The Green

City of Newburgh, Orange County, New York

Remedial Action Work Plan

NY BCP Site Number: C336099

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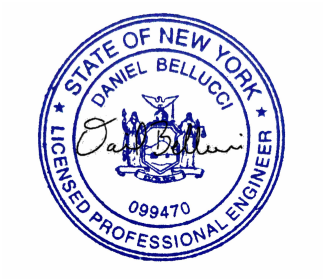
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September 2026

CERTIFICATIONS

I, Daniel Bellucci, certify that I am currently a NYS registered professional engineer and that this Remedial Action Work Plan was prepared in accordance with all applicable statutes and regulations and in substantial conformance with the DER Technical Guidance for Site Investigation and Remediation (DER-10) and Green Remediation (DER-31).



099470	October 9, 2026	
NYS Professional Engineer Number	Date	Signature

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EXECUTIVE SUMMARY

Kearney Realty & Development Group Inc. (the Volunteer) has established this plan to remediate the property known as "The Green", 137 Smith Street and 140 and 146 Montgomery Street, City of Newburgh, Orange County, New York (the "site"). A Remedial Investigation (RI) was completed by Gallagher Bassett Technical Services (GBTS) in accordance with a New York State Department of Environmental Conservation (NYSDEC)-approved Remedial Investigation Work Plan (RIWP, November 2024) to compile and evaluate data and information necessary to develop this Remedial Action Work Plan (RAWP) in accordance with the requirements of the NYSDEC Brownfield Cleanup Program (BCP). The remedial action described in this document achieves the remedial objectives, complies with applicable environmental standards, criteria and guidance and conforms to applicable laws and regulations.

Site Description and Physical Setting

The site, identified as City of Newburgh tax-lot parcels Section 12, Block 4, Lots 4.1, 10, and 2.1, is a 1.16-acre vacant parcel with approximately 357 feet of frontage on the eastern side of Montgomery Street, 147 feet on the northern side of South Street, and 378 feet on the western side of Smith Street. The site is adjoined by a multi-family residential building to the north, by Smith Street and then an apartment complex to the east, by South Street and then multi-family residential buildings to the south, and by Montgomery Street and a public school (Horizons on the Hudson) to the west. Figure 1 shows the site location, Figure 2 shows site features and adjoining properties, and Figure 3 shows the surrounding land use and sensitive receptors.

Summary of Proposed Redevelopment Plan

Development plans include construction of two, new mixed-use/mixed-income buildings with associated infrastructure and landscaping. Building 1 is a 3½-story rowhouse (45 residential units) and Building 2 is a 5-story midrise building (73 residential units) with two open-air partial parking garage levels. Both structures will have retail uses along South Street. The proposed use is consistent with existing zoning.

Building 1 will be a slab-on-grade construction with a total footprint of 12,807 sf. Retail space will occupy 2,723 sf, residential units will occupy approximately 7,588 sf, and common stairs and a utility room will occupy the remaining 2,496 sf.

Building 2 will be a split-level slab-on-grade construction with Level 1 having a total footprint of 13,719 sf and Level 2 having a total footprint of 19,351 sf. The northernmost portion of Level 2 (5,632 sf) will be slab-on-grade and the remaining 13,719 sf will be situated over Level 1.

Exterior areas will be developed with hardscaping features including permeable paver walkways, a playground and a patio along the central and southern portions, and an asphalt paved driveway north of Building 2. Landscaping features will include planter beds at the central portion and maintained lawns along the northern and north-central portions.

Construction excavations include building footings, an elevator pit (Building 2), and a stormwater system (with holding tank between the two buildings at the southern margins of the site), as well as required removals to install hardscaping and landscaping features (note: sampling results show that soils at the proposed depth of the stormwater tank meet the lower of the applicable cleanup levels for protection of groundwater or Restricted-Residential use).

The project will result in the excavation and removal of contaminated soils, as well as potential subsurface debris, as regulated waste, and the proper closure (removal) of any on-site storage tanks.

Based on known environmental conditions, the project is expected to be managed as a Track 2 Restricted-Residential Use property.

Site History and Areas of Concern

The Remedial Investigation Report (RIR; May 2026) included review of the findings from a *Phase I Environmental Site Assessment* and a *Summary Report of Subsurface Investigation* (GBTS, January 2023) conducted prior to entry into the BCP. Historical records indicated the site formerly contained multiple structures (likely used for residential purposes) from at least the late 1800s through sometime between 1971 and 1992. Soil sampling at nine (9) mechanized borings (maximum depth 12 feet below ground surface [bgs]) and an additional five (5) surface locations documented: site-wide fill material with debris; metal contamination above NYSDEC Soil Cleanup Objectives (SCOs) for Restricted-Residential Use (RRU), including arsenic (51.9 parts per million [ppm]), barium (544 ppm), cadmium 94.66 ppm), lead (3,050 ppm), and mercury (2.87 ppm); and pesticides above Unrestricted Use (UU) SCOs. No significant field evidence of contamination was observed. These findings were considered to be consistent with impacts from poor-quality fill, demolition debris, and/or from debris materials historically dumped on the site.

The RIWP identified documented soil contamination by metals, and potential groundwater and vapor contamination, as two distinct Areas of Concern (AOC).

Summary of Remedial Investigation

The RI fieldwork was conducted by GBTS in October and December 2025, and March 2026, including: extension of twenty-nine (29) soil borings; installation of eight (8) permanent groundwater monitoring wells; installation of fourteen (14) soil vapor implants; and collection and laboratory analysis of soil, groundwater and soil vapor samples. Soil and water samples were analyzed for full 6 NYCRR Part 375-6.8 parameters (inclusive of Target Compound List [TCL] and Target Analyte List [TAL] analytes) and per- and polyfluoroalkyl substances (PFAS; NYSDEC target list), and soil vapor was analyzed for volatile organic compounds (VOCs).

All fieldwork activities, sample submission, and laboratory results (maximum values noted), are presented below. Data are reported in parts per million (ppm) for soil and parts per billion (ppb) for groundwater (note: PFAS, only, reported in ppb and parts per trillion [ppt], respectively), and in micrograms per cubic meter ($\mu g/m^3$) for vapor.

Summary of Environmental Findings

1. The site is located in an area with overall moderate to steep downward slopes to the east and southeast, towards the Hudson River, with approximate surface elevations ranging from 140 to 80 feet above mean sea level (amsl).
2. Groundwater depths in monitoring wells (below the top of the stick-up PVC casing, approximately 3 feet above grade at MW-01 through MW-06, and approximately 2-inches below the flush-mounted drive-over covers at MW-07 and MW-08) correspond to approximate elevations ranging from 73.87 feet amsl at MW-08 to 114.48 to 114.06 feet amsl at MW-01 (note: measurements at MW-01 through MW-06 were recorded during two sampling events and measurements at MW-07 and MW-08 were recorded during one sampling event); direction of groundwater is southeasterly toward the Hudson River.
3. Likely hard carbonate bedrock was encountered from 7 to 22 feet bgs.
4. Fill materials (containing fragmentary debris) were observed at borings across the site from 2.5 to 15 feet bgs. Underlying native materials were generally comprised of glacial till or weathered bedrock.

5. Field evidence of contamination was not observed in site soil or groundwater. Low-level photoionization detector (PID) readings were recorded at several vapor sampling locations (maximum reading 26.5 ppm) and in the headspace at monitoring well MW-06 (maximum reading 32.8 ppm).

6. A total of twenty-nine (29) mechanized borings were extended during the RI and soil was collected at intervals of 5 feet to a maximum depth of 15 feet bgs (88 samples plus duplicates). Three soil samples were typically collected for laboratory analysis from each location (upper 2 inches [surface soil], subsurface fill, and from underlying native glacial till if present or from underlying weathered bedrock having fines).

   Soil samples were analyzed for TCL VOCs and semi-volatile organic compounds (SVOCs) plus tentatively identified compounds (TICs), TAL metals including Cr^{+6} and cyanide (CN), PFAS, pesticides, herbicides, and polychlorinated biphenyls (PCBs). Laboratory results were compared to Part 375 UU and RRU SCOs, and to NYSDEC PFAS guidance using the protection of groundwater (POG) guidance values (GVs) as the reference standard for PFAS impacts in soil.

   Polycyclic aromatic hydrocarbons (PAHs, subset of SVOCs) and metals were detected above RRU SCOs in upper fill soils, primarily at the surface, but two samples with elevated PAHs and four samples with elevated metals have been identified between 5 and 12 feet bgs. PAH impacts included: phenanthrene (73 ppm, RRU SCO 4.9 ppm), benzo(a)-anthracene and benzo(b)fluoranthene (27 and 30 ppm, RRU SCO 1.4 ppm), and chrysene (24 ppm; RRU SCO 4.9 ppm). Metal impacts included: arsenic (18.8 ppm, RRU SCO 16 ppm); barium (1,030 ppm, RRU SCO 410 ppm); copper (405 ppm, RRU SCO 280 ppm), lead (9,130 ppm, RRU SCO 400 ppm), and mercury (3.47 ppm, RRU SCO 0.3 ppm). Multiple locations in upper fill soils exceeded UU SCOs for metals and pesticides, and the POG GVs for PFAS (perfluorooctanesulfonic acid [PFOS] and perfluorooctanoic acid [PFOA]). PFAS exceedances above the POG GVs were reported in twenty-two (22) samples, with twenty (20) collected from the surface and two (2) from the upper 5 feet. PFOS exceedances

ranged from 1.1 to 4.56 ppb (POG GV 1.0 ppb, RRU GV 44 ppb) and PFOA exceedances ranged from 0.851 to 1.12 ppb (POG GV 0.8 ppb, RRU GV 33 ppb). All PFAS detections were well below the RRU GVs (all individual detections reported at less than 1 ppb) and no PFAS were detected in seventeen (17) samples, which were generally from deeper intervals below 4 feet bgs. A marginally elevated level of acetone was reported in one surface soil sample (no other significant levels of VOCs were detected). VOC and/or SVOC TICs were reported in all samples.

7. Groundwater samples from eight (8) monitoring wells were analyzed for TCL VOCs and SVOCs plus TICs, TAL metals plus Cr^{+6} and CN, pesticides, herbicides, PCBs, and PFAS. Laboratory results were compared to NYSDEC Ambient Water Quality Standards (AWQS) and Water Quality Guidance Values (WQGV).

   One VOC, a trace level of MTBE (gasoline additive) in MW-05 (0.41 ppb, Ambient Water Quality Standard [AWQS] 10 ppb), and no SVOCs, were reported in groundwater. VOC TICs (limited to a single unknown hydrocarbon) were reported in four wells from approximately 4.2 to 45 ppb and SVOC TICs (limited to three compounds) were in two wells, from approximately 6 to 25 ppb. The highest TIC concentrations for both analyte classes were reported at MW-06.

   Multiple total and dissolved TAL metals were reported in all groundwater samples, with elevated levels (maximum values noted) of iron (2,290 ppb; AWQS 300 ppb), magnesium (65,300 ppb; AWQS 35,000 ppb), manganese (2,970 ppb; AWQS 300 ppb), and/or sodium (523,000 ppb; AWQS 20,000 ppb). Exceedances are primarily due to dissolved levels, with exception of dissolved iron (reported as non-detect). Heavy metals reported above RRU SCOs in soil (arsenic, barium, copper, lead, and mercury) are either non-detect or present below AWQS in groundwater. No pesticides, herbicides, or PCBs were detected.

   Elevated PFOS (4.88 and 7.24 ppt; WQGV 2.7 ppt) was reported at MW-06 and MW-08, respectively, and elevated PFOA (7.15 to 106 ppt; WQGV 6.7 ppt) was reported at MW-

01 (highest concentration), MW-02, MW-06 and MW-08. Multiple other PFAS were found in all wells except MW-05, with a maximum value of 100 ppt (MW-01).

8. Fourteen (14) vapor samples were analyzed for VOCs during the RI and results were compared to environmental investigation findings as a whole and to the applicable New York State Department of Health (NYSDOH) guidance for evaluating potential soil vapor intrusion.

   Tetrachloroethylene (PCE) was detected in eight (8) samples in October 2025 ranging from 210 to 474 µg/m^3 and in one (1) of six (6) samples in March 2026 at 1.25 µg/m^3; no PCE breakdown products or other chlorinated VOCs (CVOCs), however, were detected (PCE and related breakdown products have not been detected in either site soil or groundwater). Additional contamination was reported site-wide, comprised of low-grade impacts from petroleum VOCs (maximum concentration m,p-xylene 77.2 µg/m^3) and non-chlorinated VOCs (including 2-butanone up to 934 µg/m^3 and acetone up to 1,300 µg/m^3).

Qualitative Human Health Exposure Assessment

The qualitative exposure assessment provided in the RIR identified potential completed routes of exposure to construction and remediation workers, as well as trespassers (during construction), through inhalation, ingestion and/or dermal contact of organic and inorganic compounds in surface and subsurface soils (primarily PAHs and metals above RRU SCOs) and through direct contact and/or ingestion for groundwater (metals and PFAS) during excavation and/or dewatering activities, and potential VOC vapor, dust and runoff exposure to off-site receptors and the public adjacent to the site.

There are no potential environmental impacts through groundwater to surface water discharge.

The Health and Safety Plan for Site Remediation (HASP) and the Community Air Monitoring Plan (CAMP) prepared for the site identify such exposures and provide instructions for on-site workers and the nearby community to minimize potential exposures during remediation and construction activities. Although the potential exists for subsurface soil contamination to be present after the completion of remediation and site redevelopment activities, all potential exposure pathways are expected to be mitigated as all surface soils will be removed and access to remaining subsurface soils will be limited by paved areas, building foundations and a 2-foot clean cover in

landscaped areas. No known private wells exist within a ½-mile radius of the site, consistent with the urban nature of the City of Newburgh.

Fish and Wildlife Assessment

Based on a RI fieldwork observations and laboratory results, and a review of DER-10 requirements, the RIR concluded that an on-site and off-site qualitative fish and wildlife resource exposure assessment (identification of impacts to fish and wildlife resources from site contaminants of ecological concern) is not required for the site (there are no ecological resources present on or in the vicinity of the site, which is the location of multiple former buildings and is in a well-developed urban setting).

Summary of the Remedy

Based on known environmental conditions and physical constraints on construction activities, the Volunteer expects to complete a Track 2 Restricted-Residential Use cleanup requiring institutional and engineering controls (ECs).

The proposed remedial action plan achieves all the remedial action goals established for the project. The plan is effective in both the short-term and long-term and reduces mobility, toxicity and volume of contaminants and uses standard methods that are well established in the industry. The proposed remedial action will consist of:

1. A remedial program will be implemented to provide the details necessary for the construction, operation, optimization, maintenance, and monitoring of the remedial program. Green remediation principles and techniques will be implemented to the extent feasible in the design, implementation, and site management of the remedy as per DER-31. The major green remediation components are as follows:
    - Considering the environmental impacts of treatment technologies and remedy stewardship over the long term;
    - Reducing direct and indirect greenhouse gases and other emissions;
    - Increasing energy efficiency and minimizing use of non-renewable energy;
    - Conserving and efficiently managing resources and materials;
    - Reducing waste, increasing recycling and increasing reuse of materials which would otherwise be considered a waste;

- Maximizing habitat value and creating habitat when possible;
- Fostering green and healthy communities and working landscapes, which balance ecological, economic and social goals;
- Integrating the remedy with the end use where possible and encouraging green and sustainable re-development; and,
- Additionally, to incorporate green remediation principles and techniques to the extent feasible in the future development at this site, any future on-site buildings shall be constructed, at a minimum, to meet the 2020 Energy Conservation Construction Code of New York (or most recent edition) to improve energy efficiency as an element of construction.

As part of the remedial program, to evaluate the remedy with respect to green and sustainable remediation principles, an environmental footprint analysis will be completed using an accepted calculator such as SEFA (Spreadsheets for Environmental Footprint Analysis, USEPA), SiteWise™ (available in the Sustainable Remediation Forum [SURF] library) or similar NYSDEC accepted tool. Water consumption, greenhouse gas emissions, renewable and non-renewable energy use, waste reduction and material use will be estimated, and goals for the project related to these green and sustainable remediation metrics, as well as for minimizing community impacts, protecting habitats and natural and cultural resources, and promoting environmental justice, will be incorporated into the remedial program, as appropriate. The project will include detailed requirements to achieve the green and sustainable remediation goals. Further, progress with respect to green and sustainable remediation metrics will be tracked during implementation of the remedial action and reported in the Final Engineering Report (FER), including a comparison to the goals established during the remedial program.

Additionally, the remedial program will include a climate change vulnerability assessment, to evaluate the impact of climate change on the project site and the proposed remedy. Potential vulnerabilities associated with extreme weather events (e.g., hurricanes, lightning, heat stress and drought), flooding, and sea level rise will be identified, and the remedial program will incorporate measures to minimize the impact of climate change on potential identified vulnerabilities.

The Site is located within a Disadvantaged Community (DAC; an area designated by the Climate Justice Working Group that faces significant socioeconomic and environmental challenges). The remedial program includes provisions to minimize greenhouse gas emissions and associated impacts to the community, which will be minimized by ensuring trucks and other construction vehicles are not idling and are equipped with emissions-control technologies. The designated travel routes for incoming and outgoing construction vehicles, including trucks associated with off-site disposal of soil, will be optimized to eliminate, or reduce as much as practicable, the travel of trucks within the DAC area and travel on highways will be prioritized. Disposal facilities and facilities providing backfill materials will be selected based on their proximity to the site and closer facilities will be prioritized to minimize greenhouse gas emissions generated during the remedial action. A stormwater management system will be constructed that will reduce site-specific impacts on municipal utilities and minimize local flooding impacts.

2. Performance of all required BCP Public Participation activities according to an approved Public Participation Plan.
3. Performance of a Community Air Monitoring Program for particulates and volatile organic compounds.
4. Selection of Track 2 Restricted-Residential Use SCOs (protection of public health) for soils to remain at the site.
5. Site preparation including setup of site security, equipment mobilization, utility mark outs and marking/staking excavation areas.
6. Completion of a Waste Characterization Study prior to excavation. Waste characterization soil samples will be collected at a frequency dictated by the disposal facility.
7. Removal of any underground storage tanks encountered during demolition activities in compliance with applicable local, State and Federal laws and regulations.
8. Removal of soils that exceed RRU SCOs and POG GVs, including the upper 2 feet across the entire Site (approximately 3,419 cubic yards [cy]), with additional removal of deeper soil as shown below, for a total of approximately 5,619 cy removed for remedial purposes:

RI sampling locations	Final excavation depth, based on original surface	Additional volume removed below initial cut of 2 feet
2SB-24; 2SB-25; 2SB-29	3 feet	133 cy
2SB-04; 2SB-11; 2SB-13; 2SB-14; 2SB-15; 2SB-19; 2SB-20	6 feet	700 cy
2SB-12	7 feet	167 cy
2SB-27	8 feet	200 cy
2SB-28	10 feet	267 cy
2SB-08; 2SB-21	13 feet	733 cy

9. Screening of excavated soil for indications of contamination by visual means, odor, and monitoring with a PID, and on-site segregation of excavated media (as needed).
10. Collection and analysis of end-point samples to evaluate the performance of the remedy with respect to attainment of Track 2 SCOs.
11. Management of excavated materials including temporarily stockpiling and segregating in accordance with defined material types and to prevent co-mingling of contaminated material and non-contaminated materials.
12. Transportation and off-site disposal of all soil material at licensed or permitted facilities in accordance with applicable laws and regulations for handling, transport, and disposal, and this plan. Sampling and analysis of excavated media as required by disposal facilities. Appropriate segregation of excavated media on-site.
13. Import of materials to be used for backfill in compliance with this plan and in accordance with applicable laws and regulations. If determined acceptable for re-use by the NYSDEC, existing fill soils that meet applicable SCOs may be relocated on the site for development.
14. An Engineering Control will be implemented, following removal of contaminated soil, to treat PFAS contamination in groundwater, including installation of a subsurface permeable reactive barrier along the upgradient site boundary and periodic groundwater monitoring to document system effectiveness. A formal Remedial Design certified by a professional engineer, providing complete technical specifications for groundwater remediation, will be submitted to NYSDEC for review and approval.

    As a contingency, if any portion of the site fails to meet Track 2 SCOs for soil, a cover system will be required as an Engineering control in areas where the upper two feet of exposed surface soil will exceed RRU SCOs, to allow for future Restricted-Residential use.

15. Performance of all activities required for the remedial action, including acquisition of required permits and attainment of pretreatment requirements, in compliance with applicable laws and regulations.
16. Based on the depth to groundwater, dewatering may be required at portions of the site. All dewatering will be in compliance with city, state, and federal laws and regulations. Extracted groundwater will either be containerized for off-site licensed or permitted disposal or will discharged to the local wastewater system in compliance with all municipal requirements, including pre-treatment if warranted.
17. Implementation of storm-water pollution prevention measures in compliance with applicable laws and regulations.
18. Performance of a soil vapor intrusion evaluation at all Site buildings prior to occupancy, to be conducted during the heating season (NYSDEC and NYSDOH will review the results and determine if an Engineering Control for vapor is required). If the Volunteer chooses to install a vapor control measure prior to this evaluation, the installed system would not be considered an Engineering Control at that time.
19. Submission of a FER that describes the remedial activities, certifies that the remedial requirements have been achieved, defines site boundaries, lists any changes from this RAWP, and describes all institutional and engineering controls to be implemented at the site.
20. Submission of an approved Site Management Plan (SMP) in the FER for the long-term management of residual contamination, including plans for operation, maintenance, monitoring, inspection and certification of engineering and institutional controls, and reporting at a specified frequency.
21. Recording of an environmental easement that includes a listing of institutional controls. Institutional controls will include prohibition of the following: (1) vegetable gardening and farming; (2) use of groundwater without treatment rendering it safe for the intended use; (3) disturbance of residual contaminated material unless it is conducted in accordance with the SMP; and (4) higher level of land usage without NYSDEC approval. The environmental easement will include a listing of engineering controls and a requirement that management of these controls must be in compliance with an approved SMP.

REMEDIAL ACTION WORK PLAN

1 INTRODUCTION

Kearney Realty & Development Group Inc. (KRDG) entered into a Brownfield Cleanup Agreement (BCA) with the New York State Department of Environmental Conservation (NYSDEC) in October 2024 to investigate and remediate a 1.16-acre property known as "The Green" in the City of Newburgh, Orange County, New York (the "site"). KRDG is a Volunteer in the Brownfield Cleanup Program (BCP). Restricted Residential use is proposed for the property. When completed, the site will contain two new residential buildings (3½-story rowhouse structure and a 5-story midrise). Refer to the BCP application for additional details.

This Remedial Action Work Plan (RAWP) summarizes the nature and extent of contamination as determined from data gathered during the Remedial Investigation (RI), performed in October and December 2025 and February and March 2026, and provides an evaluation of an Unrestricted Use (NYSDEC Track 1) cleanup and other applicable Remedial Action alternatives, their associated costs, and the recommended and preferred remedy. The remedy described in this document is consistent with the procedures defined in NYSDEC DER-10 and DER-31, and complies with all applicable standards, criteria and guidance. The remedy described in this document also complies with all applicable Federal, State and local laws, regulations and requirements. The NYSDEC and New York State Department of Health (NYSDOH) have determined that this site does not pose a significant threat to human health and the environment. The RI for this site did not identify fish and wildlife resources.

1.1 Site Location and Description

The site, located in the City of Newburgh at 137 Smith Street and 140 and 146 Montgomery Street (tax-lot parcels: Section 12, Block 4, Lots 4.1, 10, and 2.1, respectively), is a somewhat rectangular 1.16-acre parcel with approximately 357 feet of frontage on the eastern side of Montgomery Street, 147 feet on the northern side of South Street, and 378 feet on the western side of Smith Street. The property is primarily vacant wooded land, with a grass clearing at the southern portion and parking areas along the margin with Smith Street.

The site is adjoined by a multi-family residential building to the north, by Smith Street and then an apartment complex to the east, by South Street and then multi-family residential buildings to the south, and by Montgomery Street and a public school (Horizons on the Hudson) to the west.

Figure 1 shows the site location and Figure 2 shows site features and adjoining properties.

1.2 Proposed Redevelopment Plan

The Remedial Action to be performed under the RAWP is intended to make the site protective of human health and the environment consistent with the contemplated end use. The proposed redevelopment plan and end use is described here to provide the basis for this assessment. However, the Remedial Action contemplated under this RAWP may be implemented independent of the proposed redevelopment plan.

Development plans for the site (Appendix A) include construction of two, new mixed-use/mixed-income buildings with associated infrastructure and landscaping. Building 1 is a 3½-story rowhouse (45 residential units) and Building 2 is a 5-story midrise building (73 residential units) with two partial parking garage levels. Both structures will have retail uses along South Street.

The proposed use is consistent with existing zoning for the property (Waterfront Gateway), which allows for the planned residential development, inclusive of the street-level commercial uses.

Building 1 will be a slab-on-grade construction with a total footprint of 12,807 square feet (sf). Retail space will occupy 2,723 sf, residential units will occupy approximately 7,588 sf, and common stairs and a utility room will occupy the remaining 2,496 sf.

Building 2 will be a split-level slab-on-grade construction with Level 1 having a total footprint of 13,719 sf and Level 2 having a total footprint of 19,351 sf. The northernmost portion of Level 2 (5,632 sf) will be slab-on-grade and the remaining 13,719 sf will be situated over Level 1.

Exterior areas will be developed with hardscaping features including permeable paver walkways, a playground and a patio along the central and southern portions, and an asphalt paved driveway north of Building 2. Landscaping features will include planter beds at the central portion and maintained lawns along the northern and north-central portions.

Construction excavations include building footings, an elevator pit (Building 2), and a stormwater system (holding tank between the two buildings at the southern margins of the site), as well as

required removals to install hardscaping and landscaping features (note: sampling results show that soils at the proposed depth of the stormwater tank meet the lower of the applicable cleanup levels for protection of groundwater or Restricted-Residential use).

Due to variable topography across the site and anticipated footing locations and depths, maximum construction excavation depths will generally range from between 4 ft bgs to up to 15 ft bgs with the stormwater system excavated to up to 20 feet bgs. Excavation may extend below the groundwater table along the eastern margins of the site. Up to approximately 10,500 cy of soil will be removed for construction purposes (additional soil may be removed if found to be unstable or otherwise unacceptable for development reasons), with at least 5,619 cy removed for remediation purposes.

The project will result in the excavation and removal of contaminated soils, as well as potential subsurface debris, as regulated waste. Based on known environmental conditions, the project is expected to be managed as a Track 2 Restricted-Residential Use property.

Figure 4 shows the construction excavation plan for site development.

1.3 Description of Surrounding Property

The site is located within a densely developed urban setting and is adjoined to the north by a multi-family residential building The site is adjoined by a multi-family residential building to the north, by Smith Street and then an apartment complex to the east, by South Street and then multi-family residential buildings to the south, and by Montgomery Street and a public school (Horizons on the Hudson) to the west. Subsurface infrastructure typically associated with urban development, including utility lines and piping for sewers and stormwater systems, is present in adjoining and surrounding area roadways. Land use within a half-mile radius is primarily residential (includes several adjoining properties), with additional commercial, institutional, recreational, and community-services uses. The Hudson River and related waterfront facilities are located approximately 500 feet to the east.

2 REMEDIAL INVESTIGATION FINDINGS

The site was investigated in accordance with the scope of work presented in the NYSDEC-approved Remedial Investigation Work Plan (RIWP, November 2024). The investigation was conducted in October and December 2025 and February and March 2026.

2.1 Site History

The RIR included review of the findings from a previous *Phase I Environmental Site Assessment* and a *Summary Report of Subsurface Investigation* (GBTS, January 2023) conducted prior to entry into the BCP. Historical records indicated the site formerly contained multiple structures (likely used for residential purposes) from at least the late 1800s through sometime between 1971 and 1992. Soil sampling at nine (9) mechanized borings (maximum depth 12 feet below ground surface [bgs]) and an additional five (5) surface locations documented: site-wide fill material with debris; metal contamination above NYSDEC Soil Cleanup Objectives (SCOs) for Restricted-Residential Use (RRU), including arsenic (51.9 parts per million [ppm]), barium (544 ppm), cadmium 94.66 ppm), lead (3,050 ppm), and mercury (2.87 ppm); and pesticides above Unrestricted Use (UU) SCOs. No significant field evidence of contamination was observed. These findings were considered to be consistent with impacts from poor-quality fill, demolition debris, and/or from debris materials historically dumped on the site.

The RIWP identified documented soil contamination by metals, and potential groundwater and vapor contamination, as two distinct Areas of Concern (AOC).

2.2 Summary of Remedial Investigation

2.2.1 Relevant Documents

The following relevant environmental work plans and reports were developed for the site:

- Gallagher Bassett Technical Services (GBTS), Remedial Investigation Work Plan (November 2024); and,
- GBTS, Remedial Investigation Report (April 2026).

2.2.2 RI Scope of Work

The following work was performed during the RI:

1. Conducted an inspection to identify Areas of Concern and physical obstructions, including a geophysical survey to identify underground features;
2. Advanced twenty-nine (29) mechanized borings (2SB-01 to 2SB-29), and collected a total of eighty-eight (88) soil samples (generally three samples from each boring) plus duplicates;
3. Installed and sampled eight (8) permanent site monitoring wells (MW-01 to MW-08), and measured depth to groundwater; and,
4. Installed and sampled fourteen (14) soil vapor probes (SV-01 to SV-15; SV-10 could not be sampled).

Relevant analytical results from soil, groundwater, and soil vapor samples are shown on Figures 5 to 7 and complete data are provided in Tables 1 to 13. Data are reported in parts per million (ppm) for soil and parts per billion (ppb) for groundwater (per- and polyfluoroalkyl substances [PFAS], only, reported in ppb and parts per trillion [ppt], respectively), and in micrograms per cubic meter ($\mu g/m^3$) for vapor.

2.2.3 Best Management Practices

Best Management Practices (BMPs) were implemented at the site during the RI to reduce environmental impacts. The core goals were to reduce total energy use, air pollutants/greenhouse gas emissions, water use, and waste, and additionally to preserve and protect water quality, material resources, and land and ecosystem services. To achieve these ends the following BMPs were implemented:

- Advance project planning was conducted to minimize the number of mobilizations to the site by environmental fieldwork personnel and related subcontractors, and the number of media samples requiring collection, transportation, and laboratory analysis;
- Remote communication was used as practical to minimize on-site meetings, reducing the impacts associated with transportation of site personnel (energy use, pollution, etc.);
- Fieldwork utilized minimally invasive technologies, such as locating utilities and clearing boring locations with ground penetrating radar, direct push borings verses extension of test pits, and use of direct-reading instruments to screen for volatile compounds;

- Permanent monitoring wells were installed to allow for future reuse if warranted; and,
- Boring spoils were used (where appropriate) to close abandoned borings and complete permanent wells, minimizing the need to use imported backfill materials.

2.3 Significant Threat

The NYSDEC and NYSDOH have determined that this site does not pose a significant threat to human health and the environment.

2.4 Site Geology and Hydrogeology

Site geological and hydrogeological conditions, documented in the RIR, are summarized below:

1. The site is located in an area with overall moderate to steep downward slopes to the east and southeast, towards the Hudson River, with approximate surface elevations ranging from 140 to 80 feet above mean sea level (amsl).
2. Groundwater depths (measured from the top of the stick-up PVC well casing [approximately 3 feet above grade for MW-01 to MW-06 and approximately 2-inches below the flush-mounted drive-over cover for MW-07 and MW-08]) and elevations are provided in the table below. Direction of groundwater is southeasterly toward the Hudson River.

		November 2025		December 2025		March 2026	
Well	Casing Elv.	DTW	Elevation	DTW	Elevation	DTW	Elevation
MW-01	127.099	12.62	114.48	13.04	114.06	—	—
MW-02	118.662	9.98	108.68	10.06	108.60	—	—
MW-03	121.885	8.93	112.96	8.68	113.21	—	—
MW-04	112.900	18.23	94.67	17.42	95.48	—	—
MW-05	115.413	22.05	93.36	21.34	94.07	—	—
MW-06	100.471	20.86	79.61	21.24	79.23	—	—
MW-07	89.83*	—	—	—	—	0.40*	89.43*
MW-08	84.83*	—	—	—	—	10.96*	73.87*

Notes: Data in feet (elevations based on NAVD88 and reported to nearest hundredth of a foot).
** = Estimated value, based on Site topographic survey and field measurements*

3. Likely hard carbonate bedrock was encountered from 7 to 22 feet bgs.
4. Fill materials (containing fragmentary debris) were observed at borings across the site from 2.5 to 15 feet bgs. Underlying native materials were generally comprised of glacial till or weathered bedrock.

2.5 Contamination Conditions

2.5.1 Conceptual Model of Site Contamination

The site is covered with variable depth urban fill, which may include demolition debris or material sourced from off-site, impacted locations. Site soils contain polycyclic aromatic hydrocarbons (PAHs), metals, and pesticides above NYSDEC Unrestricted Use (UU) Soil Cleanup Objectives (SCOs), PFAS above NYSDEC Protection of Groundwater (POG) Guidance Values (GVs), and PAHs and metals above NYSDEC Restricted-Residential Use (RRU) SCOs (in upper soils/fill, typically at the surface). PFOS and PFOA were identified above POG GVs throughout the site, generally in surface soils, along with multiple other PFAS at low levels. PFAS above POG GVs in deeper soils were limited to four locations and exceedances were not detected in samples collected deeper than 5 feet bgs. [Note: RI sampling results at the proposed depth of the stormwater tank meet the lower of the POG SCOs/GVs or RRU SCOs].

Groundwater at multiple wells has elevated PFAS, which may be related to low-level exceedances of PFAS in surface and upper soils, and/or be from an off-site source. PFAS impacts at the northern portion of the site suggest an off-site source considering MW-01 is the most up-gradient well (where the highest PFAS impacts were recorded) and no PFAS exceedances were recorded in upper soils at this location. PFAS impacts at MW-08 are also not likely to be related to upper soils as no PFAS exceedances were recorded in upper soils. PFAS impacts at MW-02 and MW-06 (generally at the southeastern corner of the site) may be attributable to upper soils. Metal contamination above AWQS (typical of well-developed urban settings) is present in groundwater throughout the site. There are no documented contaminant plumes identified at the site (groundwater flow is southeasterly).

Significant vapor impacts are limited to a relatively uniform distribution of tetrachloroethylene (PCE) throughout the western portions of the site (all concentrations reported below 500 µg/m^3). The absence of any field evidence of contamination or PCE (or any other chlorinated VOCs [CVOCs]) in site soil and groundwater, and supporting documentation indicating likely historical use of PCE in nearby upgradient locations, support the conclusion that the source of PCE in vapor is related to local area (off-site) contamination conditions rather than a significant on-site source. A definitive source of vapors has not been identified.

Overall, the RI findings are consistent with conditions seen at urban locations where buildings have been demolished and poor-quality fill is present, resulting in impacts from PAHs, metals, pesticides, and PFAS, and where poor-quality vapor is present absent an obvious source.

Areas of concern are limited to elevated PAHs, metals and PFAS in soil and PCE concentrations in vapor that represent a potential risk of soil vapor intrusion (SVI) into any new on-site buildings.

2.5.2 Description of Areas of Concern

AOC 1: Site-wide Soil Contamination – The site contains urban fill, typically from 2.5 to 15 feet bgs, with areas exceeding RRU SCOs for PAHs and/or metals, pesticides exceeding UU SCOs, and PFAS exceeding POG GVs. There are no known releases associated with these conditions.

AOC 2: Groundwater Contamination – Elevated PFAS is documented in site groundwater potentially due to PFAS in site soils exceeding POG GVs (low grade metal contamination in groundwater, typical of urban settings, is not considered to be an AOC at this time).

AOC 3: Soil Vapor Contamination – Elevated PCE is documented in soil vapor at levels presenting a potential risk for SVI; no PCE breakdown products, however, have been identified. This contamination requires a response action but is not likely indicative of any existing significant on-site source area (PCE is not present in soil or groundwater and supporting documentation indicating likely historical use of PCE in nearby upgradient locations). Low-level impacts by other VOCs, typical of urban settings, have been identified.

2.5.3 Identification of Standards, Criteria and Guidance

The following standards, criteria, and guidance (SCG) were referenced during the RI:

- 6 NYCRR Part 182 – Endangered and Threatened Species of Fish and Wildlife
- 6 NYCRR Part 371 – Identification and Listing of Hazardous Wastes
- 6 NYCRR Part 375 – Environmental Remediation Programs;
- 6 NYCRR Part 608 – Use and Protection of Waters
- 6 NYCRR Part 661 – Tidal Wetlands – Land Use Regulations
- 6 NYCRR Part 663 – Freshwater Wetlands Maps and Classification
- 6 NYCRR Parts 700-706 – Water Quality Standards
- 29 CFR Part 1910.120 – Hazardous Waste Operations and Emergency Response

- NYSDEC DER-10 – Technical Guidance for Site Investigation and Remediation;
- NYSDEC DER-31 – Green Remediation (2010)
- NYSDEC Ambient – Water Quality Standards and Guidance Values – TOGS 1.1.1;
- NYSDEC CP-51 – Soil Cleanup Guidance (October 2010)
- NYSDOH Generic Community Air Monitoring Plan
- NYSDOH Guidance for Evaluating Soil Vapor Intrusion in the State of New York
- NYSDEC SPOTS #14 – Site Assessments at Bulk Storage Facilities
- NYSDEC Fish and Wildlife Impact Analysis for Inactive Hazardous Waste Sites

2.5.4 Soil Contamination

Soil samples collected during the RI were analyzed for Target Compound List (TCL) VOCs and semi-volatile organic compounds (SVOCs) plus tentatively identified compounds (TICs), Target Analyte List (TAL) metals including Cr^{+6} and cyanide (CN), PFAS (NYSDEC target list), pesticides, herbicides, and polychlorinated biphenyls (PCBs). Results were compared to UU and RRU SCOs and POG GVs for PFAS.

Eighty-eight (88) samples plus duplicates from twenty-nine (29) soil borings (2SB-01 to 2SB-29) were submitted to the laboratory. Three soil samples were typically collected from each location (upper 2 inches [surface soil], subsurface fill, and from underlying native glacial till if present or from underlying weathered bedrock having fines).

Submission of samples during the RI is summarized below, and relevant results are discussed in the text as warranted (note: unless otherwise indicated, results represent maximum reported values).

PAHs and metals were detected above RRU SCOs in upper fill soils, primarily at the surface, but two samples with elevated PAHs and four samples with elevated metals have been identified between 5 and 12 feet bgs. PAH impacts included: phenanthrene (73 ppm, RRU SCO 4.9 ppm), benzo(a)-anthracene and benzo(b)fluoranthene (27 and 30 ppm, RRU SCO 1.4 ppm), and chrysene (24 ppm; RRU SCO 4.9 ppm). Metals impacts included: arsenic (18.8 ppm, RRU SCO 16 ppm); barium (1,030 ppm, RRU SCO 410 ppm); copper (405 ppm, RRU SCO 280 ppm), lead (9,130 ppm, RRU SCO 400 ppm), and mercury (3.47 ppm, RRU SCO 0.3 ppm). Additional metals were reported above UU SCOs in upper fill soils.

Multiple locations in upper fill soils exceeded UU SCOs for pesticides (DDT and breakdown products, and dieldrin). No PCBs or herbicides were detected. A marginally elevated level of acetone (0.079 ppm, UU SCO 0.05 ppm) was reported in two samples (no other significant levels of VOCs were detected). VOC and/or SVOC TICs were reported in all samples except for three (3) surface samples and one (1) deeper sample (total TICs ranged from 0.64 to 37.8 ppm).

Low-level exceedances of the NYSDEC PFAS POG UU GVs for PFAS (well below the RRU GVs) were reported in twenty-five (25) samples, with twenty-one (21) from the surface and four (4) from upper soils within the upper 5 feet (perfluorooctanesulfonic acid [PFOS] 0.893 to 4.56 ppb, UU GV 0.88 ppb, RRU GV 44 ppb and perfluorooctanoic acid [PFOA] 0.677 to 1.12 ppb, UU GV 0.66 ppb, RRU GV 33 ppb). Seventy-one (71) samples contained PFOS or PFOA below guidance, and/or other PFAS (all individual detections reported at less than 1 ppb).

Significant soil contamination is limited to the upper layer of urban fill materials (primarily at the surface). Site soils contain SVOCs, metals, pesticides, and PFAS (PFOS and PFOA) above UU SCOs or UU GVs, and multiple locations have PAHs and/or metals exceeding RRU SCOs.

Tables 1 through 6 provide laboratory results for all soil at the site, and Figure 5 is a spider map showing the location and summarizing exceedances of RRU SCOs.

2.5.5 Groundwater Contamination

Groundwater samples from eight (8) monitoring wells were analyzed for TCL VOCs and SVOCs plus TICs, TAL metals plus Cr^{+6} and CN, PFAS (NYSDEC target list), pesticides, herbicides, and PCBs. Results were compared to NYSDEC Ambient Water Quality Standards and Guidance Values (AWQS).

One VOC, a trace level of MTBE (gasoline additive) in MW-05 (0.41 ppb, Ambient Water Quality Standard [AWQS] 10 ppb), and no SVOCs, were reported in groundwater. VOC TICs (limited to a single unknown hydrocarbon) were reported in four wells from approximately 4.2 to 45 ppb, and SVOC TICs (limited to three compounds) were in two wells, from approximately 6 to 25 ppb. The highest TIC concentrations for both analyte classes were reported at MW-06.

Multiple total and dissolved TAL metals were reported in all groundwater samples, with elevated levels of iron (2,290 ppb; AWQS 300 ppb), magnesium (65,300 ppb; AWQS 35,000 ppb), manganese (2,970 ppb; AWQS 300 ppb), and/or sodium (523,000 ppb; AWQS 20,000 ppb). Exceedances are primarily due to dissolved levels, with exception of dissolved iron (reported as

non-detect). Heavy metals reported above RRU SCOs in soil (arsenic, barium, copper, lead, and mercury) are either non-detect or present at levels below AWQS in groundwater. No pesticides, herbicides, or PCBs were detected.

Elevated PFOS (4.88 and 7.24 ppt; NYSDEC water quality guidance value [WQGV] 2.7 ppt) was reported at MW-06 and MW-08, respectively, and elevated PFOA (7.15 to 106 ppt; WQGV 6.7 ppt) was reported at MW-01 (highest concentration), MW-02, MW-06 and MW-08. Multiple other PFAS were found in all wells except MW-05, with a maximum value of 100 ppt (MW-01).

Groundwater at multiple wells has elevated PFAS, which may be related to low-level exceedances of PFAS in surface and upper soils, and/or be from an off-site source. Metal contamination above AWQS (typical of well-developed urban settings) is present in groundwater throughout the site. There are no documented contaminant plumes identified at the Site (groundwater flow is southeasterly).

Tables 7 through 12 provide laboratory results for all groundwater at the site and Figure 6 is a spider map showing the location and summarizing exceedances of applicable standards, criteria and guidance values (SCGs) for groundwater.

2.5.6 Soil Vapor Contamination

A vapor survey was completed during the RI to determine contamination conditions in the soil vadose zone. Fourteen (14) soil vapor samples were analyzed during the RI for VOCs (USEPA Method TO-15). Results were compared to environmental investigation findings as a whole (New York does not have any standards, criteria or guidance values for volatile chemicals in subsurface vapors) and to the applicable NYSDOH guidance for evaluating potential soil vapor intrusion.

PCE was detected in all eight (8) samples in October 2025 ranging from 210 to 474 µg/m^3 and in one (1) of six (6) samples in March 2026 at 1.25 µg/m^3; no PCE breakdown products or other CVOCs, however, were detected (PCE and related breakdown products have not been detected in either site soil or groundwater). Additional contamination was reported site-wide, comprised of low-grade impacts from petroleum VOCs (maximum concentration m,p-xylene 77.2 µg/m^3) and non-chlorinated VOCs (including 2-butanone up to 934 µg/m^3 and acetone up to 1,300 µg/m^3).

Significant vapor impacts are limited to a relatively uniform distribution of PCE throughout the western portions of the Site (all concentrations reported below 500 µg/m^3). The absence of any

field evidence of contamination or PCE (or any other CVOCs) in site soil and groundwater, and supporting documentation indicating likely historical use of PCE in nearby upgradient locations support the conclusion that the source of PCE in vapor is related to local area (off-site) contamination conditions rather than a significant on-site source. All other VOC impacts in vapor are minimal, are considered to be typical of conditions seen in urban and commercial settings, and similarly do not appear to be related to an on-site source area.

RI soil vapor results are provided in Table 13 and Figure 7.

2.6 Environmental and Public Health Assessments

2.6.1 Qualitative Human Health Exposure Assessment

An exposure assessment was conducted to qualitatively assess the potential impacts of known environmental contaminants associated with the site on human health, with attention to all possible exposure pathways (i.e. ingestion, inhalation and direct contact). Both current (existing conditions) and future use (proposed restricted-residential use) scenarios were considered. Contaminants were assessed relative to specific impacted media.

