the express written permission of HRGS. Any unpermitted use by Client or any third party shall be at Client's or such third party's own risk and without any liability to HRGS.

HRGS has used reasonable care, skill, competence, and judgment in the preparation of this Report consistent with professional standards for those providing similar services at the same time, in the same locale, and under like circumstances. Unless otherwise stated, the work performed by HRGS should be understood to be exploratory and interpretational in character and any results, findings or recommendations contained in this Report or resulting from the work proposed may include decisions which are judgmental in nature and not necessarily based solely on pure science or engineering. It should be noted that our conclusions might be modified if subsurface conditions were better delineated with additional subsurface exploration including, but not limited to, test pits, soil borings with collection of soil and water samples, and laboratory testing.

Except as expressly provided in this limitations section, HRGS makes no other representation or warranty of any kind whatsoever, oral or written, expressed or implied; and all implied warranties of merchantability and fitness for a particular purpose, are hereby disclaimed.

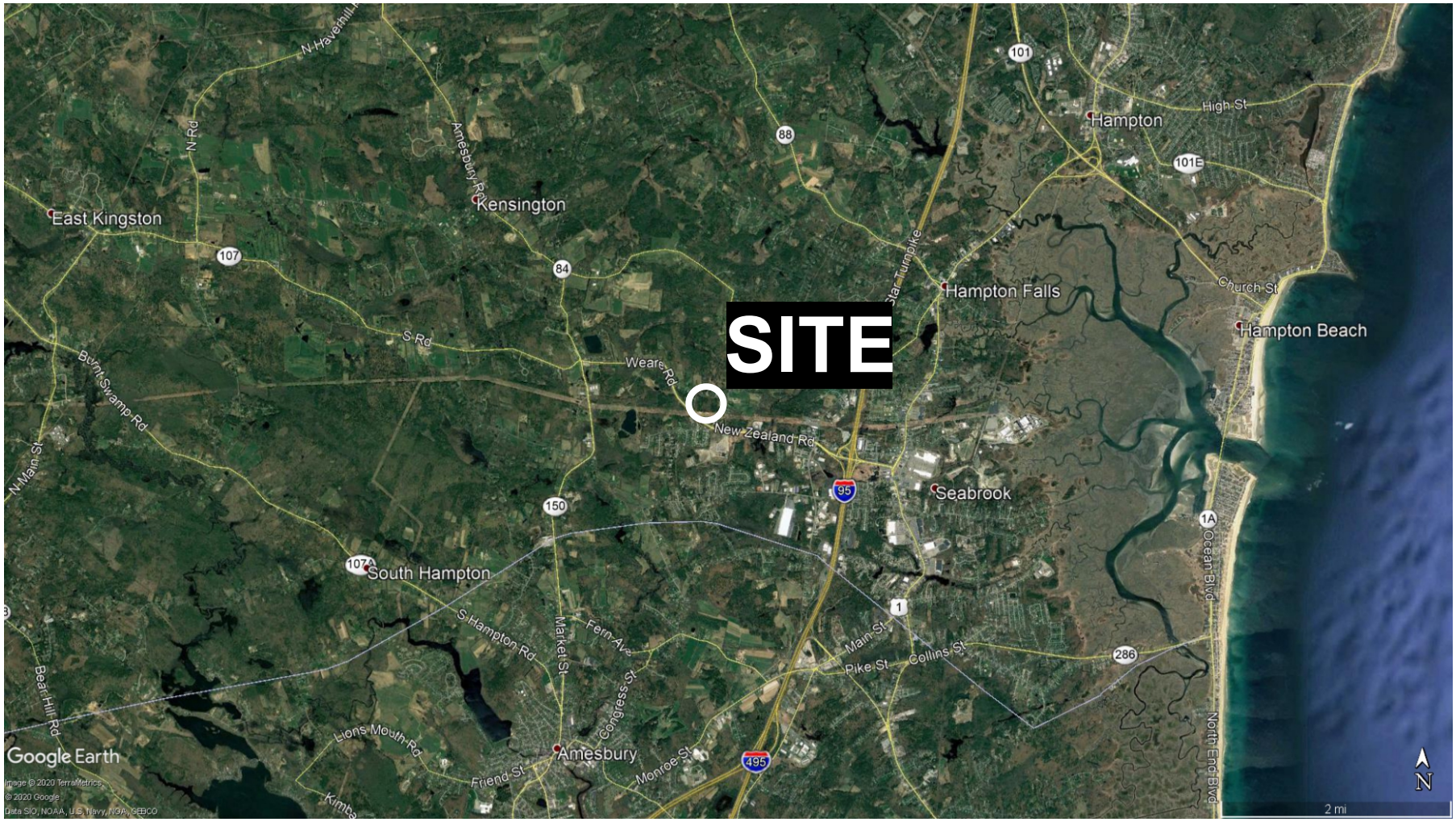
If you have any questions or comments on this letter Report, please contact us at your convenience. It has been a pleasure to work with GEM on this project. We look forward to working with you again soon.

Sincerely,
HAGER-RICHTER GEOSCIENCE, INC.

Michael Howley, P.G.
Geophysicist

Jeffrey Reid, P.G.
Owner / Principal Geophysicist

Attachments: Figures 1 through 4
Plate 1



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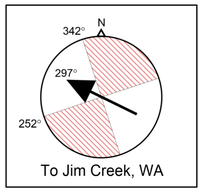
NOTES
1. Modified from Google Earth aerial photograph

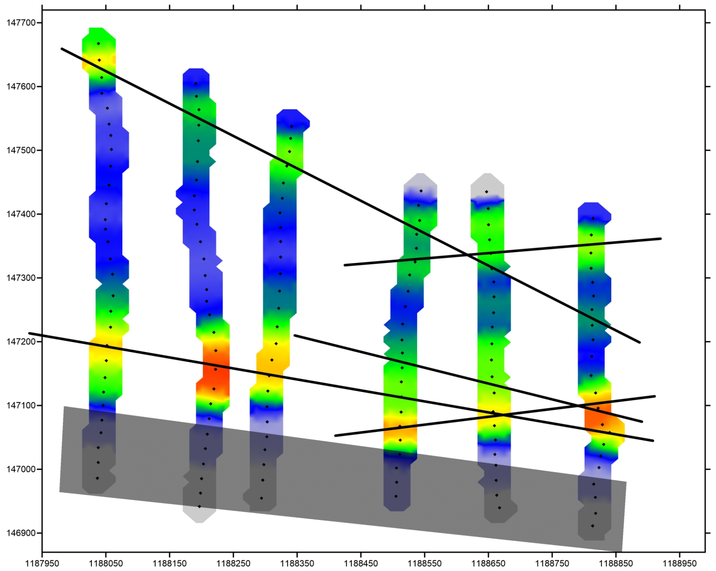
Figure 1
General Site Location
121 Weare Road
Seabrook, New Hampshire

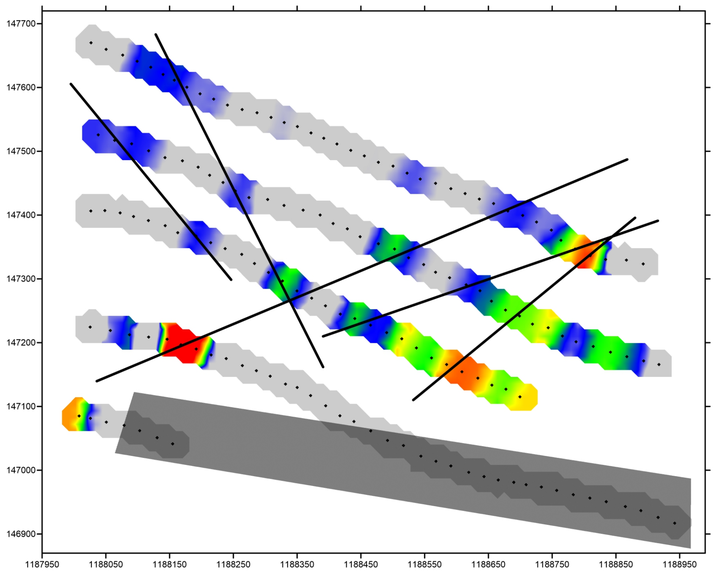
FILE 20MH32	December 2020

HAGER–RICHTER GEOSCIENCE, INC.
Salem, NH | Fords, NJ

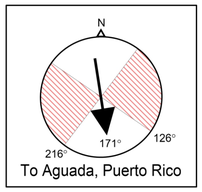
VLF Transmitter NLK
Jim Creek, WA

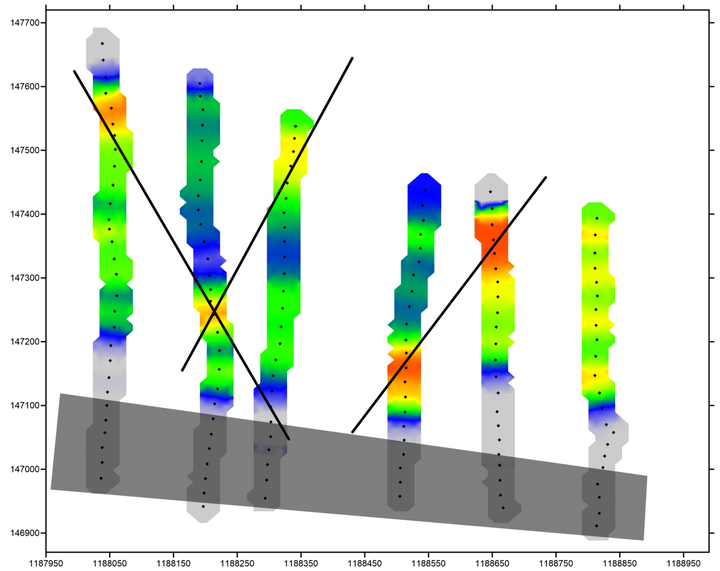


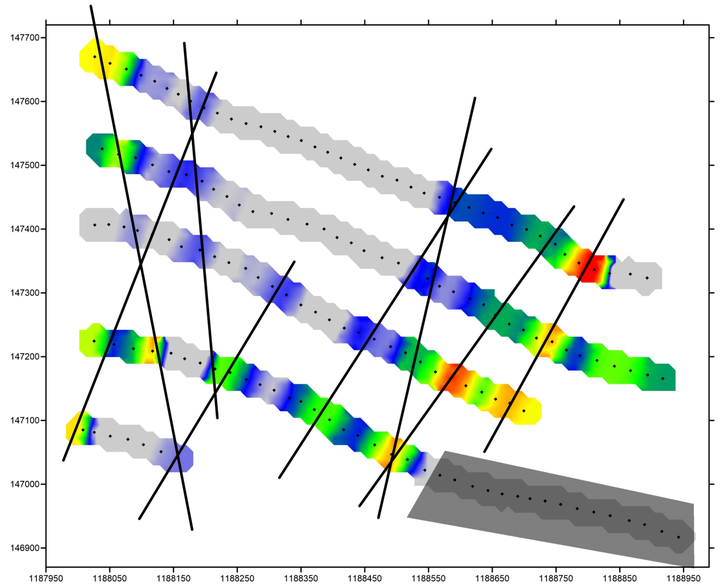




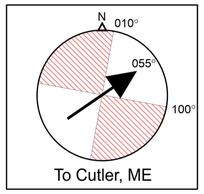
VLF Transmitter NAU
Agauda, P.R.

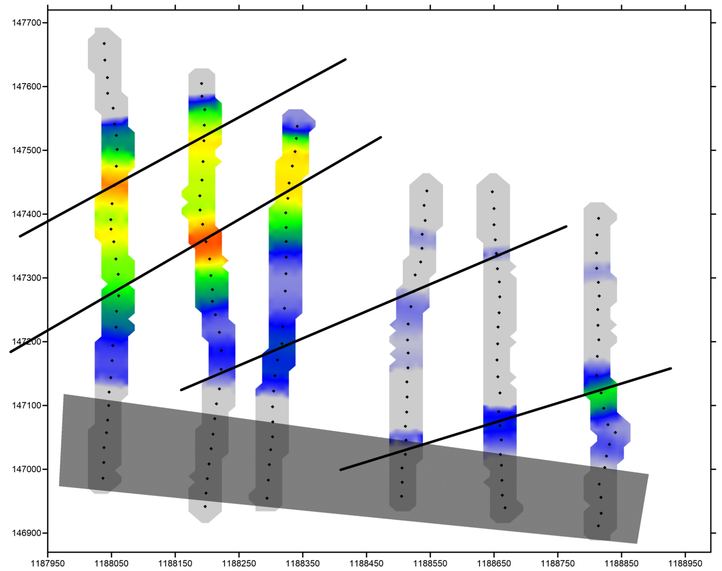


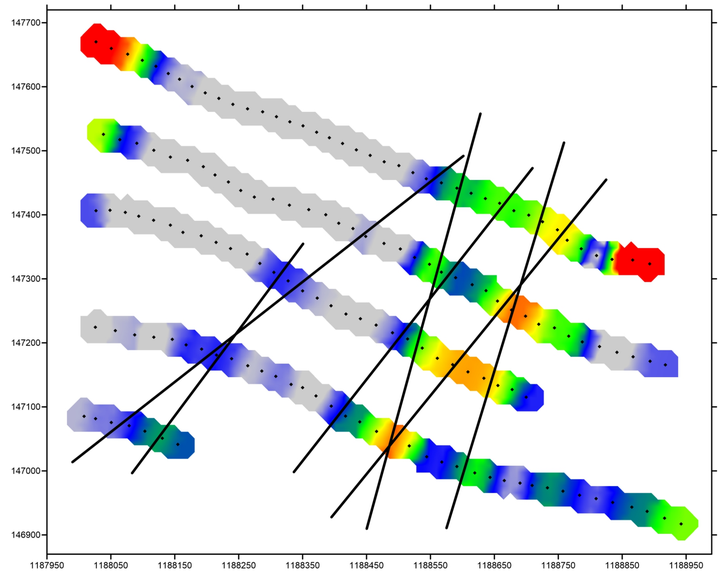




VLF Transmitter NAA
Cutler, ME

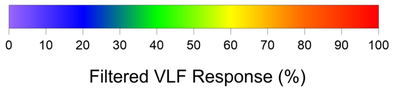






NOTES
1. VLF–EM data were acquired with a GEM Systems GSM–19V VLF receiver equipped with an omni–directional Overhauser magnetometer

2. Coordinates shown are relative to NH State Plane, Zone 2800, NAD83 Datum in US survey feet



HORIZONTAL
SCALE (feet)

LEGEND

POSSIBLE BEDROCK FRACTURE ZONE

AREAS WHERE VLF–EM DATA LIKELY IMPACTED BY POWER LINES

Plate 1
VLF–EM Survey Results
121 Weare Road
Seabrook, New Hampshire

FILE 20MH32	December 2020

HAGER–RICHTER GEOSCIENCE, INC.
Salem, NH | Fords, NJ

HORIZONTAL
SCALE (feet)

0 75 150 300

N

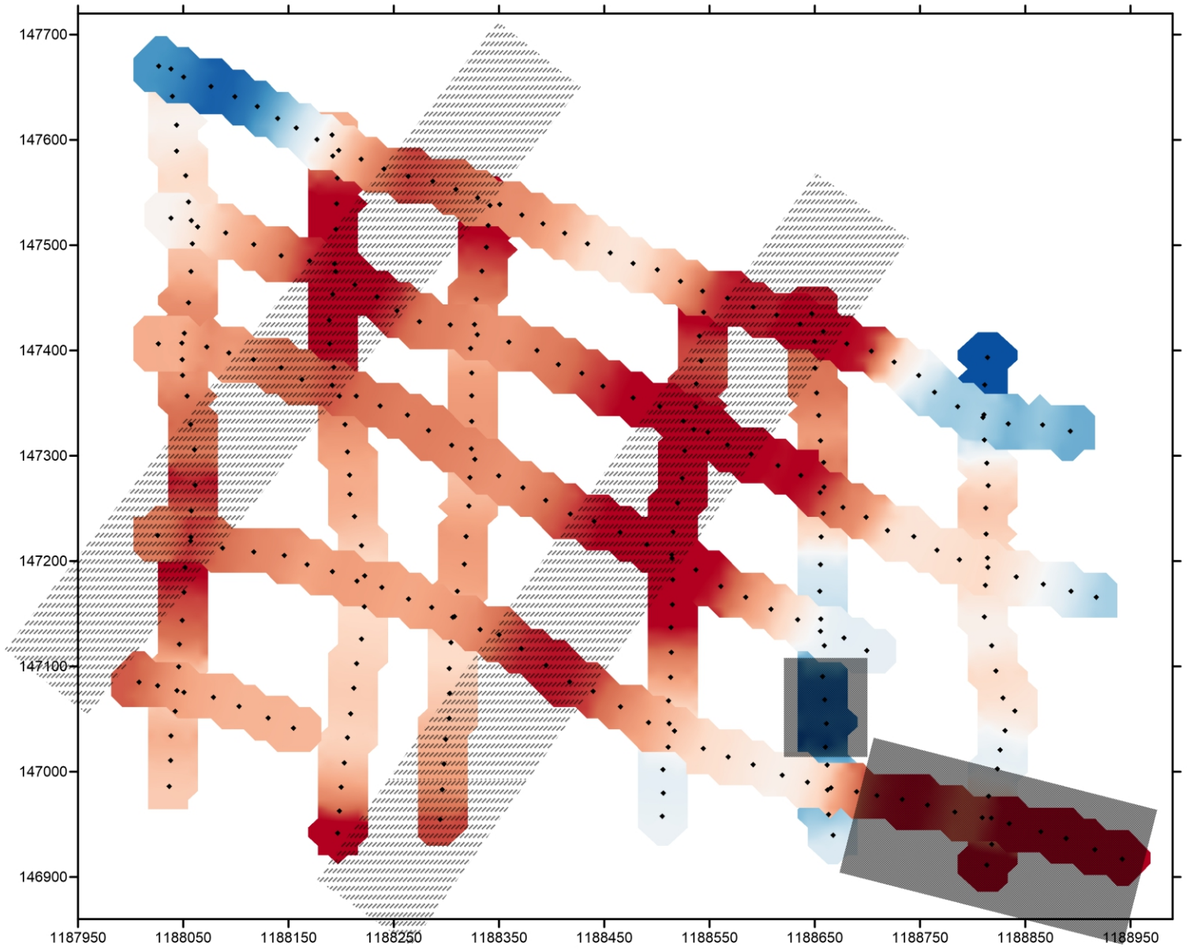
NOTES
1. Modified from Google Earth aerial photograph

Figure 2
VLF–EM Data Station Locations
121 Weare Road
Seabrook, New Hampshire

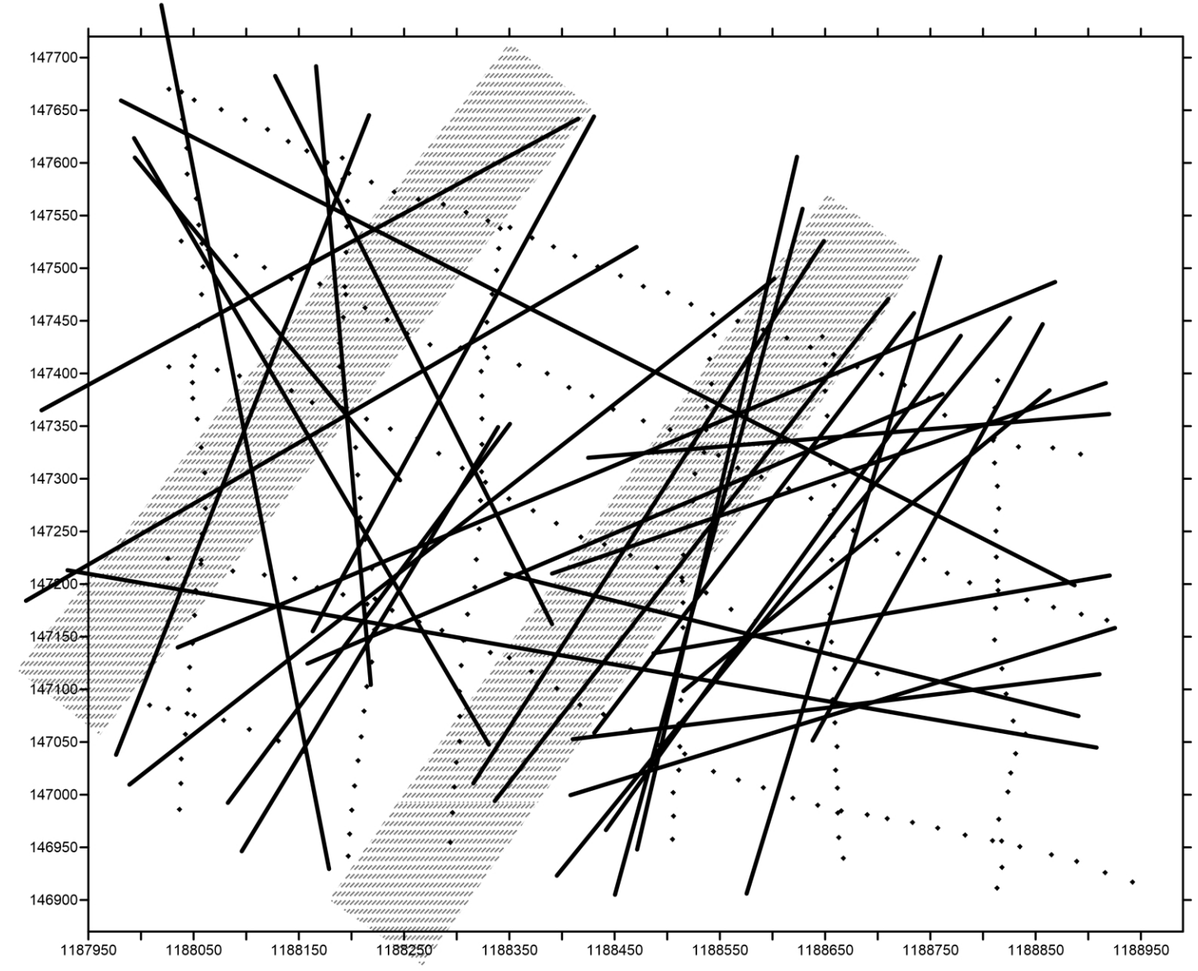
FILE 20MH32	December, 2020

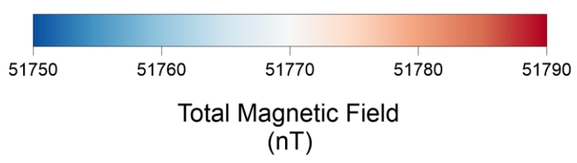
HAGER–RICHTER GEOSCIENCE, INC.
Salem, NH | Fords, NJ

Total Magnetic Field



Combined Interpretation





HORIZONTAL
SCALE (feet)

0 100 200 400

LEGEND

POSSIBLE LINEAR MAGNETIC ANOMALY

POSSIBLE BEDROCK FRACTURE ZONE

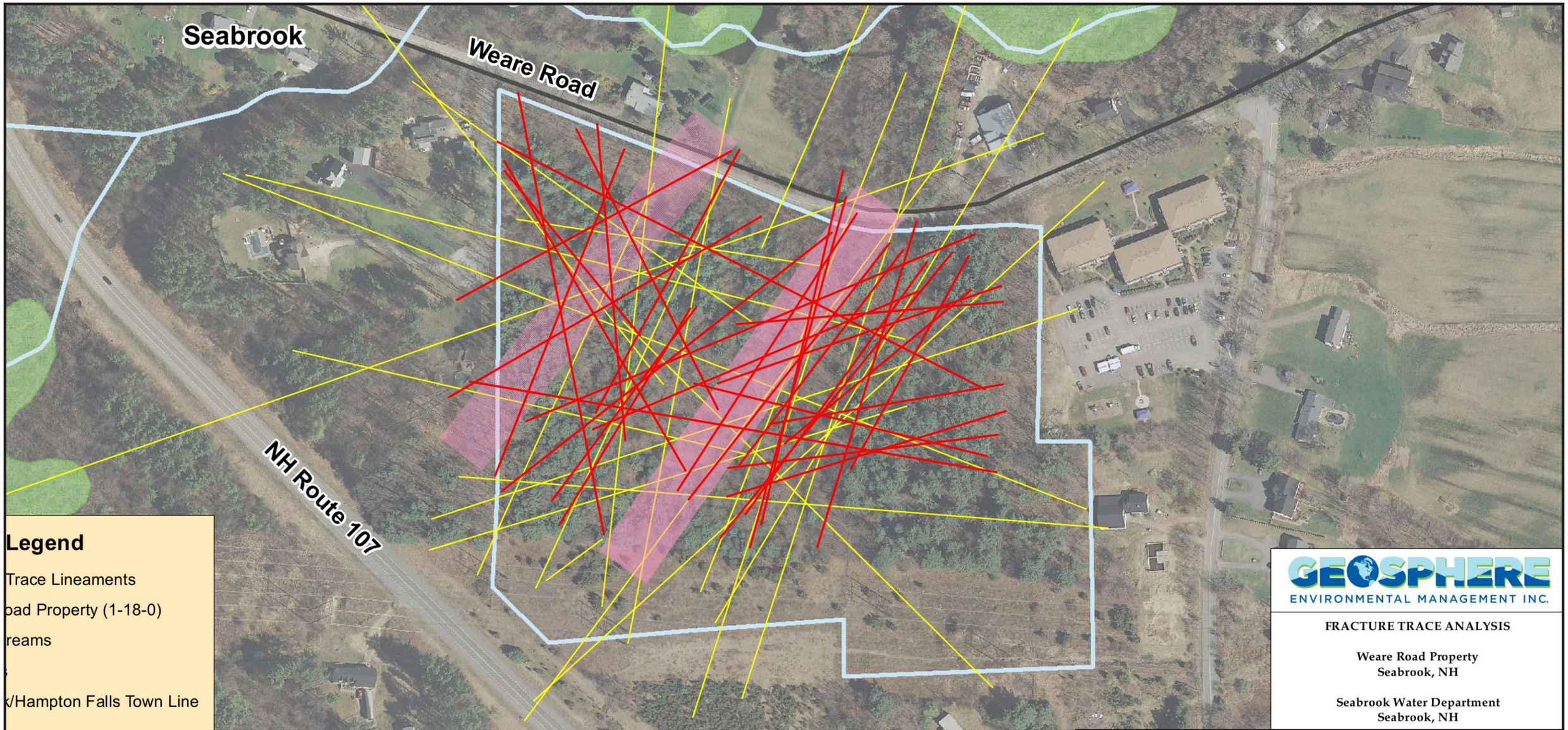
AREAS WHERE MAG DATA LIKELY IMPACTED BY POWER LINES AND/OR BARBED WIRE FENCE

NOTES
1. Mag data were acquired with a GEM Systems GSM-19V VLF receiver equipped with an omni-directional Overhauser magnetometer
2. Coordinates shown are relative to NH State Plane, Zone 2800, NAD 1983 Datum in US survey feet

Figure 3
Mag Data & Combined Interpretation
121 Weare Road
Seabrook, New Hampshire

FILE 20MH32	December 2020

HAGER-RICHTER GEOSCIENCE, INC.
Salem, NH | Fords, NJ



HORIZONTAL SCALE (feet)

0 125 250 500

LEGEND

POSSIBLE LINEAR MAGNETIC ANOMALY

POSSIBLE BEDROCK FRACTURE ZONE (VLF–EM)

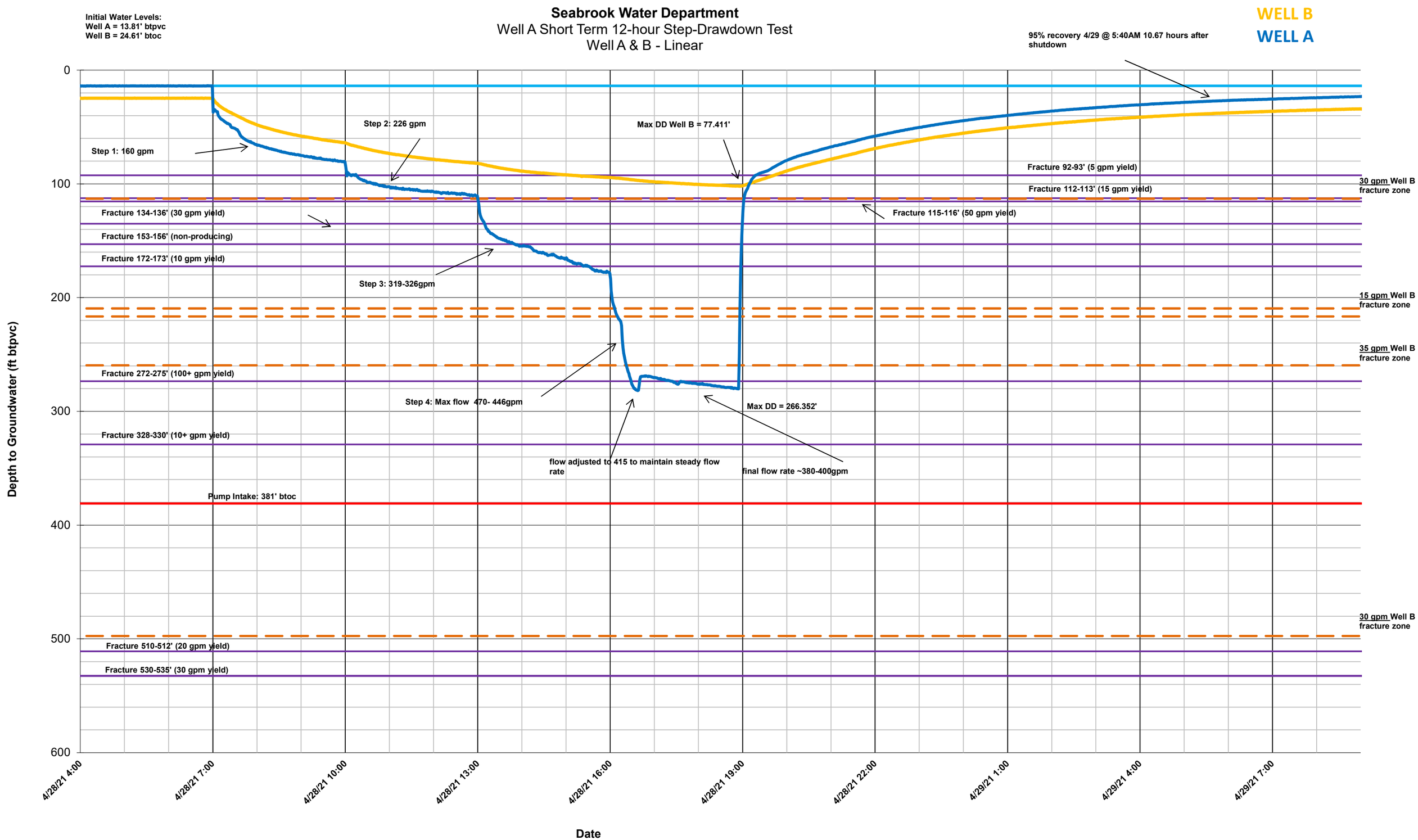
Figure 4
Combined Interpretation & FTA
121 Weare Road
Seabrook, New Hampshire

FILE 20MH32 | December 2020

HAGER–RICHTER GEOSCIENCE, INC.
Salem, NH | Fords, NJ

Appendix H

Short-Term Step Test Graphs

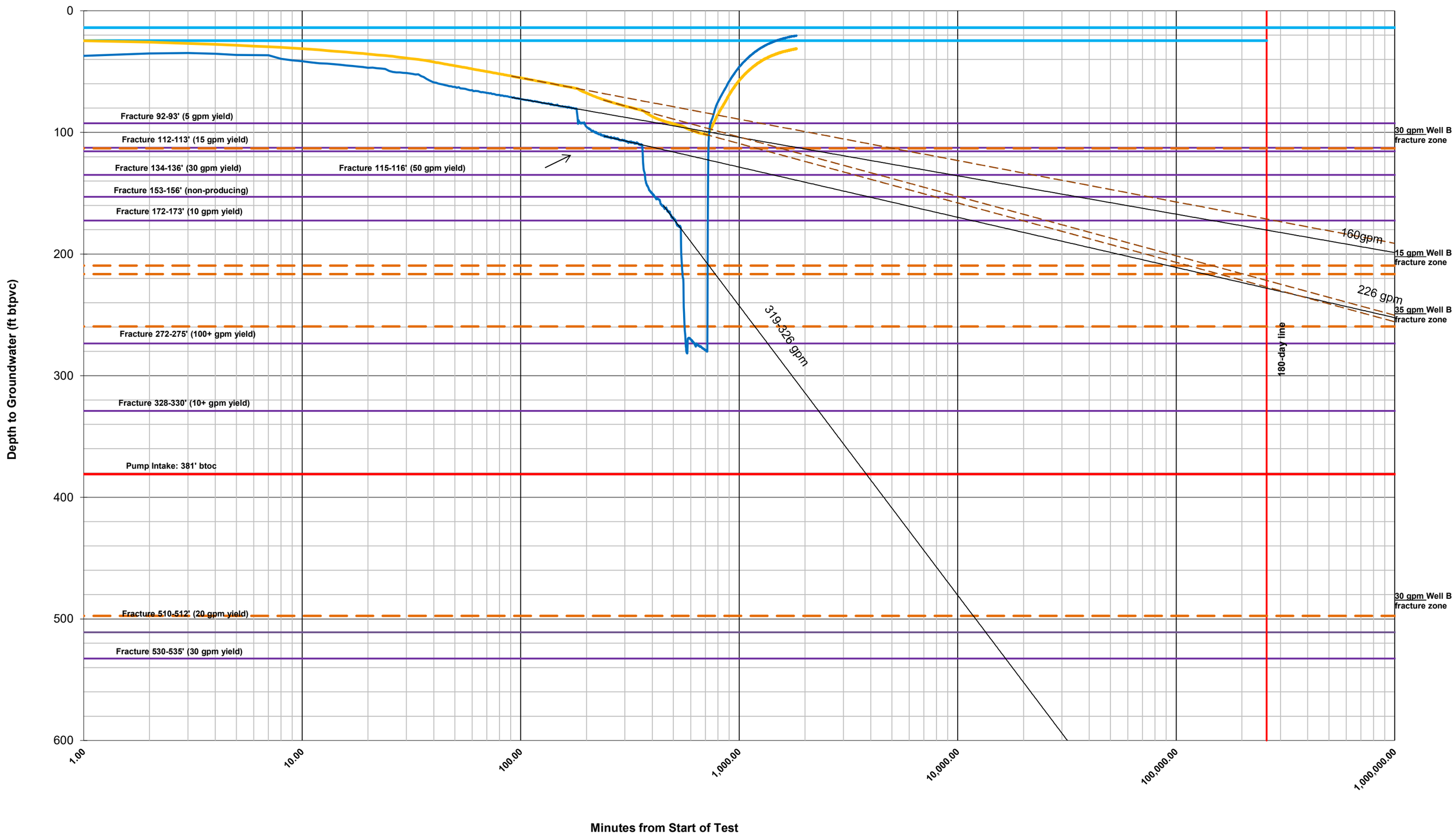


Geosphere Environmental Management, Inc.

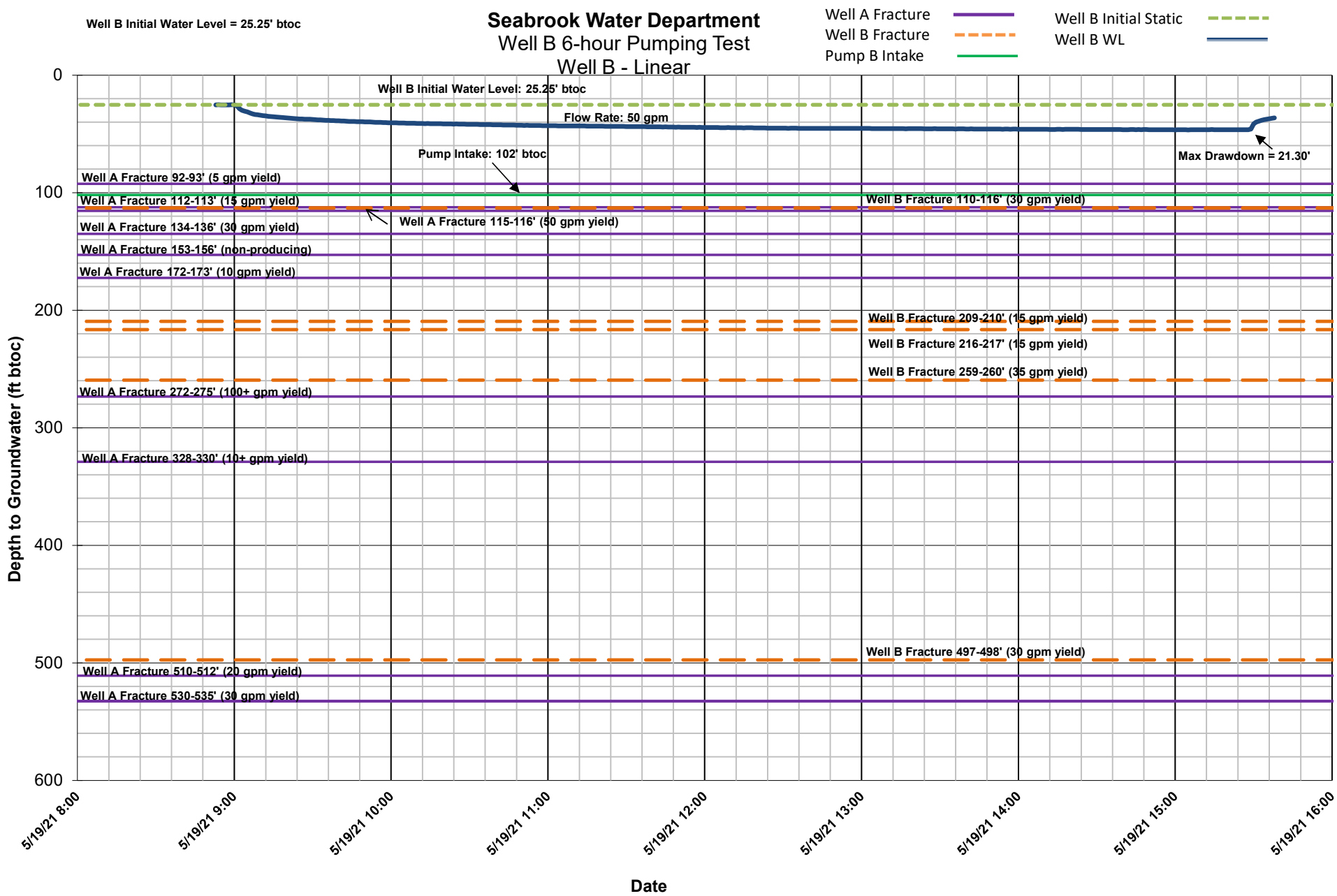
Seabrook Water Department
Well A Short Term 12-hour Step-Drawdown Test
Well A & B - Log

Initial Water Levels:
Well A = 13.81' btpvc
Well B = 24.61' btoc

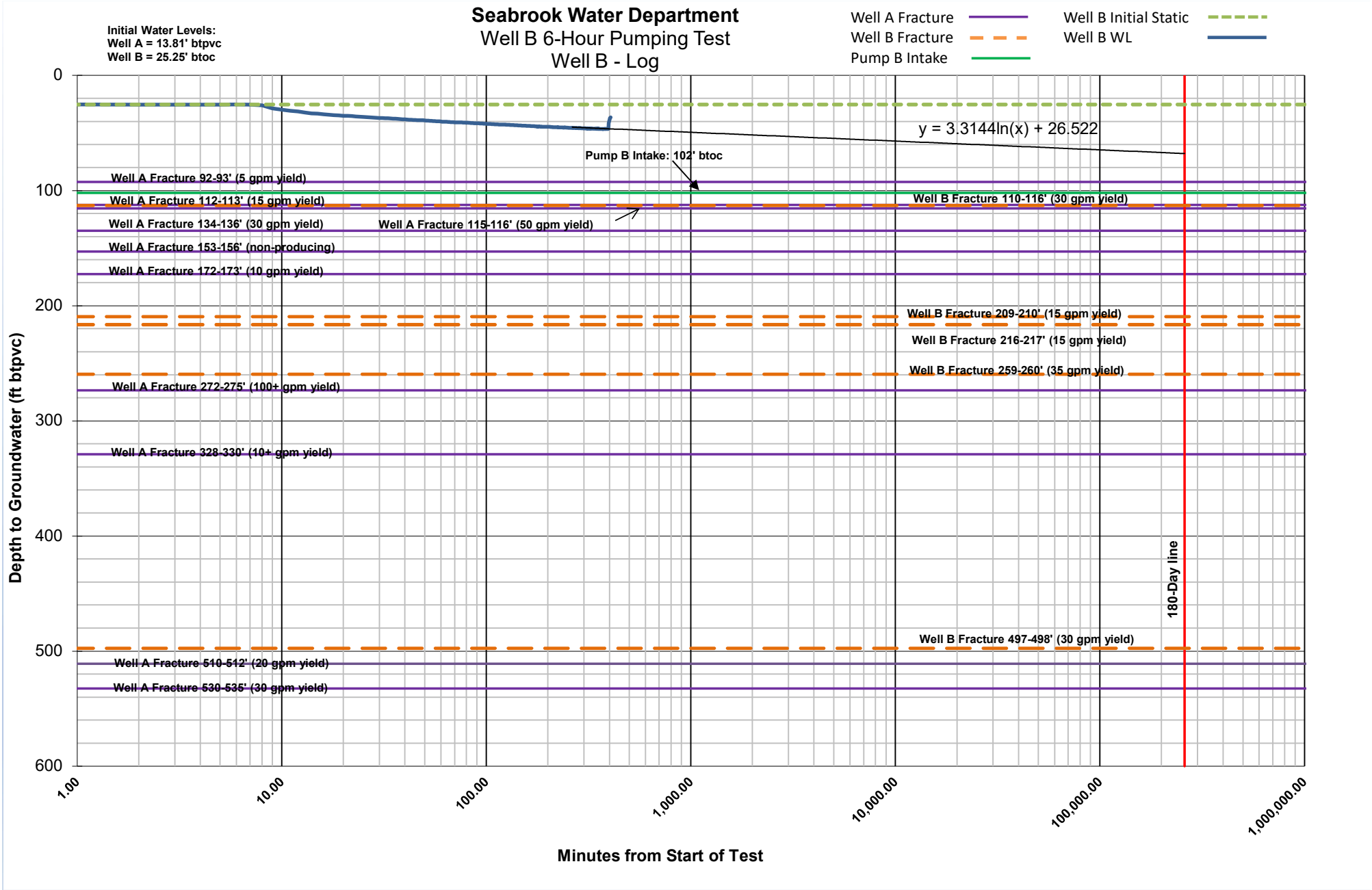
WELL B
WELL A



Geosphere Environmental Management, Inc.



Geosphere Environmental Management, Inc.



Geosphere Environmental Management, Inc.

Appendix I

Preliminary Groundwater Quality Results

Eastern Analytical, Inc.

professional laboratory and drilling services

Matt Krapf
Geosphere Environmental Management Inc.
51 Portsmouth Avenue
Exeter , NH 03833

Laboratory Report for:

Eastern Analytical, Inc. ID: 225365
Client Identification: Seabrook Weare Road Well A Step Test
Date Received: 4/29/2021

Enclosed are the analytical results per the Chain of Custody for sample(s) in the referenced project. All analyses were performed in accordance with our QA/QC Program, NELAP and other applicable state requirements. All quality control criteria was within acceptance criteria unless noted on the report pages. Results are for the exclusive use of the client named on this report and will not be released to a third party without consent.

The following information is contained within this report: Sample Conditions summary, Analytical Results/Data, Quality Control data (if requested) and copies of the Chain of Custody. This report may not be reproduced except in full, without the written approval of the laboratory.

The following standard abbreviations and conventions apply to all EAI reports:

< : "less than" followed by the reporting limit
> : "greater than" followed by the reporting limit
%R : % Recovery

Certifications:
Eastern Analytical, Inc. maintains certification in the following states: Connecticut (PH-0492), Maine (NH005), Massachusetts (M-NH005), New Hampshire/NELAP (1012), Rhode Island (269), Vermont (VT1012), New York (12072), West Virginia (9910C) and Alabama (41620). Please refer to our website at www.easternanalytical.com for a copy of our certificates and accredited parameters.

References:

- EPA 600/4-79-020, 1983
- Standard Methods for Examination of Water and Wastewater, 20th, 21st, 22nd & 23rd edition or noted revision year.
- Test Methods for Evaluating Solid Waste SW 846 3rd Edition including updates IVA and IVB
- Hach Water Analysis Handbook, 4th edition, 1992

If you have any questions regarding the results contained within, please feel free to contact customer service. Unless otherwise requested, we will dispose of the sample(s) 6 weeks from the sample receipt date.

We appreciate this opportunity to be of service and look forward to your continued patronage.

Sincerely,

Lorraine Olashaw, Lab Director | 6.4.21 Date | 97 # of pages (excluding cover letter)

SAMPLE CONDITIONS PAGE

EAI ID#: **225365**

Client: **Geosphere Environmental Management Inc.**

Client Designation: **Seabrook Weare Road Well A Step Test**

Temperature upon receipt (°C): 2.7 **Received on ice or cold packs (Yes/No): Y**

Acceptable temperature range (°C): 0-6

Lab ID	Sample ID	Date Received	Date/Time Sampled		Sample Matrix	% Dry Weight	Exceptions/Comments (other than thermal preservation)
225365.01	New Well	4/29/21	4/28/21	17:15	aqueous		Adheres to Sample Acceptance Policy
225365.02	Trip Blanks	4/29/21	4/28/21	17:15	aqueous		Adheres to Sample Acceptance Policy

All results contained in this report relate only to the above listed samples.

Unless otherwise noted:

- *Hold times, preservation, container types, and sample conditions adhered to EPA Protocol.*
- *Solid samples are reported on a dry weight basis, unless otherwise noted. pH/Corrosivity, Flashpoint, Ignitability, Paint Filter, Conductivity and Specific Gravity are always reported on an "as received" basis.*
- *Analysis of pH, Total Residual Chlorine, Dissolved Oxygen and Sulfite were performed at the laboratory outside of the recommended 15 minute hold time.*
- *Samples collected by Eastern Analytical, Inc. (EAI) were collected in accordance with approved EPA procedures.*

Eastern Analytical, Inc. www.easternanalytical.com | 800.287.0525 | customerservice@easternanalytical.com

LABORATORY REPORT

EAI ID#: **225365**

Client: **Geosphere Environmental Management Inc.**

Client Designation: **Seabrook Weare Road Well A Step Test**

Sample ID:	New Well	Trip Blanks
Lab Sample ID:	225365.01	225365.02
Matrix:	aqueous	aqueous
Date Sampled:	4/28/21	4/28/21
Date Received:	4/29/21	4/29/21
Units:	ug/L	ug/L
Date of Analysis:	5/4/21	5/4/21
Analyst:	AM	AM
Method:	524.2	524.2
Dilution Factor:	1	1
Dichlorodifluoromethane	< 0.5	< 0.5
Chloromethane	< 0.5	< 0.5
Vinyl chloride	< 0.5	< 0.5
Bromomethane	< 0.5	< 0.5
Chloroethane	< 0.5	< 0.5
Trichlorofluoromethane	< 0.5	< 0.5
Diethyl Ether	< 5	< 5
Acetone	< 10	< 10
1,1-Dichloroethene	< 0.5	< 0.5
tert-Butyl Alcohol (TBA)	< 30	< 30
Methylene chloride	< 0.5	< 0.5
Carbon disulfide	< 2	< 2
Methyl-t-butyl ether(MTBE)	< 0.5	< 0.5
Ethyl-t-butyl ether(ETBE)	< 0.5	< 0.5
Isopropyl ether(DIPE)	< 0.5	< 0.5
tert-amyl methyl ether(TAME)	< 0.5	< 0.5
trans-1,2-Dichloroethene	< 0.5	< 0.5
1,1-Dichloroethane	< 0.5	< 0.5
2,2-Dichloropropane	< 0.5	< 0.5
cis-1,2-Dichloroethene	< 0.5	< 0.5
2-Butanone(MEK)	< 5	< 5
Bromochloromethane	< 0.5	< 0.5
Tetrahydrofuran(THF)	< 5	< 5
Chloroform	< 0.5	< 0.5
1,1,1-Trichloroethane	< 0.5	< 0.5
Carbon tetrachloride	< 0.5	< 0.5
1,1-Dichloropropene	< 0.5	< 0.5
Benzene	< 0.5	< 0.5
1,2-Dichloroethane	< 0.5	< 0.5
Trichloroethene	< 0.5	< 0.5
1,2-Dichloropropane	< 0.5	< 0.5
Dibromomethane	< 0.5	< 0.5
Bromodichloromethane	< 0.5	< 0.5
4-Methyl-2-pentanone(MIBK)	< 5	< 5
cis-1,3-Dichloropropene	< 0.3	< 0.3
Toluene	< 0.5	< 0.5
trans-1,3-Dichloropropene	< 0.3	< 0.3
1,1,2-Trichloroethane	< 0.5	< 0.5
2-Hexanone	< 5	< 5
Tetrachloroethene	< 0.5	< 0.5
1,3-Dichloropropane	< 0.5	< 0.5
Dibromochloromethane	< 0.5	< 0.5
1,2-Dibromoethane(EDB)	< 0.5	< 0.5
Chlorobenzene	< 0.5	< 0.5
1,1,1,2-Tetrachloroethane	< 0.5	< 0.5
Ethylbenzene	< 0.5	< 0.5

LABORATORY REPORT

EAI ID#: **225365**

Client: **Geosphere Environmental Management Inc.**

Client Designation: **Seabrook Weare Road Well A Step Test**

Sample ID:	New Well	Trip Blanks
Lab Sample ID:	225365.01	225365.02
Matrix:	aqueous	aqueous
Date Sampled:	4/28/21	4/28/21
Date Received:	4/29/21	4/29/21
Units:	ug/L	ug/L
Date of Analysis:	5/4/21	5/4/21
Analyst:	AM	AM
Method:	524.2	524.2
Dilution Factor:	1	1
mp-Xylene	< 0.5	< 0.5
o-Xylene	< 0.5	< 0.5
Styrene	< 0.5	< 0.5
Bromoform	< 0.5	< 0.5
IsoPropylbenzene	< 0.5	< 0.5
Bromobenzene	< 0.5	< 0.5
1,1,2,2-Tetrachloroethane	< 0.5	< 0.5
1,2,3-Trichloropropane	< 0.5	< 0.5
n-Propylbenzene	< 0.5	< 0.5
2-Chlorotoluene	< 0.5	< 0.5
4-Chlorotoluene	< 0.5	< 0.5
1,3,5-Trimethylbenzene	< 0.5	< 0.5
tert-Butylbenzene	< 0.5	< 0.5
1,2,4-Trimethylbenzene	< 0.5	< 0.5
sec-Butylbenzene	< 0.5	< 0.5
1,3-Dichlorobenzene	< 0.5	< 0.5
p-Isopropyltoluene	< 0.5	< 0.5
1,4-Dichlorobenzene	< 0.5	< 0.5
1,2-Dichlorobenzene	< 0.5	< 0.5
n-Butylbenzene	< 0.5	< 0.5
1,2-Dibromo-3-chloropropane	< 0.5	< 0.5
1,3,5-Trichlorobenzene	< 0.5	< 0.5
1,2,4-Trichlorobenzene	< 0.5	< 0.5
Hexachlorobutadiene	< 0.5	< 0.5
Naphthalene	< 0.5	< 0.5
1,2,3-Trichlorobenzene	< 0.5	< 0.5
4-Bromofluorobenzene (surr)	**92 %R**	**91 %R**
1,2-Dichlorobenzene-d4 (surr)	**112 %R**	**114 %R**

QC REPORT

EAI ID#: **225365**

Client: **Geosphere Environmental Management Inc.** **Batch ID:** 637557-96471/A050421V5241

Client Designation: **Seabrook Weare Road Well A Step Test**

Parameter Name	Blank	LCS	LCSD	Analysis Date	Units	Limits	RPD	Method
Dichlorodifluoromethane	< 0.5	10 (102 %R)	9.8 (98 %R) (5 RPD)	5/4/2021	ug/L	70 - 130	30	524.2
Chloromethane	< 0.5	8.7 (87 %R)	8.4 (84 %R) (3 RPD)	5/4/2021	ug/L	70 - 130	30	524.2
Vinyl chloride	< 0.5	9.9 (99 %R)	9.6 (96 %R) (4 RPD)	5/4/2021	ug/L	70 - 130	30	524.2
Bromomethane	< 0.5	11 (107 %R)	10 (104 %R) (3 RPD)	5/4/2021	ug/L	70 - 130	30	524.2
Chloroethane	< 0.5	9.2 (92 %R)	8.8 (88 %R) (4 RPD)	5/4/2021	ug/L	70 - 130	30	524.2
Trichlorofluoromethane	< 0.5	9.7 (97 %R)	9.2 (92 %R) (5 RPD)	5/4/2021	ug/L	70 - 130	30	524.2
Diethyl Ether	< 5	8.9 (89 %R)	8.5 (85 %R) (4 RPD)	5/4/2021	ug/L	70 - 130	30	524.2
Acetone	< 10	< 10 (85 %R)	< 10 (78 %R) (7 RPD)	5/4/2021	ug/L	70 - 130	30	524.2
1,1-Dichloroethene	< 0.5	9.9 (99 %R)	9.5 (95 %R) (4 RPD)	5/4/2021	ug/L	70 - 130	30	524.2
tert-Butyl Alcohol (TBA)	< 30	43 (86 %R)	40 (79 %R) (8 RPD)	5/4/2021	ug/L	70 - 130	30	524.2
Methylene chloride	< 0.5	9.2 (92 %R)	8.7 (87 %R) (6 RPD)	5/4/2021	ug/L	70 - 130	30	524.2
Carbon disulfide	< 2	8.6 (86 %R)	8.2 (82 %R) (5 RPD)	5/4/2021	ug/L	70 - 130	30	524.2
Methyl-t-butyl ether(MTBE)	< 0.5	8.5 (85 %R)	8.1 (81 %R) (5 RPD)	5/4/2021	ug/L	70 - 130	30	524.2
Ethyl-t-butyl ether(ETBE)	< 0.5	11 (107 %R)	10 (103 %R) (4 RPD)	5/4/2021	ug/L	70 - 130	30	524.2
Isopropyl ether(DIPE)	< 0.5	9.6 (96 %R)	9.3 (93 %R) (3 RPD)	5/4/2021	ug/L	70 - 130	30	524.2
tert-amyl methyl ether(TAME)	< 0.5	10 (105 %R)	10 (100 %R) (5 RPD)	5/4/2021	ug/L	70 - 130	30	524.2
trans-1,2-Dichloroethene	< 0.5	9.8 (98 %R)	9.2 (92 %R) (6 RPD)	5/4/2021	ug/L	70 - 130	30	524.2
1,1-Dichloroethane	< 0.5	11 (107 %R)	10 (102 %R) (4 RPD)	5/4/2021	ug/L	70 - 130	30	524.2
2,2-Dichloropropane	< 0.5	11 (106 %R)	10 (100 %R) (5 RPD)	5/4/2021	ug/L	70 - 130	30	524.2
cis-1,2-Dichloroethene	< 0.5	11 (107 %R)	10 (103 %R) (3 RPD)	5/4/2021	ug/L	70 - 130	30	524.2
2-Butanone(MEK)	< 5	9.8 (98 %R)	9.1 (91 %R) (7 RPD)	5/4/2021	ug/L	70 - 130	30	524.2
Bromochloromethane	< 0.5	11 (114 %R)	11 (110 %R) (4 RPD)	5/4/2021	ug/L	70 - 130	30	524.2
Tetrahydrofuran(THF)	< 5	10 (103 %R)	9.3 (93 %R) (10 RPD)	5/4/2021	ug/L	70 - 130	30	524.2
Chloroform	* 0.50	11 (110 %R)	11 (108 %R) (2 RPD)	5/4/2021	ug/L	70 - 130	30	524.2
1,1,1-Trichloroethane	< 0.5	11 (106 %R)	10 (101 %R) (5 RPD)	5/4/2021	ug/L	70 - 130	30	524.2
Carbon tetrachloride	< 0.5	10 (103 %R)	9.9 (99 %R) (3 RPD)	5/4/2021	ug/L	70 - 130	30	524.2
1,1-Dichloropropene	< 0.5	11 (111 %R)	11 (109 %R) (3 RPD)	5/4/2021	ug/L	70 - 130	30	524.2
Benzene	< 0.5	12 (117 %R)	11 (112 %R) (4 RPD)	5/4/2021	ug/L	70 - 130	30	524.2
1,2-Dichloroethane	< 0.5	9.1 (91 %R)	8.9 (89 %R) (3 RPD)	5/4/2021	ug/L	70 - 130	30	524.2
Trichloroethene	< 0.5	11 (113 %R)	11 (109 %R) (4 RPD)	5/4/2021	ug/L	70 - 130	30	524.2
1,2-Dichloropropane	< 0.5	11 (113 %R)	11 (109 %R) (3 RPD)	5/4/2021	ug/L	70 - 130	30	524.2
Dibromomethane	< 0.5	11 (106 %R)	10 (101 %R) (5 RPD)	5/4/2021	ug/L	70 - 130	30	524.2
Bromodichloromethane	< 0.5	10 (104 %R)	10 (100 %R) (3 RPD)	5/4/2021	ug/L	70 - 130	30	524.2
4-Methyl-2-pentanone(MIBK)	< 5	12 (116 %R)	11 (106 %R) (9 RPD)	5/4/2021	ug/L	70 - 130	30	524.2
cis-1,3-Dichloropropene	< 0.3	11 (112 %R)	11 (107 %R) (5 RPD)	5/4/2021	ug/L	70 - 130	30	524.2
Toluene	< 0.5	9.7 (97 %R)	9.4 (94 %R) (3 RPD)	5/4/2021	ug/L	70 - 130	30	524.2
trans-1,3-Dichloropropene	< 0.3	9.1 (91 %R)	8.9 (89 %R) (2 RPD)	5/4/2021	ug/L	70 - 130	30	524.2
1,1,2-Trichloroethane	< 0.5	9.3 (93 %R)	9.0 (90 %R) (3 RPD)	5/4/2021	ug/L	70 - 130	30	524.2
2-Hexanone	< 5	8.2 (82 %R)	7.6 (76 %R) (8 RPD)	5/4/2021	ug/L	70 - 130	30	524.2
Tetrachloroethene	< 0.5	9.8 (98 %R)	9.4 (94 %R) (4 RPD)	5/4/2021	ug/L	70 - 130	30	524.2
1,3-Dichloropropane	< 0.5	9.0 (90 %R)	8.6 (86 %R) (4 RPD)	5/4/2021	ug/L	70 - 130	30	524.2
Dibromochloromethane	< 0.5	8.8 (88 %R)	8.6 (86 %R) (3 RPD)	5/4/2021	ug/L	70 - 130	30	524.2
1,2-Dibromoethane(EDB)	< 0.5	9.2 (92 %R)	8.8 (88 %R) (5 RPD)	5/4/2021	ug/L	70 - 130	30	524.2
Chlorobenzene	< 0.5	9.6 (96 %R)	9.3 (93 %R) (3 RPD)	5/4/2021	ug/L	70 - 130	30	524.2
1,1,1,2-Tetrachloroethane	< 0.5	9.0 (90 %R)	8.8 (88 %R) (2 RPD)	5/4/2021	ug/L	70 - 130	30	524.2
Ethylbenzene	< 0.5	9.8 (98 %R)	9.5 (95 %R) (3 RPD)	5/4/2021	ug/L	70 - 130	30	524.2

Eastern Analytical, Inc. www.easternanalytical.com | 800.287.0525 | customerservice@easternanalytical.com

QC REPORT

EAI ID#: **225365**

Client: **Geosphere Environmental Management Inc.**

Batch ID: 637557-96471/A050421V5241

Client Designation: **Seabrook Weare Road Well A Step Test**

Parameter Name	Blank	LCS	LCSD	Analysis Date	Units	Limits	RPD	Method
mp-Xylene	< 0.5	19 (94 %R)	18 (92 %R) (3 RPD)	5/4/2021	ug/L	70 - 130	30	524.2
o-Xylene	< 0.5	9.5 (95 %R)	9.3 (93 %R) (3 RPD)	5/4/2021	ug/L	70 - 130	30	524.2
Styrene	< 0.5	9.4 (94 %R)	8.9 (89 %R) (5 RPD)	5/4/2021	ug/L	70 - 130	30	524.2
Bromoform	< 0.5	9.2 (92 %R)	9.0 (90 %R) (2 RPD)	5/4/2021	ug/L	70 - 130	30	524.2
IsoPropylbenzene	< 0.5	9.5 (95 %R)	9.3 (93 %R) (3 RPD)	5/4/2021	ug/L	70 - 130	30	524.2
Bromobenzene	< 0.5	8.7 (87 %R)	8.5 (85 %R) (2 RPD)	5/4/2021	ug/L	70 - 130	30	524.2
1,1,2,2-Tetrachloroethane	< 0.5	8.2 (82 %R)	7.9 (79 %R) (4 RPD)	5/4/2021	ug/L	70 - 130	30	524.2
1,2,3-Trichloropropane	< 0.5	8.5 (85 %R)	8.3 (83 %R) (3 RPD)	5/4/2021	ug/L	70 - 130	30	524.2
n-Propylbenzene	< 0.5	9.2 (92 %R)	9.0 (90 %R) (2 RPD)	5/4/2021	ug/L	70 - 130	30	524.2
2-Chlorotoluene	< 0.5	9.4 (94 %R)	9.0 (90 %R) (4 RPD)	5/4/2021	ug/L	70 - 130	30	524.2
4-Chlorotoluene	< 0.5	9.2 (92 %R)	9.0 (90 %R) (2 RPD)	5/4/2021	ug/L	70 - 130	30	524.2
1,3,5-Trimethylbenzene	< 0.5	8.7 (87 %R)	8.5 (85 %R) (3 RPD)	5/4/2021	ug/L	70 - 130	30	524.2
tert-Butylbenzene	< 0.5	8.8 (88 %R)	8.6 (86 %R) (2 RPD)	5/4/2021	ug/L	70 - 130	30	524.2
1,2,4-Trimethylbenzene	< 0.5	8.8 (88 %R)	8.6 (86 %R) (2 RPD)	5/4/2021	ug/L	70 - 130	30	524.2
sec-Butylbenzene	< 0.5	9.1 (91 %R)	8.9 (89 %R) (2 RPD)	5/4/2021	ug/L	70 - 130	30	524.2
1,3-Dichlorobenzene	< 0.5	8.9 (89 %R)	8.7 (87 %R) (2 RPD)	5/4/2021	ug/L	70 - 130	30	524.2
p-Isopropyltoluene	< 0.5	8.9 (89 %R)	8.6 (86 %R) (3 RPD)	5/4/2021	ug/L	70 - 130	30	524.2
1,4-Dichlorobenzene	< 0.5	8.7 (87 %R)	8.5 (85 %R) (3 RPD)	5/4/2021	ug/L	70 - 130	30	524.2
1,2-Dichlorobenzene	< 0.5	8.6 (86 %R)	8.4 (84 %R) (2 RPD)	5/4/2021	ug/L	70 - 130	30	524.2
n-Butylbenzene	< 0.5	8.7 (87 %R)	8.5 (85 %R) (2 RPD)	5/4/2021	ug/L	70 - 130	30	524.2
1,2-Dibromo-3-chloropropane	< 0.5	8.3 (83 %R)	7.8 (78 %R) (6 RPD)	5/4/2021	ug/L	70 - 130	30	524.2
1,3,5-Trichlorobenzene	< 0.5	8.9 (89 %R)	8.6 (86 %R) (3 RPD)	5/4/2021	ug/L	70 - 130	30	524.2
1,2,4-Trichlorobenzene	< 0.5	8.7 (87 %R)	8.7 (87 %R) (0 RPD)	5/4/2021	ug/L	70 - 130	30	524.2
Hexachlorobutadiene	< 0.5	8.7 (87 %R)	8.8 (88 %R) (0 RPD)	5/4/2021	ug/L	70 - 130	30	524.2
Naphthalene	< 0.5	8.4 (84 %R)	8.2 (82 %R) (2 RPD)	5/4/2021	ug/L	70 - 130	30	524.2
1,2,3-Trichlorobenzene	< 0.5	9.1 (91 %R)	9.0 (90 %R) (1 RPD)	5/4/2021	ug/L	70 - 130	30	524.2
4-Bromofluorobenzene (surr)	95 %R	107 %R	107 %R	5/4/2021	% Rec	70 - 130		524.2
1,2-Dichlorobenzene-d4 (surr)	111 %R	97 %R	96 %R	5/4/2021	% Rec	70 - 130		524.2

*/! Flagged analyte recoveries deviated from the QA/QC limits. Data that impacts sample results are noted on the sample report.