The primary contaminants of concern at the site are SVOCs (PAHs) and metals exceeding RRU SCOs and PFAS exceeding POG GVs in surface and subsurface soil, metals and PFAS in groundwater, and VOCs in vapor. On-site workers (or trespassers) present during remediation and/or future development activities are the most likely receptor population.

The following section evaluates the elements associated with exposure pathways and describes how each of these elements pertains to the site. For all media, the implementation of a Health and Safety Plan for Site Remediation (HASP) and the Community Air Monitoring Plan (CAMP) will mitigate possible impacts to on-site, off-site and nearby community receptor populations. Any development activities that involve disturbance, exposure or contact with contaminated media (soil, soil vapor or groundwater) will require monitoring and mitigation plans to address potential direct contact with media, dust generation and contaminant migration.

Soil

Direct contact, ingestion and/or inhalation (of particulate matter) are the primary exposure pathways for contaminated soils, including surface and subsurface soils.

Surface Soil

People can come into contact with surface soil if they trespass, participate in ground-intrusive work at the site or are exposed to dust generated during construction activities that disturb contaminated surface soil. Outside of excavation activities, inclusive of potential soil run-off following disturbance of contaminated surface soil during remediation, there are no other likely significant exposures to contaminated surface soil, either on the site or at off-site areas. All surface soils are expected to be removed and disposed off-site as part of remediation and site development activities and all exposure pathways (direct contact, ingestion or inhalation) will be mitigated as a result

Subsurface Soil

People can come into contact with subsurface soil if they trespass, participate in ground-intrusive work at the site, or are exposed to dust generated during construction activities that disturb contaminated subsurface soils. Outside of excavation activities, inclusive of potential soil run-off following disturbance of contaminated subsurface soil during remediation, there are no other likely significant exposures to contaminated subsurface soil, either on the site or at off-site areas. The potential exists for contamination to be present in the subsurface after the completion of remediation and site development activities. All potential exposure pathways (direct contact, ingestion or inhalation) will likely be mitigated as subsurface soils would have been remediated and/or access to subsurface soils would be limited by paved areas and building foundations. Based on election of a Track 2 Restricted Use remedy for the site, the implementation of institutional controls will further eliminate potential direct contact with any contaminated soil once construction is complete.

Groundwater

Groundwater has been documented from approximately 0.4 to 19 ft below the surface. Should groundwater be encountered, direct contact and/or ingestion are the primary exposure pathways for people that participate in ground-intrusive work at the site.

Direct Contact: People can come into contact if they participate in ground-intrusive work at the site. The potential for contact is generally a concern for work conducted at depths near or below the seasonally high local groundwater elevation. Any dissolved contaminants in groundwater downgradient of the site are anticipated to diminish as a result of site remediation.

Ingestion: Impacted groundwater is not being used for drinking water (or any other purposes) at the site or at off-site areas, as the area is served by the public water supply. Based on available information, no known private wells exist within a ½-mile radius of the site, consistent with the urban nature of the City of Newburgh.

Soil Vapor

Potential exposure pathways include vapor intrusion within any new site structures and at off-site properties, and direct contact and/or inhalation of contaminated soil vapor generated during soil excavation or remedial construction. A CAMP would be implemented at the site (and as required, at off-site areas) to monitor air quality and minimize potential exposures to vapors for both construction works and the public. The potential for on-site and off-site exposure to soil vapor is expected to decrease after soils have been remediated. Based on documented levels of PCE in vapor, a vapor control measure will be required at the new site buildings.

2.6.2 Fish and Wildlife Remedial Impact Analysis

The groundwater chemistry and surface water discharge pathway was evaluated. Based on existing data and distance to surface water, there are no expected impacts to surface water from contaminants migrating beneath the site. No relevant fish and wildlife resources were identified.

2.7 Interim Remedial Action

No Interim Remedial Measures (IRMs) have been performed at the site.

2.8 Remedial Action Objectives

The Remedial Action Objectives (RAOs) identified for the site are:

RAOs	RAOs for Public Health Protection	RAOs for Environmental Protection
Soil	• Prevent ingestion / direct contact with contaminated soil	• Prevent migration of contaminants that would result in groundwater contamination
Groundwater	• Prevent ingestion of groundwater with contaminant levels exceeding drinking water standards	• Restore groundwater aquifer to pre-disposal/pre-release conditions, to the extent practicable
Vapor	• Mitigate impacts to public health resulting from existing, or the potential for, soil vapor intrusion into buildings at the site.	

3 DESCRIPTION OF REMEDIAL ACTION PLAN

This section includes a description of the remedial alternatives and provides a comparison and evaluation of the alternatives in terms of required threshold and balancing criteria.

As required, a Track 1 Unrestricted Use scenario is evaluated for the remedial action. In comparison, a Track 2 Restricted-Residential Use scenario is evaluated.

The goal of the remedy selection process is to select a remedy that is protective of human health and the environment taking into consideration the current, intended and reasonably anticipated future use of the property. The remedy selection process begins by establishing RAOs for media in which chemical constituents were found in exceedance of applicable standards, criteria and guidance values.

Remedial alternatives are then developed and evaluated based on the following nine criteria and sustainability:

Threshold Criteria

- Protection of human health and the environment;

Balancing Criteria

- Compliance with SCGs;
- Short-term effectiveness and impacts;
- Long-term effectiveness and permanence;
- Reduction of toxicity, mobility, or volume of contaminated material;
- Implementability;
- Cost effectiveness;
- Community acceptance;
- Land Use; and,
- Green and Sustainable Remediation (GSR; including climate resiliency)

3.1 Summary of Remedial Alternatives

3.1.1 Common Green and Sustainable Remediation Components

All proposed remedial alternatives share the following GSR core components:

- Implementation of a remedial program to provide details necessary for the construction, operation, optimization, maintenance, and monitoring of the remedial program, inclusive of DER-31 (Green Remediation) requirements and performance of an environmental footprint analysis (EFA) using SEFA (Spreadsheets for Environmental Footprint Analysis [USEPA]), SiteWise™ (available in the Sustainable Remediation Forum [SURF] library) or similar NYSDEC accepted tool. Progress with respect to green and sustainable remediation metrics will be tracked during implementation of the remedial action and fully documented;
- Use of Best Management Practices to reduce energy and water usage, minimize waste, reduce air and water pollution, and protect land and ecosystems during all phases of remediation; and,
- Performance of a climate change vulnerability assessment, to evaluate the impact of climate change on the project site and the proposed remedy.

3.1.2 Common Engineering Control to Treat Groundwater

All proposed remedial alternatives share a common Engineering Control to address PFAS contamination in site groundwater and to prevent off-site migration, as required by NYSDEC. The only identified potential source of PFAS contamination is from surface soils and soils within the upper 5 feet, which will be excavated and removed during the remedial action. Following source removal, residual PFAS impacts are expected to be limited to groundwater and are anticipated to be low-level and diffuse in nature. Due to the unique chemical properties of PFAS, including their high persistence and resistance to degradation, many conventional groundwater treatment technologies have limited applicability: air stripping is not effective for PFAS due to their low volatility; biological treatment has not been demonstrated to effectively degrade PFAS under field conditions due to the recalcitrance of the carbon-fluorine bond; and conventional in-situ chemical oxidation technologies have shown limited effectiveness for PFAS degradation under field conditions. Emerging destructive technologies (e.g., electrochemical and sonochemical oxidation) are not yet field-proven for in-situ groundwater application at the scale relevant to this site and are not considered practicable alternatives at this time.

No Action

A "No Action" approach to documented PFAS contamination in groundwater is considered for completeness. This pathway, however, would not prevent continued migration of PFAS-impacted groundwater beyond the site boundary, would not meet the remedial objectives established for the site, and would not be consistent with NYSDEC remedial program requirements, and is therefore eliminated from further consideration.

Technology Screening

The following technologies, commonly applied to PFAS-impacted groundwater, were qualitatively evaluated for applicability at the site:

Pump and Treat

Pump and treat (P&T) systems involve extraction of groundwater via wells, followed by ex-situ treatment using adsorption or separation technologies such as granular activated carbon (GAC), ion exchange resins, or membrane filtration. These technologies are widely used and can effectively remove PFAS from water, particularly long-chain compounds such as PFOA and PFOS.

P&T systems can be utilized to reduce PFAS concentrations and provide hydraulic containment; however, because PFAS compounds are highly persistent and not readily degraded, these systems typically require long-term or indefinite operation to maintain effectiveness. As a result, P&T is generally not considered a permanent solution for aquifer restoration of PFAS due to the persistence of these compounds and the need for long-term operation. In addition, P&T systems require aboveground infrastructure, ongoing operation and maintenance, and management of secondary waste streams. These requirements present challenges for implementation at small, urban sites and may be incompatible with residential redevelopment. Last, an off-site source of PFAS contamination to groundwater appears to be migrating onto the BCP site, and may continue to act as a source of PFAS contamination in groundwater and the BCP site.

Based on these considerations, P&T is considered technically feasible but of limited practicability for the Site.

In-Situ Sorptive Amendment Injection

In-situ sorptive treatment involves the injection of carbon-based materials (e.g., powdered or colloidal activated carbon) or similar sorptive media into the subsurface to adsorb PFAS within groundwater.

Injection-based approaches can effectively reduce PFAS mobility and concentrations within treated zones; however, achieving uniform and continuous distribution of injected materials can be difficult, particularly in heterogeneous subsurface conditions. As a result, amendment emplacement may be discontinuous, and untreated groundwater may bypass discrete treatment zones. Because these approaches do not inherently establish a continuous treatment barrier, they may not reliably control plume migration where the remedial objective is prevention of off-site transport. Long-term performance may also require repeated applications to maintain effectiveness.

Permeable Reactive Barrier

Permeable reactive barriers (PRBs) are passive, in-situ treatment systems installed across the groundwater flow path to intercept and treat contaminants as groundwater flows through a reactive treatment zone. For PFAS, PRBs typically utilize sorptive media, including activated carbon–based materials, to remove contaminants from the dissolved phase and reduce downgradient concentrations.

PRBs may be installed using injection-based methods, including emplacement of stabilized colloidal or liquid activated-carbon formulations designed to distribute throughout permeable zones and coat the aquifer matrix. These materials consist of very fine activated carbon particles (on the order of microns) suspended in a carrier fluid, allowing for low-pressure emplacement and broad subsurface distribution without significantly reducing permeability. Once emplaced, the carbon sorbs to the soil matrix and provides a persistent treatment zone where PFAS partition from the aqueous phase to the sorbed phase, thereby reducing dissolved concentrations and limiting plume migration.

Available data indicate that injectable activated carbon systems can distribute effectively through permeable media, form laterally continuous treatment zones, and rapidly adsorb contaminants from groundwater, including at low concentrations, thereby reducing contaminant mobility and advective transport.

In addition, modeling and laboratory studies indicate that carbon-based PRB systems can provide long-term plume containment, with performance duration dependent on local conditions and design (e.g., dosing, barrier thickness, and groundwater flux), and may be extended through supplemental injections if necessary.

Importantly, a distinction exists between injection-only approaches and PRB-based systems. Injection-based treatment that does not establish a continuous treatment zone may result in localized reductions in PFAS concentrations but is dependent on achieving uniform amendment distribution. In contrast, a properly designed PRB is configured as a continuous treatment zone oriented perpendicular to groundwater flow to intercept the full width and thickness of the plume. This distinction is critical for PFAS, where the primary remedial objective is control of downgradient mass flux rather than treatment of isolated pore volumes. Accordingly, PRB approaches provide a more reliable and defensible means of preventing off-site migration.

Commercially available technologies based on these principles (e.g., injectable colloidal activated carbon systems) have been demonstrated to form permeable, subsurface sorption barriers capable of intercepting and attenuating PFAS migration under a range of hydrogeologic conditions.

Preliminary Evaluation of Treatment Technologies

The Site is a relatively small urban parcel that will be redeveloped for residential use. These conditions significantly limit the availability of space for installation and long-term operation of aboveground treatment infrastructure.

Following excavation of shallow source soils, PFAS impacts are expected to be limited to groundwater at relatively low concentrations, with the primary remedial objective being the prevention of off-site migration, with active aquifer restoration considered as a potential secondary objective.

Technologies requiring long-term active management, significant infrastructure, or extensive maintenance are considered less compatible with the proposed use of the Site. Injection-based approaches are feasible; however, establishment of a continuous treatment zone is preferred to ensure consistent interception of groundwater flow and control of contaminant mass flux.

In addition, PFAS may be present in groundwater originating from off-site sources, consistent with regional conditions and the widespread occurrence of PFAS in urban environments. As such, PFAS detected in groundwater at the Site may represent a combination of on-site and off-site contributions (it is noted that the highest levels of PFAS in groundwater have been detected at monitoring well MW-01, located at the most upgradient portion of the Site and where no PFAS exceedances were recorded in upper soils) and the selected remedy should be designed to be protective regardless of source, e.g., by intercepting and treating groundwater along the upgradient property boundary, thereby preventing the migration of PFAS-impacted groundwater onto the site and minimizing potential impacts to downgradient receptors.

Selected Remedy – Permeable Reactive Barrier

A permeable reactive barrier provides the most appropriate treatment methodology for PFAS in Site groundwater based on overall Implementability and expected effectiveness at both treating PFAS in groundwater and preventing off-site migration of PFAS. After the removal of upper soils during remedial excavations, any remaining PFAS impacts in groundwater will be addressed through installation of a PRB along upgradient property boundaries.

The PRB will be installed via injection of a stabilized activated carbon amendment (e.g., a colloidal or liquid activated-carbon slurry) to create a continuous subsurface treatment zone. Upon emplacement, the injected carbon distributes through permeable intervals and sorbs to the soil matrix, forming a reactive barrier that removes PFAS from groundwater as it flows through the treatment zone. This results in rapid reduction of dissolved-phase concentrations and effective control of contaminant mass flux.

The PRB will be designed as a continuous treatment zone aligned perpendicular to the interpreted direction of groundwater flow along the upgradient Site boundary. Barrier thickness, amendment loading, and injection spacing will be established during remedial design based on site-specific hydrogeologic conditions to ensure full vertical and lateral coverage of groundwater flow paths and sufficient residence time for PFAS sorption within the treatment zone. The design will incorporate groundwater flux and anticipated influent concentrations to ensure adequate sorptive capacity over the intended operational life, with provisions for targeted re-injection to maintain effectiveness as necessary.

To address potential subsurface heterogeneity and preferential flow pathways, the remedial design will incorporate conservative assumptions and performance monitoring to verify hydraulic capture and treatment continuity, with contingency provisions (e.g., additional injection points or barrier extension) implemented if monitoring indicates incomplete plume interception.

The selected remedy is consistent with NYSDEC remedial program expectations, as it is protective of public health and the environment, addresses the primary contaminant migration pathway, and is implementable and maintainable under Site-specific conditions.

This approach is consistent with established PFAS treatment practices, which rely on adsorption-based technologies (e.g., granular or colloidal activated carbon) to immobilize PFAS, rather than attempting in-situ destruction. The selected PRB will function as a permeable, subsurface treatment zone that passively captures PFAS and prevents migration beyond the Site boundary.

The PRB approach is considered appropriate because it:

- Provides effective interception of groundwater flow and contaminant mass flux;
- Utilizes proven adsorption mechanisms for PFAS removal;
- Requires no aboveground treatment infrastructure;
- Is compatible with planned Site redevelopment; and
- Can be monitored and maintained to ensure long-term performance.

System performance will be confirmed through groundwater monitoring to verify that PFAS concentrations are effectively reduced downgradient of the barrier to levels consistent with applicable NYSDEC criteria, including PFOS and PFOA guidance values, and that off-site migration is controlled. Adjustments to the treatment zone, including supplemental injections, may be implemented as necessary to maintain effectiveness.

3.1.3 Proposed Remedial Alternatives

Alternative 1: Site meets Track 1 Unrestricted Use SCOs (see Table 14), with short-term groundwater and vapor controls as needed, consisting of the following:

1. Selection of NYSDEC 6NYCRR Part 375 Unrestricted Use (Track 1) SCOs.
2. Removal of all site soil exceeding Track 1 UU SCOs and confirmation that Track 1 UU SCOs have been achieved with post-excavation confirmatory sampling. A Track 1 remedy may employ short-term Institutional or Engineering Controls for the remediation of media

other than soil (not to exceed a duration of five years). For the purpose of this alternatives analysis, Alternative 1 (meeting Track 1 SCOs) is defined by the following actions:

a. Excavation of the entire site to 2 feet bgs, with targeted excavations thereafter to depths of 11 to 14 feet bgs at ten (10) locations, 6 to 9 feet bgs at five (5) locations, and 4 feet bgs at seven (7) locations, resulting in disposal of all material above bedrock containing contaminants above UU SCOs, estimated at approximately 9,750 cubic yards (cy); and,

b. Restoration of the site to the elevation necessary for site redevelopment (if required) through importation of approved clean materials.

3. Short-term use of a groundwater remedy as an engineering control to treat PFAS in site groundwater and prevent off-site migration. A passive permeable reactive barrier is proposed to be installed as a continuous treatment zone along the upgradient site boundary, with system effectiveness evaluated through a groundwater sampling program. A formal Remedial Design for active groundwater treatment, certified by a professional engineer, will be provided to NYSDEC and NYSDOH for review and approval prior to system installation.

4. Performance of a soil vapor intrusion evaluation at all Site buildings prior to occupancy, to be conducted during the heating season (NYSDEC and NYSDOH will review the results and determine if an Engineering Control for vapor is required). If the Volunteer chooses to install a vapor control measure prior to this evaluation, the installed system would not be considered an Engineering Control at that time.

5. No engineering or institutional controls are required for the Track 1 cleanup, with exception of those directly related to the short-term remediation of groundwater and soil vapor. While any such controls are in place, the site may only receive a Track 2 Certificate of Completion (CoC). The Volunteer may petition NYSDEC for a modification to the CoC at any time up until five years after issuance. If the Volunteer demonstrates that the remedial objectives for groundwater and soil vapor have been achieved and the applicable institutional or engineering controls are no longer necessary, then a modified Track 1 CoC will be issued (the cleanup would be considered Track 2 until the date that it is successfully modified to Track 1). If post-remediation investigation shows that there is

no need for ongoing use of a vapor control system, the system may be converted to passive use and continue to be operated as a precautionary measure, given the urban setting of the site. A concrete slab underlying all new proposed building and a vapor barrier/waterproofing membrane would be installed as part of standard building development and are not considered components of the remedy.

Alternative 2: Site meets Track 2 Restricted-Residential Use SCOs (see Table 14), with short- or long-term groundwater and vapor controls as needed, consisting of the following:

1. Selection of NYSDEC 6NYCRR Part 375 Restricted-Residential Use (Track 2) SCOs.
2. Removal of soils that exceed RRU SCOs and POG GVs, including the upper 2 feet across the entire Site (approximately 3,419 cy), with additional removal of deeper soil as shown below, for a total of approximately 5,619 cy removed for remedial purposes:

RI sampling locations	Final excavation depth, based on original surface	Additional volume removed below initial cut of 2 feet
2SB-24; 2SB-25; 2SB-29	3 feet	133 cy
2SB-04; 2SB-11; 2SB-13; 2SB-14; 2SB-15; 2SB-19; 2SB-20	6 feet	700 cy
2SB-12	7 feet	167 cy
2SB-27	8 feet	200 cy
2SB-28	10 feet	267 cy
2SB-08; 2SB-21	13 feet	733 cy

3. Confirmation that applicable SCOs have been achieved with post-excavation confirmatory sampling.
4. Restoration of the site to the elevation necessary for site redevelopment (if required) through importation of approved clean materials.
5. Use of a groundwater remedy as an engineering control to treat PFAS in site groundwater and prevent off-site migration. A passive permeable reactive barrier is proposed to be installed as a continuous treatment zone along the upgradient site boundary, with system effectiveness evaluated through a groundwater sampling program.

   A formal Remedial Design for active groundwater treatment, certified by a professional engineer, will be provided to NYSDEC and NYSDOH for review and approval prior to system installation.

6. Performance of a soil vapor intrusion evaluation at all Site buildings during the heating season and prior to occupancy (NYSDEC and NYSDOH will review the results of the evaluation and determine if an Engineering Control for vapor is required). If the Volunteer chooses to install a vapor control measure prior to this evaluation, the installed system would not be considered an Engineering Control at that time.
7. Other than the proposed remedies to address media other than soil, no engineering controls are required for a Track 2 cleanup. A concrete slab underlying all new proposed buildings and a vapor barrier/water-proofing membrane would be installed as part of standard building development and are not considered components of the remedy.
8. Establishment of use restrictions including: prohibitions on the use of site groundwater; prohibitions of restricted site uses, such as farming or vegetable gardening, to prevent future exposure pathways; and prohibition of a higher level of land use without NYSDEC approval.
9. Establishment of an approved Site Management Plan (SMP) to ensure the long-term management of these engineering and institutional controls including the performance of periodic inspections and certification that the controls are performing as they were intended.
10. The property would receive an environmental easement registered with the county clerk memorializing engineering and institutional controls, and the SMP.

3.1.4 Evaluation of Threshold Criteria

The threshold criterion is an evaluation of the remedy's ability to protect public health and the environment, and an assessment of how risks posed through each existing or potential pathway of exposure are eliminated, reduced or controlled through removal, treatment, and implementation of engineering controls or institutional controls. Protection of public health and the environment must be achieved for all approved remedial actions.

Alternative 1 would be more protective of human health and the environment by removing all soil exceeding Track 1 Unrestricted Use SCOs, thus eliminating the potential for direct contact with contaminated soil once construction is complete and eliminating the risk of contaminants leaching into groundwater from the site.

Alternative 2 would achieve comparable protection of human health and the environment by removing all soil exceeding Track 2 Restricted-Residential Use SCOs across the site, and through a SVI evaluation to ensure that future residents are protected from any contaminated vapors. Implementing institutional controls including a SMP would ensure that the vapor control systems (if required) are operational, and that inappropriate site uses are prevented, ensuring that the remedy remains protective of public health in the future.

For both Alternatives, potential exposure to contaminated soil, groundwater, or vapor during construction would be minimized by implementing the HASP, Soil/Materials Management Plan (SoMP), and CAMP. Potential contact with any contaminated groundwater would be prevented as its use is prohibited by City laws and regulations. Both alternatives include an Engineering Control for groundwater that is protective after completion of site construction.

3.1.5 Evaluation of Balancing Criteria

Compliance with Standards, Criteria and Guidance

This evaluation criterion assesses the ability of the alternative for conformance with SCGs that are applicable, relevant and appropriate. Conformance with the appropriate standards for remediation of contaminated soil is an important criterion in evaluating the remedial alternatives for the BCP site. Presently, in New York State 6 NYCRR Part 375 establishes the primary SCGs associated with remediation of contaminated soil at sites that are in the BCP (a comprehensive list of SCGs that are applicable, relevant and appropriate for evaluating the alternatives for remediation of this BCP are provided in Section 4.18).

If proposing remediation pursuant to a Track other than Track 1, Part 375 requires evaluation of at least one remedial alternative pursuant to Track I and one other alternative developed by the applicant for the proposed use of the BCP site. The proposed remedial alternatives have been prepared in conformance with this requirement.

Alternative 1 would achieve compliance with the remedial goals, chemical-specific SCGs and RAOs for soil through removal of soil to achieve Track 1 Unrestricted Use SCOs. Alternative 2 would achieve compliance through removal of soil to achieve Track 2 Restricted-Residential Use SCOs. Alternative 2 would impose institutional controls, including an environmental easement prohibiting any higher use of the site, and a SMP would ensure proper maintenance of the engineering control and compliance with institutional controls.

Health and safety measures contained in the HASP and CAMP will be implemented during site redevelopment under this RAWP. For both Alternatives, focused attention on means and methods employed during the remedial action would ensure that handling and management of contaminated material would be in compliance with applicable SCGs. These measures will protect on-site workers and the surrounding community from exposure to site-related contaminants. Both alternatives include an Engineering Control for groundwater that will be evaluated for effectiveness in compliance with applicable SCG.

Short-Term Effectiveness and Impacts

This evaluation criterion assesses the effects of the alternative during the construction and implementation phase until remedial action objectives are met. Under this criterion, alternatives are evaluated with respect to their short-term effects during the remedial action on public health and the environment during implementation of the remedial action, including protection of the community, protection of onsite workers and environmental impacts.

Both Alternatives have similar short-term effectiveness during their implementation, as each requires excavation of historical urban fill material. Each alternative would result in short-term dust generation impacts associated with excavation, handling, load out of materials, and truck traffic. Short-term impacts could potentially be higher for Alternative 1 since the excavation of greater amounts of soil and fill could take place. However, focused attention to means and methods during a Track 1 removal action, including community air monitoring and appropriate truck routing, would minimize the overall impact of these activities.

An additional short-term adverse impact and risk to the community associated with each remedial alternative is increased truck traffic. Truck traffic would be routed on the most direct course using major thoroughfares where possible and flaggers would be used to protect pedestrians at site entrances and exits. The differences in total truck trips between Alternative 1 and Alternative 2, both export and import of materials, is expected to be limited.

The potential adverse impact to the community, workers and the environment for each alternative would be minimized through implementation of control plans (including the HASP, CAMP, and SoMP) during soil disturbance activities and would minimize release of contaminants into the environment. Each alternative provides short-term effectiveness in protecting the surrounding community by decreasing the risk of contact with contaminants. Construction

workers operating under appropriate management procedures and the HASP would provide protection from on-site contaminants by using personal protective equipment (PPE) would be worn consistent with the documented risks within the respective work zones. There are no expected significant impacts for implementation of the Engineering Controls for groundwater and vapor as system installation will occur during site construction and be subject to control plans (operation of engineering controls under the SMP is considered to be a de minimis concern).

Long-Term Effectiveness and Permanence

This evaluation criterion addresses the results of a remedial action in terms of its permanence and the quantity and nature of waste and residual contamination at the site after response objectives have been met, such as permanence of the remedial alternative, magnitude of remaining contamination, adequacy of controls including the adequacy and suitability of engineering controls and institutional controls that may be used to manage remaining contamination and assessment of containment systems and institutional controls that are designed to eliminate exposures to contaminants, and long-term reliability of engineering controls.

Alternative 1 would achieve long-term effectiveness and permanence related to on-site contamination through removal of soil to achieve Track 1 Unrestricted Use SCOs. Alternative 2 would achieve compliance through removal of soil to achieve Track 2 Restricted-Residential Use SCOs. Alternative 2 would impose institutional controls, including an environmental easement prohibiting any higher use of the site, and a SMP would ensure proper maintenance of the engineering controls and compliance with institutional controls.

Reduction of Toxicity, Mobility, or Volume of Contaminated Material

This evaluation criterion assesses the remedial alternative's use of remedial technologies that permanently and significantly reduce toxicity, mobility, or volume of contaminants as their principal element. The following is the hierarchy of source removal and control measures that are to be used to remediate a site, ranked from most preferable to least preferable: removal and/or treatment, containment, elimination of exposure and treatment of source at the point of exposure. It is preferred to use removal or treatment to eliminate contaminants at a site, reduce the total mass of toxic contaminants, cause irreversible reduction in contaminants mobility, or reduce of total volume of contaminated media.

Alternative 1 would permanently eliminate the toxicity, mobility, and volume of contaminants from on-site soil by removing all soil in excess of Track 1 UU SCOs. Alternative 2 would remove impacted soils in excess of Track 2 RRU SCOs and will achieve the lowest of the three applicable contaminant specific soil cleanup objectives for all soils above bedrock (in accordance with Part 375 section 6.4 through 6.6) except as otherwise specified in part 375-3.8€(2)(iii) as applicable for soils at a depth greater than 15 feet (e.g. soils below 15 feet may not represent a source of contamination). This Alternative would leave a minimal volume of contaminated material, which requires no cover system, but which would be practically inaccessible. The implementation of institutional controls and SMP will protect on-site residents, workers and the near-by community from exposure to site-related contaminants. For both Alternatives, engineering controls will reduce toxicity, mobility, and/or volume of contaminants.

Implementability

This evaluation criterion addresses the technical and administrative feasibility of implementing an alternative and the availability of various services and materials required during its implementation, including technical feasibility of construction and operation, reliability of the selected technology, ease of undertaking remedial action, monitoring considerations, administrative feasibility (e.g. obtaining permits for remedial activities), and availability of services and materials. The techniques, materials and equipment to implement each Alternative are readily available and have been proven to be effective in remediating the contaminants present on the site. They use standard equipment and technologies that are well established in the industry. The reliability of each remedy is also high. Neither Alternative 1 nor Alternative 2 have meaningful implement-ability issues.

Cost Effectiveness

This evaluation criterion addresses the cost of alternatives, including capital costs (construction costs, equipment costs, and disposal costs, engineering expenses, etc.) and site management costs (costs incurred after remedial construction is complete) necessary to ensure the continued effectiveness of a remedial action. Short-term costs for Alternative 1 are higher than for Alternative 2 since an additional volume of soil must be removed. For comparison, approximately 9,750 cy of material would require removal to achieve Alternative 1, while approximately 5,619 cy of soil would require removal to meet Alternative 2. Long-term costs for Alternative 2 are

higher than Alternative 1 since implementation of a SMP is required as part of Alternative 2. Cost estimates for each Remedial Alternative are included as Appendix B.

Community Acceptance

This evaluation criterion addresses community opinion and support for the remedial action (observations here will be supplemented by public comment received on the RAWP). This RAWP will be subject to a public review under the NYSDEC BCP and will provide the opportunity for detailed public input on the remedial alternatives and the selected remedy. Public comments will be considered by NYSDEC prior to approval of this plan. Under all alternatives, the overall goals of the remedial program, to protect public health and the environment and eliminate potential contaminant exposures, have been broadly supported by citizens in the City of Newburgh and in other Orange County communities.

Land Use

This evaluation criterion addresses the proposed use of the property. This evaluation has considered reasonably anticipated future uses of the site and takes into account: current use and historical and/or recent development patterns; applicable zoning laws and maps; New York Department of State's Brownfield Opportunity Areas (BOA) pursuant to section 970-r of the general municipal law; applicable land use plans; proximity to real property currently used for residential use, and to commercial, industrial, agricultural, and/or recreational areas; environmental justice impacts, Federal or State land use designations; population growth patterns and projections; accessibility to existing infrastructure; proximity of the site to important cultural resources and natural resources, potential vulnerability of groundwater to contamination that might emanate from the site, proximity to flood plains, geography and geology; current institutional controls applicable to the site; and disproportionate burden impacts to the DAC in which the site is located.

The proposed development is consistent with existing zoning (Waterfront Gateway), which permits mixed residential and commercial uses. The current, intended, and reasonably anticipated future land use of the site and its surroundings are compatible with the selected remedy of soil remediation with an engineering control for groundwater. The proposed future use of the site includes new construction for residential uses, consistent with overall uses in the neighborhood. All proposed Alternatives are protective of public health and the environment for

the planned residential and commercial uses. The proposed use is consistent with recent development patterns. The surrounding area is urban and predominantly consists of commercial and mixed-use buildings, in zoning districts designated for residential and commercial uses. The planned development would remediate a contaminated parcel and provide a modern residential building. The proposed development would clean up the property and make it safer, create new employment opportunities, living space for city residents and associated societal benefits to the community, and other economic benefits from land revitalization.

Temporary short-term project impacts will be mitigated through site management controls and truck traffic controls during remediation activities.

The site is not in close proximity to important cultural resources, including federal or state historic or heritage sites or Native American religious sites, natural resources, waterways, wildlife refuges, wetlands, or critical habitats of endangered or threatened species.

The site is located in an urban area and not in proximity to fish or wildlife and neither alternative would result in any potential exposure pathways of contaminant migration affecting fish or wildlife. The remedial action is also protective of groundwater natural resources. The site does not lie in a Federal Emergency Management Agency (FEMA)-designated flood plain. Each alternative is equally protective of natural and cultural resources. Improvements in the current environmental condition of the property achieved by each considered Alternative are consistent with the City's goals for cleanup of contaminated land.

Green and Sustainable Remediation

Both proposed Alternatives were evaluated with respect to green and sustainable remediation principles and an environmental footprint analysis was completed using SEFA (Spreadsheets for Environmental Footprint Analysis, USEPA), a NYSDEC-accepted EFA calculator. SEFA inputs included metrics for greenhouse gas (GHG) emissions, total energy usage, water consumption, electrical usage, onsite and offsite emissions of nitrous oxide (NOx), sulfur oxides (SOx), particulate matter under 10 microns (PM10), and hazardous air pollutants (HAPs). Both site preparation and the direct implementation remedy were evaluated.

The evaluation of site preparation was limited to impacts from initial waste characterization efforts and associated disposal of investigation-derived waste (IDW). Evaluation of the remedial action was based on excavation and off-site disposal of contaminated soil (estimated at 9,750 cy

for Alternative 1 and 5,619 cy for Alternative 2), associated support of excavation (SOE), installation of required imported backfill, and collection of confirmatory endpoint soil samples. Alternative 2 was estimated to require between 4 and 5 months to complete (weekends and holidays were excluded from the calculations). Alternative 1 was estimated to require 2 additional months. A comparison of the SEFA calculator output (see table below) shows the Track 1 environmental impact to be significantly higher than the Track 2 alternative due to the increased excavation volume requiring additional time and resource consumption.

Alternative 1, Track 1 Cleanup		**Alternative 2, Track 2 Cleanup**	
EFA Component	**Result**	**EFA Component**	**Result**
GHG emissions	600.7	GHG emissions	349.4
Total energy used	7419.1	Total energy used	4,327.4
Water consumed	294,049	Water consumed	204,049
Electricity used	-	Electricity used	-
On-site NOx emissions	0.8198	On-site NOx emissions	0.5689
On-site SOx emissions	0.0010	On-site SOx emissions	0.0007
On-site particulate <PM10	0.0730	On-site particulate <PM10	0.0507
On-site HAPs emissions	0.0003	On-site HAPs emissions	0.0002
Total NOx emissions	3.05	Total NOx emissions	1.69
Total SOx emissions	0.22	Total SOx emissions	0.13
Total PM10 emissions	0.16	Total PM10 emissions	0.10
Total HAPs emissions	0.03	Total HAPs emissions	0.02

Notes: GHG, NOx, SOx, PM10, and HAPs in metric tons; total energy used in million British thermal units (MMBTU); water consumed in gallons; and electricity used in megawatt hours (MWH)

Appendix G provides documentation for the SEFA EFA.

3.2 Selection of the Preferred Remedy

The preferred remedy for the site is Alternative 2. Data generated during the RI and previous investigations document that soil contamination above RRU SCOs and POG GVs is primarily found in surface soils, with a limited number of locations having contamination in the upper 0-6 feet interval; this readily accessible material will be removed during construction and remedial excavation. A SMP will be utilized to manage all remaining soil under the Track 2 Restricted-Residential Use remedy, groundwater contamination treated by the passive PRB system, and (if required by NYSDEC based on the SVI evaluation) any vapor control measures.

These actions are considered protective of the health of both construction workers and future site residents. Institutional controls will be implemented to further prevent any potential exposures to residual contamination, and a SMP would ensure maintenance of the engineering controls and compliance with institutional controls.

Use restrictions will be imposed on the site (e.g., the use of groundwater from the site; prohibitions of restricted site uses, such as farming or vegetable gardening, to prevent future exposure pathways; and prohibition of a higher level of land use without NYSDEC approval).

The property would receive an environmental easement registered with the Orange County Clerk memorializing these institutional controls.

The following land use factor evaluation examines whether the selected alternative is acceptable based on the following criteria (below) as required by Article 27, Title 14 of the Environmental Conservation Law 27-1415.

Zoning

The site is located in a Waterfront Gateway district, which permits the proposed use, consistent with applicable zoning laws. The implementation of Alternative 2 and the proposed final use are consistent with recent development in the surrounding area.

Applicable Community Master Plans or Land Use Plans

Implementation of Alternative 2 is consistent with: historical and recent development patterns; applicable zoning laws and maps; NYS Department of State's Brownfield Opportunity Areas (BOA) pursuant to section 970-r of the general municipal law; applicable land use plans; and proximity to real property currently used for residential use, and to commercial, industrial, and recreational areas. The current, intended, and reasonably anticipated future land use of the site and surroundings are compatible with Alternative 2. The proposed future use of the site includes the construction of on-site residential buildings with street-level commercial space, consistent with existing uses in the immediate area and nearby urban neighborhood.

Surrounding Property Uses

The site is located within a densely developed urban setting with adjoining residential and institutional uses, and nearby residential, commercial, and public uses; the final use and the proposed remedial action are consistent with these surrounding property uses. One potential

sensitive environmental receptor, the Horizons on the Hudson School, adjoins the site to the west across the roadway at 137 Montgomery Street. Impacts to adjoining/nearby properties during implementation of Alternative 2 will be minimized through strict adherence to local regulations governing construction activities, and implementation of site-specific plans (see Section 4.1, Governing Documents), including Health and Safety and Community Air Monitoring Plans.

Land Use Designations

There are no applicable federal or state land use designations.

Public Participation

This RAWP will be subject to a public review under the NYSDEC BCP and will provide the opportunity for detailed public input on the remedial alternatives and the selected remedy. This public comment will be considered by NYSDEC prior to approval of this plan. The project Public Participation Plan is provided in Appendix C. Observations here will be supplemented by public comment received on the RAWP. Under Alternative 2, the overall goals of the remedial program, to protect public health and the environment and eliminate potential contaminant exposures, have been broadly supported by citizens in the City of Newburgh.

Environmental Justice Concerns

Implementation of Alternative 2 would clean up the property and make it safer, create new employment opportunities, living space for future city residents and associated societal benefits to the community, and other economic benefits from land revitalization.

Population growth patterns

Implementation of Alternative 2 and the proposed use is compliant with the property's zoning and is consistent with recent development patterns.

Accessibility to Existing Infrastructure

The site has ready access to City infrastructure including roads, mass transit and public utilities. Implementation of Alternative 2 is compatible with current and future access and utilization of existing infrastructure.

Proximity to Cultural Resources

The site is not in close proximity to important cultural resources, including federal or state historic or heritage sites or Native American religious sites. Implementation of Alternative 2 would not negatively impact any important cultural resources.

Proximity to Natural Resources

The site is located in an urban area and is not near significant natural resources. Implementation of Alternative 2 would not result in any potential exposure pathways of contaminant migration affecting fish or wildlife.

Off-Site Groundwater Impacts

Alternative 2 is protective of groundwater natural resources. There are no known uses of groundwater in the vicinity of the site.

Proximity to Floodplains

The site does not lie in a Federal Emergency Management Agency (FEMA)-designated flood plain. Implementation of Alternative 2 would not introduce a receptor sensitive to flooding into an area susceptible to flooding.

Geography and Geology of the Site

Site geography and geology is described in Section 2.4; implementation of Alternative 2 is consistent with these site conditions.

Current Institutional Controls

The site is not currently encumbered with any institutional controls.

3.3 Summary of Selected Remedial Actions

Based on known environmental conditions and physical constraints on construction activities, the Volunteer expects to complete a Track 2 Restricted-Residential Use cleanup with residual contamination that requires Institutional Controls for Soil and Institutional and Engineering controls for groundwater. The proposed remedial action plan achieves all of the remedial action goals established for the project.

The plan is effective in both the short-term and long-term and reduces mobility, toxicity and volume of contaminants and uses standard methods that are well established in the industry.

The proposed remedial action will consist of:

1. A remedial program will be implemented to provide the details necessary for the construction, operation, optimization, maintenance, and monitoring of the remedial program. Green remediation principles and techniques will be implemented to the extent feasible in the design, implementation, and site management of the remedy as per DER-31. The core green remediation components are as follows:
   - Considering the environmental impacts of treatment technologies and remedy stewardship over the long term;
   - Reducing direct and indirect greenhouse gases and other emissions;
   - Increasing energy efficiency and minimizing use of non-renewable energy;
   - Conserving and efficiently managing resources and materials;
   - Reducing waste, increasing recycling and increasing reuse of materials which would otherwise be considered a waste;
   - Maximizing habitat value and creating habitat when possible;
   - Fostering green and healthy communities and working landscapes which balance ecological, economic and social goals;
   - Integrating the remedy with the end use where possible and encouraging green and sustainable re-development; and,
   - Additionally, to incorporate green remediation principles and techniques to the extent feasible in the development at this site, any future on-site buildings shall be constructed (at a minimum) to meet the 2020 Energy Conservation Construction Code of New York (or most recent edition) and will utilize a 20-mil or thicker vapor barrier/waterproofing membrane on the foundation to improve energy efficiency as an element of construction.

   As part of the remedial program, to evaluate the remedy with respect to green and sustainable remediation principles, an EFA will be completed using an accepted calculator such as SEFA (Spreadsheets for Environmental Footprint Analysis, USEPA), SiteWise™ (available in the Sustainable Remediation Forum [SURF] library) or similar NYSDEC accepted tool. Water consumption, greenhouse gas emissions, renewable and non-renewable energy use, waste reduction and material use will be estimated, and goals for

the project related to these green and sustainable remediation metrics, as well as for minimizing community impacts, protecting habitats and natural and cultural resources, and promoting environmental justice, will be incorporated into the remedial program, as appropriate. The project will include detailed requirements to achieve the green and sustainable remediation goals. Further, progress with respect to green and sustainable remediation metrics will be tracked during implementation of the remedial action and reported in the Final Engineering Report (FER), including a comparison to the goals established during the remedial program.

Additionally, the remedial program will include a climate change vulnerability assessment, to evaluate the impact of climate change on the project site and the proposed remedy. Potential vulnerabilities associated with extreme weather events (e.g., hurricanes, lightning, heat stress and drought), flooding, and sea level rise will be identified, and the remedial program will incorporate measures to minimize the impact of climate change on potential identified vulnerabilities.

The Site is located within a Disadvantaged Community (DAC; an area designated by the Climate Justice Working Group that faces significant socioeconomic and environmental challenges). The remedial program includes provisions to minimize greenhouse gas emissions and associated impacts. Greenhouse gas emissions and associated impacts to the community will be minimized by ensuring trucks and other construction vehicles are not idling and are equipped with emissions-control technologies. The designated travel routes for incoming and outgoing construction vehicles, including trucks associated with off-site disposal of soil, will be optimized to eliminate, or reduce as much as practicable, the travel of trucks within the DAC area and travel on highways will be prioritized. Disposal facilities and facilities providing backfill materials will be selected based on their proximity to the site and closer facilities will be prioritized to minimize greenhouse gas emissions generated during the remedial action. A stormwater management system consisting of a series of stormwater planter beds leading to an underground sand filter tank will be constructed. The site's stormwater system will provide passive infiltration capacity to reduce site-specific impacts on the municipal stormwater system and minimize local flooding impacts.

2. Performance of all required BCP Public Participation activities according to an approved Public Participation Plan.

3. Performance of a Community Air Monitoring Program for particulates and volatile organic compounds.
4. Selection of Track 2 Restricted-Residential Use SCOs (protection of public health) for soils to remain at the site.
5. Site preparation including setup of site security, equipment mobilization, utility mark outs and marking/staking excavation areas.
6. Completion of a Waste Characterization Study prior to excavation. Waste characterization soil samples will be collected at a frequency dictated by the disposal facility.
7. Removal of any underground storage tanks (USTs) encountered during demolition activities in compliance with applicable local, State and Federal laws and regulations.
8. Removal of soils that exceed RRU SCOs and POG GVs, including the upper 2 feet across the entire Site (approximately 3,419 cy), with additional removal of deeper soil as shown below, for a total of approximately 5,619 cy removed for remedial purposes:

RI sampling locations	Final excavation depth, based on original surface	Additional volume removed below initial cut of 2 feet
2SB-24; 2SB-25; 2SB-29	3 feet	133 cy
2SB-04; 2SB-11; 2SB-13; 2SB-14; 2SB-15; 2SB-19; 2SB-20	6 feet	700 cy
2SB-12	7 feet	167 cy
2SB-27	8 feet	200 cy
2SB-28	10 feet	267 cy
2SB-08; 2SB-21	13 feet	733 cy

9. Screening of excavated soil for indications of contamination by visual means, odor, and monitoring with a PID, and on-site segregation of excavated media (as needed).
10. Collection and analysis of end-point samples to evaluate the performance of the remedy with respect to attainment of Track 2 SCOs.
11. Management of excavated materials including temporarily stockpiling and segregating in accordance with defined material types and to prevent co-mingling of contaminated material and non-contaminated materials.
12. Transportation and off-site disposal of all soil material at licensed or permitted facilities in accordance with applicable laws and regulations for handling, transport, and disposal, and this plan. Sampling and analysis of excavated media as required by disposal facilities. Appropriate segregation of excavated media on-site.

13. Import of materials to be used for backfill in compliance with this plan and in accordance with applicable laws and regulations. If determined acceptable for re-use by the NYSDEC, existing fill soils that meet applicable SCOs may be relocated on the site for development.
14. An Engineering Control will be implemented, following removal of contaminated soil, to treat PFAS contamination in groundwater, including installation of a subsurface permeable reactive barrier along the upgradient site boundary and periodic groundwater monitoring to document system effectiveness. A formal Remedial Design certified by a professional engineer, providing complete technical specifications for groundwater remediation, will be submitted to NYSDEC for review and approval.

    As a contingency, if any portion of the site fails to meet Track 2 SCOs for soil, a cover system will be required as an Engineering control in areas where the upper two feet of exposed surface soil will exceed RRU SCOs, to allow for future Restricted-Residential use.
15. Performance of all activities required for the remedial action, including acquisition of required permits and attainment of pretreatment requirements, in compliance with applicable laws and regulations.
16. Based on the depth to groundwater, dewatering may be required at portions of the site. All dewatering will be in compliance with city, state, and federal laws and regulations. Extracted groundwater will either be containerized for off-site licensed or permitted disposal or will discharged to the local wastewater system in compliance with all municipal requirements, including pre-treatment if warranted.
17. Implementation of storm-water pollution prevention measures in compliance with applicable laws and regulations.
18. Performance of a soil vapor intrusion evaluation at all Site buildings prior to occupancy, to be conducted during the heating season (NYSDEC and NYSDOH will review the results and determine if an Engineering Control for vapor is required). If the Volunteer chooses to install a vapor control measure prior to this evaluation, the installed system would not be considered an Engineering Control at that time.
19. Submission of a Final Engineering Report that describes the remedial activities, certifies that the remedial requirements have been achieved, defines site boundaries, lists any changes from this RAWP, and describes all Engineering Controls (ECs) and Institutional Controls (ICs) to be implemented at the site.

20. Submission of an approved Site Management Plan in the FER for long-term management of residual contamination, including plans for operation, maintenance, monitoring, inspection and certification of ECs and ICs, and reporting at a specified frequency.
21. Recording of an environmental easement that includes a listing of institutional controls. Institutional controls will include prohibition of the following: (1) vegetable gardening and farming; (2) use of groundwater without treatment rendering it safe for the intended use; (3) disturbance of residual contaminated material unless it is conducted in accordance with the SMP; and (4) higher level of land usage without NYSDEC approval. The environmental easement will include a listing of engineering controls and a requirement that management of these controls must be in compliance with an approved SMP.

4 REMEDIAL ACTION PROGRAM

4.1 Governing Documents

All remedial work performed under this plan will be in full compliance with the governing documents described in this section of the RAWP.

4.1.1 Standards, Criteria and Guidance

Principal SCGs applicable to remedial program implementation include the following (additional regulations and guidance will be referenced as warranted during program implementation):

- 6 NYCRR Part 360 and Part 364 Solid Waste Management Requirements
- 6 NYCRR Part 364 Waste Transporter Permits
- 6 NYCRR Part 371, Identification and Listing of Hazardous Wastes
- 6 NYCRR Part 372, Hazardous Waste Manifest System and Related Standards for Generators, Transporters and Facilities
- 6 NYCRR Subpart 374-1, Standards for the Management of Specific Hazardous Wastes and Specific Types of Hazardous Waste Management Facilities
- 6 NYCRR Part 375, Environmental Remediation, Subparts 375-1 (Remedial Program Requirements), 375-3 (Brownfield Cleanup Program), and 375-6 (Soil Cleanup Objectives)
- 6 NYCRR Part 376, Land Disposal Restrictions
- 6 NYCRR Part 608, Use and Protection of Waters
- 6 NYCRR Parts 700-706, Water Quality Standards
- 6 NYCRR Part 750 State Pollutant Discharge Elimination System (SPDES) Permits
- 10 NYCRR Part 67, Lead
- 29 CFR Part 1910.120, Hazardous Waste Operations and Emergency Response
- NYSDEC Sampling, Analysis, and Assessment of Per- and Polyfluoroalkyl Substances (PFAS) Under NYSDEC's Part 375 Remedial Programs (April 2023)
- NYSDEC CP-51 Soil Cleanup Guidance (October 2010)
- NYSDEC DER-2, Making Changes to Selected Remedies (May 2008)
- NYSDEC DER-10, Technical Guidance for Site Investigation and Remediation (May 2010)
- NYSDEC DER-23, Citizen Participation Handbook for Remedial Programs (January 2010)
- NYSDEC DER-31, Green Remediation (September 2010)
- NYSDEC TAGM 3028, "Contained In" Criteria for Environmental Media (August 1997)

- NYSDEC TOGS 1.1.1 Ambient Water Quality Standards and Guidance Values, (June 2004)
- NYSDOH Generic Community Air Monitoring Plan (May 2010)
- USEPA OSWER Directive 9200.4-17, Use of Monitored Natural Attenuation at Superfund, RCRA Corrective Action, and Underground Storage Tank Sites (November 1997)

4.1.2 Public Participation Plan

A Public Participation Plan, including an overview of the BCP program, background of the site, a summary of the investigative findings for the site, and public participation activities is provided in Appendix C.

A certification of mailing will be sent by the Volunteer to the NYSDEC project manager following the distribution of all Fact Sheets and notices that includes: (1) certification that the Fact Sheets were mailed, (2) the date they were mailed; (3) a copy of the Fact Sheet, (4) a list of recipients (contact list); and (5) a statement that the repository contains all applicable project documents.

No changes will be made to approved Fact Sheets authorized for release by NYSDEC without written consent of the NYSDEC. No other information, such as brochures and flyers, will be included with the Fact Sheet mailing.

Document repositories have been established at the following locations and contain all applicable project documents:

Newburgh Free Library
Karen Cissel, Librarian, Head of User Services
124 Grand Street, Newburgh, NY 12550
Phone: 845-563-3600
Email: kcissel@rcls.org

NYSDEC – Region 3
21 South Putt Corners Road
New Paltz, NY 12561
(845) 256-3146

4.1.3 Health and Safety Plan for Site Remediation (HASP)

All remedial work performed under this plan will be in full compliance with regulatory requirements, including site and worker safety requirements mandated by Federal OSHA. The Volunteer and associated parties preparing the remedial documents submitted to the State and those performing the construction work, are completely responsible for the preparation of an appropriate Health and Safety Plan and for the appropriate performance of work according to that plan and applicable laws. The HASP and requirements defined in this Remedial Action Work Plan pertain to all remedial and invasive work performed at the site until the issuance of a Certificate of Completion. A copy of the HASP is provided as Appendix D.

The site-specific HASP will be reviewed with site personnel and appropriate sub-contractors prior to the initiation of fieldwork. All proposed work will be performed in "Level D" PPE unless field conditions warrant additional protection.

The Site Safety Coordinator will be Erick Salazar of GBTS unless otherwise specified and approved by the NYSDEC. A resume will be provided to NYSDEC prior to the start of remedial construction.

Confined space entry will comply with all OSHA requirements to address the potential risk posed by combustible and toxic gases. Potential confined spaces on this project include utility trenches and other excavation areas.

4.1.4 Community Air Monitoring Plan (CAMP)

The CAMP (provided in Appendix E) will be initiated during all ground intrusive activities, and during any other fieldwork that is reasonably likely to generate significant dust or vapors from known or suspected contaminated soils. Ground intrusive activities include, but are not limited to, soil/waste excavation and handling, test pit excavation or trenching, and the installation of soil borings or monitoring wells. The implementation of the CAMP will document the presence or absence of VOCs and dust in the air surrounding the work zone, which may migrate off-site due to fieldwork activities. This plan provides guidance on the need for implementing more stringent dust and emission controls based on air quality data.

Mitigation measures may include reducing the surface area of contaminated soil being disturbed at one time, watering exposed soils to reduce fugitive dust and odors, or stopping excavation activities. Dust suppression will be conducted during construction activities that will disturb on-site soils and may include misting, reduction in soil movement, or cessation of excavation.

Real-time air monitoring for VOCs and particulate levels at the perimeter of the exclusion zone or work area will be performed. Periodic monitoring for VOCs will be performed during non-intrusive activities such as the collection of soil and sediment samples or the collection of groundwater samples from existing monitoring wells. Periodic monitoring during sample collection, for instance, will consist of taking a reading upon arrival at a sample location, monitoring while opening a well cap or overturning soil, monitoring during well baling/purging, and taking a reading prior to leaving a sample location. Depending upon the proximity of potentially exposed individuals, continuous monitoring may be performed during sampling activities. Examples of such situations include groundwater sampling at wells on the curb of a

busy urban street, in the midst of a public park, or adjacent to a school or residence. Exceedances of action levels observed during performance of the CAMP will be reported to the NYSDEC Project Manager within 24 hours and included in the Daily Report.

VOC Monitoring, Response Levels, and Actions

VOCs will be monitored at the upwind and downwind perimeters of the immediate work area (i.e., the exclusion zone) on a continuous basis during invasive work. Upwind concentrations will be measured at the start of each workday and continuously thereafter to establish background conditions. Monitoring work will be performed using equipment appropriate to measure the types of contaminants known or suspected to be present. The equipment will be calibrated at least daily for the contaminant(s) of concern or for an appropriate surrogate. The equipment will be capable of calculating 15-minute running average concentrations, which will be compared to the levels specified below.

If the ambient air concentration of total organic vapors at the downwind perimeter of the work area or exclusion zone exceeds 5 ppm above background for the 15-minute average, work activities will be temporarily halted and monitoring continued. If the total organic vapor level readily decreases (per instantaneous readings) below 5 ppm over background, work activities will resume with continued monitoring.

If total organic vapor levels at the downwind perimeter of the work area or exclusion zone persist at levels in excess of 5 ppm over background but less than 25 ppm, work activities will be halted, the source of vapors identified, corrective actions taken to abate emissions, and monitoring continued. After these steps, work activities will resume provided that the total organic vapor level 200 feet downwind of the exclusion zone or half the distance to the nearest potential receptor or occupied structure, whichever is less - but in no case less than 20 feet, is below 5 ppm over background for the 15-minute average.

If the organic vapor level is above 25 ppm at the perimeter of the work area, activities will be shut down.

All 15-minute readings must be recorded and be available for NYSDEC personnel to review. Instantaneous readings, if any, used for decision purposes will also be recorded.

Particulate Monitoring, Response Levels, and Actions

Particulate concentrations will be monitored continuously at the upwind and downwind perimeters of the exclusion zone at temporary particulate monitoring stations. The particulate monitoring will be performed using real-time monitoring equipment capable of measuring particulate matter less than 10 micrometers in size (PM-10) and capable of integrating over a period of 15 minutes (or less) for comparison to the airborne particulate action level. The equipment will be equipped with an audible alarm to indicate exceedance of the action level. In addition, fugitive dust migration should be visually assessed during all work activities.

If the downwind PM-10 particulate level is 100 micrograms per cubic meter (µg/m^3) greater than background (upwind perimeter) for the 15-minute period or if airborne dust is observed leaving the work area, then dust suppression techniques will be employed and work will continue provided that downwind PM-10 particulate levels do not exceed 150 µg/m^3 above the upwind level and provided that no visible dust is migrating from the work area.

If, after implementation of dust suppression techniques, downwind PM-10 particulate levels are greater than 150 µg/m^3 above the upwind level, work will be stopped and a re-evaluation of activities initiated. Work will resume provided that dust suppression measures and other controls are successful in reducing the downwind PM-10 particulate concentration to within 150 µg/m^3 of the upwind level and in preventing visible dust migration.

NYSDEC and NYSDOH will be notified within 24-hours of any CAMP exceedances and all readings will be recorded and will be available for NYSDEC personnel to review.

4.1.5 Quality Assurance Project Plan (QAPP)

A QAPP, detailing procedures necessary to generate data of sufficient quality and quantity to represent successful performance of the Remedial Action, is provided as Appendix F. The QAPP includes a Sampling and Analysis Plan (SAP), detailing sampling and analysis of all media (confirmatory and/or endpoint samples, waste characterization samples, fill and soil cover samples, etc.), and which identifies methods for sample collection and handling.

4.1.6 Soil/Materials Management Plan (SoMP)

All soil removal will follow the SoMP plan as specified in Section 5.4, below. The SoMP includes detailed plans for managing all soils/materials that are disturbed at the site, including excavation,

handling, storage, transport and disposal, and includes all controls that will be applied to these efforts to assure effective, nuisance-free performance in compliance with all applicable Federal, State and local laws and regulations. All contaminant source removal areas will be surveyed at the completion of excavation. This information will be provided on maps in the FER.

4.1.7 Storm-Water Pollution Prevention Plan (SWPPP)

The Volunteer is responsible for ensuring that a Storm Water Pollution Prevention Plan (SWPPP) will be prepared for the site prior to demolition and soil removal activities. The plan will address requirements of New York State Storm-Water Management Regulations including physical methods to control and/or divert surface water flows and to limit the potential for erosion and migration of site soils, via wind or water, and will accommodate construction sequencing and staging areas. The erosion and sediment controls will be in conformance with requirements in the New York State Guidelines for Urban Erosion and Sediment Control.

4.1.8 Contractors Site Operations Plan (SOP)

The Remedial Engineer has reviewed all plans and submittals for this remedial project (including those listed above and contractor and sub-contractor document submittals) and confirms that they are in compliance with this RAWP. The Remedial Engineer is responsible to ensure that all later document submittals for this remedial project, including contractor and sub-contractor document submittals, are in compliance with this RAWP. All remedial documents will be submitted to NYSDEC and NYSDOH in a timely manner and prior to the start of work.

4.1.9 Remedial Design in Compliance with DER-31

A remedial design program will be implemented in accordance with NYSDEC DER-31 Green Remediation to provide the details necessary for the construction, operation, optimization, maintenance, and monitoring of the remedial program.

Green and Sustainable Remediation Components

GSR principles and techniques will be employed as feasible in the design, implementation, and site management of the remedy in general conformance with per DER-31. The major remediation components are as follows:

- Considering environmental impacts of treatment technologies and remedy stewardship over the long term;

- Reducing direct and indirect greenhouse gases and other emissions;
- Increasing energy efficiency and minimizing use of non-renewable energy;
- Conserving and efficiently managing resources and materials;
- Reducing waste, and increasing recycling and reuse of materials that would otherwise be considered a waste;
- Maximizing habitat value and creating habitat when possible;
- Fostering green and healthy communities and working landscapes that support balancing ecological, economic and social goals;
- Integrating the remedy with the end use where possible and encouraging green and sustainable re-development; and,
- Additionally, to incorporate green remediation principles and techniques to the extent feasible in the development at this site, any future on-site buildings shall be constructed (at a minimum) to meet the 2020 Energy Conservation Construction Code of New York (or most recent edition) and will utilize a 20-mil or thicker vapor barrier/waterproofing membrane on the foundation to improve energy efficiency as an element of construction.

An EFA performed for each proposed remedial alternative is provided in in Appendix G.

Best Management Practices

Best Management Practices in the context of GSR are specific actions to reduce energy and water usage, minimize waste, reduce air and water pollution, and protect land and ecosystems during all phases of remediation.

BMPs will be implemented during the remedial action in consultation with NYSDEC and in general conformance with NYSDEC *Green and Sustainable Remediation and Climate Resiliency Fact Sheet* (June 2023) and USEPA *Green Remediation Best Management Practices: Site Investigation and Environmental Monitoring* (September 2016).

Examples of BMPs for remediation at the site are:

- Advance project planning to a) minimize mobilizations to the site by fieldwork personnel and related subcontractors, and b) avoid unnecessary/redundant media sampling and the associated impacts from collection, transportation, and laboratory analysis;
- Remote communication as practical to minimize on-site meetings, reducing the impacts associated with transportation of site personnel (energy use, pollution, etc.);

- Use of minimally invasive fieldwork technologies, such as direct-reading instruments;
- Use of existing on-site construction equipment as possible rather than mobilization of specialized off-site equipment (e.g., additional waste-characterization samples collected via an on-site excavator verses use of mechanized boring equipment brought to the site);
- Combining waste streams (where both practical and acceptable to the disposal facilities) to minimize both on-site handling and transportation costs; and,
- Optimization of any required Engineering Controls, including proper initial design, pilot testing, selection of correctly sized and energy efficient equipment, and periodic maintenance to ensure effective ongoing operation.

4.2 General Remedial Construction Information

4.2.1 Project Organization

Principal personnel who will participate in the remedial action include the Professional Engineer (PE), Daniel Bellucci and the Qualified Environmental Professional (QEP), Erick Salazar, CHMM. NYSDEC will be notified of any change to principal personnel. Resumes of key personnel are provided in the QAPP.

4.2.2 Remedial Engineer and Qualified Environmental Professional

Remedial Engineer

The Remedial Engineer (RE) for this project will be Daniel Bellucci of Bellucci Engineering, PLLC, a registered professional engineer licensed by the State of New York (NYS Professional Engineer Number 099470), who has contracted directly with Kearney Realty & Development Group Inc. (the Volunteer) to provide all engineering services under the BCP. The Remedial Engineer will have primary direct responsibility for implementation of the remedial program for "The Green" BCP site (No. C336099).

The Remedial Engineer will certify in the FER that the remedial activities were observed by qualified environmental professionals under their supervision and that the remediation requirements set forth in the Remedial Action Work Plan and any other relevant provisions of ECL 27-1419 have been achieved in full conformance with that Plan. Other Remedial Engineer certification requirements are listed later in this RAWP.

The Remedial Engineer will coordinate the work of other contractors and subcontractors involved in all aspects of remedial construction, including soil excavation, stockpiling, characterization, removal and disposal, air monitoring, emergency spill response, import of backfill, and management of waste transport and disposal. The Remedial Engineer will be responsible for all appropriate communication with NYSDEC and NYSDOH.

The Remedial Engineer will review all pre-remedial plans submitted by contractors for compliance with this Remedial Action Work Plan and will certify compliance in the FER.

The Remedial Engineer will provide the certifications listed in Section 11.2 in the FER.

Qualified Environmental Professional

The Qualified Environmental Professional (QEP) for this project will be Erick Salazar, CHMM of GBTS (which has contracted with the Volunteer to provide applicable environmental remediation services under the direct supervision of the Remedial Engineer). The QEP will oversee environmental remedial activities on the site, document the proper removal of contaminated soils, collect waste characterization as well as site integrity samples, inspect and certify the proper importation of approval fill soils, and assist the Remedial Engineer in the preparation of documents including the FER, the SMP, and periodic status reports.

4.2.3 Remedial Action Construction Schedule

A schedule for performance of the remedial work is provided in Section 10.

4.2.4 Work Hours

The hours for operation of remedial construction will be from 7 a.m. to 5 p.m. These hours conform to City of Newburgh requirements or to specific variances issued by applicable City agencies (NYSDEC will be notified by the Volunteer of any variances). No remedial work will be conducted on weekend days (Saturday or Sunday) unless expressly permitted by NYSDEC. NYSDEC reserves the right to deny alternate remedial construction hours.

4.2.5 Site Security

The site will be secured at a minimum with a six-foot fence and locking gates to protect the public during all construction activities.

4.2.6 Traffic Control

Traffic control will be provided by the contractor during equipment entrance and egress from the site. Trucks will follow the approved truck route in Section 5.4.4. Drivers of trucks leaving the site with excavated soil will be instructed to proceed without stopping in the vicinity of the site to prevent neighborhood impacts.

4.2.7 Contingency Plan

If unknown conditions are encountered during sub-grade removal (e.g., discovery of unidentified UST), the Contingency Plan (provided in Section 5.5) and all applicable NYSDEC guidelines will be followed to address the condition(s).

4.2.8 Worker Training and Monitoring

The Volunteer is responsible for ensuring that all site contractors provide their workers with applicable training (i.e. HAZWOPER, site safety training and medical monitoring, as necessary).

4.2.9 Agency Approvals

The Volunteer has addressed all SEQRA requirements. All permits or government approvals required for remedial construction have been, or will be, obtained prior to the start of remedial construction. Acceptance of this RAWP by NYSDEC does not constitute satisfaction of these requirements and will not be a substitute for any required permit.

The site is located in a Waterfront Gateway District that permits the planned mixed-use (residential/commercial) buildings, and the proposed use is consistent with applicable zoning laws. A Certificate of Completion will not be issued for the project unless conformance with zoning designation is demonstrated.

4.2.10 Pre-Construction Meeting with NYSDEC

A pre-construction meeting among NYSDEC, the Volunteer, the RE and QEP, and the General Contractor will take place prior to the start of remedial construction activities.

4.2.11 Emergency Contact Information

An emergency contact list with names and telephone numbers that will define the specific project contacts for use by NYSDEC and NYSDOH in the case of a day or night emergency is provided below.

Table: Emergency Contact Information

Emergency Agencies	Phone Numbers
EMERGENCY	911
Montefiore St. Luke's Cornwall 70 Dubois Street, Newburgh, NY 12550	(845) 561-4400 or 911
City of Newburgh - Police Department 55 Broadway, Newburgh, NY 12550	(845) 561-3131 or 911
City of Newburgh - Fire Department 22 Grand Street, Newburgh, NY 12550	911 (office 845-562-1212)
City of Newburgh – City Hall	(845) 569-7300
City of Newburgh - Department of Public Works	(845) 565-3297
Site Health and Safety Officer, Erick Salazar - GBTS	(845) 867-4716
Remedial Engineer, Daniel Bellucci, PE	(845) 803-4347
Construction Manager	TBD

4.3 Site Preparation

4.3.1 Agency Notification and Mobilization

Notifications

The NYSDEC will be notified in writing at least five (5) business days prior to the initiation of any of the on-site work and during the course of the fieldwork. Changes to fieldwork scheduling will be provided via email. All applicable local agencies will also be notified prior to the initiation of site work. NYSDEC will have the opportunity to participate in all remediation project status meetings (adequate notice of these meetings will be provided).

Prior to the implementation of any ground intrusive activities, a request for a complete utility mark-out of the site will be submitted in conformance with New York State Department of Labor regulations. Confirmation of underground utility locations will be secured, and a field check of the utility mark-out will be conducted prior to the initiation of work. Site utilities will be protected (as necessary) by the contractor or Volunteer.

Site Mobilization

Mobilization will be conducted as necessary for each phase of work at the site. Mobilization includes field personnel orientation, equipment mobilization (including securing all sampling equipment needed for the field investigation), marking/staking sampling locations and utility mark-outs. Each field team member will attend an orientation meeting to become familiar with the general operation of the site, health and safety requirements, and field procedures. Site mobilization will be conducted in a manner such that erosion and sedimentation control, utility marker and easement layout, and other site preparation tasks are fully instituted before construction begins.

4.3.2 Erosion and Sedimentation Controls

This section describes preventative measures that will be taken to protect the site from soil erosion and sedimentation during remedial activities. A final Erosion and Sedimentation Control Plan (ESCP), reflecting final site development plans and any approved modifications to the scope of remedial work, will be submitted to the NYSDEC for review and approval prior to the start of construction activities (preliminary plans are provided in Appendix A).

The final ESCP will include the following elements:

- A location map including the proximity of the site to relevant off-site features;
- An Existing Conditions Site Plan;
- A grading plan and construction timetable including finished elevations and addressing the sequencing of the project; and,
- The location and type of all erosion and sediment control measures (e.g., silt fence, hay bales, stabilized construction entrance, etc.) and sequencing of the measures, if needed.

The remediation will occur in such a way as to permit on-site stormwater to remain on the site.

4.3.3 Stabilized Construction Entrance(s)

Steps will be taken to ensure that trucks departing the site will not track soil, fill or debris off-site. Such actions may include use of cleaned asphalt or concrete roads or use of stone or other aggregate-based egress paths between the truck inspection station and the property exit. Measures will be taken to ensure that adjacent roadways will be kept clean of project related soils, fill and debris. Construction entrances are proposed for Smith Street and South Street; an

entrance will not be located on Montgomery Street in order to minimize any disturbances to the adjoining Horizons on the Hudson School.

4.3.4 Utility Marker and Easements Layout

The Volunteer and its contractors are solely responsible for the identification of utilities that might be affected by work under the RAWP and implementation of all required, appropriate, or necessary health and safety measures during performance of work under this RAWP. The Volunteer and its contractors are solely responsible for safe execution of all invasive and other work performed under this RAWP. The Volunteer and its contractors must obtain any local, State or Federal permits or approvals pertinent to such work that may be required to perform work under this RAWP. Approval of this RAWP by NYSDEC does not constitute satisfaction of these requirements.

The presence of utilities and easements on the site has been investigated by the Remedial Engineer. It has been determined that no risk or impediment to the planned work under this Remedial Action Work Plan is posed by utilities or easements on the site.

4.3.5 Sheeting and Shoring

Appropriate management of structural stability of on-site or off-site structures during on-site activities including excavation is the sole responsibility of the Volunteer and its contractors. The Volunteer and its contractors are solely responsible for safe execution of all work performed under this Plan. The Volunteer and its contractors must obtain any local, State or Federal permits or approvals that may be required to perform work under this Plan. The Volunteer and its contractors are solely responsible for the implementation of all required, appropriate, or necessary health and safety measures during performance of work under the approved Plan.

4.3.6 Equipment and Material Staging

Equipment and materials will be stored and staged in a manner that complies with applicable laws and regulations. Specific site areas will be designated for the staging of equipment and materials. Staging areas will be located and managed such that: a) non-contaminated materials do not contact or become intermixed with contaminated materials; and b) the likelihood of worker and/or visitor exposures to contaminated media is minimized.

4.3.7 Decontamination Area

Decontamination of field equipment will be conducted to prevent site cross-contamination, minimize the potential for off-site contamination and to reduce exposures to contaminated media. Any fluids or solids generated from decontamination activities will be properly handled, including off-site disposal as warranted. All decontamination activities will be documented in field logbooks.

Trucks and other heavy equipment remaining on-site will be brushed to remove easily accessible gross accumulations of soil at the end of each workday, and prior to moving between excavation areas or moving toward the site exit. A dedicated decontamination area will be provided as part of the erosion and sedimentation control for vehicles exiting the site and will be designed such that there is continuity between the equipment wash area and the clean egress path. Heavy equipment will be brushed and sprayed with high-pressure water and/or steam to remove soil adhering to surfaces (including wheels and vehicle undercarriages), prior to exiting the site.

Decontamination of non-disposable equipment will be conducted on a decontamination line setup on plastic sheeting, proceeding from dirty to clean. All items (disassembled as needed) will be washed/brushed thoroughly in an Alconox (or similar) solution, then rinsed with clean water (and/or nitric acid and methanol, as appropriate) per established USEPA decontamination protocols. All down-hole gauging and pumping equipment will be allowed to run fully submerged in both soapy and clean water. Rinse blanks will be collected as per the requirements of the QAPP.

Equipment known or suspected to be impacted by petroleum or solvents, grossly contaminated media, or materials subject to conditions specified in the Contingency Plan (Section 5.5), will be decontaminated on an engineered pad designed to capture and contain wash water (to be containerized and characterized prior to off-site disposal at a permitted facility.

Any fluids or solids generated from decontamination activities will be properly disposed.

4.3.8 Site Fencing

Site fencing (6 feet minimum with locking gate) will be installed as needed.

4.3.9 Demobilization

Demobilization will include:

- Restoration of temporarily disturbed locations (e.g., access and storage areas);
- Removal of sediment from erosion control measures and truck wash areas, and disposal of materials in accordance with applicable laws and regulations;
- Equipment decontamination; and,
- General refuse disposal.

Equipment will be decontaminated and demobilized at the completion of all field activities. Investigation equipment and large equipment (e.g., soil excavators) will be washed at the truck inspection station as necessary. In addition, all investigation and remediation derived waste will be appropriately disposed.

4.3.10 Well Decommissioning

Any monitoring wells located within construction areas will be properly decommissioned according to technical guidance provided in NYSDEC CP-43: Groundwater Monitoring Well Decommissioning Policy. The well casing will be exposed to a depth corresponding to the depth of planned excavation in the immediate vicinity of the well, the exposed casing will be cut off at the level of the excavation floor and the remaining subsurface portion of the casing will be grouted in-place, as per CP-43 Section 6.0.

4.4 Reporting

All daily and monthly Reports will be included in the FER.

4.4.1 Daily Reports

Daily reports will be submitted to NYSDEC and NYSDOH Project Managers by noon of the next business day after the end of the reporting period, and will include:

- An update of progress made during the reporting day;
- Locations of work and quantities of material imported and exported from the site;
- References to alpha-numeric map for site activities;
- A summary of any and all complaints with relevant details (names, phone numbers);
- A summary of CAMP finding, including excursions; and,
- An explanation of notable site conditions.

Daily reports are not intended to be the mode of communication for notification to the NYSDEC of emergencies (accident, spill), requests for changes to the RAWP or other sensitive or time critical information. However, such conditions must also be included in the daily reports. Emergency conditions and changes to the RAWP will be addressed directly to NYSDEC Project Manager via personal communication.

Daily Reports will include a description of daily activities keyed to an alpha-numeric map for the site that identifies work areas. These reports will include a summary of air sampling results, odor and dust problems and corrective actions, and all complaints received from the public.

Figure 8 shows a predefined alpha-numeric grid for use in identifying all locations described in reports submitted to NYSDEC.

The NYSDEC assigned project number will appear on all reports.

4.4.2 Monthly Reports

Monthly reports prepared in accordance with DER-10 Section 5.7(b) will be submitted to NYSDEC and NYSDOH Project Managers within one week following the end of the month of the reporting period. Reports will include, at a minimum:

- Activities relative to the site during the previous reporting period and those anticipated for the next reporting period, including a quantitative presentation of work performed (i.e. tons of material exported and imported, etc.);
- Description of approved activity modifications, including changes of work scope and/or schedule;
- Sampling results received following internal data review and validation, as applicable; and,
- An update of the remedial schedule including the percentage of project completion, unresolved delays encountered or anticipated that may affect the future schedule, and efforts made to mitigate such delays.

4.4.3 Other Reporting

Representative photographs of all remedial program elements, in acceptable quality, will be submitted to NYSDEC in digital (JPEG) format. Photographs will include the site as a whole, each contaminant source area, and site structures, and will be taken before, during, and after

remediation. Photographs will be included in the daily reports as needed, and a comprehensive chronological collection will be included in the FER.

Job-site record keeping for all remedial work will be appropriately documented. These records will be maintained on-site at all times during the project and be available for inspection by NYSDEC and NYSDOH staff.

4.4.4 Complaint Management Plan

All complaints from citizens will be promptly reported to NYSDEC. Complaints will be addressed, and outcomes will also be reported to NYSDEC in daily reports. Notices to NYSDEC will include the nature of the complaint, the party providing the complaint, and the actions taken to resolve any problems. Any public complaints will be handled as follows:

- Information from the person making the complaint (name, phone number, address, etc.) will be obtained, if possible, so follow-up can be completed.
- The nature of the complaint, date, time, and weather conditions will be noted.
- The complaint will be addressed by on-site personnel.
- The person logging the complaint will be re-contacted (if contact information was provided), so that the resolution of the complaint can be documented.
- In the event that the complaint cannot be resolved, the NYSDEC project manager will be contacted in writing.

4.4.5 Deviations from the Remedial Action Work Plan

All changes to the RAWP will be reported to the NYSDEC Project Manager and will be documented in daily reports and reported in the FER. The process to be followed if there are any deviations from the RAWP will include a request for approval for the change from NYSDEC noting the following:

- Reasons for deviating from the approved RAWP;
- Effect of the deviations on overall remedy; and,
- Determination that the remedial action with the deviation(s) is protective of public health and the environment.

Notification will be provided to NYSDEC by telephone for conditions requiring immediate action (e.g., conditions judged to be a danger to on-site personnel or the surrounding community).

5 DETAILS OF PROPOSED REMEDIAL ACTIONS

5.1 Tank and Soil Removal Activities

5.1.1 Removal of Underground Storage Tanks

A potential UST was observed at the southern margin of the site during the RI; this area will be excavated during the remedial action in order to document the presence or absence of any tanks. In accordance with DER-10, Section 5.5, any USTs encountered at the site will be excavated, cleaned, and disposed off-site at a permitted facility (specific fieldwork requirements and protocols are discussed in RAWP Section 5.5.1). Tank removal will be sequenced to allow for efficient and safe remedial construction activities, with priority given to avoiding any actions likely to result in a release from the USTs.

5.1.2 Excavation of Contaminated Materials

All soils that exceed RRU SCOs and POG GVs will be removed including the upper 2 feet across the entire Site (approximately 3,419), with additional removal of deeper soil as shown below, for a total of approximately 5,619 cy removed for remedial purposes:

RI sampling locations	Final excavation depth, based on original surface	Additional volume removed below initial cut of 2 feet
2SB-24; 2SB-25; 2SB-29	3 feet	133 cy
2SB-04; 2SB-11; 2SB-13; 2SB-14; 2SB-15; 2SB-19; 2SB-20	6 feet	700 cy
2SB-12	7 feet	167 cy
2SB-27	8 feet	200 cy
2SB-28	10 feet	267 cy
2SB-08; 2SB-21	13 feet	733 cy

Collection and analysis of confirmation samples at the remedial excavation depth will be used to verify that RRU SCOs and POG GVs for the site have been achieved. If confirmation sampling indicates that RRU SCOs or POG GVs were not achieved at the stated remedial depth, the Volunteer must notify NYSDEC, submit the sample results, and in consultation with NYSDEC determine if further remedial excavation is necessary, or if the impacted area will achieve a Track 4 cleanup and be subject to an Engineering Control (cover system) as a contingency condition. Further excavation for development will proceed after confirmation samples demonstrate that RRU SCOs and POG GVs for the site have been achieved.

Figure 9 shows proposed remedial excavations to achieve a Track 2 cleanup.

To ensure proper handling and disposal of excavated material, waste characterization sampling will be completed for all identified contaminated site material. Waste characterization sampling will be performed exclusively for the purposes of off-site disposal in a manner suitable to receiving facilities and in conformance with applicable federal, state, and local laws, rules, and regulations and facility-specific permits.

Remedial construction will include excavation and removal of any USTs, fuel dispensers, underground piping or other structures associated with a source of contamination.

No fill material will be re-used without approval by the NYSDEC and no on-site fill material will be used to regrade areas below the static water level.

5.1.3 Soil Cleanup Objectives

The Soil Cleanup Objectives for this site are Restricted Residential Use SCOs and Protection of Groundwater Guidance Values for PFAS and are presented in Tables 1 through 6, which also show exceedances of both Unrestricted and Restricted-Residential SCOs for all soil at the site. Figure 5 is a spider map that shows exceedances of applicable Track 2 SCOs.

5.2 Remedial Performance Evaluation

5.2.1 Confirmatory Sampling Locations

The Track 2 remedy requires that all soils which exceed the restricted residential SCOs or POG GVs will be excavated and transported off-site for disposal. Confirmatory endpoint sampling is required at all remedial excavation areas, and in all excavations performed solely for site development as NYSDEC has determined that the existing RI data set does not provide sufficient documentation sampling. Remedial excavations with a minimum base area of 900 sf will be performed as described below and in Section 5.2.2 – Confirmatory Sampling Frequency. At least one confirmatory base sample will be collected from each 900 sf excavation area and confirmatory wall samples will be collected at a frequency of at least one sample for every 30 linear feet of wall. Based on the results of initial endpoint sampling efforts, excavation areas may be extended vertically and/or horizontally in order to achieve required site cleanup objectives.

The upper 2 feet of soil throughout the entire site will be removed, followed by additional deeper excavations, as described in Section 5.1.2. The number of proposed endpoint samples for each excavation area, including base and wall samples, is shown below (note: no wall samples are proposed at excavation walls that extend to the BCP boundary limits as those samples would represent off-site conditions).

Excavation Areas	Depths	Number of Base Samples	Number of Wall Samples
Site-wide	2 feet	46	0
2SB-24; 2SB-25; 2SB-29	3 feet	3	8
2SB-04; 2SB-11; 2SB-13; 2SB-14; 2SB-15; 2SB-19; 2SB-20	6 feet	6	18
2SB-12	7 feet	1	4
2SB-27	8 feet	1	4
2SB-28	10 feet	1	4
2SB-08; 2SB-21	13 feet	2	6

If previously unknown contamination source areas are encountered (e.g., grossly contaminated soil, as defined in 6 NYCRR Part 375-1.2(u), underground drainage structures, or storage tanks, etc.), additional excavation and off-site disposal of the source areas as well as confirmation sampling will be required.

5.2.2 Confirmatory Sampling Frequency

Discrete confirmatory soil samples will be collected (at a minimum) from each 30 linear feet of wall (at least one sample per wall) and from every 900 square feet of excavation floor (at least one sample per floor) in excavation areas (the final number and location of samples will be determined in consultation with NYSDEC). All confirmatory samples will be analyzed for Part 375 parameters (TCL VOCs and TCL SVOCs, TAL metals, pesticides, herbicides, PCBs and cyanide) and PFAS. Based on RI data and site conditions, the Volunteer may request that a portion of the confirmatory samples be analyzed for a reduced list of parameters.

5.2.3 Confirmatory Sampling Methodology

Underlying and surrounding soils will be visually inspected and screened with the PID after soil excavation. Soil samples will be collected using dedicated, disposable plastic trowels and latex gloves (collection for PFAS will follow methodology as specified in the QAPP).

Samples will be placed in laboratory-supplied containers, properly stored in coolers, and transported to a NYSDOH-certified laboratory within 48 hours under chain of custody procedures.

5.2.4 Reporting of Results

All data will be provided to the NYSDEC within 72 hours of receipt. Any recommendations for additional testing will be reviewed with the NYSDEC prior to commencing this fieldwork.

5.2.5 QA/QC

Quality Assurance / Quality Control protocols are fully specified in the QAPP (Appendix F). QA/QC methodology includes the following:

- One duplicate sample for every 20 samples collected will be submitted to the approved laboratory for analysis of the same parameters.
- Samples will be appropriately packaged, placed in coolers and transferred under proper Chain of Custody to the analytical laboratory. Samples will be containerized in appropriate laboratory provided glassware and shipped in plastic coolers. Samples will be preserved through the use of ice to maintain a temperature of 4^{o} C.
- Dedicated disposable sampling materials will be used for the collection of soil samples, eliminating the need to prepare equipment (rinsate) blanks. However, if non-disposable equipment is used (stainless steel scoop, etc.) field rinsate blanks will be prepared at the rate of one for every 20 samples collected.

5.2.6 Data Usability Summary Reports

Complete laboratory data packages will be provided to an independent, third-party data validator. A summary of the findings in the Data Usability Summary Reports (DUSRs) will be provided in the FER.

5.2.7 Reporting of Confirmatory Data in FER

Chemical analysis of confirmatory and contingency samples will be conducted by a NYSDOH ELAP certified laboratory. The FER will provide all confirmatory sample results and exceedances of SCOs. All data submitted as part of the FER will be in an electronic data deliverable format that complies with the NYSDEC Electronic Data Warehouse Standards.

5.3 Estimated Material Removal Quantities

The estimated quantity of soil to be removed from the site is up to approximately 10,500 cy of soil for construction purposes (additional soil may be removed if found to be unstable or otherwise unacceptable for development reasons), with at least 5,619 cy removed for remediation purposes.

5.4 Soil/Materials Management Plan

5.4.1 Soil Screening Methods

Soil screening and assessment will be performed by a qualified environmental professional or experienced field technician under the direction of the Remedial Engineer during all remedial and development excavations into known or potentially contaminated material. Soil screening will be performed regardless of when the invasive work is done and will include all excavation and invasive work performed during the remedy and during development phase, such as excavations for foundations and utility work, prior to issuance of the Certificate of Completion.

Grossly contaminated soil will be identified by the presence of: non-aqueous phase liquids (NAPL); visual indications of staining, discoloration or the presence of other obvious signs of contamination; noticeable odors associated with petroleum, solvents or other chemicals; and/or elevated PID readings compared to background levels.

Soil screening will be used to establish excavation endpoints by: 1) establishing the absence of soil exhibiting significant field evidence of contamination (grossly contaminated media) or debris materials likely to be associated with contaminants of concern (e.g., urban fill); and 2) identifying the presence of non-disturbed native soils. The use of direct-reading hand-held screening devices (e.g., PID) will be employed, as appropriate, to determine likely excavation boundaries; final endpoints, however, will only be established through laboratory analysis of confirmatory samples.

All primary contaminant sources (including but not limited to tanks and/or petroleum spill areas) identified during Site Characterization, Remedial Investigation, and Remedial Action will be surveyed by a surveyor licensed to practice in the State of New York. This information will be provided on maps in the FER.

Screening will be performed by qualified environmental professionals. Resumes will be provided for all personnel responsible for field screening (i.e. those representing the Remedial Engineer) of invasive work for unknown contaminant sources during remediation and development work.

5.4.2 Stockpile Methods

All stockpile activities will be compliant with applicable laws and regulations. Stockpile areas will be appropriately graded to control run-off and will be located in areas not subject to flooding or excessive sheet flow during storm events. Material to be stockpiled will be placed within an area designed and constructed to contain the materials from all sides and prevent runoff and dispersion. Stockpiles of excavated soils and other materials shall be located at least of 50 feet from the property boundaries, where possible.

Excavated soil from known and/or suspected areas of contamination (e.g., petroleum spill areas, drains, etc.) will be stockpiled separately and will be segregated from clean soil and construction materials. Stockpiles will be used only when necessary and will be removed as soon as practicable. Excavated soils will be stockpiled on, at minimum, double layers of 8-mil minimum sheeting. Stockpiles will be kept covered at all times with appropriately anchored tarps. Stockpiles will be routinely inspected and damaged tarp covers will be promptly replaced.

Stockpiles will be inspected daily. Results of inspections will be recorded in a logbook maintained at the site and available for inspection by NYSDEC.

Soil stockpiles will be continuously encircled with silt fences. Hay bales (or equivalent) will be used as needed near catch basins, surface waters and other discharge points.

Water will be available on-site at suitable supply and pressure for use in dust control.

5.4.3 Materials Excavation and Load Out

The Remedial Engineer or a qualified environmental professional under his/her supervision will oversee all invasive work and the excavation and load-out of all excavated material.

The Volunteer and its contractors are solely responsible for safe execution of all invasive and other work performed under this Plan.

The presence of utilities and easements on the site has been investigated by the Remedial Engineer. It has been determined that no risk or impediment to the planned work under this Remedial Action Work Plan is posed by utilities or easements on the site.

Loaded vehicles leaving the site will be appropriately lined, tarped, securely covered, manifested, and placarded in accordance with appropriate Federal, State, local, and NYSDOT requirements (and all other applicable transportation requirements).

A truck wash will be operated on-site. The on-site Qualified Environmental Professional under the Remedial Engineer's directive will be responsible for ensuring that all outbound trucks will be washed at the truck wash before leaving the site until the remedial construction is complete.

Locations where vehicles enter or exit the site shall be inspected daily for evidence of off-site sediment tracking.

The on-site Qualified Environmental Professional under the Remedial Engineer's directive will be responsible for ensuring that all egress points for truck and equipment transport from the site will be clean of dirt and other materials derived from the site during site remediation and development. Cleaning of the adjacent streets will be performed as needed to maintain a clean condition with respect to site -derived materials.

The Volunteer and associated parties preparing the remedial documents submitted to the State, and parties performing this work, are completely responsible for the safe performance of all invasive work, the structural integrity of excavations, and for structures that may be affected by excavations (such as building foundations and bridge footings).

The on-site Qualified Environmental Professional under the Remedial Engineer's directive will ensure that site development activities will not interfere with, or otherwise impair or compromise, remedial activities proposed in this Remedial Action Work Plan.

Each spill area or other significant site condition to be remediated (e.g., unknown USTs) will be removed and end-point remedial performance sampling completed before excavations related to site development commence proximal to the impacted area.

Development-related grading cuts and fills will not be performed without NYSDEC approval and will not interfere with, or otherwise impair or compromise, the performance of remediation required by this plan.

Mechanical processing of historical fill and contaminated soil on-site is prohibited.

5.4.4 Materials Transport Off-Site

All transport of materials will be performed by licensed haulers in accordance with appropriate local, State, and Federal regulations, including 6 NYCRR Part 364. Haulers will be appropriately licensed and trucks properly placarded.

Final truck transport routes will be determined based on the selected disposal facilities. All trucks will follow established NYS DOT Truck Routes, as available. At this time, it is expected that trucks will proceed west on South Street (avoiding the school on Montgomery Street) to US 9W and then north to Interstate Highway I-84. All trucks loaded with site materials will exit the vicinity of the site using only these approved truck routes. This is the most appropriate approach and takes into account: (a) limiting transport through residential areas and past sensitive sites; (b) use of mapped truck routes; (c) prohibiting off- site queuing of trucks entering the facility; (d) limiting total distance to major highways; (e) promoting safety in access to highways; and (f) overall safety in transport; and (g) community input. The approved truck route is provided in Figure 12.

Trucks will be prohibited from stopping and idling in the neighborhood outside the project site.

Egress points for truck and equipment transport from the site will be kept clean of dirt and other materials during site remediation and development.

Queuing of trucks will be performed on-site (as available) in order to minimize off-site disturbance (off-site queuing will be minimized).

Material transported by trucks exiting the site will be secured with tight-fitting covers. Loose-fitting canvas-type truck covers will be prohibited. If loads contain wet material capable of producing free liquid, truck liners will be used. All trucks will be washed prior to leaving the site. Truck wash waters will be collected and disposed of off-site in an appropriate manner.