LABORATORY REPORT

EAI ID#: **225365**

Client: **Geosphere Environmental Management Inc.**

Client Designation: **Seabrook Weare Road Well A Step Test**

Sample ID:	New Well	Trip Blanks
Lab Sample ID:	225365.01	225365.02
Matrix:	aqueous	aqueous
Date Sampled:	4/28/21	4/28/21
Date Received:	4/29/21	4/29/21
Units:	ug/L	ug/L
Date of Analysis:	5/4/21	5/4/21
Analyst:	AM	AM
Method:	8260B SIM	8260B SIM
Dilution Factor:	1	1
1,4-Dioxane	< 0.2	< 0.2
4-Bromofluorobenzene (surr)	**97 %R**	**98 %R**
Toluene-d8 (surr)	**98 %R**	**99 %R**

QC REPORT

EAI ID#: **225365**

Client: **Geosphere Environmental Management Inc.** **Batch ID:** 637557-42141/A050421DIOX1

Client Designation: **Seabrook Weare Road Well A Step Test**

Parameter Name	Blank	LCS	LCSD	Analysis Date	Units	Limits	RPD	Method
1,4-Dioxane	< 0.2	4.9 (98 %R)	4.9 (97 %R) (1 RPD)	5/4/2021	ug/L	70 - 130	20	8260B
4-Bromofluorobenzene (surr)	98 %R	99 %R	98 %R	5/4/2021	% Rec	70 - 130	50	8260B
Toluene-d8 (surr)	99 %R	99 %R	99 %R	5/4/2021	% Rec	70 - 130	50	8260B

*/! Flagged analyte recoveries deviated from the QA/QC limits. Data that impacts sample results are noted on the sample report.

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LABORATORY REPORT

EAI ID#: **225365**

Client: **Geosphere Environmental Management Inc.**

Client Designation: **Seabrook Weare Road Well A Step Test**

Sample ID:	New Well	Trip Blanks
Lab Sample ID:	225365.01	225365.02
Matrix:	aqueous	aqueous
Date Sampled:	4/28/21	4/28/21
Date Received:	4/29/21	4/29/21
Units:	ug/L	ug/L
Date of Extraction/Prep:	4/29/21	4/29/21
Date of Analysis:	4/29/21	4/29/21
Analyst:	AR	AR
Method:	8011/504	8011/504
Dilution Factor:	1	1
1,2-Dibromoethane(EDB)	< 0.02	< 0.02
Dibromochloropropane (DBCP)	< 0.02	< 0.02
1,1,1,2-Tetrachloroethane (surr)	**102 %R**	**103 %R**

QC REPORT

EAI ID#: **225365**

Client: **Geosphere Environmental Management Inc.**

Batch ID: 637552-86823/A042921E5051

Client Designation: **Seabrook Weare Road Well A Step Test**

Parameter Name	Blank	LCS	LCSD	Analysis Date	Units	Limits	RPD	Method
1,2-Dibromoethane(EDB)	< 0.02	0.10 (102 %R)	0.10 (103 %R) (1 RPD)	4/29/2021	ug/L	70 - 130	20	8011/504
Dibromochloropropane (DBCP)	< 0.02	0.096 (96 %R)	0.098 (98 %R) (2 RPD)	4/29/2021	ug/L	70 - 130	20	8011/504
1,1,1,2-Tetrachloroethane (surr)	103 %R	94 %R	97 %R	4/29/2021	% Rec	65 - 135	20	8011/504

*/! Flagged analyte recoveries deviated from the QA/QC limits. Data that impacts sample results are noted on the sample report.

LABORATORY REPORT

EAI ID#: **225365**

Client: **Geosphere Environmental Management Inc.**

Client Designation: **Seabrook Weare Road Well A Step Test**

Sample ID:	New Well
Lab Sample ID:	225365.01
Matrix:	aqueous
Date Sampled:	4/28/21
Date Received:	4/29/21
Units:	ug/L
Date of Extraction/Prep:	4/29/21
Date of Analysis:	4/29/21
Analyst:	AR
Method:	505
Dilution Factor:	1
Chlordane	< 0.5
Toxaphene	< 2
1,1,1,2-Tetrachloroethane (surr)	**102 %R**

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QC REPORT

EAI ID#: **225365**

Client: **Geosphere Environmental Management Inc.** **Batch ID:** 637552-86823/A042921E5051

Client Designation: **Seabrook Weare Road Well A Step Test**

Parameter Name	Blank	LCS	LCSD	Analysis Date	Units	Limits	RPD	Method
Chlordane	< 0.5	0.93 (93 %R)	0.98 (98 %R) (5 RPD)	4/29/2021	ug/L	70 - 130	20	505
Toxaphene	< 2	< 2 (%R N/A)	< 2 (%R N/A) (RPD N/A)	4/29/2021	ug/L			505
1,1,1,2-Tetrachloroethane (surr)	103 %R	94 %R	97 %R	4/29/2021	% Rec	65 - 135	20	505

*/! Flagged analyte recoveries deviated from the QA/QC limits. Data that impacts sample results are noted on the sample report.

LABORATORY REPORT

EAI ID#: **225365**

Client: **Geosphere Environmental Management Inc.**

Client Designation: **Seabrook Weare Road Well A Step Test**

Sample ID:	New Well
Lab Sample ID:	225365.01
Matrix:	aqueous
Date Sampled:	4/28/21
Date Received:	4/29/21
Units:	ug/L
Date of Extraction/Prep:	5/7/21
Date of Analysis:	5/7/21
Analyst:	AR
Method:	515.4
Dilution Factor:	1
Pentachlorophenol	< 1
2,4-D	< 5
2,4,5-TP (Silvex)	< 5
Dinoseb	< 5
Picloram	< 5
2,4-DCAA	**90 %R**

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QC REPORT

EAI ID#: **225365**

Client: **Geosphere Environmental Management Inc.** **Batch ID:** 637559-75427/A050721HERB1

Client Designation: **Seabrook Weare Road Well A Step Test**

Parameter Name	Blank	LCS	LCSD	Analysis Date	Units	Limits	RPD	Method
Pentachlorophenol	< 1	20 (100 %R)	20 (101 %R) (1 RPD)	5/7/2021	ug/L	70 - 130	30	515.4
2,4-D	< 5	22 (109 %R)	22 (109 %R) (0 RPD)	5/7/2021	ug/L	70 - 130	30	515.4
2,4,5-TP (Silvex)	< 5	20 (102 %R)	20 (102 %R) (1 RPD)	5/7/2021	ug/L	70 - 130	30	515.4
Dinoseb	< 5	20 (101 %R)	20 (102 %R) (1 RPD)	5/7/2021	ug/L	70 - 130	30	515.4
Picloram	< 5	21 (107 %R)	22 (108 %R) (1 RPD)	5/7/2021	ug/L	70 - 130	30	515.4
2,4-DCAA	94 %R	95 %R	95 %R	5/7/2021	ug/L	70 - 130	30	515.4

*/! Flagged analyte recoveries deviated from the QA/QC limits. Data that impacts sample results are noted on the sample report.

LABORATORY REPORT

EAI ID#: **225365**

Client: **Geosphere Environmental Management Inc.**

Client Designation: **Seabrook Weare Road Well A Step Test**

Sample ID:	New Well
Lab Sample ID:	225365.01
Matrix:	aqueous
Date Sampled:	4/28/21
Date Received:	4/29/21
Units:	ug/L
Date of Extraction/Prep:	5/3/21
Date of Analysis:	5/3/21
Analyst:	MA
Method:	525.2
Dilution Factor:	1
Hexachlorocyclopentadiene	< 1
Hexachlorobenzene	< 1
bis(2-Ethylhexyl)adipate	< 1
bis(2-Ethylhexyl)phthalate	< 1
Benzo[a]pyrene	< 0.2
Simazine	< 1
Atrazine	< 1
Alachlor	< 1
Lindane(gamma-BHC)	< 0.2
Endrin	< 1
Heptachlor	< 0.4
Heptachlor Epoxide	< 0.2
Methoxychlor	< 1
1,3-Dimethyl-2-nitrobenzene(surr)	**100 %R**
Pyrene-d10(surr)	**109 %R**
Triphenylphosphate(surr)	**107 %R**
Perylene-d12(surr)	**101 %R**

QC REPORT

EAI ID#: **225365**

Client: **Geosphere Environmental Management Inc.** **Batch ID:** 637556-25664/A050321E5251

Client Designation: **Seabrook Weare Road Well A Step Test**

Parameter Name	Blank	LCS	LCSD	Analysis Date	Units	Limits	RPD	Method
Hexachlorocyclopentadiene	< 1	5.1 (102 %R)	4.8 (97 %R) (5 RPD)	5/3/2021	ug/L	70 - 130	30	525.2
Hexachlorobenzene	< 1	4.7 (94 %R)	4.6 (92 %R) (1 RPD)	5/3/2021	ug/L	70 - 130	30	525.2
bis(2-Ethylhexyl)adipate	< 1	4.8 (96 %R)	4.9 (99 %R) (2 RPD)	5/3/2021	ug/L	70 - 130	30	525.2
bis(2-Ethylhexyl)phthalate	< 1	4.7 (95 %R)	4.7 (95 %R) (0 RPD)	5/3/2021	ug/L	70 - 130	30	525.2
Benzo[a]pyrene	< 0.2	4.5 (90 %R)	4.4 (87 %R) (3 RPD)	5/3/2021	ug/L	70 - 130	30	525.2
Simazine	< 1	4.2 (84 %R)	4.4 (89 %R) (5 RPD)	5/3/2021	ug/L	70 - 130	30	525.2
Atrazine	< 1	4.9 (97 %R)	5.2 (103 %R) (6 RPD)	5/3/2021	ug/L	70 - 130	30	525.2
Alachlor	< 1	4.8 (96 %R)	4.7 (93 %R) (3 RPD)	5/3/2021	ug/L	70 - 130	30	525.2
Lindane(gamma-BHC)	< 0.2	5.0 (100 %R)	4.9 (99 %R) (1 RPD)	5/3/2021	ug/L	70 - 130	30	525.2
Endrin	< 1	4.6 (91 %R)	4.6 (91 %R) (0 RPD)	5/3/2021	ug/L	70 - 130	30	525.2
Heptachlor	< 0.4	4.5 (89 %R)	4.3 (85 %R) (5 RPD)	5/3/2021	ug/L	70 - 130	30	525.2
Heptachlor Epoxide	< 0.2	4.8 (95 %R)	4.7 (94 %R) (2 RPD)	5/3/2021	ug/L	70 - 130	30	525.2
Methoxychlor	< 1	4.3 (86 %R)	4.3 (86 %R) (0 RPD)	5/3/2021	ug/L	70 - 130	30	525.2
1,3-Dimethyl-2-nitrobenzene(surr)	106 %R	108 %R	107 %R	5/3/2021	ug/L	70 - 130		525.2
Pyrene-d10(surr)	113 %R	114 %R	108 %R	5/3/2021	ug/L	70 - 130		525.2
Triphenylphosphate(surr)	102 %R	103 %R	105 %R	5/3/2021	ug/L	70 - 130		525.2
Perylene-d12(surr)	96 %R	98 %R	98 %R	5/3/2021	ug/L	70 - 130		525.2

*/! Flagged analyte recoveries deviated from the QA/QC limits. Data that impacts sample results are noted on the sample report.

LABORATORY REPORT

EAI ID#: **225365**

Client: **Geosphere Environmental Management Inc.**

Client Designation: **Seabrook Weare Road Well A Step Test**

Sample ID:	New Well
Lab Sample ID:	225365.01
Matrix:	aqueous
Date Sampled:	4/28/21
Date Received:	4/29/21
Units:	ug/L
Date of Analysis:	5/1/21
Analyst:	JAK
Method:	531.2
Dilution Factor:	1
Aldicarb	< 0.5
Aldicarb Sulfone	< 0.5
Aldicarb Sulfoxide	< 0.5
Carbaryl	< 0.5
Carbofuran	< 0.5
3-Hydroxycarbofuran	< 0.5
Methiocarb	< 0.5
Methomyl	< 0.5
Oxamyl	< 0.5
Propoxur	< 0.5
BMDC (surr)	**108 %R**

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QC REPORT

EAI ID#: **225365**

Client: **Geosphere Environmental Management Inc.**

Client Designation: **Seabrook Weare Road Well A Step Test**

Parameter Name	Blank	LCS	LCSD		Units	Date of Analysis	Limits	RPD	Method
Aldicarb	< 0.5	< 0.5 (80 %R)		*	ug/L	4/30/21	50 - 150	30	531.2
Aldicarb Sulfone	< 0.5	< 0.5 (71 %R)		*	ug/L	4/30/21	50 - 150	30	531.2
Aldicarb Sulfoxide	< 0.5	< 0.5 (70 %R)		*	ug/L	4/30/21	50 - 150	30	531.2
Carbaryl	< 0.5	< 0.5 (80 %R)		*	ug/L	4/30/21	50 - 150	30	531.2
Carbofuran	< 0.5	< 0.5 (77 %R)		*	ug/L	4/30/21	50 - 150	30	531.2
3-Hydroxycarbofuran	< 0.5	< 0.5 (74 %R)		*	ug/L	4/30/21	50 - 150	30	531.2
Methiocarb	< 0.5	< 0.5 (80 %R)		*	ug/L	4/30/21	50 - 150	30	531.2
Methomyl	< 0.5	< 0.5 (73 %R)		*	ug/L	4/30/21	50 - 150	30	531.2
Oxamyl	< 0.5	< 0.5 (70 %R)		*	ug/L	4/30/21	50 - 150	30	531.2
Propoxur	< 0.5	< 0.5 (83 %R)		*	ug/L	4/30/21	50 - 150	30	531.2
BMDC (surr)	79 %R	85 %R		*	% Rec	4/30/21	70 - 130	20	531.2

*/! Flagged analyte recoveries deviated from the QA/QC limits. Unless noted, flagged data does not impact the sample data.

LABORATORY REPORT

EAI ID#: **225365**

Client: **Geosphere Environmental Management Inc.**

Client Designation: **Seabrook Weare Road Well A Step Test**

Sample ID:	New Well
Lab Sample ID:	225365.01
Matrix:	aqueous
Date Sampled:	4/28/21
Date Received:	4/29/21
Units:	ug/L
Date of Extraction/Prep:	5/10/21
Date of Analysis:	5/10/21
Analyst:	AR
Method:	552.3
Dilution Factor:	1
Monochloroacetic Acid (MCAA)	< 2
Monobromoacetic Acid (MBAA)	< 1
Dichloroacetic Acid (DCAA)	< 1
Trichloroacetic Acid (TCAA)	< 1
Dibromoacetic Acid (DBAA)	< 1
Total Haloacetic Acids	< 6
2,3-Dibromopropanoic Acid (surr)	**92 %R**

QC REPORT

EAI ID#: **225365**

Client: **Geosphere Environmental Management Inc.** **Batch ID:** 637562-32482/A051021HAA1

Client Designation: **Seabrook Weare Road Well A Step Test**

Parameter Name	Blank	LCS	LCSD	Analysis Date	Units	Limits	RPD	Method
Monochloroacetic Acid (MCAA)	< 2	10 (102 %R)	10 (104 %R) (2 RPD)	5/10/2021	ug/L	70 - 130	30	552.3
Monobromoacetic Acid (MBAA)	< 1	10 (104 %R)	10 (104 %R) (1 RPD)	5/10/2021	ug/L	70 - 130	30	552.3
Dichloroacetic Acid (DCAA)	< 1	9.3 (93 %R)	9.4 (94 %R) (1 RPD)	5/10/2021	ug/L	70 - 130	30	552.3
Trichloroacetic Acid (TCAA)	< 1	9.7 (97 %R)	9.7 (97 %R) (0 RPD)	5/10/2021	ug/L	70 - 130	30	552.3
Dibromoacetic Acid (DBAA)	< 1	9.4 (94 %R)	9.5 (95 %R) (1 RPD)	5/10/2021	ug/L	70 - 130	30	552.3
Total Haloacetic Acids	< 6	< 6 (%R N/A)	< 6 (%R N/A) (RPD N/A)	5/10/2021	ug/L			552.3
2,3-Dibromopropanoic Acid (surr)	91 %R	93 %R	91 %R	5/10/2021	ug/L	70 - 130	30	552.3

*/! Flagged analyte recoveries deviated from the QA/QC limits. Data that impacts sample results are noted on the sample report.

LABORATORY REPORT

EAI ID#: **225365**

Client: **Geosphere Environmental Management Inc.**

Client Designation: **Seabrook Weare Road Well A Step Test**

Sample ID:	New Well
Lab Sample ID:	225365.01
Matrix:	aqueous
Date Sampled:	4/28/21
Date Received:	4/29/21
Units:	ug/L
Date of Extraction/Prep:	5/10/21
Date of Analysis:	5/10/21
Analyst:	AR
Method:	552.3
Dilution Factor:	1
Dalapon	< 1
2,3-Dibromopropanoic Acid (surr)	**92 %R**

QC REPORT

EAI ID#: **225365**

Client: **Geosphere Environmental Management Inc.**

Batch ID: 637562-32683/A051021Dalap1

Client Designation: **Seabrook Weare Road Well A Step Test**

Parameter Name	Blank	LCS	LCSD	Analysis Date	Units	Limits	RPD	Method
Dalapon	< 1	9.7 (97 %R)	9.8 (98 %R) (1 RPD)	5/10/2021	ug/L	70 - 130	30	552.3
2,3-Dibromopropanoic Acid (surr)	91 %R	93 %R	91 %R	5/10/2021	ug/L	70 - 130	30	552.3

*/! Flagged analyte recoveries deviated from the QA/QC limits. Data that impacts sample results are noted on the sample report.

LABORATORY REPORT

EAI ID#: **225365**

Client: **Geosphere Environmental Management Inc.**

Client Designation: **Seabrook Weare Road Well A Step Test**

Sample ID: New Well

Lab Sample ID: 225365.01

Matrix: aqueous

Date Sampled: 4/28/21

Date Received: 4/29/21

		Units	Analysis Date	Time	Method	Analyst
Solids Dissolved	**180**	mg/L	4/29/21	10:50	2540C-11	KJD
Fluoride	**0.18**	mg/L	5/07/21	12:45	4500FC	SEL
Sulfate	**22**	mg/L	5/03/21	20:01	300.0	ATA
Radon	**968**	pCi/L	4/30/21	9:44	E-PERM®	HEH
Chloride	**6.5**	mg/L	5/03/21	20:01	300.0	ATA
Nitrite-N	< 0.5	mg/L	4/29/21	16:37	353.2	ATA
Nitrate-N	< 0.5	mg/L	4/29/21	16:37	353.2	ATA
Alkalinity Total (CaCO3)	**110**	mg/L	4/30/21	11:24	2320B-11	RB
Cyanide Free	< 0.02	mg/L	5/03/21	14:40	OIA-1677-09	KD
Sulfide	< 0.05	mg/L	4/30/21	9:30	8131HACH	RB
Color	< 5	PtCo	4/29/21	14:05	2120B-11	AMB
Odor	**ND**	TON	4/29/21	13:50	2150B	AMB
pH	**8.19**	SU	4/29/21	14:04	4500H+B-11	AMB
Langelier Corrosivity	**0.06**	SI	5/12/21	10:10	Langelier Index	KD

Odor: ND=Non-detect, no odor detected.

The Langelier Index is used to calculate the corrosivity of the water, and is reported as a Saturation Index. The Langelier Index is based on a calculation of Total Dissolved Solids, including Chloride, Sulfate, Calcium Hardness, Total Alkalinity, pH, and Temperature. Temperature has an important role in this calculation, and for the purposes of this report a value of 20 degrees C was used. A value of -1 is considered to be mildly corrosive, -2 is moderately corrosive and -5 severely corrosive.

QC REPORT

EAI ID#: **225365**

Client: **Geosphere Environmental Management Inc.**

Client Designation: **Seabrook Weare Road Well A Step Test**

Parameter Name	Blank	LCS	LCSD	Units	Date of Analysis	Limits	RPD	Method
Solids Dissolved	< 10	960 (100 %R)	980 (102 %R) (2 RPD)	mg/L	4/29/21	85 - 115	20	2540C-11
Fluoride	< 0.1	1.9 (94 %R)	1.9 (96 %R) (3 RPD)	mg/L	5/7/21	90 - 110	20	4500FC
Sulfate	< 1	19 (97 %R)	20 (98 %R) (1 RPD)	mg/L	5/4/21	90 - 110	20	300.0
Chloride	< 1	20 (100 %R)	20 (102 %R) (2 RPD)	mg/L	5/4/21	90 - 110	20	300.0
Nitrite-N	< 0.5	5.4 (107 %R)	5.2 (104 %R) (3 RPD)	mg/L	4/29/21	90 - 110	20	353.2
Nitrate-N	< 0.5	4.5 (91 %R)	4.6 (92 %R) (2 RPD)	mg/L	4/29/21	90 - 110	20	353.2
Alkalinity Total (CaCO3)	< 1	11 (107 %R)	11 (106 %R) (1 RPD)	mg/L	4/30/21	85 - 115	20	2320B-11
Cyanide Free	< 0.02	0.29 (116 %R)	0.30 (119 %R) (3 RPD)	mg/L	5/3/21	82 - 132	20	OIA-1677-09
Sulfide	< 0.05	0.38 (95 %R)	0.36 (90 %R) (5 RPD)	mg/L	4/30/21	80 - 120	20	8131HACH
Color	< 5	10 (100 %R)	10 (100 %R) (0 RPD)	PtCo	4/29/21	90 - 110	20	2120B-11
pH	NA	6.06 (101 %R)	6.1 (102 %R) (1 RPD)	SU	4/29/21	5.97 - 6.1	10	4500H+B-11

*/! Flagged analyte recoveries deviated from the QA/QC limits. Unless noted, flagged data does not impact the sample data.

LABORATORY REPORT

EAI ID#: **225365**

Client: **Geosphere Environmental Management Inc.**

Client Designation: **Seabrook Weare Road Well A Step Test**

Sample ID: New Well

Lab Sample ID: 225365.01

Matrix: aqueous

Date Sampled: 4/28/21

Date Received: 4/29/21

		Analytical Matrix	Units	Date of Analysis	Method	Analyst
Aluminum	< 0.05	AqTot	mg/L	4/30/21	200.8	DS
Antimony	< 0.001	AqTot	mg/L	4/30/21	200.8	DS
Arsenic	**0.027**	AqTot	mg/L	4/30/21	200.8	DS
Barium	**0.0086**	AqTot	mg/L	4/30/21	200.8	DS
Beryllium	< 0.001	AqTot	mg/L	4/30/21	200.8	DS
Cadmium	< 0.001	AqTot	mg/L	4/30/21	200.8	DS
Chromium	< 0.001	AqTot	mg/L	4/30/21	200.8	DS
Copper	**0.0015**	AqTot	mg/L	4/30/21	200.8	DS
Lead	< 0.001	AqTot	mg/L	4/30/21	200.8	DS
Manganese	**0.082**	AqTot	mg/L	4/30/21	200.8	DS
Mercury	< 0.0001	AqTot	mg/L	4/30/21	200.8	DS
Nickel	< 0.001	AqTot	mg/L	4/30/21	200.8	DS
Selenium	< 0.001	AqTot	mg/L	4/30/21	200.8	DS
Silver	< 0.001	AqTot	mg/L	4/30/21	200.8	DS
Thallium	< 0.001	AqTot	mg/L	4/30/21	200.8	DS
Uranium	**2.6**	AqTot	ug/L	4/30/21	200.8	DS
Zinc	**0.0056**	AqTot	mg/L	4/30/21	200.8	DS
Calcium	**15**	AqTot	mg/L	5/5/21	200.7	RJ
Iron	**0.058**	AqTot	mg/L	5/5/21	200.7	RJ
Sodium	**35**	AqTot	mg/L	5/5/21	200.7	RJ
Total Hardness (as CaCO3)	**59**	AqTot	mg/L	5/5/21	200.7	RJ

QC REPORT

EAI ID#: **225365**

Client: **Geosphere Environmental Management Inc.**

Client Designation: **Seabrook Weare Road Well A Step Test**

Parameter Name	Blank	LCS	LCSD	Units	Date of Analysis	Limits	RPD	Method
Aluminum	< 0.05	9.3 (92 %R)	NA	mg/L	4/30/21	85 - 115	20	200.8
Antimony	< 0.001	0.22 (109 %R)	NA	mg/L	4/30/21	85 - 115	20	200.8
Arsenic	< 0.001	0.21 (103 %R)	NA	mg/L	4/30/21	85 - 115	20	200.8
Barium	< 0.001	0.22 (109 %R)	NA	mg/L	4/30/21	85 - 115	20	200.8
Beryllium	< 0.001	0.19 (97 %R)	NA	mg/L	4/30/21	85 - 115	20	200.8
Calcium	< 0.05	11 (101 %R)	NA	mg/L	5/5/21	85 - 115	20	200.7
Cadmium	< 0.001	0.20 (98 %R)	NA	mg/L	4/30/21	85 - 115	20	200.8
Chromium	< 0.001	0.20 (101 %R)	NA	mg/L	4/30/21	85 - 115	20	200.8
Copper	< 0.001	0.19 (97 %R)	NA	mg/L	4/30/21	85 - 115	20	200.8
Iron	< 0.05	11 (102 %R)	NA	mg/L	5/5/21	85 - 115	20	200.7
Lead	< 0.001	0.20 (98 %R)	NA	mg/L	4/30/21	85 - 115	20	200.8
Manganese	< 0.005	0.20 (99 %R)	NA	mg/L	4/30/21	85 - 115	20	200.8
Mercury	< 0.0001	0.0010 (105 %R)	NA	mg/L	4/30/21	85 - 115	20	200.8
Nickel	< 0.001	0.19 (97 %R)	NA	mg/L	4/30/21	85 - 115	20	200.8
Selenium	< 0.001	0.20 (98 %R)	NA	mg/L	4/30/21	85 - 115	20	200.8
Silver	< 0.001	0.19 (95 %R)	NA	mg/L	4/30/21	85 - 115	20	200.8
Sodium	< 0.5	11 (97 %R)	NA	mg/L	5/5/21	85 - 115	20	200.7
Thallium	< 0.001	0.20 (100 %R)	NA	mg/L	4/30/21	85 - 115	20	200.8
Uranium	< 0.1	99 (99 %R)	NA	ug/L	4/30/21	85 - 115	20	200.8
Zinc	< 0.005	0.20 (100 %R)	NA	mg/L	4/30/21	85 - 115	20	200.8

*/! Flagged analyte recoveries deviated from the QA/QC limits. Unless noted, flagged data does not impact the sample data.

LABORATORY REPORT

EAI ID#: **225365**

Client: **Geosphere Environmental Management Inc.**
Client Designation: **Seabrook Weare Road Well A Step Test**

Sample ID: New Well

Lab Sample ID: 225365.01
Matrix: aqueous
Date Sampled: 4/28/21
Date Received: 4/29/21

Parameter	Concentration	Units	Date of Analysis	Method
Gross Alpha	4.5	pCi/L	5/15/21	900
Uranium	2.6	ug/L	4/30/21	200.8
Uranium*	1.7	pCi/L	6/4/21	See Ref.
Adj. Gross Alpha**	2.8	pCi/L	6/4/21	See Ref.

Gross Alpha analyzed by a subcontracted lab, entire lab report enclosed.
*Uranium conversion factor = 0.67 pCi/ug
**Adj. (Compliance) Gross Alpha = Gross Alpha (pCi/L) - Uranium (pCi/L)
ND = None detected
Gross Alpha MCL = 15 pCi/L

References: 40 CFR parts 9, 141 and 142 - National Primary Drinking Water Regulations; Radionuclides; Final Rule, December 2000. Pages 76717 and 76725 (Table 1-8, footnote 12).

If requested, the potassium-40 beta particle activity is calculated by multiplying elemental potassium concentrations (in mg/L) by a factor of 0.82.
Reference: MA DEP

June 03, 2021

Service Request No:E2100507

Eastern Analytical, Inc.
25 Chenell Drive
Concord, NH 03301

Laboratory Results for: 225365

Enclosed are the results of the sample(s) submitted to our laboratory April 30, 2021
For your reference, these analyses have been assigned our service request number **E2100507.**

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. The test results meet requirements of the current TNI standards, where applicable, and except as noted in the laboratory case narrative provided. All results are intended to be considered in their entirety and ALS Environmental is not responsible for use of less than the complete final report. Results apply only to the items submitted to the laboratory, as received for analysis. In accordance with the current TNI Standard, a statement on the estimated uncertainty of measurement of any quantitative analysis will be supplied upon request.

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental

Corey Grandits
Project Manager

ADDRESS 10450 Stancliff Rd., Suite 210, Houston, TX 77099
PHONE +1 281 530 5656 | FAX +1 281 530 5887
ALS Group USA, Corp.
dba ALS Environmental

ALS Environmental

Certificate of Analysis

ALS Environmental - Houston HRMS
10450 Stancliff Rd, Suite 210, Houston TX 77099
Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

ALS Environmental

Client:	EAI	**Service Request No.:**	E2100507
Project:	225365	**Date Received:**	04/30/21
Sample Matrix:	W		

CASE NARRATIVE

All analyses were performed in adherence to the quality assurance program of ALS Environmental. This report contains analytical results for samples designated for Tier II. When appropriate to the method, method blank results have been reported with each analytical test.

Sample Receipt

One sample was received for analysis at ALS Environmental in Houston on 04/30/21.

The sample was received in good condition and is consistent with the accompanying chain of custody form. The sample was stored in a refrigerator at 4°C upon receipt at the laboratory.

Data Validation Notes and Discussion

Precision and Accuracy:

EQ2100277: A Laboratory Control Spike (LCS) sample was analyzed and reported in addition to a MS/MSD for this extraction batch. The batch precision (MS/DMS) measurements were determined on another order in the extraction batch. The MS/DMS results are not included in this report. The LCS recovery passed.

Y flag – Cleanup Standard

The recovery for the cleanup standard, 37Cl-2,3,7,8-TCDD is below control limits in the Method Blank. The sample results are not affected since this labeled standard is provided as a means of demonstrating that both the sample extraction and subsequent cleanup steps performed as expected, and is not used in quantitation of target analytes.

Detection Limits

Detection limits are calculated for each analyte in each sample by measuring the height of the noise level for each quantitation ion for the associated labeled standard. The concentration equivalent to 2.5 times the height of the noise is then calculated using the appropriate response factor and the weight of the sample. The calculated concentration equals the detection limit.

The results of analyses are given in the attached laboratory report. All results are intended to be considered in their entirety, and ALS Environmental (ALS) is not responsible for utilization of less than the complete report.

Use of ALS group USA Corp dba ALS Environmental (ALS)'s Name. Client shall not use ALS's name or trademark in any marketing or reporting materials, press releases or in any other manner ("Materials") whatsoever and shall not attribute to ALS any test result, tolerance or specification derived from ALS's data ("Attribution") without ALS's prior written consent, which may be withheld by ALS for any reason in its sole discretion. To request ALS's consent, Client shall provide copies of the proposed Materials or Attribution and

describe in writing Client's proposed use of such Materials or Attribution. If ALS has not provided written approval of the Materials or Attribution within ten (10) days of receipt from Client, Client's request to use ALS's name or trademark in any Materials or Attribution shall be deemed denied. ALS may, in its discretion, reasonably charge Client for its time in reviewing Materials or Attribution requests. Client acknowledges and agrees that the unauthorized use of ALS's name or trademark may cause ALS to incur irreparable harm for which the recovery of money damages will be inadequate. Accordingly, Client acknowledges and agrees that a violation shall justify preliminary injunctive relief. For questions contact the laboratory.

Client: Eastern Analytical, Inc.
Project: 225365

Service Request:E2100507

SAMPLE CROSS-REFERENCE

SAMPLE #	CLIENT SAMPLE ID	DATE	TIME
E2100507-001	New Well	4/28/2021	1715

Service Request Summary

Folder #: **E2100507**
Client Name: Eastern Analytical, Inc.
Project Name: 225365
Project Number:

Project Chemist: Corey Grandits
Originating Lab: HOUSTON
Logged By: CGRANDITS
Date Received: 04/30/21
Internal Due Date: 5/21/2021
QAP: LAB QAP
Qualifier Set: HRMS Qualifier Set
Formset: Lab Standard
Merged?: N
Report to MDL?: Y
P.O. Number: 54833
EDD: No EDD Specified

1 1000 ml-Glass Bottle NM AMBER Teflon Liner Unpreserved
Location: EHRMS-WIC 10C
Pressure Gas:

32

Lab Samp No.	Client Samp No	Matrix	Collected	Dioxins Furans/1613B (HOUSTON)
E2100507-001	New Well	Drinking Water	04/28/21 1715	II

Printed 6/3/2021 10:48:02 AM

Service Request Summary

Folder #: **E2100507**
Client Name: Eastern Analytical, Inc.
Project Name: 225365
Project Number:

Project Chemist: Corey Grandits
Originating Lab: HOUSTON
Logged By: CGRANDITS
Date Received: 04/30/21
Internal Due Date: 5/21/2021
QAP: LAB QAP
Qualifier Set: HRMS Qualifier Set
Formset: Lab Standard
Merged?: N
Report to MDL?: Y
P.O. Number: 54833
EDD: No EDD Specified

1 1000 ml-Glass Bottle NM AMBER Teflon Liner Unpreserved
Location: EHRMS-WIC 10C
Pressure Gas:

33

Printed 6/3/2021 10:48:03 AM

Data Qualifiers

HRMS Qualifier Set

B Indicates the associated analyte was found in the method blank at >1/10th the reported value.
E Estimated value. The reported concentration is above the calibration range of the instrument.
H Sample extracted and/or analyzed out of suggested holding time.
J Estimated value. The reported concentration is below the MRL.
K The ion abundance ratio between the primary and secondary ions were outside of theoretical acceptance limits.The concentration of this analyte should be considered as an estimate.
P Chlorodiphenyl ether interference was present at the retention time of the target analyte. Reported result should be considered an estimate.
Q Monitored lock-mass indicates matrix-interference. Reported result is estimated.
S Signal saturated detector. Result reported from dilution.
U Compound was analyzed for, but was not detected (ND).
X See Case Narrative.
Y Isotopically Labeled Standard recovery outside of acceptance limits. In all cases, the signal-to-nois ratios are greater than 10:1, making the recoveries acceptable.
i The MDL/MRL have been elevated due to a matrix interference.

Acronyms

Cal	Calibration
Conc	CONCentration
Dioxin(s)	Polychlorinated dibenzo-p-dioxin(s)
EDL	Estimated Detection Limit
EMPC	Estimated Maximum Possible Concentration
Flags	Data qualifiers
Furan(s)	Polychlorinated dibenzofuran(s)
g	Grams
ICAL	Initial CALibration
ID	IDentifier
Ions	Masses monitored for the analyte during data acquisition
L	Liter (s)
LCS	Laboratory Control Sample
DLCS	Duplicate Laboratory Control Sample
MB	Method Blank
MCL	Method Calibration Limit
MDL	Method Detection Limit
mL	Milliliters
MS	Matrix Spiked sample
DMS	Duplicate Matrix Spiked sample
NO	Number of peaks meeting all identification criteria
PCDD(s)	Polychlorinated dibenzo-p-dioxin(s)
PCDF(s)	Polychlorinated dibenzofuran(s)
ppb	Parts per billion
ppm	Parts per million
ppq	Parts per quadrillion
ppt	Parts per trillion
QA	Quality Assurance
QC	Quality Control
Ratio	Ratio of areas from monitored ions for an analyte
% Rec.	Percent recovery
RPD	Relative Percent Difference
RRF	Relative Response Factor
RT	Retention Time
SDG	Sample Delivery Group
S/N	Signal-to-noise ratio
TEF	Toxicity Equivalence Factor
TEQ	Toxicity Equivalence Quotient

ALS Environmental

State Certifications, Accreditations, and Licenses

Agency	Number	Expire Date
American Association for Laboratory Accreditation	2897.01 2020	11/30/2021
Arkansas Department of Environmental Quality	21-022-0	3/26/2022
Department of Defense	A2LA 2897.01	11/30/2021
Florida Department of Health	E87611-2020	6/30/2021
Hawaii Department of Health	2021-2022	4/30/2022
Kansas Department of Health and Environment	E-10352-2020	7/31/2021
Louisiana Department of Environmental Quality	03087-2020	6/30/2021
Louisiana Department of Health and Hospitals	LA028-2021	12/31/2021
Maine Department of Health and Human Services	2020016	6/5/2022
Maryland Department of the Environment	343-2020	6/30/2021
Minnesota Department of Health	2021671	12/31/2021
Nevada Department of Concervation and Natural Resources	TX026932021-4	7/31/2021
New Hampshire Environmental Laboratory Accreditation Program	209421	4/24/2022
New Jersey Department of Environmental Protection	TX008	6/30/2021
Oklahoma Department of Environmental Quality	2020-123	8/31/2021
Pennsylvania Department of Environmental Protection	014	6/30/2021
Tennessee Department of Environment and Concervation	04016-2021	4/30/2022
United States Department of Agriculture	P330-19-00299	10/10/2022
Utah Department of Health Environmental Laboratory Certification	TX026932021-10	7/31/2021

ALS ENVIRONMENTAL – Houston
Data Processing/Form Production and Peer Review Signatures

SR# Unique ID: E21100507 DB-5MSUI SPB-Octyl

First Level - Data Processing - to be filled by person generating the forms

Date: 05/27/21	Analyst: YC	Samples: 001

Second Level - Data Review – to be filled by person doing peer review

Date: 05/28/21	Analyst: KJ	Samples: 001

Chain of Custody

ALS Environmental - Houston HRMS
10450 Stancliff Rd, Suite 210, Houston TX 77099
Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

CHAIN-OF-CUSTODY RECORD

Eastern Analytical, Inc.
professional laboratory and drilling services

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EAI ID# 225365 Page 1

Sample ID	Date Sampled	Matrix	aParameters	Sample Notes
New Well	4/28/2021 17:15	aqueous	Subcontract - 2,3,7,8 TCDD Dioxin Method 1613 WW or DW	

EAI ID# 225365 **Project State: NH**

Project ID:

Company ALS Environmental – Houston
Address 10450 Stancliff Road, Suite
Address Houston, TX 77099
Account #
Phone # 1 281-530-5656

Results Needed: Preferred Date: Standard
RUSH Due Date: _____

QC Deliverables
☐ A ☐ A+ ☒ B ☐ B+ ☐ C ☐ MA MCP

Notes about project:
Email login confirmation, pdf of results and invoice to customerservice@easternanalytical.com.

PO #: 54833 **EAI ID# 225365**

Data Deliverable (circle)
Excel NH EMD EQuIS ME EGAD

Call prior to analyzing, if RUSH charges will be applied.

Samples Collected by: _____

Relinquished by	Date/Time	Received by
[illegible]	4/29/21 1530	UPS
	4/30/21 09:30	J. mccarty

Relinquished by	Date/Time	Received by

Eastern Analytical, Inc. 25 Chenell Dr. Concord, NH 03301 Phone: (603)228-0525 1-800-287-0525 customerservice@easternanalytical.com

ALS Environmental

Cooler Receipt Form

Project Chemist: CA

Client/Project: EAI

Thermometer ID: 1021

Date/Time Received: 4/30/21 Initials: JM

Date/Time Logged in: 4/30/21 Initials: CA

1. Method of delivery: ○ US Mail ○ Fed Ex ✓ UPS ○ DHL ○ Courier ○ Client
2. Samples received in: ✓ Cooler ✓ Box ○ Envelope ○ Other
3. Were custody seals on coolers? ○ Yes ✓ No
   Were they intact? ○ Yes ○ No ✓ N/A
   Were they signed and dated? ○ Yes ○ No ✓ N/A
   If yes, how many and where?
4. Packing Material: ○ Inserts ✓ Baggies ✓ Bubble Wrap ○ Gel Packs ✓ Wet Ice ○ Sleeves ○ Other
5. Foreign or Regulated Soil? ○ Yes ○ No Location of Sampling:

Cooler Tracking Number	COC ID	Date Opened	Time Opened	Opened By	Temp. °C	Temp Blank?
12 446 5991 0170 0155		4/30/21	0430	JM	1.8	☐
						☐
						☐
						☐

6. Were custody papers properly filled out (ink, signed, dated, etc)? ✓ Yes ○ No
7. Did all bottles arrive in good condition (not broken, no signs of leakage)? ✓ Yes ○ No
8. Were all sample labels complete (i.e., sample ID, analysis, preservation, etc)? ✓ Yes ○ No
9. Were appropriate bottles/containers and volumes received for the requested tests? ✓ Yes ○ No
10. Did sample labels and tags agree with custody documents? ✓ Yes ○ No

Notes, Discrepancies, & Resolutions:

Service request Label:

10450 Stancliff Rd., Suite 210
Houston, TX 77099
T: +1 713 266 1599
F: +1 713 266 1599
www.alsglobal.com

SAMPLE ACCEPTANCE POLICY

This policy outlines the criteria samples must meet to be accepted by ALS Environmental - Houston HRMS.

Cooler Custody Seals (desirable, mandatory if specified in SAP):

- ✓ Intact on outside of cooler, signed and dated

Chain-of-Custody (COC) documentation (mandatory):

The following is required on each COC:

- ✓ Sample ID, the location, date and time of collection, collector's name, preservation type, sample type, and any other special remarks concerning the sampleThe COC must be completed in ink.
- ✓ Signature and date of relinquishing party.

In the absence of a COC at sample receipt, the COC will be requested from the client.

Sample Integrity (mandatory):

Samples are inspected upon arrival to ensure that sample integrity was not compromised during transfer to the laboratory.

- ✓ Sample containers must arrive in good condition (not broken or leaking).
- ✓ Samples must be labeled appropriately, including Sample IDs, and requested test using durable labels and indelible ink.
- ✓ The correct type of sample bottle must be used for the method requested.
- ✓ An appropriate sample volume, or weight, must be received.
- ✓ Sample IDs and number of containers must reconcile with the COC.
- ✓ Samples must be received within the method defined holding time.

Temperature Requirement (varies by sample matrix):

- ✓ Aqueous and Non-aqueous samples must be shipped and stored cold, at 0 to 6°C.
- ✓ Tissue samples must be shipped and stored frozen, at -20 to -10°C.
- ✓ Air samples are shipped and stored cold, at 0 to 6°C
- ✓ The sample temperature must be recorded on the COC

All cooler inspections are documented on the Cooler Receipt Form (CRF). A separate CRF is completed for each service request. Any samples not meeting the above criteria are noted on the CRF and the Project Manager notified. The Project Manager must resolve any sample integrity issues with the client prior to proceeding with the analysis. Such resolutions are documented in writing and filed with the project folder. Data associated with samples received outside of this acceptance policy will be qualified on the case narrative of the final report

Preparation Information Benchsheets

ALS Environmental - Houston HRMS
10450 Stancliff Rd., Suite 210, Houston, TX 77099
Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

Preparation Information Benchsheet

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Prep Run#: 378959
Team: Semivoa GCMS/JGUIN

Prep WorkFlow: OrgExtAq(365)
Prep Method: Method Sep Funnel/Jar

Status: Prepped
Prep Date/Time: 5/10/21 09:00

#	Lab Code	Client ID	B#	Method /Test	pH	Cl	Matrix	Amt. Ext.	Sample Description
1	E2100354-001RE	Bonnell Aluminum	.01	1613B/Dioxins Furans	6	x	Water	937mL	cloudy
2	E2100452-001	BP-2185 SUPERIOR CARRIERS BS	.02	1613B/Dioxins Furans	8	x	Wastewater	1058mL	cloudy brown
3	E2100452-002	BP-2190 SOUTHERN IONICS BS	.02	1613B/Dioxins Furans	10/4	x	Wastewater	1041mL	cloudy brown
4	E2100452-003	BP-2195 TRIMAC DSI BS	.02	1613B/Dioxins Furans	6	x	Wastewater	1032mL	cloudy brown
5	E2100452-004	BP-2200 EQUISTAR/BASELL CS	.02	1613B/Dioxins Furans	7	x	Wastewater	1054mL	cloudy brown
6	E2100453-001	BP-2500 ODFJELL BS	.02	1613B/Dioxins Furans	7	x	Wastewater	1066mL	cloudy brown
7	E2100453-002	BP-2530 NOVA BS	.02	1613B/Dioxins Furans	7	x	Wastewater	1061mL	cloudy brown
8	E2100453-003	BP-2540 OXITENO BS	.02	1613B/Dioxins Furans	6	x	Wastewater	1060mL	cloudy brown
9	E2100472-001	704WW42321	.01	1613B/Dioxins Furans	6	x	Wastewater	1028mL	cloudy brown
10	E2100475-001	001A	.01	1613B/Dioxins Furans	6	x	Water	1002mL	clear
11	E2100476-001	002A	.01	1613B/Dioxins Furans	7	x	Water	935mL	clear
12	E2100477-001	VCS-OU1-WW-WI-042021	.01	1613B/Dioxins Furans	6	x	Wastewater	912mL	clear
13	E2100477-002	VCS-OU1-WW-SI-042021	.01	1613B/Dioxins Furans	6	x	Wastewater	953mL	clear
14	E2100487-001	1R-PW-G2L-001	.01	1613B/Dioxins Furans	7	x	Water	950mL	Yellow Tint
15	E2100491-001	1980825	.02	1613B/Dioxins Furans	7	x	Water	455mL	cloudy
16	E2100507-001	New Well	.01	1613B/Dioxins Furans	7	x	Drinking Water	968mL	Clear
17	EQ2100277-01	MB		1613B/Dioxins Furans	5	x	Liquid	1000mL	
18	EQ2100277-02	LCS		1613B/Dioxins Furans	5	x	Liquid	1000mL	
19	EQ2100277-03	VCS-OU1-WW-WI-042021 MS	.02	1613B/Dioxins Furans	6	x	Liquid	942mL	
20	EQ2100277-04	VCS-OU1-WW-WI-042021 DMS	.03	1613B/Dioxins Furans	6	x	Liquid	924mL	
21	K2104467-004	003A Composite	.02	1613B/Dioxins Furans	4	x	Water	987mL	Yellow
22	K2104467-008	003B Composite	.02	1613B/Dioxins Furans	5	x	Water	983mL	Orange
23	K2104567-001	Bleach Plant Effluent	.01	1613B/Dioxins Furans	7	x	Water	949mL	Orange

Spiking Solutions

Name: 1613B Matrix Working Standard Inventory ID 216687 Logbook Ref: 216687 JG 4/17/2021 Expires On: 10/14/2021

EQ2100277-02	100.00µL	EQ2100277-03	100.00µL	EQ2100277-04	100.00µL

Name: 8290/1613B Cleanup Working Standard Inventory ID 216752 Logbook Ref: tw 216752 4/21/21 8ng/ml Expires On: 08/28/2021

E2100354-001	100.00µL	E2100452-001	100.00µL	E2100452-002	100.00µL	E2100452-003	100.00µL	E2100452-004	100.00µL	E2100453-001	100.00µL
E2100453-002	100.00µL	E2100453-003	100.00µL	E2100472-001	100.00µL	E2100475-001	100.00µL	E2100476-001	100.00µL	E2100477-001	100.00µL
E2100477-002	100.00µL	E2100487-001	100.00µL	E2100491-001	100.00µL	E2100507-001	100.00µL	EQ2100277-01	100.00µL	EQ2100277-02	100.00µL
EQ2100277-03	100.00µL	EQ2100277-04	100.00µL	K2104467-004	100.00µL	K2104467-008	100.00µL	K2104567-001	100.00µL		

Preparation Information Benchsheet

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Prep Run#: 378959
Team: Semivoa GCMS/JGUIN

Prep WorkFlow: OrgExtAq(365)
Prep Method: Method Sep Funnel/Jar

Status: Prepped
Prep Date/Time: 5/10/21 09:00

Name:	1613B Labeled Working Standard	Inventory ID	216955	Logbook Ref:	db 050321 216955 2-4ng/ml	Expires On:	09/14/2021

E2100354-001	1,000.00µL	E2100452-001	1,000.00µL	E2100452-002	1,000.00µL	E2100452-003	1,000.00µL	E2100452-004	1,000.00µL	E2100453-001	1,000.00µL
E2100453-002	1,000.00µL	E2100453-003	1,000.00µL	E2100472-001	1,000.00µL	E2100475-001	1,000.00µL	E2100476-001	1,000.00µL	E2100477-001	1,000.00µL
E2100477-002	1,000.00µL	E2100487-001	1,000.00µL	E2100491-001	1,000.00µL	E2100507-001	1,000.00µL	EQ2100277-01	1,000.00µL	EQ2100277-02	1,000.00µL
EQ2100277-03	1,000.00µL	EQ2100277-04	1,000.00µL	K2104467-004	1,000.00µL	K2104467-008	1,000.00µL	K2104567-001	1,000.00µL		

Preparation Materials

Carbon, High Purity	carbon (216474)	Ethyl Acetate 99.9% Minimum EtOAc	TW 12/15/20 (214517)	Glass Wool	glass wool tw 071520 (211598)
Hexanes 95%	hexanes (216473)	Chlorine Test Strips	Chlorine test Strips (210298)	Tridecane (n-Tridecane)	tw 04/ tridecane (216874)
Silica Gel	silica gel (216475)	Toluene 99.9% Minimum	toluene (216477)	sulfuric acid	tw sulfiric acid 11/ (213915)
Dichloromethane (Methylene Chloride) 99.9% MeCl2	tw 09/18/20 (212826)	Sodium Hydroxide 1N NaOH	sodsium hydroxide 1n (202287)	ColorpHast pH-Indicator Strips	pH strips tw 21020 (206953)

Preparation Steps

Step:	Extraction	Step:	Acid Clean	Step:	Silica Gel Clean	Step:	Final Volume
Started:	5/10/21 09:00	Started:	5/12/21 09:00	Started:	5/12/21 10:00	Started:	5/13/21 09:00
Finished:	5/10/21 15:00	Finished:	5/12/21 10:00	Finished:	5/12/21 13:00	Finished:	5/13/21 12:00
By:	JGUIN	By:	JGUIN	By:	JGUIN	By:	JGUIN
Comments		Comments		Comments		Comments	

Comments: _____

Reviewed By: JG Date: 5/13/21

Chain of Custody

Relinquished By: _____ Date: _____

Received By: _____ Date: _____

Extracts Examined
Yes No

Analytical Results

ALS Environmental - Houston HRMS
10450 Stancliff Rd., Suite 210, Houston, TX 77099
Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Eastern Analytical, Inc.	**Service Request:**	E2100507
Project:	225365	**Date Collected:**	04/28/21 17:15
Sample Matrix:	Drinking Water	**Date Received:**	04/30/21 09:30
Sample Name:	New Well	**Units:**	pg/L
Lab Code:	E2100507-001	**Basis:**	NA

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method:	1613B	**Date Analyzed:**	05/24/21 02:03
Prep Method:	Method Sep Funnel/Jar	**Date Extracted:**	5/10/21
Sample Amount:	968mL	**Instrument Name:**	E-HRMS-07
		GC Column:	DB-5MSUI
Data File Name:	P532680	**Blank File Name:**	P625817
ICAL Date:	01/18/21	**Cal Ver. File Name:**	P532671

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDD	ND	U	0.981	5.17			1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Eastern Analytical, Inc.	**Service Request:**	E2100507
Project:	225365	**Date Collected:**	04/28/21 17:15
Sample Matrix:	Drinking Water	**Date Received:**	04/30/21 09:30
Sample Name:	New Well	**Units:**	Percent
Lab Code:	E2100507-001	**Basis:**	NA

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method:	1613B	**Date Analyzed:**	05/24/21 02:03
Prep Method:	Method Sep Funnel/Jar	**Date Extracted:**	5/10/21
Sample Amount:	968mL	**Instrument Name:**	E-HRMS-07
		GC Column:	DB-5MSUI
Data File Name:	P532680	**Blank File Name:**	P625817
ICAL Date:	01/18/21	**Cal Ver. File Name:**	P532671

Labeled Standard Results

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	% Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDD	2000	1171.253	59		25-164	0.80	1.019
37Cl-2,3,7,8-TCDD	800	443.604	55		35-197	NA	1.020

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Eastern Analytical, Inc.	**Service Request:**	E2100507
Project:	225365	**Date Collected:**	NA
Sample Matrix:	Drinking Water	**Date Received:**	NA
Sample Name:	Method Blank	**Units:**	pg/L
Lab Code:	EQ2100277-05	**Basis:**	NA

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method:	1613B	**Date Analyzed:**	05/17/21 15:28
Prep Method:	Method Sep Funnel/Jar	**Date Extracted:**	5/10/21
Sample Amount:	1000mL	**Instrument Name:**	E-HRMS-08
		GC Column:	DB-5MSUI
Data File Name:	P625817	**Blank File Name:**	P625817
ICAL Date:	12/04/20	**Cal Ver. File Name:**	P625815

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDD	ND	U	8.51	8.51			1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Eastern Analytical, Inc.	**Service Request:**	E2100507
Project:	225365	**Date Collected:**	NA
Sample Matrix:	Drinking Water	**Date Received:**	NA
Sample Name:	Method Blank	**Units:**	Percent
Lab Code:	EQ2100277-05	**Basis:**	NA

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method:	1613B	**Date Analyzed:**	05/17/21 15:28
Prep Method:	Method Sep Funnel/Jar	**Date Extracted:**	5/10/21
Sample Amount:	1000mL	**Instrument Name:**	E-HRMS-08
		GC Column:	DB-5MSUI
Data File Name:	P625817	**Blank File Name:**	P625817
ICAL Date:	12/04/20	**Cal Ver. File Name:**	P625815

Labeled Standard Results

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	% Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDD	2000	807.044	40		25-164	0.78	1.019
37Cl-2,3,7,8-TCDD	800	262.907	33	Y	35-197	NA	1.020

Accuracy & Precision

ALS Environmental - Houston HRMS
10450 Stancliff Rd., Suite 210, Houston TX 77099
Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

Client:	Eastern Analytical, Inc.	**Service Request:**	E2100507
Project:	225365	**Date Analyzed:**	05/17/21
Sample Matrix:	Drinking Water	**Date Extracted:**	05/10/21

Lab Control Sample Summary
Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method:	1613B	**Units:**	pg/L
Prep Method:	Method Sep Funnel/Jar	**Basis:**	NA
		Analysis Lot:	723937

Lab Control Sample
EQ2100277-06

Analyte Name	Result	Spike Amount	% Rec	% Rec Limits
2,3,7,8-TCDD	185	200	92	67-158

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Eastern Analytical, Inc.	**Service Request:**	E2100507
Project:	225365	**Date Collected:**	NA
Sample Matrix:	Drinking Water	**Date Received:**	NA
Sample Name:	Lab Control Sample	**Units:**	pg/L
Lab Code:	EQ2100277-06	**Basis:**	NA

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method:	1613B	**Date Analyzed:**	05/17/21 20:53
Prep Method:	Method Sep Funnel/Jar	**Date Extracted:**	5/10/21
Sample Amount:	1000mL	**Instrument Name:**	E-HRMS-08
		GC Column:	DB-5MSUI
Data File Name:	P625823	**Blank File Name:**	P625817
ICAL Date:	12/04/20	**Cal Ver. File Name:**	P625815

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDD	185		5.60	5.60	0.75	1.001	1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Eastern Analytical, Inc.	**Service Request:**	E2100507
Project:	225365	**Date Collected:**	NA
Sample Matrix:	Drinking Water	**Date Received:**	NA
Sample Name:	Lab Control Sample	**Units:**	Percent
Lab Code:	EQ2100277-06	**Basis:**	NA

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method:	1613B	**Date Analyzed:**	05/17/21 20:53
Prep Method:	Method Sep Funnel/Jar	**Date Extracted:**	5/10/21
Sample Amount:	1000mL	**Instrument Name:**	E-HRMS-08
		GC Column:	DB-5MSUI
Data File Name:	P625823	**Blank File Name:**	P625817
ICAL Date:	12/04/20	**Cal Ver. File Name:**	P625815

Labeled Standard Results

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	% Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDD	2000	881.230	44		25-164	0.80	1.019
37Cl-2,3,7,8-TCDD	800	288.608	36		35-197	NA	1.020

EMSL Analytical, Inc.
200 Route 130 North Cinnaminson, NJ 08077
Phone/Fax: (800) 220-3675 / (856) 786-5974
http://www.EMSL.com / cinnasblab@EMSL.com

EMSL Order ID:	042110130
Customer ID:	ESTA42
Customer PO:	54835
Project ID:	

Attn: Customer Service
Eastern Analytical, Inc.
25 Chenell Dr.
Concord, NH 03301

Phone: (603) 228-0525
Fax: (603) 228-4591
Received: 04/30/2021
Analyzed: 05/18/2021

Proj: 225365

Test Report: Determination of Asbestos Structures >10µm in Drinking Water Performed by the 100.2 Method (EPA 600/R-94/134)

Sample ID Client / EMSL	Sample Filtration Date/Time	Original Sample Vol. Filtered (ml)	Effective Filter Area (mm^2)	Area Analyzed (mm^2)	ASBESTOS: Asbestos Types	Fibers Detected	Analytical Sensitivity	Concentration	Confidence Limits
							MFL (million fibers per liter)		
New Well 042110130-0001	5/6/2021 01:00 PM	50	1288	0.1397	None Detected	ND	0.18	<0.18	0.00 - 0.68

Collection Date/Time: *04/28/2021 17:15 PM*

Analysis of this sample confirmed two Ferro-Actinolite fibers present.

Analyst(s)
Isaac Mendez (1)

Samantha Rundstrom, Laboratory Manager
or Other Approved Signatory

Any questions please contact Samantha Rundstrom-Cruz.