5.4.5 Materials Disposal Off-Site

Waste disposal locations, to be established at a later date, will be reported to the NYSDEC Project Manager prior to the start of remedial excavation. The total quantity of material expected to be disposed off-site is anticipated to be up to approximately 10,500 cy for construction purposes (additional soil may be removed if found to be unstable or otherwise unacceptable for development reasons), with at least 5,619 cy removed for remediation purposes. Several separate disposal facilities may be secured (as warranted), based on the expected composition

of known contaminated soils. Information from the disposal facilities will be sent to the NYSDEC before the initiation of soil removal at the site.

All soil/solid waste excavated and removed from the site will be treated as contaminated and regulated material and will be disposed in accordance with all local, State (including 6NYCRR Part 360) and Federal regulations. If disposal of soil from this site is proposed for unregulated disposal (i.e. clean soil removed for development purposes), a formal request with an associated plan will be made to NYSDEC's Project Manager. Unregulated off-site management of materials from this site is prohibited without formal NYSDEC approval.

Material that does not meet Track 1 unrestricted SCOs is prohibited from being taken to a New York State recycling facility (6NYCRR Part 360-16 Registration Facility).

The following documentation will be obtained and reported by the Remedial Engineer for each disposal location used in this project to fully demonstrate and document that the disposal of material derived from the site conforms with all applicable laws: (1) a letter from the Remedial Engineer or BCP Volunteer to the receiving facility describing the material to be disposed and requesting formal written acceptance of the material. This letter will state that material to be disposed is contaminated material generated at an environmental remediation site in New York State. The letter will provide the project identity and the name and phone number of the Remedial Engineer. The letter will include as an attachment a summary of all chemical data for the material being transported (including Site Characterization data); and (2) a letter from all receiving facilities stating it is in receipt of the correspondence (above) and is approved to accept the material. These documents will be included in the FER.

Non-hazardous historical fill and contaminated soils taken off-site will be handled in accordance with 6NYCRR Part 360. Historical fill and contaminated soils from the site are prohibited from being disposed at Part 360-16 Registration Facilities (also known as Soil Recycling Facilities).

Soils that are contaminated but non-hazardous and are being removed from the site are considered by the Division of Materials Management (DMM) in NYSDEC to be Construction and Demolition (C/D) materials with contamination not typical of virgin soils. These soils may be sent to a permitted Part 360 landfill. They may be sent to a permitted C/D processing facility without permit modifications only upon prior notification of NYSDEC Region 3 DMM. This material is prohibited from being sent or redirected to a Part 360-16 Registration Facility. In this case, as

dictated by DMM, special procedures will include, at a minimum, a letter to the C/D facility that provides a detailed explanation that the material is derived from a DER remediation site, that the soil material is contaminated and that it must not be redirected to on-site or off-site Soil Recycling Facilities. The letter will provide the project identity and the name and phone number of the Remedial Engineer. The letter will include as an attachment a summary of all chemical data for the material being transported.

The FER will include an accounting of the destination of all material removed from the site during this Remedial Action, including excavated soil, contaminated soil, historical fill, solid waste, and hazardous waste, non-regulated material, and fluids. Documentation associated with disposal of all material must also include records and approvals for receipt of the material. This information will also be presented in a tabular form in the FER.

Bill of Lading system or equivalent will be used for off-site movement of non-hazardous wastes and contaminated soils. This information will be reported in the FER.

Hazardous wastes derived from on-site will be stored, transported, and disposed of in full compliance with applicable local, State, and Federal regulations.

Appropriately licensed haulers will be used for material removed from this site and will be in full compliance with all applicable local, State and Federal regulations.

Waste characterization will be performed for off-site disposal in a manner suitable to the receiving facility and in conformance with applicable permits. Sampling and analytical methods, sampling frequency, analytical results and QA/QC will be reported in the FER. All data available for soil/material to be disposed at a given facility must be submitted to the disposal facility with suitable explanation prior to shipment and receipt.

5.4.6 Materials Reuse On-Site

Soil and fill that is derived from the property that meets the soil cleanup objectives established in this plan may be reused on-site. “Reuse on-site” means material that is excavated during the remedy or development, does not leave the property, and is relocated within the same property and on comparable soil material, and addressed pursuant to engineering controls. The on-site Qualified Environmental Professional under the Remedial Engineer’s directive will ensure that procedures defined for materials reuse in this RAWP are followed and that unacceptable material will not remain on-site.

On-site soils and urban fill determined by the NYSDEC to be acceptable for on-site re-use will not be placed below the static water level.

Concrete crushing or processing on-site is prohibited.

Organic matter (wood, roots, stumps, etc.) or other solid waste derived from clearing and grubbing of the site is prohibited for reuse on-site.

Contaminated on-site material, including historical fill and contaminated soil, removed for grading or other purposes will not be reused within a cover soil layer, within landscaping berms, or as backfill for subsurface utility lines. This will be expressed in the final SMP.

5.4.7 Fluids Management

Based on the depth to groundwater, dewatering of excavations may be required along the eastern margins of the site. Should dewatering be required, all work will be completed consistent with applicable local, State, and Federal regulations rules and regulations. All liquids to be removed from the site, including dewatering fluids, will be handled, transported and disposed in accordance with applicable local, State, and Federal regulations. A City permit will be obtained for any liquids discharged into the municipal sewer system.

Discharge of water generated during remedial construction to surface waters (i.e. a local pond, stream or river) is prohibited without a SPDES permit. No such discharge is anticipated for this project.

5.4.8 Demarcation

Demarcation of remaining soil is not required for a Track 2 cleanup.

As a contingency, if the site fails to meet Track 2 SCOs and residual contamination exceeding RRU SCOs is present, demarcation will be required. After the completion of soil removal and any other invasive remedial activities and prior to backfilling, the top of the residual soil/fill will be defined by one of three methods: (1) Placement of a demarcation layer consisting of orange plastic fencing or equivalent on the surface of residual soil to provide an observable reference layer. A description or map of the approximate depth of the demarcation layer will be provided in the FER; or (2) a land survey of the top elevation of residual soil before the placement of cover soils, pavement and associated sub-soils, or other materials or structures; or, (3) all materials beneath the approved cover will be considered impacted and subject to site management after the

remedy is complete (for this option, clean cover material comprised of soil must be underlain by a demarcation layer). Demarcation may be established by one or any combination of these three methods. As appropriate, a map showing the method of demarcation for the site and all associated documentation will be presented in the FER. This demarcation will constitute the top of the 'Residuals Management Zone', the zone that requires adherence to special conditions for disturbance of contaminated residual soils defined in the SMP.

5.4.9 Backfill from Off-Site Sources

Importation of gravel and subgrade aggregate for construction purposes (e.g., to be used under foundation components), or any other materials for required backfill, will be from a NYSDEC-approved source/facility (a properly completed soil import/reuse form will be submitted to the NYSDEC project manager for approval prior to importing material). The RE/QEP will ensure that the material does not include any prohibited material (e.g., solid waste) and does not exhibit field evidence of contamination. No other backfill materials are anticipated.

The FER will include the following certification by the Remedial Engineer: "I certify that all import of soils from off-site, including source evaluation, approval and sampling, has been performed in a manner that is consistent with the methodology defined in the Remedial Action Work Plan".

Should contingency conditions during construction require importation of additional materials, clean fill meeting the requirements of 6 NYCRR Part 375-6.7(d) will be brought in to replace the excavated soil, complete the backfilling of excavations, and/or establish design grades. All imported soils will meet NYSDEC approved backfill quality objectives for this site, which are the lower of the protection of groundwater or the protection of public health soil cleanup objectives for Restricted-Residential Use as set forth in Table 375-6.8(b) of 6 NYCRR Part 375. Non-compliant soils will not be imported onto the site without prior approval by NYSDEC. Nothing in the approved Remedial Action Work Plan or its approval by NYSDEC should be construed as an approval for this purpose.

Soils that meet 'exempt' fill requirements under 6 NYCRR Part 360, but do not meet backfill soil objectives for this site, will not be imported onto the site without prior approval by NYSDEC. Nothing in this Remedial Action Work Plan should be construed as an approval for this purpose.

Solid waste will not be imported onto the site.

Trucks entering the site with imported soils will be securely covered with tight fitting covers.

5.4.10 Stormwater Pollution Prevention

An ESCP that conforms to the requirements of the NYSDEC Division of Water guidelines and NYS regulations will be developed by the Contractor and approved by the RE. This plan will be provided to the NYSDEC prior to any remedial or development construction activities.

Silt fencing or hay bales will be installed around the entire perimeter of the remedial construction area and be inspected once a week and after every storm event. Results of inspections will be recorded in a logbook and maintained at the site and available for inspection by NYSDEC. All necessary repairs shall be made immediately.

Accumulated sediments will be removed as required to keep the barrier and hay bale check functional. All undercutting or erosion of the silt fence toe anchor shall be repaired immediately with appropriate backfill materials. Manufacturer's recommendations will be followed for replacing silt fencing damaged due to weathering.

Erosion and sediment control measures identified in the RAWP shall be observed to ensure that they are operating correctly. Where discharge locations or points are accessible, they shall be inspected to ascertain whether erosion control measures are effective in preventing significant impacts to receiving waters.

5.4.11 Community Air Monitoring Plan

The CAMP will be implemented during all ground intrusive activities.

Any CAMP exceedances will be reported to NYSDEC and NYSDOH Project Managers within 24 hours and included in the Daily Report.

5.4.12 Odor, Dust and Nuisance Control Plan

Suppression of odors, dust and other nuisance conditions will be conducted during all invasive work performed during construction activities. The FER will include the following certification by the Remedial Engineer: “I certify that all invasive work during the remediation and all invasive development work were conducted in accordance with dust and odor suppression methodology defined in the Remedial Action Work Plan.”

Odor Control Plan

This odor control plan is capable of controlling emissions of nuisance odors off-site. Specific odor control methods to be used on a routine basis will include minimizing the generation of vapors and/or odors. If nuisance odors are identified at the site boundary, or if odor complaints are received, work will be halted, and the source of odors will be identified and corrected. Work will not resume until all nuisance odors have been abated. NYSDEC and NYSDOH will be notified of all odor events and of all other complaints about the project. Implementation of all odor controls, including the halt of work, will be the responsibility of the Volunteer's Remedial Engineer, who is responsible for certifying the FER.

All necessary means will be employed to prevent on- and off-site nuisances. At a minimum, procedures will include: (a) limiting the area of open excavations; (b) shrouding open excavations with tarps and other covers; and (c) using foams to cover exposed odorous soils. If odors develop and cannot be otherwise controlled, additional means to eliminate odor nuisances will include: (d) direct load-out of soils to trucks for off-site disposal; (e) use of chemical odorants in spray or misting systems; and, (f) use of staff to monitor odors in surrounding neighborhoods.

Where odor nuisances have developed during remedial work and cannot be corrected, or where the release of nuisance odors cannot otherwise be avoided due to on-site conditions or close proximity to sensitive receptors, odor control will be achieved by sheltering excavation and handling areas under tented containment structures equipped with appropriate air venting/filtering systems.

Dust Control Plan

A dust suppression plan that addresses dust management during invasive on-site work, will include, at a minimum, the items listed below:

- Dust suppression will be achieved through the use of a dedicated on-site water truck or other equivalent equipment for road wetting capable of spraying water directly onto off-road areas including excavations and stockpiles (water will be available on-site at suitable supply and pressure for use in dust control if a dedicated water truck is not utilized).
- Clearing and grubbing of larger sites will be done in stages to limit the area of exposed, non-vegetated soils vulnerable to dust production.
- Gravel will be used on roadways to provide a clean and dust-free road surface.

- On-site roads will be limited in total area to minimize the area required for water spraying.
- Materials will be hauled in properly tarped containers or vehicles, which will travel at restricted speeds while on-site.
- All reasonable attempts will be made to keep visible and/or fugitive dust to a minimum and adhere to particulate emissions limits identified in the CAMP.

Other Nuisances

A plan for rodent control will be developed and utilized by the contractor prior to and during site clearing and site grubbing, and during all remedial work.

A plan will be developed and utilized by the contractor for all remedial work and will conform, at a minimum, to City noise control standards.

5.5 Contingency Plan

This contingency plan is developed for the remedial construction to address the discovery of unknown structures or contaminated media during excavation. Identification of unknown contamination source areas during site work will be promptly communicated to NYSDEC's Project Manager.

Petroleum spills will be reported to the NYSDEC Spill Hotline. These findings will be included in the daily report.

If previously unidentified contaminant sources are found during on-site remedial excavation or development-related excavation, sampling will be performed on contaminated source material and surrounding soils and reported to NYSDEC. Chemical analytical testing will be performed for TCL volatiles and semi-volatiles, pesticides/PCBs, and TAL metals, as appropriate.

This section describes actions that must occur upon the discovery of previously unknown contaminated material(s), USTs, demolition debris or other unknown unidentifiable material that requires special handling.

On-site personnel should be prepared to respond appropriately if the following previously unknown materials are encountered (if encountered, this material could result in a recommendation from the Remedial Engineer/QEP for an immediate, temporary shutdown of construction activities):

- Previously unknown tanks (including drums) containing a liquid product that is not likely to be water and is likely to present a threat to worker health or safety;
- Previously unknown demolition debris, which could contain significant quantities of asbestos, the disturbance of which is determined, based on field observations, to violate or likely to violate Federal, State, or local asbestos regulations; and,
- Material which cannot be readily identified.

5.5.1 Procedures for Encountered Underground Storage Tanks

The procedures outlined in this Section will be adhered to if any unknown tanks are encountered during the remedial action.

Closure of any encountered USTs at the site will be in accordance with the requirements of DER-10, Section 5.5. Any encountered, previously unknown USTs will be visually inspected to determine if liquids are present in the tank. Significant quantities of liquid remaining in the tanks will be drummed on the site or removed by a properly licensed disposal company and the particular product (e.g., fuel oil, diesel, etc.) will be identified prior to off-site disposal at a permitted facility. Manifests of liquid waste management will be maintained by the RE/QEP and will be included in the FER. All encountered USTs will be disposed of pursuant to applicable Petroleum Bulk Storage (PBS) and hazardous waste regulations. The tanks and all ancillary piping will be removed from the ground and inspected for evidence of failure. A photographic record of the tanks will be generated, and evidence of tank failure will be noted. The tanks will be purged of petroleum/chemical vapors, properly stenciled as scrap metal, and transported to a metal recycling facility for destruction. A record of tank destruction will be secured by the RE/QEP and will be included in the FER. Any surrounding soil exhibiting petroleum contamination will be excavated until “clean” soils (soils not exhibiting field evidence of petroleum contamination) are encountered. Confirmatory soil samples will be collected from the base and from the walls of the tank grave and will be analyzed for both VOCs and SVOCs per CP-51 guidelines (soil sampling may be waived by NYSDEC based on encountered conditions and/or other relevant circumstances).

5.5.2 Procedures for Encountered Demolition Debris

To the extent practical, all clearly identifiable material suspected of containing asbestos will be removed from the waste stream and handled separately (if encountered). The RE will recommend that asbestos material visible in the waste stream be separated and analyzed to

determine the percent of asbestos present. All applicable Federal, State and local asbestos handling regulations will be followed. Depending on the amount of asbestos material identified in the waste stream, the RE may recommend to the Volunteer's Representative that a licensed and accredited asbestos inspector be retained to manage the handling and disposition of asbestos material. Approval to retain an asbestos inspector will be made by the Volunteer's Representative. Samples will be collected by a properly licensed asbestos inspector and submitted to a NYSDOH ELAP- certified laboratory for analysis, depending on the amount and type of material encountered. Minor amounts of asbestos may be removed from the waste stream and disposed of in accordance with applicable State and local asbestos remediation requirements. An asbestos abatement firm will be retained to properly handle and remove minor amounts of asbestos. The presence of significant quantities of asbestos will result in a temporary shutdown of the site.

5.5.3 Procedures for Encountered Unknown Material

Material which cannot be readily identified but which is considered, based on field observations, to be material that needs further investigation before disposal will be properly stockpiled (as per the SoMP) in an area separate from all other stockpiled material.

5.5.4 Screening and Laboratory Analysis

Unknown material will be screened with a PID, and all recorded levels will be documented. Samples will be collected and analyzed to identify the compounds present and to assist in determining appropriate disposal practices. Until determined by laboratory analysis otherwise, this material will be considered a hazardous substance. Specific materials known to require sampling and analysis prior to final disposition include all building components and debris containing painted surfaces and/or caulk. A plan to describe the handling and disposal of such materials will be submitted to NYSDEC for review and approval. If previously unknown underground tanks or other previously unidentified contaminant sources are found during on-site remedial excavation or development related construction, sampling will be performed on product, sediment, and surrounding soils, etc. Chemical analytical work will be for full scan parameters (TAL metals, TCL volatiles and semi-volatiles, TCL pesticides, and PCBs). These analyses will not be limited to CP-51 petroleum list parameters where tanks are identified without prior approval by NYSDEC. Analyses will not be otherwise limited without NYSDEC approval.

6 MANAGEMENT OF RESIDUAL CONTAMINATION

The selected remedy is intended to achieve a Track 2, Restricted-Residential Use cleanup with residual contaminated soil and soil vapor remaining beneath the site after the remedy is complete; Engineering and Institutional Controls are therefore required to protect human health and the environment. Long-term management of EC/ICs and of residual contamination will be executed under a site-specific Site Management Plan to be developed and included in the FER.

Engineering Controls

ECs will be implemented to protect public health and the environment by appropriately managing residual contamination. The Controlled Property (the site) will have one primary EC system: Groundwater treatment system (permeable reactive barrier with periodic groundwater monitoring; Section 6.1.1).

The following would be implemented as a contingency measure, only, and is not currently considered to be an EC for the Site: Cover system at any site areas not meeting Track 2 cleanup requirements (Section 6.1.2).

All ECs will be designed, installed, and implemented in accordance with applicable GSR practices.

The FER will report residual contamination on the site in tabular and map form, including all exceedances of SCOs, and document all applicable GSR metrics, including an EFA.

Institutional Controls

Imposition of ICs, in the form of an environmental easement for the controlled property, will be required (see Section 6.2). These ICS will:

- Require the remedial party or site owner to complete and submit to the NYSDEC a periodic certification of institutional and engineering controls in accordance with Part 375-1.8 (h)(3);
- Allow the use and development of the controlled property for restricted residential use as defined by Part 375-1.8(g), although land use is subject to local zoning laws;
- Restrict the use of groundwater as a source of potable or process water, without necessary water quality treatment as determined by the NYSDOH; and,
- Require compliance with the NYSDEC-approved Site Management Plan.

6.1 ENGINEERING CONTROLS

The remedial action requires the use of Engineering Controls as described below. If NYSDEC and NYSDOH concur that post-remediation investigation and/or monitoring results show that there is no need for ongoing use of a specific EC, the system may be removed from the remedial program (e.g., shut down or converted to passive use; see Section 7 for a discussion on terminating remedial systems required by the final remedy).

6.1.1 Groundwater Treatment System

A remedy to prevent PFAS-contaminated groundwater from migrating onto the site will be implemented as an Engineering Control. The identified potential source of PFAS contamination within the upper 5 feet of soil will be removed during the remedial action; following excavation of this material, any remaining PFAS impacts in groundwater will be addressed through installation of a passive permeable reactive barrier along upgradient property boundaries. The PRB will intercept and mitigate PFAS impacts in groundwater as it first enters the site and is expected to both treat PFAS in groundwater and prevent eventual off-site migration of PFAS.

The PRB will be designed as a continuous treatment zone (approximately 240 linear feet) aligned perpendicular to the interpreted direction of groundwater flow along the upgradient site boundary and will be installed via injection of appropriate reactive media (e.g., stabilized activated-carbon amendment as a colloidal or liquid slurry). Upon emplacement, the injected carbon distributes through permeable intervals and sorbs to the soil matrix, forming a reactive barrier that removes PFAS from groundwater as it flows through the treatment zone, resulting in rapid reduction of dissolved-phase concentrations and effective control of contaminant mass flux. Figure 10 shows the preliminary location of the PRB.

A formal Remedial Design for active groundwater treatment, certified by a professional engineer, will be provided to NYSDEC and NYSDOH for review and approval prior to the start of the remedial action and system installation. The Remedial Design will provide all details necessary for the construction, operation, optimization, and monitoring of the remedial program, in accordance with DER-10 and DER-31, including the selected PRB technology and application method based on manufacturer design calculations and recommendations. As-built drawings will be provided in the FER and operation and maintenance (O&M) of the system will be detailed in the SMP.

Barrier thickness, amendment loading, and injection spacing will be established during remedial design based on site-specific hydrogeologic conditions to ensure full vertical and lateral coverage of groundwater flow paths and sufficient residence time for PFAS sorption within the treatment zone. The design will incorporate groundwater flux and anticipated influent concentrations to ensure adequate sorptive capacity over the intended operational life, with provisions for targeted re-injection to maintain effectiveness as necessary.

System performance will be confirmed through groundwater monitoring to verify that PFAS concentrations are effectively reduced downgradient of the barrier to levels consistent with applicable NYSDEC criteria, including PFOS and PFOA guidance values, and that off-site migration is controlled (permanent monitoring wells will be installed after final soil backfilling). Post-remediation groundwater quality will be documented to determine the need for any additional remedial actions, such as follow-up injections or other response actions. The number, location, and sampling regime for the groundwater network will be determined in consultation with NYSDEC and NYSDOH, and a Work Plan will be submitted for review and approval. At least one round of post-remediation groundwater sampling will be conducted and the results reported to NYSDEC prior to issuance of the final FER.

6.1.2 Cover System

A cover system for soil is not required for a Track 2 cleanup. As a contingency, if the site fails to meet Track 2 SCOs and residual contamination is present, a cover system will be required in areas where the upper two feet of exposed surface soil will exceed RRU SCOs, to allow for future Restricted-Residential use of the site.

Where a soil cover is to be used it will be a minimum of two (2) feet of soil placed over a demarcation layer, with the upper six inches of soil of sufficient quality to maintain a vegetative layer. Soil cover material, including any fill material brought to the site, will meet the RRU SCOs for cover material for the use of the site as set forth in 6 NYCRR Part 375-6.7(d). Substitution of other materials and components may be allowed where such components already exist or are a component of the tangible property to be placed as part of site redevelopment. Such components may include, but are not necessarily limited to: pavement, concrete, paved surface parking areas, sidewalks, building foundations and building slabs.

All concrete foundation components of a cover system and any exterior pavement will have a minimum thickness of four (4) inches. Imported clean soil (or similar materials, e.g., gravel) at exterior areas will have a minimum thickness of two (2) feet. As part of site development, foundation components and any paved areas will be underlain by imported, clean stone subbase. The construction of a cover system will comply with the requirements for: a) demarcation as specified in Section 5.4.8; and b) importation of backfill from off-site sources as specified in Section 5.4.9. Maintenance of this cover system will be detailed in the SMP.

Green remediation BMPs for the design and installation of the cover system include:

- Development modifications (as possible) to use existing planned building foundations and paved areas as the main cover system component in place of bulk cover materials;
- Preferential use of existing uncontaminated on-site materials, or local sources for imported materials, to minimize impacts from transportation;
- Use of approved recycled materials where applicable, such as backfill, asphalt, and components for demarcation, drainage, and similar uses;
- Careful consideration of cover design to ensure durability and minimize impacts from climate change, including low-impact strategies for managing stormwater; and,
- As applicable, use of diverse native, drought-resistant plants and long-term natural soil amendments to minimize maintenance and preserve ecosystem services.

6.1.3 Vapor Evaluation at Site Buildings

A soil vapor intrusion evaluation will be performed at all Site buildings prior to occupancy. The SVI study will be conducted during the heating season in accordance with a SVI Work Plan to be submitted to NYSDEC for review and approval, which will fully describe the proposed sampling program including fieldwork locations and protocols, and laboratory criteria. NYSDEC and NYSDOH will review post-construction vapor and air monitoring results and determine if an Engineering Control for vapor will be required.

The Volunteer may choose to install a vapor control measure prior to this evaluation, as a precautionary measure only (any such system would not be considered an Engineering Control at that time).

6.2 INSTITUTIONAL CONTROLS

A Track 2 remedial action is proposed, and institutional controls are therefore required. Institutional controls will be incorporated in this remedial action to manage residual soil and other media and render the site protective of public health and the environment. A site-specific Environmental Easement will be recorded with Orange County to provide an enforceable means of ensuring the continual and proper management of residual contamination and protection of public health and the environment in perpetuity or until released in writing by NYSDEC. It requires that the grantor of the Environmental Easement and the grantor's successors and assigns adhere to all institutional controls placed on this site by this NYSDEC-approved remedy.

The Environmental Easement would provide restrictions on site usage and mandate operation, maintenance, monitoring and reporting measures for all institutional and engineering controls. A SMP would be prepared describing appropriate methods and procedures to ensure compliance with all institutional and engineering controls required by the Environmental Easement. Once the SMP has been approved by the NYSDEC, compliance with the SMP is required by the grantor of the Environmental Easement and grantor's successors and assigns.

ENVIRONMENTAL EASEMENT

An Environmental Easement, as defined in Article 71 Title 36 of the Environmental Conservation Law, is required when residual contamination is left on-site after the Remedial Action is complete. An Environmental Easement approved by NYSDEC will be filed and recorded with the Orange County Clerk. The Environmental Easement would be submitted as part of the FER.

The Environmental Easement renders the site a Controlled Property. The Environmental Easement must be recorded with Orange County before the Certificate of Completion can be issued by NYSDEC. A series of institutional controls would be required under a Track 2 remedy to prevent future exposure to residual contamination by controlling disturbances of the subsurface soil and restricting the use of the site to Restricted-Residential Use only. These institutional controls are requirements or restrictions placed on the site that are listed in, and required by, the Environmental Easement.

The Controlled Property (site) would also have a series of institutional controls in the form of site restrictions and requirements.

The site restrictions that apply to the Controlled Property may include:

- Vegetable gardens and farming on the Controlled Property are prohibited;
- Use of groundwater underlying the Controlled Property is prohibited without treatment rendering it safe for intended purpose;
- All future activities on the Controlled Property that will disturb residual contaminated material are prohibited unless they are conducted in accordance with the soil management provisions in the SMP;
- The Controlled Property may be used for Restricted-Residential Use only, provided the long-term engineering and institutional controls included in the SMP are employed;
- The Controlled Property may not be used for a higher level of use, such as Unrestricted Use without an amendment or extinguishment of this Environmental Easement;
- Grantor agrees to submit to NYSDEC a written statement that certifies, under penalty of perjury, that: (1) controls employed at the Controlled Property are unchanged from the previous certification or that any changes to the controls were approved by the NYSDEC; and (2) nothing has occurred that impairs the ability of the controls to protect public health and environment or that constitute a violation or failure to comply with the SMP. NYSDEC retains the right to access such Controlled Property at any time in order to evaluate the continued maintenance of any and all controls. This certification shall be submitted annually, or an alternate period of time that NYSDEC may allow. This annual statement must be certified by an expert that the NYSDEC finds acceptable.

7 COMPLETION OF REMEDIATION/TERMINATION OF REMEDIAL SYSTEMS

No remedial systems will be discontinued without written approval by NYSDEC and NYSDOH. While a proposal to discontinue a specific system may be submitted any time based on confirmatory data that justifies such request, all systems will remain in place and operational until specific permission to discontinue use is granted in writing by NYSDEC and NYSDOH. All sampling/monitoring activities will be conducted in accordance with the SMP Monitoring Plan.

7.1 Permeable Reactive Barrier

The PRB system is utilized to reduce PFAS levels in on-site groundwater and prevent off-site migration. Operation of this engineering control is generally defined by ongoing groundwater monitoring and evaluation of data to determine if further response actions are warranted to maintain system effectiveness. Criteria for successful completion of the groundwater monitoring program will be specified in the Remedial Design and the system may only be terminated with approval of NYSDEC.

7.2 Composite Cover System

A composite cover system may be required as a contingency if any portions of the site do not meet Track 2 SCOs. The composite cover prevents exposures to remaining soil exceeding the RRU SCOs and is therefore a permanent control, which may not be terminated without removal of remaining contaminated materials or implementation of an alternative NYSDEC-approved remedy. The quality and integrity of this system will be inspected at defined, regular intervals in perpetuity.

8 FINAL ENGINEERING REPORT

A Final Engineering Report will be submitted to NYSDEC following implementation of the Remedial Action defined in this RAWP.

8.1 FER Elements

The FER, to be prepared in conformance with DER-10, will document that the remedial work required under this RAWP has been completed and has been performed in compliance with this plan. The FER will provide/include:

- Comprehensive accounts of the locations and characteristics of all material removed from the site including the surveyed map(s) of all sources;
- As-built drawings for all constructed elements, calculation and manufacturer documentation for treatment systems, certifications, manifests, bills of lading as well as the complete SMP;
- Descriptions of the changes in the Remedial Action from the elements provided in the RAWP and associated design documents;
- Tabular summaries of all performance evaluation sampling results and all material characterization results and other sampling, and chemical analysis performed as part of the Remedial Action;
- Test results demonstrating that all mitigation and remedial systems are functioning properly;
- Written and photographic documentation of all remedial work performed under this remedy; and,
- itemized tabular description of actual costs incurred during all aspects of the Remedial Action.

Where determined to be necessary by NYSDEC, a Financial Assurance Plan will be required to ensure the sufficiency of revenue to perform long-term operations, maintenance and monitoring tasks defined in the Site Management Plan and Environmental Easement. This determination will be made by NYSDEC in the context of the FER review.

The FER will provide a thorough summary of all residual contamination left on the site after the remedy is complete. Residual contamination includes all contamination that exceeds the Track 1 Unrestricted Use SCO in 6NYCRR Part 375-6. A table that shows exceedances from Track 1 Unrestricted SCOs for all soil/fill remaining at the site after the Remedial Action and a map that shows the location and summarizes exceedances from Track 1 Unrestricted SCOs for all soil/fill remaining at the site after the Remedial Action will be included in the FER.

The FER will provide a thorough summary of all residual contamination that exceeds the SCOs defined for the site in the RAWP and must provide an explanation for why the material was not removed as part of the Remedial Action. A table that shows residual contamination in excess of site SCOs and a map that shows residual contamination in excess of site SCOs will be included in the FER.

The FER will include an accounting of the destination of all material removed from the site, including excavated contaminated soil, historic fill, solid waste, hazardous waste, non-regulated material, and fluids. Documentation associated with disposal of all material must also include records and approvals for receipt of the material. It will provide an accounting of the origin and chemical quality of all material imported onto the site.

The FER must include a discussion of the green remediation practices/technologies employed throughout the remedial program, including a final environmental footprint analysis using a DER accepted model, and any tracking methods used through the construction including restoration activities.

Before approval of a FER and issuance of a COC, all project reports must be submitted in digital form on electronic media (PDF).

8.2 Site Management Plan

A Site Management Plan is required, which includes an Institutional and Engineering Control Plan that identifies all use restrictions and engineering controls for the site and details the steps and media-specific requirements necessary to ensure the following institutional control remains in place and effective:

(1) Institutional Controls: The environmental easement discussed in Section 6.2.

(2) Engineering Controls: The groundwater treatment system (as well as any ECs installed as contingency measures) discussed in Section 6.1).

This plan includes, but may not be limited to:

- An Excavation Plan which details the provisions for management of future excavations in areas of remaining contamination;
- Descriptions of the provisions of the environmental easement including any land use, and groundwater use restrictions;
- A provision for evaluation of the potential for soil vapor intrusion for any occupied buildings on the site, including a provision for implementing actions recommended to address exposures related to SVI. Samples will be taken outside, sub-slab and co-located indoor locations, and in the basement/cellar and crawl spaces. DEC suggests adding sub-slab sampling ports during construction;
- A provision that should a building foundation or building slab be removed in the future, a cover system consistent with that described in Section 6.1 will be placed in any areas where the upper two feet of exposed surface soil exceed the applicable soil cleanup objectives;
- Provisions for the management and inspection of the identified engineering controls; and,
- The steps necessary for the periodic reviews and certification of the institutional and/or engineering controls.

Implementation of the SMP will be the last phase of remediation and begins with the approval of the FER and issuance of the Certificate of Completion for the Remedial Action. The SMP is submitted as part of the FER but would be written in a manner that allows its removal and use as a complete and independent document. Site Management continues in perpetuity or until released in writing by NYSDEC. The property owner is responsible to ensure that all site management responsibilities defined in the Environmental Easement and the SMP are performed.

The SMP is intended to provide a detailed description of the procedures required to manage residual contamination left in place at the site following completion of the Remedial Action in accordance with the BCA with the NYSDEC. This includes (as appropriate following completion of the final remedy):

(1) Development, implementation, and management of all engineering and institutional controls;

(2) Development and implementation of monitoring systems and a Monitoring Plan;

(3) Development of a plan to operate and maintain any treatment, collection, containment, or recovery systems (including, where appropriate, preparation of an O&M Manual);

(4) Submittal of Site Management Reports, performance of inspections and certification of results, and demonstration of proper communication of site information to NYSDEC; and,

(5) Defining criteria for termination of treatment system operation.

To address these needs, this SMP would include the following plans (as warranted): Monitoring Plan for the implementation of site monitoring; Operation and Maintenance Plan for vapor interceptor systems; and Site Management Reporting Plan for submittal of data, information, recommendations, and certifications to NYSDEC.

The SMP will be prepared in accordance with the requirements in NYSDEC DER-10 Technical Guidance for Site Investigation and Remediation and the guidelines provided by NYSDEC.

Site management activities, reporting, and EC/IC certification would be scheduled on a certification period basis. The certification period would be annually for the first three years; modifications to this frequency may be proposed in that third year. The SMP would be based on a calendar year and due for submission to NYSDEC by March 1 of the year following the reporting period.

No exclusions for handling of residual contaminated soils would be provided in the SMP. All handling of residual contaminated material would be subject to provisions contained in the SMP.

8.3 Certifications

The following certification will appear in front of the Executive Summary of the FER. The certification will be signed by the Remedial Engineer Daniel Bellucci who is a Professional Engineer registered in New York State. This certification will be appropriately signed and stamped. The certification will include the following statements:

I, Daniel Bellucci, am currently a registered professional engineer licensed by the State of New York, I had primary direct responsibility for implementation of the remedial program activities,

and I certify that the Remedial Action Work Plan was implemented and that all construction activities were completed in substantial conformance with the Department-approved Remedial Action Work Plan.

I certify that the data submitted to the Department with this Final Engineering Report demonstrates that the remediation requirements set forth in the Remedial Action Work Plan and in all applicable statutes and regulations have been or will be achieved in accordance with the time frames, if any, established for the remedy.

I certify that all documents generated in support of this report have been submitted in accordance with the DER's electronic submission protocols and have been accepted by the Department.

I certify that all data generated in support of this report have been submitted in accordance with the Department's electronic data deliverable and have been accepted by the Department.

I certify that all use restrictions, Institutional Controls, Engineering Controls, and/or any operation and maintenance requirements applicable to the site are contained in environmental easements created and recorded pursuant ECL Section 71-3605 and that all affected local governments, as defined in ECL Section 71-3603, have been notified that such easement has been recorded.

I certify that a Site Management Plan has been submitted for the continual and proper operation, maintenance, and monitoring of all Engineering Controls employed at the site, including the proper maintenance of all remaining monitoring wells, and that such plan has been approved by Department.

I certify that all information and statements in this certification form are true. I understand that a false statement made herein is punishable as a Class "A" misdemeanor, pursuant to Section 210.45 of the Penal Law. I, [name], of [business address], am certifying as Owner's Designated Site Representative for the site.

It is a violation of Article 130 of New York State Education Law for any person to alter this document in any way without the express written verification of adoption by any New York State licensed engineer in accordance with Section 7209(2), Article 130, New York State Education Law.

9 SCHEDULE

Site preparation and soil excavation will commence in January 2026. Currently, a nine-month soil excavation period is anticipated. If the schedule for remediation and development activities changes, it will be updated and submitted to NYSDEC.

The current project schedule is presented below:

Fieldwork/Deliverables Timeline	**Date**
Remedial Action Work Plan (RAWP), Decision Document, and Remedial Design (RD):	
Submission of RAWP	May 2026
Public Comment Period for RAWP	May 2026
NYSDEC and NYSDOH Issue RAWP Comments	August 2026
Submission of Revised RAWP	September 2026
NYSDEC Approval of RAWP; Decision Document issued	October 2026
Submission of RD to NYSDEC	November 2026
NYSDEC Approval of RD	December 2026
Implementation of RAWP and RD	2026-2028
Site Management Plan (SMP):	
Submission	August 2028
NYSDEC and NYSDOH Issue Comments	October 2028
Submission of Revised Document	November 2028
Department Approval	December 2028
Final Engineering Report (FER):	
Submission	October 2028
NYSDEC and NYSDOH Issue Comments	November 2028
Submission of Revised Document	December 2028
Department Approval	December 2028
Certification of Completion (COC):	
Receive COC	December 2028

FIGURES



0 50 100
SCALE IN FEET
(APPROXIMATELY)

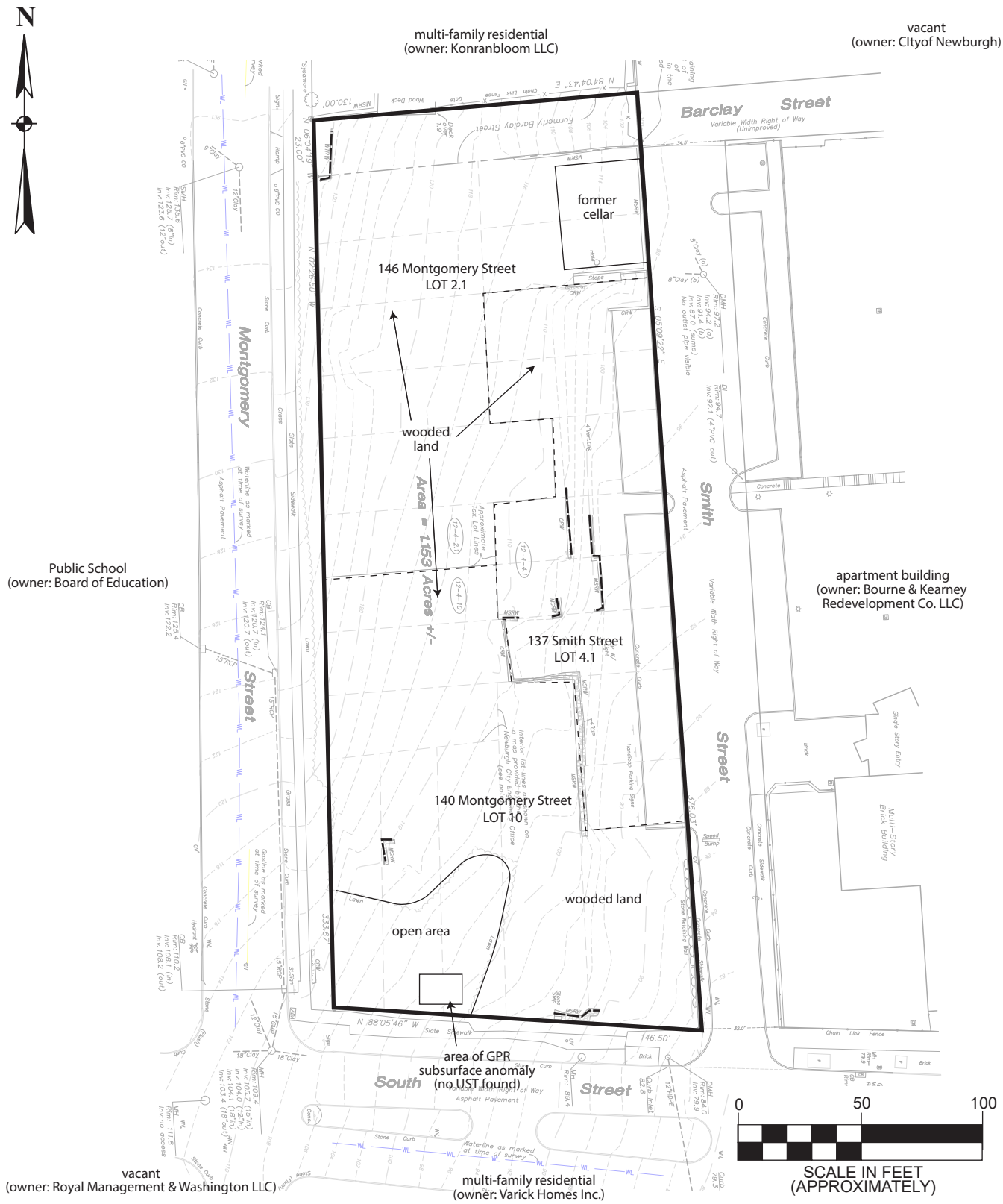
All feature locations are approximate. This map is intended as a schematic to be used in conjunction with the associated report, and it should not be relied upon as a survey for planning or other activities.

Figure 1: Site Location Map

The Green - BCP Site No. C336099
City of Newburgh
Orange County, New York

Legend:
- BCP Site Boundary
- tax lot lines

File: 22003-0092
September 2026
Scale as shown
Figures



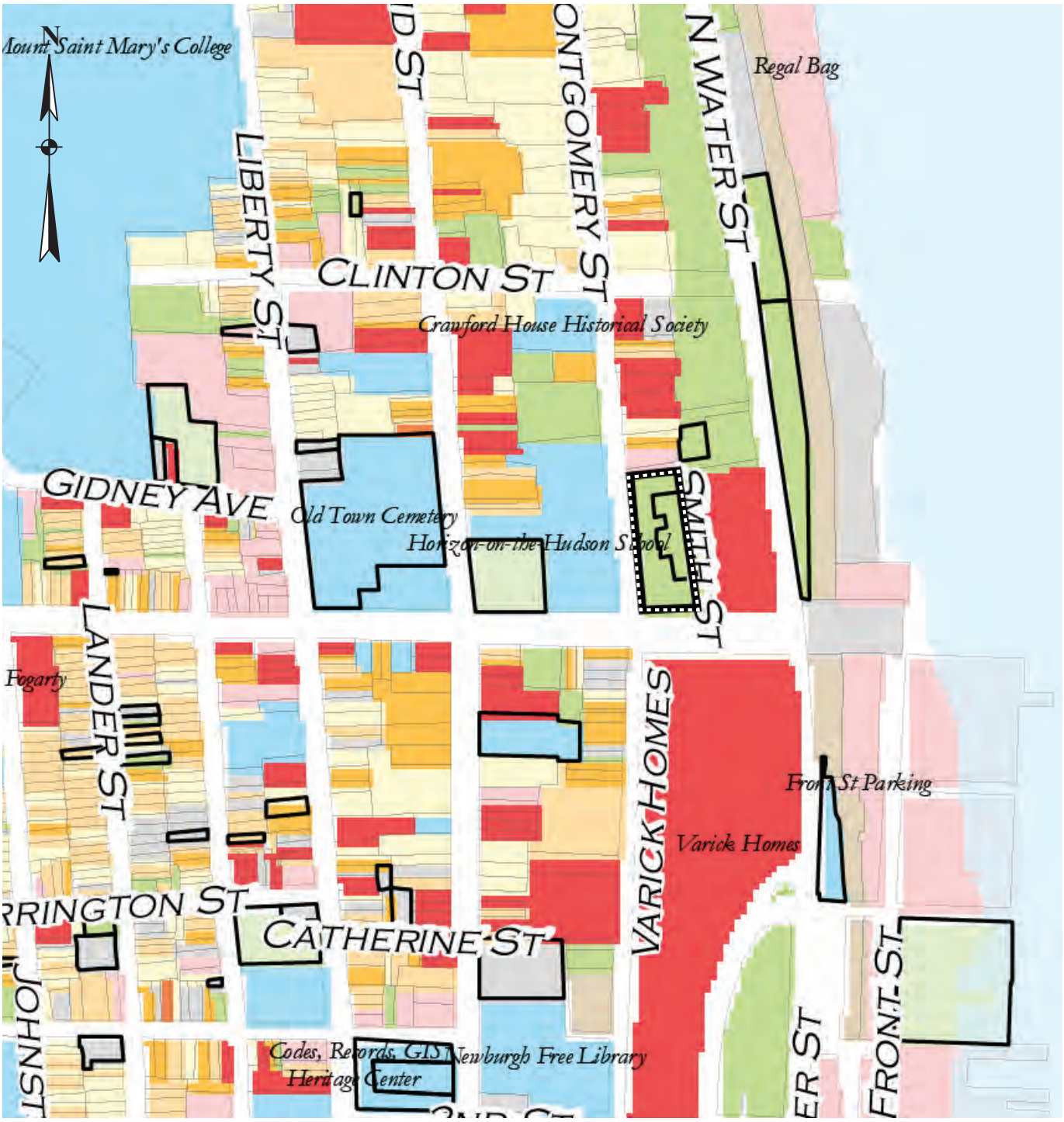
Base Map provided by INSITE Engineering, Surveying & Landscape Architecture P.C. Boundary & Topographic Survey dated 1/19/23.

Figure 2: Site Map

The Green - BCP Site No. C336099
City of Newburgh
Orange County, New York

Legend:
- BCP Site Boundary
- lot lines
- foundation remains

File: 22003-0092
September 2026
Scale as shown
Figures



Base map provided by City of Newburgh Existing Land Use Map dated 2009. All feature locations are approximate.
This map is intended as a schematic to be used in conjunction with the associated report, and it should not be relied upon as a survey for planning or other activities.

Figure 3: Surrounding Land Usage

The Green - BCP Site No. C336099
City of Newburgh
Orange County, New York

Legend:

BCP Site Boundary

File: 22003-0092

September 2026

Scale as shown

Figures



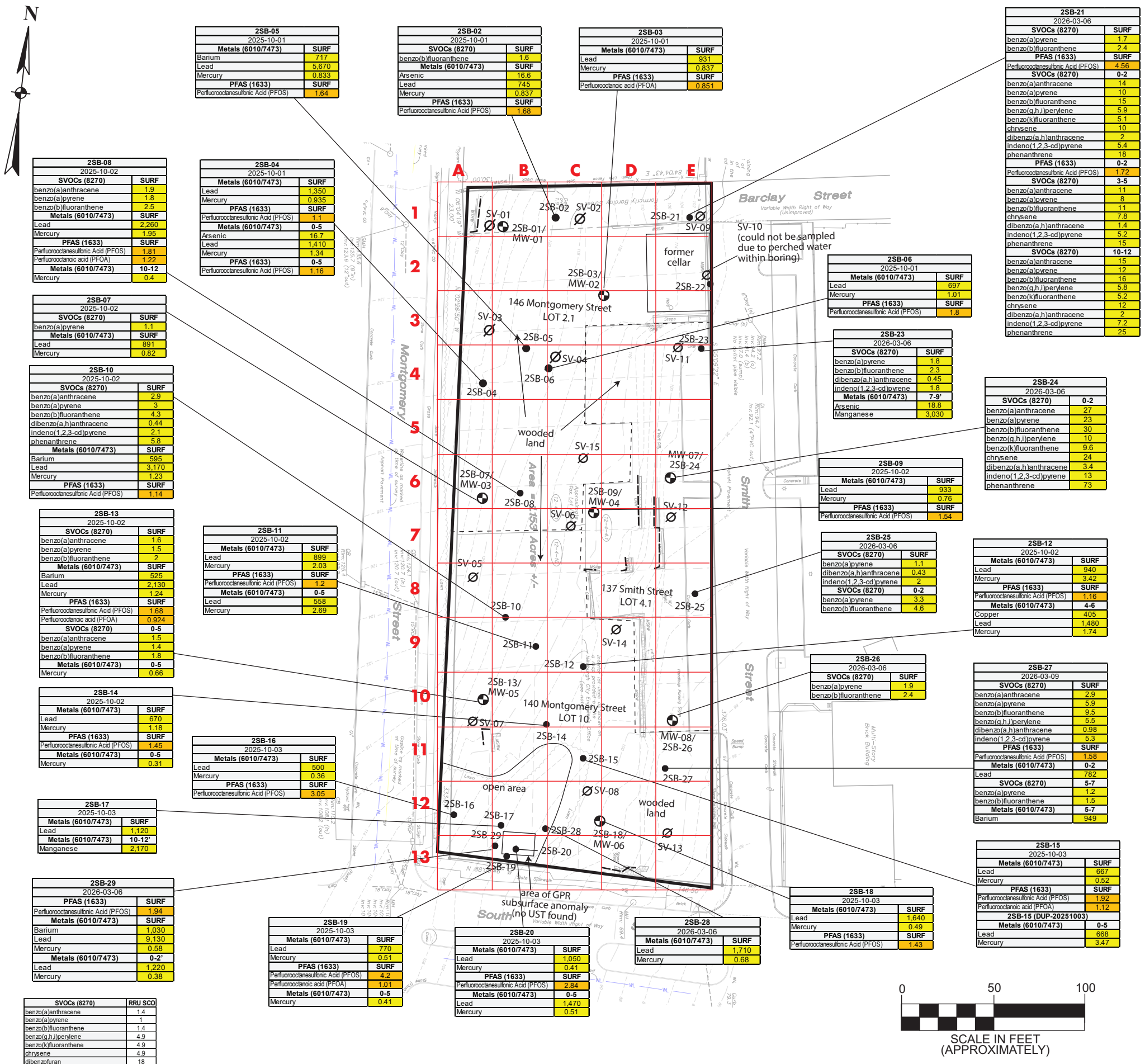
Base Map provided by INSITE Engineering, Surveying & Landscape Architecture P.C. Boundary & Topographic Survey dated 1/19/23.

Figure 4: Proposed Construction Excavation Map

The Green - BCP Site No. C336099
City of Newburgh
Orange County, New York

Legend:
- BCP Site Boundary
- foundation remains
- excavation for hardscaping and landscaping (minimum 2 feet)
- excavation for stormwater management system (15-20 feet)
- Building Footprints: variable excavation based on Site conditions (4 to 15 feet)

File: 22003-0092
September 2026
Scale as shown
Figures



2SB-05	
2025-10-01	
Metals (6010/7473)	**SURF**
Barium	717
Lead	5,670
Mercury	0.833
PFAS (1633)	**SURF**
Perfluorooctanesulfonic Acid (PFOS)	1.64

2SB-02	
2025-10-01	
SVOCs (8270)	**SURF**
benzo(b)fluoranthene	1.6
Metals (6010/7473)	**SURF**
Arsenic	16.6
Lead	745
Mercury	0.837
PFAS (1633)	**SURF**
Perfluorooctanesulfonic Acid (PFOS)	1.68

2SB-03	
2025-10-01	
Metals (6010/7473)	**SURF**
Lead	931
Mercury	0.837
PFAS (1633)	**SURF**
Perfluorooctanoic acid (PFOA)	0.851

2SB-21	
2026-03-06	
SVOCs (8270)	**SURF**
benzo(a)pyrene	1.7
benzo(b)fluoranthene	2.4
PFAS (1633)	**SURF**
Perfluorooctanesulfonic Acid (PFOS)	4.56
SVOCs (8270)	**0-2**
benzo(a)anthracene	14
benzo(a)pyrene	10
benzo(b)fluoranthene	15
benzo(g,h,i)perylene	5.9
benzo(k)fluoranthene	5.1
chrysene	10
dibenzo(a,h)anthracene	2
indeno(1,2,3-cd)pyrene	5.4
phenanthrene	18
PFAS (1633)	**0-2**
Perfluorooctanesulfonic Acid (PFOS)	1.72
SVOCs (8270)	**3-5**
benzo(a)anthracene	11
benzo(a)pyrene	8
benzo(b)fluoranthene	11
chrysene	7.8
dibenzo(a,h)anthracene	1.4
indeno(1,2,3-cd)pyrene	5.2
phenanthrene	15
SVOCs (8270)	**10-12**
benzo(a)anthracene	15
benzo(a)pyrene	12
benzo(b)fluoranthene	16
benzo(g,h,i)perylene	5.8
benzo(k)fluoranthene	5.2
chrysene	12
dibenzo(a,h)anthracene	2
indeno(1,2,3-cd)pyrene	7.2
phenanthrene	25

2SB-08	
2025-10-02	
SVOCs (8270)	**SURF**
benzo(a)anthracene	1.9
benzo(a)pyrene	1.8
benzo(b)fluoranthene	2.5
Metals (6010/7473)	**SURF**
Lead	2,260
Mercury	1.95
PFAS (1633)	**SURF**
Perfluorooctanesulfonic Acid (PFOS)	1.81
Perfluorooctanoic acid (PFOA)	1.22
Metals (6010/7473)	**10-12**
Mercury	0.4

2SB-04	
2025-10-01	
Metals (6010/7473)	**SURF**
Lead	1,350
Mercury	0.935
PFAS (1633)	**SURF**
Perfluorooctanesulfonic Acid (PFOS)	1.1
Metals (6010/7473)	**0-5**
Arsenic	16.7
Lead	1,410
Mercury	1.34
PFAS (1633)	**0-5**
Perfluorooctanesulfonic Acid (PFOS)	1.16

2SB-06	
2025-10-01	
Metals (6010/7473)	**SURF**
Lead	697
Mercury	1.01
PFAS (1633)	**SURF**
Perfluorooctanesulfonic Acid (PFOS)	1.8

2SB-07	
2025-10-02	
SVOCs (8270)	**SURF**
benzo(a)pyrene	1.1
Metals (6010/7473)	**SURF**
Lead	891
Mercury	0.82

2SB-23	
2026-03-06	
SVOCs (8270)	**SURF**
benzo(a)pyrene	1.8
benzo(b)fluoranthene	2.3
dibenzo(a,h)anthracene	0.45
indeno(1,2,3-cd)pyrene	1.8
Metals (6010/7473)	**7-9'**
Arsenic	18.8
Manganese	3,030

2SB-10	
2025-10-02	
SVOCs (8270)	**SURF**
benzo(a)anthracene	2.9
benzo(a)pyrene	3
benzo(b)fluoranthene	4.3
dibenzo(a,h)anthracene	0.44
indeno(1,2,3-cd)pyrene	2.1
phenanthrene	5.8
Metals (6010/7473)	**SURF**
Barium	595
Lead	3,170
Mercury	1.23
PFAS (1633)	**SURF**
Perfluorooctanesulfonic Acid (PFOS)	1.14

2SB-24	
2026-03-06	
SVOCs (8270)	**0-2**
benzo(a)anthracene	27
benzo(a)pyrene	23
benzo(b)fluoranthene	30
benzo(g,h,i)perylene	10
benzo(k)fluoranthene	9.6
chrysene	24
dibenzo(a,h)anthracene	3.4
indeno(1,2,3-cd)pyrene	13
phenanthrene	73

2SB-09	
2025-10-02	
Metals (6010/7473)	**SURF**
Lead	933
Mercury	0.76
PFAS (1633)	**SURF**
Perfluorooctanesulfonic Acid (PFOS)	1.54

2SB-13	
2025-10-02	
SVOCs (8270)	**SURF**
benzo(a)anthracene	1.6
benzo(a)pyrene	1.5
benzo(b)fluoranthene	2
Metals (6010/7473)	**SURF**
Barium	525
Lead	2,130
Mercury	1.24
PFAS (1633)	**SURF**
Perfluorooctanesulfonic Acid (PFOS)	1.68
Perfluorooctanoic acid (PFOA)	0.924
SVOCs (8270)	**0-5**
benzo(a)anthracene	1.5
benzo(a)pyrene	1.4
benzo(b)fluoranthene	1.8
Metals (6010/7473)	**0-5**
Mercury	0.66

2SB-11	
2025-10-02	
Metals (6010/7473)	**SURF**
Lead	899
Mercury	2.03
PFAS (1633)	**SURF**
Perfluorooctanesulfonic Acid (PFOS)	1.2
Metals (6010/7473)	**0-5**
Lead	558
Mercury	2.69

2SB-25	
2026-03-06	
SVOCs (8270)	**SURF**
benzo(a)pyrene	1.1
dibenzo(a,h)anthracene	0.43
indeno(1,2,3-cd)pyrene	2
SVOCs (8270)	**0-2**
benzo(a)pyrene	3.3
benzo(b)fluoranthene	4.6

2SB-12	
2025-10-02	
Metals (6010/7473)	**SURF**
Lead	940
Mercury	3.42
PFAS (1633)	**SURF**
Perfluorooctanesulfonic Acid (PFOS)	1.16
Metals (6010/7473)	**4-6**
Copper	405
Lead	1,480
Mercury	1.74

2SB-14	
2025-10-02	
Metals (6010/7473)	**SURF**
Lead	670
Mercury	1.18
PFAS (1633)	**SURF**
Perfluorooctanesulfonic Acid (PFOS)	1.45
Metals (6010/7473)	**0-5**
Mercury	0.31

2SB-26	
2026-03-06	
SVOCs (8270)	**SURF**
benzo(a)pyrene	1.9
benzo(b)fluoranthene	2.4

2SB-27	
2026-03-09	
SVOCs (8270)	**SURF**
benzo(a)anthracene	2.9
benzo(a)pyrene	5.9
benzo(b)fluoranthene	9.5
benzo(g,h,i)perylene	5.5
dibenzo(a,h)anthracene	0.98
indeno(1,2,3-cd)pyrene	5.3
PFAS (1633)	**SURF**
Perfluorooctanesulfonic Acid (PFOS)	1.58
Metals (6010/7473)	**0-2**
Lead	782
SVOCs (8270)	**5-7**
benzo(a)pyrene	1.2
benzo(b)fluoranthene	1.5
Metals (6010/7473)	**5-7**
Barium	949

2SB-16	
2025-10-03	
Metals (6010/7473)	**SURF**
Lead	500
Mercury	0.36
PFAS (1633)	**SURF**
Perfluorooctanesulfonic Acid (PFOS)	3.05

2SB-17	
2025-10-03	
Metals (6010/7473)	**SURF**
Lead	1,120
Metals (6010/7473)	**10-12'**
Manganese	2,170

2SB-15	
2025-10-03	
Metals (6010/7473)	**SURF**
Lead	667
Mercury	0.52
PFAS (1633)	**SURF**
Perfluorooctanesulfonic Acid (PFOS)	1.92
Perfluorooctanoic acid (PFOA)	1.12
2SB-15 (DUP-20251003)	
Metals (6010/7473)	**0-5**
Lead	668
Mercury	3.47

2SB-29	
2026-03-06	
PFAS (1633)	**SURF**
Perfluorooctanesulfonic Acid (PFOS)	1.94
Metals (6010/7473)	**SURF**
Barium	1,030
Lead	9,130
Mercury	0.58
Metals (6010/7473)	**0-2'**
Lead	1,220
Mercury	0.38

2SB-19	
2025-10-03	
Metals (6010/7473)	**SURF**
Lead	770
Mercury	0.51
PFAS (1633)	**SURF**
Perfluorooctanesulfonic Acid (PFOS)	4.2
Perfluorooctanoic acid (PFOA)	1.01
Metals (6010/7473)	**0-5**
Mercury	0.41

2SB-20	
2025-10-03	
Metals (6010/7473)	**SURF**
Lead	1,050
Mercury	0.41
PFAS (1633)	**SURF**
Perfluorooctanesulfonic Acid (PFOS)	2.84
Metals (6010/7473)	**0-5**
Lead	1,470
Mercury	0.51

2SB-28	
2026-03-06	
Metals (6010/7473)	**SURF**
Lead	1,710
Mercury	0.68

2SB-18	
2025-10-03	
Metals (6010/7473)	**SURF**
Lead	1,640
Mercury	0.49
PFAS (1633)	**SURF**
Perfluorooctanesulfonic Acid (PFOS)	1.43

SVOCs (8270)	RRU SCO
benzo(a)anthracene	1.4
benzo(a)pyrene	1
benzo(b)fluoranthene	1.4
benzo(g,h,i)perylene	4.9
benzo(k)fluoranthene	4.9
chrysene	4.9
dibenzofuran	18
dibenzo(a,h)anthracene	0.33
indeno(1,2,3-cd)pyrene	1.4
phenanthrene	4.9
Metals (6010/7473)	**RRU SCO**
Arsenic	16
Barium	410
Copper	280
Lead	400
Manganese	2,000
Mercury	0.3
Nickel	320
Zinc	6,600
PFAS (1633)	**POG GVs**
Perfluorooctanesulfonic acid (PFOS)	1
Perfluorooctanoic acid (PFOA)	0.8

Base Map provided by INSITE Engineering, Surveying & Landscape Architecture P.C. Boundary & Topographic Survey dated 1/19/23.

Figure 5: Soil Contamination Exceeding RRU SCOs and POG GVs

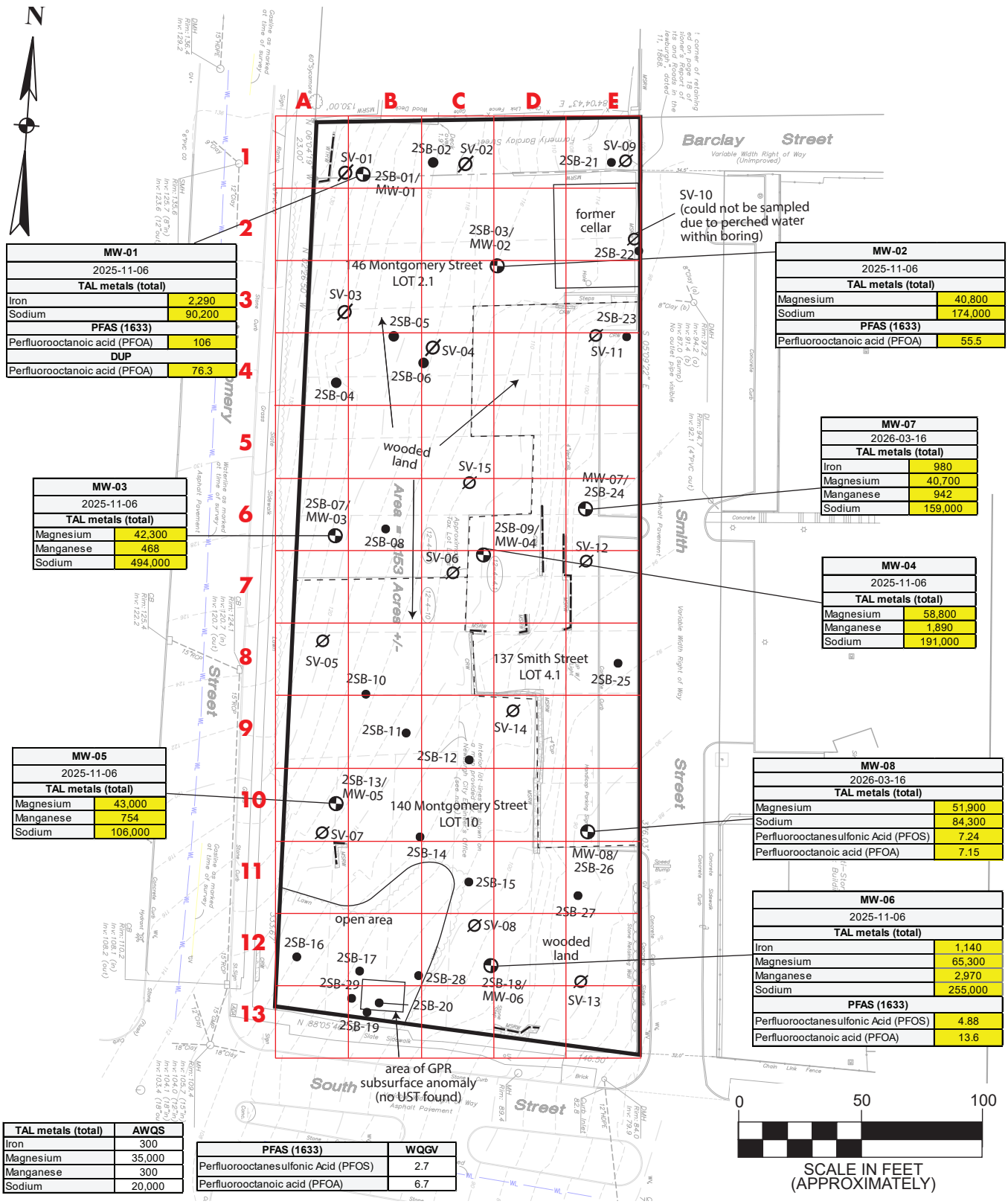
The Green - BCP Site No. C336099
City of Newburgh
Orange County, New York

Legend:
- BCP Site Boundary
- lot lines
- foundation remains
- soil sample location
- soil vapor location
- soil sample and monitoring well location

SURF = soil collected from 0-2 inches

All PFAS data in ug/Kg (ppb)
value > POG Guidance Value
All other data in mg/Kg (ppm)
value > RRU SCO

File: 22003-0092
September 2026
Scale as shown
Figures



MW-01	
2025-11-06	
TAL metals (total)	
Iron	2,290
Sodium	90,200
PFAS (1633)	
Perfluorooctanoic acid (PFOA)	106
DUP	
Perfluorooctanoic acid (PFOA)	76.3

MW-02	
2025-11-06	
TAL metals (total)	
Magnesium	40,800
Sodium	174,000
PFAS (1633)	
Perfluorooctanoic acid (PFOA)	55.5

MW-03	
2025-11-06	
TAL metals (total)	
Magnesium	42,300
Manganese	468
Sodium	494,000

MW-07	
2026-03-16	
TAL metals (total)	
Iron	980
Magnesium	40,700
Manganese	942
Sodium	159,000

MW-04	
2025-11-06	
TAL metals (total)	
Magnesium	58,800
Manganese	1,890
Sodium	191,000

MW-05	
2025-11-06	
TAL metals (total)	
Magnesium	43,000
Manganese	754
Sodium	106,000

MW-08	
2026-03-16	
TAL metals (total)	
Magnesium	51,900
Sodium	84,300
Perfluorooctanesulfonic Acid (PFOS)	7.24
Perfluorooctanoic acid (PFOA)	7.15

MW-06	
2025-11-06	
TAL metals (total)	
Iron	1,140
Magnesium	65,300
Manganese	2,970
Sodium	255,000
PFAS (1633)	
Perfluorooctanesulfonic Acid (PFOS)	4.88
Perfluorooctanoic acid (PFOA)	13.6

TAL metals (total)	AWQS
Iron	300
Magnesium	35,000
Manganese	300
Sodium	20,000

PFAS (1633)	WQGV
Perfluorooctanesulfonic Acid (PFOS)	2.7
Perfluorooctanoic acid (PFOA)	6.7

Base Map provided by INSITE Engineering, Surveying & Landscape Architecture P.C. Boundary & Topographic Survey dated 1/19/23.

Figure 6: Groundwater Contamination Exceeding SCGs

The Green - BCP Site No. C336099
City of Newburgh
Orange County, New York

Legend:
- BCP Site Boundary
- lot lines
- foundation remains
- soil sample location
- soil vapor location
- soil sample and monitoring well location

PFAS data in ng/L (ppt)
PFAS value > WQGV
All other data in µg/L (ppb)
value > AWQS

File: 22003-0092

September 2026

Scale as shown

Figures

SV-02	
2025-10-03	
VOCs, TO-15	
2-butanone	150
2-hexanone (MBK)	8.52
acetone	174
benzene	11.4
ethanol	17.2
ethylbenzene	11.3
heptane	5.49
isooctane	9.13
isopropylalcohol	57.5
m,p-xylene	33.5
o-xylene	9.8
propylene	7.5
tetrachloroethene (PCE)	454
toluene	63.3

SV-09	
2026-03-09	
VOCs, TO-15	
2-butanone	510
2-hexanone (MBK)	48.3
acetone	186
ethanol	48.2
isopropylalcohol	5.21
propylene	43
tetrachloroethene (PCE)	1.25
toluene	6.52

SV-11	
2026-03-09	
VOCs, TO-15	
2-butanone	902
2-hexanone (MBK)	99.5
4-methyl-2-pentanone (MIBK)	13.6
acetone	264
benzene	7.09
ethanol	60.1
heptane	17.9
hexane	25.8
isopropylalcohol	16.4
m,p-xylene	12.3
o-xylene	5.34
propylene	77.6
toluene	27.6

SV-01	
2025-10-03	
VOCs, TO-15	
1,2,4-trimethylbenzene	12.1
2-butanone	161
2-hexanone (MBK)	10.6
4-ethyltoluene	13.7
acetone	144
benzene	13.1
ethanol	12.4
ethylbenzene	18.8
heptane	5.32
isooctane	9.6
isopropylalcohol	36.1
m,p-xylene	77.2
o-xylene	27.8
propylene	8.6
tetrachloroethene (PCE)	453
toluene	64.8

SV-03	
2025-10-03	
VOCs, TO-15	
1,2,4-trimethylbenzene	11.3
2-butanone	80.2
2-hexanone (MBK)	7.21
4-ethyltoluene	12.7
acetone	105
benzene	19.8
ethanol	6.7
ethylbenzene	12.5
isooctane	6.9
isopropylalcohol	9.7
m,p-xylene	49.9
o-xylene	17.5
tetrachloroethene (PCE)	333
toluene	49.7

SV-15	
2026-03-09	
VOCs, TO-15	
2-butanone	749
2-hexanone (MBK)	74.9
acetone	173
ethanol	41.2
m,p-xylene	6.9
propylene	90.5
toluene	8.85

SV-05	
2025-10-03	
VOCs, TO-15	
1,2,4-trimethylbenzene	9.8
2-butanone	117
2-hexanone (MBK)	10.3
4-ethyltoluene	9.5
acetone	105
benzene	15.1
ethanol	7.98
ethylbenzene	8.38
isopropylalcohol	33.7
m,p-xylene	32.6
o-xylene	11.8
propylene	7.83
tetrachloroethene (PCE)	210
toluene	31.6

SV-07	
2025-10-03	
VOCs, TO-15	
1,2,4-trimethylbenzene	11
2-butanone	124
2-hexanone (MBK)	9.5
4-ethyltoluene	13.7
acetone	133
benzene	14.8
ethylbenzene	16.1
heptane	5.61
isooctane	10.6
isopropylalcohol	23.1
m,p-xylene	64.2
o-xylene	22.7
propylene	5.8
tetrachloroethene (PCE)	467
toluene	71.2

SV-04	
2025-10-03	
VOCs, TO-15	
1,2,4-trimethylbenzene	10.7
2-butanone	86.1
2-hexanone (MBK)	7.9
4-ethyltoluene	12.8
acetone	119
benzene	20.9
ethanol	6.85
ethylbenzene	15
heptane	5.37
isooctane	12.4
isopropylalcohol	81.8
m,p-xylene	57.3
o-xylene	20.3
propylene	7.41
tetrachloroethene (PCE)	474
toluene	67.8

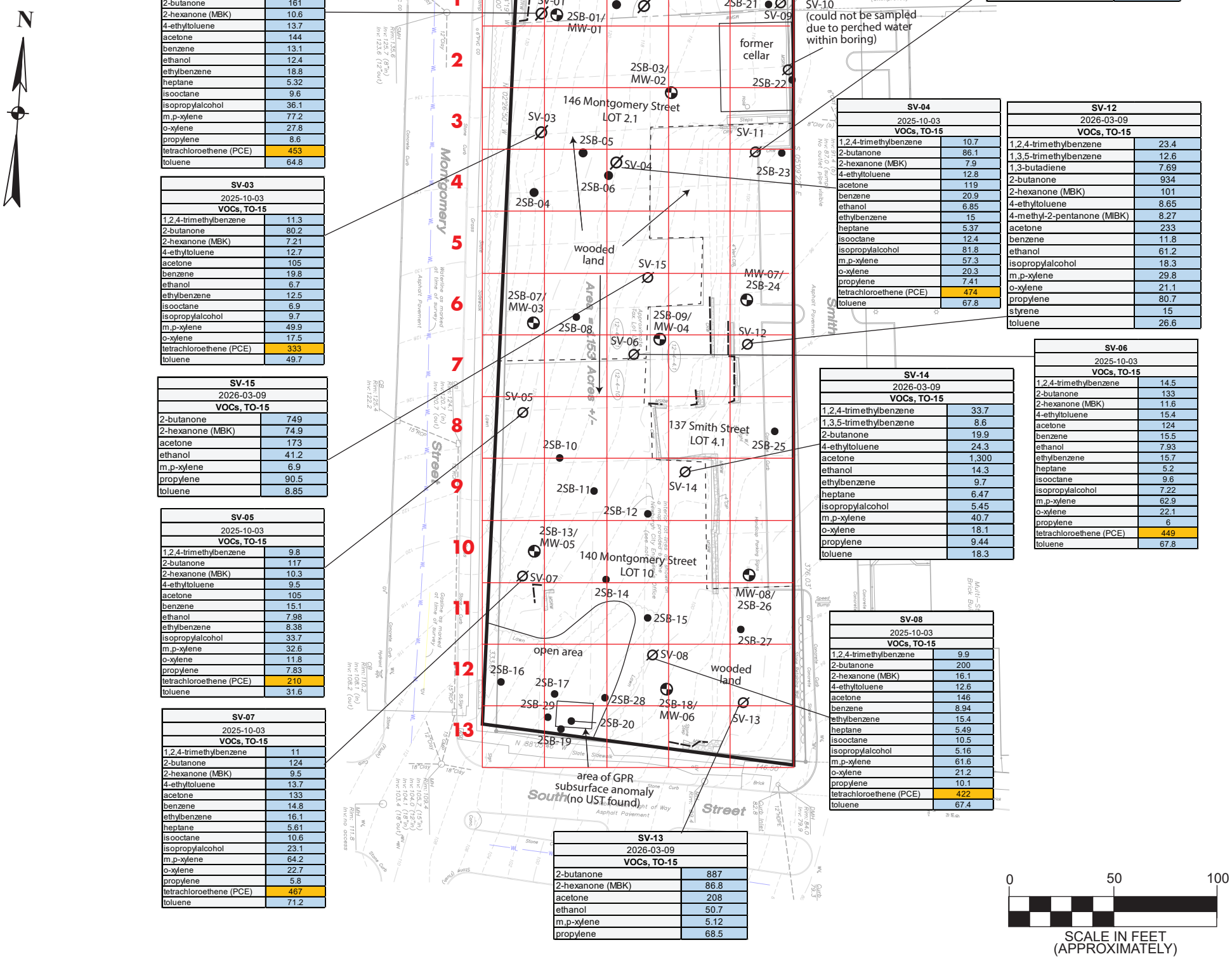
SV-12	
2026-03-09	
VOCs, TO-15	
1,2,4-trimethylbenzene	23.4
1,3,5-trimethylbenzene	12.6
1,3-butadiene	7.69
2-butanone	934
2-hexanone (MBK)	101
4-ethyltoluene	8.65
4-methyl-2-pentanone (MIBK)	8.27
acetone	233
benzene	11.8
ethanol	61.2
isopropylalcohol	18.3
m,p-xylene	29.8
o-xylene	21.1
propylene	80.7
styrene	15
toluene	26.6

SV-06	
2025-10-03	
VOCs, TO-15	
1,2,4-trimethylbenzene	14.5
2-butanone	133
2-hexanone (MBK)	11.6
4-ethyltoluene	15.4
acetone	124
benzene	15.5
ethanol	7.93
ethylbenzene	15.7
heptane	5.2
isooctane	9.6
isopropylalcohol	7.22
m,p-xylene	62.9
o-xylene	22.1
propylene	6
tetrachloroethene (PCE)	449
toluene	67.8

SV-14	
2026-03-09	
VOCs, TO-15	
1,2,4-trimethylbenzene	33.7
1,3,5-trimethylbenzene	8.6
2-butanone	19.9
4-ethyltoluene	24.3
acetone	1,300
ethanol	14.3
ethylbenzene	9.7
heptane	6.47
isopropylalcohol	5.45
m,p-xylene	40.7
o-xylene	18.1
propylene	9.44
toluene	18.3

SV-08	
2025-10-03	
VOCs, TO-15	
1,2,4-trimethylbenzene	9.9
2-butanone	200
2-hexanone (MBK)	16.1
4-ethyltoluene	12.6
acetone	146
benzene	8.94
ethylbenzene	15.4
heptane	5.49
isooctane	10.5
isopropylalcohol	5.16
m,p-xylene	61.6
o-xylene	21.2
propylene	10.1
tetrachloroethene (PCE)	422
toluene	67.4

SV-13	
2026-03-09	
VOCs, TO-15	
2-butanone	887
2-hexanone (MBK)	86.8
acetone	208
ethanol	50.7
m,p-xylene	5.12
propylene	68.5



Base Map provided by INSITE Engineering, Surveying & Landscape Architecture P.C. Boundary & Topographic Survey dated 1/19/23.

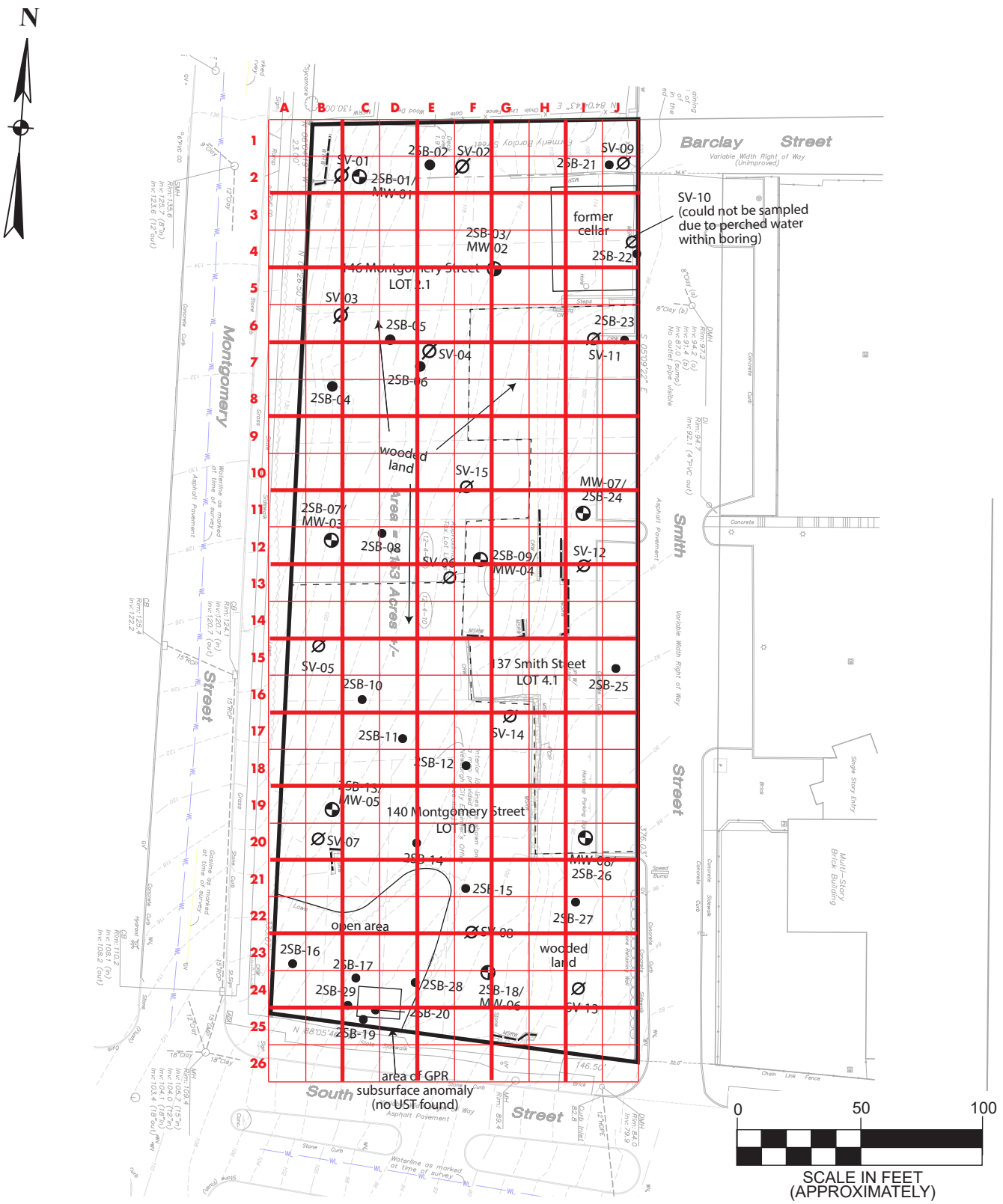
Figure 7: Vapor Contamination: VOCs

The Green - BCP Site No. C336099
City of Newburgh
Orange County, New York

Legend:
- BCP Site Boundary
- lot lines
- foundation remains
- soil sample location
- soil vapor location
- soil sample and monitoring well location

All data in µg/m³
Detected concentrations
Relatively elevated concentrations

File: 22003-0092
September 2026
Scale as shown
Figures



Base Map provided by INSITE Engineering, Surveying & Landscape Architecture P.C. Boundary & Topographic Survey dated 1/19/23.

Figure 8: Alph-Numeric Grid Map

The Green - BCP Site No. C336099
City of Newburgh
Orange County, New York

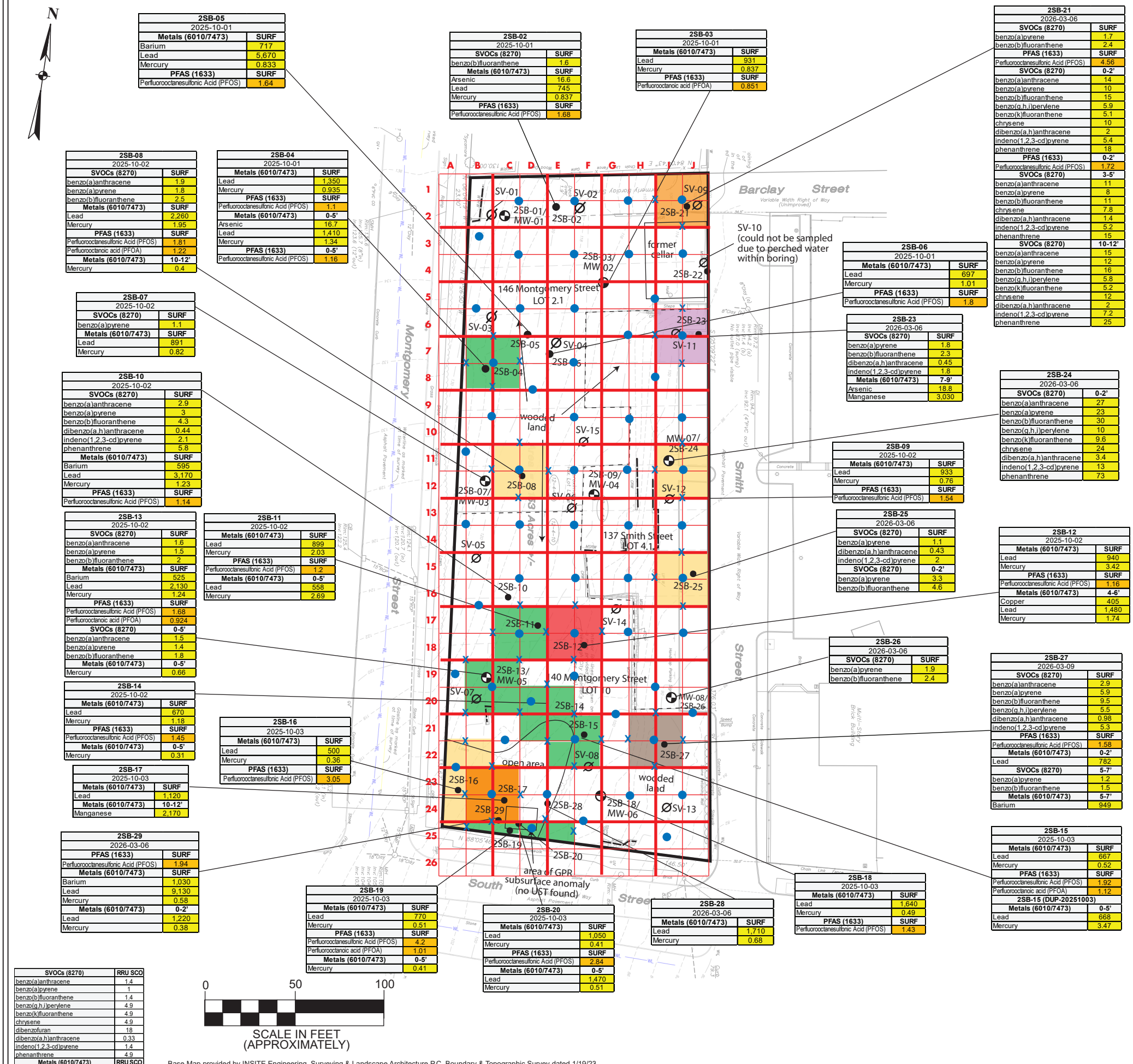
Legend:
- BCP Site Boundary
- lot lines
- foundation remains
- soil sample location
- soil vapor location
- soil sample and monitoring well location

File: 22003-0092

September 2026

Scale as shown

Figures



2SB-05	
2025-10-01	
Metals (6010/7473)	**SURF**
Barium	717
Lead	5,670
Mercury	0.833
PFAS (1633)	**SURF**
Perfluorooctanesulfonic Acid (PFOS)	1.64

2SB-02	
2025-10-01	
SVOCs (8270)	**SURF**
benzo(b)fluoranthene	1.6
Metals (6010/7473)	**SURF**
Arsenic	16.6
Lead	745
Mercury	0.837
PFAS (1633)	**SURF**
Perfluorooctanesulfonic Acid (PFOS)	1.68

2SB-03	
2025-10-01	
Metals (6010/7473)	**SURF**
Lead	931
Mercury	0.837
PFAS (1633)	**SURF**
Perfluorooctanoic acid (PFOA)	0.851

2SB-21	
2026-03-06	
SVOCs (8270)	**SURF**
benzo(a)pyrene	1.7
benzo(b)fluoranthene	2.4
PFAS (1633)	**SURF**
Perfluorooctanesulfonic Acid (PFOS)	4.56
SVOCs (8270)	**0-2'**
benzo(a)anthracene	14
benzo(a)pyrene	10
benzo(b)fluoranthene	15
benzo(g,h,i)perylene	5.9
benzo(k)fluoranthene	5.1
chrysene	10
dibenzo(a,h)anthracene	2
indeno(1,2,3-cd)pyrene	5.4
phenanthrene	18
PFAS (1633)	**0-2'**
Perfluorooctanesulfonic Acid (PFOS)	1.72
SVOCs (8270)	**3-5'**
benzo(a)anthracene	11
benzo(a)pyrene	8
benzo(b)fluoranthene	11
chrysene	7.8
dibenzo(a,h)anthracene	1.4
indeno(1,2,3-cd)pyrene	5.2
phenanthrene	15
SVOCs (8270)	**10-12'**
benzo(a)anthracene	15
benzo(a)pyrene	12
benzo(b)fluoranthene	16
benzo(g,h,i)perylene	5.8
benzo(k)fluoranthene	5.2
chrysene	12
dibenzo(a,h)anthracene	2
indeno(1,2,3-cd)pyrene	7.2
phenanthrene	25

2SB-08	
2025-10-02	
SVOCs (8270)	**SURF**
benzo(a)anthracene	1.9
benzo(a)pyrene	1.8
benzo(b)fluoranthene	2.5
Metals (6010/7473)	**SURF**
Lead	2,260
Mercury	1.95
PFAS (1633)	**SURF**
Perfluorooctanesulfonic Acid (PFOS)	1.81
Perfluorooctanoic acid (PFOA)	1.22
Metals (6010/7473)	**10-12'**
Mercury	0.4

2SB-04	
2025-10-01	
Metals (6010/7473)	**SURF**
Lead	1,350
Mercury	0.935
PFAS (1633)	**SURF**
Perfluorooctanesulfonic Acid (PFOS)	1.1
Metals (6010/7473)	**0-5'**
Arsenic	16.7
Lead	1,410
Mercury	1.34
PFAS (1633)	**0-5'**
Perfluorooctanesulfonic Acid (PFOS)	1.16

2SB-06	
2025-10-01	
Metals (6010/7473)	**SURF**
Lead	697
Mercury	1.01
PFAS (1633)	**SURF**
Perfluorooctanesulfonic Acid (PFOS)	1.8

2SB-07	
2025-10-02	
SVOCs (8270)	**SURF**
benzo(a)pyrene	1.1
Metals (6010/7473)	**SURF**
Lead	891
Mercury	0.82

2SB-23	
2026-03-06	
SVOCs (8270)	**SURF**
benzo(a)pyrene	1.8
benzo(b)fluoranthene	2.3
dibenzo(a,h)anthracene	0.45
indeno(1,2,3-cd)pyrene	1.8
Metals (6010/7473)	**7-9'**
Arsenic	18.8
Manganese	3,030

2SB-10	
2025-10-02	
SVOCs (8270)	**SURF**
benzo(a)anthracene	2.9
benzo(a)pyrene	3
benzo(b)fluoranthene	4.3
dibenzo(a,h)anthracene	0.44
indeno(1,2,3-cd)pyrene	2.1
phenanthrene	5.8
Metals (6010/7473)	**SURF**
Barium	595
Lead	3,170
Mercury	1.23
PFAS (1633)	**SURF**
Perfluorooctanesulfonic Acid (PFOS)	1.14

2SB-24	
2026-03-06	
SVOCs (8270)	**0-2'**
benzo(a)anthracene	27
benzo(a)pyrene	23
benzo(b)fluoranthene	30
benzo(g,h,i)perylene	10
benzo(k)fluoranthene	9.6
chrysene	24
dibenzo(a,h)anthracene	3.4
indeno(1,2,3-cd)pyrene	13
phenanthrene	73

2SB-09	
2025-10-02	
Metals (6010/7473)	**SURF**
Lead	933
Mercury	0.76
PFAS (1633)	**SURF**
Perfluorooctanesulfonic Acid (PFOS)	1.54

2SB-13	
2025-10-02	
SVOCs (8270)	**SURF**
benzo(a)anthracene	1.6
benzo(a)pyrene	1.5
benzo(b)fluoranthene	2
Metals (6010/7473)	**SURF**
Barium	525
Lead	2,130
Mercury	1.24
PFAS (1633)	**SURF**
Perfluorooctanesulfonic Acid (PFOS)	1.68
Perfluorooctanoic acid (PFOA)	0.924
SVOCs (8270)	**0-5'**
benzo(a)anthracene	1.5
benzo(a)pyrene	1.4
benzo(b)fluoranthene	1.8
Metals (6010/7473)	**0-5'**
Mercury	0.66

2SB-11	
2025-10-02	
Metals (6010/7473)	**SURF**
Lead	899
Mercury	2.03
PFAS (1633)	**SURF**
Perfluorooctanesulfonic Acid (PFOS)	1.2
Metals (6010/7473)	**0-5'**
Lead	558
Mercury	2.69

2SB-25	
2026-03-06	
SVOCs (8270)	**SURF**
benzo(a)pyrene	1.1
dibenzo(a,h)anthracene	0.43
indeno(1,2,3-cd)pyrene	2
SVOCs (8270)	**0-2'**
benzo(a)pyrene	3.3
benzo(b)fluoranthene	4.6

2SB-12	
2025-10-02	
Metals (6010/7473)	**SURF**
Lead	940
Mercury	3.42
PFAS (1633)	**SURF**
Perfluorooctanesulfonic Acid (PFOS)	1.16
Metals (6010/7473)	**4-6'**
Copper	405
Lead	1,480
Mercury	1.74

2SB-14	
2025-10-02	
Metals (6010/7473)	**SURF**
Lead	670
Mercury	1.18
PFAS (1633)	**SURF**
Perfluorooctanesulfonic Acid (PFOS)	1.45
Metals (6010/7473)	**0-5'**
Mercury	0.31

2SB-16	
2025-10-03	
Metals (6010/7473)	**SURF**
Lead	500
Mercury	0.36
PFAS (1633)	**SURF**
Perfluorooctanesulfonic Acid (PFOS)	3.05

2SB-26	
2026-03-06	
SVOCs (8270)	**SURF**
benzo(a)pyrene	1.9
benzo(b)fluoranthene	2.4

2SB-27	
2026-03-09	
SVOCs (8270)	**SURF**
benzo(a)anthracene	2.9
benzo(a)pyrene	5.9
benzo(b)fluoranthene	9.5
benzo(g,h,i)perylene	5.5
dibenzo(a,h)anthracene	0.98
indeno(1,2,3-cd)pyrene	5.3
PFAS (1633)	**SURF**
Perfluorooctanesulfonic Acid (PFOS)	1.58
Metals (6010/7473)	**0-2'**
Lead	782
SVOCs (8270)	**5-7'**
benzo(a)pyrene	1.2
benzo(b)fluoranthene	1.5
Metals (6010/7473)	**5-7'**
Barium	949

2SB-17	
2025-10-03	
Metals (6010/7473)	**SURF**
Lead	1,120
Metals (6010/7473)	**10-12'**
Manganese	2,170

2SB-15	
2025-10-03	
Metals (6010/7473)	**SURF**
Lead	667
Mercury	0.52
PFAS (1633)	**SURF**
Perfluorooctanesulfonic Acid (PFOS)	1.92
Perfluorooctanoic acid (PFOA)	1.12
2SB-15 (DUP-20251003)	
Metals (6010/7473)	**0-5'**
Lead	668
Mercury	3.47

2SB-29	
2026-03-06	
PFAS (1633)	**SURF**
Perfluorooctanesulfonic Acid (PFOS)	1.94
Metals (6010/7473)	**SURF**
Barium	1,030
Lead	9,130
Mercury	0.58
Metals (6010/7473)	**0-2'**
Lead	1,220
Mercury	0.38

2SB-19	
2025-10-03	
Metals (6010/7473)	**SURF**
Lead	770
Mercury	0.51
PFAS (1633)	**SURF**
Perfluorooctanesulfonic Acid (PFOS)	4.2
Perfluorooctanoic acid (PFOA)	1.01
Metals (6010/7473)	**0-5'**
Mercury	0.41

2SB-20	
2025-10-03	
Metals (6010/7473)	**SURF**
Lead	1,050
Mercury	0.41
PFAS (1633)	**SURF**
Perfluorooctanesulfonic Acid (PFOS)	2.84
Metals (6010/7473)	**0-5'**
Lead	1,470
Mercury	0.51

2SB-28	
2026-03-06	
Metals (6010/7473)	**SURF**
Lead	1,710
Mercury	0.68

2SB-18	
2025-10-03	
Metals (6010/7473)	**SURF**
Lead	1,640
Mercury	0.49
PFAS (1633)	**SURF**
Perfluorooctanesulfonic Acid (PFOS)	1.43

SVOCs (8270)	RRU SCO
benzo(a)anthracene	1.4
benzo(a)pyrene	1
benzo(b)fluoranthene	1.4
benzo(g,h,i)perylene	4.9
benzo(k)fluoranthene	4.9
chrysene	4.9
dibenzofuran	18
dibenzo(a,h)anthracene	0.33
indeno(1,2,3-cd)pyrene	1.4
phenanthrene	4.9
Metals (6010/7473)	**RRU SCO**
Arsenic	16
Barium	410
Copper	280
Lead	400
Manganese	2,000
Mercury	0.3
Nickel	320
Zinc	6,600
PFAS (1633)	**POG GVs**
Perfluorooctanesulfonic acid (PFOS)	1
Perfluorooctanoic acid (PFOA)	0.8

Base Map provided by INSITE Engineering, Surveying & Landscape Architecture P.C. Boundary & Topographic Survey dated 1/19/23.