Report amended: 05/24/2021 14:52:58 Replaces initial report from:05/18/2021 18:15:46 Reason Code: DataEntry-Other (see report comment)

CHAIN-OF-CUSTODY RECORD

Eastern Analytical, Inc.
professional laboratory and drilling services

55

EAI ID# 225365 Page 1

042110130

Sample ID	Date Sampled	Matrix	aParameters	Sample Notes
New Well	4/28/2021 17:15	aqueous	Subcontract - Asbestos in Water 100.2 (Fibers >10 microns)	

2021 APR 30 AM 9:51

UPS:12 X46 599 01 9097 2955

Page 1 Of 1

EAI ID# 225365 **Project State: NH**

Project ID:

Company EMSL ANALYTICAL, INC.
Address 200 ROUTE 130 NORTH
Address CINNAMINSON, NJ 08077
Account #
Phone # (856) 303-2500

Results Needed: Preferred Date: Standard
RUSH Due Date: _____

QC Deliverables
☐ A ☐ A+ ☒ B ☐ B+ ☐ C ☐ MA MCP

Notes about project:
Email login confirmation, pdf of results and invoice to customerservice@easternanalytical.com.

PO #:54835 **EAI ID# 225365**

Data Deliverable (circle)
Excel NH EMD EQuIS ME EGAD

Call prior to analyzing, if RUSH charges will be applied.

Samples Collected by:

Relinquished by	Date/Time	Received by
	4/29/21 1530	UPS
Relinquished by	Date/Time	Received by
		UPS 4/30/21 9:30

OrderID: 042110130

Eastern Analytical, Inc. 25 Chenell Dr. Concord, NH 03301 *Phone: (603)228-0525* *1-800-287-0525* *customerservice@easternanalytical.com*

S.4/C

KNL ENVIRONMENTAL TESTING

FL DOH Certification #E84025
NH Laboratory ID #2530

Report Date: May 18, 2021

Eastern Analytical, Inc.
25 Chenell Dr.
Concord, NH 03301

Field Custody: Client
Client/Field ID: 225365
New Well
PO# 54831
Sample Collection: 04-28-21/1715
Lab ID No: 21.6674
Lab Custody Date: 05-06-21/1029
Sample Description: Water

CERTIFICATE OF ANALYSIS

Contam Code	Parameter	Units	Results	Analysis Date/Time	Method	Detection Limit
4002	Analytical Gross Alpha (aga)	pCi/L	4.5 ± 1.3	5-15-21/0750	EPA 900.0	1.5
	Gross Beta	pCi/L	4.6 ± 1.7	5-15-21/0750	EPA 900.0	3.2
4010	Radium-226 + Radium-228	pCi/L	0.7 ± 0.6	Calc	Calc	0.6
4020	Radium-226	pCi/L	0.5 ± 0.2	5-17-21/1337	EPA 903.0*	0.3
4030	Radium-228	pCi/L	0.2 ± 0.6	5-17-21/1707	EPA Ra-05	0.6

* 84% carrier recovery
Alpha Standard: Th-230
Beta Standard: Cs-137

Thomas J. Weeks
Laboratory Manager

Test results meet all requirements of the 2016 TNI standards. Statement of estimated uncertainty available upon request. Test results refer only to sample(s) listed.
Contact person: Thomas Weeks (813) 229-2879.

KNL ENVIROMENTAL TESTING, INC. | 3202 NORTH FLORIDA AVENUE | TAMPA, FLORIDA 33603
813.229.2879 | KNLENVIRONMENTAL.COM

CHAIN-OF-CUSTODY RECORD

Eastern Analytical, Inc.
professional laboratory and drilling services

21.6674

EAI ID# 225365 Page 1

Sample ID	Date Sampled	Matrix	aParameters	Sample Notes
New Well	4/28/2021 17:15	aqueous	Subcontract - Gross Alpha & Beta KNL	
New Well	4/28/2021 17:15	aqueous	Subcontract - Radium 226 & Radium 228 Combined KNL	

EAI ID# 225365 **Project State: NH**

Project ID:

Company KNL Environmental Testing
Address 3202 N. Florida Ave.
Address Tampa, FL 33603
Account #
Phone # 813-229-2879

Results Needed: **Preferred Date: Standard**
RUSH Due Date: _____

QC Deliverables
☐ A ☐ A+ ☒ B ☐ B+ ☐ C ☐ MA MCP

Notes about project:
Email login confirmation, pdf of results and invoice to customerservice@easternanalytical.com.

PO #: 54831 **EAI ID# 225365**

Data Deliverable **(circle)**
Excel NH EMD EQuIS ME EGAD

Call prior to analyzing, if RUSH charges will be applied.

Samples Collected by: 5-3-2021
@ 1600 UPS
Relinquished by **Date/Time** **Received by**
KNL 5-6-21/1029
Relinquished by **Date/Time** **Received by**

Eastern Analytical, Inc. 25 Chenell Dr. Concord, NH 03301 Phone: (603)228-0525 1-800-287-0525 customerservice@easternanalytical.com

Pace Analytical Services, LLC
110 South Bayview Blvd.
Oldsmar , FL 34677
(813)881-9401

May 12, 2021

Customer Service
Eastern Analytical Inc.
25 Chenell Drive
Concord, NH 03301

RE: Project: 225365
Pace Project No.: 35629686

Dear Customer Service:

Enclosed are the analytical results for sample(s) received by the laboratory on April 30, 2021. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - Ormond Beach

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Chelsea Gagne
chelsea.gagne@pacelabs.com
813-855-1844
Project Manager

Enclosures

cc: Alison Blay, Eastern Analytical Inc.
Jennifer Laramie, Eastern Analytical Inc.

Pace Analytical Services, LLC
110 South Bayview Blvd.
Oldsmar , FL 34677
(813)881-9401

CERTIFICATIONS

Project: 225365
Pace Project No.: 35629686

Pace Analytical Services Ormond Beach
8 East Tower Circle, Ormond Beach, FL 32174
Alaska DEC- CS/UST/LUST
Alabama Certification #: 41320
Arizona Certification# AZ0819
Colorado Certification: FL NELAC Reciprocity
Connecticut Certification #: PH-0216
Delaware Certification: FL NELAC Reciprocity
Florida Certification #: E83079
Georgia Certification #: 955
Guam Certification: FL NELAC Reciprocity
Hawaii Certification: FL NELAC Reciprocity
Illinois Certification #: 200068
Indiana Certification: FL NELAC Reciprocity
Kansas Certification #: E-10383
Kentucky Certification #: 90050
Louisiana Certification #: FL NELAC Reciprocity
Louisiana Environmental Certificate #: 05007
Maryland Certification: #346
Michigan Certification #: 9911
Mississippi Certification: FL NELAC Reciprocity
Missouri Certification #: 236
Montana Certification #: Cert 0074
Nebraska Certification: NE-OS-28-14
New Hampshire Certification #: 2958
New Jersey Certification #: FL022
New York Certification #: 11608
North Carolina Environmental Certificate #: 667
North Carolina Certification #: 12710
North Dakota Certification #: R-216
Ohio DEP 87780
Oklahoma Certification #: D9947
Pennsylvania Certification #: 68-00547
Puerto Rico Certification #: FL01264
South Carolina Certification: #96042001
Tennessee Certification #: TN02974
Texas Certification: FL NELAC Reciprocity
US Virgin Islands Certification: FL NELAC Reciprocity
Virginia Environmental Certification #: 460165
West Virginia Certification #: 9962C
Wisconsin Certification #: 399079670
Wyoming (EPA Region 8): FL NELAC Reciprocity

Pace Analytical Services, LLC
110 South Bayview Blvd.
Oldsmar , FL 34677
(813)881-9401

SAMPLE SUMMARY

Project: 225365
Pace Project No.: 35629686

Lab ID	Sample ID	Matrix	Date Collected	Date Received
35629686001	**New Well**	Drinking Water	04/28/21 17:15	04/30/21 09:20

Pace Analytical Services, LLC
110 South Bayview Blvd.
Oldsmar , FL 34677
(813)881-9401

SAMPLE ANALYTE COUNT

Project: 225365
Pace Project No.: 35629686

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
35629686001	**New Well**	EPA 547	ERS	1	PASI-O
		EPA 549.2	ERS	1	PASI-O
		EPA 548.1	TM2	1	PASI-O
		EPA 300.1	NMT	2	PASI-O
		EPA 300.1	NMT	2	PASI-O

PASI-O = Pace Analytical Services - Ormond Beach

Pace Analytical Services, LLC
110 South Bayview Blvd.
Oldsmar , FL 34677
(813)881-9401

ANALYTICAL RESULTS

Project: 225365
Pace Project No.: 35629686

Sample: New Well **Lab ID: 35629686001** Collected: 04/28/21 17:15 Received: 04/30/21 09:20 Matrix: Drinking Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
547 HPLC Glyphosate	Analytical Method: EPA 547 Pace Analytical Services - Ormond Beach								
Glyphosate	ND	ug/L	6.0	4.2	1		05/11/21 16:10		
549.2 HPLC Paraquat Diquat	Analytical Method: EPA 549.2 Preparation Method: EPA 549.2 Pace Analytical Services - Ormond Beach								
Diquat	ND	ug/L	0.40	0.16	1	05/01/21 12:47	05/03/21 17:07	85-00-7	
548.1 GCS Endothall	Analytical Method: EPA 548.1 Preparation Method: EPA 548.1 Pace Analytical Services - Ormond Beach								
Endothall	ND	ug/L	9.0	3.3	1	05/02/21 11:08	05/03/21 20:28		
300.1 Oxihalide IC Anions 14d	Analytical Method: EPA 300.1 Pace Analytical Services - Ormond Beach								
Chlorite	ND	ug/L	2.0	0.25	1		05/11/21 06:46		
Surrogates									
Dichloroacetate (S)	94	%	90-115		1		05/11/21 06:46	79-43-6	
300.1 Oxihalide IC Anions 28d	Analytical Method: EPA 300.1 Pace Analytical Services - Ormond Beach								
Bromate	ND	ug/L	1.0	0.22	1		05/11/21 06:46	15541-45-4	
Surrogates									
Dichloroacetate (S)	94	%	90-115		1		05/11/21 06:46	79-43-6	

Pace Analytical Services, LLC
110 South Bayview Blvd.
Oldsmar , FL 34677
(813)881-9401

QUALITY CONTROL DATA

Project: 225365
Pace Project No.: 35629686

QC Batch: 726528
QC Batch Method: EPA 547
Analysis Method: EPA 547
Analysis Description: 547 HPLC Glyphosate
Laboratory: Pace Analytical Services - Ormond Beach
Associated Lab Samples: 35629686001

METHOD BLANK: 3959859 Matrix: Water
Associated Lab Samples: 35629686001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Glyphosate	ug/L	ND	6.0	4.2	05/11/21 09:42	

LABORATORY CONTROL SAMPLE: 3959860

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Glyphosate	ug/L	50	53.1	106	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3959861 3959862

Parameter	Units	35629109003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Glyphosate	ug/L	<4.2	50	50	49.7	49.1	99	98	80-120	1	30	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3959863 3959864

Parameter	Units	35629413001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Glyphosate	ug/L	4.2 U	50	50	44.3	43.8	89	88	80-120	1	30	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 South Bayview Blvd.
Oldsmar , FL 34677
(813)881-9401

QUALITY CONTROL DATA

Project: 225365
Pace Project No.: 35629686

QC Batch: 725805
QC Batch Method: EPA 548.1
Analysis Method: EPA 548.1
Analysis Description: 548 GCS Endothall
Laboratory: Pace Analytical Services - Ormond Beach
Associated Lab Samples: 35629686001

METHOD BLANK: 3956536
Matrix: Water
Associated Lab Samples: 35629686001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Endothall	ug/L	ND	9.0	3.3	05/03/21 18:40	

LABORATORY CONTROL SAMPLE: 3956537

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Endothall	ug/L	50	36.2	72	64-137	

LABORATORY CONTROL SAMPLE: 3956538

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Endothall	ug/L	9	6.5 I	72	50-150	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3956539 3956540

Parameter	Units	35629686001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Endothall	ug/L	ND	50	50	34.9	38.5	70	77	64-137	10	30	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3956541 3956542

Parameter	Units	35629859001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Endothall	ug/L	3.3 U	50	50	38.2	37.5	76	75	64-137	2	30	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 South Bayview Blvd.
Oldsmar , FL 34677
(813)881-9401

QUALITY CONTROL DATA

Project: 225365
Pace Project No.: 35629686

QC Batch: 725745
QC Batch Method: EPA 549.2
Analysis Method: EPA 549.2
Analysis Description: 549 HPLC Paraquat Diquat
Laboratory: Pace Analytical Services - Ormond Beach

Associated Lab Samples: 35629686001

METHOD BLANK: 3956252 Matrix: Water
Associated Lab Samples: 35629686001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Diquat	ug/L	ND	0.40	0.16	05/03/21 15:57	

LABORATORY CONTROL SAMPLE: 3956253

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Diquat	ug/L	2	1.9	96	70-130	

LABORATORY CONTROL SAMPLE: 3956254

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Diquat	ug/L	0.4	.38 I	95	50-150	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3956311 3956312

Parameter	Units	35629320001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Diquat	ug/L	ND	2	2	2.0	2.0	100	99	70-130	0	30	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3956313 3956314

Parameter	Units	35629325001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Diquat	ug/L	ND	2	2	2.0	2.0	100	99	70-130	1	30	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 South Bayview Blvd.
Oldsmar , FL 34677
(813)881-9401

QUALITY CONTROL DATA

Project: 225365
Pace Project No.: 35629686

QC Batch: 727988
QC Batch Method: EPA 300.1
Analysis Method: EPA 300.1
Analysis Description: 300.1 Oxihalides IC Anions
Laboratory: Pace Analytical Services - Ormond Beach
Associated Lab Samples: 35629686001

METHOD BLANK: 3968703
Matrix: Water
Associated Lab Samples: 35629686001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chlorite	ug/L	ND	2.0	0.25	05/10/21 16:31	
Dichloroacetate (S)	%	99	90-115		05/10/21 16:31	

LABORATORY CONTROL SAMPLE: 3968704

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chlorite	ug/L	40	37.9	95	85-115	
Dichloroacetate (S)	%			98	90-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3968705 3968706

Parameter	Units	35630867003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chlorite	ug/L	0.14 mg/L	400	400	528	538	97	99	75-125	2	20	
Dichloroacetate (S)	%						100	102	90-115			

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 South Bayview Blvd.
Oldsmar , FL 34677
(813)881-9401

QUALITY CONTROL DATA

Project: 225365
Pace Project No.: 35629686

QC Batch: 727989
QC Batch Method: EPA 300.1
Analysis Method: EPA 300.1
Analysis Description: 300.1 Oxihalides IC Anions
Laboratory: Pace Analytical Services - Ormond Beach
Associated Lab Samples: 35629686001

METHOD BLANK: 3968708
Matrix: Water
Associated Lab Samples: 35629686001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Bromate	ug/L	ND	1.0	0.22	05/10/21 16:31	
Dichloroacetate (S)	%	99	90-115		05/10/21 16:31	

LABORATORY CONTROL SAMPLE: 3968709

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Bromate	ug/L	8	7.5	93	85-115	
Dichloroacetate (S)	%			98	90-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3968710 3968711

Parameter	Units	35629118001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Bromate	ug/L	ND	40	40	39.4	38.8	99	97	75-125	1	20	
Dichloroacetate (S)	%						99	98	90-115			

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
110 South Bayview Blvd.
Oldsmar , FL 34677
(813)881-9401

QUALIFIERS

Project: 225365
Pace Project No.: 35629686

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

I	The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit.
U	Compound was analyzed for but not detected.

Pace Analytical Services, LLC
110 South Bayview Blvd.
Oldsmar , FL 34677
(813)881-9401

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 225365
Pace Project No.: 35629686

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
35629686001	**New Well**	EPA 547	726528		
35629686001	**New Well**	EPA 549.2	725745	EPA 549.2	725968
35629686001	**New Well**	EPA 548.1	725805	EPA 548.1	725896
35629686001	**New Well**	EPA 300.1	727988		
35629686001	**New Well**	EPA 300.1	727989		

CHAIN-OF-CUSTODY RECORD

Eastern Analytical, Inc.
professional laboratory and drilling services

EAI ID# **225365** Page 1

Sample ID	Date Sampled	Matrix	aParameters	Sample Notes
New Well	4/28/2021 17:15	aqueous	Subcontract - Glyphosate EPA Method 547	
New Well	4/28/2021 17:15	aqueous	Subcontract - Diquat EPA Method 549	
New Well	4/28/2021 17:15	aqueous	Subcontract - Endothall - Drinking water SALI	
New Well	4/28/2021 17:15	aqueous	Subcontract - SOCs Herbicides EPA Method 515.3 (Dalapon Only)	

WO#: 35629686

35629686

EAI ID# **225365** Project State: NH

Project ID:

Company Pace Analytical (FL)

Address 110 Bayview BLVD

Address Oldsmar, FL 34677

Account #

Phone # 813-855-1844

Results Needed: Preferred Date: Standard

RUSH Due Date:_____

QC Deliverables

☐ A ☐ A+ ☒ B ☐ B+ ☐ C ☐ MA MCP

Notes about project:

Email login confirmation, pdf of results and invoice to customerservice@easternanalytical.com.

PO #:54832 EAI ID# **225365**

Data Deliverable (circle)

Excel NH EMD EQuIS ME EGAD

Call prior to analyzing, if RUSH charges will be applied.

Samples Collected by: _____

Relinquished by	Date/Time	Received by
[signature]	4/29/21 1530	UPS
	4/30/21 920	SAT/PACE
Relinquished by	Date/Time	Received by

Eastern Analytical, Inc. 25 Chenell Dr. Concord, NH 03301 Phone: (603)228-0525 1-800-287-0525 customerservice@easternanalytical.com

CHAIN-OF-CUSTODY RECORD

Eastern Analytical, Inc.
professional laboratory and drilling services

EAI ID# 225365 Page 2

Sample ID	Date Sampled	Matrix	aParameters	Sample Notes
New Well	4/28/2021 17:15	aqueous	Subcontract - Bromate 300.0	
New Well	4/28/2021 17:15	aqueous	Subcontract - Chlorite 300.0	

EAI ID# 225365 **Project State: NH**

Project ID:

Company Pace Analytical (FL)

Address 110 Bayview BLVD

Address Oldsmar, FL 34677

Account #

Phone # 813-855-1844

Results Needed: Preferred Date: Standard

RUSH Due Date:

QC Deliverables

☐ A ☐ A+ ☒ B ☐ B+ ☐ C ☐ MA MCP

Notes about project:

Email login confirmation, pdf of results and invoice to customerservice@easternanalytical.com.

PO #: 54832 **EAI ID# 225365**

Data Deliverable (circle)

Excel NH EMD EQuIS ME EGAD

Call prior to analyzing, if RUSH charges will be applied.

Samples Collected by: [signature] 4/29/21 1530 UPS

Relinquished by **Date/Time** **Received by**

Relinquished by **Date/Time** **Received by**

Eastern Analytical, Inc. 25 Chenell Dr. Concord, NH 03301 Phone: (603)228-0525 1-800-287-0525 customerservice@easternanalytical.com

Pace Analytical	Document Name: Sample Condition Upon Receipt Form	Document Revised: May 30, 2018
	Document No.: F-FL-C-007 rev. 13	Issuing Authority: Pace Florida Quality Office

WO#: 35629686

PM: CLG Due Date: 05/14/21

CLIENT: 37-EASANA

Project #

Project Manager:

Client:

Date and Initials of person:
Examining contents: SMK
Label:
Deliver:
pH:

Thermometer Used: T-353 Date: 4/30/21 Time: 0930 Initials: KMF

State of Origin: ☐ For WW projects, all containers verified to ≤6 °C

Cooler #1 Temp.°C 1.4 (Visual) +0.1 (Correction Factor) 1.5 (Actual) ☐ Samples on ice, cooling process has begun

Cooler #2 Temp.°C ____ (Visual) ____ (Correction Factor) ____ (Actual) ☐ Samples on ice, cooling process has begun

Cooler #3 Temp.°C ____ (Visual) ____ (Correction Factor) ____ (Actual) ☐ Samples on ice, cooling process has begun

Cooler #4 Temp.°C ____ (Visual) ____ (Correction Factor) ____ (Actual) ☐ Samples on ice, cooling process has begun

Cooler #5 Temp.°C ____ (Visual) ____ (Correction Factor) ____ (Actual) ☐ Samples on ice, cooling process has begun

Cooler #6 Temp.°C ____ (Visual) ____ (Correction Factor) ____ (Actual) ☐ Samples on ice, cooling process has begun

Courier: ☐ Fed Ex ☑ UPS ☐ USPS ☐ Client ☐ Commercial ☐ Pace ☐ Other ____

Shipping Method: ☐ First Overnight ☐ Priority Overnight ☐ Standard Overnight ☐ Ground ☐ International Priority ☑ Other NDA

Billing: ☐ Recipient ☐ Sender ☐ Third Party ☐ Credit Card ☐ Unknown

Tracking # 1Z X46 599 01 9466 3746

Custody Seal on Cooler/Box Present: ☐ Yes ☑ No **Seals intact:** ☐ Yes ☐ No Ice: Wet Blue Dry None

Packing Material: ☑ Bubble Wrap ☐ Bubble Bags ☐ None ☐ Other ____

Samples shorted to lab (If Yes, complete) Shorted Date: ____ Shorted Time: ____ Qty: ____

Comments:

Chain of Custody Present	☑ Yes	☐ No	☐ N/A
Chain of Custody Filled Out	☑ Yes	☐ No	☐ N/A
Relinquished Signature & Sampler Name COC	☑ Yes	☐ No	☐ N/A
Samples Arrived within Hold Time	☑ Yes	☐ No	☐ N/A
Rush TAT requested on COC	☐ Yes	☑ No	☐ N/A
Sufficient Volume	☑ Yes	☐ No	☐ N/A
Correct Containers Used	☑ Yes	☐ No	☐ N/A
Containers Intact	☑ Yes	☐ No	☐ N/A
Sample Labels match COC (sample IDs & date/time of collection)	☑ Yes	☐ No	☐ N/A
All containers needing acid/base preservation have been checked.	☑ Yes	☐ No	☐ N/A
All Containers needing preservation are found to be in compliance with EPA recommendation: Exceptions: VOA, Coliform, TOC, O&G, Carbamates	☑ Yes	☐ No	☐ N/A
Headspace in VOA Vials? (>6mm):	☐ Yes	☐ No	☑ N/A
Trip Blank Present:	☐ Yes	☐ No	☑ N/A

Preservation Information:
Preservative: ____
Lot #/Trace #: ____
Date: ____ Time: ____
Initials: ____

Client Notification/ Resolution:
Person Contacted: ____ Date/Time: ____

Comments/ Resolution (use back for additional comments): Received extra AHG 508.1, pH of 1.5

Project Manager Review: ____ Date: ____

PHOENIX
Environmental Laboratories, Inc.

Wednesday, May 05, 2021

Attn: Front Office
Eastern Analytical
25 Chenell Drive
Concord, NH 03301

Project ID: 225365
SDG ID: GCI19205
Sample ID#s: CI19205

This laboratory is in compliance with the NELAC requirements of procedures used except where indicated.

This report contains results for the parameters tested, under the sampling conditions described on the Chain Of Custody, as received by the laboratory. This report is incomplete unless all pages indicated in the pagination at the bottom of the page are included.

A scanned version of the COC form accompanies the analytical report and is an exact duplicate of the original.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200. The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Sincerely yours,

Phyllis Shiller

Phyllis Shiller
Laboratory Director

NELAC - #NY11301
CT Lab Registration #PH-0618
MA Lab Registration #M-CT007
ME Lab Registration #CT-007
NH Lab Registration #213693-A,B

NJ Lab Registration #CT-003
NY Lab Registration #11301
PA Lab Registration #68-03530
RI Lab Registration #63
UT Lab Registration #CT00007
VT Lab Registration #VT11301

587 East Middle Turnpike, P.O. Box 370, Manchester, CT 06040
Telephone (860) 645-1102 Fax (860) 645-0823

PHOENIX
Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac
NY # 11301

Sample Id Cross Reference

May 05, 2021

SDG I.D.: GCI19205

Project ID: 225365

Client Id	Lab Id	Matrix
NEW WELL	CI19205	WATER

PHOENIX
Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

Analysis Report

May 05, 2021

FOR: Attn: Front Office
Eastern Analytical
25 Chenell Drive
Concord, NH 03301

Sample Information		Custody Information		Date	Time
Matrix:	WATER	Collected by:		04/28/21	17:15
Location Code:	EASTANAL-NH	Received by:	CP	04/30/21	15:28
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	54830				

Laboratory Data

SDG ID: GCI19205
Phoenix ID: CI19205

Project ID: 225365
Client ID: NEW WELL

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
MBAS	< 0.05	0.05	mg/L	1	04/30/21 16:00	MW	SM5540 C-11
Extraction of DW PCB	Completed				05/04/21	JS/JS	E508
PCB Screen							
PCB-1016 (screen)	ND	0.080	ug/l	1	05/04/21	SC	E508
PCB-1221 (screen)	ND	0.10	ug/l	1	05/04/21	SC	E508
PCB-1232 (screen)	ND	0.10	ug/l	1	05/04/21	SC	E508
PCB-1242 (screen)	ND	0.10	ug/l	1	05/04/21	SC	E508
PCB-1248 (screen)	ND	0.10	ug/l	1	05/04/21	SC	E508
PCB-1254 (screen)	ND	0.10	ug/l	1	05/04/21	SC	E508
PCB-1260 (screen)	ND	0.10	ug/l	1	05/04/21	SC	E508
PCB-1262 (screen)	ND	0.10	ug/l	1	05/04/21	SC	E508
PCB-1268 (screen)	ND	0.10	ug/l	1	05/04/21	SC	E508
QA/QC Surrogates							
%DCBP (Surrogate Rec)	84		%	1	05/04/21	SC	30 - 150 %
%DCBP (Surrogate Rec) (Confirmation)	80		%	1	05/04/21	SC	30 - 150 %

Project ID: 225365
Client ID: NEW WELL

Phoenix I.D.: CI19205

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference

RL/PQL=Reporting/Practical Quantitation Level (Equivalent to NELAC LOQ, Limit of Quantitation) ND=Not Detected at RL/PQL
BRL=Below Reporting Level L=Biased Low
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

The LAS standard used for the MBAS analysis has a molecular weight of 342 g/mol.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Phyllis Shiller, Laboratory Director
May 05, 2021
Reviewed and Released by: Rashmi Makol, Project Manager

PHOENIX
Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

QA/QC Report

May 05, 2021

QA/QC Data

SDG I.D.: GCI19205

Parameter	Blank	Blk RL	Sample Result	Dup Result	Dup RPD	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
QA/QC Batch 573443 (mg/L), QC Sample No: CI19206 (CI19205)													
MBAS	BRL	0.05	<0.05	<0.05	NC	88.2			93.5			85 - 115	20

Comment:

Additional criteria matrix spike acceptance range is 75-125%.

PHOENIX
Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

QA/QC Report

May 05, 2021

QA/QC Data

SDG I.D.: GCI19205

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
QA/QC Batch 573741 (ug/l), QC Sample No: CI19204 (CI19205)										
PCB Screen - Water										
PCB-1016 (screen)	ND	0.080	78			67			40 - 140	20
PCB-1221 (screen)	ND	0.10							40 - 140	20
PCB-1232 (screen)	ND	0.10							40 - 140	20
PCB-1242 (screen)	ND	0.10							40 - 140	20
PCB-1248 (screen)	ND	0.10							40 - 140	20
PCB-1254 (screen)	ND	0.10							40 - 140	20
PCB-1260 (screen)	ND	0.10	100			69			40 - 140	20
PCB-1262 (screen)	ND	0.10							40 - 140	20
PCB-1268 (screen)	ND	0.10							40 - 140	20
%DCBP (Surrogate Rec)	86	%	94			64			30 - 150	20
%DCBP (Surrogate Rec) (Confirma	90	%	87			50			30 - 150	20

If there are any questions regarding this data, please call Phoenix Client Services at extension 200.

RPD - Relative Percent Difference
LCS - Laboratory Control Sample
LCSD - Laboratory Control Sample Duplicate
MS - Matrix Spike
MS Dup - Matrix Spike Duplicate
NC - No Criteria
Intf - Interference

Phyllis Shiller, Laboratory Director
May 05, 2021

Wednesday, May 05, 2021

Criteria: None

State: NH

Sample Criteria Exceedances Report

GCI19205 - EASTANAL-NH

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SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
*** No Data to Display ***								

Phoenix Laboratories does not assume responsibility for the data contained in this exceedance report. It is provided as an additional tool to identify requested criteria exceedences. All efforts are made to ensure the accuracy of the data (obtained from appropriate agencies). A lack of exceedence information does not necessarily suggest conformance to the criteria. It is ultimately the site professional's responsibility to determine appropriate compliance.

PHOENIX

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac
NY # 11301

Analysis Comments

May 05, 2021 SDG I.D.: GCI19205

The following analysis comments are made regarding exceptions to criteria not already noted in the Analysis Report or QA/QC Report:

PCB Narration

AU-ECD29 05/04/21-1: CI19205

The following Continuing Calibration compounds did not meet % deviation criteria:
Samples: CI19205
Preceding CC 504B033 - None.
Succeeding CC 504B054 - PCB 1260 16%H (%)

1.2 ons
1P

CHAIN-OF-CUSTODY RECORD

Eastern Analytical, Inc.
professional laboratory and drilling services

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EAI ID# 225365 Page 1

Sample ID	Date Sampled	Matrix	aParameters	Sample Notes
New Well	4/28/2021 17:15	aqueous	Subcontract - Surfactants / MBAS Method SM5540C	19205
New Well	4/28/2021 17:15	aqueous	Subcontract - PCBs EPA Method 508	

1-1000ml Amber
1-500ml plastic

EAI ID# 225365 **Project State: NH**
Project ID:

Company Phoenix Environmental Labs
Address 587 East Middle Turnpike
Address Manchester , CT 06040
Account #
Phone # (860) 645-1102

Results Needed: Preferred Date: Standard
RUSH Due Date: _____

QC Deliverables
☐ A ☐ A+ ☒ B ☐ B+ ☐ C ☐ MA MCP

Notes about project:
Email login confirmation, pdf of results and invoice to customerservice@easternanalytical.com.

PO #:54830 **EAI ID# 225365**

Data Deliverable (circle)
Excel NH EMD EQuIS ME EGAD

Call prior to analyzing, if RUSH charges will be applied.

Samples Collected by: 4-30-2021
1000

Relinquished by	Date/Time	Received by
	4-30-21 @ 10:35	
Relinquished by	**Date/Time**	**Received by**
	1578	

Eastern Analytical, Inc. 25 Chenell Dr. Concord, NH 03301 Phone: (603)228-0525 1-800-287-0525 customerservice@easternanalytical.com

As a subcontract lab to EAI, you will defend, indemnify and hold Eastern Analytical, Inc., its officers, employees, and agents harmless from and against any and all liability, loss, expense or claims for injury or damages arising out of the performance against this chain of custody but only in proportion to and to the extent such liability, loss, expense, or claims for injury or damages are caused by or result from the negligent or intentional acts or omissions of you as a subcontract lab, your officers, agents or employees

May 12, 2021

Vista Work Order No. 2104303

Ms. Jennifer Laramie
Eastern Analytical, Inc.
25 Chennell Drive
Concord, NH 03301

Dear Ms. Laramie,

Enclosed are the results for the sample set received at Vista Analytical Laboratory on April 30, 2021 under your Project Name '225365 NH'.

Vista Analytical Laboratory is committed to serving you effectively. If you require additional information, please contact me at 916-673-1520 or by email at mmaier@vista-analytical.com.

Thank you for choosing Vista as part of your analytical support team.

Sincerely,

Martha Maier

Martha Maier
Laboratory Director

Vista Analytical Laboratory certifies that the report herein meets all the requirements set forth by NELAP for those applicable test methods. Results relate only to the samples as received by the laboratory. This report should not be reproduced except in full without the written approval of Vista.

Vista Work Order No. 2104303
Case Narrative

Sample Condition on Receipt:

One aqueous sample was received and stored securely in accordance with Vista standard operating procedures and EPA methodology. The sample was received in good condition and within the method temperature requirements.

Analytical Notes:

EPA Method 537.1

The sample was extracted and analyzed for a selected list of four analytes using EPA Method 537.1. The results for PFHxS, PFOA and PFOS include both linear and branched isomers. The result for PFNA includes the linear isomer only.

Holding Times

The sample was extracted and analyzed within the method hold times.

Quality Control

The Initial Calibration and Continuing Calibration Verifications met the acceptance criteria.

Two Laboratory Fortified Blanks (LFB/LFBD) and a Laboratory Reagent Blank (LRB) were extracted and analyzed with the preparation batch. No analytes were detected in the LRB above the method required limits. The LFB/LFBD recoveries were within the method acceptance criteria.

The surrogate recoveries for all QC and field samples were within the acceptance criteria.

TABLE OF CONTENTS

Sample Inventory Report

Vista Sample ID	Client Sample ID	Sampled	Received	Components/Containers
2104303-01	New Well	28-Apr-21 17:15	30-Apr-21 09:35	HDPE Bottle, 250 mL HDPE Bottle, 250 mL

ANALYTICAL RESULTS

Sample ID: LRB

EPA Method 537.1

Client Data

Name: Eastern Analytical, Inc.
Project: 225365 NH
Matrix: Aqueous

Laboratory Data

Lab Sample: B1E0021-BLK1
Column: BEH C18

Analyte	CAS Number	Conc. (ng/L)	NH MCL	RL	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFHxS	355-46-4	ND	18	2.00		B1E0021	05-May-21	0.250 L	06-May-21 18:06	1
PFOA	335-67-1	ND	12	2.00		B1E0021	05-May-21	0.250 L	06-May-21 18:06	1
PFNA	375-95-1	ND	11	2.00		B1E0021	05-May-21	0.250 L	06-May-21 18:06	1
PFOS	1763-23-1	ND	15	2.00		B1E0021	05-May-21	0.250 L	06-May-21 18:06	1

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C2-PFHxA	SURR	94.8	70 - 130		B1E0021	05-May-21	0.250 L	06-May-21 18:06	1
13C2-PFDA	SURR	92.3	70 - 130		B1E0021	05-May-21	0.250 L	06-May-21 18:06	1

RL - Reporting limit

Results reported to RL.

When reported, PFHxS, PFOA, PFOS, MeFOSAA and EtFOSAA include both linear and branched isomers. Only the linear isomer is reported for all other analytes.

Sample ID: LFBD **EPA Method 537.1**

Name:	Eastern Analytical, Inc.	Lab Sample:	B1E0021-BS1/B1E0021-BSD1
Project:	225365 NH	QC Batch:	B1E0021
Matrix:	Aqueous	Samp Size:	0.250/0.250 L
Date Extracted:	05-May-21	Column:	BEH C18

Analyte	CAS Number	LFB (ng/L)	LFB Spike	LFB % Rec	LFB Quals	LFBD (ng/L)	LFBD Spike	LFBD % Rec	RPD	LFBD Quals	%Rec Limits	RPD Limits	LFB Analyzed	LFB Dil	LFBD Analyzed	LFBD Dil
PFHxS	355-46-4	19.9	14.6	137		17.7	14.6	121	12.0		50-150	50	06-May-21 18:17	1	06-May-21 18:28	1
PFOA	335-67-1	19.2	16.0	120		18.1	16.0	113	6.00		50-150	50	06-May-21 18:17	1	06-May-21 18:28	1
PFNA	375-95-1	18.6	16.0	116		18.2	16.0	114	2.37		50-150	50	06-May-21 18:17	1	06-May-21 18:28	1
PFOS	1763-23-1	17.8	14.8	120		15.5	14.8	105	13.9		50-150	50	06-May-21 18:17	1	06-May-21 18:28	1

Labeled Standards	Type	LFB % Rec	LFB Quals	LFBD % Rec	LFBD Quals	Limits	LFB Analyzed	LFB Dil	LFBD Analyzed	LFBD Dil
13C2-PFHxA	SURR	95.2		91.3		70 - 130	06-May-21 18:17	1	06-May-21 18:28	1
13C2-PFDA	SURR	92.3		89.7		70 - 130	06-May-21 18:17	1	06-May-21 18:28	1

Sample ID: New Well

EPA Method 537.1

Client Data				Laboratory Data			
Name:	Eastern Analytical, Inc.	Matrix:	Aqueous	Lab Sample:	2104303-01	Column:	BEH C18
Project:	225365 NH	Date Collected:	28-Apr-21 17:15	Date Received:	30-Apr-21 09:35		
Location:	225365						

Analyte	CAS Number	Conc. (ng/L)	NH MCL	RL	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFHxS	355-46-4	ND	18	1.88		B1E0021	05-May-21	0.266 L	07-May-21 14:54	1
PFOA	335-67-1	ND	12	1.88		B1E0021	05-May-21	0.266 L	07-May-21 14:54	1
PFNA	375-95-1	ND	11	1.88		B1E0021	05-May-21	0.266 L	07-May-21 14:54	1
PFOS	1763-23-1	ND	15	1.88		B1E0021	05-May-21	0.266 L	07-May-21 14:54	1

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C2-PFHxA	SURR	111	70 - 130		B1E0021	05-May-21	0.266 L	07-May-21 14:54	1
13C2-PFDA	SURR	109	70 - 130		B1E0021	05-May-21	0.266 L	07-May-21 14:54	1

RL - Reporting limit

Results reported to RL.

When reported, PFHxS, PFOA, PFOS, MeFOSAA and EtFOSAA include both linear and branched isomers. Only the linear isomer is reported for all other analytes.

DATA QUALIFIERS & ABBREVIATIONS

B	This compound was also detected in the method blank
Conc.	Concentration
CRS	Cleanup Recovery Standard
D	Dilution
DL	Detection Limit
E	The associated compound concentration exceeded the calibration range of the instrument
H	Recovery and/or RPD was outside laboratory acceptance limits
I	Chemical Interference
IS	Internal Standard
J	The amount detected is below the Reporting Limit/LOQ
LOD	Limit of Detection
LOQ	Limit of Quantitation
M	Estimated Maximum Possible Concentration (CA Region 2 projects only)
MDL	Method Detection Limit
NA	Not applicable
ND	Not Detected
OPR	Ongoing Precision and Recovery sample
P	The reported concentration may include contribution from chlorinated diphenyl ether(s).
Q	The ion transition ratio is outside of the acceptance criteria.
RL	Reporting Limit
RL	For 537.1, the reported RLs are the MRLs.
TEQ	Toxic Equivalency, sum of the toxic equivalency factors (TEF) multiplied by the sample concentrations.
TEQMax	TEQ calculation that uses the detection limit as the concentration for non-detects
TEQMin	TEQ calculation that uses zero as the concentration for non-detects
TEQRisk	TEQ calculation that uses ½ the detection limit as the concentration for non-detects
U	Not Detected (specific projects only)
*	See Cover Letter

Unless otherwise noted, solid sample results are reported in dry weight. Tissue samples are reported in wet weight.

Vista Analytical Laboratory Certifications

Accrediting Authority	Certificate Number
Alaska Department of Environmental Conservation	17-013
Arkansas Department of Environmental Quality	21-023-0
California Department of Health – ELAP	2892
DoD ELAP - A2LA Accredited - ISO/IEC 17025:2005	3091.01
Florida Department of Health	E87777-26
Hawaii Department of Health	N/A
Louisiana Department of Environmental Quality	01977
Maine Department of Health	2020018
Massachusetts Department of Environmental Protection	M-CA413
Michigan Department of Environmental Quality	9932
Minnesota Department of Health	1980678
New Hampshire Environmental Accreditation Program	207720
New Jersey Department of Environmental Protection	CA003
New York Department of Health	11411
Ohio Environmental Protection Agency	87778
Oregon Laboratory Accreditation Program	4042-016
Pennsylvania Department of Environmental Protection	017
Texas Commission on Environmental Quality	T104704189-21-12
Vermont Department of Health	VT-4042
Virginia Department of General Services	10769
Washington Department of Ecology	C584
Wisconsin Department of Natural Resources	998036160

Current certificates and lists of licensed parameters are located in the Quality Assurance office and are available upon request.

NELAP Accredited Test Methods

MATRIX: Air	
Description of Test	**Method**
Determination of Polychlorinated p- Dioxins & Polychlorinated Dibenzofurans	EPA 23
Polychlorinated Dibenzodioxins in Ambient Air by GC/HRMS	EPA TO-9A

MATRIX: Biological Tissue	
Description of Test	**Method**
Tetra- through Octa-Chlorinated Dioxins and Furans by Isotope Dilution GC/HRMS	EPA 1613B
Brominated Diphenyl Ethers by HRGC/HRMS	EPA 1614A
Chlorinated Biphenyl Congeners in Water, Soil, Sediment, and Tissue by GC/HRMS	EPA 1668A/C
Pesticides in Water, Soil, Sediment, Biosolids, and Tissue by HRGC/HRMS	EPA 1699
Perfluorinated Alkyl Acids in Drinking Water by SPE and LC/MS/MS	EPA 537
Polychlorinated Dibenzo-p-Dioxins and Polychlorinated Dibenzofurans by GC/HRMS	EPA 8280A/B
Polychlorinated Dibenzodioxins (PCDDs) and Polychlorinated Dibenzofurans (PCDFs) by GC/HRMS	EPA 8290/8290A

MATRIX: Drinking Water	
Description of Test	**Method**
Tetra- through Octa-Chlorinated Dioxins and Furans by Isotope Dilution GC/HRMS	EPA 1613/1613B
Perfluorinated Alkyl Acids in Drinking Water by SPE and LC/MS/MS	EPA 537
Perfluorinated Alkyl Acids in Drinking Water by SPE and LC/MS/MS	EPA 537.1
Determination of Per- and Polyfluoroalkyl Substances in Drinking Water by Isotope Dilution Anion Exchange Solid Phase Extraction and Liquid Chromatography/Tandem Mass Spectrometry	EPA 533
Perfluorooctanesulonate (PFOS) and Perfluorooctanoate (PFOA) - Method for Unfiltered Samples Using Solid Phase Extraction and Liquid Chromatography/Mass Spectrometry	ISO 25101 2009

MATRIX: Non-Potable Water	
Description of Test	**Method**
Tetra- through Octa-Chlorinated Dioxins and Furans by Isotope Dilution GC/HRMS	EPA 1613B
Brominated Diphenyl Ethers by HRGC/HRMS	EPA 1614A
Chlorinated Biphenyl Congeners in Water, Soil, Sediment, and Tissue by GC/HRMS	EPA 1668A/C
Pesticides in Water, Soil, Sediment, Biosolids, and Tissue by HRGC/HRMS	EPA 1699
Perfluorinated Alkyl Acids in Drinking Water by SPE and LC/MS/MS	EPA 537
Dioxin by GC/HRMS	EPA 613
Polychlorinated Dibenzo-p-Dioxins and Polychlorinated Dibenzofurans by GC/HRMS	EPA 8280A/B
Polychlorinated Dibenzodioxins (PCDDs) and Polychlorinated Dibenzofurans (PCDFs) by GC/HRMS	EPA 8290/8290A

MATRIX: Solids	
Description of Test	**Method**
Tetra-Octa Chlorinated Dioxins and Furans by Isotope Dilution GC/HRMS	EPA 1613
Tetra- through Octa-Chlorinated Dioxins and Furans by Isotope Dilution GC/HRMS	EPA 1613B
Brominated Diphenyl Ethers by HRGC/HRMS	EPA 1614A
Chlorinated Biphenyl Congeners in Water, Soil, Sediment, and Tissue by GC/HRMS	EPA 1668A/C
Pesticides in Water, Soil, Sediment, Biosolids, and Tissue by HRGC/HRMS	EPA 1699
Perfluorinated Alkyl Acids in Drinking Water by SPE and LC/MS/MS	EPA 537
Polychlorinated Dibenzo-p-Dioxins and Polychlorinated Dibenzofurans by GC/HRMS	EPA 8280A/B
Polychlorinated Dibenzodioxins (PCDDs) and Polychlorinated Dibenzofurans (PCDFs) by GC/HRMS	EPA 8290/8290A

CHAIN-OF-CUSTODY RECORD

Eastern Analytical, Inc.
professional laboratory and drilling services

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EAI ID# 225365 Page 1

Sample ID	Date Sampled	Matrix	aParameters 2104303 4.3°C	Sample Notes
New Well	4/28/2021 17:15	aqueous	Subcontract - Perfluorinated Compounds EPA Method 537 modified	

EAI ID# 225365 **Project State: NH**

Project ID:

Company Vista Analytical Laboratory
Address 1104 Windfield Way
Address El Dorado Hills, CA 95762
Account #
Phone # (916) 673-1520

Results Needed: Preferred Date: Standard
RUSH Due Date: _____

QC Deliverables
☐ A ☐ A+ ☒ B ☐ B+ ☐ C ☐ MA MCP

Notes about project:
Email login confirmation, pdf of results and invoice to customerservice@easternanalytical.com.

4 Regulated Compound List

PO #: 54834 **EAI ID# 225365**

Data Deliverable (circle)
Excel NH EMD EQuIS ME EGAD

Call prior to analyzing, if RUSH charges will be applied.

Samples Collected by:

Relinquished by	Date/Time	Received by
	4/29/21	1600 UPS
UPS	04/30/21 0935	Justin Bnsaw 04/30/21 0935

Eastern Analytical, Inc. 25 Chenell Dr. Concord, NH 03301 Phone: (603)228-0525 1-800-287-0525 customerservice@easternanalytical.com

Vista Analytical Laboratory

Sample Log-In Checklist

Page # 1 of 1

Vista Work Order #: 2104303 TAT 14 days

Samples Arrival:	Date/Time 04/30/21 0935		Initials:		Location: WR-2 Shelf/Rack: N/A		
Delivered By:	FedEx	UPS	On Trac	GLS	DHL	Hand Delivered	Other
Preservation:	Ice *		Blue Ice		Techni Ice	Dry Ice	None
Temp °C: 4.4 (uncorrected)			Probe used: Y / N		Thermometer ID: IR-4		
Temp °C: 4.3 (corrected)							

					YES	NO	NA
Shipping Container(s) Intact?					✓		
Shipping Custody Seals Intact?						✓	✓
Airbill —	Trk # 1ZX465990297914764				✓		
Shipping Documentation Present?					✓		
Shipping Container	Vista	Client	Retain	Return	Dispose		
Chain of Custody / Sample Documentation Present?					✓		
Chain of Custody / Sample Documentation Complete?					✓		
Holding Time Acceptable?					✓		

Logged In:	Date/Time 04/30/21 11:42	Initials: YA	Location: R-13, WR-2 Shelf/Rack: A-4, F-6
COC Anomaly/Sample Acceptance Form completed?			✓ ✓

Comments:

* Ice was fully melted upon receipt.

ID.: LR – SLC *Rev No.: 6* *Rev Date: 07/16/2020* *Page: 1 of 1*

CoC/Label Reconciliation Report WO# 2104303

LabNumber	CoC Sample ID	EAI Label	SampleAlias	Sample Date/Time	Container	BaseMatrix	Sample Comments
2104303-01	A New Well	☐ New Well	225365 .01	28-Apr-21 17:15 ☑	HDPE Bottle, 250 mL	Aqueous	
2104303-01	B New Well	☐ New Well	225365 .01	28-Apr-21 17:15 ☑	HDPE Bottle, 250 mL	Aqueous	

Checkmarks indicate that information on the COC reconciled with the sample label.
Any discrepancies are noted in the following columns.

	Yes	No	NA
Sample Container Intact?	✓		
Sample Custody Seals Intact?		✓	✓
Adequate Sample Volume?	✓		
Container Type Appropriate for Analysis(es)	✓		

Comments: * Reconciled by EAI Label ID + date/time.

Preservation Documented: Na2S2O3 (Trizma All) NH4CH3CO2 None Other

Verifed by/Date: [illegible] 04/30/21

CHAIN-OF-CUSTODY RECORD

225365

GEMInh

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Sample IDs	Date/Time Composites need start and stop dates/times	Matrix	Parameters and Sample Notes	# of containers
New Well	4/28/21 17:15	aqueous Grab or Comp	AqTot/pH/S2/TDS/Color/Odor/CyanFree/Cl/F/NO3/NO2/SO4/AlkT/LangelierCorrosivity/ICPMets.Ca.Fe.Na. HardTot/V524/DIOX/CARB/E504/E505/HERB/E525/HAA/SurfactantsMBASSubPEL/Radon/AdjGrossAlpha/GrossAlphaBetaSubKNL/Rad226Rad228ComboSubKNL/GlyphosateDWSubSALI/DiquatDWSubSALI/EndothallDWSubSALI/DioxinTCDDWWSubALSTX/SOC5153HerbSubSali/PCBsDWSubSALI/PFCsSubVAL/AsbestosDWSubEMSL/Bromate300SubSALI/Chlorite300SubSALI/~~MPASubASI~~ DWTot/ICPMets.Al.Sb.As.Ba.Be.Cd.Cr.Cu.Pb.Mn.Hg.Ni.Se.Ag.Tl.U.Zn	many
☒ Sampler confirms ID and parameters are accurate			*Circle preservative/s:* HCL HNO_3 H_2SO_4 NaOH MEOH $Na_2S_2O_3$ ICE — Dissolved Sample Field Filtered ☐	
Trip Blanks	4/28/21 17:15	aqueous Grab or Comp	AqTot/V524/DIOX/E504	many
☒ Sampler confirms ID and parameters are accurate			*Circle preservative/s:* HCL HNO_3 H_2SO_4 NaOH MEOH $Na_2S_2O_3$ ICE — Dissolved Sample Field Filtered ☐	

Note, due to "efervescent" nature of the water, Some air bubbles may be present in any/all VOA vials. Every effort was made to minimize air bubbles to the ~~good~~ greatest extent possible.

Please ensure this auto COC is accurate, adheres to permit or sampling requirements for this sampling event, and modify as necessary.

PO# < 20216

EAI Project ID

Project: Seabrook Weare Road Well A Step Test
State: NH
Proj. Mgr: Matt Krapf
Customer: Geosphere Environmental Mgmt
51 Portsmout Ave
Exeter, NH 03833
(603) 773-0075 x 17
mkrapf@geospherenh.com

Preferred Date: Std T/A

Invoice to: Geosphere Environmental
51 Portsmouth Ave
Exeter, NH 03833

Email Results to:
Matt Krapf
mkrapf@geospherenh.com

☐ A ☐ A+ ☒ B ☐ B+ ☐ C ☐ MA MCP

ReportingOptions

☒ HC
☒ EDD PDF
☒ EDD email
☒ PDF prelim, NO FAX
☒ e-mail Login Confirmation

☐ NO FAX
☐ Partial FAX
☐ PDF Invoice
☐ EQUIS

[redacted]

Temp 52.7°C

Ice Y ☒ N ☐

Samples Collected by: Matt Krapf + Shawn Case

Relinquished by	Date/Time	Received by
Matthew W. Krapf	4/29/21 8:50am	
Relinquished by	Date/Time	Received by

Direct 773-0075 X12

Eastern Analytical, Inc.

professional laboratory and drilling services

Matt Krapf
Geosphere Environmental Management Inc.
51 Portsmouth Avenue
Exeter , NH 03833

Laboratory Report for:

Eastern Analytical, Inc. ID: 226532
Client Identification: New Public Water Supply Well Seabrook Well 2
Date Received: 5/20/2021

Enclosed are the analytical results per the Chain of Custody for sample(s) in the referenced project. All analyses were performed in accordance with our QA/QC Program, NELAP and other applicable state requirements. All quality control criteria was within acceptance criteria unless noted on the report pages. Results are for the exclusive use of the client named on this report and will not be released to a third party without consent.

The following information is contained within this report: Sample Conditions summary, Analytical Results/Data, Quality Control data (if requested) and copies of the Chain of Custody. This report may not be reproduced except in full, without the written approval of the laboratory.

The following standard abbreviations and conventions apply to all EAI reports:

< : "less than" followed by the reporting limit
> : "greater than" followed by the reporting limit
%R : % Recovery

Certifications:
Eastern Analytical, Inc. maintains certification in the following states: Connecticut (PH-0492), Maine (NH005), Massachusetts (M-NH005), New Hampshire/NELAP (1012), Rhode Island (269), Vermont (VT1012), New York (12072), West Virginia (9910C) and Alabama (41620). Please refer to our website at www.easternanalytical.com for a copy of our certificates and accredited parameters.

References:

- EPA 600/4-79-020, 1983
- Standard Methods for Examination of Water and Wastewater, 20th, 21st, 22nd & 23rd edition or noted revision year.
- Test Methods for Evaluating Solid Waste SW 846 3rd Edition including updates IVA and IVB
- Hach Water Analysis Handbook, 4th edition, 1992

If you have any questions regarding the results contained within, please feel free to contact customer service. Unless otherwise requested, we will dispose of the sample(s) 6 weeks from the sample receipt date.

We appreciate this opportunity to be of service and look forward to your continued patronage.

Sincerely,

Lorraine Olashaw, Lab Director | 6-29-21 Date | 97 # of pages (excluding cover letter)

SAMPLE CONDITIONS PAGE

EAI ID#: **226532**

Client: **Geosphere Environmental Management Inc.**

Client Designation: **New Public Water Supply Well Seabrook Well 2**

Temperature upon receipt (°C): 2.1 **Received on ice or cold packs (Yes/No): Y**

Acceptable temperature range (°C): 0-6

Lab ID	Sample ID	Date Received	Date/Time Sampled		Sample Matrix	% Dry Weight	Exceptions/Comments (other than thermal preservation)
226532.01	Well B	5/20/21	5/19/21	15:00	aqueous		Adheres to Sample Acceptance Policy
226532.02	Trip Blanks	5/20/21	5/19/21	00:00	aqueous		Adheres to Sample Acceptance Policy

All results contained in this report relate only to the above listed samples.