Figure 9: Proposed Track 2 Restricted Residential Remedial Excavations and Confirmatory Endpoint Sample Location Grid

The Green - BCP Site No. C336099
City of Newburgh
Orange County, New York

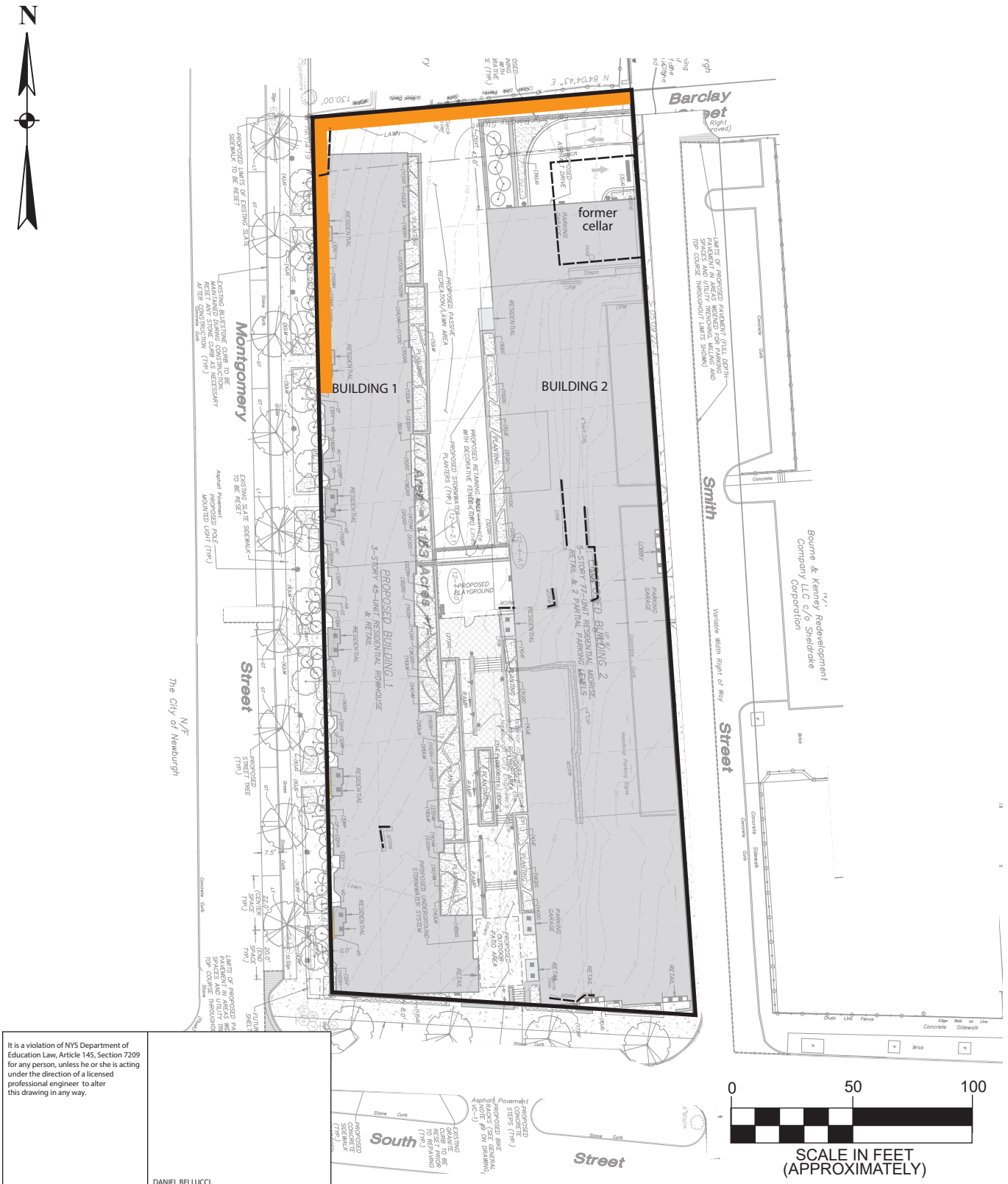
Legend:
- BCP Site Boundary
- lot lines
- foundation remains
- soil sample location
- soil vapor location
- soil sample and monitoring well location
- proposed Base EP samples
- X proposed wall EP samples

All PFAS data in ug/Kg (ppb)
value > POG Guidance Value
All other data in mg/Kg (ppm)
value > RRU SCO

SURF = soil collected from 0-2 inches
*Note: Sitewide 2' excavatin depth

- to 3' (3 Base, 8 Wall)
- to 6' (6 Base, 18 Wall)
- to 7' (1 Base, 4 Wall)
- to 8' (1 Base, 4 Wall)
- to 10' (1 Base, 4 Wall)
- to 13' (2 Base, 6 Wall)

File: 22003-0092
September 2026
Scale as shown
Figures



It is a violation of NYS Department of Education Law, Article 145, Section 7209 for any person, unless he or she is acting under the direction of a licensed professional engineer to alter this drawing in any way.

DANIEL BELLUCCI,
Licensed Professional Engineer
State of New York License #099470

Base Map provided by INSITE Engineering, Surveying & Landscape Architecture P.C. Boundary & Topographic Survey dated 1/19/23.

Figure 10: In-Situ Treatment using Activated Carbon

The Green - BCP Site No. C336099
City of Newburgh
Orange County, New York

Legend:
- BCP Site Boundary
- foundation remains
- area of permeable reactive barrier groundwater treatment zone
- building footprints: 4-6 inch concrete slabs underlain by vapor barrier/waterproofing

File: 22003-0092
September 2026
Scale as shown
Figures



It is a violation of NYS Department of Education Law, Article 145, Section 7209 for any person, unless he or she is acting under the direction of a licensed professional engineer to alter this drawing in any way.

DANIEL BELLUCCI,
Licensed Professional Engineer
State of New York License #099470

Base Map provided by INSITE Engineering, Surveying & Landscape Architecture P.C. Boundary & Topographic Survey dated 1/19/23.

Figure 11: Contingent Cover System

The Green - BCP Site No. C336099
City of Newburgh
Orange County, New York

Legend:

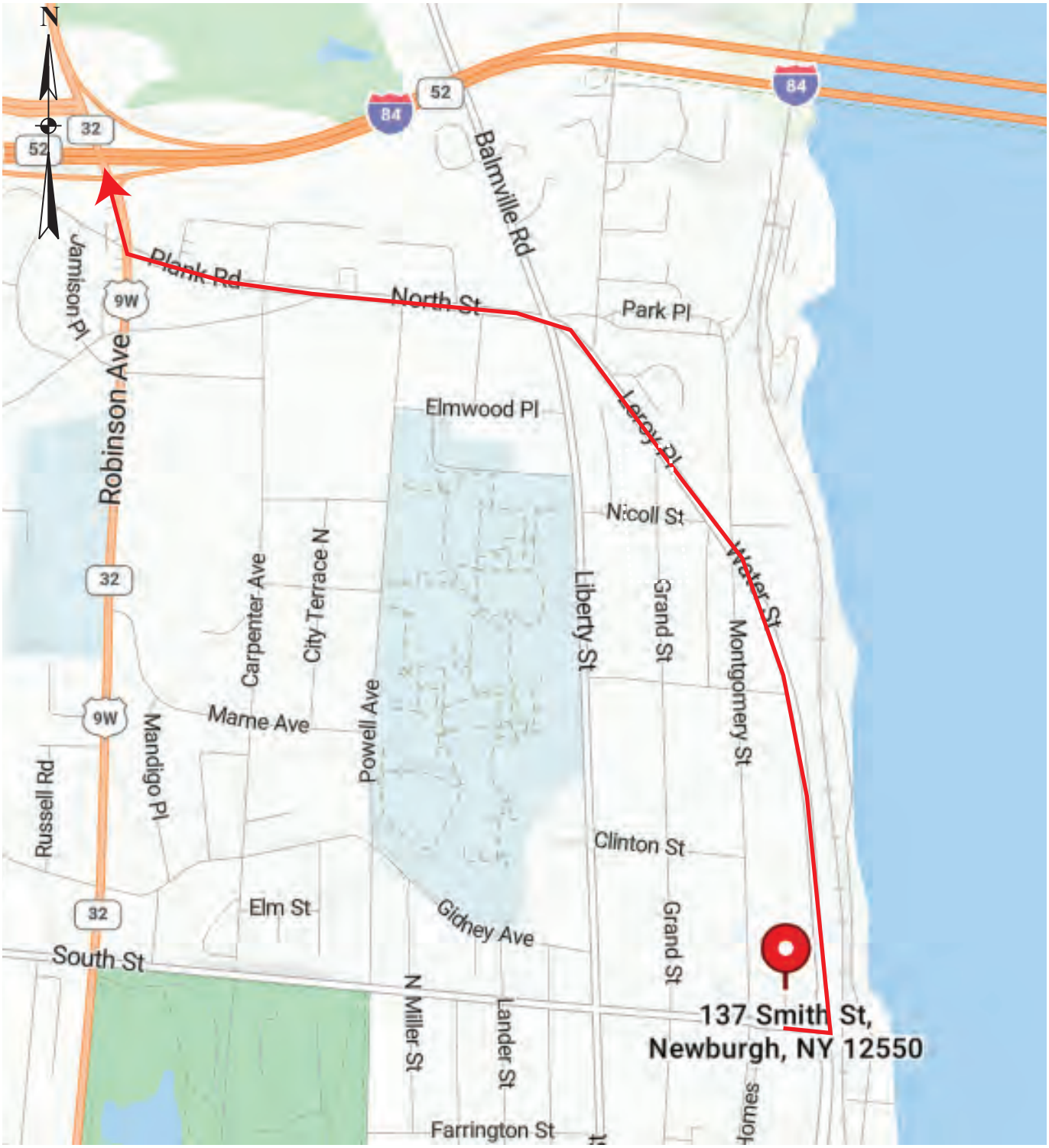
- BCP Site Boundary
- foundation remains
- hardscaping and landscaping areas minimum 2 feet of clean backfill over demarcation layer at areas without building footprint
- building footprints

File: 22003-0092

September 2026

Scale as shown

Figures



All feature locations are approximate.
This map is intended as a schematic to be used in conjunction with the associated report, and it should not be relied upon as a survey for planning or other activities.

Figure 12: Truck Route

The Green - BCP Site No. C336099
City of Newburgh
Orange County, New York

Legend:

Truck Route

File: 22003-0092

September 2026

Scale as shown

Figures

TABLES

Table 1: VOCs in Soil

The Green, Newburgh, NY
BCP ID: C336099

GALLAGHER BASSETT | TECHNICAL SERVICES

All data in mg/Kg (ppm)			Sample	2SB-01 SURF			2SB-01 5-7.5			DUP-20251001			2SB-01 7.5-10			2SB-02 SURF			2SB-02 5-7.5			2SB-02 7.5-10			2SB-03 SURF			2SB-03 10-12.5			2SB-03 12.5-15			2SB-04 SURF		
U= Not Detected ≥ value			Date	2025-10-01			2025-10-01			2025-10-01			2025-10-01			2025-10-01			2025-10-01			2025-10-01			2025-10-01			2025-10-01			2025-10-01			2025-10-01		
VOCs (8260)	**UU SCO**	**RRU SCO**	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL
1,1,1,2-tetrachloroethane	NA	NA	0.0049	U	1	0.0059	U	1	0.0048	U	1	0.0053	U	1	0.0058	U	1	0.0063	U	1	0.0052	U	1	0.0059	U	1	0.0048	U	1	0.0043	U	1	0.0062	U	1
1,1,1-trichloroethane (TCA)	0.68	100	0.0049	U	1	0.0059	U	1	0.0048	U	1	0.0053	U	1	0.0058	U	1	0.0063	U	1	0.0052	U	1	0.0059	U	1	0.0048	U	1	0.0043	U	1	0.0062	U	1
1,1,2,2-tetrachloroethane	NA	NA	0.0049	U	1	0.0059	U	1	0.0048	U	1	0.0053	U	1	0.0058	U	1	0.0063	U	1	0.0052	U	1	0.0059	U	1	0.0048	U	1	0.0043	U	1	0.0062	U	1
1,1,2-trichloro-1,2,2-trifluoroethane	NA	NA	0.0049	U	1	0.0059	U	1	0.0048	U	1	0.0053	U	1	0.0058	U	1	0.0063	U	1	0.0052	U	1	0.0059	U	1	0.0048	U	1	0.0043	U	1	0.0062	U	1
1,1,2-trichloroethane	NA	NA	0.0049	U	1	0.0059	U	1	0.0048	U	1	0.0053	U	1	0.0058	U	1	0.0063	U	1	0.0052	U	1	0.0059	U	1	0.0048	U	1	0.0043	U	1	0.0062	U	1
1,1-dichloroethane	0.27	47	0.0049	U	1	0.0059	U	1	0.0048	U	1	0.0053	U	1	0.0058	U	1	0.0063	U	1	0.0052	U	1	0.0059	U	1	0.0048	U	1	0.0043	U	1	0.0062	U	1
1,1-dichloroethylene	0.24	0.98	0.0049	U	1	0.0059	U	1	0.0048	U	1	0.0053	U	1	0.0058	U	1	0.0063	U	1	0.0052	U	1	0.0059	U	1	0.0048	U	1	0.0043	U	1	0.0062	U	1
1,2,3-Trichlorobenzene	NA	NA	0.0049	U	1	0.0059	U	1	0.0048	U	1	0.0053	U	1	0.0058	U	1	0.0063	U	1	0.0052	U	1	0.0059	U	1	0.0048	U	1	0.0043	U	1	0.0062	U	1
1,2,3-Trichloropropane	NA	NA	0.0049	U	1	0.0059	U	1	0.0048	U	1	0.0053	U	1	0.0058	U	1	0.0063	U	1	0.0052	U	1	0.0059	U	1	0.0048	U	1	0.0043	U	1	0.0062	U	1
1,2,4-Trichlorobenzene	NA	NA	0.0049	U	1	0.0059	U	1	0.0048	U	1	0.0053	U	1	0.0058	U	1	0.0063	U	1	0.0052	U	1	0.0059	U	1	0.0048	U	1	0.0043	U	1	0.0062	U	1
1,2,4-Trimethylbenzene	5.9	100	0.0049	U	1	0.0059	U	1	0.0048	U	1	0.0053	U	1	0.0058	U	1	0.0063	U	1	0.0052	U	1	0.0059	U	1	0.0048	U	1	0.0043	U	1	0.0062	U	1
1,2-Dibromo-3-chloropropane	NA	NA	0.0049	U	1	0.0059	U	1	0.0048	U	1	0.0053	U	1	0.0058	U	1	0.0063	U	1	0.0052	U	1	0.0059	U	1	0.0048	U	1	0.0043	U	1	0.0062	U	1
1,2-dibromoethane	NA	NA	0.0049	U	1	0.0059	U	1	0.0048	U	1	0.0053	U	1	0.0058	U	1	0.0063	U	1	0.0052	U	1	0.0059	U	1	0.0048	U	1	0.0043	U	1	0.0062	U	1
1,2-dichlorobenzene	1.1	100	0.0049	U	1	0.0059	U	1	0.0048	U	1	0.0053	U	1	0.0058	U	1	0.0063	U	1	0.0052	U	1	0.0059	U	1	0.0048	U	1	0.0043	U	1	0.0062	U	1
1,2-dichloroethane	0.02	5.8	0.0049	U	1	0.0059	U	1	0.0048	U	1	0.0053	U	1	0.0058	U	1	0.0063	U	1	0.0052	U	1	0.0059	U	1	0.0048	U	1	0.0043	U	1	0.0062	U	1
1,2-dichloropropane	NA	NA	0.0049	U	1	0.0059	U	1	0.0048	U	1	0.0053	U	1	0.0058	U	1	0.0063	U	1	0.0052	U	1	0.0059	U	1	0.0048	U	1	0.0043	U	1	0.0062	U	1
1,3,5-trimethylbenzene	3.1	100	0.0049	U	1	0.0059	U	1	0.0048	U	1	0.0053	U	1	0.0058	U	1	0.0063	U	1	0.0052	U	1	0.0059	U	1	0.0048	U	1	0.0043	U	1	0.0062	U	1
1,3-dichlorobenzene	2.6	38	0.0049	U	1	0.0059	U	1	0.0048	U	1	0.0053	U	1	0.0058	U	1	0.0063	U	1	0.0052	U	1	0.0059	U	1	0.0048	U	1	0.0043	U	1	0.0062	U	1
1,4-dichlorobenzene	1.8	24	0.0049	U	1	0.0059	U	1	0.0048	U	1	0.0053	U	1	0.0058	U	1	0.0063	U	1	0.0052	U	1	0.0059	U	1	0.0048	U	1	0.0043	U	1	0.0062	U	1
1,4-dioxane	0.1	5.7	0.074	U	1	0.08	U	1	0.072	U	1	0.08	U	1	0.078	U	1	0.078	U	1	0.078	U	1	0.077	U	1	0.072	U	1	0.064	U	1	0.079	U	1
2-butanone (MEK)	0.1	100	0.03	U	1	0.035	U	1	0.029	U	1	0.032	U	1	0.035	U	1	0.038	U	1	0.031	U	1	0.036	U	1	0.029	U	1	0.026	U	1	0.037	U	1
2-hexanone (MBK)	NA	NA	0.025	U	1	0.03	U	1	0.024	U	1	0.027	U	1	0.029	U	1	0.031	U	1	0.026	U	1	0.03	U	1	0.024	U	1	0.021	U	1	0.031	U	1
4-methyl-2-pentanone	NA	NA	0.025	U	1	0.03	U	1	0.024	U	1	0.027	U	1	0.029	U	1	0.031	U	1	0.026	U	1	0.03	U	1	0.024	U	1	0.021	U	1	0.031	U	1
acetone	0.03	100	0.049	U	1	0.059	U	1	0.048	U	1	0.053	U	1	0.058	U	1	0.063	U	1	0.052	U	1	0.059	U	1	0.048	U	1	0.043	U	1	0.062	U	1
acrolein	NA	NA	0.0049	U	1	0.0059	U	1	0.0048	U	1	0.0053	U	1	0.0058	U	1	0.0063	U	1	0.0052	U	1	0.0059	U	1	0.0048	U	1	0.0043	U	1	0.0062	U	1
acrylonitrile	NA	NA	0.0049	U	1	0.0059	U	1	0.0048	U	1	0.0053	U	1	0.0058	U	1	0.0063	U	1	0.0052	U	1	0.0059	U	1	0.0048	U	1	0.0043	U	1	0.0062	U	1
benzene	0.06	3.7	0.0049	U	1	0.0059	U	1	0.0048	U	1	0.0053	U	1	0.0058	U	1	0.0063	U	1	0.0052	U	1	0.0059	U	1	0.0048	U	1	0.0043	U	1	0.0062	U	1
bromochloromethane	NA	NA	0.0049	U	1	0.0059	U	1	0.0048	U	1	0.0053	U	1	0.0058	U	1	0.0063	U	1	0.0052	U	1	0.0059	U	1	0.0048	U	1	0.0043	U	1	0.0062	U	1
bromodichloromethane	NA	NA	0.0049	U	1	0.0059	U	1	0.0048	U	1	0.0053	U	1	0.0058	U	1	0.0063	U	1	0.0052	U	1	0.0059	U	1	0.0048	U	1	0.0043	U	1	0.0062	U	1
Bromoform	NA	NA	0.0049	U	1	0.0059	U	1	0.0048	U	1	0.0053	U	1	0.0058	U	1	0.0063	U	1	0.0052	U	1	0.0059	U	1	0.0048	U	1	0.0043	U	1	0.0062	U	1
bromomethane	NA	NA	0.0049	U	1	0.0059	U	1	0.0048	U	1	0.0053	U	1	0.0058	U	1	0.0063	U	1	0.0052	U	1	0.0059	U	1	0.0048	U	1	0.0043	U	1	0.0062	U	1
carbon disulfide	NA	NA	0.0049	U	1	0.0059	U	1	0.0048	U	1	0.0053	U	1	0.0058	U	1	0.0063	U	1	0.0052	U	1	0.0059	U	1	0.0048	U	1	0.0043	U	1	0.0062	U	1
carbon tetrachloride	0.76	7.1	0.0049	U	1	0.0059	U	1	0.0048	U	1	0.0053	U	1	0.0058	U	1	0.0063	U	1	0.0052	U	1	0.0059	U	1	0.0048	U	1	0.0043	U	1	0.0062	U	1
chlorobenzene	4.5	100	0.0049	U	1	0.0059	U	1	0.0048	U	1	0.0053	U	1	0.0058	U	1	0.0063	U	1	0.0052	U	1	0.0059	U	1	0.0048	U	1	0.0043	U	1	0.0062	U	1
chloroethane	NA	NA	0.0049	U	1	0.0059	U	1	0.0048	U	1	0.0053	U	1	0.0058	U	1	0.0063	U	1	0.0052	U	1	0.0059	U	1	0.0048	U	1	0.0043	U	1	0.0062	U	1
chloroform	0.37	24	0.0049	U	1	0.0059	U	1	0.0048	U	1	0.0053	U	1	0.0058	U	1	0.0063	U	1	0.0052	U	1	0.0059	U	1	0.0048	U	1	0.0043	U	1	0.0062	U	1
chloromethane	NA	NA	0.0049	U	1	0.0059	U	1	0.0048	U	1	0.0053	U	1	0.0058	U	1	0.0063	U	1	0.0052	U	1	0.0059	U	1	0.0048	U	1	0.0043	U	1	0.0062	U	1
cis-1,2-dichloroethylene (DCE)	0.019	41	0.0049	U	1	0.0059	U	1	0.0048	U	1	0.0053	U	1	0.0058	U	1	0.0063	U	1	0.0052	U	1	0.0059	U	1	0.0048	U	1	0.0043	U	1	0.0062	U	1
cis-1,3-dichloropropylene	NA	NA	0.0049	U	1	0.0059	U	1	0.0048	U	1	0.0053	U	1	0.0058	U	1	0.0063	U	1	0.0052	U	1	0.0059	U	1	0.0048	U	1	0.0043	U	1	0.0062	U	1
cyclohexane	NA	NA	0.0049	U	1	0.0059	U	1	0.0048	U	1	0.0053	U	1	0.0058	U	1	0.0063	U	1	0.0052	U	1	0.0059	U	1	0.0048	U	1	0.0043	U	1	0.0062	U	1
dibromochloromethane	NA	NA	0.0049	U	1	0.0059	U	1	0.0048	U	1	0.0053	U	1	0.0058	U	1	0.0063	U	1	0.0052	U	1	0.0059	U	1	0.0048	U	1	0.0043	U	1	0.0062	U	1
dibromomethane	NA	NA	0.0049	U	1	0.0059	U	1	0.0048	U	1	0.0053	U	1	0.0058	U	1	0.0063	U	1	0.0052	U	1	0.0059	U	1	0.0048	U	1	0.0043	U	1	0.0062	U	1
dichlorodifluoromethane	NA	NA	0.0049	U	1	0.0059	U	1	0.0048	U	1	0.0053	U	1	0.0058	U	1	0.0063	U	1	0.0052	U	1	0.0059	U	1	0.0048	U	1	0.0043	U	1	0.0062	U	1
ethyl benzene	1	76	0.0049	U	1	0.0059	U	1	0.0048	U	1	0.0053	U	1	0.0058	U	1	0.0063	U	1	0.0052	U	1	0.0059	U	1	0.0048	U	1	0.0043	U	1	0.0062	U	1
hexachlorobutadiene	NA	NA	0.0049	U	1	0.0059	U	1	0.0048	U	1	0.0053	U	1	0.0058	U	1	0.0063	U	1	0.0052	U	1	0.0059	U	1	0.0048	U	1	0.0043	U	1	0.0062	U	1
isopropylbenzene	2.3	100	0.0049	U	1	0.0059	U	1	0.0048	U	1	0.0053	U	1	0.0058	U	1	0.0063	U	1	0.0052	U	1	0.0059	U	1	0.0048	U	1	0.0043	U	1	0.0062	U	1
methyl acetate	NA	NA	0.049	U	1	0.059	U	1	0.048	U	1	0.053	U	1	0.058	U	1	0.063	U	1	0.052	U	1	0.059	U	1	0.048	U	1	0.043	U	1	0.062	U	1
methyl tert-butyl ether (MTBE)	0.1	100	0.0099	U	1	0.012	U	1	0.0096	U	1	0.011	U	1	0.012	U	1	0.013	U	1	0.01	U	1	0.012	U	1	0.0095	U	1	0.0085	U	1	0.012	U	1
methylcyclohexane	NA	NA	0.0049	U	1	0.0059	U	1	0.0048	U	1	0.0053	U	1	0.0058	U	1	0.0063	U	1	0.0052	U	1	0.0059	U	1	0.0048	U	1	0.0043	U	1	0.0062	U	1
methylene chloride	0.05	81	0.025	U	1	0.03	U	1	0.024	U	1	0.027	U	1	0.029	U	1	0.031	U	1	0.026	U	1	0.03	U	1	0.024	U	1	0.021	U	1	0.031	U	1
n-butylbenzene	18	100	0.0049	U	1	0.0059	U	1	0.0048	U	1	0.0053	U	1	0.0058	U	1	0.0063	U	1	0.0052	U	1	0.0059	U	1	0.0048	U	1	0.0043	U	1	0.0062	U	1
n-propylbenzene	5	100	0.0049	U	1	0.0059	U	1	0.0048	U	1	0.0053	U	1	0.0058	U	1	0.0063	U	1	0.0052	U	1	0.0059	U	1	0.0048	U	1	0.0043	U	1	0.0062	U	1
o-xylene	0.26	100	0.0049	U	1	0.0059	U	1	0.0048	U	1	0.0053	U	1	0.0058	U	1	0.0063	U	1	0.0052	U	1	0.0059	U	1	0.0048	U	1	0.0043	U	1	0.0062	U	1
p- & m- xylenes	0.26	100	0.0049	U	1	0.0059	U	1	0.0048	U	1	0.0053	U	1	0.0058	U	1	0.0063	U	1	0.0052	U	1	0.0059	U	1	0.0048	U	1	0.0043	U	1	0.0062	U	1
p-isopropyltoluene	10	NA	0.0049	U	1	0.0059	U	1	0.0048	U	1	0.0053	U	1	0.0058	U	1	0.0063	U	1	0.0052	U	1	0.0059	U	1	0.0048	U	1	0.0043	U	1	0.0062	U	1
sec-butylbenzene	25	100	0.0049	U	1	0.0059	U	1	0.0048	U	1	0.0053	U	1	0.0058	U	1	0.0063	U	1	0.0052	U	1	0.0059	U	1	0.0048	U	1	0.0043	U	1	0.0062	U	1
styrene	NA	NA	0.0049	U	1	0.0059	U	1	0.0048	U	1	0.0053	U	1	0.0058	U	1	0.0063	U	1	0.0052	U	1	0.0059	U	1	0.0048	U	1	0.0043	U	1	0.0062	U	1
tert-butyl alcohol	NA	NA	0.049	U	1	0.059	U	1	0.048	U	1	0.053	U	1	0.058	U	1	0.063	U	1	0.052	U	1	0.059	U	1	0.048	U	1	0.043	U	1	0.062	U	1
tert-butylbenzene	11	100	0.0049	U	1	0.0059	U	1	0.0048	U	1	0.0053	U	1	0.0058	U	1	0.0063	U	1	0.0052	U	1	0.0059	U	1	0.0048	U	1	0.0043	U	1	0.0062	U	1
tetrachloroethylene (PCE)	1.3	18	0.0049	U	1	0.0059	U	1	0.0048	U	1	0.0053	U	1	0.0058	U	1	0.0063	U	1	0.0052	U	1	0.0059	U	1	0.0048	U	1	0.0043	U	1	0.0062	U	1
toluene	0.7	100	0.0049	U	1	0.0059	U	1	0.0048	U	1	0.0053	U	1	0.0058	U	1	0.0063	U	1	0.0052	U	1	0.0059	U	1	0.0048	U	1	0.0043	U	1	0.0062	U	1
trans-1,2-dichloroethylene (DCE)	0.19	100	0.0049	U	1	0.0059	U	1	0.0048	U	1	0.0053	U	1	0.0058	U	1	0.0063	U	1	0.0052	U	1	0.0059	U	1	0.0048	U	1	0.0043	U	1	0.0062	U	1
trans-1,3-dichloropropylene	NA	NA	0.0049	U	1	0.0059	U	1	0.0048	U	1	0.0053	U	1	0.0058	U	1	0.0063	U	1	0.0052	U	1	0.0059	U	1	0.0048	U	1	0.0043	U	1	0.0062	U	1
trichloroethylene (TCE)	0.47	6.4	0.0049	U	1	0.0059	U	1	0.0048	U	1	0.0053	U	1	0.0058	U	1	0.0063	U	1	0.0052	U	1	0.0059	U	1	0.0048	U	1	0.0043	U	1	0.0062	U	1
trichlorofluoromethane	NA	NA	0.0049	U	1	0.0059	U	1	0.0048	U	1	0.0053	U	1	0.0058	U	1	0.0063	U	1	0.0052	U	1	0.0059	U	1	0.0048	U	1	0.0043	U	1	0.0062	U	1
vinyl chloride (VC)	0.03	0.48	0.0049	U	1	0.0059	U	1	0.0048	U	1	0.0053	U	1	0.0058	U	1	0.0063	U	1	0.0052	U	1	0.0059	U	1	0.0048	U	1	0.0043	U	1	0.0062	U	1
xylenes, total	0.26	100	0.0049	U	1	0.0059	U	1	0.0048	U	1	0.0053	U	1	0.0058	U	1	0.0063	U	1	0.0052	U	1	0.0059	U	1	0.0048	U	1	0.0043	U	1	0.0062	U	1

value ≤ UU SCO
value > UU SCO

Q = Laboratory Qualifier DL = Dilution NA = not available (addtional flags: B-in blank, D-diluted, E-estimated, J-approximate, L-Biased Low, S-lab solvent)