Unless otherwise noted:

- *Hold times, preservation, container types, and sample conditions adhered to EPA Protocol.*
- *Solid samples are reported on a dry weight basis, unless otherwise noted. pH/Corrosivity, Flashpoint, Ignitability, Paint Filter, Conductivity and Specific Gravity are always reported on an "as received" basis.*
- *Analysis of pH, Total Residual Chlorine, Dissolved Oxygen and Sulfite were performed at the laboratory outside of the recommended 15 minute hold time.*
- *Samples collected by Eastern Analytical, Inc. (EAI) were collected in accordance with approved EPA procedures.*

LABORATORY REPORT

EAI ID#: **226532**

Client: **Geosphere Environmental Management Inc.**

Client Designation: **New Public Water Supply Well Seabrook Well 2**

Sample ID:	Well B	Trip Blanks
Lab Sample ID:	226532.01	226532.02
Matrix:	aqueous	aqueous
Date Sampled:	5/19/21	5/19/21
Date Received:	5/20/21	5/20/21
Units:	ug/L	ug/L
Date of Analysis:	5/21/21	5/21/21
Analyst:	AM	AM
Method:	524.2	524.2
Dilution Factor:	1	1
Dichlorodifluoromethane	< 0.5	< 0.5
Chloromethane	< 0.5	< 0.5
Vinyl chloride	< 0.5	< 0.5
Bromomethane	< 0.5	< 0.5
Chloroethane	< 0.5	< 0.5
Trichlorofluoromethane	< 0.5	< 0.5
Diethyl Ether	< 5	< 5
Acetone	< 10	< 10
1,1-Dichloroethene	< 0.5	< 0.5
tert-Butyl Alcohol (TBA)	< 30	< 30
Methylene chloride	< 0.5	< 0.5
Carbon disulfide	< 2	< 2
Methyl-t-butyl ether(MTBE)	< 0.5	< 0.5
Ethyl-t-butyl ether(ETBE)	< 0.5	< 0.5
Isopropyl ether(DIPE)	< 0.5	< 0.5
tert-amyl methyl ether(TAME)	< 0.5	< 0.5
trans-1,2-Dichloroethene	< 0.5	< 0.5
1,1-Dichloroethane	< 0.5	< 0.5
2,2-Dichloropropane	< 0.5	< 0.5
cis-1,2-Dichloroethene	< 0.5	< 0.5
2-Butanone(MEK)	< 5	< 5
Bromochloromethane	< 0.5	< 0.5
Tetrahydrofuran(THF)	< 5	< 5
Chloroform	< 0.5	< 0.5
1,1,1-Trichloroethane	< 0.5	< 0.5
Carbon tetrachloride	< 0.5	< 0.5
1,1-Dichloropropene	< 0.5	< 0.5
Benzene	< 0.5	< 0.5
1,2-Dichloroethane	< 0.5	< 0.5
Trichloroethene	< 0.5	< 0.5
1,2-Dichloropropane	< 0.5	< 0.5
Dibromomethane	< 0.5	< 0.5
Bromodichloromethane	< 0.5	< 0.5
4-Methyl-2-pentanone(MIBK)	< 5	< 5
cis-1,3-Dichloropropene	< 0.3	< 0.3
Toluene	< 0.5	< 0.5
trans-1,3-Dichloropropene	< 0.3	< 0.3
1,1,2-Trichloroethane	< 0.5	< 0.5
2-Hexanone	< 5	< 5
Tetrachloroethene	< 0.5	< 0.5
1,3-Dichloropropane	< 0.5	< 0.5
Dibromochloromethane	< 0.5	< 0.5
1,2-Dibromoethane(EDB)	< 0.5	< 0.5
Chlorobenzene	< 0.5	< 0.5
1,1,1,2-Tetrachloroethane	< 0.5	< 0.5
Ethylbenzene	< 0.5	< 0.5

Eastern Analytical, Inc. www.easternanalytical.com | 800.287.0525 | customerservice@easternanalytical.com

LABORATORY REPORT

EAI ID#: **226532**

Client: **Geosphere Environmental Management Inc.**

Client Designation: **New Public Water Supply Well Seabrook Well 2**

Sample ID:	Well B	Trip Blanks
Lab Sample ID:	226532.01	226532.02
Matrix:	aqueous	aqueous
Date Sampled:	5/19/21	5/19/21
Date Received:	5/20/21	5/20/21
Units:	ug/L	ug/L
Date of Analysis:	5/21/21	5/21/21
Analyst:	AM	AM
Method:	524.2	524.2
Dilution Factor:	1	1
mp-Xylene	< 0.5	< 0.5
o-Xylene	< 0.5	< 0.5
Styrene	< 0.5	< 0.5
Bromoform	< 0.5	< 0.5
IsoPropylbenzene	< 0.5	< 0.5
Bromobenzene	< 0.5	< 0.5
1,1,2,2-Tetrachloroethane	< 0.5	< 0.5
1,2,3-Trichloropropane	< 0.5	< 0.5
n-Propylbenzene	< 0.5	< 0.5
2-Chlorotoluene	< 0.5	< 0.5
4-Chlorotoluene	< 0.5	< 0.5
1,3,5-Trimethylbenzene	< 0.5	< 0.5
tert-Butylbenzene	< 0.5	< 0.5
1,2,4-Trimethylbenzene	< 0.5	< 0.5
sec-Butylbenzene	< 0.5	< 0.5
1,3-Dichlorobenzene	< 0.5	< 0.5
p-Isopropyltoluene	< 0.5	< 0.5
1,4-Dichlorobenzene	< 0.5	< 0.5
1,2-Dichlorobenzene	< 0.5	< 0.5
n-Butylbenzene	< 0.5	< 0.5
1,2-Dibromo-3-chloropropane	< 0.5	< 0.5
1,3,5-Trichlorobenzene	< 0.5	< 0.5
1,2,4-Trichlorobenzene	< 0.5	< 0.5
Hexachlorobutadiene	< 0.5	< 0.5
Naphthalene	< 0.5	< 0.5
1,2,3-Trichlorobenzene	< 0.5	< 0.5
4-Bromofluorobenzene (surr)	**86 %R**	**85 %R**
1,2-Dichlorobenzene-d4 (surr)	**110 %R**	**110 %R**

QC REPORT

EAI ID#: **226532**

Client: **Geosphere Environmental Management Inc.** **Batch ID:** 637571-98824/A052121V5241

Client Designation: **New Public Water Supply Well Seabrook Well 2**

Parameter Name	Blank	LCS	LCSD	Analysis Date	Units	Limits	RPD	Method
Dichlorodifluoromethane	< 0.5	12 (115 %R)	11 (111 %R) (4 RPD)	5/21/2021	ug/L	70 - 130	30	524.2
Chloromethane	< 0.5	10 (104 %R)	10 (103 %R) (1 RPD)	5/21/2021	ug/L	70 - 130	30	524.2
Vinyl chloride	< 0.5	11 (115 %R)	11 (114 %R) (0 RPD)	5/21/2021	ug/L	70 - 130	30	524.2
Bromomethane	< 0.5	11 (107 %R)	10 (103 %R) (4 RPD)	5/21/2021	ug/L	70 - 130	30	524.2
Chloroethane	< 0.5	9.4 (94 %R)	8.7 (87 %R) (7 RPD)	5/21/2021	ug/L	70 - 130	30	524.2
Trichlorofluoromethane	< 0.5	10 (103 %R)	9.8 (98 %R) (6 RPD)	5/21/2021	ug/L	70 - 130	30	524.2
Diethyl Ether	< 5	8.9 (89 %R)	8.6 (86 %R) (3 RPD)	5/21/2021	ug/L	70 - 130	30	524.2
Acetone	< 10	< 10 (98 %R)	< 10 (91 %R) (7 RPD)	5/21/2021	ug/L	70 - 130	30	524.2
1,1-Dichloroethene	< 0.5	10 (100 %R)	9.4 (94 %R) (5 RPD)	5/21/2021	ug/L	70 - 130	30	524.2
tert-Butyl Alcohol (TBA)	< 30	50 (100 %R)	49 (98 %R) (1 RPD)	5/21/2021	ug/L	70 - 130	30	524.2
Methylene chloride	< 0.5	10 (100 %R)	9.7 (97 %R) (3 RPD)	5/21/2021	ug/L	70 - 130	30	524.2
Carbon disulfide	< 2	9.4 (94 %R)	9 (90 %R) (4 RPD)	5/21/2021	ug/L	70 - 130	30	524.2
Methyl-t-butyl ether(MTBE)	< 0.5	9.4 (94 %R)	8.9 (89 %R) (5 RPD)	5/21/2021	ug/L	70 - 130	30	524.2
Ethyl-t-butyl ether(ETBE)	< 0.5	9.9 (99 %R)	9.6 (96 %R) (4 RPD)	5/21/2021	ug/L	70 - 130	30	524.2
Isopropyl ether(DIPE)	< 0.5	9.1 (91 %R)	8.9 (89 %R) (3 RPD)	5/21/2021	ug/L	70 - 130	30	524.2
tert-amyl methyl ether(TAME)	< 0.5	10 (101 %R)	9.7 (97 %R) (4 RPD)	5/21/2021	ug/L	70 - 130	30	524.2
trans-1,2-Dichloroethene	< 0.5	10 (100 %R)	9.7 (97 %R) (4 RPD)	5/21/2021	ug/L	70 - 130	30	524.2
1,1-Dichloroethane	< 0.5	9.7 (97 %R)	9.4 (94 %R) (3 RPD)	5/21/2021	ug/L	70 - 130	30	524.2
2,2-Dichloropropane	< 0.5	11 (109 %R)	10 (104 %R) (5 RPD)	5/21/2021	ug/L	70 - 130	30	524.2
cis-1,2-Dichloroethene	< 0.5	9.9 (99 %R)	9.5 (95 %R) (4 RPD)	5/21/2021	ug/L	70 - 130	30	524.2
2-Butanone(MEK)	< 5	8.8 (88 %R)	8.3 (83 %R) (5 RPD)	5/21/2021	ug/L	70 - 130	30	524.2
Bromochloromethane	< 0.5	9.8 (98 %R)	9.7 (97 %R) (1 RPD)	5/21/2021	ug/L	70 - 130	30	524.2
Tetrahydrofuran(THF)	< 5	8.4 (84 %R)	8.1 (81 %R) (4 RPD)	5/21/2021	ug/L	70 - 130	30	524.2
Chloroform	< 0.5	9.7 (97 %R)	9.4 (94 %R) (3 RPD)	5/21/2021	ug/L	70 - 130	30	524.2
1,1,1-Trichloroethane	< 0.5	10 (102 %R)	9.7 (97 %R) (5 RPD)	5/21/2021	ug/L	70 - 130	30	524.2
Carbon tetrachloride	< 0.5	9.9 (99 %R)	9.5 (95 %R) (4 RPD)	5/21/2021	ug/L	70 - 130	30	524.2
1,1-Dichloropropene	< 0.5	10 (101 %R)	9.8 (98 %R) (4 RPD)	5/21/2021	ug/L	70 - 130	30	524.2
Benzene	< 0.5	9.9 (99 %R)	9.5 (95 %R) (4 RPD)	5/21/2021	ug/L	70 - 130	30	524.2
1,2-Dichloroethane	< 0.5	9.6 (96 %R)	9.3 (93 %R) (4 RPD)	5/21/2021	ug/L	70 - 130	30	524.2
Trichloroethene	< 0.5	9.7 (97 %R)	9.5 (95 %R) (2 RPD)	5/21/2021	ug/L	70 - 130	30	524.2
1,2-Dichloropropane	< 0.5	9.5 (95 %R)	9.1 (91 %R) (5 RPD)	5/21/2021	ug/L	70 - 130	30	524.2
Dibromomethane	< 0.5	9.8 (98 %R)	9.5 (95 %R) (3 RPD)	5/21/2021	ug/L	70 - 130	30	524.2
Bromodichloromethane	< 0.5	10 (100 %R)	9.5 (95 %R) (5 RPD)	5/21/2021	ug/L	70 - 130	30	524.2
4-Methyl-2-pentanone(MIBK)	< 5	8.8 (88 %R)	8.7 (87 %R) (1 RPD)	5/21/2021	ug/L	70 - 130	30	524.2
cis-1,3-Dichloropropene	< 0.3	9.8 (98 %R)	9.5 (95 %R) (3 RPD)	5/21/2021	ug/L	70 - 130	30	524.2
Toluene	< 0.5	12 (116 %R)	11 (112 %R) (4 RPD)	5/21/2021	ug/L	70 - 130	30	524.2
trans-1,3-Dichloropropene	< 0.3	12 (122 %R)	12 (116 %R) (5 RPD)	5/21/2021	ug/L	70 - 130	30	524.2
1,1,2-Trichloroethane	< 0.5	11 (111 %R)	11 (108 %R) (3 RPD)	5/21/2021	ug/L	70 - 130	30	524.2
2-Hexanone	< 5	9.5 (95 %R)	9.3 (93 %R) (2 RPD)	5/21/2021	ug/L	70 - 130	30	524.2
Tetrachloroethene	< 0.5	12 (120 %R)	11 (115 %R) (4 RPD)	5/21/2021	ug/L	70 - 130	30	524.2
1,3-Dichloropropane	< 0.5	11 (110 %R)	11 (106 %R) (4 RPD)	5/21/2021	ug/L	70 - 130	30	524.2
Dibromochloromethane	< 0.5	11 (114 %R)	11 (110 %R) (4 RPD)	5/21/2021	ug/L	70 - 130	30	524.2
1,2-Dibromoethane(EDB)	< 0.5	11 (111 %R)	11 (108 %R) (3 RPD)	5/21/2021	ug/L	70 - 130	30	524.2
Chlorobenzene	< 0.5	11 (115 %R)	11 (111 %R) (3 RPD)	5/21/2021	ug/L	70 - 130	30	524.2
1,1,1,2-Tetrachloroethane	< 0.5	11 (114 %R)	11 (110 %R) (4 RPD)	5/21/2021	ug/L	70 - 130	30	524.2
Ethylbenzene	< 0.5	12 (119 %R)	12 (117 %R) (2 RPD)	5/21/2021	ug/L	70 - 130	30	524.2

QC REPORT

EAI ID#: **226532**

Client: **Geosphere Environmental Management Inc.** **Batch ID:** 637571-98824/A052121V5241

Client Designation: **New Public Water Supply Well Seabrook Well 2**

Parameter Name	Blank	LCS	LCSD	Analysis Date	Units	Limits	RPD	Method
mp-Xylene	< 0.5	25 (125 %R)	24 (121 %R) (4 RPD)	5/21/2021	ug/L	70 - 130	30	524.2
o-Xylene	< 0.5	11 (107 %R)	10 (103 %R) (3 RPD)	5/21/2021	ug/L	70 - 130	30	524.2
Styrene	< 0.5	11 (114 %R)	11 (110 %R) (3 RPD)	5/21/2021	ug/L	70 - 130	30	524.2
Bromoform	< 0.5	12 (118 %R)	11 (115 %R) (3 RPD)	5/21/2021	ug/L	70 - 130	30	524.2
IsoPropylbenzene	< 0.5	11 (112 %R)	11 (109 %R) (3 RPD)	5/21/2021	ug/L	70 - 130	30	524.2
Bromobenzene	< 0.5	12 (118 %R)	12 (115 %R) (3 RPD)	5/21/2021	ug/L	70 - 130	30	524.2
1,1,2,2-Tetrachloroethane	< 0.5	11 (109 %R)	11 (105 %R) (3 RPD)	5/21/2021	ug/L	70 - 130	30	524.2
1,2,3-Trichloropropane	< 0.5	11 (114 %R)	11 (110 %R) (3 RPD)	5/21/2021	ug/L	70 - 130	30	524.2
n-Propylbenzene	< 0.5	13 (126 %R)	12 (122 %R) (3 RPD)	5/21/2021	ug/L	70 - 130	30	524.2
2-Chlorotoluene	< 0.5	13 (125 %R)	12 (122 %R) (3 RPD)	5/21/2021	ug/L	70 - 130	30	524.2
4-Chlorotoluene	< 0.5	12 (123 %R)	12 (120 %R) (2 RPD)	5/21/2021	ug/L	70 - 130	30	524.2
1,3,5-Trimethylbenzene	< 0.5	13 (130 %R)	13 (125 %R) (3 RPD)	5/21/2021	ug/L	70 - 130	30	524.2
tert-Butylbenzene	< 0.5	12 (118 %R)	11 (115 %R) (3 RPD)	5/21/2021	ug/L	70 - 130	30	524.2
1,2,4-Trimethylbenzene	< 0.5	12 (121 %R)	12 (117 %R) (3 RPD)	5/21/2021	ug/L	70 - 130	30	524.2
sec-Butylbenzene	< 0.5	12 (125 %R)	12 (120 %R) (4 RPD)	5/21/2021	ug/L	70 - 130	30	524.2
1,3-Dichlorobenzene	< 0.5	12 (124 %R)	12 (118 %R) (5 RPD)	5/21/2021	ug/L	70 - 130	30	524.2
p-Isopropyltoluene	< 0.5	12 (121 %R)	12 (117 %R) (3 RPD)	5/21/2021	ug/L	70 - 130	30	524.2
1,4-Dichlorobenzene	< 0.5	12 (121 %R)	12 (115 %R) (4 RPD)	5/21/2021	ug/L	70 - 130	30	524.2
1,2-Dichlorobenzene	< 0.5	12 (116 %R)	11 (112 %R) (3 RPD)	5/21/2021	ug/L	70 - 130	30	524.2
n-Butylbenzene	< 0.5	12 (120 %R)	12 (117 %R) (3 RPD)	5/21/2021	ug/L	70 - 130	30	524.2
1,2-Dibromo-3-chloropropane	< 0.5	12 (124 %R)	12 (115 %R) (7 RPD)	5/21/2021	ug/L	70 - 130	30	524.2
1,3,5-Trichlorobenzene	< 0.5	12 (120 %R)	12 (118 %R) (2 RPD)	5/21/2021	ug/L	70 - 130	30	524.2
1,2,4-Trichlorobenzene	< 0.5	12 (120 %R)	12 (117 %R) (3 RPD)	5/21/2021	ug/L	70 - 130	30	524.2
Hexachlorobutadiene	< 0.5	12 (123 %R)	12 (122 %R) (1 RPD)	5/21/2021	ug/L	70 - 130	30	524.2
Naphthalene	< 0.5	11 (111 %R)	11 (107 %R) (3 RPD)	5/21/2021	ug/L	70 - 130	30	524.2
1,2,3-Trichlorobenzene	< 0.5	13 (126 %R)	12 (123 %R) (2 RPD)	5/21/2021	ug/L	70 - 130	30	524.2
4-Bromofluorobenzene (surr)	88 %R	98 %R	99 %R	5/21/2021	% Rec	70 - 130		524.2
1,2-Dichlorobenzene-d4 (surr)	108 %R	97 %R	95 %R	5/21/2021	% Rec	70 - 130		524.2

*/! Flagged analyte recoveries deviated from the QA/QC limits. Data that impacts sample results are noted on the sample report.

LABORATORY REPORT

EAI ID#: **226532**

Client: **Geosphere Environmental Management Inc.**

Client Designation: **New Public Water Supply Well Seabrook Well 2**

Sample ID:	Well B	Trip Blanks
Lab Sample ID:	226532.01	226532.02
Matrix:	aqueous	aqueous
Date Sampled:	5/19/21	5/19/21
Date Received:	5/20/21	5/20/21
Units:	ug/L	ug/L
Date of Analysis:	5/21/21	5/21/21
Analyst:	AM	AM
Method:	8260B SIM	8260B SIM
Dilution Factor:	1	1
1,4-Dioxane	< 0.2	< 0.2
4-Bromofluorobenzene (surr)	**101 %R**	**99 %R**
Toluene-d8 (surr)	**100 %R**	**100 %R**

QC REPORT

EAI ID#: **226532**

Client: **Geosphere Environmental Management Inc.** **Batch ID:** 637572-08759/A052121DIOX1

Client Designation: **New Public Water Supply Well Seabrook Well 2**

Parameter Name	Blank	LCS	LCSD	Analysis Date	Units	Limits	RPD	Method
1,4-Dioxane	< 0.2	4.1 (82 %R)	4.4 (89 %R) (7 RPD)	5/21/2021	ug/L	70 - 130	20	8260B
4-Bromofluorobenzene (surr)	99 %R	99 %R	99 %R	5/21/2021	% Rec	70 - 130	50	8260B
Toluene-d8 (surr)	99 %R	100 %R	99 %R	5/21/2021	% Rec	70 - 130	50	8260B

*/! Flagged analyte recoveries deviated from the QA/QC limits. Data that impacts sample results are noted on the sample report.

LABORATORY REPORT

EAI ID#: **226532**

Client: **Geosphere Environmental Management Inc.**

Client Designation: **New Public Water Supply Well Seabrook Well 2**

Sample ID:	Well B	Trip Blanks
Lab Sample ID:	226532.01	226532.02
Matrix:	aqueous	aqueous
Date Sampled:	5/19/21	5/19/21
Date Received:	5/20/21	5/20/21
Units:	ug/L	ug/L
Date of Extraction/Prep:	5/26/21	5/26/21
Date of Analysis:	5/26/21	5/26/21
Analyst:	AR	AR
Method:	8011/504	8011/504
Dilution Factor:	1	1
1,2-Dibromoethane(EDB)	< 0.02	< 0.02
Dibromochloropropane (DBCP)	< 0.02	< 0.02
1,1,1,2-Tetrachloroethane (surr)	**94 %R**	**90 %R**

QC REPORT

EAI ID#: **226532**

Client: **Geosphere Environmental Management Inc.** **Batch ID:** 637576-16707/A052621E5041

Client Designation: **New Public Water Supply Well Seabrook Well 2**

Parameter Name	Blank	LCS	LCSD	Analysis Date	Units	Limits	RPD	Method
1,2-Dibromoethane(EDB)	< 0.02	0.10 (102 %R)	0.095 (95 %R) (6 RPD)	5/26/2021	ug/L	70 - 130	20	8011/504
Dibromochloropropane (DBCP)	< 0.02	0.098 (98 %R)	0.091 (91 %R) (7 RPD)	5/26/2021	ug/L	70 - 130	20	8011/504
1,1,1,2-Tetrachloroethane (surr)	93 %R	95 %R	89 %R	5/26/2021	% Rec	65 - 135	20	8011/504

*/! Flagged analyte recoveries deviated from the QA/QC limits. Data that impacts sample results are noted on the sample report.

LABORATORY REPORT

EAI ID#: **226532**

Client: **Geosphere Environmental Management Inc.**

Client Designation: **New Public Water Supply Well Seabrook Well 2**

Sample ID:	Well B
Lab Sample ID:	226532.01
Matrix:	aqueous
Date Sampled:	5/19/21
Date Received:	5/20/21
Units:	ug/L
Date of Extraction/Prep:	5/26/21
Date of Analysis:	5/26/21
Analyst:	AR
Method:	505
Dilution Factor:	1
Chlordane	< 0.5
Toxaphene	< 2
1,1,1,2-Tetrachloroethane (surr)	**94 %R**

QC REPORT

EAI ID#: **226532**

Client: **Geosphere Environmental Management Inc.** **Batch ID:** 637576-16796/A052621E5051

Client Designation: **New Public Water Supply Well Seabrook Well 2**

Parameter Name	Blank	LCS	LCSD	Analysis Date	Units	Limits	RPD	Method
Chlordane	< 0.5	0.92 (92 %R)	0.91 (91 %R) (1 RPD)	5/26/2021	ug/L	70 - 130	20	505
Toxaphene	< 2	< 2 (%R N/A)	< 2 (%R N/A) (RPD N/A)	5/26/2021	ug/L			505
1,1,1,2-Tetrachloroethane (surr)	93 %R	95 %R	89 %R	5/26/2021	% Rec	65 - 135	20	505

*/! Flagged analyte recoveries deviated from the QA/QC limits. Data that impacts sample results are noted on the sample report.

LABORATORY REPORT

EAI ID#: **226532**

Client: **Geosphere Environmental Management Inc.**

Client Designation: **New Public Water Supply Well Seabrook Well 2**

Sample ID:	Well B
Lab Sample ID:	226532.01
Matrix:	aqueous
Date Sampled:	5/19/21
Date Received:	5/20/21
Units:	ug/L
Date of Extraction/Prep:	5/25/21
Date of Analysis:	5/25/21
Analyst:	AR
Method:	515.4
Dilution Factor:	1
Pentachlorophenol	< 1
2,4-D	< 5
2,4,5-TP (Silvex)	< 5
Dinoseb	< 5
Picloram	< 5
2,4-DCAA	**88 %R**

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QC REPORT

EAI ID#: **226532**

Client: **Geosphere Environmental Management Inc.** **Batch ID:** 637575-29675/A052521HERB1

Client Designation: **New Public Water Supply Well Seabrook Well 2**

Parameter Name	Blank	LCS	LCSD	Analysis Date	Units	Limits	RPD	Method
Pentachlorophenol	< 1	20 (100 %R)	20 (99 %R) (0 RPD)	5/25/2021	ug/L	70 - 130	30	515.4
2,4-D	< 5	21 (104 %R)	21 (105 %R) (1 RPD)	5/25/2021	ug/L	70 - 130	30	515.4
2,4,5-TP (Silvex)	< 5	20 (101 %R)	20 (101 %R) (0 RPD)	5/25/2021	ug/L	70 - 130	30	515.4
Dinoseb	< 5	22 (109 %R)	21 (107 %R) (2 RPD)	5/25/2021	ug/L	70 - 130	30	515.4
Picloram	< 5	21 (105 %R)	21 (106 %R) (1 RPD)	5/25/2021	ug/L	70 - 130	30	515.4
2,4-DCAA	95 %R	95 %R	93 %R	5/25/2021	ug/L	70 - 130	30	515.4

*/! Flagged analyte recoveries deviated from the QA/QC limits. Data that impacts sample results are noted on the sample report.

LABORATORY REPORT

EAI ID#: **226532**

Client: **Geosphere Environmental Management Inc.**

Client Designation: **New Public Water Supply Well Seabrook Well 2**

Sample ID:	Well B
Lab Sample ID:	226532.01
Matrix:	aqueous
Date Sampled:	5/19/21
Date Received:	5/20/21
Units:	ug/L
Date of Extraction/Prep:	5/26/21
Date of Analysis:	5/26/21
Analyst:	MB
Method:	525.2
Dilution Factor:	1
Hexachlorocyclopentadiene	< 1
Hexachlorobenzene	< 1
bis(2-Ethylhexyl)adipate	< 1
bis(2-Ethylhexyl)phthalate	< 1
Benzo[a]pyrene	< 0.2
Simazine	< 1
Atrazine	< 1
Alachlor	< 1
Lindane(gamma-BHC)	< 0.2
Endrin	< 1
Heptachlor	< 0.4
Heptachlor Epoxide	< 0.2
Methoxychlor	< 1
1,3-Dimethyl-2-nitrobenzene(surr)	**99 %R**
Pyrene-d10(surr)	**112 %R**
Triphenylphosphate(surr)	**104 %R**
Perylene-d12(surr)	**97 %R**

QC REPORT

EAI ID#: **226532**

Client: **Geosphere Environmental Management Inc.** **Batch ID:** 637576-14179/A052621E5251

Client Designation: **New Public Water Supply Well Seabrook Well 2**

Parameter Name	Blank	LCS	LCSD	Analysis Date	Units	Limits	RPD	Method
Hexachlorocyclopentadiene	< 1	4.7 (95 %R)	4.7 (94 %R) (1 RPD)	5/26/2021	ug/L	70 - 130	30	525.2
Hexachlorobenzene	< 1	4.6 (91 %R)	4.6 (91 %R) (0 RPD)	5/26/2021	ug/L	70 - 130	30	525.2
bis(2-Ethylhexyl)adipate	< 1	4.7 (93 %R)	4.8 (96 %R) (4 RPD)	5/26/2021	ug/L	70 - 130	30	525.2
bis(2-Ethylhexyl)phthalate	< 1	4.7 (94 %R)	4.7 (93 %R) (1 RPD)	5/26/2021	ug/L	70 - 130	30	525.2
Benzo[a]pyrene	< 0.2	4.5 (89 %R)	4.5 (89 %R) (0 RPD)	5/26/2021	ug/L	70 - 130	30	525.2
Simazine	< 1	3.6 (72 %R)	3.7 (74 %R) (3 RPD)	5/26/2021	ug/L	70 - 130	30	525.2
Atrazine	< 1	4.7 (93 %R)	4.7 (94 %R) (1 RPD)	5/26/2021	ug/L	70 - 130	30	525.2
Alachlor	< 1	4.6 (93 %R)	4.8 (96 %R) (4 RPD)	5/26/2021	ug/L	70 - 130	30	525.2
Lindane(gamma-BHC)	< 0.2	4.9 (97 %R)	4.9 (97 %R) (0 RPD)	5/26/2021	ug/L	70 - 130	30	525.2
Endrin	< 1	4.3 (86 %R)	4.3 (86 %R) (0 RPD)	5/26/2021	ug/L	70 - 130	30	525.2
Heptachlor	< 0.4	4.3 (85 %R)	4.3 (87 %R) (1 RPD)	5/26/2021	ug/L	70 - 130	30	525.2
Heptachlor Epoxide	< 0.2	4.6 (91 %R)	4.6 (92 %R) (1 RPD)	5/26/2021	ug/L	70 - 130	30	525.2
Methoxychlor	< 1	4.3 (86 %R)	4.3 (86 %R) (0 RPD)	5/26/2021	ug/L	70 - 130	30	525.2
1,3-Dimethyl-2-nitrobenzene(surr)	107 %R	104 %R	103 %R	5/26/2021	ug/L	70 - 130		525.2
Pyrene-d10(surr)	110 %R	108 %R	110 %R	5/26/2021	ug/L	70 - 130		525.2
Triphenylphosphate(surr)	98 %R	108 %R	105 %R	5/26/2021	ug/L	70 - 130		525.2
Perylene-d12(surr)	97 %R	99 %R	96 %R	5/26/2021	ug/L	70 - 130		525.2

*/! Flagged analyte recoveries deviated from the QA/QC limits. Data that impacts sample results are noted on the sample report.

LABORATORY REPORT

EAI ID#: **226532**

Client: **Geosphere Environmental Management Inc.**

Client Designation: **New Public Water Supply Well Seabrook Well 2**

Sample ID:	Well B
Lab Sample ID:	226532.01
Matrix:	aqueous
Date Sampled:	5/19/21
Date Received:	5/20/21
Units:	ug/L
Date of Analysis:	6/8/21
Analyst:	AM
Method:	531.2
Dilution Factor:	1
Aldicarb	< 0.5
Aldicarb Sulfone	< 0.5
Aldicarb Sulfoxide	< 0.5
Carbaryl	< 0.5
Carbofuran	< 0.5
3-Hydroxycarbofuran	< 0.5
Methiocarb	< 0.5
Methomyl	< 0.5
Oxamyl	< 0.5
Propoxur	< 0.5
BMDC (surr)	**94 %R**

QC REPORT

EAI ID#: **226532**

Client: **Geosphere Environmental Management Inc.**

Client Designation: **New Public Water Supply Well Seabrook Well 2**

Parameter Name	Blank	LCS	LCSD		Units	Date of Analysis	Limits	RPD	Method
Aldicarb	< 0.5	< 0.5 (95 %R)		*	ug/L	6/8/21	50 - 150	30	531.2
Aldicarb Sulfone	< 0.5	< 0.5 (96 %R)		*	ug/L	6/8/21	50 - 150	30	531.2
Aldicarb Sulfoxide	< 0.5	< 0.5 (78 %R)		*	ug/L	6/8/21	50 - 150	30	531.2
Carbaryl	< 0.5	< 0.5 (96 %R)		*	ug/L	6/8/21	50 - 150	30	531.2
Carbofuran	< 0.5	< 0.5 (90 %R)		*	ug/L	6/8/21	50 - 150	30	531.2
3-Hydroxycarbofuran	< 0.5	< 0.5 (95 %R)		*	ug/L	6/8/21	50 - 150	30	531.2
Methiocarb	< 0.5	< 0.5 (97 %R)		*	ug/L	6/8/21	50 - 150	30	531.2
Methomyl	< 0.5	< 0.5 (91 %R)		*	ug/L	6/8/21	50 - 150	30	531.2
Oxamyl	< 0.5	< 0.5 (81 %R)		*	ug/L	6/8/21	50 - 150	30	531.2
Propoxur	< 0.5	< 0.5 (96 %R)		*	ug/L	6/8/21	50 - 150	30	531.2
BMDC (surr)	99 %R	105 %R		*	% Rec	6/8/21	70 - 130	20	531.2

*/! Flagged analyte recoveries deviated from the QA/QC limits. Unless noted, flagged data does not impact the sample data.

LABORATORY REPORT

EAI ID#: **226532**

Client: **Geosphere Environmental Management Inc.**

Client Designation: **New Public Water Supply Well Seabrook Well 2**

Sample ID:	Well B
Lab Sample ID:	226532.01
Matrix:	aqueous
Date Sampled:	5/19/21
Date Received:	5/20/21
Units:	ug/L
Date of Extraction/Prep:	5/27/21
Date of Analysis:	5/27/21
Analyst:	AR
Method:	552.3
Dilution Factor:	1
Dalapon	< 1
2,3-Dibromopropanoic Acid (surr)	**94 %R**

QC REPORT

EAI ID#: **226532**

Client: **Geosphere Environmental Management Inc.** **Batch ID:** 637577-02478/A052721Dalap1

Client Designation: **New Public Water Supply Well Seabrook Well 2**

Parameter Name	Blank	LCS	LCSD	Analysis Date	Units	Limits	RPD	Method
Dalapon	< 1	10 (105 %R)	11 (106 %R) (2 RPD)	5/27/2021	ug/L	70 - 130	30	552.3
2,3-Dibromopropanoic Acid (surr)	96 %R	107 %R	96 %R	5/27/2021	ug/L	70 - 130	30	552.3

*/! Flagged analyte recoveries deviated from the QA/QC limits. Data that impacts sample results are noted on the sample report.

LABORATORY REPORT

EAI ID#: **226532**

Client: **Geosphere Environmental Management Inc.**

Client Designation: **New Public Water Supply Well Seabrook Well 2**

Sample ID:	Well B
Lab Sample ID:	226532.01
Matrix:	aqueous
Date Sampled:	5/19/21
Date Received:	5/20/21
Units:	ug/L
Date of Extraction/Prep:	5/27/21
Date of Analysis:	5/27/21
Analyst:	AR
Method:	552.3
Dilution Factor:	1
Monochloroacetic Acid (MCAA)	< 2
Monobromoacetic Acid (MBAA)	< 1
Dichloroacetic Acid (DCAA)	< 1
Trichloroacetic Acid (TCAA)	< 1
Dibromoacetic Acid (DBAA)	< 1
Total Haloacetic Acids	< 6
2,3-Dibromopropanoic Acid (surr)	**94 %R**

QC REPORT

EAI ID#: **226532**

Client: **Geosphere Environmental Management Inc.** **Batch ID:** 637577-02409/A052721HAA1

Client Designation: **New Public Water Supply Well Seabrook Well 2**

Parameter Name	Blank	LCS	LCSD	Analysis Date	Units	Limits	RPD	Method
Monochloroacetic Acid (MCAA)	< 2	10 (103 %R)	10 (102 %R) (1 RPD)	5/27/2021	ug/L	70 - 130	30	552.3
Monobromoacetic Acid (MBAA)	< 1	10 (104 %R)	10 (104 %R) (0 RPD)	5/27/2021	ug/L	70 - 130	30	552.3
Dichloroacetic Acid (DCAA)	< 1	10 (103 %R)	10 (103 %R) (0 RPD)	5/27/2021	ug/L	70 - 130	30	552.3
Trichloroacetic Acid (TCAA)	< 1	10 (105 %R)	11 (107 %R) (2 RPD)	5/27/2021	ug/L	70 - 130	30	552.3
Dibromoacetic Acid (DBAA)	< 1	9.9 (99 %R)	10 (103 %R) (4 RPD)	5/27/2021	ug/L	70 - 130	30	552.3
Total Haloacetic Acids	< 6	< 6 (%R N/A)	< 6 (%R N/A) (RPD N/A)	5/27/2021	ug/L			552.3
2,3-Dibromopropanoic Acid (surr)	96 %R	107 %R	96 %R	5/27/2021	ug/L	70 - 130	30	552.3

*/! Flagged analyte recoveries deviated from the QA/QC limits. Data that impacts sample results are noted on the sample report.

LABORATORY REPORT

EAI ID#: **226532**

Client: **Geosphere Environmental Management Inc.**

Client Designation: **New Public Water Supply Well Seabrook Well 2**

Sample ID: Well B

Lab Sample ID: 226532.01

Matrix: aqueous

Date Sampled: 5/19/21

Date Received: 5/20/21

		Analysis				
		Units	**Date**	**Time**	**Method**	**Analyst**
Solids Dissolved	**140**	mg/L	5/25/21	14:20	2540C-11	KJD
Fluoride	**0.23**	mg/L	5/21/21	14:10	4500FC	SEL
Sulfate	**23**	mg/L	5/21/21	11:59	300.0	ATA
Radon	**2970**	pCi/L	5/21/21	9:14	E-PERM®	HEH
Chloride	**7**	mg/L	5/21/21	11:59	300.0	ATA
Nitrite-N	< 0.5	mg/L	5/21/21	11:59	300.0	ATA
Nitrate-N	< 0.5	mg/L	5/21/21	11:59	300.0	ATA
Alkalinity Total (CaCO3)	**98**	mg/L	5/21/21	10:34	2320B-11	RB
Cyanide Free	< 0.02	mg/L	5/26/21	11:03	OIA-1677-09	KD
Sulfide	< 0.05	mg/L	5/24/21	9:25	8131HACH	RB
Color	< 5	PtCo	5/20/21	17:45	2120B-11	AMB
Odor	**ND**	TON	5/20/21	15:15	2150B	AMB
pH	**8.39**	SU	5/20/21	15:14	4500H+B-11	ATA
Langelier Corrosivity	**0.25**	SI	5/26/21	16:30	Langelier Index	KD

Odor: ND=non-detect, no odor detected.

The Langelier Index is used to calculate the corrosivity of the water, and is reported as a Saturation Index. The Langelier Index is based on a calculation of Total Dissolved Solids, including Chloride, Sulfate, Calcium Hardness, Total Alkalinity, pH, and Temperature. Temperature has an important role in this calculation, and for the purposes of this report a value of 20 degrees C was used. A value of -1 is considered to be mildly corrosive, -2 is moderately corrosive and -5 severely corrosive.

QC REPORT

EAI ID#: **226532**

Client: **Geosphere Environmental Management Inc.**

Client Designation: **New Public Water Supply Well Seabrook Well 2**

Parameter Name	Blank	LCS	LCSD	Units	Date of Analysis	Limits	RPD	Method
Solids Dissolved	< 10	960 (100 %R)	950 (99 %R) (1 RPD)	mg/L	5/25/21	85 - 115	20	2540C-11
Fluoride	< 0.1	2.0 (99 %R)	2.0 (100 %R) (1 RPD)	mg/L	5/21/21	90 - 110	20	4500FC
Sulfate	< 1	21 (104 %R)	21 (103 %R) (1 RPD)	mg/L	5/21/21	90 - 110	20	300.0
Chloride	< 1	21 (104 %R)	21 (105 %R) (1 RPD)	mg/L	5/21/21	90 - 110	20	300.0
Nitrite-N	< 0.5	2.2 (110 %R)	2.2 (111 %R) (1 RPD)	mg/L	5/21/21	90 - 110	20	300.0
Nitrate-N	< 0.5	2.0 (101 %R)	2.1 (104 %R) (3 RPD)	mg/L	5/21/21	90 - 110	20	300.0
Alkalinity Total (CaCO3)	< 1	11 (106 %R)	11 (106 %R) (0 RPD)	mg/L	5/21/21	85 - 115	20	2320B-11
Cyanide Free	< 0.02	0.27 (106 %R)	0.26 (103 %R) (3 RPD)	mg/L	5/26/21	82 - 132	20	OIA-1677-09
Sulfide	< 0.05	0.40 (100 %R)	0.41 (103 %R) (2 RPD)	mg/L	5/24/21	80 - 120	20	8131HACH
Color	< 5	10 (100 %R)	10 (100 %R) (0 RPD)	PtCo	5/20/21	90 - 110	20	2120B-11
pH	NA	6.04 (101 %R)	6.1 (102 %R) (1 RPD)	SU	5/20/21	5.97 - 6.1	10	4500H+B-11

*/! Flagged analyte recoveries deviated from the QA/QC limits. Unless noted, flagged data does not impact the sample data.

LABORATORY REPORT

EAI ID#: **226532**

Client: **Geosphere Environmental Management Inc.**

Client Designation: **New Public Water Supply Well Seabrook Well 2**

Sample ID: Well B

Lab Sample ID: 226532.01

Matrix: aqueous

Date Sampled: 5/19/21

Date Received: 5/20/21

		Analytical Matrix	Units	Date of Analysis	Method	Analyst
Aluminum	< 0.05	AqTot	mg/L	5/21/21	200.8	DS
Antimony	< 0.001	AqTot	mg/L	5/21/21	200.8	DS
Arsenic	**0.022**	AqTot	mg/L	5/21/21	200.8	DS
Barium	**0.0082**	AqTot	mg/L	5/21/21	200.8	DS
Beryllium	< 0.001	AqTot	mg/L	5/21/21	200.8	DS
Cadmium	< 0.001	AqTot	mg/L	5/21/21	200.8	DS
Chromium	< 0.001	AqTot	mg/L	5/21/21	200.8	DS
Copper	< 0.001	AqTot	mg/L	5/21/21	200.8	DS
Lead	< 0.001	AqTot	mg/L	5/21/21	200.8	DS
Manganese	**0.085**	AqTot	mg/L	5/21/21	200.8	DS
Mercury	< 0.0001	AqTot	mg/L	5/21/21	200.8	DS
Nickel	< 0.001	AqTot	mg/L	5/21/21	200.8	DS
Selenium	< 0.001	AqTot	mg/L	5/21/21	200.8	DS
Silver	< 0.001	AqTot	mg/L	5/21/21	200.8	DS
Thallium	< 0.001	AqTot	mg/L	5/21/21	200.8	DS
Uranium	**1.2**	AqTot	ug/L	5/21/21	200.8	DS
Zinc	< 0.005	AqTot	mg/L	5/21/21	200.8	DS
Calcium	**16**	AqTot	mg/L	5/25/21	200.7	RJ
Iron	< 0.05	AqTot	mg/L	5/25/21	200.7	RJ
Sodium	**34**	AqTot	mg/L	5/25/21	200.7	RJ
Total Hardness (as CaCO3)	**61**	AqTot	mg/L	5/25/21	200.7	RJ

QC REPORT

EAI ID#: **226532**

Client: **Geosphere Environmental Management Inc.**

Client Designation: **New Public Water Supply Well Seabrook Well 2**

Parameter Name	Blank	LCS	LCSD	Units	Date of Analysis	Limits	RPD	Method
Aluminum	< 0.05	11 (103 %R)	NA	mg/L	5/21/21	85 - 115	20	200.8
Antimony	< 0.001	0.21 (106 %R)	NA	mg/L	5/21/21	85 - 115	20	200.8
Arsenic	< 0.001	0.21 (103 %R)	NA	mg/L	5/21/21	85 - 115	20	200.8
Barium	< 0.001	0.21 (107 %R)	NA	mg/L	5/21/21	85 - 115	20	200.8
Beryllium	< 0.001	0.22 (111 %R)	NA	mg/L	5/21/21	85 - 115	20	200.8
Calcium	< 0.05	11 (103 %R)	NA	mg/L	5/25/21	85 - 115	20	200.7
Cadmium	< 0.001	0.21 (104 %R)	NA	mg/L	5/21/21	85 - 115	20	200.8
Chromium	< 0.001	0.20 (102 %R)	NA	mg/L	5/21/21	85 - 115	20	200.8
Copper	< 0.001	0.19 (97 %R)	NA	mg/L	5/21/21	85 - 115	20	200.8
Iron	< 0.05	11 (98 %R)	NA	mg/L	5/25/21	85 - 115	20	200.7
Lead	< 0.001	0.20 (98 %R)	NA	mg/L	5/21/21	85 - 115	20	200.8
Manganese	< 0.005	0.21 (104 %R)	NA	mg/L	5/21/21	85 - 115	20	200.8
Mercury	< 0.0001	0.0010 (102 %R)	NA	mg/L	5/21/21	85 - 115	20	200.8
Nickel	< 0.001	0.20 (99 %R)	NA	mg/L	5/21/21	85 - 115	20	200.8
Selenium	< 0.001	0.20 (99 %R)	NA	mg/L	5/21/21	85 - 115	20	200.8
Silver	< 0.001	0.20 (98 %R)	NA	mg/L	5/21/21	85 - 115	20	200.8
Sodium	< 0.5	11 (97 %R)	NA	mg/L	5/25/21	85 - 115	20	200.7
Thallium	< 0.001	0.20 (100 %R)	NA	mg/L	5/21/21	85 - 115	20	200.8
Uranium	< 0.1	91 (91 %R)	NA	ug/L	5/21/21	85 - 115	20	200.8
Zinc	< 0.005	0.20 (101 %R)	NA	mg/L	5/21/21	85 - 115	20	200.8

*/! Flagged analyte recoveries deviated from the QA/QC limits. Unless noted, flagged data does not impact the sample data.

LABORATORY REPORT

EAI ID#: **226532**

Client: **Geosphere Environmental Management Inc.**

Client Designation: **New Public Water Supply Well Seabrook Well 2**

Sample ID: Well B

Lab Sample ID: 226532.01
Matrix: aqueous
Date Sampled: 5/19/21
Date Received: 5/20/21

Parameter	Concentration	Units	Date of Analysis	Method
Gross Alpha	5.1	pCi/L	6/2/21	900
Uranium	1.2	ug/L	5/21/21	200.8
Uranium*	0.8	pCi/L	6/28/21	See Ref.
Adj. Gross Alpha**	4.3	pCi/L	6/28/21	See Ref.

Gross Alpha analyzed by a subcontracted lab, entire lab report enclosed.
*Uranium conversion factor = 0.67 pCi/ug
**Adj. (Compliance) Gross Alpha = Gross Alpha (pCi/L) - Uranium (pCi/L)
ND = None detected
Gross Alpha MCL = 15 pCi/L

References: 40 CFR parts 9, 141 and 142 - National Primary Drinking Water Regulations; Radionuclides; Final Rule, December 2000. Pages 76717 and 76725 (Table 1-8, footnote 12).

If requested, the potassium-40 beta particle activity is calculated by multiplying elemental potassium concentrations (in mg/L) by a factor of 0.82.
Reference: MA DEP

June 25, 2021

Service Request No:E2100583

Alison Blay
Eastern Analytical, Inc.
25 Chenell Drive
Concord, NH 03301

Laboratory Results for: 226532

Dear Alison,

Enclosed are the results of the sample(s) submitted to our laboratory May 21, 2021
For your reference, these analyses have been assigned our service request number **E2100583.**

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. The test results meet requirements of the current TNI standards, where applicable, and except as noted in the laboratory case narrative provided. All results are intended to be considered in their entirety and ALS Environmental is not responsible for use of less than the complete final report. Results apply only to the items submitted to the laboratory, as received for analysis. In accordance with the current TNI Standard, a statement on the estimated uncertainty of measurement of any quantitative analysis will be supplied upon request.

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental

Corey Grandits
Project Manager

ADDRESS 10450 Stancliff Rd., Suite 210, Houston, TX 77099
PHONE +1 281 530 5656 | FAX +1 281 530 5887
ALS Group USA, Corp.
dba ALS Environmental

Certificate of Analysis

ALS Environmental - Houston HRMS
10450 Stancliff Rd, Suite 210, Houston TX 77099
Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

ALS Environmental

Client:	EAI	**Service Request No.:**	E2100583
Project:	226532	**Date Received:**	05/21/21
Sample Matrix:	W		

CASE NARRATIVE

All analyses were performed in adherence to the quality assurance program of ALS Environmental. This report contains analytical results for samples designated for Tier II. When appropriate to the method, method blank results have been reported with each analytical test.

Sample Receipt

One sample was received for analysis at ALS Environmental in Houston on 05/21/21.

The sample was received in good condition and is consistent with the accompanying chain of custody form. The sample was stored in a refrigerator at 4°C upon receipt at the laboratory.

Data Validation Notes and Discussion

Precision and Accuracy:

EQ2100322: Laboratory Control Spike/Duplicate Laboratory Control Spike (LCS/DLCS) samples were analyzed and reported in lieu of a MS/MSD for this extraction batch. The LCS and DLCS recoveries are within QC limits.

Detection Limits

Detection limits are calculated for each analyte in each sample by measuring the height of the noise level for each quantitation ion for the associated labeled standard. The concentration equivalent to 2.5 times the height of the noise is then calculated using the appropriate response factor and the weight of the sample. The calculated concentration equals the detection limit.

Certification is held for the state of NH for the method/matrix/analytes provided in this report.

The results of analyses are given in the attached laboratory report. All results are intended to be considered in their entirety, and ALS Environmental (ALS) is not responsible for utilization of less than the complete report.

Use of ALS group USA Corp dba ALS Environmental (ALS)'s Name. Client shall not use ALS's name or trademark in any marketing or reporting materials, press releases or in any other manner ("Materials") whatsoever and shall not attribute to ALS any test result, tolerance or specification derived from ALS's data ("Attribution") without ALS's prior written consent, which may be withheld by ALS for any reason in its sole discretion. To request ALS's consent, Client shall provide copies of the proposed Materials or Attribution and describe in writing Client's proposed use of such Materials or Attribution. If ALS has not provided written approval of the Materials or Attribution within ten (10) days of receipt from Client, Client's request to use ALS's name or trademark in any Materials or Attribution shall be deemed denied. ALS may, in its discretion, reasonably charge Client for its time in reviewing Materials or Attribution requests. Client acknowledges and agrees that the unauthorized use of ALS's name or trademark may cause ALS to incur irreparable harm for which the recovery of money damages will be inadequate. Accordingly, Client acknowledges and agrees that a violation shall justify preliminary injunctive relief. For questions contact the laboratory.

SAMPLE CROSS-REFERENCE

SAMPLE #	CLIENT SAMPLE ID	DATE	TIME
E2100583-001	Well B	5/19/2021	1500

Service Request Summary

Folder #: **E2100583**
Client Name: Eastern Analytical, Inc.
Project Name: 226532
Project Number:

Report To: Alison Blay
Eastern Analytical, Inc.
25 Chenell Drive
Concord, NH 03301
USA
Phone Number: 800-287-0525
Cell Number:
Fax Number: 603-228-4591
E-mail: alisonb@eailabs.com

Project Chemist: Corey Grandits
Originating Lab: HOUSTON
Logged By: CGRANDITS
Date Received: 05/21/21
Internal Due Date: 6/14/2021
QAP: LAB QAP
Qualifier Set: HRMS Qualifier Set
Formset: Lab Standard
Merged?: N
Report to MDL?: Y
P.O. Number: 54977
EDD: No EDD Specified

1 1000 ml-Glass Bottle NM AMBER Teflon Liner Unpreserved
Location: EHRMS-WIC 10C
Pressure Gas:

31

Lab Samp No.	Client Samp No	Matrix	Collected	HOUSTON Dioxins Furans/1613B
E2100583-001	Well B	Water	05/19/21 1500	II

Folder Comments:

CC report to customerservice@eailabs.com; use the EAI ID number from the coc as the project name

Printed 6/25/2021 2:13:38 PM

Service Request Summary

Folder #: **E2100583**
Client Name: Eastern Analytical, Inc.
Project Name: 226532
Project Number:

Report To: Alison Blay
Eastern Analytical, Inc.
25 Chenell Drive
Concord, NH 03301
USA
Phone Number: 800-287-0525
Cell Number:
Fax Number: 603-228-4591
E-mail: alisonb@eailabs.com

Project Chemist: Corey Grandits
Originating Lab: HOUSTON
Logged By: CGRANDITS
Date Received: 05/21/21
Internal Due Date: 6/14/2021
QAP: LAB QAP
Qualifier Set: HRMS Qualifier Set
Formset: Lab Standard
Merged?: N
Report to MDL?: Y
P.O. Number: 54977
EDD: No EDD Specified

1 1000 ml-Glass Bottle NM AMBER Teflon Liner Unpreserved
Location: EHRMS-WIC 10C
Pressure Gas:

32

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Data Qualifiers

HRMS Qualifier Set

B Indicates the associated analyte was found in the method blank at >1/10th the reported value.
E Estimated value. The reported concentration is above the calibration range of the instrument.
H Sample extracted and/or analyzed out of suggested holding time.
J Estimated value. The reported concentration is below the MRL.
K The ion abundance ratio between the primary and secondary ions were outside of theoretical acceptance limits.The concentration of this analyte should be considered as an estimate.
P Chlorodiphenyl ether interference was present at the retention time of the target analyte. Reported result should be considered an estimate.
Q Monitored lock-mass indicates matrix-interference. Reported result is estimated.
S Signal saturated detector. Result reported from dilution.
U Compound was analyzed for, but was not detected (ND).
X See Case Narrative.
Y Isotopically Labeled Standard recovery outside of acceptance limits. In all cases, the signal-to-nois ratios are greater than 10:1, making the recoveries acceptable.
i The MDL/MRL have been elevated due to a matrix interference.

Acronyms

Cal	Calibration
Conc	CONCentration
Dioxin(s)	Polychlorinated dibenzo-p-dioxin(s)
EDL	Estimated Detection Limit
EMPC	Estimated Maximum Possible Concentration
Flags	Data qualifiers
Furan(s)	Polychlorinated dibenzofuran(s)
g	Grams
ICAL	Initial CALibration
ID	IDentifier
Ions	Masses monitored for the analyte during data acquisition
L	Liter (s)
LCS	Laboratory Control Sample
DLCS	Duplicate Laboratory Control Sample
MB	Method Blank
MCL	Method Calibration Limit
MDL	Method Detection Limit
mL	Milliliters
MS	Matrix Spiked sample
DMS	Duplicate Matrix Spiked sample
NO	Number of peaks meeting all identification criteria
PCDD(s)	Polychlorinated dibenzo-p-dioxin(s)
PCDF(s)	Polychlorinated dibenzofuran(s)
ppb	Parts per billion
ppm	Parts per million
ppq	Parts per quadrillion
ppt	Parts per trillion
QA	Quality Assurance
QC	Quality Control
Ratio	Ratio of areas from monitored ions for an analyte
% Rec.	Percent recovery
RPD	Relative Percent Difference
RRF	Relative Response Factor
RT	Retention Time
SDG	Sample Delivery Group
S/N	Signal-to-noise ratio
TEF	Toxicity Equivalence Factor
TEQ	Toxicity Equivalence Quotient

ALS Environmental

State Certifications, Accreditations, and Licenses

Agency	Number	Expire Date
American Association for Laboratory Accreditation	2897.01 2020	11/30/2021
Arkansas Department of Environmental Quality	21-022-0	3/26/2022
Department of Defense	A2LA 2897.01	11/30/2021
Florida Department of Health	E87611-2020	6/30/2021
Hawaii Department of Health	2021-2022	4/30/2022
Kansas Department of Health and Environment	E-10352-2020	7/31/2021
Louisiana Department of Environmental Quality	03087-2021	6/30/2022
Louisiana Department of Environmental Quality	03087-2020	6/30/2021
Louisiana Department of Health and Hospitals	LA028-2021	12/31/2021
Maine Department of Health and Human Services	2020016	6/5/2022
Maryland Department of the Environment	343-2020	6/30/2021
Minnesota Department of Health	2021671	12/31/2021
Nevada Department of Concervation and Natural Resources	TX026932021-4	7/31/2021
New Hampshire Environmental Laboratory Accreditation Program	209421	4/24/2022
New Jersey Department of Environmental Protection	TX008	6/30/2021
Oklahoma Department of Environmental Quality	2020-123	8/31/2021
Pennsylvania Department of Environmental Protection	014	6/30/2021
Tennessee Department of Environment and Concervation	04016-2021	4/30/2022
United States Department of Agriculture	P330-19-00299	10/10/2022
Utah Department of Health Environmental Laboratory Certification	TX026932021-10	7/31/2021

ALS ENVIRONMENTAL – Houston
Data Processing/Form Production and Peer Review Signatures

SR# Unique ID: E21100583 DB-5MSUI SPB-Octyl

First Level - Data Processing - to be filled by person generating the forms

Date: 06/25/21	Analyst:	Samples: 001

Second Level - Data Review – to be filled by person doing peer review

Date: 06/25/21	Analyst:	Samples: 001

ALS Environmental

Chain of Custody

ALS Environmental - Houston HRMS
10450 Stancliff Rd, Suite 210, Houston TX 77099
Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

CHAIN-OF-CUSTODY RECORD

Eastern Analytical, Inc.
professional laboratory and drilling services

EAI ID# **226532** Page 1

Sample ID	Date Sampled	Matrix	aParameters	Sample Notes
Well B	5/19/2021 15:00	aqueous	Subcontract - 2,3,7,8 TCDD Dioxin Method 1613 WW or DW	

EAI ID# **226532** Project State: NH

Project ID:

Company ALS Environmental – Houston

Address 10450 Stancliff Road, Suite

Address Houston, TX 77099

Account #

Phone # 1 281-530-5656

Results Needed: Preferred Date: Standard

RUSH Due Date: _____

QC Deliverables

☐ A ☐ A+ ☒ B ☐ B+ ☐ C ☐ MA MCP

Notes about project:

Email login confirmation, pdf of results and invoice to customerservice@easternanalytical.com.

PO #: 54977 EAI ID# **226532**

Data Deliverable (circle)

Excel NH EMD EQuIS ME EGAD

Call prior to analyzing, if RUSH charges will be applied.

Samples Collected by: _____

Relinquished by	Date/Time	Received by
[signature]	5/20/21 1600	UPS
	5/21/21 0935	PARESH GIRA

Relinquished by	Date/Time	Received by

Eastern Analytical, Inc. 25 Chenell Dr. Concord, NH 03301 Phone: (603)228-0525 1-800-287-0525 customerservice@easternanalytical.com

As a subcontract lab to EAI, you will defend, indemnify and hold Eastern Analytical, Inc., its officers, employees, and agents harmless from and against any and all liability, loss, expense or claims for injury or damage arising out of the performance against this chain of custody but only in proportion to and to the extent such liability, loss, expense, or claims for injury or damages are caused by or result from the negligent or intentiona acts or omissions of you as a subcontract lab, your officers, agents or employees

ALS Environmental

Cooler Receipt Form

Project Chemist: LG

Client/Project: EAI

Thermometer ID: IR21

Date/Time Received: 5/21/21 Initials: PG

Date/Time Logged in: 5/21/21 Initials: LG

1. Method of delivery: ○ US Mail ○ Fed Ex ☑ UPS ○ DHL ○ Courier ○ Client
2. Samples received in: ☑ Cooler ☑ Box ○ Envelope ○ Other
3. Were custody seals on coolers? ○ Yes ☑ No
   Were they intact? ○ Yes ○ No ☑ N/A
   Were they signed and dated? ○ Yes ○ No ☑ N/A
   If yes, how many and where?
4. Packing Material: ○ Inserts ☑ Baggies ☑ Bubble Wrap ○ Gel Packs ☑ Wet Ice ○ Sleeves ○ Other
5. Foreign or Regulated Soil? ○ Yes ○ No Location of Sampling:

Cooler Tracking Number	COC ID	Date Opened	Time Opened	Opened By	Temp. °C	Temp Blank?
12 [illegible]		5/21/21	0451	PG	5.1	☐
						☐
						☐
						☐

6. Were custody papers properly filled out (ink, signed, dated, etc)? ☑ Yes ○ No
7. Did all bottles arrive in good condition (not broken, no signs of leakage)? ☑ Yes ○ No
8. Were all sample labels complete (i.e., sample ID, analysis, preservation, etc)? ☑ Yes ○ No
9. Were appropriate bottles/containers and volumes received for the requested tests? ☑ Yes ○ No
10. Did sample labels and tags agree with custody documents? ☑ Yes ○ No

Notes, Discrepancies, & Resolutions:

Service request Label:

10450 Stancliff Rd., Suite 210
Houston, TX 77099
T: +1 713 266 1599
F: +1 713 266 1599
www.alsglobal.com

SAMPLE ACCEPTANCE POLICY

This policy outlines the criteria samples must meet to be accepted by ALS Environmental – Houston HRMS.

Cooler Custody Seals (desirable, mandatory if specified in SAP):

- ✓ Intact on outside of cooler, signed and dated

Chain-of-Custody (COC) documentation (mandatory):

The following is required on each COC:

- ✓ Sample ID, the location, date and time of collection, collector's name, preservation type, sample type, and any other special remarks concerning the sampleThe COC must be completed in ink.
- ✓ Signature and date of relinquishing party.

In the absence of a COC at sample receipt, the COC will be requested from the client.

Sample Integrity (mandatory):

Samples are inspected upon arrival to ensure that sample integrity was not compromised during transfer to the laboratory.

- ✓ Sample containers must arrive in good condition (not broken or leaking).
- ✓ Samples must be labeled appropriately, including Sample IDs, and requested test using durable labels and indelible ink.
- ✓ The correct type of sample bottle must be used for the method requested.
- ✓ An appropriate sample volume, or weight, must be received.
- ✓ Sample IDs and number of containers must reconcile with the COC.
- ✓ Samples must be received within the method defined holding time.

Temperature Requirement (varies by sample matrix):

- ✓ Aqueous and Non-aqueous samples must be shipped and stored cold, at 0 to 6°C.
- ✓ Tissue samples must be shipped and stored frozen, at -20 to -10°C.
- ✓ Air samples are shipped and stored cold, at 0 to 6°C
- ✓ The sample temperature must be recorded on the COC

All cooler inspections are documented on the Cooler Receipt Form (CRF). A separate CRF is completed for each service request. Any samples not meeting the above criteria are noted on the CRF and the Project Manager notified. The Project Manager must resolve any sample integrity issues with the client prior to proceeding with the analysis. Such resolutions are documented in writing and filed with the project folder. Data associated with samples received outside of this acceptance policy will be qualified on the case narrative of the final report

ALS Environmental

Preparation Information Benchsheets

ALS Environmental - Houston HRMS
10450 Stancliff Rd., Suite 210, Houston, TX 77099
Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

Preparation Information Benchsheet

Prep Run#: 380005
Team: Semivoa GCMS/TWOODS

Prep WorkFlow: OrgExtAq(365)
Prep Method: Method Sep Funnel/Jar

Status: Prepped
Prep Date/Time: 5/24/21 10:00

42

#	Lab Code	Client ID	B#	Method /Test	pH	Cl	Matrix	Amt. Ext.	Sample Description
1	E2100582-001	VCS-OU1-WW-SI-051821	.01	1613B/Dioxins Furans			Wastewater	959mL	clear
2	E2100582-002	VCS-OU1-WW-WI-051821	.01	1613B/Dioxins Furans			Wastewater	905mL	cloudy
3	E2100583-001	Well B	.01	1613B/Dioxins Furans			Water	981mL	clear
4	E2100585-001	704WW52121	.01	1613B/Dioxins Furans			Wastewater	996mL	cloudy brown
5	EQ2100322-01	LCS		1613B/Dioxins Furans			Liquid	1000mL	
6	EQ2100322-02	DLCS		1613B/Dioxins Furans			Liquid	1000mL	
7	EQ2100322-03	MB		1613B/Dioxins Furans			Liquid	1000mL	

Spiking Solutions

Name: 1613B Matrix Working Standard | Inventory ID 216687 | Logbook Ref: 216687 JG 4/17/2021 | Expires On: 10/14/2021

EQ2100322-01 100.00µL EQ2100322-02 100.00µL

Name: 1613B Labeled Working Standard | Inventory ID 217241 | Logbook Ref: tw 05/20/21 217241 | Expires On: 09/14/2021

E2100582-001 1,000.00µL E2100582-002 1,000.00µL E2100583-001 1,000.00µL E2100585-001 1,000.00µL EQ2100322-01 1,000.00µL EQ2100322-02 1,000.00µL
EQ2100322-03 1,000.00µL

Name: 8290/1613B Cleanup Working Standard | Inventory ID 217261 | Logbook Ref: 217261 db 52121 | Expires On: 08/28/2021

E2100582-001 100.00µL E2100582-002 100.00µL E2100583-001 100.00µL E2100585-001 100.00µL EQ2100322-01 100.00µL EQ2100322-02 100.00µL
EQ2100322-03 100.00µL

Preparation Materials

Carbon, High Purity	tw 11/30/20 carbon (214362)	Ethyl Acetate 99.9% Minimum EtOAc	TW 12/15/20 (214517)	Glass Wool	glass wool tw 071520 (211598)
Hexanes 95%	tw 1/8/21 hexanes (214901)	Dichloromethane (Methylene Chloride) 99.9% MeCl2	tw 09/18/20 (212826)	Sodium Sulfate Anhydrous Reagent Grade Na2SO4	tw 04/12/21 (217292)
Tridecane (n-Tridecane)	tw 04/ tridecane (216874)	Toluene 99.9% Minimum	tw 1/8/21 toluene (214898)	sulfuric acid	tw sulfiric acid 11/ (213915)
Chlorine Test Strips	Chlorine test Strips (210298)	Sodium Hydroxide 1N NaOH	tw 5/18/21 1n NaOH (217646)	Silica Gel	tw 06/01/21 silics g (217554)
ColorpHast pH-Indicator Strips	pH strips tw 21020 (206953)				

Preparation Steps

Step:	Extraction	Step:	Acid Clean	Step:	Silica Gel Clean	Step:	Final Volume
Started:	5/24/21 10:00	Started:	6/2/21 09:00	Started:	6/2/21 10:00	Started:	6/3/21 09:00
Finished:	5/24/21 13:00	Finished:	6/2/21 10:00	Finished:	6/2/21 13:00	Finished:	6/3/21 12:00
By:	TWOODS	By:	TWOODS	By:	TWOODS	By:	TWOODS
Comments		Comments		Comments		Comments	

Preparation Information Benchsheet

Prep Run#: 380005
Team: Semivoa GCMS/TWOODS

Prep WorkFlow: OrgExtAq(365)
Prep Method: Method Sep Funnel/Jar

Status: Prepped
Prep Date/Time: 5/24/21 10:00

43

Comments: _____

Reviewed By: _____ Date: _____

Chain of Custody

Relinquished By: _____ Date: _____

Received By: _____ Date: _____

Extracts Examined
Yes No

Analytical Results

ALS Environmental - Houston HRMS
10450 Stancliff Rd., Suite 210, Houston, TX 77099
Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Eastern Analytical, Inc.	**Service Request:**	E2100583
Project:	226532	**Date Collected:**	05/19/21 15:00
Sample Matrix:	Water	**Date Received:**	05/21/21 09:35
Sample Name:	Well B	**Units:**	pg/L
Lab Code:	E2100583-001	**Basis:**	NA

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method:	1613B	**Date Analyzed:**	06/21/21 05:44
Prep Method:	Method Sep Funnel/Jar	**Date Extracted:**	5/24/21
Sample Amount:	981mL	**Instrument Name:**	E-HRMS-08
		GC Column:	DB-5MSUI
Data File Name:	P626068	**Blank File Name:**	P626062
ICAL Date:	12/04/20	**Cal Ver. File Name:**	P626059

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDD	ND	U	2.12	5.10			1

Client:	Eastern Analytical, Inc.	**Service Request:**	E2100583
Project:	226532	**Date Collected:**	05/19/21 15:00
Sample Matrix:	Water	**Date Received:**	05/21/21 09:35
Sample Name:	Well B	**Units:**	Percent
Lab Code:	E2100583-001	**Basis:**	NA

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method:	1613B	**Date Analyzed:**	06/21/21 05:44
Prep Method:	Method Sep Funnel/Jar	**Date Extracted:**	5/24/21
Sample Amount:	981mL	**Instrument Name:**	E-HRMS-08
		GC Column:	DB-5MSUI
Data File Name:	P626068	**Blank File Name:**	P626062
ICAL Date:	12/04/20	**Cal Ver. File Name:**	P626059

Labeled Standard Results

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	% Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDD	2000	945.801	47		25-164	0.78	1.022
37Cl-2,3,7,8-TCDD	800	389.531	49		35-197	NA	1.023

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Eastern Analytical, Inc.	**Service Request:**	E2100583
Project:	226532	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Method Blank	**Units:**	pg/L
Lab Code:	EQ2100322-03	**Basis:**	NA

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method:	1613B	**Date Analyzed:**	06/21/21 00:45
Prep Method:	Method Sep Funnel/Jar	**Date Extracted:**	5/24/21
Sample Amount:	1000mL	**Instrument Name:**	E-HRMS-08
		GC Column:	DB-5MSUI
Data File Name:	P626062	**Blank File Name:**	P626062
ICAL Date:	12/04/20	**Cal Ver. File Name:**	P626059

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDD	ND	U	2.72	5.00			1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Eastern Analytical, Inc.	**Service Request:**	E2100583
Project:	226532	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Method Blank	**Units:**	Percent
Lab Code:	EQ2100322-03	**Basis:**	NA

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method:	1613B	**Date Analyzed:**	06/21/21 00:45
Prep Method:	Method Sep Funnel/Jar	**Date Extracted:**	5/24/21
Sample Amount:	1000mL	**Instrument Name:**	E-HRMS-08
		GC Column:	DB-5MSUI
Data File Name:	P626062	**Blank File Name:**	P626062
ICAL Date:	12/04/20	**Cal Ver. File Name:**	P626059

Labeled Standard Results

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	% Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDD	2000	1030.458	52		25-164	0.79	1.022
37Cl-2,3,7,8-TCDD	800	368.842	46		35-197	NA	1.022

Accuracy & Precision

ALS Environmental - Houston HRMS
10450 Stancliff Rd., Suite 210, Houston TX 77099
Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

Client:	Eastern Analytical, Inc.	**Service Request:**	E2100583
Project:	226532	**Date Analyzed:**	06/21/21
Sample Matrix:	Water	**Date Extracted:**	05/24/21

Duplicate Lab Control Sample Summary
Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method:	1613B	**Units:**	pg/L
Prep Method:	Method Sep Funnel/Jar	**Basis:**	NA
		Analysis Lot:	728855

	Lab Control Sample EQ2100322-01			Duplicate Lab Control Sample EQ2100322-02					
Analyte Name	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
2,3,7,8-TCDD	195	200	97	191	200	95	67-158	2	50

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Eastern Analytical, Inc.	**Service Request:**	E2100583
Project:	226532	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Lab Control Sample	**Units:**	pg/L
Lab Code:	EQ2100322-01	**Basis:**	NA

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method:	1613B	**Date Analyzed:**	06/21/21 06:34
Prep Method:	Method Sep Funnel/Jar	**Date Extracted:**	5/24/21
Sample Amount:	1000mL	**Instrument Name:**	E-HRMS-08
		GC Column:	DB-5MSUI
Data File Name:	P626069	**Blank File Name:**	P626062
ICAL Date:	12/04/20	**Cal Ver. File Name:**	P626059

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDD	195		1.43	5.00	0.75	1.000	1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Eastern Analytical, Inc.	**Service Request:**	E2100583
Project:	226532	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Lab Control Sample	**Units:**	Percent
Lab Code:	EQ2100322-01	**Basis:**	NA

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method:	1613B	**Date Analyzed:**	06/21/21 06:34
Prep Method:	Method Sep Funnel/Jar	**Date Extracted:**	5/24/21
Sample Amount:	1000mL	**Instrument Name:**	E-HRMS-08
		GC Column:	DB-5MSUI
Data File Name:	P626069	**Blank File Name:**	P626062
ICAL Date:	12/04/20	**Cal Ver. File Name:**	P626059

Labeled Standard Results

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	% Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDD	2000	1258.879	63		25-164	0.77	1.022
37Cl-2,3,7,8-TCDD	800	448.054	56		35-197	NA	1.022

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Eastern Analytical, Inc.	**Service Request:**	E2100583
Project:	226532	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Duplicate Lab Control Sample	**Units:**	pg/L
Lab Code:	EQ2100322-02	**Basis:**	NA

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method:	1613B	**Date Analyzed:**	06/21/21 07:24
Prep Method:	Method Sep Funnel/Jar	**Date Extracted:**	5/24/21
Sample Amount:	1000mL	**Instrument Name:**	E-HRMS-08
		GC Column:	DB-5MSUI
Data File Name:	P626070	**Blank File Name:**	P626062
ICAL Date:	12/04/20	**Cal Ver. File Name:**	P626059

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDD	191		1.34	5.00	0.76	1.001	1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Eastern Analytical, Inc.	**Service Request:**	E2100583
Project:	226532	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Duplicate Lab Control Sample	**Units:**	Percent
Lab Code:	EQ2100322-02	**Basis:**	NA

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method:	1613B	**Date Analyzed:**	06/21/21 07:24
Prep Method:	Method Sep Funnel/Jar	**Date Extracted:**	5/24/21
Sample Amount:	1000mL	**Instrument Name:**	E-HRMS-08
		GC Column:	DB-5MSUI
Data File Name:	P626070	**Blank File Name:**	P626062
ICAL Date:	12/04/20	**Cal Ver. File Name:**	P626059

Labeled Standard Results

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	% Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDD	2000	1103.261	55		25-164	0.78	1.022
37Cl-2,3,7,8-TCDD	800	394.305	49		35-197	NA	1.023

EMSL Analytical, Inc.
200 Route 130 North Cinnaminson, NJ 08077
Phone/Fax: (800) 220-3675 / (856) 786-5974
http://www.EMSL.com / cinnasblab@EMSL.com

EMSL Order ID:	042112085
Customer ID:	ESTA42
Customer PO:	54979
Project ID:	

Attn: Customer Service
Eastern Analytical, Inc.
25 Chenell Dr.
Concord, NH 03301

Phone: (603) 228-0525
Fax: (603) 228-4591
Received: 05/21/2021
Analyzed: 06/15/2021

Proj: 226532 - Well B

Test Report: Determination of Asbestos Structures >10µm in Drinking Water Performed by the 100.2 Method (EPA 600/R-94/134)

Sample ID Client / EMSL	Sample Filtration Date/Time	Original Sample Vol. Filtered (ml)	Effective Filter Area (mm²)	Area Analyzed (mm²)	ASBESTOS Asbestos Types	Fibers Detected	Analytical Sensitivity	Concentration	Confidence Limits
							MFL (million fibers per liter)		
Well B 042112085-0001	5/27/2021 11:05 AM	25	1326	0.2794	None Detected	ND	0.19	<0.19	0.00 - 0.70

Collection Date/Time: 05/19/2021 15:00 PM

Sample ozonated prior to analysis due to lab receipt time exceeding 48hr method hold time.

Analyst(s)
Wayne Froehlich (1)

Samantha Rundstrom, Laboratory Manager
or Other Approved Signatory

Any questions please contact Samantha Rundstrom-Cruz.

Initial report from: 06/15/2021 07:48:30

CHAIN-OF-CUSTODY RECORD

042112085

Eastern Analytical, Inc.
professional laboratory and drilling services

EAI ID# 226532 Page 1

OrderID: 042112085

Sample ID	Date Sampled	Matrix	aParameters	Sample Notes
Well B	5/19/2021 15:00	aqueous	Subcontract - Asbestos in Water 100.2 (Fibers >10 microns)	

RECEIVED
EMSL
CINNAMINSON, NJ
21 MAY 21 AM 10:03

Page 1 Of 1

EAI ID# 226532 **Project State: NH**

Project ID:

Company EMSL ANALYTICAL, INC.
Address 200 ROUTE 130 NORTH
Address CINNAMINSON, NJ 08077
Account #
Phone # (856) 303-2500

Results Needed: Preferred Date: Standard
RUSH Due Date: _____

QC Deliverables
☐ A ☐ A+ ☒ B ☐ B+ ☐ C ☐ MA MCP

Notes about project:
Email login confirmation, pdf of results and invoice to customerservice@easternanalytical.com.

PO #:54979 **EAI ID# 226532**

Data Deliverable (circle)
Excel NH EMD EQuIS ME EGAD

Call prior to analyzing, if RUSH charges will be applied.

Samples Collected by: _____

Relinquished by	Date/Time	Received by
[signature]	5/20/21 1600	UPS
PM UPS	5/21/21 10:05	[signature]

Relinquished by **Date/Time** **Received by**

2.1°C

Eastern Analytical, Inc. 25 Chenell Dr. Concord, NH 03301 Phone: (603)228-0525 1-800-287-0525 customerservice@easternanalytical.com

As a subcontract lab to EAI, you will defend, indemnify and hold Eastern Analytical, Inc., its officers, employees, and agents harmless from and against any and all liability, loss, expense or claims for injury or damages arising out of the performance against this chain of custody but only in proportion to and to the extent such liability, loss, expense, or claims for injury or damages are caused by or result from the negligent or intentional acts or omissions of you as a subcontract lab, your officers, agents or employees

KNL ENVIRONMENTAL TESTING

FL DOH Certification #E84025
NH Laboratory ID #2530

Report Date: June 9, 2021

Eastern Analytical, Inc.
25 Chenell Dr.
Concord, NH 03301

Field Custody: Client
Client/Field ID: 226532
Well B

PO#54976
Sample Collection: 5-19-21/1500
Lab ID No: 21.7921
Lab Custody Date: 5-26-21/1125
Sample Description: Water

CERTIFICATE OF ANALYSIS

Contam Code	Parameter	Units	Results	Analysis Date/Time	Method	Detection Limit
4002	Analytical Gross Alpha (aga)	pCi/L	5.1 ± 1.3	6-2-21/1654	EPA 900.0	1.4
	Gross Beta	pCi/L	5.2 ± 2.0	6-2-21/1654	EPA 900.0	3.9
4010	Radium-226 + Radium-228	pCi/L	0.9 ± 0.5	Calc	Calc	0.6
4020	Radium-226	pCi/L	0.9 ± 0.3	6-2-21/1220	EPA 903.0*	0.4
4030	Radium-228	pCi/L	0.0 ± 0.5	6-4-21/1242	EPA Ra-05	0.6

* 89% carrier recovery
Alpha Standard: Th-230
Beta Standard: Cs-137

Thomas J. Weeks
Laboratory Manager

Test results meet all requirements of the 2016 TNI standards. Statement of estimated uncertainty available upon request. Test results refer only to sample(s) listed.
Contact person: Thomas Weeks (813) 229-2879.

KNL ENVIROMENTAL TESTING, INC. | 3202 NORTH FLORIDA AVENUE | TAMPA, FLORIDA 33603
813.229.2879 | KNLENVIRONMENTAL.COM

CHAIN-OF-CUSTODY RECORD

Eastern Analytical, Inc.
professional laboratory and drilling services

21.7921 TD EAI ID# **226532**

Sample ID	Date Sampled	Matrix	aParameters	Sample Notes
Well B	5/19/2021 15:00	aqueous	Subcontract - Gross Alpha & Beta KNL	
Well B	5/19/2021 15:00	aqueous	Subcontract - Radium 226 & Radium 228 Combined KNL	

EAI ID# **226532** Project State: NH

Project ID:

Company KNL Environmental Testing
Address 3202 N. Florida Ave.
Address Tampa, FL 33603
Account #
Phone # 813-229-2879

Results Needed: Preferred Date: Standard
RUSH Due Date: _____

QC Deliverables
☐ A ☐ A+ ☒ B ☐ B+ ☐ C ☐ MA MCP

Notes about project:
Email login confirmation, pdf of results and invoice to customerservice@easternanalytical.com.

PO #: 54976 EAI ID# **226532**

Data Deliverable (circle)
Excel NH EMD EQuIS ME EGAD

Call prior to analyzing, if RUSH charges will be applied.

Samples Collected by: 5-21-2021 @ 1600 UPS

Relinquished by	Date/Time	Received by
	5-26-21 1125	KNL
Relinquished by	Date/Time	Received by

Eastern Analytical, Inc. 25 Chenell Dr. Concord, NH 03301 Phone: (603)228-0525 1-800-287-0525 customerservice@easternanalytical.com

Pace Analytical Services, LLC
110 South Bayview Blvd.
Oldsmar , FL 34677
(813)881-9401

June 04, 2021

Customer Service
Eastern Analytical Inc.
25 Chenell Drive
Concord, NH 03301

RE: Project: 226532
Pace Project No.: 35635129

Dear Customer Service:

Enclosed are the analytical results for sample(s) received by the laboratory on May 21, 2021. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - Ormond Beach

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Chelsea Gagne
chelsea.gagne@pacelabs.com
813-855-1844
Project Manager

Enclosures

cc: Alison Blay, Eastern Analytical Inc.
Jennifer Laramie, Eastern Analytical Inc.

Pace Analytical Services, LLC
110 South Bayview Blvd.
Oldsmar , FL 34677
(813)881-9401

CERTIFICATIONS

Project: 226532
Pace Project No.: 35635129

Pace Analytical Services Ormond Beach
8 East Tower Circle, Ormond Beach, FL 32174
Alaska DEC- CS/UST/LUST
Alabama Certification #: 41320
Arizona Certification# AZ0819
Colorado Certification: FL NELAC Reciprocity
Connecticut Certification #: PH-0216
Delaware Certification: FL NELAC Reciprocity
Florida Certification #: E83079
Georgia Certification #: 955
Guam Certification: FL NELAC Reciprocity
Hawaii Certification: FL NELAC Reciprocity
Illinois Certification #: 200068
Indiana Certification: FL NELAC Reciprocity
Kansas Certification #: E-10383
Kentucky Certification #: 90050
Louisiana Certification #: FL NELAC Reciprocity
Louisiana Environmental Certificate #: 05007
Maryland Certification: #346
Michigan Certification #: 9911
Mississippi Certification: FL NELAC Reciprocity
Missouri Certification #: 236
Montana Certification #: Cert 0074
Nebraska Certification: NE-OS-28-14
New Hampshire Certification #: 2958
New Jersey Certification #: FL022
New York Certification #: 11608
North Carolina Environmental Certificate #: 667
North Carolina Certification #: 12710
North Dakota Certification #: R-216
Ohio DEP 87780
Oklahoma Certification #: D9947
Pennsylvania Certification #: 68-00547
Puerto Rico Certification #: FL01264
South Carolina Certification: #96042001
Tennessee Certification #: TN02974
Texas Certification: FL NELAC Reciprocity
US Virgin Islands Certification: FL NELAC Reciprocity
Virginia Environmental Certification #: 460165
West Virginia Certification #: 9962C
Wisconsin Certification #: 399079670
Wyoming (EPA Region 8): FL NELAC Reciprocity

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SAMPLE SUMMARY

Project: 226532
Pace Project No.: 35635129

Lab ID	Sample ID	Matrix	Date Collected	Date Received
35635129001	**Well B**	Drinking Water	05/19/21 15:00	05/21/21 10:04

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SAMPLE ANALYTE COUNT

Project: 226532
Pace Project No.: 35635129

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
35635129001	**Well B**	EPA 505	JPD	8	PASI-O
		EPA 547	ERS	1	PASI-O
		EPA 549.2	ERS	1	PASI-O
		EPA 548.1	TM2	1	PASI-O
		EPA 300.1	NMT	2	PASI-O
		EPA 300.1	NMT	2	PASI-O

PASI-O = Pace Analytical Services - Ormond Beach

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ANALYTICAL RESULTS

Project: 226532
Pace Project No.: 35635129

Sample: Well B **Lab ID: 35635129001** Collected: 05/19/21 15:00 Received: 05/21/21 10:04 Matrix: Drinking Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
505 GCS PCB-TOX-TCH	Analytical Method: EPA 505 Preparation Method: EPA 505								
	Pace Analytical Services - Ormond Beach								
PCB-1016 (Aroclor 1016)	ND	ug/L	0.10	0.043	1	05/27/21 17:42	05/28/21 06:50	12674-11-2	
PCB-1221 (Aroclor 1221)	ND	ug/L	0.10	0.032	1	05/27/21 17:42	05/28/21 06:50	11104-28-2	
PCB-1232 (Aroclor 1232)	ND	ug/L	0.10	0.044	1	05/27/21 17:42	05/28/21 06:50	11141-16-5	
PCB-1242 (Aroclor 1242)	ND	ug/L	0.10	0.015	1	05/27/21 17:42	05/28/21 06:50	53469-21-9	
PCB-1248 (Aroclor 1248)	ND	ug/L	0.10	0.012	1	05/27/21 17:42	05/28/21 06:50	12672-29-6	
PCB-1254 (Aroclor 1254)	ND	ug/L	0.10	0.036	1	05/27/21 17:42	05/28/21 06:50	11097-69-1	
PCB-1260 (Aroclor 1260)	ND	ug/L	0.10	0.029	1	05/27/21 17:42	05/28/21 06:50	11096-82-5	
PCB, Total	ND	ug/L	0.10	0.044	1	05/27/21 17:42	05/28/21 06:50	1336-36-3	
547 HPLC Glyphosate	Analytical Method: EPA 547								
	Pace Analytical Services - Ormond Beach								
Glyphosate	ND	ug/L	6.0	4.2	1		05/25/21 06:08		
549.2 HPLC Paraquat Diquat	Analytical Method: EPA 549.2 Preparation Method: EPA 549.2								
	Pace Analytical Services - Ormond Beach								
Diquat	ND	ug/L	0.40	0.16	1	05/22/21 11:20	05/25/21 12:29	85-00-7	
548.1 GCS Endothall	Analytical Method: EPA 548.1 Preparation Method: EPA 548.1								
	Pace Analytical Services - Ormond Beach								
Endothall	ND	ug/L	9.0	3.3	1	05/24/21 23:26	05/25/21 11:05		
300.1 Oxihalide IC Anions 14d	Analytical Method: EPA 300.1								
	Pace Analytical Services - Ormond Beach								
Chlorite	ND	ug/L	2.0	0.25	1		06/02/21 02:52		
Surrogates									
Dichloroacetate (S)	108	%	90-115		1		06/02/21 02:52	79-43-6	
300.1 Oxihalide IC Anions 28d	Analytical Method: EPA 300.1								
	Pace Analytical Services - Ormond Beach								
Bromate	ND	ug/L	1.0	0.22	1		06/02/21 02:52	15541-45-4	
Surrogates									
Dichloroacetate (S)	108	%	90-115		1		06/02/21 02:52	79-43-6	

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QUALITY CONTROL DATA

Project: 226532
Pace Project No.: 35635129

QC Batch: 731957
QC Batch Method: EPA 547
Analysis Method: EPA 547
Analysis Description: 547 HPLC Glyphosate
Laboratory: Pace Analytical Services - Ormond Beach
Associated Lab Samples: 35635129001

METHOD BLANK: 3991416 Matrix: Water
Associated Lab Samples: 35635129001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Glyphosate	ug/L	ND	6.0	4.2	05/25/21 01:59	

LABORATORY CONTROL SAMPLE: 3991417

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Glyphosate	ug/L	50	54.7	109	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3991418 3991419

Parameter	Units	35634386001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Glyphosate	ug/L	4.2 U	50	50	45.6	44.6	91	89	80-120	2	30	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3991420 3991421

Parameter	Units	35635174001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Glyphosate	ug/L	<4.2	50	50	50.8	53.4	102	107	80-120	5	30	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 226532
Pace Project No.: 35635129

QC Batch: 733230
QC Batch Method: EPA 505
Analysis Method: EPA 505
Analysis Description: 505 GCS PCB-TOX-TCH
Laboratory: Pace Analytical Services - Ormond Beach
Associated Lab Samples: 35635129001

METHOD BLANK: 3998953 Matrix: Water
Associated Lab Samples: 35635129001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
PCB-1016 (Aroclor 1016)	ug/L	ND	0.10	0.043	05/27/21 22:37	
PCB-1221 (Aroclor 1221)	ug/L	ND	0.10	0.032	05/27/21 22:37	
PCB-1232 (Aroclor 1232)	ug/L	ND	0.10	0.044	05/27/21 22:37	
PCB-1242 (Aroclor 1242)	ug/L	ND	0.10	0.015	05/27/21 22:37	
PCB-1248 (Aroclor 1248)	ug/L	ND	0.10	0.012	05/27/21 22:37	
PCB-1254 (Aroclor 1254)	ug/L	ND	0.10	0.036	05/27/21 22:37	
PCB-1260 (Aroclor 1260)	ug/L	ND	0.10	0.029	05/27/21 22:37	

LABORATORY CONTROL SAMPLE: 3998954

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
PCB-1016 (Aroclor 1016)	ug/L	0.71	0.71	99	70-130	
PCB-1260 (Aroclor 1260)	ug/L	0.72	0.63	87	70-130	

LABORATORY CONTROL SAMPLE: 3998955

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
PCB-1016 (Aroclor 1016)	ug/L	0.071	.086 I	121	50-150	
PCB-1260 (Aroclor 1260)	ug/L	0.072	0.10	141	50-150	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3998986 3998987

Parameter	Units	35634006001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
PCB-1016 (Aroclor 1016)	ug/L	<0.044	0.71	0.71	0.63	0.65	88	91	70-130	3	20	
PCB-1260 (Aroclor 1260)	ug/L	<0.029	0.72	0.71	0.53	0.62	73	86	70-130	16	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3998996 3998997

Parameter	Units	35634301001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
PCB-1016 (Aroclor 1016)	ug/L	ND	0.71	0.71	0.62	0.57	87	80	70-130	8	20	
PCB-1260 (Aroclor 1260)	ug/L	ND	0.72	0.72	0.49	0.36	68	50	70-130	32	20	J(M1), J(R1)

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 226532
Pace Project No.: 35635129

QC Batch: 732258
QC Batch Method: EPA 548.1
Analysis Method: EPA 548.1
Analysis Description: 548 GCS Endothall
Laboratory: Pace Analytical Services - Ormond Beach

Associated Lab Samples: 35635129001

METHOD BLANK: 3992669 Matrix: Water
Associated Lab Samples: 35635129001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Endothall	ug/L	ND	9.0	3.3	05/25/21 10:04	

LABORATORY CONTROL SAMPLE: 3992670

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Endothall	ug/L	50	40.1	80	64-137	

LABORATORY CONTROL SAMPLE: 3992671

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Endothall	ug/L	9	7.8 I	86	50-150	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3992672 3992673

Parameter	Units	35635129001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Endothall	ug/L	ND	50	50	41.4	42.8	83	86	64-137	3	30	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3992674 3992675

Parameter	Units	35635151001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Endothall	ug/L	3.3 U	50	50	38.5	44.3	77	89	64-137	14	30	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 226532
Pace Project No.: 35635129

QC Batch: 731765
QC Batch Method: EPA 549.2
Analysis Method: EPA 549.2
Analysis Description: 549 HPLC Paraquat Diquat
Laboratory: Pace Analytical Services - Ormond Beach
Associated Lab Samples: 35635129001

METHOD BLANK: 3990807 Matrix: Water
Associated Lab Samples: 35635129001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Diquat	ug/L	ND	0.40	0.16	05/25/21 10:55	

LABORATORY CONTROL SAMPLE: 3990808

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Diquat	ug/L	2	2.1	103	70-130	

LABORATORY CONTROL SAMPLE: 3990809

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Diquat	ug/L	0.4	0.42	104	50-150	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3990810 3990811

Parameter	Units	70173724001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Diquat	ug/L	<0.40	2	2	2.1	2.2	104	108	70-130	4	30	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3990812 3990813

Parameter	Units	70173725001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Diquat	ug/L	<0.40	2	2	1.9	1.9	95	97	70-130	2	30	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 226532
Pace Project No.: 35635129

QC Batch: 734331
QC Batch Method: EPA 300.1
Analysis Method: EPA 300.1
Analysis Description: 300.1 Oxihalides IC Anions
Laboratory: Pace Analytical Services - Ormond Beach
Associated Lab Samples: 35635129001

METHOD BLANK: 4005243 Matrix: Water
Associated Lab Samples: 35635129001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chlorite	ug/L	ND	2.0	0.25	06/01/21 13:57	
Dichloroacetate (S)	%	109	90-115		06/01/21 13:57	

LABORATORY CONTROL SAMPLE: 4005244

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chlorite	ug/L	40	41.0	102	85-115	
Dichloroacetate (S)	%			105	90-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 4005245 4005246

Parameter	Units	20200073001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chlorite	ug/L	<0.25	40	40	38.8	36.3	97	91	75-125	7	20	
Dichloroacetate (S)	%						105	106	90-115			

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 4005248 4005247

Parameter	Units	35635605001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chlorite	ug/L	<0.25	20	20	19.5	21.3	97	106	75-125	9	20	
Dichloroacetate (S)	%						108	112	90-115			

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 226532
Pace Project No.: 35635129

QC Batch: 734335
QC Batch Method: EPA 300.1
Analysis Method: EPA 300.1
Analysis Description: 300.1 Oxihalides IC Anions
Laboratory: Pace Analytical Services - Ormond Beach
Associated Lab Samples: 35635129001

METHOD BLANK: 4005252 Matrix: Water
Associated Lab Samples: 35635129001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Bromate	ug/L	ND	1.0	0.22	06/01/21 13:57	
Dichloroacetate (S)	%	109	90-115		06/01/21 13:57	

LABORATORY CONTROL SAMPLE: 4005253

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Bromate	ug/L	8	7.7	96	85-115	
Dichloroacetate (S)	%			105	90-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 4005254 4005255

Parameter	Units	20200073001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Bromate	ug/L	<0.22	8	8	7.4	6.9	92	86	75-125	7	20	
Dichloroacetate (S)	%						105	106	90-115			

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 4010222 4010223

Parameter	Units	35635605001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Bromate	ug/L	0.87 I	4	4	5.1	4.8	107	99	75-125	6	20	
Dichloroacetate (S)	%						112	108	90-115			

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: 226532
Pace Project No.: 35635129

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

I	The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit.
U	Compound was analyzed for but not detected.
J(M1)	Estimated Value. Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.
J(R1)	Estimated Value. RPD value was outside control limits.

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 226532
Pace Project No.: 35635129

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
35635129001	**Well B**	EPA 505	733230	EPA 505	733319
35635129001	**Well B**	EPA 547	731957		
35635129001	**Well B**	EPA 549.2	731765	EPA 549.2	731949
35635129001	**Well B**	EPA 548.1	732258	EPA 548.1	732347
35635129001	**Well B**	EPA 300.1	734331		
35635129001	**Well B**	EPA 300.1	734335		

CHA WO# : 35635129

35635129

RECORD

Eastern Analytical, Inc.
professional laboratory and drilling services

EAI ID# 226532 Page 1

Sample ID	Date Sampled	Matrix	aParameters	Sample Notes
Well B	5/19/2021 15:00	aqueous	Subcontract - Glyphosate EPA Method 547	
Well B	5/19/2021 15:00	aqueous	Subcontract - Diquat EPA Method 549	
Well B	5/19/2021 15:00	aqueous	Subcontract - Endothall - Drinking water SALI	
Well B	5/19/2021 15:00	aqueous	Subcontract - PCBs EPA Method 505	

EAI ID# 226532 Project State: NH

Project ID:

Company Pace Analytical (FL)

Address 110 Bayview BLVD

Address Oldsmar, FL 34677

Account #

Phone # 813-855-1844

Results Needed: Preferred Date: Standard

RUSH Due Date:

QC Deliverables

☐ A ☐ A+ ☒ B ☐ B+ ☐ C ☐ MA MCP

Notes about project:

Email login confirmation, pdf of results and invoice to customerservice@easternanalytical.com.

PO #:54974 EAI ID# 226532

Data Deliverable (circle)

Excel NH EMD EQuIS ME EGAD

Call prior to analyzing, if RUSH charges will be applied.

Samples Collected by:

Chris Johnson 5/20/21 1600 UPS

Relinquished by Date/Time Received by

RON/Paul 5/21/21

Relinquished by Date/Time Received by

1004

Eastern Analytical, Inc. 25 Chenell Dr. Concord, NH 03301 Phone: (603)228-0525 1-800-287-0525 customerservice@easternanalytical.com

CHAIN-OF-CUSTODY RECORD

Eastern Analytical, Inc.
professional laboratory and drilling services

EAI ID# **226532** Page 2

Sample ID	Date Sampled	Matrix	aParameters	Sample Notes
Well B	5/19/2021 15:00	aqueous	Subcontract - Bromate 300.0	
Well B	5/19/2021 15:00	aqueous	Subcontract - Chlorite 300.0	

EAI ID# **226532** **Project State: NH**

Project ID:

Company Pace Analytical (FL)
Address 110 Bayview BLVD
Address Oldsmar, FL 34677
Account #
Phone # 813-855-1844

Results Needed: Preferred Date: Standard
RUSH Due Date: _____

QC Deliverables
☐ A ☐ A+ ☒ B ☐ B+ ☐ C ☐ MA MCP

Notes about project:
Email login confirmation, pdf of results and invoice to customerservice@easternanalytical.com.

PO #: 54974 **EAI ID#** **226532**

Data Deliverable (circle)
Excel NH EMD EQuIS ME EGAD

Call prior to analyzing, if RUSH charges will be applied.

Samples Collected by: _____
Relinquished by Date/Time Received by
5/20/21 1600 UPS
BPJ/Paul 5/21/21
Relinquished by Date/Time Received by 1004

Eastern Analytical, Inc. 25 Chenell Dr. Concord, NH 03301 Phone: (603)228-0525 1-800-287-0525 customerservice@easternanalytical.com

Pace Analytical	Document Name: Sample Condition Upon Receipt Form Document No.: F-FL-C-007 rev. 13	Document Revised: May 30, 2018 Issuing Authority: Pace Florida Quality Office

Sample Condition Upon Receipt (SCUR)

Project # WO#: 35635129

Project Manager: PM: CLG **Due Date:** 06/07/21

Client: CLIENT: 37-EASANA

Date and Initials of person:
Examining contents: ____
Label: BRW
Deliver: ____
pH: ____

Thermometer Used: T-353 Date: 5/21/21 Time: 1021 Initials: KAT

State of Origin: ____ ☐ For WV projects, all containers verified to ≤6 °C

Cooler #1 Temp.°C	4.3 (Visual)	+0.1 (Correction Factor)	4.4 (Actual)	☐ Samples on ice, cooling process has begun
Cooler #2 Temp.°C	____ (Visual)	____ (Correction Factor)	____ (Actual)	☐ Samples on ice, cooling process has begun
Cooler #3 Temp.°C	____ (Visual)	____ (Correction Factor)	____ (Actual)	☐ Samples on ice, cooling process has begun
Cooler #4 Temp.°C	____ (Visual)	____ (Correction Factor)	____ (Actual)	☐ Samples on ice, cooling process has begun
Cooler #5 Temp.°C	____ (Visual)	____ (Correction Factor)	____ (Actual)	☐ Samples on ice, cooling process has begun
Cooler #6 Temp.°C	____ (Visual)	____ (Correction Factor)	____ (Actual)	☐ Samples on ice, cooling process has begun

Courier: ☐ Fed Ex ☑ UPS ☐ USPS ☐ Client ☐ Commercial ☐ Pace ☐ Other ____

Shipping Method: ☐ First Overnight ☐ Priority Overnight ☐ Standard Overnight ☐ Ground ☐ International Priority ☐ Other ____

Billing: ☐ Recipient ☐ Sender ☐ Third Party ☐ Credit Card ☑ Unknown

Tracking # ____

Custody Seal on Cooler/Box Present: ☐ Yes ☑ No **Seals intact:** ☐ Yes ☐ No **Ice:** (Wet) Blue Dry None

Packing Material: ☑ Bubble Wrap ☑ Bubble Bags ☐ None ☐ Other ____

Samples shorted to lab (if Yes, complete) Shorted Date: ____ Shorted Time: ____ Qty: ____

		Comments:
Chain of Custody Present	☑ Yes ☐ No ☐ N/A	
Chain of Custody Filled Out	☑ Yes ☐ No ☐ N/A	
Relinquished Signature & Sampler Name COC	☑ Yes ☐ No ☐ N/A	
Samples Arrived within Hold Time	☑ Yes ☐ No ☐ N/A	
Rush TAT requested on COC	☐ Yes ☑ No ☐ N/A	
Sufficient Volume	☑ Yes ☐ No ☐ N/A	
Correct Containers Used	☑ Yes ☐ No ☐ N/A	
Containers Intact	☑ Yes ☐ No ☐ N/A	
Sample Labels match COC (sample IDs & date/time of collection)	☑ Yes ☐ No ☐ N/A	
All containers needing acid/base preservation have been checked.	☑ Yes ☐ No ☐ N/A	BRW 5/21 Preservation Information: Preservative: ____ Lot #/Trace #: ____ Date: ____ Time: ____ Initials: ____
All Containers needing preservation are found to be in compliance with EPA recommendation: Exceptions: VOA, Coliform, TOC, O&G, Carbamates	☑ Yes ☐ No ☐ N/A	
Headspace in VOA Vials? (>6mm):	☐ Yes ☐ No ☑ N/A	
Trip Blank Present:	☐ Yes ☐ No ☑ N/A	

Client Notification/ Resolution:
Person Contacted: ____ Date/Time: ____

Comments/ Resolution (use back for additional comments): Received 508.1 AGIG also missing 505 vials.

Project Manager Review: ____ Date: ____

PHOENIX
Environmental Laboratories, Inc.

Tuesday, May 25, 2021

Attn: Front Office
Eastern Analytical
25 Chenell Drive
Concord, NH 03301

Project ID: 226532
SDG ID: GCI36575
Sample ID#s: CI36575

This laboratory is in compliance with the NELAC requirements of procedures used except where indicated.

This report contains results for the parameters tested, under the sampling conditions described on the Chain Of Custody, as received by the laboratory. This report is incomplete unless all pages indicated in the pagination at the bottom of the page are included.

A scanned version of the COC form accompanies the analytical report and is an exact duplicate of the original.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200. The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Sincerely yours,

Phyllis Shiller

Phyllis Shiller
Laboratory Director

NELAC - #NY11301
CT Lab Registration #PH-0618
MA Lab Registration #M-CT007
ME Lab Registration #CT-007
NH Lab Registration #213693-A,B
NJ Lab Registration #CT-003
NY Lab Registration #11301
PA Lab Registration #68-03530
RI Lab Registration #63
UT Lab Registration #CT00007
VT Lab Registration #VT11301

587 East Middle Turnpike, P.O. Box 370, Manchester, CT 06040
Telephone (860) 645-1102 Fax (860) 645-0823

PHOENIX
Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

Sample Id Cross Reference

May 25, 2021

SDG I.D.: GCI36575

Project ID: 226532

Client Id	Lab Id	Matrix
WELL B	CI36575	WATER

PHOENIX

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

Analysis Report

May 25, 2021

FOR: Attn: Front Office
Eastern Analytical
25 Chenell Drive
Concord, NH 03301

Sample Information		Custody Information		Date	Time
Matrix:	WATER	Collected by:		05/19/21	15:00
Location Code:	EASTANAL-NH	Received by:	SW	05/21/21	11:08
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	54975				

Laboratory Data

SDG ID: GCI36575
Phoenix ID: CI36575

Project ID: 226532
Client ID: WELL B

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
MBAS	< 0.05	0.05	mg/L	1	05/21/21 12:19	EG/MW	SM5540 C-11

RL/PQL=Reporting/Practical Quantitation Level (Equivalent to NELAC LOQ, Limit of Quantitation) ND=Not Detected at RL/PQL
BRL=Below Reporting Level L=Biased Low

Comments:

The LAS standard used for the MBAS analysis has a molecular weight of 342 g/mol.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Phyllis Shiller

Phyllis Shiller, Laboratory Director
May 25, 2021
Reviewed and Released by: Kathleen Cressia, QA/QC Officer

PHOENIX
Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

QA/QC Report

May 25, 2021

QA/QC Data

SDG I.D.: GCI36575

Parameter	Blank	Blk RL	Sample Result	Dup Result	Dup RPD	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
QA/QC Batch 576506 (mg/L), QC Sample No: CI36932 (CI36575)													
MBAS	BRL	0.05	<0.05	<0.05	NC	102			104			85 - 115	20

Comment:

Additional criteria matrix spike acceptance range is 75-125%.

If there are any questions regarding this data, please call Phoenix Client Services at extension 200.

RPD - Relative Percent Difference
LCS - Laboratory Control Sample
LCSD - Laboratory Control Sample Duplicate
MS - Matrix Spike
MS Dup - Matrix Spike Duplicate
NC - No Criteria
Intf - Interference

Phyllis Shiller, Laboratory Director
May 25, 2021

Tuesday, May 25, 2021

Criteria: None

State: NH

Sample Criteria Exceedances Report

GCI36575 - EASTANAL-NH

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
*** No Data to Display ***								

Phoenix Laboratories does not assume responsibility for the data contained in this exceedance report. It is provided as an additional tool to identify requested criteria exceedences. All efforts are made to ensure the accuracy of the data (obtained from appropriate agencies). A lack of exceedence information does not necessarily suggest conformance to the criteria. It is ultimately the site professional's responsibility to determine appropriate compliance.

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PHOENIX

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac
NY # 11301

Analysis Comments

May 25, 2021 SDG I.D.: GCI36575

The following analysis comments are made regarding exceptions to criteria not already noted in the Analysis Report or QA/QC Report: None.

CHAIN-OF-CUSTODY RECORD

13.0° WC ice melted

Eastern Analytical, Inc.
professional laboratory and drilling services

EAI ID# 226532

Page 1

Sample ID	Date Sampled	Matrix	aParameters	Sample Notes
Well B	5/19/2021 15:00	aqueous	Subcontract - Surfactants / MBAS Method SM5540C	36575

Rcvd - 1 500ml plastic

EAI ID# 226532 Project State: NH

Project ID:

Company Phoenix Environmental Labs
Address 587 East Middle Turnpike
Address Manchester , CT 06040
Account #
Phone # (860) 645-1102

Results Needed: Preferred Date: Standard

RUSH Due Date: _____

QC Deliverables

☐ A ☐ A+ ☒ B ☐ B+ ☐ C ☐ MA MCP

Notes about project:

Email login confirmation, pdf of results and invoice to customerservice@easternanalytical.com.

PO #:54975 EAI ID# 226532

Data Deliverable (circle)

Excel NH EMD EQuIS ME EGAD

Call prior to analyzing, if RUSH charges will be applied.

Samples Collected by: _____

Relinquished by	Date/Time	Received by
[illegible]	5/20/21	1600 UPS
UPS [illegible]	5/21/21	11:08

Eastern Analytical, Inc. 25 Chenell Dr. Concord, NH 03301 Phone: (603)228-0525 1-800-287-0525 customerservice@easternanalytical.com

June 02, 2021

Vista Work Order No. 2105197

Ms. Jennifer Laramie
Eastern Analytical, Inc.
25 Chennell Drive
Concord, NH 03301

Dear Ms. Laramie,

Enclosed are the results for the sample set received at Vista Analytical Laboratory on May 21, 2021 under your Project Name '226532 NH'.

Vista Analytical Laboratory is committed to serving you effectively. If you require additional information, please contact me at 916-673-1520 or by email at mmaier@vista-analytical.com.

Thank you for choosing Vista as part of your analytical support team.

Sincerely,

for

Martha Maier
Laboratory Director

Vista Analytical Laboratory certifies that the report herein meets all the requirements set forth by NELAP for those applicable test methods. Results relate only to the samples as received by the laboratory. This report should not be reproduced except in full without the written approval of Vista.

Vista Analytical Laboratory 1104 Windfield Way El Dorado Hills, CA 95762 ph: 916-673-1520 fx: 916-673-0106 www.vista-analytical.com

Vista Work Order No. 2105197
Case Narrative

Sample Condition on Receipt:

One aqueous sample was received and stored securely in accordance with Vista standard operating procedures and EPA methodology. The sample was received in good condition and within the method temperature requirements.

Analytical Notes:

EPA Method 537.1

The sample was extracted and analyzed for a selected list of four analytes using EPA Method 537.1. The results for PFHxS, PFOA and PFOS include both linear and branched isomers. The result for PFNA includes the linear isomer only.

Holding Times

The sample was extracted and analyzed within the method hold times.

Quality Control

The Initial Calibration and Continuing Calibration Verifications met the acceptance criteria.

Two Laboratory Fortified Blanks (LFB/LFBD) and a Laboratory Reagent Blank (LRB) were extracted and analyzed with the preparation batch. No analytes were detected in the LRB above the method required limits. The LFB/LFBD recoveries were within the method acceptance criteria. The preservative added to the LRB, LFB and LFBD was from a different lot than was used in the field samples. The sample preservative lot was previously shown to have no detectable analytes.

The surrogate recoveries for all QC and field samples were within the acceptance criteria.

TABLE OF CONTENTS

Sample Inventory Report

Vista Sample ID	Client Sample ID	Sampled	Received	Components/Containers
2105197-01	Well B	19-May-21 15:00	21-May-21 10:02	Polypropylene, 250mL Polypropylene, 250mL

ANALYTICAL RESULTS

Sample ID: LRB

EPA Method 537.1

Client Data

Name: Eastern Analytical, Inc.
Matrix: Aqueous
Project: 226532 NH

Laboratory Data

Lab Sample: B1E0181-BLK1
Column: BEH C18

Analyte	CAS Number	Conc. (ng/L)	NH MCL	RL	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFHxS	355-46-4	ND	18	2.00		B1E0181	22-May-21	0.250 L	24-May-21 11:22	1
PFOA	335-67-1	ND	12	2.00		B1E0181	22-May-21	0.250 L	24-May-21 11:22	1
PFNA	375-95-1	ND	11	2.00		B1E0181	22-May-21	0.250 L	24-May-21 11:22	1
PFOS	1763-23-1	ND	15	2.00		B1E0181	22-May-21	0.250 L	24-May-21 11:22	1

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C2-PFHxA	SURR	112	70 - 130		B1E0181	22-May-21	0.250 L	24-May-21 11:22	1
13C2-PFDA	SURR	86.4	70 - 130		B1E0181	22-May-21	0.250 L	24-May-21 11:22	1

RL - Reporting limit

Results reported to RL.

When reported, PFHxS, PFOA, PFOS, MeFOSAA and EtFOSAA include both linear and branched isomers. Only the linear isomer is reported for all other analytes.

Sample ID: LFBD **EPA Method 537.1**

Name:	Eastern Analytical, Inc.	Lab Sample:	B1E0181-BS1/B1E0181-BSD1		
Project:	226532 NH	QC Batch:	B1E0181	Date Extracted:	22-May-21
Matrix:	Aqueous	Samp Size:	0.250/0.250 L	Column:	BEH C18

Analyte	CAS Number	LFB (ng/L)	LFB Spike	LFB % Rec	LFB Quals	LFBD (ng/L)	LFBD Spike	LFBD % Rec	RPD	LFBD Quals	%Rec Limits	RPD Limits	LFB Analyzed	LFB Dil	LFBD Analyzed	LFBD Dil
PFHxS	355-46-4	37.7	36.4	104		37.9	36.4	104	0.510		70-130	30	24-May-21 11:33	1	24-May-21 11:44	1
PFOA	335-67-1	44.4	40.0	111		41.9	40.0	105	5.74		70-130	30	24-May-21 11:33	1	24-May-21 11:44	1
PFNA	375-95-1	40.0	40.0	100		37.7	40.0	94.2	6.11		70-130	30	24-May-21 11:33	1	24-May-21 11:44	1
PFOS	1763-23-1	38.7	37.0	105		38.9	37.0	105	0.332		70-130	30	24-May-21 11:33	1	24-May-21 11:44	1

Labeled Standards	Type	LFB % Rec	LFB Quals	LFBD % Rec	LFBD Quals	Limits	LFB Analyzed	LFB Dil	LFBD Analyzed	LFBD Dil
13C2-PFHxA	SURR	113		112		70 - 130	24-May-21 11:33	1	24-May-21 11:44	1
13C2-PFDA	SURR	89.3		84.5		70 - 130	24-May-21 11:33	1	24-May-21 11:44	1

Sample ID: Well B

EPA Method 537.1

Client Data

Name: Eastern Analytical, Inc.
Project: 226532 NH
Location: 226532
Matrix: Aqueous
Date Collected: 19-May-21 15:00

Laboratory Data

Lab Sample: 2105197-01
Date Received: 21-May-21 10:02
Column: BEH C18

Analyte	CAS Number	Conc. (ng/L)	NH MCL	RL	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFHxS	355-46-4	ND	18	2.07		B1E0181	22-May-21	0.241 L	24-May-21 13:03	1
PFOA	335-67-1	ND	12	2.07		B1E0181	22-May-21	0.241 L	24-May-21 13:03	1
PFNA	375-95-1	ND	11	2.07		B1E0181	22-May-21	0.241 L	24-May-21 13:03	1
PFOS	1763-23-1	ND	15	2.07		B1E0181	22-May-21	0.241 L	24-May-21 13:03	1

Labeled Standards	Type	% Recovery	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C2-PFHxA	SURR	108	70 - 130		B1E0181	22-May-21	0.241 L	24-May-21 13:03	1
13C2-PFDA	SURR	85.7	70 - 130		B1E0181	22-May-21	0.241 L	24-May-21 13:03	1

RL - Reporting limit

Results reported to RL.

When reported, PFHxS, PFOA, PFOS, MeFOSAA and EtFOSAA include both linear and branched isomers. Only the linear isomer is reported for all other analytes.

DATA QUALIFIERS & ABBREVIATIONS

B	This compound was also detected in the method blank
Conc.	Concentration
CRS	Cleanup Recovery Standard
D	Dilution
DL	Detection Limit
E	The associated compound concentration exceeded the calibration range of the instrument
H	Recovery and/or RPD was outside laboratory acceptance limits
I	Chemical Interference
IS	Internal Standard
J	The amount detected is below the Reporting Limit/LOQ
LOD	Limit of Detection
LOQ	Limit of Quantitation
M	Estimated Maximum Possible Concentration (CA Region 2 projects only)
MDL	Method Detection Limit
NA	Not applicable
ND	Not Detected
OPR	Ongoing Precision and Recovery sample
P	The reported concentration may include contribution from chlorinated diphenyl ether(s).
Q	The ion transition ratio is outside of the acceptance criteria.
RL	Reporting Limit
RL	For 537.1, the reported RLs are the MRLs.
TEQ	Toxic Equivalency, sum of the toxic equivalency factors (TEF) multiplied by the sample concentrations.
TEQMax	TEQ calculation that uses the detection limit as the concentration for non-detects
TEQMin	TEQ calculation that uses zero as the concentration for non-detects
TEQRisk	TEQ calculation that uses ½ the detection limit as the concentration for non-detects
U	Not Detected (specific projects only)
*	See Cover Letter

Unless otherwise noted, solid sample results are reported in dry weight. Tissue samples are reported in wet weight.

Vista Analytical Laboratory Certifications

Accrediting Authority	Certificate Number
Alaska Department of Environmental Conservation	17-013
Arkansas Department of Environmental Quality	21-023-0
California Department of Health – ELAP	2892
DoD ELAP - A2LA Accredited - ISO/IEC 17025:2005	3091.01
Florida Department of Health	E87777-26
Hawaii Department of Health	N/A
Louisiana Department of Environmental Quality	01977
Maine Department of Health	2020018
Massachusetts Department of Environmental Protection	M-CA413
Michigan Department of Environmental Quality	9932
Minnesota Department of Health	1980678
New Hampshire Environmental Accreditation Program	207720
New Jersey Department of Environmental Protection	CA003
New York Department of Health	11411
Ohio Environmental Protection Agency	87778
Oregon Laboratory Accreditation Program	4042-016
Pennsylvania Department of Environmental Protection	017
Texas Commission on Environmental Quality	T104704189-21-12
Vermont Department of Health	VT-4042
Virginia Department of General Services	10769
Washington Department of Ecology	C584
Wisconsin Department of Natural Resources	998036160

Current certificates and lists of licensed parameters are located in the Quality Assurance office and are available upon request.

NELAP Accredited Test Methods

MATRIX: Air	
Description of Test	**Method**
Determination of Polychlorinated p- Dioxins & Polychlorinated Dibenzofurans	EPA 23
Polychlorinated Dibenzodioxins in Ambient Air by GC/HRMS	EPA TO-9A

MATRIX: Biological Tissue	
Description of Test	**Method**
Tetra- through Octa-Chlorinated Dioxins and Furans by Isotope Dilution GC/HRMS	EPA 1613B
Brominated Diphenyl Ethers by HRGC/HRMS	EPA 1614A
Chlorinated Biphenyl Congeners in Water, Soil, Sediment, and Tissue by GC/HRMS	EPA 1668A/C
Pesticides in Water, Soil, Sediment, Biosolids, and Tissue by HRGC/HRMS	EPA 1699
Perfluorinated Alkyl Acids in Drinking Water by SPE and LC/MS/MS	EPA 537
Polychlorinated Dibenzo-p-Dioxins and Polychlorinated Dibenzofurans by GC/HRMS	EPA 8280A/B
Polychlorinated Dibenzodioxins (PCDDs) and Polychlorinated Dibenzofurans (PCDFs) by GC/HRMS	EPA 8290/8290A

MATRIX: Drinking Water	
Description of Test	**Method**
Tetra- through Octa-Chlorinated Dioxins and Furans by Isotope Dilution GC/HRMS	EPA 1613/1613B
Perfluorinated Alkyl Acids in Drinking Water by SPE and LC/MS/MS	EPA 537
Perfluorinated Alkyl Acids in Drinking Water by SPE and LC/MS/MS	EPA 537.1
Determination of Per- and Polyfluoroalkyl Substances in Drinking Water by Isotope Dilution Anion Exchange Solid Phase Extraction and Liquid Chromatography/Tandem Mass Spectrometry	EPA 533
Perfluorooctanesulonate (PFOS) and Perfluorooctanoate (PFOA) - Method for Unfiltered Samples Using Solid Phase Extraction and Liquid Chromatography/Mass Spectrometry	ISO 25101 2009

MATRIX: Non-Potable Water	
Description of Test	**Method**
Tetra- through Octa-Chlorinated Dioxins and Furans by Isotope Dilution GC/HRMS	EPA 1613B
Brominated Diphenyl Ethers by HRGC/HRMS	EPA 1614A
Chlorinated Biphenyl Congeners in Water, Soil, Sediment, and Tissue by GC/HRMS	EPA 1668A/C
Pesticides in Water, Soil, Sediment, Biosolids, and Tissue by HRGC/HRMS	EPA 1699
Perfluorinated Alkyl Acids in Drinking Water by SPE and LC/MS/MS	EPA 537
Dioxin by GC/HRMS	EPA 613
Polychlorinated Dibenzo-p-Dioxins and Polychlorinated Dibenzofurans by GC/HRMS	EPA 8280A/B
Polychlorinated Dibenzodioxins (PCDDs) and Polychlorinated Dibenzofurans (PCDFs) by GC/HRMS	EPA 8290/8290A

MATRIX: Solids	
Description of Test	**Method**
Tetra-Octa Chlorinated Dioxins and Furans by Isotope Dilution GC/HRMS	EPA 1613
Tetra- through Octa-Chlorinated Dioxins and Furans by Isotope Dilution GC/HRMS	EPA 1613B
Brominated Diphenyl Ethers by HRGC/HRMS	EPA 1614A
Chlorinated Biphenyl Congeners in Water, Soil, Sediment, and Tissue by GC/HRMS	EPA 1668A/C
Pesticides in Water, Soil, Sediment, Biosolids, and Tissue by HRGC/HRMS	EPA 1699
Perfluorinated Alkyl Acids in Drinking Water by SPE and LC/MS/MS	EPA 537
Polychlorinated Dibenzo-p-Dioxins and Polychlorinated Dibenzofurans by GC/HRMS	EPA 8280A/B
Polychlorinated Dibenzodioxins (PCDDs) and Polychlorinated Dibenzofurans (PCDFs) by GC/HRMS	EPA 8290/8290A

CHAIN-OF-CUSTODY RECORD

Eastern Analytical, Inc.
professional laboratory and drilling services

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2105197 1.0°C

EAI ID# 226532 Page 1

Sample ID	Date Sampled	Matrix	aParameters	Sample Notes
Well B	5/19/2021 15:00	aqueous	Subcontract - PFAS EPA Method 537.1 (4 Compounds)	

EAI ID# 226532 **Project State: NH**

Project ID:

Company Vista Analytical Laboratory
Address 1104 Windfield Way
Address El Dorado Hills, CA 95762
Account #
Phone # (916) 673-1520

Results Needed: Preferred Date: Standard
RUSH Due Date: _____

QC Deliverables
☐ A ☐ A+ ☒ B ☐ B+ ☐ C ☐ MA MCP

Notes about project:
Email login confirmation, pdf of results and invoice to customerservice@easternanalytical.com.

PO #: 54978 **EAI ID# 226532**

Data Deliverable (circle)
Excel NH EMD EQuIS ME EGAD

Call prior to analyzing, if RUSH charges will be applied.

Samples Collected by: _____

Relinquished by	Date/Time	Received by
	5/20/21 1600	UPS
UPS	05/21/21 1002	

Relinquished by	Date/Time	Received by

Eastern Analytical, Inc. 25 Chenell Dr. Concord, NH 03301 Phone: (603)228-0525 1-800-287-0525 customerservice@easternanalytical.com

As a subcontract lab to EAI, you will defend, indemnify and hold Eastern Analytical, Inc., its officers, employees, and agents harmless from and against any and all liability, loss, expense or claims for injury or damages arising out of the performance against this chain of custody but only in proportion to and to the extent such liability, loss, expense, or claims for injury or damages are caused by or result from the negligent or intentional acts or omissions of you as a subcontract lab, your officers, agents or employees

Vista Analytical Laboratory

Sample Log-In Checklist

Page # 1 of 1

Vista Work Order #: 2105197 TAT 14

Samples Arrival:	**Date/Time** 05/21/21 1002		**Initials:** WWS		**Location:** WR-2 **Shelf/Rack:** N/8		
Delivered By:	FedEx	UPS	On Trac	GLS	DHL	Hand Delivered	Other
Preservation:	Ice		Blue Ice		Techni Ice	Dry Ice	None
Temp °C: 1.1 (uncorrected)	**Probe used:** Y / N				**Thermometer ID:** IR-4		
Temp °C: 1.0 (corrected)							

					YES	NO	NA
Shipping Container(s) Intact?					✓		
Shipping Custody Seals Intact?							✓
Airbill —	Trk # 1Z X46 599 01 9204 4721				✓		
Shipping Documentation Present?					✓		
Shipping Container	Vista	Client	Retain	Return	Dispose		
Chain of Custody / Sample Documentation Present?					✓		
Chain of Custody / Sample Documentation Complete?					✓		
Holding Time Acceptable?					✓		

Logged In:	**Date/Time** 05/21/21 1048	**Initials:** WWS	**Location:** R-13, WR-2 **Shelf/Rack:** 8-4, C-7
COC Anomaly/Sample Acceptance Form completed?			✓ ✓

Comments:

ID.: LR – SLC *Rev No.: 6* *Rev Date: 07/16/2020* *Page: 1 of 1*

CoC/Label Reconciliation Report WO# 2105197

LabNumber	CoC Sample ID		SampleAlias	Sample Date/Time		Container	BaseMatrix	Sample Comments
2105197-01	A Well B	☑	226532	19-May-21 15:00	☑	Polypropylene, 250mL	Aqueous	
2105197-01	B Well B	☑	226532	19-May-21 15:00	☑	Polypropylene, 250mL	Aqueous	

Checkmarks indicate that information on the COC reconciled with the sample label.
Any discrepancies are noted in the following columns.

	Yes	No	NA
Sample Container Intact?	✓		
Sample Custody Seals Intact?			✓
Adequate Sample Volume?	✓		
Container Type Appropriate for Analysis(es)	✓		

Comments: handwritten "T2" on cap
light brown tint

Preservation Documented: Na2S2O3 (Trizma) NH4CH3CO2 None Other

Verifed by/Date: MWS 05/21/21

CHAIN-OF-CUSTODY RECORD

226532

GEMInh

97

Sample IDs	Date/Time *Composites need start and stop dates/times*	Matrix	Parameters and Sample Notes	# of containers
~~New Well~~ WELL B *	5/19/2021 15:00	aqueous Grab or Comp	AqTot/pH/S2/TDS/Color/Odor/CyanFree/NO3/NO2/SO4/AlkT/LangelierCorrosivity/ICPMets.Ca.Fe.Na. HardTot/V524/DIOX/HAA/Dalapon/CARB/E504/E505/HERB/E525/GlyphosateDWSubSALI/DiquatDWSubSALI/SurfactantsMBASSubPEL/Radon/AdjGrossAlpha/GrossAlphaBetaSubKNL/Rad226Rad228ComboSubKNL/EndothallDWSubSALI/DioxinTCDDWWSubALSTX/PCBsDWSubSALI/PFCsSubVAL/AsbestosDWSubEMSL/Bromate300SubSALI/Chlorite300SubSALI DWTot/ICPMets.Al.Sb.As.Ba.Be.Cd.Cr.Cu.Pb.Mn.Hg.Ni.Se.Ag.Tl.U.Zn/Cl/F	many
☑ Sampler confirms ID and parameters are accurate			*Circle preservative/s:* HCL HNO_3 H_2SO_4 NaOH MEOH $Na_2S_2O_3$ ICE	Dissolved Sample Field Filtered ☐
Trip Blanks	10/27/2020 (1) 5/13/21 @ 17:00 (2) 5/5/21 @ 17:10 (2)	aqueous Grab or Comp	AqTot/V524/DIOX/E504	5
☑ Sampler confirms ID and parameters are accurate			*Circle preservative/s:* HCL HNO_3 H_2SO_4 NaOH MEOH $Na_2S_2O_3$ ICE	Dissolved Sample Field Filtered ☐

Please ensure this auto COC is accurate, adheres to permit or sampling requirements for this sampling event, and modify as necessary.

EAI Project ID

Project Name New Public Water Supply Well Seabrook Well 2

State NH

Client (Pro Mgr) ~~David Niemeyer~~ Matt Krapf

Customer Geosphere Environmental

Address 51 Portsmouth Avenue

City Exeter NH 03833

Phone 773-0075 **Fax** 773-0077(14)

Email: ~~dniemeyer@geospherenh.com~~ mkrapf@geospherenh.com

Direct 773-0075 ~~x22~~ x17

Results Needed by: Preferred date Std T/A

Notes:

For PFAS, please analyze for 4 NH Regulated compounds

* per Containers

QC deliverables

☐ A ☐ A+ ☒ B ☐ B+ ☐ C ☐ MA MCP

ReportingOptions

☒ HC
☒ EDD PDF
☒ EDD email
☒ PDF prelim, NO FAX
☒ e-mail Login Confirmation

☐ NO FAX
☐ Partial FAX
☐ PDF Invoice
☐ EQUIS

PO# Verbal

Quote#:

Temp 2.1 °C

Ice Y ☐ N ☐

Samples Collected by: Shawn Case / Samy Tshiteu

Relinquished by	Date/Time	Received by
S Case	5/20/21 10:30	Eric Halvorson
Eric Halvorson	5-20-21 14:30	
Relinquished by	**Date/Time**	**Received by**
	5/21/21	

Appendix J

Sample of Residential Outreach Letter and Questionnaire

Seabrook Water Department

550 Route 107 ~ PO Box 456, Seabrook, NH 03874
Phone: (603) 474-9921 Fax: (603) 474-3399
www.seabrooknh.info

January 12, 2022

Dear Well Owner:

Seabrook Water Department (SWD) will be conducting an aquifer pumping test for two (2) new public water supply wells in the near future and is requesting your permission to access your private well in order to monitor groundwater levels. SWD is seeking to obtain a new Large Groundwater Withdrawal Permit from the State of New Hampshire Department of Environmental Services (NHDES) per current regulations under RSA 485:3 and 485-C. These new public water supply wells are needed to support continued growth in Seabrook and to continue to meet existing customer water service demands and expectations.

You are not required by NHDES to provide SWD with information about your well, or to grant permission to access your well in order to collect groundwater level measurements. However, our ability to monitor your well during this pumping test will provide important information to NHDES to determine a sustainable pumping rate for the new public water supply well that does not adversely impact your groundwater supply.

If you choose to participate, our consultant, Geosphere Environmental Management, Inc. (GEOSPHERE), will perform data collection. Groundwater level measurements in your well will be collected by temporarily installing a small, automated groundwater level recording device in your well. The recording device will be left in the well for four to six weeks, to measure groundwater levels before, during, and after the pumping test. There will be no cost to you for any monitoring or testing of your well, and we will provide you with the groundwater level monitoring results if requested.

We have included with this letter a Water Well Questionnaire that will provide information on your well to help assess any potential impacts on your well from the pumping test. Please complete it and return it to GEOSPHERE in the enclosed self-addressed stamped envelope. If you are "Not Interested" or have "No Well", please annotate the questionnaire as such, and return it so that we can accurately document your response.

Should you like more information regarding the State's Large Groundwater Withdrawal regulations, or information pertaining directly to SWD's proposed Large Groundwater Withdrawal, please contact Andrew Koff at NHDES, (603) 271-3918 or andrew.koff@des.nh.gov or Ray Talkington at GEOSPHERE, (603) 773-0075 ext. 11 or rtalkington@geospherenh.com.

Please give strong consideration to participating in this request. The best way to ensure that there will be no long term adverse impacts on your well is to get this monitoring data during the pumping test. If you have any questions or comments, please contact me at (603) 474-9921 or cslayton@seabrooknh.org

Sincerely,
Seabrook Water Department

Signature

Curtis Slayton, Water Superintendent

Attachments: Well Questionnaire Form

WATER WELL QUESTIONNAIRE

Seabrook Water Department is proposing to develop two (2) new groundwater sources of supply on Weare Rd. near Amy Drive. We are in the process of identifying private well water users in the vicinity of the proposed withdrawal for the purpose of monitoring wells during the upcoming pumping test planned for these two wells (Date TBD). **Seabrook Water Department** is seeking your permission to monitor water levels in your well during the pumping tests in order to evaluate and understand aquifer dynamics and identify any impacts that may potentially occur to your well.

Please complete the following questionnaire by first indicating your willingness and permission to have your well monitored. Following that, please complete the remainder of the questionnaire **the best of your knowledge** to assist us in better understanding your well.

May **Seabrook Water Department** use your well to monitor water levels during the pumping test? YES or NO

Name _____ Telephone No _____

Address _____ Tax Map _____ Lot No _____

Email _____ Do you grant permission to be contacted via text message? YES or NO

Is your well used for DOMESTIC or AGRICULTURAL/IRRIGATION purposes? _____

If AGRICULTURAL/IRRIGATION, are there times that the well is not used? When? _____

What year did you purchase your home? _____ Number of residents in the house _____

Date Installed _____ Well Depth _____ Ft. Well Diameter _____In. Casing Depth _____Ft.

Well Type (bedrock, dug, driven point) _____ Well Driller _____

Estimated Yield (gallons per minute) _____ Estimated Water Depth _____ft Pump Size _____HP

Pump Depth _____ Ft. Pump Age _____yrs Estimated Depth to Bedrock _____ Ft.