Table 1: VOCs in Soil

The Green, Newburgh, NY
BCP ID: C336099

GALLAGHER BASSETT | TECHNICAL SERVICES

All data in mg/Kg (ppm)			Sample	2SB-04 0-5			2SB-04 10-15			2SB-05 SURF			2SB-05 5-7			2SB-06 SURF			2SB-06 0-2.5			2SB-06 7.5-10			2SB-07 SURF			2SB-07 10-15			2SB-08 SURF			2SB-08 8-10		
U= Not Detected ≥ value			Date	2025-10-01			2025-10-01			2025-10-01			2025-10-01			2025-10-01			2025-10-01			2025-10-01			2025-10-02			2025-10-02			2025-10-02			2025-10-02		
VOCs (8260)	**UU SCO**	**RRU SCO**	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL
1,1,1,2-tetrachloroethane	NA	NA	0.0069	U	1	0.0043	U	1	0.0063	U	1	0.0047	U	1	0.0078	U	1	0.0063	U	1	0.0039	U	1	0.0068	U	1	0.0045	U	1	0.0068	U	1	0.0044	U	1
1,1,1-trichloroethane (TCA)	0.68	100	0.0069	U	1	0.0043	U	1	0.0063	U	1	0.0047	U	1	0.0078	U	1	0.0063	U	1	0.0039	U	1	0.0068	U	1	0.0045	U	1	0.0068	U	1	0.0044	U	1
1,1,2,2-tetrachloroethane	NA	NA	0.0069	U	1	0.0043	U	1	0.0063	U	1	0.0047	U	1	0.0078	U	1	0.0063	U	1	0.0039	U	1	0.0068	U	1	0.0045	U	1	0.0068	U	1	0.0044	U	1
1,1,2-trichloro-1,2,2-trifluoroethane	NA	NA	0.0069	U	1	0.0043	U	1	0.0063	U	1	0.0047	U	1	0.0078	U	1	0.0063	U	1	0.0039	U	1	0.0068	U	1	0.0045	U	1	0.0068	U	1	0.0044	U	1
1,1,2-trichloroethane	NA	NA	0.0069	U	1	0.0043	U	1	0.0063	U	1	0.0047	U	1	0.0078	U	1	0.0063	U	1	0.0039	U	1	0.0068	U	1	0.0045	U	1	0.0068	U	1	0.0044	U	1
1,1-dichloroethane	0.27	47	0.0069	U	1	0.0043	U	1	0.0063	U	1	0.0047	U	1	0.0078	U	1	0.0063	U	1	0.0039	U	1	0.0068	U	1	0.0045	U	1	0.0068	U	1	0.0044	U	1
1,1-dichloroethylene	0.24	0.98	0.0069	U	1	0.0043	U	1	0.0063	U	1	0.0047	U	1	0.0078	U	1	0.0063	U	1	0.0039	U	1	0.0068	U	1	0.0045	U	1	0.0068	U	1	0.0044	U	1
1,2,3-Trichlorobenzene	NA	NA	0.0069	U	1	0.0043	U	1	0.0063	U	1	0.0047	U	1	0.0078	U	1	0.0063	U	1	0.0039	U	1	0.0068	U	1	0.0045	U	1	0.0068	U	1	0.0044	U	1
1,2,3-Trichloropropane	NA	NA	0.0069	U	1	0.0043	U	1	0.0063	U	1	0.0047	U	1	0.0078	U	1	0.0063	U	1	0.0039	U	1	0.0068	U	1	0.0045	U	1	0.0068	U	1	0.0044	U	1
1,2,4-Trichlorobenzene	NA	NA	0.0069	U	1	0.0043	U	1	0.0063	U	1	0.0047	U	1	0.0078	U	1	0.0063	U	1	0.0039	U	1	0.0068	U	1	0.0045	U	1	0.0068	U	1	0.0044	U	1
1,2,4-Trimethylbenzene	5.9	100	0.0069	U	1	0.0043	U	1	0.0063	U	1	0.0047	U	1	0.0078	U	1	0.0063	U	1	0.0039	U	1	0.0068	U	1	0.0045	U	1	0.0068	U	1	0.0044	U	1
1,2-Dibromo-3-chloropropane	NA	NA	0.0069	U	1	0.0043	U	1	0.0063	U	1	0.0047	U	1	0.0078	U	1	0.0063	U	1	0.0039	U	1	0.0068	U	1	0.0045	U	1	0.0068	U	1	0.0044	U	1
1,2-dibromoethane	NA	NA	0.0069	U	1	0.0043	U	1	0.0063	U	1	0.0047	U	1	0.0078	U	1	0.0063	U	1	0.0039	U	1	0.0068	U	1	0.0045	U	1	0.0068	U	1	0.0044	U	1
1,2-dichlorobenzene	1.1	100	0.0069	U	1	0.0043	U	1	0.0063	U	1	0.0047	U	1	0.0078	U	1	0.0063	U	1	0.0039	U	1	0.0068	U	1	0.0045	U	1	0.0068	U	1	0.0044	U	1
1,2-dichloroethane	0.02	5.8	0.0069	U	1	0.0043	U	1	0.0063	U	1	0.0047	U	1	0.0078	U	1	0.0063	U	1	0.0039	U	1	0.0068	U	1	0.0045	U	1	0.0068	U	1	0.0044	U	1
1,2-dichloropropane	NA	NA	0.0069	U	1	0.0043	U	1	0.0063	U	1	0.0047	U	1	0.0078	U	1	0.0063	U	1	0.0039	U	1	0.0068	U	1	0.0045	U	1	0.0068	U	1	0.0044	U	1
1,3,5-trimethylbenzene	3.1	100	0.0069	U	1	0.0043	U	1	0.0063	U	1	0.0047	U	1	0.0078	U	1	0.0063	U	1	0.0039	U	1	0.0068	U	1	0.0045	U	1	0.0068	U	1	0.0044	U	1
1,3-dichlorobenzene	2.6	38	0.0069	U	1	0.0043	U	1	0.0063	U	1	0.0047	U	1	0.0078	U	1	0.0063	U	1	0.0039	U	1	0.0068	U	1	0.0045	U	1	0.0068	U	1	0.0044	U	1
1,4-dichlorobenzene	1.8	24	0.0069	U	1	0.0043	U	1	0.0063	U	1	0.0047	U	1	0.0078	U	1	0.0063	U	1	0.0039	U	1	0.0068	U	1	0.0045	U	1	0.0068	U	1	0.0044	U	1
1,4-dioxane	0.1	5.7	0.076	U	1	0.064	U	1	0.083	U	1	0.071	U	1	0.095	U	1	0.075	U	1	0.059	U	1	0.1	U	1	0.067	U	1	0.1	U	1	0.066	U	1
2-butanone (MEK)	0.1	100	0.041	U	1	0.026	U	1	0.038	U	1	0.028	U	1	0.047	U	1	0.038	U	1	0.024	U	1	0.041	U	1	0.027	U	1	0.041	U	1	0.027	U	1
2-hexanone (MBK)	NA	NA	0.034	U	1	0.021	U	1	0.031	U	1	0.024	U	1	0.039	U	1	0.031	U	1	0.02	U	1	0.034	U	1	0.022	U	1	0.034	U	1	0.022	U	1
4-methyl-2-pentanone	NA	NA	0.034	U	1	0.021	U	1	0.031	U	1	0.024	U	1	0.039	U	1	0.031	U	1	0.02	U	1	0.034	U	1	0.022	U	1	0.034	U	1	0.022	U	1
acetone	0.03	100	0.069	U	1	0.043	U	1	0.063	U	1	0.047	U	1	0.078	U	1	0.063	U	1	0.039	U	1	0.068	U	1	0.018	JS	1	0.068	U	1	0.044	U	1
acrolein	NA	NA	0.0069	U	1	0.0043	U	1	0.0063	U	1	0.0047	U	1	0.0078	U	1	0.0063	U	1	0.0039	U	1	0.0068	U	1	0.0045	U	1	0.0068	U	1	0.0044	U	1
acrylonitrile	NA	NA	0.0069	U	1	0.0043	U	1	0.0063	U	1	0.0047	U	1	0.0078	U	1	0.0063	U	1	0.0039	U	1	0.0068	U	1	0.0045	U	1	0.0068	U	1	0.0044	U	1
benzene	0.06	3.7	0.0069	U	1	0.0043	U	1	0.0063	U	1	0.0047	U	1	0.0078	U	1	0.0063	U	1	0.0039	U	1	0.0068	U	1	0.0045	U	1	0.0068	U	1	0.0044	U	1
bromochloromethane	NA	NA	0.0069	U	1	0.0043	U	1	0.0063	U	1	0.0047	U	1	0.0078	U	1	0.0063	U	1	0.0039	U	1	0.0068	U	1	0.0045	U	1	0.0068	U	1	0.0044	U	1
bromodichloromethane	NA	NA	0.0069	U	1	0.0043	U	1	0.0063	U	1	0.0047	U	1	0.0078	U	1	0.0063	U	1	0.0039	U	1	0.0068	U	1	0.0045	U	1	0.0068	U	1	0.0044	U	1
Bromoform	NA	NA	0.0069	U	1	0.0043	U	1	0.0063	U	1	0.0047	U	1	0.0078	U	1	0.0063	U	1	0.0039	U	1	0.0068	U	1	0.0045	U	1	0.0068	U	1	0.0044	U	1
bromomethane	NA	NA	0.0069	U	1	0.0043	U	1	0.0063	U	1	0.0047	U	1	0.0078	U	1	0.0063	U	1	0.0039	U	1	0.0068	U	1	0.0045	U	1	0.0068	U	1	0.0044	U	1
carbon disulfide	NA	NA	0.0069	U	1	0.0043	U	1	0.0063	U	1	0.0047	U	1	0.0078	U	1	0.0063	U	1	0.0039	U	1	0.0068	U	1	0.0034	J	1	0.0068	U	1	0.0044	U	1
carbon tetrachloride	0.76	7.1	0.0069	U	1	0.0043	U	1	0.0063	U	1	0.0047	U	1	0.0078	U	1	0.0063	U	1	0.0039	U	1	0.0068	U	1	0.0045	U	1	0.0068	U	1	0.0044	U	1
chlorobenzene	4.5	100	0.0069	U	1	0.0043	U	1	0.0063	U	1	0.0047	U	1	0.0078	U	1	0.0063	U	1	0.0039	U	1	0.0068	U	1	0.0045	U	1	0.0068	U	1	0.0044	U	1
chloroethane	NA	NA	0.0069	U	1	0.0043	U	1	0.0063	U	1	0.0047	U	1	0.0078	U	1	0.0063	U	1	0.0039	U	1	0.0068	U	1	0.0045	U	1	0.0068	U	1	0.0044	U	1
chloroform	0.37	24	0.0069	U	1	0.0043	U	1	0.0063	U	1	0.0047	U	1	0.0078	U	1	0.0063	U	1	0.0039	U	1	0.0068	U	1	0.0045	U	1	0.0068	U	1	0.0044	U	1
chloromethane	NA	NA	0.0069	U	1	0.0043	U	1	0.0063	U	1	0.0047	U	1	0.0078	U	1	0.0063	U	1	0.0039	U	1	0.0068	U	1	0.0045	U	1	0.0068	U	1	0.0044	U	1
cis-1,2-dichloroethylene (DCE)	0.019	41	0.0069	U	1	0.0043	U	1	0.0063	U	1	0.0047	U	1	0.0078	U	1	0.0063	U	1	0.0039	U	1	0.0068	U	1	0.0045	U	1	0.0068	U	1	0.0044	U	1
cis-1,3-dichloropropylene	NA	NA	0.0069	U	1	0.0043	U	1	0.0063	U	1	0.0047	U	1	0.0078	U	1	0.0063	U	1	0.0039	U	1	0.0068	U	1	0.0045	U	1	0.0068	U	1	0.0044	U	1
cyclohexane	NA	NA	0.0069	U	1	0.0043	U	1	0.0063	U	1	0.0047	U	1	0.0078	U	1	0.0063	U	1	0.0039	U	1	0.0068	U	1	0.0045	U	1	0.0068	U	1	0.0044	U	1
dibromochloromethane	NA	NA	0.0069	U	1	0.0043	U	1	0.0063	U	1	0.0047	U	1	0.0078	U	1	0.0063	U	1	0.0039	U	1	0.0068	U	1	0.0045	U	1	0.0068	U	1	0.0044	U	1
dibromomethane	NA	NA	0.0069	U	1	0.0043	U	1	0.0063	U	1	0.0047	U	1	0.0078	U	1	0.0063	U	1	0.0039	U	1	0.0068	U	1	0.0045	U	1	0.0068	U	1	0.0044	U	1
dichlorodifluoromethane	NA	NA	0.0069	U	1	0.0043	U	1	0.0063	U	1	0.0047	U	1	0.0078	U	1	0.0063	U	1	0.0039	U	1	0.0068	U	1	0.0045	U	1	0.0068	U	1	0.0044	U	1
ethyl benzene	1	76	0.0069	U	1	0.0043	U	1	0.0063	U	1	0.0047	U	1	0.0078	U	1	0.0063	U	1	0.0039	U	1	0.0068	U	1	0.0045	U	1	0.0068	U	1	0.0044	U	1
hexachlorobutadiene	NA	NA	0.0069	U	1	0.0043	U	1	0.0063	U	1	0.0047	U	1	0.0078	U	1	0.0063	U	1	0.0039	U	1	0.0068	U	1	0.0045	U	1	0.0068	U	1	0.0044	U	1
isopropylbenzene	2.3	100	0.0069	U	1	0.0043	U	1	0.0063	U	1	0.0047	U	1	0.0078	U	1	0.0063	U	1	0.0039	U	1	0.0068	U	1	0.0045	U	1	0.0068	U	1	0.0044	U	1
methyl acetate	NA	NA	0.069	U	1	0.043	U	1	0.063	U	1	0.047	U	1	0.078	U	1	0.063	U	1	0.039	U	1	0.068	U	1	0.045	U	1	0.068	U	1	0.044	U	1
methyl tert-butyl ether (MTBE)	0.1	100	0.014	U	1	0.0086	U	1	0.013	U	1	0.0094	U	1	0.016	U	1	0.013	U	1	0.0079	U	1	0.014	U	1	0.009	U	1	0.014	U	1	0.0089	U	1
methylcyclohexane	NA	NA	0.0069	U	1	0.0043	U	1	0.0063	U	1	0.0047	U	1	0.0078	U	1	0.0063	U	1	0.0039	U	1	0.0068	U	1	0.0045	U	1	0.0068	U	1	0.0044	U	1
methylene chloride	0.05	81	0.034	U	1	0.021	U	1	0.031	U	1	0.024	U	1	0.039	U	1	0.031	U	1	0.02	U	1	0.034	U	1	0.022	U	1	0.034	U	1	0.022	U	1
n-butylbenzene	18	100	0.0069	U	1	0.0043	U	1	0.0063	U	1	0.0047	U	1	0.0078	U	1	0.0063	U	1	0.0039	U	1	0.0068	U	1	0.0045	U	1	0.0068	U	1	0.0044	U	1
n-propylbenzene	5	100	0.0069	U	1	0.0043	U	1	0.0063	U	1	0.0047	U	1	0.0078	U	1	0.0063	U	1	0.0039	U	1	0.0068	U	1	0.0045	U	1	0.0068	U	1	0.0044	U	1
o-xylene	0.26	100	0.0069	U	1	0.0043	U	1	0.0063	U	1	0.0047	U	1	0.0078	U	1	0.0063	U	1	0.0039	U	1	0.0068	U	1	0.0045	U	1	0.0068	U	1	0.0044	U	1
p- & m- xylenes	0.26	100	0.0069	U	1	0.0043	U	1	0.0063	U	1	0.0047	U	1	0.0078	U	1	0.0063	U	1	0.0039	U	1	0.0068	U	1	0.0045	U	1	0.0068	U	1	0.0044	U	1
p-isopropyltoluene	10	NA	0.0069	U	1	0.0043	U	1	0.0063	U	1	0.0047	U	1	0.0078	U	1	0.0063	U	1	0.0039	U	1	0.0068	U	1	0.0045	U	1	0.0068	U	1	0.0044	U	1
sec-butylbenzene	25	100	0.0069	U	1	0.0043	U	1	0.0063	U	1	0.0047	U	1	0.0078	U	1	0.0063	U	1	0.0039	U	1	0.0068	U	1	0.0045	U	1	0.0068	U	1	0.0044	U	1
styrene	NA	NA	0.0069	U	1	0.0043	U	1	0.0063	U	1	0.0047	U	1	0.0078	U	1	0.0063	U	1	0.0039	U	1	0.0068	U	1	0.0045	U	1	0.0068	U	1	0.0044	U	1
tert-butyl alcohol	NA	NA	0.069	U	1	0.043	U	1	0.063	U	1	0.047	U	1	0.078	U	1	0.063	U	1	0.039	U	1	0.068	U	1	0.045	U	1	0.068	U	1	0.044	U	1
tert-butylbenzene	11	100	0.0069	U	1	0.0043	U	1	0.0063	U	1	0.0047	U	1	0.0078	U	1	0.0063	U	1	0.0039	U	1	0.0068	U	1	0.0045	U	1	0.0068	U	1	0.0044	U	1
tetrachloroethylene (PCE)	1.3	18	0.0069	U	1	0.0043	U	1	0.0063	U	1	0.0047	U	1	0.0078	U	1	0.0063	U	1	0.0039	U	1	0.0068	U	1	0.0045	U	1	0.0068	U	1	0.0044	U	1
toluene	0.7	100	0.0069	U	1	0.0043	U	1	0.0063	U	1	0.0047	U	1	0.0078	U	1	0.0063	U	1	0.0039	U	1	0.0068	U	1	0.0045	U	1	0.0068	U	1	0.0044	U	1
trans-1,2-dichloroethylene (DCE)	0.19	100	0.0069	U	1	0.0043	U	1	0.0063	U	1	0.0047	U	1	0.0078	U	1	0.0063	U	1	0.0039	U	1	0.0068	U	1	0.0045	U	1	0.0068	U	1	0.0044	U	1
trans-1,3-dichloropropylene	NA	NA	0.0069	U	1	0.0043	U	1	0.0063	U	1	0.0047	U	1	0.0078	U	1	0.0063	U	1	0.0039	U	1	0.0068	U	1	0.0045	U	1	0.0068	U	1	0.0044	U	1
trichloroethylene (TCE)	0.47	6.4	0.0069	U	1	0.0043	U	1	0.0063	U	1	0.0047	U	1	0.0078	U	1	0.0063	U	1	0.0039	U	1	0.0068	U	1	0.0045	U	1	0.0068	U	1	0.0044	U	1
trichlorofluoromethane	NA	NA	0.0069	U	1	0.0043	U	1	0.0063	U	1	0.0047	U	1	0.0078	U	1	0.0063	U	1	0.0039	U	1	0.0068	U	1	0.0045	U	1	0.0068	U	1	0.0044	U	1
vinyl chloride (VC)	0.03	0.48	0.0069	U	1	0.0043	U	1	0.0063	U	1	0.0047	U	1	0.0078	U	1	0.0063	U	1	0.0039	U	1	0.0068	U	1	0.0045	U	1	0.0068	U	1	0.0044	U	1
xylenes, total	0.26	100	0.0069	U	1	0.0043	U	1	0.0063	U	1	0.0047	U	1	0.0078	U	1	0.0063	U	1	0.0039	U	1	0.0068	U	1	0.0045	U	1	0.0068	U	1	0.0044	U	1

value ≤ UU SCO
value > UU SCO

Q = Laboratory Qualifier DL = Dilution NA = not available (addtional flags: B-in blank, D-diluted, E-estimated, J-approximate, L-Biased Low, S-lab solvent)

Table 1: VOCs in Soil

The Green, Newburgh, NY
BCP ID: C336099

GALLAGHER BASSETT | TECHNICAL SERVICES

All data in mg/Kg (ppm)			Sample	2SB-08 10-12			2SB-09 SURF			2SB-09 10-12.5			2SB-09 12.5-15			2SB-10 SURF			2SB-10 5-7			2SB-10 10-12			2SB-11 SURF			2SB-11 0-5			2SB-11 13-15			2SB-12 SURF		
U= Not Detected ≥ value			Date	2025-10-02			2025-10-02			2025-10-02			2025-10-02			2025-10-02			2025-10-02			2025-10-02			2025-10-02			2025-10-02			2025-10-02			2025-10-02		
VOCs (8260)	**UU SCO**	**RRU SCO**		Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL
1,1,1,2-tetrachloroethane	NA	NA		0.0042	U	1	0.0068	U	1	0.0046	U	1	0.0053	U	1	0.0061	U	1	0.0051	U	1	0.0047	U	1	0.0074	U	1	0.0049	U	1	0.0048	U	1	0.0089	U	1
1,1,1-trichloroethane (TCA)	0.68	100		0.0042	U	1	0.0068	U	1	0.0046	U	1	0.0053	U	1	0.0061	U	1	0.0051	U	1	0.0047	U	1	0.0074	U	1	0.0049	U	1	0.0048	U	1	0.0089	U	1
1,1,2,2-tetrachloroethane	NA	NA		0.0042	U	1	0.0068	U	1	0.0046	U	1	0.0053	U	1	0.0061	U	1	0.0051	U	1	0.0047	U	1	0.0074	U	1	0.0049	U	1	0.0048	U	1	0.57	U	50
1,1,2-trichloro-1,2,2-trifluoroethane	NA	NA		0.0042	U	1	0.0068	U	1	0.0046	U	1	0.0053	U	1	0.0061	U	1	0.0051	U	1	0.0047	U	1	0.0074	U	1	0.0049	U	1	0.0048	U	1	0.0089	U	1
1,1,2-trichloroethane	NA	NA		0.0042	U	1	0.0068	U	1	0.0046	U	1	0.0053	U	1	0.0061	U	1	0.0051	U	1	0.0047	U	1	0.0074	U	1	0.0049	U	1	0.0048	U	1	0.0089	U	1
1,1-dichloroethane	0.27	47		0.0042	U	1	0.0068	U	1	0.0046	U	1	0.0053	U	1	0.0061	U	1	0.0051	U	1	0.0047	U	1	0.0074	U	1	0.0049	U	1	0.0048	U	1	0.0089	U	1
1,1-dichloroethylene	0.24	0.98		0.0042	U	1	0.0068	U	1	0.0046	U	1	0.0053	U	1	0.0061	U	1	0.0051	U	1	0.0047	U	1	0.0074	U	1	0.0049	U	1	0.0048	U	1	0.0089	U	1
1,2,3-Trichlorobenzene	NA	NA		0.0042	U	1	0.0068	U	1	0.0046	U	1	0.0053	U	1	0.0061	U	1	0.0051	U	1	0.0047	U	1	0.0074	U	1	0.0049	U	1	0.0048	U	1	0.57	U	50
1,2,3-Trichloropropane	NA	NA		0.0042	U	1	0.0068	U	1	0.0046	U	1	0.0053	U	1	0.0061	U	1	0.0051	U	1	0.0047	U	1	0.0074	U	1	0.0049	U	1	0.0048	U	1	0.57	U	50
1,2,4-Trichlorobenzene	NA	NA		0.0042	U	1	0.0068	U	1	0.0046	U	1	0.0053	U	1	0.0061	U	1	0.0051	U	1	0.0047	U	1	0.0074	U	1	0.0049	U	1	0.0048	U	1	0.57	U	50
1,2,4-Trimethylbenzene	5.9	100		0.0042	U	1	0.0068	U	1	0.0046	U	1	0.0053	U	1	0.0061	U	1	0.0051	U	1	0.0047	U	1	0.0074	U	1	0.0049	U	1	0.0048	U	1	0.57	U	50
1,2-Dibromo-3-chloropropane	NA	NA		0.0042	U	1	0.0068	U	1	0.0046	U	1	0.0053	U	1	0.0061	U	1	0.0051	U	1	0.0047	U	1	0.0074	U	1	0.0049	U	1	0.0048	U	1	0.57	U	50
1,2-dibromoethane	NA	NA		0.0042	U	1	0.0068	U	1	0.0046	U	1	0.0053	U	1	0.0061	U	1	0.0051	U	1	0.0047	U	1	0.0074	U	1	0.0049	U	1	0.0048	U	1	0.0089	U	1
1,2-dichlorobenzene	1.1	100		0.0042	U	1	0.0068	U	1	0.0046	U	1	0.0053	U	1	0.0061	U	1	0.0051	U	1	0.0047	U	1	0.0074	U	1	0.0049	U	1	0.0048	U	1	0.57	U	50
1,2-dichloroethane	0.02	5.8		0.0042	U	1	0.0068	U	1	0.0046	U	1	0.0053	U	1	0.0061	U	1	0.0051	U	1	0.0047	U	1	0.0074	U	1	0.0049	U	1	0.0048	U	1	0.0089	U	1
1,2-dichloropropane	NA	NA		0.0042	U	1	0.0068	U	1	0.0046	U	1	0.0053	U	1	0.0061	U	1	0.0051	U	1	0.0047	U	1	0.0074	U	1	0.0049	U	1	0.0048	U	1	0.0089	U	1
1,3,5-trimethylbenzene	3.1	100		0.0042	U	1	0.0068	U	1	0.0046	U	1	0.0053	U	1	0.0061	U	1	0.0051	U	1	0.0047	U	1	0.0074	U	1	0.0049	U	1	0.0048	U	1	0.57	U	50
1,3-dichlorobenzene	2.6	38		0.0042	U	1	0.0068	U	1	0.0046	U	1	0.0053	U	1	0.0061	U	1	0.0051	U	1	0.0047	U	1	0.0074	U	1	0.0049	U	1	0.0048	U	1	0.57	U	50
1,4-dichlorobenzene	1.8	24		0.0042	U	1	0.0068	U	1	0.0046	U	1	0.0053	U	1	0.0061	U	1	0.0051	U	1	0.0047	U	1	0.0074	U	1	0.0049	U	1	0.0048	U	1	0.57	U	50
1,4-dioxane	0.1	5.7		0.063	U	1	0.1	U	1	0.068	U	1	0.08	U	1	0.091	U	1	0.077	U	1	0.071	U	1	0.11	U	1	0.074	U	1	0.073	U	1	0.13	U	1
2-butanone (MEK)	0.1	100		0.025	U	1	0.041	U	1	0.027	U	1	0.032	U	1	0.036	U	1	0.031	U	1	0.028	U	1	0.044	U	1	0.03	U	1	0.029	U	1	0.054	U	1
2-hexanone (MBK)	NA	NA		0.021	U	1	0.034	U	1	0.023	U	1	0.027	U	1	0.03	U	1	0.026	U	1	0.024	U	1	0.037	U	1	0.025	U	1	0.024	U	1	0.045	U	1
4-methyl-2-pentanone	NA	NA		0.021	U	1	0.034	U	1	0.023	U	1	0.027	U	1	0.03	U	1	0.026	U	1	0.024	U	1	0.037	U	1	0.025	U	1	0.024	U	1	0.045	U	1
acetone	0.03	100		0.042	U	1	0.068	U	1	0.046	U	1	0.053	U	1	0.061	U	1	0.051	U	1	0.047	U	1	0.074	U	1	0.049	U	1	0.048	U	1	0.089	U	1
acrolein	NA	NA		0.0042	U	1	0.0068	U	1	0.0046	U	1	0.0053	U	1	0.0061	U	1	0.0051	U	1	0.0047	U	1	0.0074	U	1	0.0049	U	1	0.0048	U	1	0.0089	U	1
acrylonitrile	NA	NA		0.0042	U	1	0.0068	U	1	0.0046	U	1	0.0053	U	1	0.0061	U	1	0.0051	U	1	0.0047	U	1	0.0074	U	1	0.0049	U	1	0.0048	U	1	0.0089	U	1
benzene	0.06	3.7		0.0042	U	1	0.0068	U	1	0.0046	U	1	0.0053	U	1	0.0061	U	1	0.0051	U	1	0.0047	U	1	0.0074	U	1	0.0049	U	1	0.0048	U	1	0.0089	U	1
bromochloromethane	NA	NA		0.0042	U	1	0.0068	U	1	0.0046	U	1	0.0053	U	1	0.0061	U	1	0.0051	U	1	0.0047	U	1	0.0074	U	1	0.0049	U	1	0.0048	U	1	0.0089	U	1
bromodichloromethane	NA	NA		0.0042	U	1	0.0068	U	1	0.0046	U	1	0.0053	U	1	0.0061	U	1	0.0051	U	1	0.0047	U	1	0.0074	U	1	0.0049	U	1	0.0048	U	1	0.0089	U	1
Bromoform	NA	NA		0.0042	U	1	0.0068	U	1	0.0046	U	1	0.0053	U	1	0.0061	U	1	0.0051	U	1	0.0047	U	1	0.0074	U	1	0.0049	U	1	0.0048	U	1	0.0089	U	1
bromomethane	NA	NA		0.0042	U	1	0.0068	U	1	0.0046	U	1	0.0053	U	1	0.0061	U	1	0.0051	U	1	0.0047	U	1	0.0074	U	1	0.0049	U	1	0.0048	U	1	0.0089	U	1
carbon disulfide	NA	NA		0.0042	U	1	0.0068	U	1	0.0046	U	1	0.0053	U	1	0.0061	U	1	0.0051	U	1	0.0047	U	1	0.0074	U	1	0.0049	U	1	0.0048	U	1	0.0089	U	1
carbon tetrachloride	0.76	7.1		0.0042	U	1	0.0068	U	1	0.0046	U	1	0.0053	U	1	0.0061	U	1	0.0051	U	1	0.0047	U	1	0.0074	U	1	0.0049	U	1	0.0048	U	1	0.0089	U	1
chlorobenzene	4.5	100		0.0042	U	1	0.0068	U	1	0.0046	U	1	0.0053	U	1	0.0061	U	1	0.0051	U	1	0.0047	U	1	0.0074	U	1	0.0049	U	1	0.0048	U	1	0.0089	U	1
chloroethane	NA	NA		0.0042	U	1	0.0068	U	1	0.0046	U	1	0.0053	U	1	0.0061	U	1	0.0051	U	1	0.0047	U	1	0.0074	U	1	0.0049	U	1	0.0048	U	1	0.0089	U	1
chloroform	0.37	24		0.0042	U	1	0.0068	U	1	0.0046	U	1	0.0053	U	1	0.0061	U	1	0.0051	U	1	0.0047	U	1	0.0074	U	1	0.0049	U	1	0.0048	U	1	0.0089	U	1
chloromethane	NA	NA		0.0042	U	1	0.0068	U	1	0.0046	U	1	0.0053	U	1	0.0061	U	1	0.0051	U	1	0.0047	U	1	0.0074	U	1	0.0049	U	1	0.0048	U	1	0.0089	U	1
cis-1,2-dichloroethylene (DCE)	0.019	41		0.0042	U	1	0.0068	U	1	0.0046	U	1	0.0053	U	1	0.0061	U	1	0.0051	U	1	0.0047	U	1	0.0074	U	1	0.0049	U	1	0.0048	U	1	0.0089	U	1
cis-1,3-dichloropropylene	NA	NA		0.0042	U	1	0.0068	U	1	0.0046	U	1	0.0053	U	1	0.0061	U	1	0.0051	U	1	0.0047	U	1	0.0074	U	1	0.0049	U	1	0.0048	U	1	0.0089	U	1
cyclohexane	NA	NA		0.0042	U	1	0.0068	U	1	0.0046	U	1	0.0053	U	1	0.0061	U	1	0.0051	U	1	0.0047	U	1	0.0074	U	1	0.0049	U	1	0.0048	U	1	0.0089	U	1
dibromochloromethane	NA	NA		0.0042	U	1	0.0068	U	1	0.0046	U	1	0.0053	U	1	0.0061	U	1	0.0051	U	1	0.0047	U	1	0.0074	U	1	0.0049	U	1	0.0048	U	1	0.0089	U	1
dibromomethane	NA	NA		0.0042	U	1	0.0068	U	1	0.0046	U	1	0.0053	U	1	0.0061	U	1	0.0051	U	1	0.0047	U	1	0.0074	U	1	0.0049	U	1	0.0048	U	1	0.0089	U	1
dichlorodifluoromethane	NA	NA		0.0042	U	1	0.0068	U	1	0.0046	U	1	0.0053	U	1	0.0061	U	1	0.0051	U	1	0.0047	U	1	0.0074	U	1	0.0049	U	1	0.0048	U	1	0.0089	U	1
ethyl benzene	1	76		0.0042	U	1	0.0068	U	1	0.0046	U	1	0.0053	U	1	0.0061	U	1	0.0051	U	1	0.0047	U	1	0.0074	U	1	0.0049	U	1	0.0048	U	1	0.0089	U	1
hexachlorobutadiene	NA	NA		0.0042	U	1	0.0068	U	1	0.0046	U	1	0.0053	U	1	0.0061	U	1	0.0051	U	1	0.0047	U	1	0.0074	U	1	0.0049	U	1	0.0048	U	1	0.57	U	50
isopropylbenzene	2.3	100		0.0042	U	1	0.0068	U	1	0.0046	U	1	0.0053	U	1	0.0061	U	1	0.0051	U	1	0.0047	U	1	0.0074	U	1	0.0049	U	1	0.0048	U	1	0.57	U	50
methyl acetate	NA	NA		0.042	U	1	0.068	U	1	0.046	U	1	0.053	U	1	0.061	U	1	0.051	U	1	0.047	U	1	0.074	U	1	0.049	U	1	0.048	U	1	0.089	U	1
methyl tert-butyl ether (MTBE)	0.1	100		0.0084	U	1	0.014	U	1	0.0091	U	1	0.011	U	1	0.012	U	1	0.01	U	1	0.0095	U	1	0.015	U	1	0.0099	U	1	0.0097	U	1	0.018	U	1
methylcyclohexane	NA	NA		0.0042	U	1	0.0068	U	1	0.0046	U	1	0.0053	U	1	0.0061	U	1	0.0051	U	1	0.0047	U	1	0.0074	U	1	0.0049	U	1	0.0048	U	1	0.0089	U	1
methylene chloride	0.05	81		0.021	U	1	0.034	U	1	0.023	U	1	0.027	U	1	0.03	U	1	0.026	U	1	0.024	U	1	0.037	U	1	0.025	U	1	0.024	U	1	0.045	U	1
n-butylbenzene	18	100		0.0042	U	1	0.0068	U	1	0.0046	U	1	0.0053	U	1	0.0061	U	1	0.0051	U	1	0.0047	U	1	0.0074	U	1	0.0049	U	1	0.0048	U	1	0.57	U	50
n-propylbenzene	5	100		0.0042	U	1	0.0068	U	1	0.0046	U	1	0.0053	U	1	0.0061	U	1	0.0051	U	1	0.0047	U	1	0.0074	U	1	0.0049	U	1	0.0048	U	1	0.57	U	50
o-xylene	0.26	100		0.0042	U	1	0.0068	U	1	0.0046	U	1	0.0053	U	1	0.0061	U	1	0.0051	U	1	0.0047	U	1	0.0074	U	1	0.0049	U	1	0.0048	U	1	0.0089	U	1
p- & m- xylenes	0.26	100		0.0042	U	1	0.0068	U	1	0.0046	U	1	0.0053	U	1	0.0061	U	1	0.0051	U	1	0.0047	U	1	0.0074	U	1	0.0049	U	1	0.0048	U	1	0.0089	U	1
p-isopropyltoluene	10	NA		0.0042	U	1	0.0068	U	1	0.0046	U	1	0.0053	U	1	0.0061	U	1	0.0051	U	1	0.0047	U	1	0.0074	U	1	0.0049	U	1	0.0048	U	1	0.57	U	50
sec-butylbenzene	25	100		0.0042	U	1	0.0068	U	1	0.0046	U	1	0.0053	U	1	0.0061	U	1	0.0051	U	1	0.0047	U	1	0.0074	U	1	0.0049	U	1	0.0048	U	1	0.57	U	50
styrene	NA	NA		0.0042	U	1	0.0068	U	1	0.0046	U	1	0.0053	U	1	0.0061	U	1	0.0051	U	1	0.0047	U	1	0.0074	U	1	0.0049	U	1	0.0048	U	1	0.0089	U	1
tert-butyl alcohol	NA	NA		0.042	U	1	0.068	U	1	0.046	U	1	0.053	U	1	0.061	U	1	0.051	U	1	0.047	U	1	0.074	U	1	0.049	U	1	0.048	U	1	0.089	U	1
tert-butylbenzene	11	100		0.0042	U	1	0.0068	U	1	0.0046	U	1	0.0053	U	1	0.0061	U	1	0.0051	U	1	0.0047	U	1	0.0074	U	1	0.0049	U	1	0.0048	U	1	0.57	U	50
tetrachloroethylene (PCE)	1.3	18		0.0042	U	1	0.0068	U	1	0.0046	U	1	0.0053	U	1	0.0061	U	1	0.0051	U	1	0.0047	U	1	0.0074	U	1	0.0049	U	1	0.0048	U	1	0.0089	U	1
toluene	0.7	100		0.0042	U	1	0.0068	U	1	0.0046	U	1	0.0053	U	1	0.0061	U	1	0.0051	U	1	0.0047	U	1	0.0074	U	1	0.0049	U	1	0.0048	U	1	0.0089	U	1
trans-1,2-dichloroethylene (DCE)	0.19	100		0.0042	U	1	0.0068	U	1	0.0046	U	1	0.0053	U	1	0.0061	U	1	0.0051	U	1	0.0047	U	1	0.0074	U	1	0.0049	U	1	0.0048	U	1	0.0089	U	1
trans-1,3-dichloropropylene	NA	NA		0.0042	U	1	0.0068	U	1	0.0046	U	1	0.0053	U	1	0.0061	U	1	0.0051	U	1	0.0047	U	1	0.0074	U	1	0.0049	U	1	0.0048	U	1	0.0089	U	1
trichloroethylene (TCE)	0.47	6.4		0.0042	U	1	0.0068	U	1	0.0046	U	1	0.0053	U	1	0.0061	U	1	0.0051	U	1	0.0047	U	1	0.0074	U	1	0.0049	U	1	0.0048	U	1	0.0089	U	1
trichlorofluoromethane	NA	NA		0.0042	U	1	0.0068	U	1	0.0046	U	1	0.0053	U	1	0.0061	U	1	0.0051	U	1	0.0047	U	1	0.0074	U	1	0.0049	U	1	0.0048	U	1	0.0089	U	1
vinyl chloride (VC)	0.03	0.48		0.0042	U	1	0.0068	U	1	0.0046	U	1	0.0053	U	1	0.0061	U	1	0.0051	U	1	0.0047	U	1	0.0074	U	1	0.0049	U	1	0.0048	U	1	0.0089	U	1
xylenes, total	0.26	100		0.0042	U	1	0.0068	U	1	0.0046	U	1	0.0053	U	1	0.0061	U	1	0.0051	U	1	0.0047	U	1	0.0074	U	1	0.0049	U	1	0.0048	U	1	0.0089	U	1

value ≤ UU SCO
value > UU SCO

Q = Laboratory Qualifier DL = Dilution NA = not available (addtional flags: B-in blank, D-diluted, E-estimated, J-approximate, L-Biased Low, S-lab solvent)

Table 1: VOCs in Soil

The Green, Newburgh, NY
BCP ID: C336099

GALLAGHER BASSETT | TECHNICAL SERVICES

All data in mg/Kg (ppm)			Sample	2SB-12 4-6			2SB-12 8-10			2SB-13 SURF			2SB-13 0-5			2SB-13 8-10			2SB-14 SURF			2SB-14 0-5			2SB-14 10-12.5			2SB-15 SURF			2SB-15 0-5			DUP-20251003		
U= Not Detected ≥ value			Date	2025-10-02			2025-10-02			2025-10-02			2025-10-02			2025-10-02			2025-10-02			2025-10-02			2025-10-02			2025-10-03			2025-10-03			2025-10-03		
VOCs (8260)	**UU SCO**	**RRU SCO**	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL
1,1,1,2-tetrachloroethane	NA	NA	0.0069	U	1	0.0054	U	1	0.0076	U	1	0.0063	U	1	0.0058	U	1	0.0074	U	1	0.0059	U	1	0.0051	U	1	0.0073	U	1	0.0061	U	1	0.0054	U	1
1,1,1-trichloroethane (TCA)	0.68	100	0.0069	U	1	0.0054	U	1	0.0076	U	1	0.0063	U	1	0.0058	U	1	0.0074	U	1	0.0059	U	1	0.0051	U	1	0.0073	U	1	0.0061	U	1	0.0054	U	1
1,1,2,2-tetrachloroethane	NA	NA	0.0069	U	1	0.0054	U	1	0.42	U	50	0.0063	U	1	0.0058	U	1	0.42	U	50	0.0059	U	1	0.0051	U	1	0.0073	U	1	0.0061	U	1	0.0054	U	1
1,1,2-trichloro-1,2,2-trifluoroethane	NA	NA	0.0069	U	1	0.0054	U	1	0.0076	U	1	0.0063	U	1	0.0058	U	1	0.0074	U	1	0.0059	U	1	0.0051	U	1	0.0073	U	1	0.0061	U	1	0.0054	U	1
1,1,2-trichloroethane	NA	NA	0.0069	U	1	0.0054	U	1	0.0076	U	1	0.0063	U	1	0.0058	U	1	0.0074	U	1	0.0059	U	1	0.0051	U	1	0.0073	U	1	0.0061	U	1	0.0054	U	1
1,1-dichloroethane	0.27	47	0.0069	U	1	0.0054	U	1	0.0076	U	1	0.0063	U	1	0.0058	U	1	0.0074	U	1	0.0059	U	1	0.0051	U	1	0.0073	U	1	0.0061	U	1	0.0054	U	1
1,1-dichloroethylene	0.24	0.98	0.0069	U	1	0.0054	U	1	0.0076	U	1	0.0063	U	1	0.0058	U	1	0.0074	U	1	0.0059	U	1	0.0051	U	1	0.0073	U	1	0.0061	U	1	0.0054	U	1
1,2,3-Trichlorobenzene	NA	NA	0.0069	U	1	0.0054	U	1	0.42	U	50	0.0063	U	1	0.0058	U	1	0.42	U	50	0.0059	U	1	0.0051	U	1	0.0073	U	1	0.0061	U	1	0.0054	U	1
1,2,3-Trichloropropane	NA	NA	0.0069	U	1	0.0054	U	1	0.42	U	50	0.0063	U	1	0.0058	U	1	0.42	U	50	0.0059	U	1	0.0051	U	1	0.0073	U	1	0.0061	U	1	0.0054	U	1
1,2,4-Trichlorobenzene	NA	NA	0.0069	U	1	0.0054	U	1	0.42	U	50	0.0063	U	1	0.0058	U	1	0.42	U	50	0.0059	U	1	0.0051	U	1	0.0073	U	1	0.0061	U	1	0.0054	U	1
1,2,4-Trimethylbenzene	5.9	100	0.0069	U	1	0.0054	U	1	0.42	U	50	0.0063	U	1	0.0058	U	1	0.42	U	50	0.0059	U	1	0.0051	U	1	0.0073	U	1	0.0061	U	1	0.0054	U	1
1,2-Dibromo-3-chloropropane	NA	NA	0.0069	U	1	0.0054	U	1	0.42	U	50	0.0063	U	1	0.0058	U	1	0.42	U	50	0.0059	U	1	0.0051	U	1	0.0073	U	1	0.0061	U	1	0.0054	U	1
1,2-dibromoethane	NA	NA	0.0069	U	1	0.0054	U	1	0.0076	U	1	0.0063	U	1	0.0058	U	1	0.0074	U	1	0.0059	U	1	0.0051	U	1	0.0073	U	1	0.0061	U	1	0.0054	U	1
1,2-dichlorobenzene	1.1	100	0.0069	U	1	0.0054	U	1	0.42	U	50	0.0063	U	1	0.0058	U	1	0.42	U	50	0.0059	U	1	0.0051	U	1	0.0073	U	1	0.0061	U	1	0.0054	U	1
1,2-dichloroethane	0.02	5.8	0.0069	U	1	0.0054	U	1	0.0076	U	1	0.0063	U	1	0.0058	U	1	0.0074	U	1	0.0059	U	1	0.0051	U	1	0.0073	U	1	0.0061	U	1	0.0054	U	1
1,2-dichloropropane	NA	NA	0.0069	U	1	0.0054	U	1	0.0076	U	1	0.0063	U	1	0.0058	U	1	0.0074	U	1	0.0059	U	1	0.0051	U	1	0.0073	U	1	0.0061	U	1	0.0054	U	1
1,3,5-trimethylbenzene	3.1	100	0.0069	U	1	0.0054	U	1	0.42	U	50	0.0063	U	1	0.0058	U	1	0.42	U	50	0.0059	U	1	0.0051	U	1	0.0073	U	1	0.0061	U	1	0.0054	U	1
1,3-dichlorobenzene	2.6	38	0.0069	U	1	0.0054	U	1	0.42	U	50	0.0063	U	1	0.0058	U	1	0.42	U	50	0.0059	U	1	0.0051	U	1	0.0073	U	1	0.0061	U	1	0.0054	U	1
1,4-dichlorobenzene	1.8	24	0.0069	U	1	0.0054	U	1	0.42	U	50	0.0063	U	1	0.0058	U	1	0.42	U	50	0.0059	U	1	0.0051	U	1	0.0073	U	1	0.0061	U	1	0.0054	U	1
1,4-dioxane	0.1	5.7	0.1	U	1	0.081	U	1	0.11	U	1	0.095	U	1	0.087	U	1	0.11	U	1	0.088	U	1	0.076	U	1	0.11	U	1	0.091	U	1	0.081	U	1
2-butanone (MEK)	0.1	100	0.042	U	1	0.032	U	1	0.046	U	1	0.038	U	1	0.035	U	1	0.044	U	1	0.035	U	1	0.03	U	1	0.044	U	1	0.036	U	1	0.032	U	1
2-hexanone (MBK)	NA	NA	0.035	U	1	0.027	U	1	0.038	U	1	0.032	U	1	0.029	U	1	0.037	U	1	0.029	U	1	0.025	U	1	0.037	U	1	0.03	U	1	0.027	U	1
4-methyl-2-pentanone	NA	NA	0.035	U	1	0.027	U	1	0.038	U	1	0.032	U	1	0.029	U	1	0.037	U	1	0.029	U	1	0.025	U	1	0.037	U	1	0.03	U	1	0.027	U	1
acetone	0.03	100	0.069	U	1	0.054	U	1	0.076	U	1	0.063	U	1	0.058	U	1	0.074	U	1	0.059	U	1	0.051	U	1	0.073	U	1	0.061	U	1	0.054	U	1
acrolein	NA	NA	0.0069	U	1	0.0054	U	1	0.0076	U	1	0.0063	U	1	0.0058	U	1	0.0074	U	1	0.0059	U	1	0.0051	U	1	0.0073	U	1	0.0061	U	1	0.0054	U	1
acrylonitrile	NA	NA	0.0069	U	1	0.0054	U	1	0.0076	U	1	0.0063	U	1	0.0058	U	1	0.0074	U	1	0.0059	U	1	0.0051	U	1	0.0073	U	1	0.0061	U	1	0.0054	U	1
benzene	0.06	3.7	0.0069	U	1	0.0054	U	1	0.0076	U	1	0.0063	U	1	0.0058	U	1	0.0074	U	1	0.0059	U	1	0.0051	U	1	0.0073	U	1	0.0061	U	1	0.0054	U	1
bromochloromethane	NA	NA	0.0069	U	1	0.0054	U	1	0.0076	U	1	0.0063	U	1	0.0058	U	1	0.0074	U	1	0.0059	U	1	0.0051	U	1	0.0073	U	1	0.0061	U	1	0.0054	U	1
bromodichloromethane	NA	NA	0.0069	U	1	0.0054	U	1	0.0076	U	1	0.0063	U	1	0.0058	U	1	0.0074	U	1	0.0059	U	1	0.0051	U	1	0.0073	U	1	0.0061	U	1	0.0054	U	1
Bromoform	NA	NA	0.0069	U	1	0.0054	U	1	0.0076	U	1	0.0063	U	1	0.0058	U	1	0.0074	U	1	0.0059	U	1	0.0051	U	1	0.0073	U	1	0.0061	U	1	0.0054	U	1
bromomethane	NA	NA	0.0069	U	1	0.0054	U	1	0.0076	U	1	0.0063	U	1	0.0058	U	1	0.0074	U	1	0.0059	U	1	0.0051	U	1	0.0073	U	1	0.0061	U	1	0.0054	U	1
carbon disulfide	NA	NA	0.0069	U	1	0.0054	U	1	0.0076	U	1	0.0063	U	1	0.0058	U	1	0.0074	U	1	0.0059	U	1	0.0051	U	1	0.0073	U	1	0.0061	U	1	0.0054	U	1
carbon tetrachloride	0.76	7.1	0.0069	U	1	0.0054	U	1	0.0076	U	1	0.0063	U	1	0.0058	U	1	0.0074	U	1	0.0059	U	1	0.0051	U	1	0.0073	U	1	0.0061	U	1	0.0054	U	1
chlorobenzene	4.5	100	0.0069	U	1	0.0054	U	1	0.0076	U	1	0.0063	U	1	0.0058	U	1	0.0074	U	1	0.0059	U	1	0.0051	U	1	0.0073	U	1	0.0061	U	1	0.0054	U	1
chloroethane	NA	NA	0.0069	U	1	0.0054	U	1	0.0076	U	1	0.0063	U	1	0.0058	U	1	0.0074	U	1	0.0059	U	1	0.0051	U	1	0.0073	U	1	0.0061	U	1	0.0054	U	1
chloroform	0.37	24	0.0069	U	1	0.0054	U	1	0.0076	U	1	0.0063	U	1	0.0058	U	1	0.0074	U	1	0.0059	U	1	0.0051	U	1	0.0073	U	1	0.0061	U	1	0.0054	U	1
chloromethane	NA	NA	0.0069	U	1	0.0054	U	1	0.0076	U	1	0.0063	U	1	0.0058	U	1	0.0074	U	1	0.0059	U	1	0.0051	U	1	0.0073	U	1	0.0061	U	1	0.0054	U	1
cis-1,2-dichloroethylene (DCE)	0.019	41	0.0069	U	1	0.0054	U	1	0.0076	U	1	0.0063	U	1	0.0058	U	1	0.0074	U	1	0.0059	U	1	0.0051	U	1	0.0073	U	1	0.0061	U	1	0.0054	U	1
cis-1,3-dichloropropylene	NA	NA	0.0069	U	1	0.0054	U	1	0.0076	U	1	0.0063	U	1	0.0058	U	1	0.0074	U	1	0.0059	U	1	0.0051	U	1	0.0073	U	1	0.0061	U	1	0.0054	U	1
cyclohexane	NA	NA	0.0069	U	1	0.0054	U	1	0.0076	U	1	0.0063	U	1	0.0058	U	1	0.0074	U	1	0.0059	U	1	0.0051	U	1	0.0073	U	1	0.0061	U	1	0.0054	U	1
dibromochloromethane	NA	NA	0.0069	U	1	0.0054	U	1	0.0076	U	1	0.0063	U	1	0.0058	U	1	0.0074	U	1	0.0059	U	1	0.0051	U	1	0.0073	U	1	0.0061	U	1	0.0054	U	1
dibromomethane	NA	NA	0.0069	U	1	0.0054	U	1	0.0076	U	1	0.0063	U	1	0.0058	U	1	0.0074	U	1	0.0059	U	1	0.0051	U	1	0.0073	U	1	0.0061	U	1	0.0054	U	1
dichlorodifluoromethane	NA	NA	0.0069	U	1	0.0054	U	1	0.0076	U	1	0.0063	U	1	0.0058	U	1	0.0074	U	1	0.0059	U	1	0.0051	U	1	0.0073	U	1	0.0061	U	1	0.0054	U	1
ethyl benzene	1	76	0.0069	U	1	0.0054	U	1	0.0076	U	1	0.0063	U	1	0.0058	U	1	0.0074	U	1	0.0059	U	1	0.0051	U	1	0.0073	U	1	0.0061	U	1	0.0054	U	1
hexachlorobutadiene	NA	NA	0.0069	U	1	0.0054	U	1	0.42	U	50	0.0063	U	1	0.0058	U	1	0.42	U	50	0.0059	U	1	0.0051	U	1	0.0073	U	1	0.0061	U	1	0.0054	U	1
isopropylbenzene	2.3	100	0.0069	U	1	0.0054	U	1	0.42	U	50	0.0063	U	1	0.0058	U	1	0.42	U	50	0.0059	U	1	0.0051	U	1	0.0073	U	1	0.0061	U	1	0.0054	U	1
methyl acetate	NA	NA	0.069	U	1	0.054	U	1	0.076	U	1	0.063	U	1	0.058	U	1	0.074	U	1	0.059	U	1	0.051	U	1	0.073	U	1	0.061	U	1	0.054	U	1
methyl tert-butyl ether (MTBE)	0.1	100	0.014	U	1	0.011	U	1	0.015	U	1	0.013	U	1	0.012	U	1	0.015	U	1	0.012	U	1	0.01	U	1	0.015	U	1	0.012	U	1	0.011	U	1
methylcyclohexane	NA	NA	0.0069	U	1	0.0054	U	1	0.0076	U	1	0.0063	U	1	0.0058	U	1	0.0074	U	1	0.0059	U	1	0.0051	U	1	0.0073	U	1	0.0061	U	1	0.0054	U	1
methylene chloride	0.05	81	0.035	U	1	0.027	U	1	0.038	U	1	0.032	U	1	0.029	U	1	0.037	U	1	0.029	U	1	0.025	U	1	0.037	U	1	0.03	U	1	0.027	U	1
n-butylbenzene	18	100	0.0069	U	1	0.0054	U	1	0.42	U	50	0.0063	U	1	0.0058	U	1	0.42	U	50	0.0059	U	1	0.0051	U	1	0.0073	U	1	0.0061	U	1	0.0054	U	1
n-propylbenzene	5	100	0.0069	U	1	0.0054	U	1	0.42	U	50	0.0063	U	1	0.0058	U	1	0.42	U	50	0.0059	U	1	0.0051	U	1	0.0073	U	1	0.0061	U	1	0.0054	U	1
o-xylene	0.26	100	0.0069	U	1	0.0054	U	1	0.0076	U	1	0.0063	U	1	0.0058	U	1	0.0074	U	1	0.0059	U	1	0.0051	U	1	0.0073	U	1	0.0061	U	1	0.0054	U	1
p- & m- xylenes	0.26	100	0.0069	U	1	0.0054	U	1	0.0076	U	1	0.0063	U	1	0.0058	U	1	0.0074	U	1	0.0059	U	1	0.0051	U	1	0.0073	U	1	0.0061	U	1	0.0054	U	1
p-isopropyltoluene	10	NA	0.0069	U	1	0.0054	U	1	0.42	U	50	0.0063	U	1	0.0058	U	1	0.42	U	50	0.0059	U	1	0.0051	U	1	0.0073	U	1	0.0061	U	1	0.0054	U	1
sec-butylbenzene	25	100	0.0069	U	1	0.0054	U	1	0.42	U	50	0.0063	U	1	0.0058	U	1	0.42	U	50	0.0059	U	1	0.0051	U	1	0.0073	U	1	0.0061	U	1	0.0054	U	1
styrene	NA	NA	0.0069	U	1	0.0054	U	1	0.0076	U	1	0.0063	U	1	0.0058	U	1	0.0074	U	1	0.0059	U	1	0.0051	U	1	0.0073	U	1	0.0061	U	1	0.0054	U	1
tert-butyl alcohol	NA	NA	0.069	U	1	0.054	U	1	0.076	U	1	0.063	U	1	0.058	U	1	0.074	U	1	0.059	U	1	0.051	U	1	0.073	U	1	0.061	U	1	0.054	U	1
tert-butylbenzene	11	100	0.0069	U	1	0.0054	U	1	0.42	U	50	0.0063	U	1	0.0058	U	1	0.42	U	50	0.0059	U	1	0.0051	U	1	0.0073	U	1	0.0061	U	1	0.0054	U	1
tetrachloroethylene (PCE)	1.3	18	0.0069	U	1	0.0054	U	1	0.0076	U	1	0.0063	U	1	0.0058	U	1	0.0074	U	1	0.0059	U	1	0.0051	U	1	0.0073	U	1	0.0061	U	1	0.0054	U	1
toluene	0.7	100	0.0069	U	1	0.0054	U	1	0.0076	U	1	0.0063	U	1	0.0058	U	1	0.0074	U	1	0.0059	U	1	0.0051	U	1	0.0073	U	1	0.0061	U	1	0.0054	U	1
trans-1,2-dichloroethylene (DCE)	0.19	100	0.0069	U	1	0.0054	U	1	0.0076	U	1	0.0063	U	1	0.0058	U	1	0.0074	U	1	0.0059	U	1	0.0051	U	1	0.0073	U	1	0.0061	U	1	0.0054	U	1
trans-1,3-dichloropropylene	NA	NA	0.0069	U	1	0.0054	U	1	0.0076	U	1	0.0063	U	1	0.0058	U	1	0.0074	U	1	0.0059	U	1	0.0051	U	1	0.0073	U	1	0.0061	U	1	0.0054	U	1
trichloroethylene (TCE)	0.47	6.4	0.0069	U	1	0.0054	U	1	0.0076	U	1	0.0063	U	1	0.0058	U	1	0.0074	U	1	0.0059	U	1	0.0051	U	1	0.0073	U	1	0.0061	U	1	0.0054	U	1
trichlorofluoromethane	NA	NA	0.0069	U	1	0.0054	U	1	0.0076	U	1	0.0063	U	1	0.0058	U	1	0.0074	U	1	0.0059	U	1	0.0051	U	1	0.0073	U	1	0.0061	U	1	0.0054	U	1
vinyl chloride (VC)	0.03	0.48	0.0069	U	1	0.0054	U	1	0.0076	U	1	0.0063	U	1	0.0058	U	1	0.0074	U	1	0.0059	U	1	0.0051	U	1	0.0073	U	1	0.0061	U	1	0.0054	U	1
xylenes, total	0.26	100	0.0069	U	1	0.0054	U	1	0.0076	U	1	0.0063	U	1	0.0058	U	1	0.0074	U	1	0.0059	U	1	0.0051	U	1	0.0073	U	1	0.0061	U	1	0.0054	U	1

value ≤ UU SCO
value > UU SCO

Q = Laboratory Qualifier DL = Dilution NA = not available (addtional flags: B-in blank, D-diluted, E-estimated, J-approximate, L-Biased Low, S-lab solvent)