Do you have more than one (1) well on the property? YES or NO. If so, what type of well? _____

List any water treatment equipment _____

Describe any water shortage problems with the well; when and why _____

_____

Describe any water quality problems; when and why _____

_____

Describe the most recent maintenance performed on your well or pump _____

_____

Additional comments or known problems with your well _____

_____

Signature: _____ Date: _____

Your participation in the questionnaire is not mandatory. If you wish to participate, please return the completed form in the enclosed self-addressed stamped envelope to:

Geosphere Environmental Management, Inc.
51 Portsmouth Avenue
Exeter, NH 03833

If you have any questions, please contact either:
Curtis Slayton of the Seabrook Water Department at 603-474-9921, cslayton@seabrooknh.org, or
Ray Talkington of Geosphere at 603-773-0075 x17, rtalkington@geospherenh.com

Appendix K

DES Database Wells within WHPA

All Wells Within 1000 Feet of Potential Impact Area
Weare Road Seabrook, NH

WRB_NUMBER	TYPE	USE	LATITUDE	LONGITUDE	NAME	ADDRESS	TOWN	MAP	LOT
106.0383	BEDROCK	AGRICULTURAL	42.91643333	-70.86476667	TOWN OF HAMPTON FALLS	THE COMMONS RTE 1 & RTE 88	HAMPTON FALLS	8	88
214.005	BEDROCK	AGRICULTURAL	42.9004752	-70.8813686	T VORIAS XALOY CO	72 STARD RD	SEABROOK	4	19-1
214.0074	BEDROCK	AGRICULTURAL	42.88846185	-70.90342823	M. LIND	30 RILEY RD	SEABROOK	3	14
214.0075	BEDROCK	AGRICULTURAL	42.8927182	-70.91077654	J. LOSI	75 TRUE RD	SEABROOK	2	46
106.0005	BEDROCK	DOMESTIC	42.905808	-70.865405	K PELTON	19 LAFAYETTE RD	HAMPTON FALLS		
106.0006	BEDROCK	DOMESTIC	42.91414337	-70.86497141	T MARSTON	95 LAFAYETTE RD	HAMPTON FALLS	8	64
106.0007	BEDROCK	DOMESTIC	42.91689005	-70.86336823	T PRETTY	101 LAFAYETTE RD	HAMPTON FALLS	8	63
106.0021	BEDROCK	DOMESTIC	42.90942635	-70.89499058	ALLEN	134 RTE 84	HAMPTON FALLS	1	17-2
106.0024	BEDROCK	DOMESTIC	42.9099769	-70.8940196	RASPBERRY FARM	KENSINGTON RD	HAMPTON FALLS		
106.0045	BEDROCK	DOMESTIC	42.92018537	-70.88617445	LAGO	7 CRANK RD	HAMPTON FALLS	1	72
106.0055	BEDROCK	DOMESTIC	42.9067728	-70.8652244	J DODGE	116 LAFAYETTE RD	HAMPTON FALLS	8	50
106.007	BEDROCK	DOMESTIC	42.9159366	-70.88996621	GRADY	GOODWIN RD	HAMPTON FALLS		
106.0073	BEDROCK	DOMESTIC	42.91601455	-70.86048747	T MONROE	16 COACH LN	HAMPTON FALLS	8	83-1
106.0074	BEDROCK	COMMERCIAL	42.91768186	-70.86274294	R BRAGGER	105 LAFAYETTE RD	HAMPTON FALLS	8	62
106.0075	BEDROCK	DOMESTIC	42.91561818	-70.8901498	KENNON	7 GOODWIN RD	HAMPTON FALLS	1	83-4
106.0076	BEDROCK	DOMESTIC	42.91811785	-70.88992055	KARPIAK	25 CRANK RD	HAMPTON FALLS	1	67-2
106.0084	BEDROCK	DOMESTIC	42.91700642	-70.85947725	C BONSON	30 COACH LN	HAMPTON FALLS	8	83-5
106.0093	BEDROCK	DOMESTIC	42.9164127	-70.865145	R & M LILLY	EXETER RD	HAMPTON FALLS	5	22
106.0094	BEDROCK	DOMESTIC	42.90827824	-70.85582255	T HAM	38 BRIMMER LN	HAMPTON FALLS	2	143
106.0112	BEDROCK	COMMERCIAL	42.9067728	-70.8652244	R MORELLI	LAFAYETTE RD	HAMPTON FALLS		
106.0115	BEDROCK	DOMESTIC	42.91400053	-70.86519325	P MOORES JR	74 LAFAYETTE RD	HAMPTON FALLS	8	94
106.0136	BEDROCK	DOMESTIC	42.90959788	-70.8914161	ALLEN	124 KENSINGTON RD	HAMPTON FALLS	1	17-1
106.0148	BEDROCK	DOMESTIC	42.92043117	-70.87844522	FORNIER	17 DRINKWATER RD	HAMPTON FALLS	2	68
106.0153	BEDROCK	DOMESTIC	42.91352553	-70.8594991	R DAWES	33 DEPOT RD	HAMPTON FALLS	8	84-3
106.0154	BEDROCK	DOMESTIC	42.912989	-70.858532	D WITHAM	DEPOT RD	HAMPTON FALLS	8	84-12
106.0155	BEDROCK	DOMESTIC	42.91639403	-70.89598228	ONEIL	45 CRANK RD	HAMPTON FALLS	1	62
106.0159	BEDROCK	DOMESTIC	42.92458545	-70.88275303	BAGLIN	COBURN WOODS RD	HAMPTON FALLS	4	73-5
106.016	BEDROCK	DOMESTIC	42.9230753	-70.8831062	D COE	PARSONAGE RD	HAMPTON FALLS		
106.017	BEDROCK	DOMESTIC	42.91396554	-70.8662808	H HALLER	9 KENSINGTON RD	HAMPTON FALLS	8	20
106.0176	BEDROCK	DOMESTIC	42.92426481	-70.8838921	RICHARD WHITNEY BLDR	5 COBURN WOODS RD	HAMPTON FALLS	4	73-8
106.0184	BEDROCK	DOMESTIC	42.9138436	-70.8894314	O COTE	GOODWIN RD	HAMPTON FALLS		
106.0185	BEDROCK	DOMESTIC	42.9067728	-70.8652244	L ELIAS	123 LAFAYETTE RD	HAMPTON FALLS	8	59
106.0187	BEDROCK	DOMESTIC	42.90833278	-70.85730948	M PERKINS	32 BRIMMER LN	HAMPTON FALLS	7	60-2
106.0191	BEDROCK	DOMESTIC	42.90962063	-70.88475678	TONRY	104 KENSINGTON RD	HAMPTON FALLS	1	8
106.0193	BEDROCK	DOMESTIC	42.92087897	-70.91103647	J MCINNIS	227 KENSINGTON RD	HAMPTON FALLS	1	50
106.0195	BEDROCK	DOMESTIC	42.92313298	-70.88376828	DPW BLDG CONTR	2 COBURN WOODS RD	HAMPTON FALLS	4	73-12
106.0197	BEDROCK	DOMESTIC	42.91622888	-70.87670694	BENOIT DEVEL	26 ALEXIS LN	HAMPTON FALLS	2	45042
106.0198	BEDROCK	DOMESTIC	42.91709467	-70.87481814	BENOIT DEVEL	4 WHITTIER DR	HAMPTON FALLS	2	45032
106.0199	BEDROCK	DOMESTIC	42.91689005	-70.86336823	FRANCIS CHASE BLDG CONTR	101 LAFAYETTE RD	HAMPTON FALLS	8	63
106.02	BEDROCK	DOMESTIC	42.92340647	-70.88321642	T SHEK	9 COBURN WOODS RD	HAMPTON FALLS	4	73-9
106.0201	BEDROCK	DOMESTIC	42.91051588	-70.89534631	DUFRESNE	152 KENSINGTON RD	HAMPTON FALLS	1	94
106.0215	BEDROCK	DOMESTIC	42.91369651	-70.85975437	S MITCHELL	25 DEPOT RD	HAMPTON FALLS		
106.0216	BEDROCK	COMMERCIAL	42.90801178	-70.86568144	SEACOAST WHOLESALE	34 LAFAYETTE RD	HAMPTON FALLS	7	54
106.022	BEDROCK	DOMESTIC	42.91073547	-70.89008418	LONERZAN	34 GOODWIN RD	HAMPTON FALLS	1	97
106.0226	BEDROCK	DOMESTIC	42.90538088	-70.86514819	PELTON	19 LAFAYETTE RD	HAMPTON FALLS	7	68
106.0229	BEDROCK	DOMESTIC	42.9040093	-70.87628074	WISET	15 DODGE RD	HAMPTON FALLS	7	2
106.023	BEDROCK	DOMESTIC	42.91866088	-70.87340187	SECOND STOREY HOMES	7 FIELDSTONE LN	HAMPTON FALLS	2	23-3
106.0232	BEDROCK	DOMESTIC	42.91464513	-70.87654052	BENOIT DEVEL	2 GOV POWELL RD	HAMPTON FALLS	2	45045
106.0233	BEDROCK	DOMESTIC	42.91501631	-70.86088457	NORTHWAY BUILDERS	5 COACH LN	HAMPTON FALLS	8	83-17
106.0245	BEDROCK	DOMESTIC	42.905808	-70.865405	K PELTON	19 LAFAYETTE RD	HAMPTON FALLS		
106.0254	BEDROCK	DOMESTIC	42.92148278	-70.87418327	HAMPTON FALLS TOWN HALL	DRINKWATER RD	HAMPTON FALLS	2	75
106.026	BEDROCK	DOMESTIC	42.9067728	-70.8652244	A GEORGIO	109 LAFAYETTE RD	HAMPTON FALLS	8	61
106.0261	BEDROCK	DOMESTIC	42.9081833	-70.86938191	CHAMPAGNE	KENSINGTON RD	HAMPTON FALLS	7	30

All Wells Within 1000 Feet of Potential Impact Area
Weare Road Seabrook, NH

WRB_NUMBER	TYPE	USE	LATITUDE	LONGITUDE	NAME	ADDRESS	TOWN	MAP	LOT
106.0262	BEDROCK	DOMESTIC	42.92380235	-70.88283017	THE GREAT ROOM	1 COBURN WOODS RD	HAMPTON FALLS	4	73-6/7
106.0264	BEDROCK	DOMESTIC	42.91919576	-70.8753624	SECOND STOREY HOMES	1 FIELDSTONE LN	HAMPTON FALLS	2	23-1
106.0265	BEDROCK	DOMESTIC	42.9188388	-70.87227216	SECOND STOREY HOMES	2 FIELDSTONE LN	HAMPTON FALLS	2	23-5
106.0292	BEDROCK	DOMESTIC	42.9067728	-70.8652244	M RIDOLFO	106 LAFAYETTE RD	HAMPTON FALLS	8	46
106.0295	BEDROCK	DOMESTIC	42.91369651	-70.85975437	S MITCHELL	25 DEPOT RD	HAMPTON FALLS	8	84-5
106.0296	BEDROCK	DOMESTIC	42.91615935	-70.87513995	BENOIT DEVEL	WELLINGTON FARM RD	HAMPTON FALLS		LOT 27
106.0297	BEDROCK	DOMESTIC	42.91450872	-70.87462727	BENOIT DEVEL	30 GOV POWELL RD	HAMPTON FALLS	2	45046
106.0298	BEDROCK	DOMESTIC	42.91361317	-70.87573994	BENOIT DEVEL	3 GOV POWELL RD	HAMPTON FALLS	2	12145
106.0299	BEDROCK	DOMESTIC	42.91387887	-70.87492277	BENOIT DEVEL	6 GOV POWELL RD	HAMPTON FALLS	2	11414
106.03	BEDROCK	DOMESTIC	42.91308865	-70.87511952	BENOIT DEVEL	5 GOV POWELL RD	HAMPTON FALLS	2	11780
106.0303	BEDROCK	OTHER	42.9150512	-70.865252	HAMPTON FALLS BAPTIST CHUR	1 Kensington Rd	HAMPTON FALLS	8	39
106.0304	BEDROCK	DOMESTIC	42.90356824	-70.8798059	SCOTT BLOOD EXCAVATING	21 STARD RD	HAMPTON FALLS	2	44927
106.0306	BEDROCK	DOMESTIC	42.91515238	-70.88834515	KENNEDY/POLANSKI	10 GOODWIN RD	HAMPTON FALLS	2	15067
106.0316	BEDROCK	DOMESTIC	42.92366576	-70.87935977	WASSON BUILDERS	76 EXETER RD	HAMPTON FALLS		
106.0318	BEDROCK	DOMESTIC	42.91077605	-70.89997163	MICHAEL	8 PEAVER LN	HAMPTON FALLS	1	38
106.0325	BEDROCK	DOMESTIC	42.915165	-70.862092	G. MERRIL	12 DEPOT RD	HAMPTON FALLS		
106.0335	BEDROCK	DOMESTIC	42.9132939	-70.8699433	B. & B. SPRAGUE	4 WOODLAND AVE	HAMPTON FALLS		
106.0352	BEDROCK	DOMESTIC	42.91015788	-70.8941661	DOLAN	129 KENSINGTON RD	HAMPTON FALLS		
106.0378	BEDROCK	DOMESTIC	42.91824122	-70.90074943	DUBE-PLUS	8 HARDY LN	HAMPTON FALLS	1	65-3
106.0384	BEDROCK	DOMESTIC	42.91697455	-70.90068276	TURNER PORTER	HARDY LN	HAMPTON FALLS	1-065.01	1
106.0388	BEDROCK	DOMESTIC	42.92034122	-70.90584943	PERSIMMON HOMES	NASON RD	HAMPTON FALLS	1	3
106.039	BEDROCK	DOMESTIC	42.91974122	-70.90956609	ANNIS	200 KENSINGTON RD	HAMPTON FALLS	1	47-1
106.0392	BEDROCK	DOMESTIC	42.906267	-70.870533		62 KENSINGTON RD	HAMPTON FALLS	7	32
106.0393	BEDROCK	DOMESTIC	42.906267	-70.870533		62 KENSINGTON RD	HAMPTON FALLS	7	32
106.0394	BEDROCK	DOMESTIC	42.906267	-70.870533		62 KENSINGTON RD	HAMPTON FALLS	7	32
106.0395	BEDROCK	DOMESTIC	42.906267	-70.870533		62 KENSINGTON RD	HAMPTON FALLS	7	32
106.0396	BEDROCK	DOMESTIC	42.906267	-70.870533		62 KENSINGTON RD	HAMPTON FALLS	7	32
106.0397	BEDROCK	DOMESTIC	42.906267	-70.870533		62 KENSINGTON RD	HAMPTON FALLS	7	32
106.0399	BEDROCK	DOMESTIC	42.9067728	-70.8652244	UNKNOWN NAME	115 LAFAYETTE RD	HAMPTON FALLS	8	58
106.04	BEDROCK	DOMESTIC	42.9171	-70.901233		KENSINGTON RD	HAMPTON FALLS	1	65-1
106.0403	BEDROCK	GEOTHERMAL	42.91543479	-70.86197692	CHRIS BOYLE	13 MERRILL ROAD	HAMPTON FALLS	8	71
106.0409	BEDROCK	DOMESTIC	42.91540332	-70.86199993	ED DECOSTA	11 MERRILL	HAMPTON FALLS	8	B072-LOT00
106.0413	BEDROCK	DOMESTIC	42.90815	-70.864733		33 LAFAYETTE	HAMPTON FALLS	07-064	07-064
106.0417	BEDROCK	DOMESTIC	42.906315	-70.8705471	UNKNOWN NAME	62 KENSINGTON RD	HAMPTON FALLS	7	32
106.0419	BEDROCK	DOMESTIC	42.915567	-70.896933	BRIMANTE	48 CRANK RD	HAMPTON FALLS	1	87
106.044	BEDROCK	OTHER	42.913239	-70.866984	RACHEL GROGAN	13 KENSINGTON ROAD	HAMPTON FALLS	7	11
214.0001	BEDROCK	MUNICIPAL	42.88856674	-70.90282137	TOWN OF SEABROOK	RILEY WELL FIELD	SEABROOK		
214.0003	BEDROCK	MUNICIPAL	42.88766318	-70.90199944	TOWN OF SEABROOK	RILEY WELL FIELD	SEABROOK		
214.0007	BEDROCK	AGRICULTURAL	42.890416	-70.895766	L PROVENCHER	LEDGE RD	SEABROOK		36
214.0011	BEDROCK	TEST/EXPLORATION	42.89549292	-70.90366513	SEABROOK WATER DEPT	RTE 107	SEABROOK		
214.0031	BEDROCK	DOMESTIC	42.89043097	-70.89891088	G LOCKE	72 LEDGE RD	SEABROOK	3	24
214.0033	BEDROCK	TEST/EXPLORATION	42.9054477	-70.894387	TOWN OF SEABROOK	MILL LN	SEABROOK		
214.0054	BEDROCK	DOMESTIC	42.89723277	-70.91394744	SMALL	1 FRANCES DR	SEABROOK	2	44927
214.009	BEDROCK	DOMESTIC	42.88782456	-70.90583276	EPPING WELL & PUMP		SEABROOK		
214.0099	BEDROCK	AGRICULTURAL	42.9030241	-70.8817977	GREEN & CO	8 PINEO FARM Road	SEABROOK		LOT 15
214.01	BEDROCK	DOMESTIC	42.89010733	-70.90223388	M. MISPILKIN	38 LEDGE RD	SEABROOK	3	45085
214.0122	BEDROCK	TEST/EXPLORATION	42.9004613	-70.9163641	TOWN OF SEABROOK	OLD NEW BOSTON RD	SEABROOK	1	3
214.0123	BEDROCK	TEST/EXPLORATION	42.9004613	-70.9163641	TOWN OF SEABROOK	OLD NEW BOSTON RD	SEABROOK	1	3
214.0124	BEDROCK	TEST/EXPLORATION	42.9004613	-70.9163641	TOWN OF SEABROOK	OLD NEW BOSTON RD	SEABROOK	1	3
214.0022	BEDROCK	COMMERCIAL	42.90024633	-70.86960833	AUTO SHINE CAR WASH	RTE 1	SEABROOK		
106.0002	BEDROCK	DOMESTIC	42.91577138	-70.88781765	F STILES	4 GOODWIN RD	HAMPTON FALLS	1	77
106.0008	BEDROCK	DOMESTIC	42.91011965	-70.88582157	J MARMONTI	107 KENSINGTON RD	HAMPTON FALLS	2	5
106.0009	BEDROCK	DOMESTIC	42.90953173	-70.85736962	D DEWITT	BRIMMER LN	HAMPTON FALLS	7	60-3

All Wells Within 1000 Feet of Potential Impact Area
Weare Road Seabrook, NH

WRB_NUMBER	TYPE	USE	LATITUDE	LONGITUDE	NAME	ADDRESS	TOWN	MAP	LOT
106.001	BEDROCK	DOMESTIC	42.91413142	-70.85803668	R REMINGTON	39 COACH LN	HAMPTON FALLS	8	83-11
106.0011	BEDROCK	DOMESTIC	42.91285193	-70.88954427	G BOSWORTH	GOODWIN RD	HAMPTON FALLS	1	
106.0014	BEDROCK	DOMESTIC	42.91321942	-70.85780783	J CASEY JR	COACH LN	HAMPTON FALLS		
106.0015	BEDROCK	DOMESTIC	42.91616033	-70.85806208	M CARATELLI	COACH LN	HAMPTON FALLS		
106.0017	BEDROCK	DOMESTIC	42.90688033	-70.87306349	A RUSH	76 KENSINGTON RD	HAMPTON FALLS	7	35
106.0022	BEDROCK	DOMESTIC	42.91580153	-70.85994485	BERRY & FORTIER	COACH LN	HAMPTON FALLS	8	83-16
106.0025	BEDROCK	DOMESTIC	42.90811015	-70.89096165	G HEAL	7 MILL LN	HAMPTON FALLS	1	16-1
106.0035	BEDROCK	DOMESTIC	42.92080728	-70.8830231	F FULLER	BIRCH DR	HAMPTON FALLS	2	50-438
106.0036	BEDROCK	DOMESTIC	42.91394372	-70.85674943	A ANDERSON	COACH LN	HAMPTON FALLS	8	83-8
106.0038	BEDROCK	DOMESTIC	42.91572233	-70.8650067	HF REALTY TRUST	CNR RTE 88	HAMPTON FALLS		
106.0042	BEDROCK	DOMESTIC	42.90995263	-70.89646588	J DORAN	RTE 84	HAMPTON FALLS	1	94-1
106.0043	BEDROCK	DOMESTIC	42.91764088	-70.88804425	TWIN TOWN HOMES	CRANK RD	HAMPTON FALLS	1	67-3
106.0044	BEDROCK	DOMESTIC	42.91917622	-70.8894903	R COX	27 CRANK RD	HAMPTON FALLS	1	67-7
106.0049	BEDROCK	DOMESTIC	42.90572532	-70.87550172	THERMO HOMES INC	DODGE RD	HAMPTON FALLS	7	3
106.0051	BEDROCK	DOMESTIC	42.91927715	-70.88713935	R FOSTER	CRANK RD	HAMPTON FALLS	1	67
106.0054	BEDROCK	DOMESTIC	42.91663908	-70.8594184	E LUPONI	23 COACH LN	HAMPTON FALLS	8	83-15
106.0056	BEDROCK	DOMESTIC	42.91690833	-70.86066105	T MONROE	COACH LN	HAMPTON FALLS	8	83-1
106.0058	BEDROCK	DOMESTIC	42.91355692	-70.86204667	A EDGERLY	MEADOW LN	HAMPTON FALLS	8	84-11
106.0059	BEDROCK	DOMESTIC	42.9148843	-70.85659752	J MURRAY	COACH LN	HAMPTON FALLS	8	83-6
106.0061	BEDROCK	DOMESTIC	42.91526958	-70.85800503	L POWICKI	33 COACH LN	HAMPTON FALLS	8	83-13
106.0068	BEDROCK	DOMESTIC	42.92222185	-70.87485522	D VERITY	MARTHAS CT	HAMPTON FALLS	2	82-4
106.0082	BEDROCK	DOMESTIC	42.91659252	-70.89310977	R ANDERSON	38 CRANK RD	HAMPTON FALLS	1	86
106.0083	BEDROCK	DOMESTIC	42.90951715	-70.89461596	S LYNCH	KENSINGTON RD	HAMPTON FALLS	1	17-3
106.0085	BEDROCK	DOMESTIC	42.91577613	-70.8915925	A MAGNARELLI	1 GOODWIN RD	HAMPTON FALLS	1	83-5-A
106.009	BEDROCK	DOMESTIC	42.91471452	-70.8576404	MARDON CORP	35 COACH LN	HAMPTON FALLS	8	83-12
106.0103	BEDROCK	DOMESTIC	42.90996905	-70.87378209	R DAVEY	71 KENSINGTON RD	HAMPTON FALLS	7	6
106.0106	BEDROCK	DOMESTIC	42.91135145	-70.86803155	D JANVRIN	28 KENSINGTON RD	HAMPTON FALLS	7	26
106.0107	BEDROCK	DOMESTIC	42.91201553	-70.86749293	D DIAL	22 KENSINGTON RD	HAMPTON FALLS	7	24
106.0109	BEDROCK	DOMESTIC	42.91591243	-70.90104278	T GORMLEY	166 KENSINGTON RD	HAMPTON FALLS	1	44-1
106.0127	BEDROCK	DOMESTIC	42.90389052	-70.90808139	N POND	37 MILL LN	HAMPTON FALLS	1	23-1
106.013	BEDROCK	DOMESTIC	42.91021393	-70.88694477	A FOSTER	111 KENSINGTON RD	HAMPTON FALLS	1	100
106.0133	BEDROCK	DOMESTIC	42.91261448	-70.90113586	K ODONNELL	154 KENSINGTON RD	HAMPTON FALLS	1	40-1
106.0204	BEDROCK	DOMESTIC	42.91950933	-70.87722195	J FLEMING	12 DRINKWATER RD	HAMPTON FALLS	2	24
106.0209	BEDROCK	DOMESTIC	42.91688853	-70.87278692	BENOIT DEVEL	8 WHITTIER DR	HAMPTON FALLS	2	4-17
106.021	BEDROCK	DOMESTIC	42.91636837	-70.87378285	BENOIT DEVEL	5 WHITTIER DR	HAMPTON FALLS	2	4-28
106.0212	BEDROCK	DOMESTIC	42.91351785	-70.87703713	BENOIT DEVEL	1 GOV POWELL RD	HAMPTON FALLS	2	4-34
106.0221	BEDROCK	DOMESTIC	42.91802232	-70.88761093	T GILBERT	17 CRANK RD	HAMPTON FALLS	1	68
106.0239	BEDROCK	DOMESTIC	42.90364364	-70.8995263	J ARNAT	33 MILL LN	HAMPTON FALLS	1	19
106.024	BEDROCK	DOMESTIC	42.91615463	-70.90008855	NEWELL EATON	167 KENSINGTON RD	HAMPTON FALLS	1	57
106.0241	BEDROCK	DOMESTIC	42.91846372	-70.86801063	B MERRILL	20 EXETER RD	HAMPTON FALLS	8	28-1
106.0243	BEDROCK	DOMESTIC	42.91900425	-70.87429037	SECOND STOREY HOMES	5 FIELDSTONE LN	HAMPTON FALLS	2	23-2
106.0244	BEDROCK	DOMESTIC	42.9183946	-70.87251	SECOND STOREY HOMES	9 FIELDSTONE LN	HAMPTON FALLS	2	23-4
106.0271	BEDROCK	DOMESTIC	42.91300913	-70.86100735	B ORLUK	MEADOW LN	HAMPTON FALLS	8	84-7
106.0272	BEDROCK	DOMESTIC	42.91543835	-70.87892697	D HUDSON	ALEXIS LN	HAMPTON FALLS	2	4-21
106.0273	BEDROCK	DOMESTIC	42.91428953	-70.86466385	D DREEN	LAFAYETTE RD	HAMPTON FALLS	8	91
106.0274	BEDROCK	DOMESTIC	42.90769548	-70.8626778	B BARTER	9 BRIMMER LN	HAMPTON FALLS	7	64-1
106.0275	BEDROCK	DOMESTIC	42.90783083	-70.86112705	FIELDSTONE BUILDERS	17 BRIMMER LN	HAMPTON FALLS	7	64-3
106.0276	BEDROCK	DOMESTIC	42.90795217	-70.85933333	FIELDSTONE BUILDERS	11 BRIMMER LN	HAMPTON FALLS	7	64-2
106.0283	BEDROCK	DOMESTIC	42.91406002	-70.90074096	M VELTOS	KENSINGTON RD	HAMPTON FALLS	1	43
106.0284	BEDROCK	DOMESTIC	42.91863623	-70.88746882	J SPINNATO	CRANK RD	HAMPTON FALLS	1	69
106.0301	BEDROCK	DOMESTIC	42.91791833	-70.87406618	DUPERE CORP	MARTHAS CT	HAMPTON FALLS	2	82-7
214.0035	BEDROCK	DOMESTIC	42.88989122	-70.90333276	EPPING WELL & PUMP	LEDGE RD	SEABROOK		
214.004	BEDROCK	DOMESTIC	42.89299885	-70.89919622	D ROY	68 BORDER WINDS AVE	SEABROOK	2	94-11

All Wells Within 1000 Feet of Potential Impact Area
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WRB_NUMBER	TYPE	USE	LATITUDE	LONGITUDE	NAME	ADDRESS	TOWN	MAP	LOT
214.0042	BEDROCK	DOMESTIC	42.89169503	-70.89740257	P EVANS	44 BORDER WINDS AVE	SEABROOK	2	94-17
214.0046	BEDROCK	DOMESTIC	42.89089982	-70.90284113	R MELANSA	16 ALISON DR	SEABROOK	2	73
214.0048	BEDROCK	DOMESTIC	42.89059125	-70.90150227	W SHAMPLE	4 BORDER WINDS AVE	SEABROOK	2	94-27
214.0068	BEDROCK	DOMESTIC	42.89212257	-70.90199761	R KENYON	15 BORDER WINDS AVE	SEABROOK	2	94-4
214.0073	BEDROCK	DOMESTIC	42.88685972	-70.88551619	WATERLINE INDUSTRIES	145 BATCHELDER RD	SEABROOK	6	34-3
214.0078	BEDROCK	DOMESTIC	42.89090585	-70.90156281	P. WANING	8 BORDER WINDS AVE	SEABROOK	2	94-26
214.0079	BEDROCK	DOMESTIC	42.8915136	-70.89806925	B. HAMMOND	40 BORDER WINDS AVE	SEABROOK	2	94-18
214.0083	BEDROCK	DOMESTIC	42.88697389	-70.91446363	T. MARTIN	3 AVA MAE LN	SEABROOK	3	2-10
106.0062	BEDROCK	OTHER	42.91821927	-70.86337472	L FORD	98 LAFAYETTE RD	HAMPTON FALLS	8	43
106.0119	BEDROCK	OTHER	42.92128873	-70.87464937	P GUPTIL	DRINKWATER RD	HAMPTON FALLS	2	74
214.0014	BEDROCK	TEST/EXPLORATION	42.89972522	-70.90870719	WHITMAN & HOWARD		SEABROOK		
214.0015	BEDROCK	TEST/EXPLORATION	42.90219547	-70.91053556	WHITMAN & HOWARD		SEABROOK		
214.0016	BEDROCK	TEST/EXPLORATION	42.90542392	-70.91346708	WHITMAN & HOWARD		SEABROOK		
214.0026	BEDROCK	TEST/EXPLORATION	42.89609572	-70.88670037	OBRIENS GENERAL STORE	8 BATCHELDER RD	SEABROOK	5	11
106.0442	BEDROCK	DOMESTIC	42.922717	-70.877033	BRYNE	60 EXETER ROAD	HAMPTON FALLS	2	77
106.0446	BEDROCK	DOMESTIC	42.9120552	-70.8596626	UNKNOWN NAME	12 MARINERS LANE	HAMPTON FALLS	8	84-5-1
106.0449	BEDROCK	DOMESTIC	42.905567	-70.873233	CONNOLLY FAMILY TRUST	10 DODGE ROAD	HAMPTON FALLS	7	038-001
106.045	BEDROCK	DOMESTIC	42.919917	-70.878267	WEINHOLD	16 DRINKWATER RD	HAMPTON FALLS	2	025-000
106.0452	BEDROCK	COMMERCIAL	42.90773988	-70.86493749	UNKNOWN NAME	41 LAFAYETTE ROAD	HAMPTON FALLS	7	61
106.0455	BEDROCK	DOMESTIC	42.91075	-70.901233	COGSWORTH	6 PEVEAR LN.	HAMPTON FALLS	1	37
106.0398	BEDROCK	DOMESTIC	42.91366667	-70.8698	JAMES WIECZOREK	94 LAFAYETTE RD	HAMPTON FALLS	8	40
106.0401	BEDROCK	DOMESTIC	42.91361667	-70.86988333	SCOTT & LINDA BIEBER	5 WOODLAWN AVE	HAMPTON FALLS	8	033.00
106.0408	BEDROCK	DOMESTIC	42.9173	-70.90046667	LOUIE DOW & KEVIN MERRILL	N/A HARDY LN	HAMPTON FALLS	1	5
106.0414	BEDROCK	DOMESTIC	42.90668333	-70.89186667	RICH KNIGHT	12 MILL LN	HAMPTON FALLS	1	6
106.0424	BEDROCK	DOMESTIC	42.91603333	-70.89741667	KPB FAMILY TRUST KPB FAMILY TRUST	50 CRANK RD.	HAMPTON FALLS	1	88
106.0428	BEDROCK	DOMESTIC	42.91906667	-70.88655	CHRISTINE & KEN MAKEPEACE	10 CRANK ROAD	HAMPTON FALLS	01	075.04
106.0438	BEDROCK	DOMESTIC	42.91831667	-70.90193333	BRIAN WOLPERT	8 HARDY LANE	HAMPTON FALLS	1	65-2
106.0439	BEDROCK	DOMESTIC	42.91335	-70.87045	GREG KOULOHERAS	6 WOODLAWN AVE	HAMPTON FALLS	7	17
106.0444	BEDROCK	DOMESTIC	42.91686667	-70.88766667	PAUL SCHLEPPY	2 GOODWIN ROAD	HAMPTON FALLS	1	76
106.0046	BEDROCK	DOMESTIC	42.9078178	-70.91346379	R CARTER	49 WEARE RD	HAMPTON FALLS	1	32-2
106.0081	BEDROCK	DOMESTIC	42.90848645	-70.91254144	C MUTRIE	9 LA-FIESTA DR	HAMPTON FALLS	1	30-3
214.0117	BEDROCK	TEST / EXPLORATION	42.90360789	-70.8859161	TOWN OF SEABROOK	PINEO FARM RD	SEABROOK	4	14
214.0118	BEDROCK	TEST / EXPLORATION	42.90379122	-70.8857661	TOWN OF SEABROOK	PINEO FARM RD	SEABROOK	4	14
214.0119	BEDROCK	TEST / EXPLORATION	42.90330789	-70.88569943	TOWN OF SEABROOK	PINEO FARM RD	SEABROOK	4	14
214.012	BEDROCK	TEST / EXPLORATION	42.90362455	-70.8854661	TOWN OF SEABROOK	PINEO FARM RD	SEABROOK	4	14
214.0121	BEDROCK	TEST / EXPLORATION	42.90347455	-70.8852661	TOWN OF SEABROOK	PINEO FARM RD	SEABROOK	4	14
214.0148	BEDROCK	TEST / EXPLORATION	42.901067	-70.889717	GEOSPHERE ENVIRONMENTAL	NA STARD ROAD	SEABROOK	0	0
214.015	BEDROCK	TEST / EXPLORATION	42.900617	-70.888733	GEOSPHERE ENVIRONMENTAL MGT	NA STARD ROAD	SEABROOK	0	0
214.0162	BEDROCK	TEST / EXPLORATION	42.89955	-70.88956667	TOWN OF SEABROOK	27 STARD RD	SEABROOK	4	9-0
214.0163	BEDROCK	TEST / EXPLORATION	42.89858333	-70.88606667	TOWN OF SEABROOK	27 STARD RD	SEABROOK	4	9-0
214.0164	BEDROCK	TEST / EXPLORATION	42.89926667	-70.88866667	TOWN OF SEABROOK	27 STARD RD	SEABROOK	4	9-0
214.0166	BEDROCK	AGRICULTURAL	42.89618333	-70.87718333	PARKE PLACE VILLAGE	44 NEW ZEALAND ROAD	SEABROOK	7	74-0
214.0167	BEDROCK	TEST / EXPLORATION	42.9009	-70.8865	TOWN OF SEABROOK	27 STARD RD	SEABROOK	4	13-0
214.0168	BEDROCK	TEST / EXPLORATION	42.90093333	-70.88736667	TOWN OF SEABROOK	27 STARD ROAD	SEABROOK	4	13-0
214.0175	BEDROCK	MUNICIPAL	42.90663333	-70.91335	SEABROOK WATER DEPARTMENT	550 ROUTE 107	SEABROOK	1	1-0
214.0176	BEDROCK	MUNICIPAL	42.90631667	-70.91346667	SEABROOK WATER DEPARTMENT	550 ROUTE 107	SEABROOK	1	1-0
214.0177	BEDROCK	TEST / EXPLORATION	42.90245	-70.89326667	SEABROOK WATER DEPARTMENT	66 MILL LN	SEABROOK	4	8-0
214.0178	BEDROCK	TEST / EXPLORATION	42.90281667	-70.89341667	SEABROOK WATER DEPARTMENT	66 MILL LN	SEABROOK	4	8-0
214.0179	BEDROCK	TEST / EXPLORATION	42.90125	-70.89236667	SEABROOK WATER DEPARTMENT	66 MILL LN	SEABROOK	4	8-0
214.018	BEDROCK	TEST / EXPLORATION	42.90123333	-70.88845	SEABROOK WATER DEPARTMENT	45 STARD ROAD	SEABROOK	4	13-0
214.0191	BEDROCK	TEST / EXPLORATION	42.901583	-70.889467	SEABROOK WATER DEPT.	45 STARD RD	SEABROOK	04	13
214.0192	BEDROCK	TEST / EXPLORATION	42.901667	-70.89	SEABROOK WATER DEPT	45 STARD RD	SEABROOK	4	13
106.038	OTHER	TEST/EXPLORATION	42.9067728	-70.8652244	BENOIT	82-84 LAFAYETTE RD	HAMPTON FALLS	8	25

All Wells Within 1000 Feet of Potential Impact Area
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WRB_NUMBER	TYPE	USE	LATITUDE	LONGITUDE	NAME	ADDRESS	TOWN	MAP	LOT
214.0051	OTHER	TEST/EXPLORATION	42.89633782	-70.88706297	PENNONI ASSOC	8 BATCHELDER RD	SEABROOK	5	11
106.0435	OVERBURDEN	TEST / EXPLORATION	42.920767	-70.884617		4 CRANK ROAD	HAMPTON FALLS	27395	1
127.009	OVERBURDEN	TEST/EXPLORATION	42.90174755	-70.91755434	PUBLIC SERVICE OF NH		KENSINGTON		
127.0094	OVERBURDEN	TEST/EXPLORATION	42.90174755	-70.91727656	PUBLIC SERVICE OF NH		KENSINGTON		
214.0002	OVERBURDEN	TEST/EXPLORATION	42.89313664	-70.91172076	TOWN OF SEABROOK	OFF TRUE RD	SEABROOK		
214.0004	OVERBURDEN	TEST/EXPLORATION	42.89785874	-70.91588757	TOWN OF SEABROOK	OFF OLD NEW BOSTON RD	SEABROOK		
214.0009	OVERBURDEN	TEST/EXPLORATION	42.8985752	-70.9089375	J JUTIAS	6 SMITHS LN	SEABROOK	10	18-0
214.0028	OVERBURDEN	MUNICIPAL	42.890416	-70.895766	TOWN OF SEABROOK	LEDGE RD	SEABROOK		
214.0029	OVERBURDEN	OTHER	42.888265	-70.903347	M FRAUGHTON	RILEY RD	SEABROOK	3	18
214.0097	OVERBURDEN	AGRICULTURAL	42.90185273	-70.87237762	P. GULCHANG	4 EATON LN	SEABROOK		
214.0113	OVERBURDEN	AGRICULTURAL	42.89250987	-70.89749687	G. MCDONALD	64 BORDER WINDS AVE	SEABROOK		
214.0115	OVERBURDEN	TEST/EXPLORATION	42.8915043	-70.88440964	GZA GEO ENVIRONMENTAL INC	13 BATCHELDER RD	SEABROOK		
214.0139	OVERBURDEN	AGRICULTURAL	42.89978638	-70.87615604	T. HARRIMAN	19 JEAN DR	SEABROOK	7	50
214.0145	OVERBURDEN	DOMESTIC	42.90277221	-70.86574349	UNKNOWN NAME	53 B STREET	SEABROOK	7	90
214.0157	OVERBURDEN	TEST / EXPLORATION	42.90286777	-70.86610584	UNKNOWN NAME	48 B STREET	SEABROOK	MHP1	7-90-43
214.0161	OVERBURDEN	MONITORING	42.90333933	-70.8621389	LUCY BALDWIN	40 B ST	SEABROOK	7	90-0
214.0173	OVERBURDEN	TEST / EXPLORATION	42.8902167	-70.8856193	K & R REALTY LLC	21 BATCHELDER Road	SEABROOK	5	13-2
214.0184	OVERBURDEN	MONITORING	42.9008448	-70.9077139	UNKNOWN NAME	319 ROUTE 107	SEABROOK	2	41-0
214.0185	OVERBURDEN	MONITORING	42.88891676	-70.88604459	ROBY & WILLIAMS INC.	153 BATCHELDER RD	SEABROOK	6	34-1
214.0195	OVERBURDEN	TEST / EXPLORATION	42.9003783	-70.88421022	UNKNOWN NAME	47 STARD RD	SEABROOK	4	13-10
214.0013	OVERBURDEN	TEST/EXPLORATION	42.90304099	-70.91451873	WHITMAN & HOWARD		SEABROOK		

Domestic Wells Within 1000 Feet of Potential Impact Area
Weare Road Seabrook, NH

WRB_NUMBER	TYPE	USE	LATITUDE	LONGITUDE	NAME	ADDRESS	TOWN	MAP	LOT	DISTANCE (ft)	Direction
106.0005	BEDROCK	DOMESTIC	42.905808	-70.865405	K PELTON	19 LAFAYETTE RD	HAMPTON FALLS			10552	E
106.0006	BEDROCK	DOMESTIC	42.91414337	-70.86497141	T MARSTON	95 LAFAYETTE RD	HAMPTON FALLS	8	64	11555	ENE
106.0007	BEDROCK	DOMESTIC	42.91689005	-70.86336823	T PRETTY	101 LAFAYETTE RD	HAMPTON FALLS	8	63	12381	ENE
106.0021	BEDROCK	DOMESTIC	42.90942635	-70.89499058	ALLEN	134 RTE 84	HAMPTON FALLS	1	17-2	3932	NE
106.0024	BEDROCK	DOMESTIC	42.9099769	-70.8940196	RASPBERRY FARM	KENSINGTON RD	HAMPTON FALLS			4252	NE
106.0045	BEDROCK	DOMESTIC	42.92018537	-70.88617445	LAGO	7 CRANK RD	HAMPTON FALLS	1	72	8488	NE
106.0055	BEDROCK	DOMESTIC	42.9067728	-70.8652244	J DODGE	116 LAFAYETTE RD	HAMPTON FALLS	8	50	10663	ENE
106.007	BEDROCK	DOMESTIC	42.9159366	-70.88996621	GRADY	GOODWIN RD	HAMPTON FALLS			6637	NE
106.0073	BEDROCK	DOMESTIC	42.91601455	-70.86048747	T MONROE	16 COACH LN	HAMPTON FALLS	8	83-1	12931	ENE
106.0075	BEDROCK	DOMESTIC	42.91561818	-70.8901498	KENNON	7 GOODWIN RD	HAMPTON FALLS	1	83-4	6514	NE
106.0076	BEDROCK	DOMESTIC	42.91811785	-70.88992055	KARPIAK	25 CRANK RD	HAMPTON FALLS	1	67-2	7307	NNE
106.0084	BEDROCK	DOMESTIC	42.91700642	-70.85947725	C BONSON	30 COACH LN	HAMPTON FALLS	8	83-5	13330	ENE
106.0093	BEDROCK	DOMESTIC	42.9164127	-70.865145	R & M LILLY	EXETER RD	HAMPTON FALLS	5	22	11878	ENE
106.0094	BEDROCK	DOMESTIC	42.90827824	-70.85582255	T HAM	38 BRIMMER LN	HAMPTON FALLS	2	143	13241	ENE
106.0115	BEDROCK	DOMESTIC	42.91400053	-70.86519325	P MOORES JR	74 LAFAYETTE RD	HAMPTON FALLS	8	94	11479	ENE
106.0136	BEDROCK	DOMESTIC	42.90959788	-70.8914161	ALLEN	124 KENSINGTON RD	HAMPTON FALLS	1	17-1	4638	NE
106.0148	BEDROCK	DOMESTIC	42.92043117	-70.87844522	FORNIER	17 DRINKWATER RD	HAMPTON FALLS	2	68	9882	NE
106.0153	BEDROCK	DOMESTIC	42.91352553	-70.8594991	R DAWES	33 DEPOT RD	HAMPTON FALLS	8	84-3	12823	ENE
106.0154	BEDROCK	DOMESTIC	42.912989	-70.858532	D WITHAM	DEPOT RD	HAMPTON FALLS	8	84-12	12999	ENE
106.0155	BEDROCK	DOMESTIC	42.91639403	-70.89598228	ONEIL	45 CRANK RD	HAMPTON FALLS	1	62	6012	NNE
106.0159	BEDROCK	DOMESTIC	42.92458545	-70.88275303	BAGLIN	COBURN WOODS RD	HAMPTON FALLS	4	73-5	10329	NE
106.016	BEDROCK	DOMESTIC	42.9230753	-70.8831062	D COE	PARSONAGE RD	HAMPTON FALLS			9822	NE
106.017	BEDROCK	DOMESTIC	42.91396554	-70.8662808	H HALLER	9 KENSINGTON RD	HAMPTON FALLS	8	20	11209	ENE
106.0176	BEDROCK	DOMESTIC	42.92426481	-70.8838921	RICHARD WHITNEY BLDR	5 COBURN WOODS RD	HAMPTON FALLS	4	73-8	10064	NNE
106.0184	BEDROCK	DOMESTIC	42.9138436	-70.8894314	O COTE	GOODWIN RD	HAMPTON FALLS			6122	NE
106.0185	BEDROCK	DOMESTIC	42.9067728	-70.8652244	L ELIAS	123 LAFAYETTE RD	HAMPTON FALLS	8	59	10663	ENE
106.0187	BEDROCK	DOMESTIC	42.90833278	-70.85730948	M PERKINS	32 BRIMMER LN	HAMPTON FALLS	7	60-2	12854	ENE
106.0191	BEDROCK	DOMESTIC	42.90962063	-70.88475678	TONRY	104 KENSINGTON RD	HAMPTON FALLS	1	8	6085	ENE
106.0193	BEDROCK	DOMESTIC	42.92087897	-70.91103647	J MCINNIS	227 KENSINGTON RD	HAMPTON FALLS	1	50	7448	NNW
106.0195	BEDROCK	DOMESTIC	42.92313298	-70.88376828	DPW BLDG CONTR	2 COBURN WOODS RD	HAMPTON FALLS	4	73-12	9738	NE
106.0197	BEDROCK	DOMESTIC	42.91622888	-70.87670694	BENOIT DEVEL	26 ALEXIS LN	HAMPTON FALLS	2	45042	9221	NE
106.0198	BEDROCK	DOMESTIC	42.91709467	-70.87481814	BENOIT DEVEL	4 WHITTIER DR	HAMPTON FALLS	2	45032	9816	NE
106.0199	BEDROCK	DOMESTIC	42.91689005	-70.86336823	FRANCIS CHASE BLDG CONTR	101 LAFAYETTE RD	HAMPTON FALLS	8	63	12381	ENE
106.02	BEDROCK	DOMESTIC	42.92340647	-70.88321642	T SHEK	9 COBURN WOODS RD	HAMPTON FALLS	4	73-9	9904	NE
106.0201	BEDROCK	DOMESTIC	42.91051588	-70.89534631	DUFRESNE	152 KENSINGTON RD	HAMPTON FALLS	1	94	4192	NE
106.0215	BEDROCK	DOMESTIC	42.91369651	-70.85975437	S MITCHELL	25 DEPOT RD	HAMPTON FALLS			12781	ENE
106.022	BEDROCK	DOMESTIC	42.91073547	-70.89008418	LONERZAN	34 GOODWIN RD	HAMPTON FALLS	1	97	5181	NE
106.0226	BEDROCK	DOMESTIC	42.90538088	-70.86514819	PELTON	19 LAFAYETTE RD	HAMPTON FALLS	7	68	10596	E
106.0229	BEDROCK	DOMESTIC	42.9040093	-70.87628074	WISET	15 DODGE RD	HAMPTON FALLS	7	2	7572	E
106.023	BEDROCK	DOMESTIC	42.91866088	-70.87340187	SECOND STOREY HOMES	7 FIELDSTONE LN	HAMPTON FALLS	2	23-3	10463	NE
106.0232	BEDROCK	DOMESTIC	42.91464513	-70.87654052	BENOIT DEVEL	2 GOV POWELL RD	HAMPTON FALLS	2	45045	8924	ENE
106.0233	BEDROCK	DOMESTIC	42.91501631	-70.86088457	NORTHWAY BUILDERS	5 COACH LN	HAMPTON FALLS	8	83-17	12684	ENE
106.0245	BEDROCK	DOMESTIC	42.905808	-70.865405	K PELTON	19 LAFAYETTE RD	HAMPTON FALLS			10552	E
106.0254	BEDROCK	DOMESTIC	42.92148278	-70.87418327	HAMPTON FALLS TOWN HALL	DRINKWATER RD	HAMPTON FALLS	2	75	10968	NE
106.026	BEDROCK	DOMESTIC	42.9067728	-70.8652244	A GEORGIO	109 LAFAYETTE RD	HAMPTON FALLS	8	61	10663	ENE
106.0261	BEDROCK	DOMESTIC	42.9081833	-70.86938191	CHAMPAGNE	KENSINGTON RD	HAMPTON FALLS	7	30	9698	ENE
106.0262	BEDROCK	DOMESTIC	42.92380235	-70.88283017	THE GREAT ROOM	1 COBURN WOODS RD	HAMPTON FALLS	4	73-6/7	10082	NE
106.0264	BEDROCK	DOMESTIC	42.91919576	-70.8753624	SECOND STOREY HOMES	1 FIELDSTONE LN	HAMPTON FALLS	2	23-1	10179	NE
106.0265	BEDROCK	DOMESTIC	42.9188388	-70.87227216	SECOND STOREY HOMES	2 FIELDSTONE LN	HAMPTON FALLS	2	23-5	10743	NE
106.0292	BEDROCK	DOMESTIC	42.9067728	-70.8652244	M RIDOLFO	106 LAFAYETTE RD	HAMPTON FALLS	8	46	10663	ENE
106.0295	BEDROCK	DOMESTIC	42.91369651	-70.85975437	S MITCHELL	25 DEPOT RD	HAMPTON FALLS	8	84-5	12781	ENE
106.0296	BEDROCK	DOMESTIC	42.91615935	-70.87513995	BENOIT DEVEL	WELLINGTON FARM RD	HAMPTON FALLS		LOT 27	9546	NE
106.0297	BEDROCK	DOMESTIC	42.91450872	-70.87462727	BENOIT DEVEL	30 GOV POWELL RD	HAMPTON FALLS	2	45046	9329	ENE
106.0298	BEDROCK	DOMESTIC	42.91361317	-70.87573994	BENOIT DEVEL	3 GOV POWELL RD	HAMPTON FALLS	2	12145	8905	ENE
106.0299	BEDROCK	DOMESTIC	42.91387887	-70.87492277	BENOIT DEVEL	6 GOV POWELL RD	HAMPTON FALLS	2	11414	9142	ENE

Domestic Wells Within 1000 Feet of Potential Impact Area
Weare Road Seabrook, NH

WRB_NUMBER	TYPE	USE	LATITUDE	LONGITUDE	NAME	ADDRESS	TOWN	MAP	LOT	DISTANCE (ft)	Direction
106.03	BEDROCK	DOMESTIC	42.91308865	-70.87511952	BENOIT DEVEL	5 GOV POWELL RD	HAMPTON FALLS	2	11780	8953	ENE
106.0304	BEDROCK	DOMESTIC	42.90356824	-70.8798059	SCOTT BLOOD EXCAVATING	21 STARD RD	HAMPTON FALLS	2	44927	6614	E
106.0306	BEDROCK	DOMESTIC	42.91515238	-70.88834515	KENNEDY/POLANSKI	10 GOODWIN RD	HAMPTON FALLS	2	15067	6674	NE
106.0316	BEDROCK	DOMESTIC	42.92366576	-70.87935977	WASSON BUILDERS	76 EXETER RD	HAMPTON FALLS			10600	NE
106.0318	BEDROCK	DOMESTIC	42.91077605	-70.89997163	MICHAEL	8 PEAVER LN	HAMPTON FALLS	1	38	3722	NNE
106.0325	BEDROCK	DOMESTIC	42.915165	-70.862092	G. MERRIL	12 DEPOT RD	HAMPTON FALLS			12411	ENE
106.0335	BEDROCK	DOMESTIC	42.9132939	-70.8699433	B. & B. SPRAGUE	4 WOODLAND AVE	HAMPTON FALLS			10217	ENE
106.0352	BEDROCK	DOMESTIC	42.91015788	-70.8941661	DOLAN	129 KENSINGTON RD	HAMPTON FALLS			4278	NE
106.0378	BEDROCK	DOMESTIC	42.91824122	-70.90074943	DUBE-PLUS	8 HARDY LN	HAMPTON FALLS	1	65-3	6332	N
106.0384	BEDROCK	DOMESTIC	42.91697455	-70.90068276	TURNER PORTER	HARDY LN	HAMPTON FALLS	1-065.01	1	5878	N
106.0388	BEDROCK	DOMESTIC	42.92034122	-70.90584943	PERSIMMON HOMES	NASON RD	HAMPTON FALLS	1	3	7040	N
106.039	BEDROCK	DOMESTIC	42.91974122	-70.90956609	ANNIS	200 KENSINGTON RD	HAMPTON FALLS	1	47	6956	NNW
106.0392	BEDROCK	DOMESTIC	42.906267	-70.870533		62 KENSINGTON RD	HAMPTON FALLS	7	32	9232	ENE
106.0393	BEDROCK	DOMESTIC	42.906267	-70.870533		62 KENSINGTON RD	HAMPTON FALLS	7	32	9232	ENE
106.0394	BEDROCK	DOMESTIC	42.906267	-70.870533		62 KENSINGTON RD	HAMPTON FALLS	7	32	9232	ENE
106.0395	BEDROCK	DOMESTIC	42.906267	-70.870533		62 KENSINGTON RD	HAMPTON FALLS	7	32	9232	ENE
106.0396	BEDROCK	DOMESTIC	42.906267	-70.870533		62 KENSINGTON RD	HAMPTON FALLS	7	32	9232	ENE
106.0397	BEDROCK	DOMESTIC	42.906267	-70.870533		62 KENSINGTON RD	HAMPTON FALLS	7	32	9232	ENE
106.0399	BEDROCK	DOMESTIC	42.9067728	-70.8652244	UNKNOWN NAME	115 LAFAYETTE RD	HAMPTON FALLS	8	58	10663	ENE
106.04	BEDROCK	DOMESTIC	42.9171	-70.901233		KENSINGTON RD	HAMPTON FALLS	1	65-1	5902	N
106.0409	BEDROCK	DOMESTIC	42.91540332	-70.86199993	ED DECOSTA	11 MERRILL	HAMPTON FALLS	8	B072-LOT00	12469	ENE
106.0413	BEDROCK	DOMESTIC	42.90815	-70.864733		33 LAFAYETTE	HAMPTON FALLS	07-064	07-064	10900	ENE
106.0417	BEDROCK	DOMESTIC	42.906315	-70.8705471	UNKNOWN NAME	62 KENSINGTON RD	HAMPTON FALLS	7	32	9232	ENE
106.0419	BEDROCK	DOMESTIC	42.915567	-70.896933	BRIMANTE	48 CRANK RD	HAMPTON FALLS	1	87	5639	NNE
214.0031	BEDROCK	DOMESTIC	42.89043097	-70.89891088	G LOCKE	72 LEDGE RD	SEABROOK	3	24	4130	SSE
214.0054	BEDROCK	DOMESTIC	42.89723277	-70.91394744	SMALL	1 FRANCES DR	SEABROOK	2	44927	2948	WSW
214.009	BEDROCK	DOMESTIC	42.88782456	-70.90583276	EPPING WELL & PUMP		SEABROOK			4843	S
214.01	BEDROCK	DOMESTIC	42.89010733	-70.90223388	M. MISPILKIN	38 LEDGE RD	SEABROOK	3	45085	4029	S
106.0002	BEDROCK	DOMESTIC	42.91577138	-70.88781765	F STILES	4 GOODWIN RD	HAMPTON FALLS	1	77	6938	NE
106.0008	BEDROCK	DOMESTIC	42.91011965	-70.88582157	J MARMONTI	107 KENSINGTON RD	HAMPTON FALLS	2	5	5941	NE
106.0009	BEDROCK	DOMESTIC	42.90953173	-70.85736962	D DEWITT	BRIMMER LN	HAMPTON FALLS	7	60-3	12936	ENE
106.001	BEDROCK	DOMESTIC	42.91413142	-70.85803668	R REMINGTON	39 COACH LN	HAMPTON FALLS	8	83-11	13268	ENE
106.0011	BEDROCK	DOMESTIC	42.91285193	-70.88954427	G BOSWORTH	GOODWIN RD	HAMPTON FALLS	1		5831	NE
106.0014	BEDROCK	DOMESTIC	42.91321942	-70.85780783	J CASEY JR	COACH LN	HAMPTON FALLS			13210	ENE
106.0015	BEDROCK	DOMESTIC	42.91616033	-70.85806208	M CARATELLI	COACH LN	HAMPTON FALLS			13544	ENE
106.0017	BEDROCK	DOMESTIC	42.90688033	-70.87306349	A RUSH	76 KENSINGTON RD	HAMPTON FALLS	7	35	8622	ENE
106.0022	BEDROCK	DOMESTIC	42.91580153	-70.85994485	BERRY & FORTIER	COACH LN	HAMPTON FALLS	8	83-16	13031	ENE
106.0025	BEDROCK	DOMESTIC	42.90811015	-70.89096165	G HEAL	7 MILL LN	HAMPTON FALLS	1	16-1	4392	NE
106.0035	BEDROCK	DOMESTIC	42.92080728	-70.8830231	F FULLER	BIRCH DR	HAMPTON FALLS	2	50-438	9173	NE
106.0036	BEDROCK	DOMESTIC	42.91394372	-70.85674943	A ANDERSON	COACH LN	HAMPTON FALLS	8	83-8	13566	ENE
106.0038	BEDROCK	DOMESTIC	42.91572233	-70.8650067	HF REALTY TRUST	CNR RTE 88	HAMPTON FALLS			11795	ENE
106.0042	BEDROCK	DOMESTIC	42.90995263	-70.89646588	J DORAN	RTE 84	HAMPTON FALLS	1	94-1	3855	NNE
106.0043	BEDROCK	DOMESTIC	42.91764088	-70.88804425	TWIN TOWN HOMES	CRANK RD	HAMPTON FALLS	1	67-3	7442	NE
106.0044	BEDROCK	DOMESTIC	42.91917622	-70.8894903	R COX	27 CRANK RD	HAMPTON FALLS	1	67-7	7697	NNE
106.0049	BEDROCK	DOMESTIC	42.90572532	-70.87550172	THERMO HOMES INC	DODGE RD	HAMPTON FALLS	7	3	7889	ENE
106.0051	BEDROCK	DOMESTIC	42.91927715	-70.88713935	R FOSTER	CRANK RD	HAMPTON FALLS	1	67	8069	NE
106.0054	BEDROCK	DOMESTIC	42.91663908	-70.8594184	E LUPONI	23 COACH LN	HAMPTON FALLS	8	83-15	13287	ENE
106.0056	BEDROCK	DOMESTIC	42.91690833	-70.86066105	T MONROE	COACH LN	HAMPTON FALLS	8	83-1	13030	ENE
106.0058	BEDROCK	DOMESTIC	42.91355692	-70.86204667	A EDGERLY	MEADOW LN	HAMPTON FALLS	8	84-11	12191	ENE
106.0059	BEDROCK	DOMESTIC	42.9148843	-70.85659752	J MURRAY	COACH LN	HAMPTON FALLS	8	83-6	13726	ENE
106.0061	BEDROCK	DOMESTIC	42.91526958	-70.85800503	L POWICKI	33 COACH LN	HAMPTON FALLS	8	83-13	13430	ENE
106.0068	BEDROCK	DOMESTIC	42.92222185	-70.87485522	D VERITY	MARTHAS CT	HAMPTON FALLS	2	82-4	11024	NE
106.0082	BEDROCK	DOMESTIC	42.91659252	-70.89310977	R ANDERSON	38 CRANK RD	HAMPTON FALLS	1	86	6400	NNE
106.0083	BEDROCK	DOMESTIC	42.90951715	-70.89461596	S LYNCH	KENSINGTON RD	HAMPTON FALLS	1	17-3	4021	NE
106.0085	BEDROCK	DOMESTIC	42.91577613	-70.8915925	A MAGNARELLI	1 GOODWIN RD	HAMPTON FALLS	1	83-5-A	6346	NNE

Domestic Wells Within 1000 Feet of Potential Impact Area
Weare Road Seabrook, NH

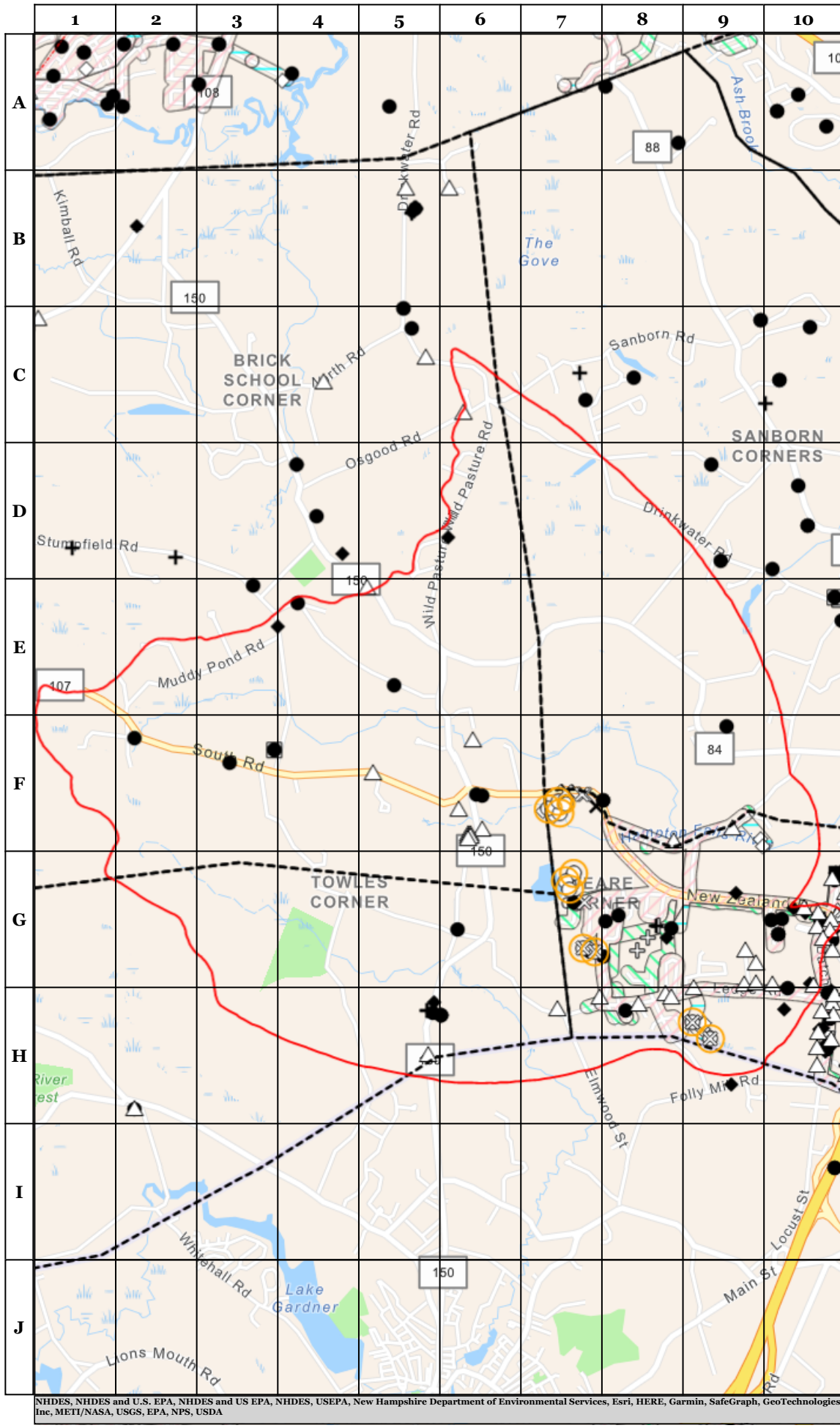
WRB_NUMBER	TYPE	USE	LATITUDE	LONGITUDE	NAME	ADDRESS	TOWN	MAP	LOT	DISTANCE (ft)	Direction
106.009	BEDROCK	DOMESTIC	42.91471452	-70.8576404	MARDON CORP	35 COACH LN	HAMPTON FALLS	8	83-12	13444	ENE
106.0103	BEDROCK	DOMESTIC	42.90996905	-70.87378209	R DAVEY	71 KENSINGTON RD	HAMPTON FALLS	7	6	8786	ENE
106.0106	BEDROCK	DOMESTIC	42.91135145	-70.86803155	D JANVRIN	28 KENSINGTON RD	HAMPTON FALLS	7	26	10405	ENE
106.0107	BEDROCK	DOMESTIC	42.91201553	-70.86749293	D DIAL	22 KENSINGTON RD	HAMPTON FALLS	7	24	10628	ENE
106.0109	BEDROCK	DOMESTIC	42.91591243	-70.90104278	T GORMLEY	166 KENSINGTON RD	HAMPTON FALLS	1	44-1	5481	N
106.0127	BEDROCK	DOMESTIC	42.90389052	-70.90808139	N POND	37 MILL LN	HAMPTON FALLS	1	23-1	1454	NW
106.013	BEDROCK	DOMESTIC	42.91021393	-70.88694477	A FOSTER	111 KENSINGTON RD	HAMPTON FALLS	1	100	5713	NE
106.0133	BEDROCK	DOMESTIC	42.91261448	-70.90113586	K ODONNELL	154 KENSINGTON RD	HAMPTON FALLS	1	40-1	4293	N
106.0204	BEDROCK	DOMESTIC	42.91950933	-70.87722195	J FLEMING	12 DRINKWATER RD	HAMPTON FALLS	2	24	9882	NE
106.0209	BEDROCK	DOMESTIC	42.91688853	-70.87278692	BENOIT DEVEL	8 WHITTIER DR	HAMPTON FALLS	2	4-17	10215	NE
106.021	BEDROCK	DOMESTIC	42.91636837	-70.87378285	BENOIT DEVEL	5 WHITTIER DR	HAMPTON FALLS	2	4-28	9888	NE
106.0212	BEDROCK	DOMESTIC	42.91351785	-70.87703713	BENOIT DEVEL	1 GOV POWELL RD	HAMPTON FALLS	2	4-34	8590	ENE
106.0221	BEDROCK	DOMESTIC	42.91802232	-70.88761093	T GILBERT	17 CRANK RD	HAMPTON FALLS	1	68	7622	NE
106.0239	BEDROCK	DOMESTIC	42.90364364	-70.8995263	J ARNAT	33 MILL LN	HAMPTON FALLS	1	19	1578	NE
106.024	BEDROCK	DOMESTIC	42.91615463	-70.90008855	NEWELL EATON	167 KENSINGTON RD	HAMPTON FALLS	1	57	5613	NNE
106.0241	BEDROCK	DOMESTIC	42.91846372	-70.86801063	B MERRILL	20 EXETER RD	HAMPTON FALLS	8	28-1	11598	ENE
106.0243	BEDROCK	DOMESTIC	42.91900425	-70.87429037	SECOND STOREY HOMES	5 FIELDSTONE LN	HAMPTON FALLS	2	23-2	10354	NE
106.0244	BEDROCK	DOMESTIC	42.9183946	-70.87251	SECOND STOREY HOMES	9 FIELDSTONE LN	HAMPTON FALLS	2	23-4	10595	NE
106.0271	BEDROCK	DOMESTIC	42.91300913	-70.86100735	B ORLUK	MEADOW LN	HAMPTON FALLS	8	84-7	12378	ENE
106.0272	BEDROCK	DOMESTIC	42.91543835	-70.87892697	D HUDSON	ALEXIS LN	HAMPTON FALLS	2	4-21	8574	NE
106.0273	BEDROCK	DOMESTIC	42.91428953	-70.86466385	D DREEN	LAFAYETTE RD	HAMPTON FALLS	8	91	11652	ENE
106.0274	BEDROCK	DOMESTIC	42.90769548	-70.8626778	B BARTER	9 BRIMMER LN	HAMPTON FALLS	7	64-1	11399	ENE
106.0275	BEDROCK	DOMESTIC	42.90783083	-70.86112705	FIELDSTONE BUILDERS	17 BRIMMER LN	HAMPTON FALLS	7	64-3	11816	ENE
106.0276	BEDROCK	DOMESTIC	42.90795217	-70.85933333	FIELDSTONE BUILDERS	11 BRIMMER LN	HAMPTON FALLS	7	64-2	12295	ENE
106.0283	BEDROCK	DOMESTIC	42.91406002	-70.90074096	M VELTOS	KENSINGTON RD	HAMPTON FALLS	1	43	4830	N
106.0284	BEDROCK	DOMESTIC	42.91863623	-70.88746882	J SPINNATO	CRANK RD	HAMPTON FALLS	1	69	7827	NE
106.0301	BEDROCK	DOMESTIC	42.91791833	-70.87406618	DUPERE CORP	MARTHAS CT	HAMPTON FALLS	2	82-7	10157	NE
214.0035	BEDROCK	DOMESTIC	42.88989122	-70.90333276	EPPING WELL & PUMP	LEDGE RD	SEABROOK			4079	S
214.004	BEDROCK	DOMESTIC	42.89299885	-70.89919622	D ROY	68 BORDER WINDS AVE	SEABROOK	2	94-11	3236	SSE
214.0042	BEDROCK	DOMESTIC	42.89169503	-70.89740257	P EVANS	44 BORDER WINDS AVE	SEABROOK	2	94-17	3876	SSE
214.0046	BEDROCK	DOMESTIC	42.89089982	-70.90284113	R MELANSA	16 ALISON DR	SEABROOK	2	73	3723	S
214.0048	BEDROCK	DOMESTIC	42.89059125	-70.90150227	W SHAMPLE	4 BORDER WINDS AVE	SEABROOK	2	94-27	3887	S
214.0068	BEDROCK	DOMESTIC	42.89212257	-70.90199761	R KENYON	15 BORDER WINDS AVE	SEABROOK	2	94-4	3313	S
214.0073	BEDROCK	DOMESTIC	42.88685972	-70.88551619	WATERLINE INDUSTRIES	145 BATCHELDER RD	SEABROOK	6	34-3	7212	SE
214.0078	BEDROCK	DOMESTIC	42.89090585	-70.90156281	P. WANING	8 BORDER WINDS AVE	SEABROOK	2	94-26	3771	S
214.0079	BEDROCK	DOMESTIC	42.8915136	-70.89806925	B. HAMMOND	40 BORDER WINDS AVE	SEABROOK	2	94-18	3854	SSE
214.0083	BEDROCK	DOMESTIC	42.88697389	-70.91446363	T. MARTIN	3 AVA MAE LN	SEABROOK	3	2-10	5818	SSW
106.0442	BEDROCK	DOMESTIC	42.922717	-70.877033	BRYNE	60 EXETER ROAD	HAMPTON FALLS	2	77	10746	NE
106.0446	BEDROCK	DOMESTIC	42.9120552	-70.8596626	UNKNOWN NAME	12 MARINERS LANE	HAMPTON FALLS	8	84-5-1	12601	ENE
106.0449	BEDROCK	DOMESTIC	42.905567	-70.873233	CONNOLLY FAMILY TRUST	10 DODGE ROAD	HAMPTON FALLS	7	038-001	8473	E
106.045	BEDROCK	DOMESTIC	42.919917	-70.878267	WEINHOLD	16 DRINKWATER RD	HAMPTON FALLS	2	025-000	9783	NE
106.0455	BEDROCK	DOMESTIC	42.91075	-70.901233	COGSWORTH	6 PEVEAR LN.	HAMPTON FALLS	1	37	3623	NNE
106.0398	BEDROCK	DOMESTIC	42.91366667	-70.8698	JAMES WIECZOREK	94 LAFAYETTE RD	HAMPTON FALLS	8	40	10311	ENE
106.0401	BEDROCK	DOMESTIC	42.91361667	-70.86988333	SCOTT & LINDA BIEBER	5 WOODLAWN AVE	HAMPTON FALLS	8	033.00	10283	ENE
106.0408	BEDROCK	DOMESTIC	42.9173	-70.90046667	LOUIE DOW & KEVIN MERRILL	N/A HARDY LN	HAMPTON FALLS	1	5	6005	N
106.0414	BEDROCK	DOMESTIC	42.90668333	-70.89186667	RICH KNIGHT	12 MILL LN	HAMPTON FALLS	1	6	3901	ENE
106.0424	BEDROCK	DOMESTIC	42.91603333	-70.89741667	KPB FAMILY TRUST KPB FAMILY TRUST	50 CRANK RD.	HAMPTON FALLS	1	88	5756	NNE
106.0428	BEDROCK	DOMESTIC	42.91906667	-70.88655	CHRISTINE & KEN MAKEPEACE	10 CRANK ROAD	HAMPTON FALLS	01	075.04	8097	NE
106.0438	BEDROCK	DOMESTIC	42.91831667	-70.90193333	BRIAN WOLPERT	8 HARDY LANE	HAMPTON FALLS	1	65-2	6320	N
106.0439	BEDROCK	DOMESTIC	42.91335	-70.87045	GREG KOULOHERAS	6 WOODLAWN AVE	HAMPTON FALLS	7	17	10104	ENE
106.0444	BEDROCK	DOMESTIC	42.91686667	-70.88766667	PAUL SCHLEPPY	2 GOODWIN ROAD	HAMPTON FALLS	1	76	7276	NE
106.0046	BEDROCK	DOMESTIC	42.9078178	-70.91346379	R CARTER	49 WEARE RD	HAMPTON FALLS	1	32-2	3486	NW
106.0081	BEDROCK	DOMESTIC	42.90848645	-70.91254144	C MUTRIE	9 LA-FIESTA DR	HAMPTON FALLS	1	30-3	3501	NW
214.0145	OVERBURDEN	DOMESTIC	42.90277221	-70.86574349	UNKNOWN NAME	53 B STREET	SEABROOK	7	90	10338	E

All Wells Unable to be Located Within 1000 Feet of Potential Impact Area
Weare Road Seabrook, NH

WRB_NUMBER	ADDRESS_1	Full_add	TOWN	NAME	MAP	LOT	TYPE_DESCRIPTION	USE_DESCRIPTION	TOTAL_DEPTH	DEPTH_TO_BEDROCK	CASING	TESTED_YIELD
106.0016	RTE 1	RTE 1, HAMPTON FALLS, New Hampshire	HAMPTON FALLS	VILLAGE BARN GARDEN CTR			DRILLED IN BEDROCK	COMMERCIAL;	150 ft	38 ft	61 ft	25 gal/min
106.0019	RTE 1	RTE 1, HAMPTON FALLS, New Hampshire	HAMPTON FALLS	P DANUSIS			DRILLED IN BEDROCK	DOMESTIC;	120 ft	10 ft	21 ft	15 gal/min
106.0028	RTE 88	RTE 88, HAMPTON FALLS, New Hampshire	HAMPTON FALLS	CONVERTED CONTR			DRILLED IN BEDROCK	DOMESTIC;	162 ft	28 ft	40 ft	4 gal/min
106.003	RTE 88	RTE 88, HAMPTON FALLS, New Hampshire	HAMPTON FALLS	D VERITY			DRILLED IN BEDROCK	DOMESTIC;	150 ft	30 ft	47 ft	30 gal/min
106.0031	RTE 88	RTE 88, HAMPTON FALLS, New Hampshire	HAMPTON FALLS	D VERITY			DRILLED IN BEDROCK	DOMESTIC;	100 ft	25 ft	37 ft	20 gal/min
106.0038	CNR RTE 88	CNR RTE 88, HAMPTON FALLS, New Hampshire	HAMPTON FALLS	HF REALTY TRUST			DRILLED IN BEDROCK	DOMESTIC;	300 ft	50 ft	67 ft	15 gal/min
106.0048	UNKNOWN ADDRESS	UNKNOWN ADDRESS, HAMPTON FALLS, New Hampshire	HAMPTON FALLS	M BURNETT			DRILLED IN BEDROCK	DOMESTIC;	130 ft	45 ft	60 ft	15 gal/min
106.005	RTE 1	RTE 1, HAMPTON FALLS, New Hampshire	HAMPTON FALLS	UNIT 8 TRUST			DRILLED IN BEDROCK	DOMESTIC;	120 ft	19 ft	32 ft	7 gal/min
106.0052	RTE 88	RTE 88, HAMPTON FALLS, New Hampshire	HAMPTON FALLS	B HARRIS			DRILLED IN BEDROCK	DOMESTIC;	482 ft	11 ft	21 ft	2.5 gal/min
106.0053	RTE 88	RTE 88, HAMPTON FALLS, New Hampshire	HAMPTON FALLS	LIBERTY HOUSE WRIGHTS			DRILLED IN BEDROCK	DOMESTIC;	300 ft	8 ft	20 ft	3 gal/min
106.0069	RTE 88	RTE 88, HAMPTON FALLS, New Hampshire	HAMPTON FALLS	P KECHAU			DRILLED IN BEDROCK	DOMESTIC;	302 ft	9 ft	20 ft	3 gal/min
106.0079	RTE 1	RTE 1, HAMPTON FALLS, New Hampshire	HAMPTON FALLS	R FITZGERALD			DRILLED IN BEDROCK	DOMESTIC;	220 ft	50 ft	68 ft	4 gal/min
106.008	RTE 84	RTE 84, HAMPTON FALLS, New Hampshire	HAMPTON FALLS	M MARKET			DRILLED IN BEDROCK	DOMESTIC;	600 ft	10 ft	22 ft	2.5 gal/min
106.0099	RTE 88	RTE 88, HAMPTON FALLS, New Hampshire	HAMPTON FALLS	M ROY			DRILLED IN BEDROCK	DOMESTIC;	175 ft	28 ft	43 ft	20 gal/min
106.0104	RTE 88	RTE 88, HAMPTON FALLS, New Hampshire	HAMPTON FALLS	STATE DOT (L TUTTLE)			DRILLED IN BEDROCK	DOMESTIC;	375 ft	100 ft	119 ft	12 gal/min
106.0105	RTE 1	RTE 1, HAMPTON FALLS, New Hampshire	HAMPTON FALLS	STATE DOT (D ALSTON)			DRILLED IN BEDROCK	DOMESTIC;	125 ft	60 ft	80 ft	10 gal/min
106.0124	RTE 88	RTE 88, HAMPTON FALLS, New Hampshire	HAMPTON FALLS	MICHSON			DRILLED IN BEDROCK	DOMESTIC;	540 ft	30 ft	60 ft	7.5 gal/min
106.0125	RTE 88	RTE 88, HAMPTON FALLS, New Hampshire	HAMPTON FALLS	MICHLESON			DRILLED IN BEDROCK	DOMESTIC;	540 ft	15 ft	30 ft	30 gal/min
106.0142	RTE 88	RTE 88, HAMPTON FALLS, New Hampshire	HAMPTON FALLS	R YAMADA		LOT 262	DRILLED IN BEDROCK	DOMESTIC;	120 ft	37 ft	51 ft	40 gal/min
106.0145	RTE 88	RTE 88, HAMPTON FALLS, New Hampshire	HAMPTON FALLS	C VAJGRT			DRILLED IN BEDROCK	DOMESTIC;	143 ft	40 ft	81 ft	100 gal/min
106.0156	WELLINGTON FARM RD	WELLINGTON FARM RD, HAMPTON FALLS, New Hampshire	HAMPTON FALLS	NE DESIGN		LOT 2	DRILLED IN BEDROCK	DOMESTIC;	142 ft	32 ft	47 ft	7 gal/min
106.0166	UNKNOWN ADDRESS	UNKNOWN ADDRESS, HAMPTON FALLS, New Hampshire	HAMPTON FALLS	GREAT WOODS POST & BEAM			DRILLED IN BEDROCK	DOMESTIC;	345 ft	80 ft	115 ft	8 gal/min
106.0172	RTE 88	RTE 88, HAMPTON FALLS, New Hampshire	HAMPTON FALLS	R MACDONALD			DRILLED IN BEDROCK	DOMESTIC;	200 ft	42 ft	51 ft	20 gal/min
106.0177	RTE 88	RTE 88, HAMPTON FALLS, New Hampshire	HAMPTON FALLS	HARTLAND CONST		LOT 1	DRILLED IN BEDROCK	DOMESTIC;	245 ft	48 ft	60 ft	15 gal/min
106.0188	RTE 88	RTE 88, HAMPTON FALLS, New Hampshire	HAMPTON FALLS	SOUTHWICK CORP BLDG CONTR		LOT 2	DRILLED IN BEDROCK	DOMESTIC;	82 ft	28 ft	40 ft	50 gal/min
106.0189	RTE 88	RTE 88, HAMPTON FALLS, New Hampshire	HAMPTON FALLS	SOUTHWICK CORP BLDG CONTR		LOT 3	DRILLED IN BEDROCK	DOMESTIC;	102 ft	37 ft	60 ft	50 gal/min
106.0268	GOVERNORS RIDGE RD	GOVERNORS RIDGE RD, HAMPTON FALLS, New Hampshire	HAMPTON FALLS	GREEN & CO		2	DRILLED IN BEDROCK	DOMESTIC;	140 ft	37 ft	51 ft	20 gal/min
106.0269	GOVERNORS RIDGE RD	GOVERNORS RIDGE RD, HAMPTON FALLS, New Hampshire	HAMPTON FALLS	GREEN & CO		LOT 1	DRILLED IN BEDROCK	DOMESTIC;	75 ft	43.5 ft	60 ft	30 gal/min
106.027	GOVERNORS RIDGE RD	GOVERNORS RIDGE RD, HAMPTON FALLS, New Hampshire	HAMPTON FALLS	GREEN & CO		LOT 3	DRILLED IN BEDROCK	DOMESTIC;	240 ft	15 ft	30 ft	10 gal/min
106.0285	RTE 88	RTE 88, HAMPTON FALLS, New Hampshire	HAMPTON FALLS	T WASSON		LOT 1	DRILLED IN BEDROCK	DOMESTIC;	225 ft	16 ft	42 ft	10 gal/min
106.0296	WELLINGTON FARM RD	WELLINGTON FARM RD, HAMPTON FALLS, New Hampshire	HAMPTON FALLS	BENOIT DEVEL		LOT 27	DRILLED IN BEDROCK	DOMESTIC;	140 ft	8 ft	20 ft	12 gal/min
106.035	RTE 1	RTE 1, HAMPTON FALLS, New Hampshire	HAMPTON FALLS	CHANGING PLACES LLC			DRILLED IN BEDROCK	DOMESTIC;	240 ft	54 ft	70 ft	22 gal/min
106.0381	RTE 88	RTE 88, HAMPTON FALLS, New Hampshire	HAMPTON FALLS	AMES MODULAR HOMES			DRILLED IN BEDROCK	DOMESTIC;	120 ft	18 ft	41 ft	75 gal/min
106.0383	THE COMMONS RTE 1 & RTE 88	THE COMMONS RTE 1 & RTE 88, HAMPTON FALLS, New Hampshire	HAMPTON FALLS	TOWN OF HAMPTON FALLS	8	88	DRILLED IN BEDROCK	AGRICULTURAL;	300 ft	45 ft	60 ft	30 gal/min
106.0408	N/A HARDY LN	N/A HARDY LN, HAMPTON FALLS, New Hampshire	HAMPTON FALLS	LOUIE DOW & KEVIN MERRILL	1	5	BEDROCK (DRILLED)	DOMESTIC DRINKING WATER;	140 ft	48 ft	96 ft	60 gal/min
214.0002	OFF TRUE RD	OFF TRUE RD, SEABROOK, New Hampshire	SEABROOK	TOWN OF SEABROOK			DRILLED IN GRAVEL	TEST/EXPLORATION;	31.7 ft	33 ft	30.7 ft	
214.0004	OFF OLD NEW BOSTON RD	OFF OLD NEW BOSTON RD, SEABROOK, New Hampshire	SEABROOK	TOWN OF SEABROOK			DRILLED IN GRAVEL	TEST/EXPLORATION;	30 ft		28 ft	
214.0008	RTE 1	RTE 1, SEABROOK, New Hampshire	SEABROOK	HYDRO ENVIRONMENTAL			UNDIFFERENTIATED	TEST/EXPLORATION;	12 ft		12 ft	
214.0011	RTE 107	RTE 107, SEABROOK, New Hampshire	SEABROOK	SEABROOK WATER DEPT			DRILLED IN BEDROCK	TEST/EXPLORATION;	203 ft	59 ft	73 ft	12 gal/min
214.0012	RTE 1	RTE 1, SEABROOK, New Hampshire	SEABROOK	XCEL			UNDIFFERENTIATED	TEST/EXPLORATION;	7 ft	7 ft		
214.0013	UNKNOWN ADDRESS	UNKNOWN ADDRESS, SEABROOK, New Hampshire	SEABROOK	WHITMAN & HOWARD			UNDIFFERENTIATED	TEST/EXPLORATION;	387 ft	68 ft	84 ft	90 gal/min
214.0014	UNKNOWN ADDRESS	UNKNOWN ADDRESS, SEABROOK, New Hampshire	SEABROOK	WHITMAN & HOWARD			DRILLED IN BEDROCK	TEST/EXPLORATION;	300 ft	41 ft	49 ft	75 gal/min
214.0015	UNKNOWN ADDRESS	UNKNOWN ADDRESS, SEABROOK, New Hampshire	SEABROOK	WHITMAN & HOWARD			DRILLED IN BEDROCK	TEST/EXPLORATION;	200 ft	46 ft	56 ft	110 gal/min
214.0016	UNKNOWN ADDRESS	UNKNOWN ADDRESS, SEABROOK, New Hampshire	SEABROOK	WHITMAN & HOWARD			DRILLED IN BEDROCK	TEST/EXPLORATION;	300 ft	63 ft	72 ft	100 gal/min
214.0022	RTE 1	RTE 1, SEABROOK, New Hampshire	SEABROOK	AUTO SHINE CAR WASH			DRILLED IN BEDROCK	COMMERCIAL;	305 ft	48 ft	60 ft	30 gal/min
214.0025	RTE 107	RTE 107, SEABROOK, New Hampshire	SEABROOK	GENNONI ASSOCIATION			DRILLED IN GRAVEL	TEST/EXPLORATION;	20 ft	9 ft	1 ft	
214.0036	OFF RTE 1	OFF RTE 1, SEABROOK, New Hampshire	SEABROOK	TOWN OF SEABROOK			DUG	MUNICIPAL;	24 ft		24 ft	300 gal/min
214.0077	RTE 1	RTE 1, SEABROOK, New Hampshire	SEABROOK	PROWASH CAR WASH		2537	DRILLED IN BEDROCK	COMMERCIAL;	505 ft	25 ft	42 ft	5 gal/min
214.009	UNKNOWN ADDRESS	UNKNOWN ADDRESS, SEABROOK, New Hampshire	SEABROOK	EPPING WELL & PUMP			DRILLED IN BEDROCK	DOMESTIC;	280 ft	120 ft	140 ft	75 gal/min

Appendix L

List of PCSs within PIA



GROUND WATER PROTECTION AREA INVENTORY MAP

SEABROOK WATER DEPT

HAMPTON FALLS, KENSINGTON, SEABROOK, SOUTH HAMPTON

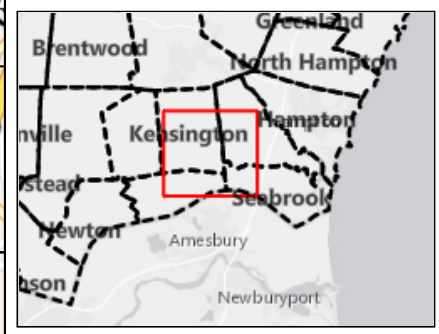
2111010-001, 002, 003, 004, 006, 007, 008, 009, 011, 014, 015

- Approximate Delineation Boundary
- Sanitary Protection Area
- Aboveground Storage Tank Facilities
- Automobile Salvage Yard Facilities
- Local Potential Contamination Source Inventory Sites
- National Pollutant Discharge System (NPDES) Outfalls
- Public Water Supply Facilities
- Public Water Supply Sources
- Registered Water Users
- Resource Conservation and Recovery Act (RCRA) Sites
- Solid Waste Facilities
- Source Water Hazard Inventory Sites
- Underground Storage Tank Facilities
- Town Boundaries
- Railroad Lines
- Transmission Lines
- Water Line Distribution
- Sewer Line Distribution
- Water and Sewer Line Distribution

Map prepared on 2/1/2023

Scale = 1 : 226,000 Feet

0 2354 feet



NEW HAMPSHIRE DEPARTMENT OF Environmental

State of New Hampshire Department of Environmental Services Inventory of Potential and Existing Sources of Groundwater Contamination Within the Wellhead Protection Area

EPA ID: 2111010-001, 002, 003, 004, 006, 007, 008, 009, 011, 014, 015

SYSTEM NAME: SEABROOK WATER DEPT

TOWN(s): HAMPTON FALLS, KENSINGTON, SEABROOK, SOUTH HAMPTON

NOTES: Report prepared on 2/1/2023 by the NHDES Drinking Water and Groundwater Bureau. Only GIS features contained within the approximate delineation boundary are listed. The map-cell column in the report indicates which 2453 X 4087 foot grid cell the site of facility is located on the accompanying map. For example, a map cell value of 'G-11' indicates column 'G' and row '11'. Text outlined by a blue rectangle provides a link to the feature's DES OneStop page providing additional information.

Aboveground Storage Tank Facilities

These are facilities where there are, or were in the case of inactive sites, aboveground storage tanks. If there is a documented release from a tank, it becomes a LAST project type and is also listed in the Source Water Hazard Inventory. Status is only indicated for numbered tanks. F=Facility, O=Historical.

FACILITY SITE#:	FACILITY NAME:	FACILITY ADDRESS:	TANK #:	STATUS:	MAP CELL:
199708035-970835A-F	YANKEE GREYHOUND RACING INC	RTE 107, SEABROOK			G8
199708035-970835A-O	YANKEE GREYHOUND RACING INC	RTE 107, SEABROOK			G8
199708035-970835A-O	YANKEE GREYHOUND RACING INC	RTE 107, SEABROOK			G8

National Pollutant Discharge Elimination System (NPDES) Outfalls

All facilities which discharge any pollutant from point sources to surface waters (directly or indirectly) are required to obtain a federal permit from the US Environmental Protection Agency and a State Water Discharge Permit from NHDES.

OUTFALL ID#:	FACILITY NAME:	FACILITY ADDRESS:	STATUS:	TYPE:	CATEGORY:	WATER BODY:	MAP CELL:
910007-001	GRUHN ENGINE REPAIR SITE (198905073) (GWR)	35 WEARE ROAD, HAMPTON FALLS	ACTIVE	Minor	GWR	Hampton Falls River	F7

Local Potential Contamination Source Inventory Sites

This includes potential contamination sources within a source water protection area. The sites were located by Public Water Systems applying for a sampling waiver or by NHDES-DWGB staff during "windshield surveys".

SITE#:	SITE NAME:	SITE ADDRESS:	PROJECT TYPE:	MAP CELL:
PCS00656	CIMARRON APARTMENTS	24 BATCHELDER RD, SEABROOK	UST	G10
PCS00663	CORIUM CORP	9 BATCHELDER RD, SEABROOK	MAN	G10
PCS00668	HALE BROS INC	16 STARD RD, SEABROOK	MW	G10
PCS00879	DIAMOND PAVING	114 ROUTE 150, SOUTH HAMPTON	CAT	H5
PCS00881	RICK'S FIX IT SHOP	167 ROUTE 107, SEABROOK	GSR	G10
PCS00882	PATS TOWING	175 RTE 107, SEABROOK	VSR	G10
PCS01164	A COUNTRY SETTING	237 SOUTH RD, KENSINGTON	CLN	F5
PCS01732	(NO NAME PROVIDED)	KENSINGTON	EEE	C6
PCS01985	NAPA/ SEARS	1 BATCHELDER ROAD, SEABROOK	VSR	G10
PCS01986	RICHARDSON ELECTRIC CO.	17 BATCHELDER ROAD, SEABROOK	MAN	G10
PCS01987	HURLEY ENGINEERING/ PRECISION MACHINERY	19 BATCHELDER ROAD, SEABROOK	MW	G10
PCS01988	JANVRIN CONSTRUCTION & TRUCKING	60 MILL LANE, SEABROOK	VSR	F9
PCS01989	VEDRANI FAMINY TRUST	120 TRUE ROAD, SEABROOK	FP	H7
PCS01990	LAGO & SONS CONSTRUCTION	1 BLACKSNAKE ROAD, SEABROOK	GSR	H8
PCS01991	MATRIX PAVING & EXCAVATING	94 BLACKSNAKE ROAD, SEABROOK	EEE	H7
PCS01992	SHAMROCK PAVING	11 LEDGE ROAD, SEABROOK	GSR	H8

PCS01993	DIAMOND PAVING	14 LEDGE ROAD, SEABROOK	GSR	H8
PCS01994	TSC PAVING	49 LEDGE ROAD, SEABROOK	GSR	G9
PCS01995	HARLEY REAL ESTATE DEVELOPMENT	85 LEDGE ROAD, SEABROOK	GSR	G10
PCS01996	INDUSTRIAL CONDOS	103 LEDGE ROAD, SEABROOK	GSR,LANDMNGT	G10
PCS01997	WATERLINE INDUSTRIES	7 LONDON LANE, SEABROOK	GSR	G9
PCS01998	JTA CORPORATION	8 LONDON LANE, SEABROOK	GSR	G9
PCS01999	MICROVISION, INC.	20 LONDON LANE, SEABROOK	LAB	G9
PCS02000	ARCSOURCE	36 LONDON LANE, SEABROOK	MW	G9
PCS02001	RICK'S SEPTIC SERVICE	3 WEARE ROAD, HAMPTONG FALLS	GSR	F8
PCS02002	CHRISTOPHER D BETCHELDER AND B & S CONTAINER SERVICE	7 PINE LANE, HAMPTON FALLS	GSR	F6
PCS02004	ARTHUR F WIGGIN, JR (OWNER)	268 SOUTH ROAD, KENSINGTON	EEE	F6
PCS02006	CP BUILDING SUPPLY, INC.	268 AMESBURY ROAD, KENSINGTON	GSR	F6
PCS02024	VIKING WELDING/ SHEEP ISLAND BOATS- METAL FAB.	INDUST CONDOS 243 AMESBURY RD, KENSINGTON	MW	F6
PCS02025	WOODWRIGHTS, INC.	UNIT 3 INDUST CONDOS, 243 AMESBURY RD, KENSINGTON	GSR	F6
PCS02026	WAYACA CONSTRUCTION / LCI GENERAL CONTRACTOR	UNIT 5 INDUST CONDOS, 243 AMESBURY RD, KENSINGTON	GSR	F6
PCS02027	SEACOAST FLOORING SUPPLY	UNIT 6 INDUST CONDOS, AMESBURY RD, KENSINGTON	GSR	F6
PCS02031	DESIGNER EXPRESSION	UNIT 7 INDUST CONDOS, AMESBURY RD, KENSINGTON	GSR	F6

Public Water Supply Sources and Facilities

SRC. #:	SYSTEM NAME:	SYSTEM ADDRESS:	SYS. TYPE:	SYS. ACT.:	SRC. TYPE:	SRC. ACT.:	SRC. REC.	WELL TYPE:	WELL DEPTH:	POP. SERVED:	MAP CELL:
2111010-001-G	SEABROOK WATER DEPT	RTE 1, SEABROOK	C	ACTIVE	G	ACTIVE	SG	GPW	50	14000	G7
2111010-002-G	SEABROOK WATER DEPT	RTE 1, SEABROOK	C	ACTIVE	G	ACTIVE	SG	GPW	50	14000	G7
2111010-003-G	SEABROOK WATER DEPT	RTE 1, SEABROOK	C	ACTIVE	G	ACTIVE	SG	GPW	90	14000	H9
2111010-004-G	SEABROOK WATER DEPT	RTE 1, SEABROOK	C	ACTIVE	G	ACTIVE	SG	GPW	50	14000	H9
2111010-006-G	SEABROOK WATER DEPT	RTE 1, SEABROOK	C	ACTIVE	G	ACTIVE	SG	BRW	500	14000	F7
2111010-007-G	SEABROOK WATER DEPT	RTE 1, SEABROOK	C	ACTIVE	G	ACTIVE	SG	BRW	500	14000	F7
2111010-008-G	SEABROOK WATER DEPT	RTE 1, SEABROOK	C	ACTIVE	G	ACTIVE	SG	BRW	500	14000	F7
2111010-009-G	SEABROOK WATER DEPT	RTE 1, SEABROOK	C	ACTIVE	G	ACTIVE	SG	BRW	518	14000	F7
2111010-011-G	SEABROOK WATER DEPT	RTE 1, SEABROOK	C	ACTIVE	G	ACTIVE	SG	BRW	402	14000	G7
2111010-014-G	SEABROOK WATER DEPT	RTE 1, SEABROOK	C	ACTIVE	G	ACTIVE	SG	BRW	415	14000	G7
2111010-015-G	SEABROOK WATER DEPT	RTE 1, SEABROOK	C	ACTIVE	G	ACTIVE	SG	BRW	405	14000	G7
2111010-501	SEABROOK WATER DEPT	RTE 1, SEABROOK	C	ACTIVE	E	ACTIVE	PT			14000	G7

2111010-502	SEABROOK WATER DEPT	RTE 1, SEABROOK	C	ACTIVE	E	INACTIVE	PT			14000	G7
2111010-503	SEABROOK WATER DEPT	RTE 1, SEABROOK	C	ACTIVE	E	ACTIVE	PT			14000	H9
2111010-504	SEABROOK WATER DEPT	RTE 1, SEABROOK	C	ACTIVE	E	INACTIVE	PT			14000	H9
2111010-506	SEABROOK WATER DEPT	RTE 1, SEABROOK	C	ACTIVE	E	INACTIVE	PT			14000	F7
2111010-507	SEABROOK WATER DEPT	RTE 1, SEABROOK	C	ACTIVE	E	INACTIVE	PT			14000	F7
2111010-508	SEABROOK WATER DEPT	RTE 1, SEABROOK	C	ACTIVE	E	INACTIVE	PT			14000	F7
2111010-509	SEABROOK WATER DEPT	RTE 1, SEABROOK	C	ACTIVE	E	INACTIVE	PT			14000	F7
2111010-511	SEABROOK WATER DEPT	RTE 1, SEABROOK	C	ACTIVE	E	INACTIVE	PT			14000	G7
2111010-512	SEABROOK WATER DEPT	RTE 1, SEABROOK	C	ACTIVE	E	ACTIVE	PT			14000	H9
2111010-514	SEABROOK WATER DEPT	RTE 1, SEABROOK	C	ACTIVE	E	INACTIVE	PT			14000	F7
2111010-516	SEABROOK WATER DEPT	RTE 1, SEABROOK	C	ACTIVE	E	ACTIVE	PT			14000	F7

Resource Conservation & Recovery Act (RCRA) Sites

These are facilities that generate hazardous waste. If a release is documented, it is also listed under the Source Water Hazard Inventory Sites.

FACILITY SITE#:	FACILITY NAME:	FACILITY ADDRESS:	STATUS:	REGULATED GEN. TYPE:	MAP CELL:
NHD018908913-0005395	ROSENCRANTZ JAMES & SON INC	RTE 107, SOUTH RD, KENSINGTON	ACTIVE	RCRA REGULATED	F3
NHD500002936-0005462	POLAR REFRIGERANT TECHNOLOGIES	89 EXETER RD, SOUTH HAMPTON	DECLASSIFIED	RCRA REGULATED	H5
NHD500013578-0005514	PATS TOWING	173 NEW ZEALAND RD, RTE 107, SEABROOK	INACTIVE	RCRA REGULATED	G10
NHD500023296-0001622	L R S ENVIRO-SERVICES INC	5 BATCHELDER RD, SEABROOK	INACTIVE	RCRA REGULATED	G10
NHD510057557-0009314	SEABROOK GREYHOUND PARK	42 NEW ZEALAND RD, SEABROOK	ACTIVE	STATE REGULATED	G8
NHD510065790-0011141	DIRIGIO DEMOLITION CORP	RTE 107, KENSINGTON	INACTIVE		F6
NHD510119688-0011668	LOWELL S E TRUCKING	39 WILD PASTURE, KENSINGTON	INACTIVE	STATE REGULATED	D6
NHD510123714-0013501	WORTHEN BILL ATLANTIC TRUCK	3 NUDDLY POND RD, KENSINGTON	INACTIVE	STATE REGULATED	E3
NHD510128879-0005304	HUDSON TRUCK SALES	272 SOUTH RD, KENSINGTON	INACTIVE	STATE REGULATED	F6
NHD510132483-0002854	CIMARRON REALTY TRUST	24 BATCHELDER RD, SEABROOK	INACTIVE	STATE REGULATED	G10
NHD510169600-0008686	US FOOD SERVICE INC	100 LEDGE RD, SEABROOK	INACTIVE	STATE REGULATED	H10
NHD510214836-0060062	HAMPTON TRUCK CENTER	118 EXETER RD, SOUTH HAMPTON	ACTIVE	RCRA REGULATED	H5
NHD981897515-0013625	HAMPTON MOTOR CO	RTE 107, SEABROOK	INACTIVE	RCRA REGULATED	G10
NHD986466514-0002965	UTILITY TRAILERS OF NEW ENGLAND INC	242 RTE 107, SEABROOK	ACTIVE	RCRA REGULATED	G9

Source Water Hazard Inventory Sites

This includes all Groundwater Hazard Inventory, Remediation Sites, and Initial Response Spill Sites regulated by NHDES to ensure water resource protection. If status is not indicated, it is assigned to a project manager.

Risk Codes: 1 - Immediate risk to human health. 2 - In wellhead protection area or within 1000' of well.
3 - Free product or high level source. 4 - Surface water impact. 5 - Groundwater impact, no alternate water.
6 - High concentration, alternate water availabe. 7 - Low concentration, alternate water available.
8 - No sources, no ambient groundwater quality standard violations onsite. NDY - Not yet defined.

FACILITY SITE#:	FACILITY NAME:	FACILITY ADDRESS:	PROJECT TYPE:	STATUS:	RISK:	MAP CELL:
100100213-0000000	SEABROOK TOWN FILE	29 HAZEN DR, SEABROOK				G10
100100213-0002897	SEABROOK TOWN FILE	29 HAZEN DR, SEABROOK	SPILL/RLS	CLOSED	8	G10
100100213-0038322	SEABROOK TOWN FILE	29 HAZEN DR, SEABROOK	H2O SAMPLE		NDY	G10
198905073-0000000	GRUHN PROPERTY (SEABROOK WELLFIELD)	RT 107, HAMPTON FALLS				F8
198905073-0000807	GRUHN PROPERTY (SEABROOK WELLFIELD)	RT 107, HAMPTON FALLS	HAZWASTE	CLOSED	8	F8
199008021-0002287	DIRIGIO DEMOLITION	RTE 150, KENSINGTON	LUST	CLOSED	8	F6
199008021-0005716	DIRIGIO DEMOLITION	RTE 150, KENSINGTON	SPILL/RLS	CLOSED	8	F6
199101033-0000000	KENSINGTON ABANDONED DUMP/B & S DUMP	BEAVER DAM ROAD, KENSINGTON				F3
199101033-0002651	KENSINGTON ABANDONED DUMP/B & S DUMP	BEAVER DAM ROAD, KENSINGTON	OLD DUMP		NDY	F3
199502010-0005541	KEVIN ROSENCRANTZ	188 SOUTH RD, KENSINGTON	OPUF	CLOSED	8	F3
199506011-0005805	FORMER MIDWAY EXCAVATORS INC	89 EXETER RD, SOUTH HAMPTON	LUST	CLOSED	8	H6
199506011-0014341	FORMER MIDWAY EXCAVATORS INC	89 EXETER RD, SOUTH HAMPTON	UIC	CLOSED	8	H5
199506011-0018318	FORMER MIDWAY EXCAVATORS INC	89 EXETER RD, SOUTH HAMPTON	MOST		2	H6
199506028-0005825	CHARLES P. BLOUIN INC.	203 ROUTE 107, SEABROOK	UIC	CLOSED	8	G10
199705024-0007029	OBRIENS GENERAL STORE	8 BATCHELDER RD, SEABROOK	LUST		2	G10
199705024-0013212	OBRIENS GENERAL STORE	8 BATCHELDER RD, SEABROOK	LUST	CLOSED	8	G10
199707037-0007159	JOHN & SHIRLEY KLIER RESIDENCE	146 SOUTH ROAD, KENSINGTON	OPUF	CLOSED	8	F2
199708035-0007453	YANKEE GREYHOUND RACING INC	RTE 107, SEABROOK	UIC	CLOSED	8	G8
200007016-0010135	WILLIAM HILL	2 ADDER LANE, SEABROOK	OPUF	CLOSED	8	H8
200207045-0012156	INDUSTRIAL BUILDING	LEDGE ROAD, SEABROOK	HOLDTANK		8	G10
200404067-0013560	KAMCO SUPPLY SPILL	23 TRUE RD, SEABROOK	SPILL/RLS	CLOSED	8	G8
200405062-0015482	SEABROOK WATER DEPT (BRW 5)	40 OLD NEW BOSTON RD, SEABROOK	UIC	CLOSED	8	G7
200604045-0015478	MONTRONE ROPERTY	153 KENSINGTON, HAMPTON FALLS	SPILL/RLS	CLOSED	8	F9
200710034-0017414	WILLIAM RUDOLPH SEITZ	12 HIGHLAND AVE, KENSINGTON	HAZMAT	CLOSED	8	G6
201209063-0029196	SEA BROOK WATER WORKS	40 OLD NEW BOSTON RD, SEABROOK	SPILL/RLS	CLOSED	8	G7
201212018-0029616	TOMAINO RESIDENCE	69 TRUE RD, SEABROOK	OPUF	CLOSED	8	G8
201302034-0030140	TRUCK INCIDENT	203 NEW ZEALAND RD, SEABROOK	IRSPILL	CLOSED	8	G10
201309021-0033812	PATNAUDE PROPERTY	18 COTTAGE RD, KENSINGTON	OPUF		NDY	E5
201604030-0036652	KENSINGTON INVESTMENT(LOT 5-16)	16 COTTAGE ROAD, KENSINGTON	UIC		8	E4
201909021-0000000	DUPUIS RESIDENCE	7 ZEALAND PARK, SEABROOK				G10
201909021-0039355	DUPUIS RESIDENCE	7 ZEALAND PARK, SEABROOK	OPUF	CLOSED	8	G10
202210065-0040932	GRAY PROPERTY	8 TRUE LANE, SEABROOK	IRSPILL		NDY	G8
202211022-0041003	SEABROOK WATER SUPPLY WELL BRW-5	OFF OF OLD NEW BOSTON ROAD, SEABROOK	NDW		NDY	G7

Solid Waste Facilities

Solid Waste Facilities which are permitted by NHDES. This includes transfer stations and recycling centers, landfills, incinerators, and composting facilities.

FACILITY SITE#:	FACILITY NAME:	FACILITY ADDRESS:	STATUS:	TYPE:	MAP CELL:
0000195	KENSINGTON MUNICIPAL LANDFILL	BEAVER DAM RD, KENSINGTON	NOT OPERATING	UNLINED LANDFILL	F3

Registered Water Users

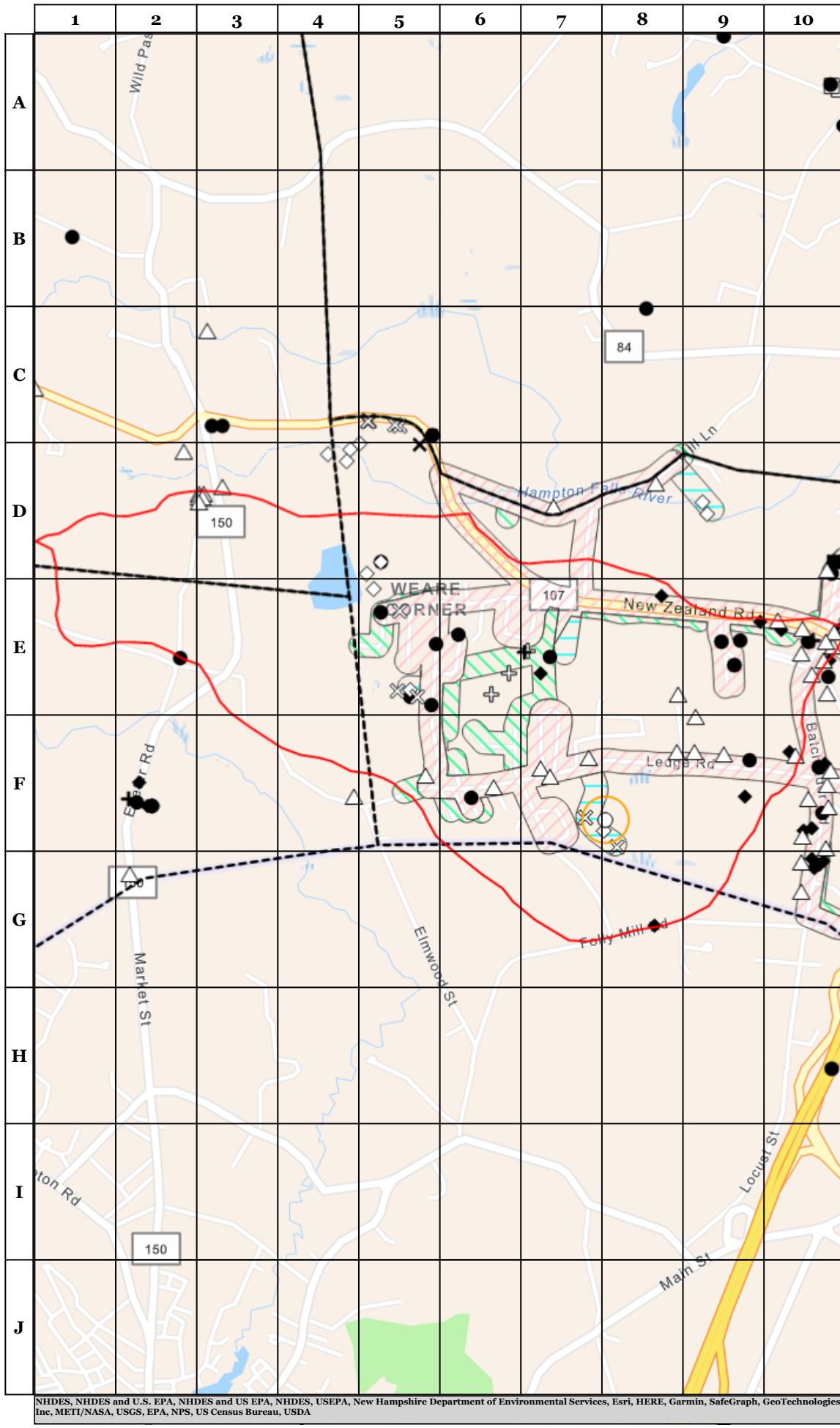
"Use of water" includes the withdrawal of water from the ground or surface water body, the delivery of water from another supplier to the user indicated the release of water from the user indicated to another facility, and/or the return of water to the environment.

SDID#:	FACILITY NAME:	FACILITY ADDRESS:	ACTION:	TYPE:	WATER BODY:	MAP CELL:
20503 20503-S01	SEABROOK WATER WORKS	SEABROOK	WL	GW	46 TRUE ROAD GPW #1 & #2	G7
20503 20503-S02	SEABROOK WATER WORKS	SEABROOK	WL	GW	54 LEDGE ROAD GPW #3 & #4	H9
20503 20503-S03	SEABROOK WATER WORKS	SEABROOK	WL	GW	FOGG-PINEO FIELD #5 & #6	F9
20503 20503-S04	SEABROOK WATER WORKS	SEABROOK	WL	GW	540 ROUTE 107BRW #1#2#3#4	F7
20503 20503-S05	SEABROOK WATER WORKS	SEABROOK	WL	GW	OLD NEW BOSTON ROAD BRW5	G7
20503 20503-S07	SEABROOK WATER WORKS	SEABROOK	WL	GW	54 LEDGE ROAD GPW #7	H9
20503 20503-S08	SEABROOK WATER WORKS	SEABROOK	WL	GW	BRW 1	F7
20503 20503-S09	SEABROOK WATER WORKS	SEABROOK	WL	GW	BRW 2	F7
20503 20503-S10	SEABROOK WATER WORKS	SEABROOK	WL	GW	BRW 3	F9
20503 20503-S11	SEABROOK WATER WORKS	SEABROOK	WL	GW	BRW 4	F7
20503 20503-S12	SEABROOK WATER WORKS	SEABROOK	WL	GW	BRW 5.1	G7
20503 20503-S13	SEABROOK WATER WORKS	SEABROOK	WL	GW	BRW 5.2	G7

Underground Storage Tank Facilities

These are facilities where there are, or were in the case of inactive sites, underground storage tanks. If there is a documented release from a tank, it becomes a LUST project type and is also listed in the Source Water Hazard Inventory. Status is only indicated for numbered tanks. F=Facility, O=Historical.

FACILITY SITE#:	FACILITY NAME:	FACILITY ADDRESS:	TANK #:	STATUS:	MAP CELL:
199506011-0112388-F	FORMER MIDWAY EXCAVATORS INC	89 EXETER RD, SOUTH HAMPTON			H5
199506011-0112388-F	FORMER MIDWAY EXCAVATORS INC	89 EXETER RD, SOUTH HAMPTON			H6
199506011-0112389-F	FORMER MIDWAY EXCAVATORS INC	89 EXETER RD, SOUTH HAMPTON			H5
199506011-0112389-F	FORMER MIDWAY EXCAVATORS INC	89 EXETER RD, SOUTH HAMPTON			H6
199705024-0113011-5	OBRIENS GENERAL STORE	8 BATCHELDER RD, SEABROOK	5	ACTIVE	G10
199705024-0113011-6	OBRIENS GENERAL STORE	8 BATCHELDER RD, SEABROOK	6	ACTIVE	G10
199705024-0113011-F	OBRIENS GENERAL STORE	8 BATCHELDER RD, SEABROOK			G10
199708035-0112307-F	YANKEE GREYHOUND RACING INC	RTE 107, SEABROOK			G8



NHDES, NHDES and U.S. EPA, NHDES and US EPA, NHDES, USEPA, New Hampshire Department of Environmental Services, Esri, HERE, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA

GROUND WATER PROTECTION AREA INVENTORY MAP

SEABROOK WATER DEPT

KENSINGTON, SEABROOK, SOUTH HAMPTON

2111010-012

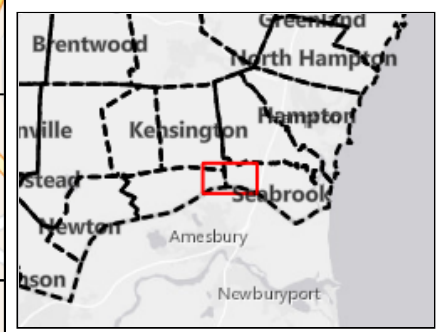
- Approximate Delineation Boundary
- Sanitary Protection Area
- Aboveground Storage Tank Facilities
- Automobile Salvage Yard Facilities
- Local Potential Contamination Source Inventory Sites
- National Pollutant Discharge System (NPDES) Outfalls
- Public Water Supply Facilities
- Public Water Supply Sources
- Registered Water Users
- Resource Conservation and Recovery Act (RCRA) Sites
- Solid Waste Facilities
- Source Water Hazard Inventory Sites
- Underground Storage Tank Facilities
- Town Boundaries
- Railroad Lines
- Transmission Lines
- Water Line Distribution
- Sewer Line Distribution
- Water and Sewer Line Distribution

N
W
E
S

Map prepared on 2/1/2023

Scale = 1 : 131,000 Feet

0 1365 feet



NEW HAMPSHIRE DEPARTMENT OF Environmental Services

State of New Hampshire Department of Environmental Services Inventory of Potential and Existing Sources of Groundwater Contamination Within the Wellhead Protection Area

EPA ID: 2111010-012

SYSTEM NAME: SEABROOK WATER DEPT

TOWN(s): KENSINGTON, SEABROOK, SOUTH HAMPTON

NOTES: Report prepared on 2/1/2023 by the NHDES Drinking Water and Groundwater Bureau. Only GIS features contained within the approximate delineation boundary are listed. The map-cell column in the report indicates which 1423 X 2370 foot grid cell the site of facility is located on the accompanying map. For example, a map cell value of 'G-11' indicates column 'G' and row '11'. Text outlined by a blue rectangle provides a link to the feature's DES OneStop page providing additional information.

Aboveground Storage Tank Facilities

These are facilities where there are, or were in the case of inactive sites, aboveground storage tanks. If there is a documented release from a tank, it becomes a LAST project type and is also listed in the Source Water Hazard Inventory. Status is only indicated for numbered tanks. F=Facility, O=Historical.

FACILITY SITE#:	FACILITY NAME:	FACILITY ADDRESS:	TANK #:	STATUS:	MAP CELL:
199708035-970835A-F	YANKEE GREYHOUND RACING INC	RTE 107, SEABROOK			E6
199708035-970835A-O	YANKEE GREYHOUND RACING INC	RTE 107, SEABROOK			E7
199708035-970835A-O	YANKEE GREYHOUND RACING INC	RTE 107, SEABROOK			E6

Local Potential Contamination Source Inventory Sites

This includes potential contamination sources within a source water protection area. The sites were located by Public Water Systems applying for a sampling waiver or by NHDES-DWGB staff during "windshield surveys".

SITE#:	SITE NAME:	SITE ADDRESS:	PROJECT TYPE:	MAP CELL:
PCS00656	CIMARRON APARTMENTS	24 BATCHELDER RD, SEABROOK	UST	E10
PCS00663	CORIUM CORP	9 BATCHELDER RD, SEABROOK	MAN	E10
PCS00668	HALE BROS INC	16 STARD RD, SEABROOK	MW	E10
PCS00881	RICK'S FIX IT SHOP	167 ROUTE 107, SEABROOK	GSR	E10
PCS00882	PATS TOWING	175 RTE 107, SEABROOK	VSR	E10
PCS01985	NAPA/ SEARS	1 BATCHELDER ROAD, SEABROOK	VSR	E10
PCS01986	RICHARDSON ELECTRIC CO.	17 BATCHELDER ROAD, SEABROOK	MAN	E10
PCS01987	HURLEY ENGINEERING/ PRECISION MACHINERY	19 BATCHELDER ROAD, SEABROOK	MW	E10
PCS01989	VEDRANI FAMINY TRUST	120 TRUE ROAD, SEABROOK	FP	F5
PCS01990	LAGO & SONS CONSTRUCTION	1 BLACKSNAKE ROAD, SEABROOK	GSR	F6
PCS01992	SHAMROCK PAVING	11 LEDGE ROAD, SEABROOK	GSR	F7
PCS01993	DIAMOND PAVING	14 LEDGE ROAD, SEABROOK	GSR	F7
PCS01994	TSC PAVING	49 LEDGE ROAD, SEABROOK	GSR	F7
PCS01995	HARLEY REAL ESTATE DEVELOPMENT	85 LEDGE ROAD, SEABROOK	GSR	F9
PCS01996	INDUSTRIAL CONDOS	103 LEDGE ROAD, SEABROOK	GSR,LANDMNGT	F10
PCS01997	WATERLINE INDUSTRIES	7 LONDON LANE, SEABROOK	GSR	F8
PCS01998	JTA CORPORATION	8 LONDON LANE, SEABROOK	GSR	F9
PCS01999	MICROVISION, INC.	20 LONDON LANE, SEABROOK	LAB	F9
PCS02000	ARCSOURCE	36 LONDON LANE, SEABROOK	MW	E8
PCS02024	VIKING WELDING/ SHEEP ISLAND BOATS- METAL FAB.	INDUST CONDOS 243 AMESBURY RD, KENSINGTON	MW	D3
PCS02025	WOODWRIGHTS, INC.	UNIT 3 INDUST CONDOS, 243 AMESBURY RD, KENSINGTON	GSR	D3

PCS02026	WAYACA CONSTRUCTION / LCI GENERAL CONTRACTOR	UNIT 5 INDUST CONDOS, 243 AMESBURY RD, KENSINGTON	GSR	D3
PCS02027	SEACOAST FLOORING SUPPLY	UNIT 6 INDUST CONDOS, AMESBURY RD, KENSINGTON	GSR	D3
PCS02031	DESIGNER EXPRESSION	UNIT 7 INDUST CONDOS, AMESBURY RD, KENSINGTON	GSR	D3

Public Water Supply Sources and Facilities

SRC. #:	SYSTEM NAME:	SYSTEM ADDRESS:	SYS. TYPE:	SYS. ACT.:	SRC. TYPE:	SRC. ACT.:	SRC. REC.	WELL TYPE:	WELL DEPTH:	POP. SERVED:	MAP CELL:
2111010-012-G	SEABROOK WATER DEPT	RTE 1, SEABROOK	C	ACTIVE	G	ACTIVE	SG	GPW	128	14000	F8
2111010-501	SEABROOK WATER DEPT	RTE 1, SEABROOK	C	ACTIVE	E	ACTIVE	PT			14000	E5
2111010-502	SEABROOK WATER DEPT	RTE 1, SEABROOK	C	ACTIVE	E	INACTIVE	PT			14000	E5
2111010-503	SEABROOK WATER DEPT	RTE 1, SEABROOK	C	ACTIVE	E	ACTIVE	PT			14000	F7
2111010-504	SEABROOK WATER DEPT	RTE 1, SEABROOK	C	ACTIVE	E	INACTIVE	PT			14000	F8
2111010-511	SEABROOK WATER DEPT	RTE 1, SEABROOK	C	ACTIVE	E	INACTIVE	PT			14000	E5
2111010-512	SEABROOK WATER DEPT	RTE 1, SEABROOK	C	ACTIVE	E	ACTIVE	PT			14000	F7

Resource Conservation & Recovery Act (RCRA) Sites

These are facilities that generate hazardous waste. If a release is documented, it is also listed under the Source Water Hazard Inventory Sites.

FACILITY SITE#:	FACILITY NAME:	FACILITY ADDRESS:	STATUS:	REGULATED GEN. TYPE:	MAP CELL:
NHD500013578-0005514	PATS TOWING	173 NEW ZEALAND RD, RTE 107, SEABROOK	INACTIVE	RCRA REGULATED	E10
NHD510057557-0009314	SEABROOK GREYHOUND PARK	42 NEW ZEALAND RD, SEABROOK	ACTIVE	STATE REGULATED	E7
NHD510128366-0004693	FULLER ROBERT	143 BLACK SNAKE RD, SEABROOK	INACTIVE	STATE REGULATED	G8
NHD510132483-0002854	CIMARRON REALTY TRUST	24 BATCHELDER RD, SEABROOK	INACTIVE	STATE REGULATED	F10
NHD510169600-0008686	US FOOD SERVICE INC	100 LEDGE RD, SEABROOK	INACTIVE	STATE REGULATED	F9
NHD981897515-0013625	HAMPTON MOTOR CO	RTE 107, SEABROOK	INACTIVE	RCRA REGULATED	E9
NHD986466514-0002965	UTILITY TRAILERS OF NEW ENGLAND INC	242 RTE 107, SEABROOK	ACTIVE	RCRA REGULATED	E8

Source Water Hazard Inventory Sites

This includes all Groundwater Hazard Inventory, Remediation Sites, and Initial Response Spill Sites regulated by NHDES to ensure water resource protection. If status is not indicated, it is assigned to a project manager.

Risk Codes: 1 - Immediate risk to human health. 2 - In wellhead protection area or within 1000' of well.
3 - Free product or high level source. 4 - Surface water impact. 5 - Groundwater impact, no alternate water.
6 - High concentration, alternate water availabe. 7 - Low concentration, alternate water available.
8 - No sources, no ambient groundwater quality standard violations onsite. NDY - Not yet defined.

FACILITY SITE#:	FACILITY NAME:	FACILITY ADDRESS:	PROJECT TYPE:	STATUS:	RISK:	MAP CELL:
100100213-0000000	SEABROOK TOWN FILE	29 HAZEN DR, SEABROOK				E9

100100213-0002897	SEABROOK TOWN FILE	29 HAZEN DR, SEABROOK	SPILL/RLS	CLOSED	8	E9
100100213-0038322	SEABROOK TOWN FILE	29 HAZEN DR, SEABROOK	H2O SAMPLE		NDY	E9
199506028-0005825	CHARLES P. BLOUIN INC.	203 ROUTE 107, SEABROOK	UIC	CLOSED	8	E9
199705024-0007029	OBRIENS GENERAL STORE	8 BATCHELDER RD, SEABROOK	LUST		2	E10
199705024-0013212	OBRIENS GENERAL STORE	8 BATCHELDER RD, SEABROOK	LUST	CLOSED	8	E10
199708035-0007453	YANKEE GREYHOUND RACING INC	RTE 107, SEABROOK	UIC	CLOSED	8	E7
200007016-0010135	WILLIAM HILL	2 ADDER LANE, SEABROOK	OPUF	CLOSED	8	F6
200207045-0012156	INDUSTRIAL BUILDING	LEDGE ROAD, SEABROOK	HOLDTANK		8	F9
200404067-0013560	KAMCO SUPPLY SPILL	23 TRUE RD, SEABROOK	SPILL/RLS	CLOSED	8	E5
200405062-0015482	SEABROOK WATER DEPT (BRW 5)	40 OLD NEW BOSTON RD, SEABROOK	UIC	CLOSED	8	E5
201209063-0029196	SEA BROOK WATER WORKS	40 OLD NEW BOSTON RD, SEABROOK	SPILL/RLS	CLOSED	8	E5
201212018-0029616	TOMAINO RESIDENCE	69 TRUE RD, SEABROOK	OPUF	CLOSED	8	E5
201302034-0030140	TRUCK INCIDENT	203 NEW ZEALAND RD, SEABROOK	IRSPILL	CLOSED	8	E10
201909021-0000000	DUPUIS RESIDENCE	7 ZEALAND PARK, SEABROOK				E9
201909021-0039355	DUPUIS RESIDENCE	7 ZEALAND PARK, SEABROOK	OPUF	CLOSED	8	E9
202210065-0040932	GRAY PROPERTY	8 TRUE LANE, SEABROOK	IRSPILL		NDY	E6
202211022-0041003	SEABROOK WATER SUPPLY WELL BRW-5	OFF OF OLD NEW BOSTON ROAD, SEABROOK	NDW		NDY	D5

Registered Water Users

"Use of water" includes the withdrawal of water from the ground or surface water body, the delivery of water from another supplier to the user indicated the release of water from the user indicated to another facility, and/or the return of water to the environment.

SDID#:	FACILITY NAME:	FACILITY ADDRESS:	ACTION:	TYPE:	WATER BODY:	MAP CELL:
20503 20503-S01	SEABROOK WATER WORKS	SEABROOK	WL	GW	46 TRUE ROAD GPW #1 & #2	E5
20503 20503-S02	SEABROOK WATER WORKS	SEABROOK	WL	GW	54 LEDGE ROAD GPW #3 & #4	F8
20503 20503-S05	SEABROOK WATER WORKS	SEABROOK	WL	GW	OLD NEW BOSTON ROAD BRW5	D5
20503 20503-S07	SEABROOK WATER WORKS	SEABROOK	WL	GW	54 LEDGE ROAD GPW #7	F8
20503 20503-S12	SEABROOK WATER WORKS	SEABROOK	WL	GW	BRW 5.1	E5
20503 20503-S13	SEABROOK WATER WORKS	SEABROOK	WL	GW	BRW 5.2	D5

Underground Storage Tank Facilities

These are facilities where there are, or were in the case of inactive sites, underground storage tanks. If there is a documented release from a tank, it becomes a LUST project type and is also listed in the Source Water Hazard Inventory. Status is only indicated for numbered tanks. F=Facility, O=Historical.

FACILITY SITE#:	FACILITY NAME:	FACILITY ADDRESS:	TANK #:	STATUS:	MAP CELL:
199705024-0113011-5	OBRIENS GENERAL STORE	8 BATCHELDER RD, SEABROOK	5	ACTIVE	E10
199705024-0113011-6	OBRIENS GENERAL STORE	8 BATCHELDER RD, SEABROOK	6	ACTIVE	E10
199705024-0113011-F	OBRIENS GENERAL STORE	8 BATCHELDER RD, SEABROOK			E10
199708035-0112307-F	YANKEE GREYHOUND RACING INC	RTE 107, SEABROOK			E7

Table 2 - Existing Potential Contamination Sources

2020-2021 GAA Reclassification - Potential Contamination Source Management Program
Seabrook Water Department
Seabrook, NH

Site ID	Facility Name	Physical Address	Town	Zip Code	Map ID #	2020/2021 PCS Result	Notes
PCS01985	Motortown - NAPA	1 Batchelder Road	Seabrook	03874	1	I	Retail Auto Parts Supply Store
NHD500023296-0001622	Private Jet Services Elevate Holdings Inc	5 Batchelder Road	Seabrook	03874	2	I	Aviation. (Site ID may apply to previous business LRS Enviro-Services)
1991705024-0113011-F, -5, -6, 199705024-0007029, 199705024-0013212	O'Brien's Convenience Store / Cimarron Office / Master McGrath's Restaurant	8 Batchelder Road	Seabrook	03874	3	I	Gasoline USTs
PCS00663	Functional Coatings	9 Batchelder Road	Seabrook	03874	4	I	Adhesives Manufacturer (Site ID may apply to previous business, Corium Corp
Not Registered*	C & J Bus Terminal	13 Batchelder Road	Seabrook	03874	5	I	Bus Terminal
Not Registered*	East West Distributors	15 Batchelder Road	Seabrook	03874	6	I	Tobacco Warehouse
PCS01986	Richardson Electric	17 Batchelder Road	Seabrook	03874	7	I	Electrical Contractor - Garage and Shop
PCS01987	Hurley Engineering	19 Batchelder Road	Seabrook	03874	8	I	Machine Shop
Not Registered*	RYEKNOT HOLDINGS LLC 89 LEDGE RD #3	19A Batchelder Road	Seabrook	03874	9	I	Storage Facility
Not Registered*	J & C Industries	21 Batchelder Road	Seabrook	03874	10	I	Machine Manufacture Shop
PCS00656, NHD510132483-0002854	Rockingham Village Apartments	24 Batchelder Road	Seabrook	03874	11	I	Apartment Complex with USTs
Not Registered*	Johnson Racing	130 Batchelder Road	Seabrook	03874	12	I	Racecar Shop
Not Registered*	Bocra Industries	140 Batchelder Road	Seabrook	03874	13	I	Commercial Machine Shop
Not Registered*	Aerodynamics	142 Batchelder Road	Seabrook	03874	14	I	Metal Finishing
Not Registered*	Communication Component Filters	145 Batchelder Road	Seabrook	03874	15	I	Mobile Communication Infrastructure
Not Registered*	Northeast Printing Machinery	146 Batchelder Road	Seabrook	03874	16	I	Machine Shop
Not Registered*	Global Pallet	148 Batchelder Road	Seabrook	03874	17	I	Pallet Manufacturer
Not Registered*	Syvinski Landscaping Inc	151 Batchelder Road	Seabrook	03874	18	I	Landscaping Business
Not Registered*	Will-Mor Engineering Co. Inc	153 Batchelder Road	Seabrook	03874	19	I	Machine Company
Not Registered*	Diesel Equipment	155 Batchelder Road	Seabrook	03874	20	I	Trucking & Towing of Cars & Gravel
Not Registered*	Northeast Basement Systems	157 Batchelder Road	Seabrook	03874	21	I	Basement Waterproofing
Not Registered*	Henkel Corporation	167 Batchelder Road	Seabrook	03874	22	I	Manufacturing of Various Items Purchased for Production of Adhesives, Urethanes, etc
PCS01990	Lago & Sons Construction	1 Blacksnake Road	Seabrook	03874	23	I	Firewood Processing Business
Not Registered*	Spednik Park	60 Blacksnake Road	Seabrook	03874	24	I	Residential Mobile Home Park
PCS01991	Matrix Paving	94 Blacksnake Road	Seabrook	03874	25	I	Paving Company
Not Registered*	Screw-Matic Corporation	1 Chase Park Road	Seabrook	03874	26	I	Manufacturing Oil, Coolant & Acetone
Not Registered*	TECC	8 Chase Park Road	Seabrook	03874	27	I	Electrical Contractor & Generator Sales
Not Registered*	JRS Custom Fiberglass	8C Chase Park Road	Seabrook	03874	28	I	Fiberglass Molding Business
Not Registered*	Turcotte Storage	8D Chase Park Road	Seabrook	03874	29	I	Storage Facility - Vacant
Not Registered*	Baier Truck Transport	8E Chase Park Road	Seabrook	03874	30	I	Transportation Company
PCS01992	Shamrock Paving	11 Ledge Road	Seabrook	03874	31	I	Paving Company
PCS01993	Diamond Paving	14 Ledge Road	Seabrook	03874	32	I	Paving Company
PCS01994	TCS Paving	49 Ledge Road	Seabrook	03874	33	I	Paving Company
Not Registered*	Beacon Roofing	81 Ledge Road	Seabrook	03874	34	I	Roofing Contractor
Not Registered*	World of Wheels	89-1 Ledge Road	Seabrook	03874	35	I	Auto Wholesales
Not Registered*	New England Cedar Fence / DTC Hauling & Removal	89-2 Ledge Road	Seabrook	03874	36	I	Fencing Contractor / Waste Disposal
Not Registered*	C M Ragusa Co	89-3 Ledge Road	Seabrook	03874	37	I	Contractor
Not Registered*	Radiation Safety & Control Services Inc	93 Ledge Road	Seabrook	03874	38	I	Manufacturer and instrument testing lab
Not Registered*	Ledge Road Industrial Condo Assn.	95A Ledge Road - Unit 4	Seabrook	03874	39	I	Manufacturer of Retractable Fire Sprinklers
Not Registered*	Ledge Rd Classic Auto	95B Ledge Road	Seabrook	03874	40	I	Automotive Shop
Not Registered*	Sprinkler Innovations	95D and 95E Ledge Road	Seabrook	03874	41	I	Manufacturer of Retractable Fire Sprinklers
Not Registered*	Complete Control Services and Dependable Controls Services	95H Ledge Road	Seabrook	03874	42	I	Electrical Controls Installation & Service
Not Registered*	Eastcoast Flooring	99-1 Ledge Road	Seabrook	03874	43	I	Flooring Supplier/Contractor
Not Registered*	T1 Training	99-2 and 99-3 Ledge Road	Seabrook	03874	44	I	Gym
Not Registered*	Dry Air Systems, Inc	99-1 Ledge Road	Seabrook	03874	45	I	HVAC Maintenance
Not Registered*	The Window Source	99-7 Ledge Road	Seabrook	03874	46	I	Renewal Door/Siding/Window Installation
Not Registered*	Greg Lanouette	99-8 Ledge Road	Seabrook	03874	47	I	Construction Company
Not Registered*	Inmotion/Proforma	99-9 Ledge Road	Seabrook	03874	48	I	Current use not determined
NHD510169600-0008686	U S Foods	100 Ledge Road	Seabrook	03874	49	I	Food Distributor with USTs and ASTs
PCS01996	Dynamic Lighting Systems	103 Ledge Road	Seabrook	03874	50	I	Lighting Systems

Table 2 - Existing Potential Contamination Sources

2020-2021 GAA Reclassification - Potential Contamination Source Management Program
Seabrook Water Department
Seabrook, NH

Site ID	Facility Name	Physical Address	Town	Zip Code	Map ID #	2020/2021 PCS Result	Notes
PCS01996	A1 Management	103-2 Ledge Road	Seabrook	03874	51	I	Property Management (Site ID Applies to Industrial Condo Complex)
PCS01996	Scally Construction	103 Ledge Road	Seabrook	03874	52	I	Construction Contractor (Site ID Applies to Industrial Condo Complex)
PCS01996	D & D Machine Inc	103-4 and 103-9 Ledge Road	Seabrook	03874	53	I	Machine Shop (Site ID Applies to Industrial Condo Complex)
PCS01996	Chimo, LLC	103-6 Ledge Road	Seabrook	03874	54	I	Cabinet Manufacturer (Site ID Applies to Industrial Condo Complex)
PCS01996	Victory Auto Design	103-7 and 103-8 Ledge Road	Seabrook	03874	55	I	Automotive Shop (Site ID Applies to Industrial Condo Complex)
PCS01996	Sweeney Manufacturing	103-11 Ledge Road	Seabrook	03874	56	I	Machine Shop Manufacturing (Site ID Applies to Industrial Condo Complex)
PCS01996	Saddleback Properties	103-12 Ledge Road	Seabrook	03874	57	I	Generator Sales & Repair (Site ID Applies to Industrial Condo Complex)
Not Registered*	Midway Utilities	106 Ledge Road	Seabrook	03874	58	I	Heavy Equipment Maintenance and Storage
Not Registered*	CT Tree Service	106 Ledge Road	Seabrook	03874	59	I	Arborist with Equipment
Not Registered*	Rob's Welding Repairs	106 Ledge Road - Units 3&4	Seabrook	03874	60	I	Welding Contractor
Not Registered*	LMS Machine	106 Ledge Road	Seabrook	03874	61	I	Machine Shop
Not Registered*	Russ Carter	106R Unit 6 Ledge Road	Seabrook	03874	62	I	Current use not determined
Not Registered*	Sillver Shield Ammo	106R Unit 7/8 Ledge Road	Seabrook	03874	63	I	E-Commerce Of Guns, Ammo & Accessories
Not Registered*	Ipsum Technologies	111 Ledge Road	Seabrook	03874	64	I	Machine Shop
Not Registered*	Dinsmore Communication	130 Ledge Road	Seabrook	03874	65	I	Inspected for On-Site Oil Burner
Not Registered*	Prosero, Inc & Spinnaker	131 Ledge Road - #1	Seabrook	03874	66	I	Dry Goods Distributor
Not Registered*	Bradford & Bigelow	131 Ledge Road - Unit 2	Seabrook	03874	67	I	Book Distributor
PCS01997	Waterline Industries & Dumke Dream Builders	7 London Lane	Seabrook	03874	68	I	General Contractor with Maintenance Garage and Equipment Storage
PCS01998	JTA Corporation	8 London Lane	Seabrook	03874	69	I	Carboard box manufacturer
PCS01999	Northeast Concrete Pumping	20 London Lane	Seabrook	03874	70	I	Concrete Pumping Contractor with Equipment (Site ID may apply to previous business, Microvision, Inc.)
Not Registered*	Port Lighting	24 London Lane	Seabrook	03874	71	I	Entertainment Lighting Service, Sales & Rentals
Not Registered*	Greenhead Lobster	25 London Lane	Seabrook	03874	72	I	Lobster Sales & Shipping
Not Registered*	MacKenzie Fuels	28 London Lane	Seabrook	03874	73	I	On-Site Propane Trucks and Fuel Tanks
PCS02000	ArcSource	36 London Lane	Seabrook	03874	74	I	Multiple On-Site Propane and Welding Gas Tanks
PCS00882	Pat'sTowing	173 Route 107	Seabrook	03874	75	I	Automobile Service Center
199506028-0005825	Charles P Blouin Inc	203 Route 107	Seabrook	03874	76	I	HVAC Sheet Metal Fabricator
Not Registered*	Zealand Park	223 Route 107	Seabrook	03874	77	I	Mobile Home Park
Not Registered*	Extra Space Storage	233 Route 107	Seabrook	03874	78	I	Storage Facility
NHD986466514-0002965	Utility Trailers of New England, Inc.	242 Route 107	Seabrook	03874	79	I	Maintence Facility for Utility Trailers
Not Registered*	John Chase Paving	295 Route 107	Seabrook	03874	80	I	Paving Company
199708035-970835A-F, -O NHD510057557-0009314	The Brook	319 Route 107	Seabrook	03874	81	I	Mainteance Shed with Diesel Fuel (Site ID may apply to previous business, Yankee Greyhound Racing, Inc and/or Seabrook Greyhound Park)
Not Registered*	Fairview Millwork Inc	344 Route 107	Seabrook	03874	82	I	Retail Building Materials
Not Registered*	Seabrook Inns	9 Stard Road	Seabrook	03874	83	I	Maintence Shed On-Site for Hotel
Not Registered*	Boston Harbor Marine	12 Stard Road	Seabrook	03874	84	I	Boat Storage and Sales
Not Registered*	ATG Seabrook	27 Stard Road	Seabrook	03874	85	I	Truck and Large Equipment Maintenance Garage
Not Registered*	Seabrook Truck Center	27A Stard Road	Seabrook	03874	86	I	Truck and Large Equipment Maintenance Garage
Not Registered*	Fiesta Shows Transport C E	32 Stard Road	Seabrook	03874	87	I	Entertainment Trucking
Not Registered*	Water Structures	60 Stard Road	Seabrook	03874	88	I	Water Feature Manufacturer
Not Registered*	Infinite Creative Enterprises, Inc & ICE Signs Pro Design & Vending Technologies In	72 Stard Road	Seabrook	03874	89	I	LED Sign, Massage Chair & Vending Machine Warehouse & Distribution
Not Registered*	Coca Cola Bottling	118 Stard Road	Seabrook	03874	90	I	Beverage Bottler with Delivery Trucks
Not Registered*	Windjammer Apartments	47 Weare Road	Seabrook	03874	91	I	Residential Apartment Complex
Not Registered*	Boston Data Systems	3A Whitaker Way	Seabrook	03874	92	I	Computer Repairs and Sales
Not Registered*	KW Precision Machine	3B Whitaker Way	Seabrook	03874	93	I	Machine Shop
Not Registered*	Commercial Photography & Printing	6 Whitaker Way	Seabrook	03874	94	I	Photography and Printing Company
Not Registered*	John Abbiuso Construction	8Whitaker Way	Seabrook	03874	95	I	Construction Company
Not Registered*	RG Machine	9 Whitaker Way	Seabrook	03874	96	I	Machine Shop
Not Registered*	QTX Transport	15 Whitaker Way - #2	Seabrook	03874	97	I	Trucking Company
Not Registered*	Geskus Photography	16 Whitaker Way	Seabrook	03874	98	I	Photography and Printing Company
Not Registered*	RGS Marble & Granite	24 Whitaker Way	Seabrook	03874	99	I	Granite Supplier

Table 2 - Existing Potential Contamination Sources

2020-2021 GAA Reclassification - Potential Contamination Source Management Program
Seabrook Water Department
Seabrook, NH

Site ID	Facility Name	Physical Address	Town	Zip Code	Map ID #	2020/2021 PCS Result	Notes
Not Registered*	Martin International	14 Woodworkers Way	Seabrook	03874	100	I	Manufacturer
Not Registered*	Seabrook Medical International	15 Woodworkers Way	Seabrook	03874	101	I	Precision Machining of Medical Instruments & Implants
Not Registered*	Marco Rubber & Plastics	35 Woodworkers Way	Seabrook	03874	102	I	Distribution of Rubber Products/Wholesale
Not Registered*	Bishop Children Revoc. Trust	204 New Zealand Road	Seabrook	03874	103	I	Paving Company & Garage For Vehicles
Not Registered*	Peter and Diane Kokaras / Patricia Michelin	213 Route 107	Seabrook	03874	104	I	Former Restaurant, Now Just Residential Home
Not Registered*	199 New Zealand Road, LLC	199 New Zealand Road	Seabrook	03874	105	I	Multi-Bay Car Storage Garage
Not Registered*	Provencher Concrete	85 Ledge Road	Seabrook	0.874	106	I	Empty building in disrepair
Not Registered*	Coastal Paving and Landscaping	228 Kensington Road	Hampton Falls	03844	107	I	In-Compliance
Not Registered*	Davis Residence	166 Kensington Road	Hampton Falls	03844	108	HQ	Location identified by Hampton Falls officials. Contact again during next round in 202
Not Registered*	Suzanne Veillieux - Jesta Farm	190 Drinkwater Road	Hampton Falls	03844	109	HQ	Location identified by Hampton Falls officials. Contact again during next round in 202
Not Registered*	Hilliard Residence	212 Drinkwater Road	Hampton Falls	03844	110	HQ	Location identified by Hampton Falls officials. Contact again during next round in 202
Not Registered*	Gormer Residence	38 Crank Road	Hampton Falls	03844	111	NR	Location identified during Geosphere windshiel survey. Attempt contact again in 202
Not Registered*	Nor'East Architectural Antiques	16 Exeter Road	South Hampton	03827	112	HQ	Contact again in 2023 to determine any changes t this status
Not Registered*	N.B.R. Diamond Tool Corp.	22 Exeter Road	South Hampton	03827	113	I	In-Compliance
Not Registered*	Seacoast Flooring Supply	22 Exeter Road	South Hampton	03827	114	HQ	Contact again in 2023 to determine any changes t this status
Not Registered*	Sublime Restorations	22 Exeter Road	South Hampton	03827	115	DNP	Work with South Hampton officials to contact agai in 2023.
Not Registered*	DeSesa Landscaping	77 Exeter Road - Unit C	South Hampton	03827	116	NR	Permitted only visiual inspection through garage doo windows by 77 Exeter Road property owner
Not Registered*	Mountain Top Landscaping	77 Exeter Road	South Hampton	03827	117	I	In-Compliance
Not Registered*	Atlantic Trucking, Inc. / Remove-All	77 Exeter Road - Unit A	South Hampton	03827	118	I	In-Compliance
Not Registered*	Al Stewart Contracting	77 Exeter Road - Unit B	South Hampton	03827	119	NR	Permitted only visiual inspection through garage doo windows by 77 Exeter Road property owner
Not Registered*	Cornerstone Landscaping	77 Exeter Road - Unit E	South Hampton	03827	120	NR	Permitted only visiual inspection through garage doo windows by 77 Exeter Road property owner
Not Registered*	Mike's Electrical	77 Exeter Road - Unit D	South Hampton	03827	121	NR	Permitted only visiual inspection through garage doo windows by 77 Exeter Road property owner
Not Registered*	Construction Tech, LLC	77 Exeter Road - Unit F	South Hampton	03827	122	NR	Permitted only visiual inspection through garage doo windows by 77 Exeter Road property owner
Not Registered*	North Shore Home Energy	77 Exeter Road - Unit G	South Hampton	03827	123	NR	Permitted only visiual inspection through garage doo windows by 77 Exeter Road property owner
Not Registered*	Garlin Glibert Construction	77 Exeter Road - Unit H	South Hampton	03827	124	NR	Permitted only visiual inspection through garage doo windows by 77 Exeter Road property owner
Not Registered*	DM Construction	85 Exeter Road	South Hampton	03827	125	NR	Attempt to contact again in 2023
NHD500002936-0005462, 199506011-0112388-F, 199506011-0005825, 199506011-0014341, 199506011-0018318	DiTucci Trucking	89 Exeter Road	South Hampton	03827	126	I	In-Complance following BMP rules remediations
	R & M Freight, Inc.	89 Exeter Road	South Hampton	03827	127	I	In-Compliance
	R & D Packaging	89 Exeter Road	South Hampton	03827	128	I	In-Complance following BMP rules remediations
Not Registered*	Anything Automotive	101B Exeter Road	South Hampton	03827	129	I	In-Complance following BMP rules remediations
Not Registered*	Jamco Excavators	118 Exeter Road	South Hampton	03827	130	I	In-Complance following BMP rules remediations
Not Registered*	Midway Oil Co.	118 Exeter Road	South Hampton	03827	131	Not Inspected	Located across the New Hampshire border in Amesbury, MA
NHD510214836-0060062	Hampton Truck Center	118 Exeter Road	South Hampton	03827	132	I	In-Compliance
Not Registered*	Tuff-Crete Corp.	118 Exeter Road	South Hampton	03827	133	I	In-Complance following BMP rules remediations
Not Registered*	EcoOil Recycling	118 Exeter Road	South Hampton	03827	134	I	In-Complance following BMP rules remediations
Not Registered*	Pete Southard Boats	118 Exeter Road	South Hampton	03827	135	I	In-Complance following BMP rules remediations

Notes:
* = PCS not identified on Januray 24, 2020 NH DES generated PCS list
Multiple Site IDs applied to this address from previous businesses but do noy necessarily apply to current occupants
I = Inspected for compliance with Best Management Practices rules (please refer to corresponding notes in table)
HQ = Phone conversation with PCS representative conlcuded that PCS only possesses Household Quantities of regulated substances
NR = No Response - unable to make contact with PCS represenetative after multiple telephone, email attemps, or certified mailings.
DNP = PCS DID NOT PARTICIAPTE in BMP inspection protocol
Not Inspected = PCS was not inspected due to location in Massacusetts despite being located within SWD GAA

Appendix M

Natural Heritage Bureau Data Check Results Letter

New Hampshire Natural Heritage Bureau
NHB DataCheck Results Letter

To: Matt Krapf, Geosphere Environmental Mgmt
51 Portsmouth Ave

Exeter, NH 03833

From: NH Natural Heritage Bureau
Date: 11/16/2021 (valid until 11/16/2022)
Re: Review by NH Natural Heritage Bureau of request submitted 11/2/2021
Permits: OTHER - Large Groundwater Withdrawal Permit

NHB ID: **NHB21-3440** **Applicant:** Matt Krapf

Location: Seabrook
Weare Road

Project Description: This property will be used for the development of two new public drinking water source of supply bedrock wells.

The NH Natural Heritage database has been checked by staff of the NH Natural Heritage Bureau and/or the NH Nongame and Endangered Species Program for records of rare species and exemplary natural communities near the area mapped below. The species considered include those listed as Threatened or Endangered by either the state of New Hampshire or the federal government.

It was determined that, although there was a NHB record (e.g., rare wildlife, plant, and/or natural community) present in the vicinity, we do not expect that it will be impacted by the proposed project. This determination was made based on the project information submitted via the NHB Datacheck Tool on 11/2/2021 1:25:39 PM, and cannot be used for any other project.

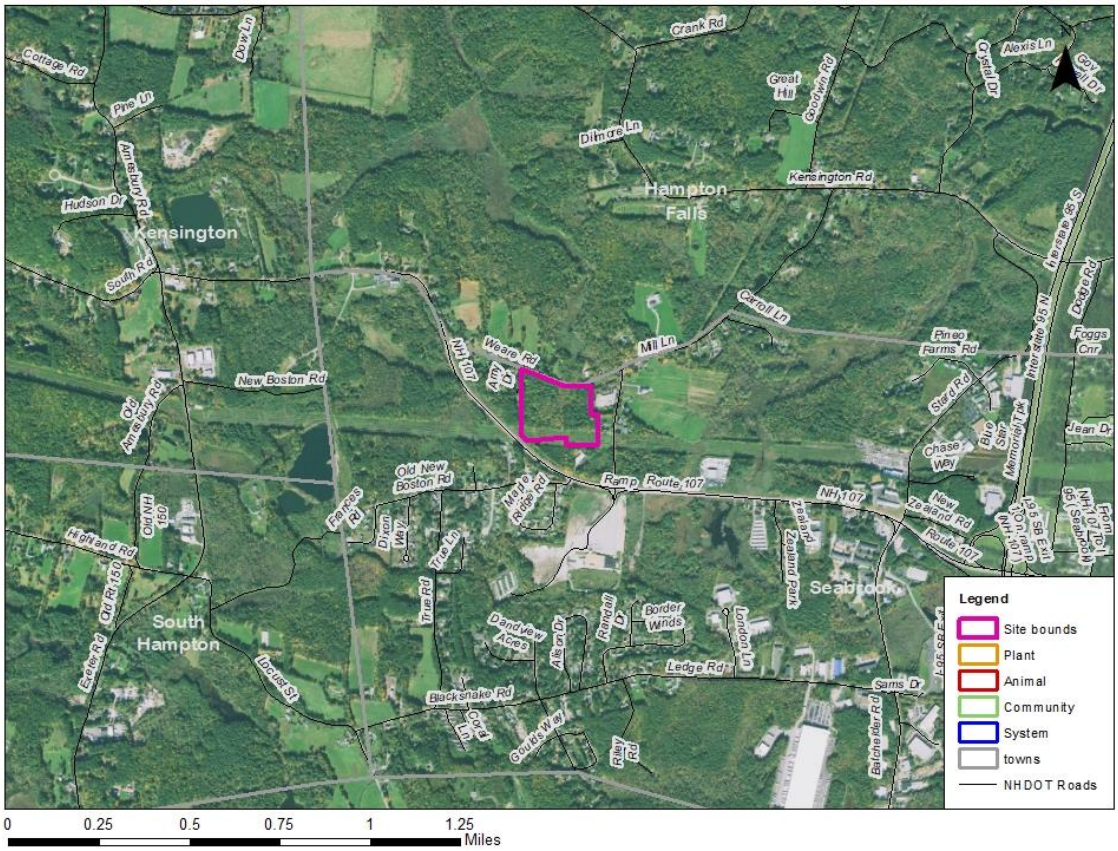
Department of Natural and Cultural Resources
Division of Forests and Lands
(603) 271-2214 fax: 271-6488

DNCR/NHB
172 Pembroke Rd.
Concord, NH 03301

New Hampshire Natural Heritage Bureau
NHB DataCheck Results Letter

MAP OF PROJECT BOUNDARIES FOR: **NHB21-3440**

NHB21-3440



Department of Natural and Cultural Resources
Division of Forests and Lands
(603) 271-2214 fax: 271-6488

DNCR/NHB
172 Pembroke Rd.
Concord, NH 03301

Appendix N

List of Seabrook Owned Wells within PIA

Summary of Proposed Monitoring Locations
Well A and Well B Long-Term Pumping Tests
Weare Road Seabrook, NH

Monitoring Point ID	Well Type	Resource Type	Water Level Monitoring Method	Frequency of Water Level Monitoring	Operating Schedule	Distance / Direction From Wells A and B
Well A	Proposed PWS	Bedrock	Pressure Transducer	Every Minute	Constant Rate for 7 Days*	N/A
Well B	Proposed PWS	Bedrock	Pressure Transducer	Every Minute	Constant Rate for 7 Days*	N/A
Well F	Observation	Bedrock	Pressure Transducer	Every Minute	N/A	3,900 feet / E
Well L	Observation	Bedrock	Pressure Transducer	Every Minute	N/A	4,100 feet / E
Well M	Observation	Bedrock	Pressure Transducer	Every Minute	N/A	3,200 feet / E
Well N	Observation	Bedrock	Pressure Transducer	Every Minute	N/A	3,500 feet / E
Well O	Observation	Bedrock	Pressure Transducer	Every Minute	N/A	3,710 feet / E
MW-6B	Observation	Bedrock	Pressure Transducer	Every Minute	N/A	2,400 feet / NW
MW-10	Observation	Bedrock	Pressure Transducer	Every Minute	N/A	2,350 feet / W
MW-12B	Observation	Bedrock	Pressure Transducer	Every Minute	N/A	1,600 feet / W
MW-13B	Observation	Bedrock	Pressure Transducer	Every Minute	N/A	1,500 feet / WSW
BTW 1-01	Observation	Bedrock	Pressure Transducer	Every Minute	N/A	3,560 feet / SW
BTW 2-01	Observation	Bedrock	Pressure Transducer	Every Minute	N/A	2,750 feet / NE
BTW 8-15	Observation	Bedrock	Pressure Transducer	Every Minute	N/A	4,210 feet / E
Bedrock Test Well	Observation	Bedrock	Pressure Transducer	Every Minute	N/A	5,190 feet / SSE
BMX	Observation	Bedrock	Pressure Transducer	Every Minute	N/A	2,910 feet / W
Rockwell 22	Observation	Bedrock	Pressure Transducer	Every Minute	N/A	2,900 feet / E
Domestic Wells** (See Appendix N)	Private Water Supply	Bedrock	Pressure Transducer	Every Minute	Regular Operation	TBD**
Batchelder Road BTW (Ambient)	Observation	Bedrock	Pressure Transducer	Every Minute	N/A	7,900 feet / SE
BRW 5	PWS	Bedrock	SCADA	Every 15 Minutes	TBD***	2,750 feet / WSW
BRW 5.1	PWS	Bedrock	SCADA	Every 15 Minutes	TBD***	2,970 feet / WSW
BRW 5.2	PWS	Bedrock	SCADA	Every 15 Minutes	TBD***	2,900 feet / WSW
BRW 1	PWS	Bedrock	SCADA	Every 15 Minutes	TBD***	5,240 feet / SE
BRW 2	PWS	Bedrock	SCADA	Every 15 Minutes	TBD***	3,400 feet / WNW
BRW 3	PWS	Bedrock	SCADA	Every 15 Minutes	TBD***	3,680 feet / WNW
BRW 4	PWS	Bedrock	SCADA	Every 15 Minutes	TBD***	3, 840 feet / WNW
GPW 1	PWS	Overburden	SCADA	Every 15 Minutes	TBD***	3,350 feet / SW
GPW 2	PWS	Overburden	SCADA	Every 15 Minutes	TBD***	3,600 feet / SW
GPW 3	PWS	Overburden	SCADA	Every 15 Minutes	TBD***	4, 780 feet / S
GPW 4	PWS	Overburden	SCADA	Every 15 Minutes	TBD***	5,400 feet / S
GPW 7	PWS	Overburden	SCADA	Every 15 Minutes	TBD***	4,820 feet / S
OW 33A	Observation	Overburden	Pressure Transducer	Every Minute	N/A	3,060 feet / E
GPW-6	Observation	Overburden	Pressure Transducer	Every Minute	N/A	3,060 feet / E
PZ/SG-1	Proposed PZ/SG	Shallow Groundwater / Surface Water	Pressure Transducer	Every Minute	N/A	370 feet / NE
PZ/SG-2	Proposed PZ/SG	Shallow Groundwater / Surface Water	Pressure Transducer	Every Minute	N/A	1,390 feet / W
PZ/SG-3	Proposed PZ/SG	Shallow Groundwater / Surface Water	Pressure Transducer	Every Minute	N/A	1,600 feet / N
PZ/SG-4	Proposed PZ/SG	Shallow Groundwater / Surface Water	Pressure Transducer	Every Minute	N/A	1,830 feet / ENE

Notes:
*During the Well A long-term pumping test, Well B will be used as an observation well and vice versa.
**The number and distribution of domestic wells used for monitoring is contigent upon the results of the request to monitor outreach.
***the operating schedule for the active Seabrook production wells during the long-term pumping tests is contigent upon the current water level monitoring being conducted at Wells A and B, and what hydraulic connection, if any, is observed between the Seabrook production wells and Wells A a
N/A = Not Applicable
TBD = To be determined
PWS = Public water supply

Appendix O

List of Potential Private Monitoring Wells

List of Potential Private Monitoring Wells
Weare Road Seabrook, NH

WRB_NUMBER	LATITUDE	LONGITUDE	NAME	ADDRESS	TOWN	MAP	LOT	TYPE	USE
106.0005	42.905808	-70.865405	K PELTON	19 LAFAYETTE RD	HAMPTON FALLS			BEDROCK	DOMESTIC
106.0055	42.9067728	-70.8652244	J DODGE	116 LAFAYETTE RD	HAMPTON FALLS	8	50	BEDROCK	DOMESTIC
106.0094	42.90827824	-70.85582255	T HAM	38 BRIMMER LN	HAMPTON FALLS	2	143	BEDROCK	DOMESTIC
106.0185	42.9067728	-70.8652244	L ELIAS	123 LAFAYETTE RD	HAMPTON FALLS	8	59	BEDROCK	DOMESTIC
106.0187	42.90833278	-70.85730948	M PERKINS	32 BRIMMER LN	HAMPTON FALLS	7	60-2	BEDROCK	DOMESTIC
106.0233	42.91501631	-70.86088457	NORTHWAY BUILDERS	5 COACH LN	HAMPTON FALLS	8	83-17	BEDROCK	DOMESTIC
106.0245	42.905808	-70.865405	K PELTON	19 LAFAYETTE RD	HAMPTON FALLS			BEDROCK	DOMESTIC
106.026	42.9067728	-70.8652244	A GEORGIO	109 LAFAYETTE RD	HAMPTON FALLS	8	61	BEDROCK	DOMESTIC
106.0262	42.92380235	-70.88283017	THE GREAT ROOM	1 COBURN WOODS RD	HAMPTON FALLS	4	73-6/7	BEDROCK	DOMESTIC
106.0292	42.9067728	-70.8652244	M RIDOLFO	106 LAFAYETTE RD	HAMPTON FALLS	8	46	BEDROCK	DOMESTIC
106.0378	42.91824122	-70.90074943	DUBE-PLUS	8 HARDY LN	HAMPTON FALLS	1	65-3	BEDROCK	DOMESTIC
106.0399	42.9067728	-70.8652244	UNKNOWN NAME	115 LAFAYETTE RD	HAMPTON FALLS	8	58	BEDROCK	DOMESTIC
106.0002	42.91577138	-70.88781765	F STILES	4 GOODWIN RD	HAMPTON FALLS	1	77	BEDROCK	DOMESTIC
106.0036	42.91394372	-70.85674943	A ANDERSON	COACH LN	HAMPTON FALLS	8	83-8	BEDROCK	DOMESTIC
106.0106	42.91135145	-70.86803155	D JANVRIN	28 KENSINGTON RD	HAMPTON FALLS	7	26	BEDROCK	DOMESTIC
106.0107	42.91201553	-70.86749293	D DIAL	22 KENSINGTON RD	HAMPTON FALLS	7	24	BEDROCK	DOMESTIC
106.0133	42.91261448	-70.90113586	K ODONNELL	154 KENSINGTON RD	HAMPTON FALLS	1	40-1	BEDROCK	DOMESTIC
106.0209	42.91688853	-70.87278692	BENOIT DEVEL	8 WHITTIER DR	HAMPTON FALLS	2	4-17	BEDROCK	DOMESTIC
106.021	42.91636837	-70.87378285	BENOIT DEVEL	5 WHITTIER DR	HAMPTON FALLS	2	4-28	BEDROCK	DOMESTIC
106.0283	42.91406002	-70.90074096	M VELTOS	KENSINGTON RD	HAMPTON FALLS	1	43	BEDROCK	DOMESTIC
106.0428	42.91906667	-70.88655	CHRISTINE & KEN MAKEPEACE	10 CRANK ROAD	HAMPTON FALLS	01	075.04	BEDROCK	DOMESTIC
106.0444	42.91686667	-70.88766667	PAUL SCHLEPPY	2 GOODWIN ROAD	HAMPTON FALLS	1	76	BEDROCK	DOMESTIC
106.0045	42.92018537	-70.88617445	LAGO	7 CRANK RD	HAMPTON FALLS	1	72	BEDROCK	DOMESTIC
106.0084	42.91700642	-70.85947725	C BONSON	30 COACH LN	HAMPTON FALLS	8	83-5	BEDROCK	DOMESTIC
106.0176	42.92426481	-70.8838921	RICHARD WHITNEY BLDR	5 COBURN WOODS RD	HAMPTON FALLS	4	73-8	BEDROCK	DOMESTIC
106.0068	42.92222185	-70.87485522	D VERITY	MARTHAS CT	HAMPTON FALLS	2	82-4	BEDROCK	DOMESTIC
106.0082	42.91659252	-70.89310977	R ANDERSON	38 CRANK RD	HAMPTON FALLS	1	86	BEDROCK	DOMESTIC
106.009	42.91471452	-70.8576404	MARDON CORP	35 COACH LN	HAMPTON FALLS	8	83-12	BEDROCK	DOMESTIC
106.0204	42.91950933	-70.87722195	J FLEMING	12 DRINKWATER RD	HAMPTON FALLS	2	24	BEDROCK	DOMESTIC
106.0241	42.91846372	-70.86801063	B MERRILL	20 EXETER RD	HAMPTON FALLS	8	28-1	BEDROCK	DOMESTIC
106.0274	42.90769548	-70.8626778	B BARTER	9 BRIMMER LN	HAMPTON FALLS	7	64-1	BEDROCK	DOMESTIC
106.0446	42.9120552	-70.8596626	UNKNOWN NAME	12 MARINERS LANE	HAMPTON FALLS	8	84-5-1	BEDROCK	DOMESTIC
106.0438	42.91831667	-70.90193333	BRIAN WOLPERT	8 HARDY LANE	HAMPTON FALLS	1	65-2	BEDROCK	DOMESTIC
106.0021	42.90942635	-70.89499058	ALLEN	134 RTE 84	HAMPTON FALLS	1	17-2	BEDROCK	DOMESTIC
106.0136	42.90959788	-70.8914161	ALLEN	124 KENSINGTON RD	HAMPTON FALLS	1	17-1	BEDROCK	DOMESTIC
106.0191	42.90962063	-70.88475678	TONRY	104 KENSINGTON RD	HAMPTON FALLS	1	8	BEDROCK	DOMESTIC
106.0193	42.92087897	-70.91103647	J MCINNIS	227 KENSINGTON RD	HAMPTON FALLS	1	50	BEDROCK	DOMESTIC
106.0229	42.9040093	-70.87628074	WISET	15 DODGE RD	HAMPTON FALLS	7	2	BEDROCK	DOMESTIC
106.0304	42.90356824	-70.8798059	SCOTT BLOOD EXCAVATING	21 STARD RD	HAMPTON FALLS	2	44927	BEDROCK	DOMESTIC
106.0388	42.92034122	-70.90584943	PERSIMMON HOMES	NASON RD	HAMPTON FALLS	1	3	BEDROCK	DOMESTIC
106.039	42.91974122	-70.90956609	ANNIS	200 KENSINGTON RD	HAMPTON FALLS	1	47	BEDROCK	DOMESTIC
106.0008	42.91011965	-70.88582157	J MARMONTI	107 KENSINGTON RD	HAMPTON FALLS	2	5	BEDROCK	DOMESTIC
106.0025	42.90811015	-70.89096165	G HEAL	7 MILL LN	HAMPTON FALLS	1	16-1	BEDROCK	DOMESTIC
106.0042	42.90995263	-70.89646588	J DORAN	RTE 84	HAMPTON FALLS	1	94-1	BEDROCK	DOMESTIC
106.0049	42.90572532	-70.87550172	THERMO HOMES INC	DODGE RD	HAMPTON FALLS	7	3	BEDROCK	DOMESTIC
106.0103	42.90996905	-70.87378209	R DAVEY	71 KENSINGTON RD	HAMPTON FALLS	7	6	BEDROCK	DOMESTIC
106.0127	42.90389052	-70.90808139	N POND	37 MILL LN	HAMPTON FALLS	1	23-1	BEDROCK	DOMESTIC
106.013	42.91021393	-70.88694477	A FOSTER	111 KENSINGTON RD	HAMPTON FALLS	1	100	BEDROCK	DOMESTIC
106.0212	42.91351785	-70.87703713	BENOIT DEVEL	1 GOV POWELL RD	HAMPTON FALLS	2	4-34	BEDROCK	DOMESTIC
106.0239	42.90364364	-70.8995263	J ARNAT	33 MILL LN	HAMPTON FALLS	1	19	BEDROCK	DOMESTIC
106.0272	42.91543835	-70.87892697	D HUDSON	ALEXIS LN	HAMPTON FALLS	2	4-21	BEDROCK	DOMESTIC
106.0455	42.91075	-70.901233	COGSWORTH	6 PEVEAR LN.	HAMPTON FALLS	1	37	BEDROCK	DOMESTIC
106.0414	42.90668333	-70.89186667	RICH KNIGHT	12 MILL LN	HAMPTON FALLS	1	6	BEDROCK	DOMESTIC
106.0046	42.9078178	-70.91346379	R CARTER	49 WEARE RD	HAMPTON FALLS	1	32-2	BEDROCK	DOMESTIC

List of Potential Private Monitoring Wells
Weare Road Seabrook, NH

WRB_NUMBER	LATITUDE	LONGITUDE	NAME	ADDRESS	TOWN	MAP	LOT	TYPE	USE
106.0081	42.90848645	-70.91254144	C MUTRIE	9 LA-FIESTA DR	HAMPTON FALLS	1	30-3	BEDROCK	DOMESTIC
214.0166	42.896183	-70.877183	PARKE PLACE VILLAGE	44 NEW ZEALAND ROAD	SEABROOK	7	74-0	BEDROCK	AGRICULTURAL
214.0022	42.90023755	-70.86961119	AUTO SHINE CAR WASH	RTE 1	SEABROOK			BEDROCK	COMMERCIAL
214.005	42.90046642	-70.88136804	VORIAS XALOY CO	72 STARD RD	SEABROOK	4	19-1	BEDROCK	AGRICULTURAL
214.0166	42.896183	-70.877183	PARKE PLACE VILLAGE	44 NEW ZEALAND ROAD	SEABROOK	7	74-0	BEDROCK	AGRICULTURAL
214.0022	42.90023755	-70.86961119	AUTO SHINE CAR WASH	RTE 1	SEABROOK			BEDROCK	COMMERCIAL
214.0054	42.89723277	-70.91394744	SMALL	1 FRANCES DR	SEABROOK	2	44927	BEDROCK	DOMESTIC
214.009	42.88782456	-70.90583276	EPPING WELL & PUMP		SEABROOK			BEDROCK	DOMESTIC
214.004	42.89299885	-70.89919622	D ROY	68 BORDER WINDS AVE	SEABROOK	2	94-11	BEDROCK	DOMESTIC
214.0042	42.89169503	-70.89740257	P EVANS	44 BORDER WINDS AVE	SEABROOK	2	94-17	BEDROCK	DOMESTIC
214.0046	42.89089982	-70.90284113	R MELANSA	16 ALISON DR	SEABROOK	2	73	BEDROCK	DOMESTIC
214.0068	42.89212257	-70.90199761	R KENYON	15 BORDER WINDS AVE	SEABROOK	2	94-4	BEDROCK	DOMESTIC
214.0073	42.88685972	-70.88551619	WATERLINE INDUSTRIES	145 BATCHELDER RD	SEABROOK	6	34-3	BEDROCK	DOMESTIC
214.0078	42.89090585	-70.90156281	P. WANING	8 BORDER WINDS AVE	SEABROOK	2	94-26	BEDROCK	DOMESTIC
214.0079	42.8915136	-70.89806925	B. HAMMOND	40 BORDER WINDS AVE	SEABROOK	2	94-18	BEDROCK	DOMESTIC
214.0083	42.88697389	-70.91446363	T. MARTIN	3 AVA MAE LN	SEABROOK	3	2-10	BEDROCK	DOMESTIC

Attachment A

Supplementary Information Used in Determining COD

Radius of Influence/COD Calculations:

The Cooper-Jacob equation for calculating a radius of influence, shown below, was used to estimate a conservative preliminary 180-day cone of depression (COD) based on known aquifer properties and pumping test data:

$$R = 1.5\sqrt{\frac{Tt}{S_c}}$$

In the Cooper-Jacob equation, R equals the radius of influence (ft), T is transmissivity (ft^2/day), t is the time period (day), and S_c is the storage coefficient (dimensionless). Transmissivity and Specific Storage are factors of aquifer thickness which can be simplified to Hydraulic Conductivity (K; ft/day) and specific storage (S_s; 1/ft), respectively. The following simplified equation was used to analyze the radius of influence of the proposed production wells:

$$R = 1.5\sqrt{\frac{Kt}{S_s}}$$

This equation was solved assuming a time period of 180 days. Hydraulic conductivity was estimated to be 0.25 ft/day based on the Cooper-Jacob Straight-Line Method calculator offered by the USGS (Open File Report 02-197). This method used recovery data from the pumping test conducted on Well A on April 28, 2021. A specific storage of 1.58 x 10^{-5} 1/ft was selected based on a range given by Domenico and Mifflin (1965) for fissured rock.

$$R = 1.5\sqrt{\frac{0.25\frac{ft}{day}\times 180\ days}{1.58\ x\ 10^{-5}\frac{1}{ft}}} = 2{,}529 \text{ feet}$$

The resulting radius of influence of 2,529 feet was used as the radius of the cone of depression for Wells A and B.

WELL ID: Well A 12-Hour PT

Local ID: Well A
Date: 4/28/2021
Time: 0:00

INPUT

Construction:		
Casing dia. (d_c)	8	Inch
Annulus dia. (d_w)	8	Inch
Screen Length (L)	553	Feet
Depths to:		
water level (DTW)	11.81	Feet
Top of Aquifer	55	Feet
Base of Aquifer	620	Feet
Annular Fill:		
across screen --	Open Hole	
above screen --	Cement	
Aquifer Material --	Fractured Igneous and	
FLOW RATE	400	GPM

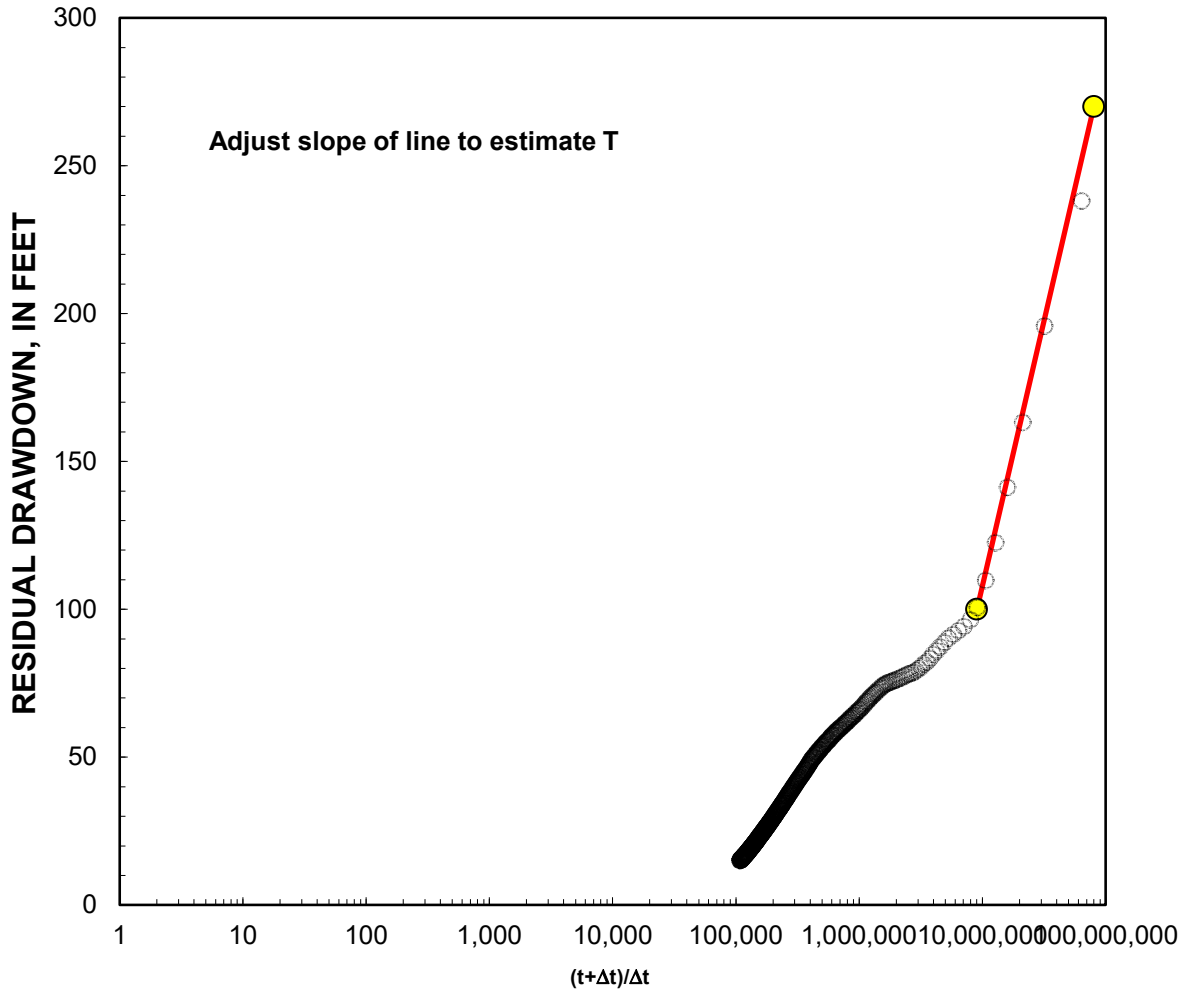
COMPUTED

Aquifer thickness = 600 Feet

Slope = 179.164728 Feet/log10

Input is consistent.

K =	0.1	Feet/Day
T =	80	Feet2/Day



REMARKS: Cooper-Jacob recovery analysis of single-well aquifer test

Recovery of 12-hour Well A Pumping Test

WELL ID: Well A 12-Hour PT

Local ID: Well A
Date: 4/28/2021
Time: 0:00

INPUT

Construction:		
Casing dia. (d_c)	8	Inch
Annulus dia. (d_w)	8	Inch
Screen Length (L)	553	Feet
Depths to:		
water level (DTW)	11.81	Feet
Top of Aquifer	55	Feet
Base of Aquifer	620	Feet
Annular Fill:		
across screen --	Open Hole	
above screen --	Cement	
Aquifer Material --	Fractured Igneous and	
FLOW RATE	160	GPM

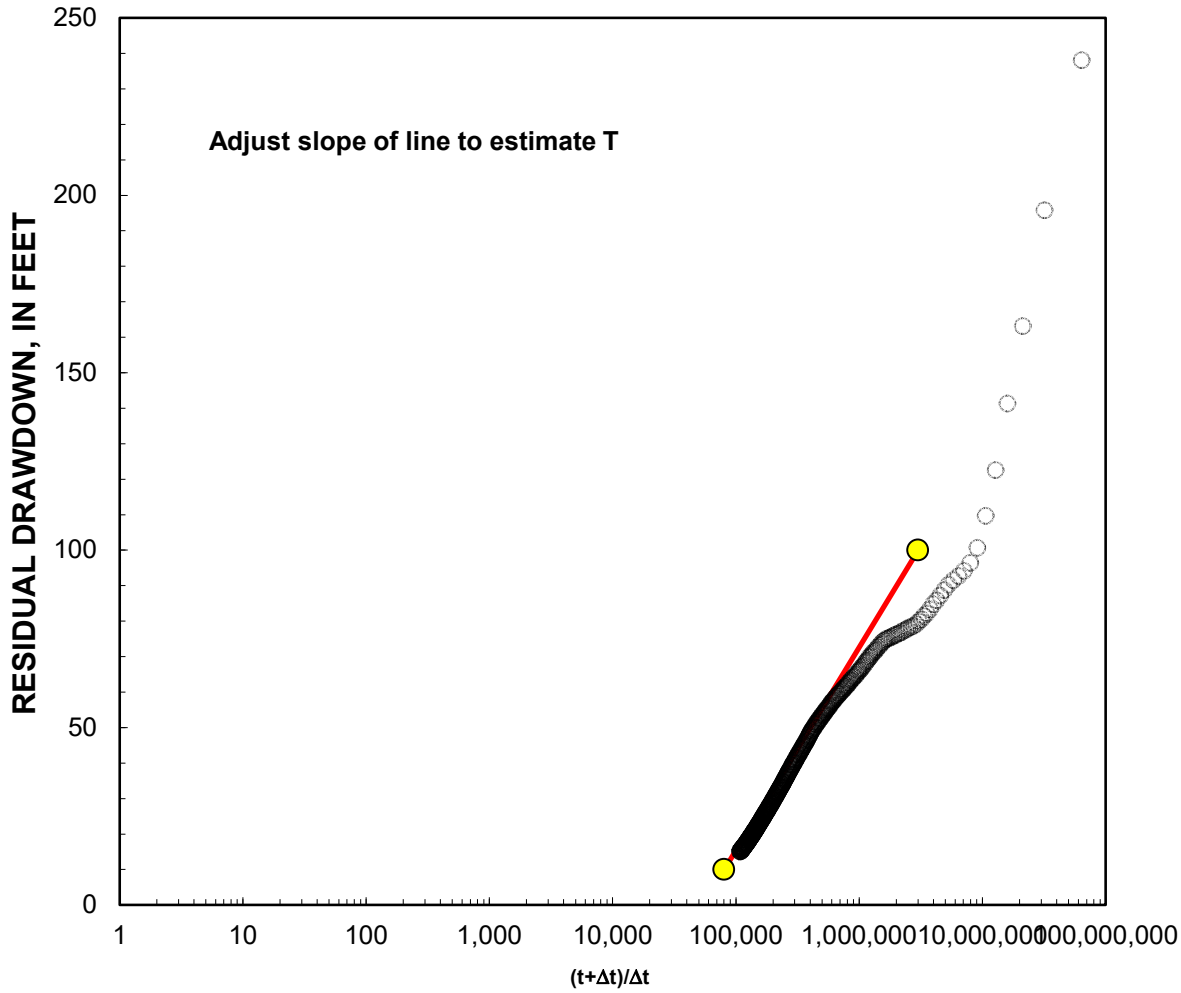
COMPUTED

Aquifer thickness = 600 Feet

Slope = 57.1780255 Feet/log10

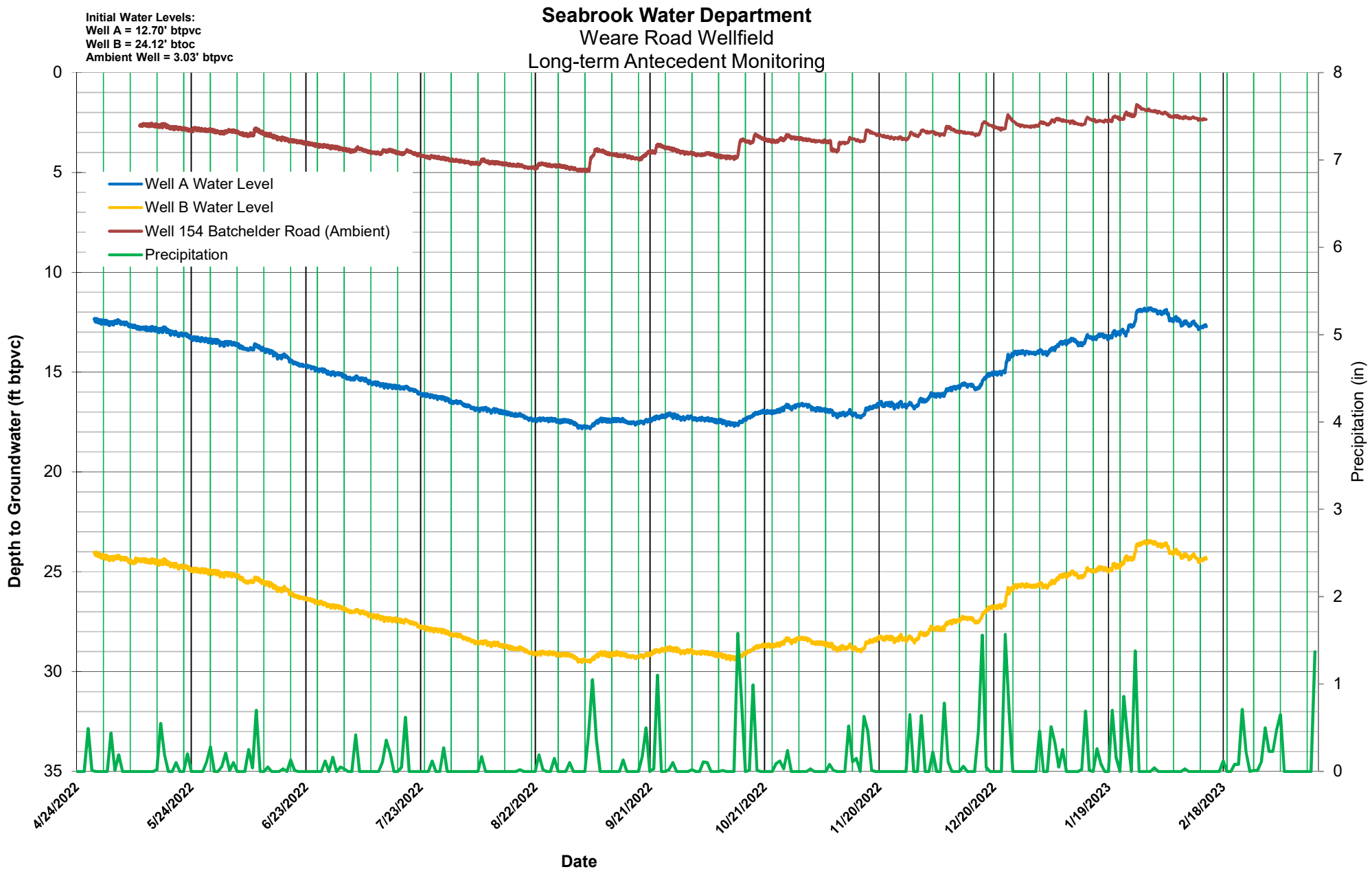
Input is consistent.

K = 400.0 Feet/Day
T = 100 Feet2/Day



REMARKS: Cooper-Jacob recovery analysis of single-well aquifer test

Recovery of 12-hour Well A Pumping Test



Geosphere Environmental Management, Inc.