Table 1: VOCs in Soil

The Green, Newburgh, NY
BCP ID: C336099

GALLAGHER BASSETT | TECHNICAL SERVICES

All data in mg/Kg (ppm)			Sample	2SB-15 10-12			2SB-16 SURF			2SB-16 10-12			2SB-17 SURF			2SB-17 0-5			2SB-17 10-12			2SB-18 SURF			2SB-18 10-15			2SB-19 SURF			2SB-19 0-5			2SB-19 10-13		
U= Not Detected ≥ value			Date	2025-10-03			2025-10-03			2025-10-03			2025-10-03			2025-10-03			2025-10-03			2025-10-03			2025-10-03			2025-10-03			2025-10-03			2025-10-03		
VOCs (8260)	**UU SCO**	**RRU SCO**		Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL
1,1,1,2-tetrachloroethane	NA	NA		0.0058	U	1	0.0066	U	1	0.0059	U	1	0.0065	U	1	0.0057	U	1	0.0055	U	1	0.0059	U	1	0.006	U	1	0.0075	U	1	0.0058	U	1	0.0043	U	1
1,1,1-trichloroethane (TCA)	0.68	100		0.0058	U	1	0.0066	U	1	0.0059	U	1	0.0065	U	1	0.0057	U	1	0.0055	U	1	0.0059	U	1	0.006	U	1	0.0075	U	1	0.0058	U	1	0.0043	U	1
1,1,2,2-tetrachloroethane	NA	NA		0.0058	U	1	0.38	U	50	0.33	U	50	0.0065	U	1	0.0057	U	1	0.32	U	50	0.31	U	50	0.006	U	1	0.43	U	50	0.32	U	50	0.0043	U	1
1,1,2-trichloro-1,2,2-trifluoroethane	NA	NA		0.0058	U	1	0.0066	U	1	0.0059	U	1	0.0065	U	1	0.0057	U	1	0.0055	U	1	0.0059	U	1	0.006	U	1	0.0075	U	1	0.0058	U	1	0.0043	U	1
1,1,2-trichloroethane	NA	NA		0.0058	U	1	0.0066	U	1	0.0059	U	1	0.0065	U	1	0.0057	U	1	0.0055	U	1	0.0059	U	1	0.006	U	1	0.0075	U	1	0.0058	U	1	0.0043	U	1
1,1-dichloroethane	0.27	47		0.0058	U	1	0.0066	U	1	0.0059	U	1	0.0065	U	1	0.0057	U	1	0.0055	U	1	0.0059	U	1	0.006	U	1	0.0075	U	1	0.0058	U	1	0.0043	U	1
1,1-dichloroethylene	0.24	0.98		0.0058	U	1	0.0066	U	1	0.0059	U	1	0.0065	U	1	0.0057	U	1	0.0055	U	1	0.0059	U	1	0.006	U	1	0.0075	U	1	0.0058	U	1	0.0043	U	1
1,2,3-Trichlorobenzene	NA	NA		0.0058	U	1	0.38	U	50	0.33	U	50	0.0065	U	1	0.0057	U	1	0.32	U	50	0.31	U	50	0.006	U	1	0.43	U	50	0.32	U	50	0.0043	U	1
1,2,3-Trichloropropane	NA	NA		0.0058	U	1	0.38	U	50	0.33	U	50	0.0065	U	1	0.0057	U	1	0.32	U	50	0.31	U	50	0.006	U	1	0.43	U	50	0.32	U	50	0.0043	U	1
1,2,4-Trichlorobenzene	NA	NA		0.0058	U	1	0.38	U	50	0.33	U	50	0.0065	U	1	0.0057	U	1	0.32	U	50	0.31	U	50	0.006	U	1	0.43	U	50	0.32	U	50	0.0043	U	1
1,2,4-Trimethylbenzene	5.9	100		0.0058	U	1	0.38	U	50	0.33	U	50	0.0065	U	1	0.0057	U	1	0.32	U	50	0.31	U	50	0.006	U	1	0.43	U	50	0.32	U	50	0.0043	U	1
1,2-Dibromo-3-chloropropane	NA	NA		0.0058	U	1	0.38	U	50	0.33	U	50	0.0065	U	1	0.0057	U	1	0.32	U	50	0.31	U	50	0.006	U	1	0.43	U	50	0.32	U	50	0.0043	U	1
1,2-dibromoethane	NA	NA		0.0058	U	1	0.0066	U	1	0.0059	U	1	0.0065	U	1	0.0057	U	1	0.0055	U	1	0.0059	U	1	0.006	U	1	0.0075	U	1	0.0058	U	1	0.0043	U	1
1,2-dichlorobenzene	1.1	100		0.0058	U	1	0.38	U	50	0.33	U	50	0.0065	U	1	0.0057	U	1	0.32	U	50	0.31	U	50	0.006	U	1	0.43	U	50	0.32	U	50	0.0043	U	1
1,2-dichloroethane	0.02	5.8		0.0058	U	1	0.0066	U	1	0.0059	U	1	0.0065	U	1	0.0057	U	1	0.0055	U	1	0.0059	U	1	0.006	U	1	0.0075	U	1	0.0058	U	1	0.0043	U	1
1,2-dichloropropane	NA	NA		0.0058	U	1	0.0066	U	1	0.0059	U	1	0.0065	U	1	0.0057	U	1	0.0055	U	1	0.0059	U	1	0.006	U	1	0.0075	U	1	0.0058	U	1	0.0043	U	1
1,3,5-trimethylbenzene	3.1	100		0.0058	U	1	0.38	U	50	0.33	U	50	0.0065	U	1	0.0057	U	1	0.32	U	50	0.31	U	50	0.006	U	1	0.43	U	50	0.32	U	50	0.0043	U	1
1,3-dichlorobenzene	2.6	38		0.0058	U	1	0.38	U	50	0.33	U	50	0.0065	U	1	0.0057	U	1	0.32	U	50	0.31	U	50	0.006	U	1	0.43	U	50	0.32	U	50	0.0043	U	1
1,4-dichlorobenzene	1.8	24		0.0058	U	1	0.38	U	50	0.33	U	50	0.0065	U	1	0.0057	U	1	0.32	U	50	0.31	U	50	0.006	U	1	0.43	U	50	0.32	U	50	0.0043	U	1
1,4-dioxane	0.1	5.7		0.087	U	1	0.1	U	1	0.088	U	1	0.097	U	1	0.085	U	1	0.082	U	1	0.088	U	1	0.09	U	1	0.11	U	1	0.087	U	1	0.065	U	1
2-butanone (MEK)	0.1	100		0.035	U	1	0.04	U	1	0.035	U	1	0.0073	J	1	0.034	U	1	0.033	U	1	0.035	U	1	0.036	U	1	0.045	U	1	0.035	U	1	0.026	U	1
2-hexanone (MBK)	NA	NA		0.029	U	1	0.033	U	1	0.029	U	1	0.032	U	1	0.028	U	1	0.027	U	1	0.029	U	1	0.03	U	1	0.038	U	1	0.029	U	1	0.022	U	1
4-methyl-2-pentanone	NA	NA		0.029	U	1	0.033	U	1	0.029	U	1	0.032	U	1	0.028	U	1	0.027	U	1	0.029	U	1	0.03	U	1	0.038	U	1	0.029	U	1	0.022	U	1
acetone	0.03	100		0.058	U	1	0.066	U	1	0.059	U	1	0.079	S	1	0.057	U	1	0.055	U	1	0.059	U	1	0.06	U	1	0.075	U	1	0.058	U	1	0.043	U	1
acrolein	NA	NA		0.0058	U	1	0.0066	U	1	0.0059	U	1	0.0065	U	1	0.0057	U	1	0.0055	U	1	0.0059	U	1	0.006	U	1	0.0075	U	1	0.0058	U	1	0.0043	U	1
acrylonitrile	NA	NA		0.0058	U	1	0.0066	U	1	0.0059	U	1	0.0065	U	1	0.0057	U	1	0.0055	U	1	0.0059	U	1	0.006	U	1	0.0075	U	1	0.0058	U	1	0.0043	U	1
benzene	0.06	3.7		0.0058	U	1	0.0066	U	1	0.0059	U	1	0.0065	U	1	0.0057	U	1	0.0055	U	1	0.0059	U	1	0.006	U	1	0.0075	U	1	0.0058	U	1	0.0043	U	1
bromochloromethane	NA	NA		0.0058	U	1	0.0066	U	1	0.0059	U	1	0.0065	U	1	0.0057	U	1	0.0055	U	1	0.0059	U	1	0.006	U	1	0.0075	U	1	0.0058	U	1	0.0043	U	1
bromodichloromethane	NA	NA		0.0058	U	1	0.0066	U	1	0.0059	U	1	0.0065	U	1	0.0057	U	1	0.0055	U	1	0.0059	U	1	0.006	U	1	0.0075	U	1	0.0058	U	1	0.0043	U	1
Bromoform	NA	NA		0.0058	U	1	0.0066	U	1	0.0059	U	1	0.0065	U	1	0.0057	U	1	0.0055	U	1	0.0059	U	1	0.006	U	1	0.0075	U	1	0.0058	U	1	0.0043	U	1
bromomethane	NA	NA		0.0058	U	1	0.0066	U	1	0.0059	U	1	0.0065	U	1	0.0057	U	1	0.0055	U	1	0.0059	U	1	0.006	U	1	0.0075	U	1	0.0058	U	1	0.0043	U	1
carbon disulfide	NA	NA		0.0058	U	1	0.0066	U	1	0.0059	U	1	0.0065	U	1	0.0057	U	1	0.0055	U	1	0.0059	U	1	0.006	U	1	0.0075	U	1	0.0058	U	1	0.0043	U	1
carbon tetrachloride	0.76	7.1		0.0058	U	1	0.0066	U	1	0.0059	U	1	0.0065	U	1	0.0057	U	1	0.0055	U	1	0.0059	U	1	0.006	U	1	0.0075	U	1	0.0058	U	1	0.0043	U	1
chlorobenzene	4.5	100		0.0058	U	1	0.0066	U	1	0.0059	U	1	0.0065	U	1	0.0057	U	1	0.0055	U	1	0.0059	U	1	0.006	U	1	0.0075	U	1	0.0058	U	1	0.0043	U	1
chloroethane	NA	NA		0.0058	U	1	0.0066	U	1	0.0059	U	1	0.0065	U	1	0.0057	U	1	0.0055	U	1	0.0059	U	1	0.006	U	1	0.0075	U	1	0.0058	U	1	0.0043	U	1
chloroform	0.37	24		0.0058	U	1	0.0066	U	1	0.0059	U	1	0.0065	U	1	0.0057	U	1	0.0055	U	1	0.0059	U	1	0.006	U	1	0.0075	U	1	0.0058	U	1	0.0043	U	1
chloromethane	NA	NA		0.0058	U	1	0.0066	U	1	0.0059	U	1	0.0065	U	1	0.0057	U	1	0.0055	U	1	0.0059	U	1	0.006	U	1	0.0075	U	1	0.0058	U	1	0.0043	U	1
cis-1,2-dichloroethylene (DCE)	0.019	41		0.0058	U	1	0.0066	U	1	0.0059	U	1	0.0065	U	1	0.0057	U	1	0.0055	U	1	0.0059	U	1	0.006	U	1	0.0075	U	1	0.0058	U	1	0.0043	U	1
cis-1,3-dichloropropylene	NA	NA		0.0058	U	1	0.0066	U	1	0.0059	U	1	0.0065	U	1	0.0057	U	1	0.0055	U	1	0.0059	U	1	0.006	U	1	0.0075	U	1	0.0058	U	1	0.0043	U	1
cyclohexane	NA	NA		0.0058	U	1	0.0066	U	1	0.0059	U	1	0.0065	U	1	0.0057	U	1	0.0055	U	1	0.0059	U	1	0.006	U	1	0.0075	U	1	0.0058	U	1	0.0043	U	1
dibromochloromethane	NA	NA		0.0058	U	1	0.0066	U	1	0.0059	U	1	0.0065	U	1	0.0057	U	1	0.0055	U	1	0.0059	U	1	0.006	U	1	0.0075	U	1	0.0058	U	1	0.0043	U	1
dibromomethane	NA	NA		0.0058	U	1	0.0066	U	1	0.0059	U	1	0.0065	U	1	0.0057	U	1	0.0055	U	1	0.0059	U	1	0.006	U	1	0.0075	U	1	0.0058	U	1	0.0043	U	1
dichlorodifluoromethane	NA	NA		0.0058	U	1	0.0066	U	1	0.0059	U	1	0.0065	U	1	0.0057	U	1	0.0055	U	1	0.0059	U	1	0.006	U	1	0.0075	U	1	0.0058	U	1	0.0043	U	1
ethyl benzene	1	76		0.0058	U	1	0.0066	U	1	0.0059	U	1	0.0065	U	1	0.0057	U	1	0.0055	U	1	0.0059	U	1	0.006	U	1	0.0075	U	1	0.0058	U	1	0.0043	U	1
hexachlorobutadiene	NA	NA		0.0058	U	1	0.38	U	50	0.33	U	50	0.0065	U	1	0.0057	U	1	0.32	U	50	0.31	U	50	0.006	U	1	0.43	U	50	0.32	U	50	0.0043	U	1
isopropylbenzene	2.3	100		0.0058	U	1	0.38	U	50	0.33	U	50	0.0065	U	1	0.0057	U	1	0.32	U	50	0.31	U	50	0.006	U	1	0.43	U	50	0.32	U	50	0.0043	U	1
methyl acetate	NA	NA		0.058	U	1	0.066	U	1	0.059	U	1	0.065	U	1	0.057	U	1	0.055	U	1	0.059	U	1	0.06	U	1	0.075	U	1	0.058	U	1	0.043	U	1
methyl tert-butyl ether (MTBE)	0.1	100		0.012	U	1	0.013	U	1	0.012	U	1	0.013	U	1	0.011	U	1	0.011	U	1	0.012	U	1	0.012	U	1	0.015	U	1	0.012	U	1	0.0086	U	1
methylcyclohexane	NA	NA		0.0058	U	1	0.0066	U	1	0.0059	U	1	0.0065	U	1	0.0057	U	1	0.0055	U	1	0.0059	U	1	0.006	U	1	0.0075	U	1	0.0058	U	1	0.0043	U	1
methylene chloride	0.05	81		0.029	U	1	0.033	U	1	0.029	U	1	0.032	U	1	0.028	U	1	0.027	U	1	0.029	U	1	0.03	U	1	0.038	U	1	0.029	U	1	0.022	U	1
n-butylbenzene	18	100		0.0058	U	1	0.38	U	50	0.33	U	50	0.0065	U	1	0.0057	U	1	0.32	U	50	0.31	U	50	0.006	U	1	0.43	U	50	0.32	U	50	0.0043	U	1
n-propylbenzene	5	100		0.0058	U	1	0.38	U	50	0.33	U	50	0.0065	U	1	0.0057	U	1	0.32	U	50	0.31	U	50	0.006	U	1	0.43	U	50	0.32	U	50	0.0043	U	1
o-xylene	0.26	100		0.0058	U	1	0.0066	U	1	0.0059	U	1	0.0065	U	1	0.0057	U	1	0.0055	U	1	0.0059	U	1	0.006	U	1	0.0075	U	1	0.0058	U	1	0.0043	U	1
p- & m- xylenes	0.26	100		0.0058	U	1	0.0066	U	1	0.0059	U	1	0.0065	U	1	0.0057	U	1	0.0055	U	1	0.0059	U	1	0.006	U	1	0.0075	U	1	0.0058	U	1	0.0043	U	1
p-isopropyltoluene	10	NA		0.0058	U	1	0.38	U	50	0.33	U	50	0.0065	U	1	0.0057	U	1	0.32	U	50	0.31	U	50	0.006	U	1	0.43	U	50	0.32	U	50	0.0043	U	1
sec-butylbenzene	25	100		0.0058	U	1	0.38	U	50	0.33	U	50	0.0065	U	1	0.0057	U	1	0.32	U	50	0.31	U	50	0.006	U	1	0.43	U	50	0.32	U	50	0.0043	U	1
styrene	NA	NA		0.0058	U	1	0.0066	U	1	0.0059	U	1	0.0065	U	1	0.0057	U	1	0.0055	U	1	0.0059	U	1	0.006	U	1	0.0075	U	1	0.0058	U	1	0.0043	U	1
tert-butyl alcohol	NA	NA		0.058	U	1	0.066	U	1	0.059	U	1	0.065	U	1	0.057	U	1	0.055	U	1	0.059	U	1	0.06	U	1	0.075	U	1	0.058	U	1	0.043	U	1
tert-butylbenzene	11	100		0.0058	U	1	0.38	U	50	0.33	U	50	0.0065	U	1	0.0057	U	1	0.32	U	50	0.31	U	50	0.006	U	1	0.43	U	50	0.32	U	50	0.0043	U	1
tetrachloroethylene (PCE)	1.3	18		0.0058	U	1	0.0066	U	1	0.0059	U	1	0.0065	U	1	0.0057	U	1	0.0055	U	1	0.0059	U	1	0.006	U	1	0.0075	U	1	0.0058	U	1	0.0043	U	1
toluene	0.7	100		0.0058	U	1	0.0066	U	1	0.0059	U	1	0.0065	U	1	0.0057	U	1	0.0055	U	1	0.0059	U	1	0.006	U	1	0.0075	U	1	0.0058	U	1	0.0043	U	1
trans-1,2-dichloroethylene (DCE)	0.19	100		0.0058	U	1	0.0066	U	1	0.0059	U	1	0.0065	U	1	0.0057	U	1	0.0055	U	1	0.0059	U	1	0.006	U	1	0.0075	U	1	0.0058	U	1	0.0043	U	1
trans-1,3-dichloropropylene	NA	NA		0.0058	U	1	0.0066	U	1	0.0059	U	1	0.0065	U	1	0.0057	U	1	0.0055	U	1	0.0059	U	1	0.006	U	1	0.0075	U	1	0.0058	U	1	0.0043	U	1
trichloroethylene (TCE)	0.47	6.4		0.0058	U	1	0.0066	U	1	0.0059	U	1	0.0065	U	1	0.0057	U	1	0.0055	U	1	0.0059	U	1	0.006	U	1	0.0075	U	1	0.0058	U	1	0.0043	U	1
trichlorofluoromethane	NA	NA		0.0058	U	1	0.0066	U	1	0.0059	U	1	0.0065	U	1	0.0057	U	1	0.0055	U	1	0.0059	U	1	0.006	U	1	0.0075	U	1	0.0058	U	1	0.0043	U	1
vinyl chloride (VC)	0.03	0.48		0.0058	U	1	0.0066	U	1	0.0059	U	1	0.0065	U	1	0.0057	U	1	0.0055	U	1	0.0059	U	1	0.006	U	1	0.0075	U	1	0.0058	U	1	0.0043	U	1
xylenes, total	0.26	100		0.0058	U	1	0.0066	U	1	0.0059	U	1	0.0065	U	1	0.0057	U	1	0.0055	U	1	0.0059	U	1	0.006	U	1	0.0075	U	1	0.0058	U	1	0.0043	U	1

value ≤ UU SCO
value > UU SCO

Q = Laboratory Qualifier DL = Dilution NA = not available (addtional flags: B-in blank, D-diluted, E-estimated, J-approximate, L-Biased Low, S-lab solvent)

Table 1: VOCs in Soil

The Green, Newburgh, NY
BCP ID: C336099

GALLAGHER BASSETT | TECHNICAL SERVICES

All data in mg/Kg (ppm)			Sample	DUP2-20251003			2SB-20 SURF			2SB-20 0-5			2SB-20 5-8			2SB-21 Surf			2SB-21 0-2			2SB-21 3-5			2SB-21 10-12			2SB-22 Surf			2SB-22 0-2			2SB-22 3-5		
U= Not Detected ≥ value			Date	2025-10-03			2025-10-03			2025-10-03			2025-10-03			2026-03-06			2026-03-06			2026-03-06			2026-03-06			2026-03-06			2026-03-06			2026-03-06		
VOCs (8260)	**UU SCO**	**RRU SCO**		Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL
1,1,1,2-tetrachloroethane	NA	NA		0.0047	U	1	0.0066	U	1	0.0058	U	1	0.0056	U	1	0.0069	U	1	0.0056	U	1	0.0057	U	1	0.0057	U	1	0.0053	U	1	0.0055	U	1	0.0056	U	1
1,1,1-trichloroethane (TCA)	0.68	100		0.0047	U	1	0.0066	U	1	0.0058	U	1	0.0056	U	1	0.0069	U	1	0.0056	U	1	0.0057	U	1	0.0057	U	1	0.0053	U	1	0.0055	U	1	0.0056	U	1
1,1,2,2-tetrachloroethane	NA	NA		0.0047	U	1	0.44	U	50	0.0058	U	1	0.0056	U	1	0.44	U	50	0.0056	U	1	0.0057	U	1	0.34	U	50	0.0053	U	1	0.0055	U	1	0.0056	U	1
1,1,2-trichloro-1,2,2-trifluoroethane	NA	NA		0.0047	U	1	0.0066	U	1	0.0058	U	1	0.0056	U	1	0.0069	U	1	0.0056	U	1	0.0057	U	1	0.0057	U	1	0.0053	U	1	0.0055	U	1	0.0056	U	1
1,1,2-trichloroethane	NA	NA		0.0047	U	1	0.0066	U	1	0.0058	U	1	0.0056	U	1	0.0069	U	1	0.0056	U	1	0.0057	U	1	0.0057	U	1	0.0053	U	1	0.0055	U	1	0.0056	U	1
1,1-dichloroethane	0.27	47		0.0047	U	1	0.0066	U	1	0.0058	U	1	0.0056	U	1	0.0069	U	1	0.0056	U	1	0.0057	U	1	0.0057	U	1	0.0053	U	1	0.0055	U	1	0.0056	U	1
1,1-dichloroethylene	0.24	0.98		0.0047	U	1	0.0066	U	1	0.0058	U	1	0.0056	U	1	0.0069	U	1	0.0056	U	1	0.0057	U	1	0.0057	U	1	0.0053	U	1	0.0055	U	1	0.0056	U	1
1,2,3-Trichlorobenzene	NA	NA		0.0047	U	1	0.44	U	50	0.0058	U	1	0.0056	U	1	0.44	U	50	0.0056	U	1	0.0057	U	1	0.34	U	50	0.0053	U	1	0.0055	U	1	0.0056	U	1
1,2,3-Trichloropropane	NA	NA		0.0047	U	1	0.44	U	50	0.0058	U	1	0.0056	U	1	0.44	U	50	0.0056	U	1	0.0057	U	1	0.34	U	50	0.0053	U	1	0.0055	U	1	0.0056	U	1
1,2,4-Trichlorobenzene	NA	NA		0.0047	U	1	0.44	U	50	0.0058	U	1	0.0056	U	1	0.44	U	50	0.0056	U	1	0.0057	U	1	0.34	U	50	0.0053	U	1	0.0055	U	1	0.0056	U	1
1,2,4-Trimethylbenzene	5.9	100		0.0047	U	1	0.44	U	50	0.0058	U	1	0.0056	U	1	0.44	U	50	0.0056	U	1	0.0057	U	1	0.34	U	50	0.0053	U	1	0.0055	U	1	0.0056	U	1
1,2-Dibromo-3-chloropropane	NA	NA		0.0047	U	1	0.44	U	50	0.0058	U	1	0.0056	U	1	0.44	U	50	0.0056	U	1	0.0057	U	1	0.34	U	50	0.0053	U	1	0.0055	U	1	0.0056	U	1
1,2-dibromoethane	NA	NA		0.0047	U	1	0.0066	U	1	0.0058	U	1	0.0056	U	1	0.0069	U	1	0.0056	U	1	0.0057	U	1	0.0057	U	1	0.0053	U	1	0.0055	U	1	0.0056	U	1
1,2-dichlorobenzene	1.1	100		0.0047	U	1	0.44	U	50	0.0058	U	1	0.0056	U	1	0.44	U	50	0.0056	U	1	0.0057	U	1	0.34	U	50	0.0053	U	1	0.0055	U	1	0.0056	U	1
1,2-dichloroethane	0.02	5.8		0.0047	U	1	0.0066	U	1	0.0058	U	1	0.0056	U	1	0.0069	U	1	0.0056	U	1	0.0057	U	1	0.0057	U	1	0.0053	U	1	0.0055	U	1	0.0056	U	1
1,2-dichloropropane	NA	NA		0.0047	U	1	0.0066	U	1	0.0058	U	1	0.0056	U	1	0.0069	U	1	0.0056	U	1	0.0057	U	1	0.0057	U	1	0.0053	U	1	0.0055	U	1	0.0056	U	1
1,3,5-trimethylbenzene	3.1	100		0.0047	U	1	0.44	U	50	0.0058	U	1	0.0056	U	1	0.44	U	50	0.0056	U	1	0.0057	U	1	0.34	U	50	0.0053	U	1	0.0055	U	1	0.0056	U	1
1,3-dichlorobenzene	2.6	38		0.0047	U	1	0.44	U	50	0.0058	U	1	0.0056	U	1	0.44	U	50	0.0056	U	1	0.0057	U	1	0.34	U	50	0.0053	U	1	0.0055	U	1	0.0056	U	1
1,4-dichlorobenzene	1.8	24		0.0047	U	1	0.44	U	50	0.0058	U	1	0.0056	U	1	0.44	U	50	0.0056	U	1	0.0057	U	1	0.34	U	50	0.0053	U	1	0.0055	U	1	0.0056	U	1
1,4-dioxane	0.1	5.7		0.071	U	1	0.099	U	1	0.087	U	1	0.084	U	1	0.1	U	1	0.083	U	1	0.085	U	1	0.086	U	1	0.08	U	1	0.082	U	1	0.084	U	1
2-butanone (MEK)	0.1	100		0.028	U	1	0.039	U	1	0.035	U	1	0.034	U	1	0.042	U	1	0.033	U	1	0.034	U	1	0.034	U	1	0.032	U	1	0.033	U	1	0.034	U	1
2-hexanone (MBK)	NA	NA		0.024	U	1	0.033	U	1	0.029	U	1	0.028	U	1	0.035	U	1	0.028	U	1	0.028	U	1	0.029	U	1	0.027	U	1	0.027	U	1	0.028	U	1
4-methyl-2-pentanone	NA	NA		0.024	U	1	0.033	U	1	0.029	U	1	0.028	U	1	0.035	U	1	0.028	U	1	0.028	U	1	0.029	U	1	0.027	U	1	0.027	U	1	0.028	U	1
acetone	0.03	100		0.047	U	1	0.066	U	1	0.058	U	1	0.056	U	1	0.069	U	1	0.056	U	1	0.057	U	1	0.057	U	1	0.053	U	1	0.055	U	1	0.056	U	1
acrolein	NA	NA		0.0047	U	1	0.0066	U	1	0.0058	U	1	0.0056	U	1	0.0069	U	1	0.0056	U	1	0.0057	U	1	0.0057	U	1	0.0053	U	1	0.0055	U	1	0.0056	U	1
acrylonitrile	NA	NA		0.0047	U	1	0.0066	U	1	0.0058	U	1	0.0056	U	1	0.0069	U	1	0.0056	U	1	0.0057	U	1	0.0057	U	1	0.0053	U	1	0.0055	U	1	0.0056	U	1
benzene	0.06	3.7		0.0047	U	1	0.0066	U	1	0.0058	U	1	0.0056	U	1	0.0069	U	1	0.0056	U	1	0.0057	U	1	0.0057	U	1	0.0053	U	1	0.0055	U	1	0.0056	U	1
bromochloromethane	NA	NA		0.0047	U	1	0.0066	U	1	0.0058	U	1	0.0056	U	1	0.0069	U	1	0.0056	U	1	0.0057	U	1	0.0057	U	1	0.0053	U	1	0.0055	U	1	0.0056	U	1
bromodichloromethane	NA	NA		0.0047	U	1	0.0066	U	1	0.0058	U	1	0.0056	U	1	0.0069	U	1	0.0056	U	1	0.0057	U	1	0.0057	U	1	0.0053	U	1	0.0055	U	1	0.0056	U	1
Bromoform	NA	NA		0.0047	U	1	0.0066	U	1	0.0058	U	1	0.0056	U	1	0.0069	U	1	0.0056	U	1	0.0057	U	1	0.0057	U	1	0.0053	U	1	0.0055	U	1	0.0056	U	1
bromomethane	NA	NA		0.0047	U	1	0.0066	U	1	0.0058	U	1	0.0056	U	1	0.0069	U	1	0.0056	U	1	0.0057	U	1	0.0057	U	1	0.0053	U	1	0.0055	U	1	0.0056	U	1
carbon disulfide	NA	NA		0.0047	U	1	0.0066	U	1	0.0058	U	1	0.0056	U	1	0.0069	U	1	0.0056	U	1	0.0057	U	1	0.0057	U	1	0.0053	U	1	0.0055	U	1	0.0056	U	1
carbon tetrachloride	0.76	7.1		0.0047	U	1	0.0066	U	1	0.0058	U	1	0.0056	U	1	0.0069	U	1	0.0056	U	1	0.0057	U	1	0.0057	U	1	0.0053	U	1	0.0055	U	1	0.0056	U	1
chlorobenzene	4.5	100		0.0047	U	1	0.0066	U	1	0.0058	U	1	0.0056	U	1	0.0069	U	1	0.0056	U	1	0.0057	U	1	0.0057	U	1	0.0053	U	1	0.0055	U	1	0.0056	U	1
chloroethane	NA	NA		0.0047	U	1	0.0066	U	1	0.0058	U	1	0.0056	U	1	0.0069	U	1	0.0056	U	1	0.0057	U	1	0.0057	U	1	0.0053	U	1	0.0055	U	1	0.0056	U	1
chloroform	0.37	24		0.0047	U	1	0.0066	U	1	0.0058	U	1	0.0056	U	1	0.0069	U	1	0.0056	U	1	0.0057	U	1	0.0057	U	1	0.0053	U	1	0.0055	U	1	0.0056	U	1
chloromethane	NA	NA		0.0047	U	1	0.0066	U	1	0.0058	U	1	0.0056	U	1	0.0069	U	1	0.0056	U	1	0.0057	U	1	0.0057	U	1	0.0053	U	1	0.0055	U	1	0.0056	U	1
cis-1,2-dichloroethylene (DCE)	0.019	41		0.0047	U	1	0.0066	U	1	0.0058	U	1	0.0056	U	1	0.0069	U	1	0.0056	U	1	0.0057	U	1	0.0057	U	1	0.0053	U	1	0.0055	U	1	0.0056	U	1
cis-1,3-dichloropropylene	NA	NA		0.0047	U	1	0.0066	U	1	0.0058	U	1	0.0056	U	1	0.0069	U	1	0.0056	U	1	0.0057	U	1	0.0057	U	1	0.0053	U	1	0.0055	U	1	0.0056	U	1
cyclohexane	NA	NA		0.0047	U	1	0.0066	U	1	0.0058	U	1	0.0056	U	1	0.0069	U	1	0.0056	U	1	0.0057	U	1	0.0057	U	1	0.0053	U	1	0.0055	U	1	0.0056	U	1
dibromochloromethane	NA	NA		0.0047	U	1	0.0066	U	1	0.0058	U	1	0.0056	U	1	0.0069	U	1	0.0056	U	1	0.0057	U	1	0.0057	U	1	0.0053	U	1	0.0055	U	1	0.0056	U	1
dibromomethane	NA	NA		0.0047	U	1	0.0066	U	1	0.0058	U	1	0.0056	U	1	0.0069	U	1	0.0056	U	1	0.0057	U	1	0.0057	U	1	0.0053	U	1	0.0055	U	1	0.0056	U	1
dichlorodifluoromethane	NA	NA		0.0047	U	1	0.0066	U	1	0.0058	U	1	0.0056	U	1	0.0069	U	1	0.0056	U	1	0.0057	U	1	0.0057	U	1	0.0053	U	1	0.0055	U	1	0.0056	U	1
ethyl benzene	1	76		0.0047	U	1	0.0066	U	1	0.0058	U	1	0.0056	U	1	0.0069	U	1	0.0056	U	1	0.0057	U	1	0.0057	U	1	0.0053	U	1	0.0055	U	1	0.0056	U	1
hexachlorobutadiene	NA	NA		0.0047	U	1	0.44	U	50	0.0058	U	1	0.0056	U	1	0.44	U	50	0.0056	U	1	0.0057	U	1	0.34	U	50	0.0053	U	1	0.0055	U	1	0.0056	U	1
isopropylbenzene	2.3	100		0.0047	U	1	0.44	U	50	0.0058	U	1	0.0056	U	1	0.44	U	50	0.0056	U	1	0.0057	U	1	0.34	U	50	0.0053	U	1	0.0055	U	1	0.0056	U	1
methyl acetate	NA	NA		0.047	U	1	0.066	U	1	0.058	U	1	0.056	U	1	0.069	U	1	0.056	U	1	0.057	U	1	0.057	U	1	0.053	U	1	0.055	U	1	0.056	U	1
methyl tert-butyl ether (MTBE)	0.1	100		0.0095	U	1	0.013	U	1	0.012	U	1	0.011	U	1	0.014	U	1	0.011	U	1	0.011	U	1	0.011	U	1	0.011	U	1	0.011	U	1	0.011	U	1
methylcyclohexane	NA	NA		0.0047	U	1	0.0066	U	1	0.0058	U	1	0.0056	U	1	0.0069	U	1	0.0056	U	1	0.0057	U	1	0.0057	U	1	0.0053	U	1	0.0055	U	1	0.0056	U	1
methylene chloride	0.05	81		0.024	U	1	0.033	U	1	0.029	U	1	0.028	U	1	0.035	U	1	0.028	U	1	0.028	U	1	0.029	U	1	0.027	U	1	0.027	U	1	0.028	U	1
n-butylbenzene	18	100		0.0047	U	1	0.44	U	50	0.0058	U	1	0.0056	U	1	0.44	U	50	0.0056	U	1	0.0057	U	1	0.34	U	50	0.0053	U	1	0.0055	U	1	0.0056	U	1
n-propylbenzene	5	100		0.0047	U	1	0.44	U	50	0.0058	U	1	0.0056	U	1	0.44	U	50	0.0056	U	1	0.0057	U	1	0.34	U	50	0.0053	U	1	0.0055	U	1	0.0056	U	1
o-xylene	0.26	100		0.0047	U	1	0.0066	U	1	0.0058	U	1	0.0056	U	1	0.0069	U	1	0.0056	U	1	0.0057	U	1	0.0057	U	1	0.0053	U	1	0.0055	U	1	0.0056	U	1
p- & m- xylenes	0.26	100		0.0047	U	1	0.0066	U	1	0.0058	U	1	0.0056	U	1	0.0069	U	1	0.0056	U	1	0.0057	U	1	0.0057	U	1	0.0053	U	1	0.0055	U	1	0.0056	U	1
p-isopropyltoluene	10	NA		0.0047	U	1	0.44	U	50	0.0058	U	1	0.0056	U	1	0.44	U	50	0.0056	U	1	0.0057	U	1	0.34	U	50	0.0053	U	1	0.0055	U	1	0.0056	U	1
sec-butylbenzene	25	100		0.0047	U	1	0.44	U	50	0.0058	U	1	0.0056	U	1	0.44	U	50	0.0056	U	1	0.0057	U	1	0.34	U	50	0.0053	U	1	0.0055	U	1	0.0056	U	1
styrene	NA	NA		0.0047	U	1	0.0066	U	1	0.0058	U	1	0.0056	U	1	0.0069	U	1	0.0056	U	1	0.0057	U	1	0.0057	U	1	0.0053	U	1	0.0055	U	1	0.0056	U	1
tert-butyl alcohol	NA	NA		0.047	U	1	0.066	U	1	0.058	U	1	0.056	U	1	0.069	U	1	0.056	U	1	0.057	U	1	0.057	U	1	0.053	U	1	0.055	U	1	0.056	U	1
tert-butylbenzene	11	100		0.0047	U	1	0.44	U	50	0.0058	U	1	0.0056	U	1	0.44	U	50	0.0056	U	1	0.0057	U	1	0.34	U	50	0.0053	U	1	0.0055	U	1	0.0056	U	1
tetrachloroethylene (PCE)	1.3	18		0.0047	U	1	0.0066	U	1	0.0058	U	1	0.0056	U	1	0.0069	U	1	0.0056	U	1	0.0057	U	1	0.0057	U	1	0.0053	U	1	0.0055	U	1	0.0056	U	1
toluene	0.7	100		0.0047	U	1	0.0066	U	1	0.0058	U	1	0.0056	U	1	0.0069	U	1	0.0056	U	1	0.0057	U	1	0.0057	U	1	0.0053	U	1	0.0055	U	1	0.0056	U	1
trans-1,2-dichloroethylene (DCE)	0.19	100		0.0047	U	1	0.0066	U	1	0.0058	U	1	0.0056	U	1	0.0069	U	1	0.0056	U	1	0.0057	U	1	0.0057	U	1	0.0053	U	1	0.0055	U	1	0.0056	U	1
trans-1,3-dichloropropylene	NA	NA		0.0047	U	1	0.0066	U	1	0.0058	U	1	0.0056	U	1	0.0069	U	1	0.0056	U	1	0.0057	U	1	0.0057	U	1	0.0053	U	1	0.0055	U	1	0.0056	U	1
trichloroethylene (TCE)	0.47	6.4		0.0047	U	1	0.0066	U	1	0.0058	U	1	0.0056	U	1	0.0069	U	1	0.0056	U	1	0.0057	U	1	0.0057	U	1	0.0053	U	1	0.0055	U	1	0.0056	U	1
trichlorofluoromethane	NA	NA		0.0047	U	1	0.0066	U	1	0.0058	U	1	0.0056	U	1	0.0069	U	1	0.0056	U	1	0.0057	U	1	0.0057	U	1	0.0053	U	1	0.0055	U	1	0.0056	U	1
vinyl chloride (VC)	0.03	0.48		0.0047	U	1	0.0066	U	1	0.0058	U	1	0.0056	U	1	0.0069	U	1	0.0056	U	1	0.0057	U	1	0.0057	U	1	0.0053	U	1	0.0055	U	1	0.0056	U	1
xylenes, total	0.26	100		0.0047	U	1	0.0066	U	1	0.0058	U	1	0.0056	U	1	0.0069	U	1	0.0056	U	1	0.0057	U	1	0.0057	U	1	0.0053	U	1	0.0055	U	1	0.0056	U	1

value ≤ UU SCO
value > UU SCO

Q = Laboratory Qualifier DL = Dilution NA = not available (addtional flags: B-in blank, D-diluted, E-estimated, J-approximate, L-Biased Low, S-lab solvent)

Table 1: VOCs in Soil

The Green, Newburgh, NY
BCP ID: C336099

GALLAGHER BASSETT | TECHNICAL SERVICES

All data in mg/Kg (ppm)			Sample	2SB-22 5-7			2SB-23 Surf			2SB-23 0-2			2SB-23 4-6			2SB-23 7-9			2SB-24 Surf			2SB-24 0-2			2SB-24 3-5			DUP-20260306			2SB-24 6-8			2SB-25 Surf		
U= Not Detected ≥ value			Date	2026-03-06			2026-03-06			2026-03-06			2026-03-06			2026-03-06			2026-03-06			2026-03-06			2026-03-06			2026-03-06			2026-03-06			2026-03-06		
VOCs (8260)	**UU SCO**	**RRU SCO**		Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL
1,1,1,2-tetrachloroethane	NA	NA		0.0058	U	1	0.0052	U	1	0.0056	U	1	0.0056	U	1	0.0056	U	1	0.0057	U	1	0.0056	U	1	0.0056	U	1	0.0057	U	1	0.0053	LU	1	0.0055	U	1
1,1,1-trichloroethane (TCA)	0.68	100		0.0058	U	1	0.0052	U	1	0.0056	U	1	0.0056	U	1	0.0056	U	1	0.0057	U	1	0.0056	U	1	0.0056	U	1	0.0057	U	1	0.0053	LU	1	0.0055	U	1
1,1,2,2-tetrachloroethane	NA	NA		0.34	U	50	0.0052	U	1	0.0056	U	1	0.32	U	50	0.0056	U	1	0.0057	U	1	0.0056	U	1	0.0056	U	1	0.0057	U	1	0.0053	LU	1	0.0055	U	1
1,1,2-trichloro-1,2,2-trifluoroethane	NA	NA		0.0058	U	1	0.0052	U	1	0.0056	U	1	0.0056	U	1	0.0056	U	1	0.0057	U	1	0.0056	U	1	0.0056	U	1	0.0057	U	1	0.0053	LU	1	0.0055	U	1
1,1,2-trichloroethane	NA	NA		0.0058	U	1	0.0052	U	1	0.0056	U	1	0.0056	U	1	0.0056	U	1	0.0057	U	1	0.0056	U	1	0.0056	U	1	0.0057	U	1	0.0053	LU	1	0.0055	U	1
1,1-dichloroethane	0.27	47		0.0058	U	1	0.0052	U	1	0.0056	U	1	0.0056	U	1	0.0056	U	1	0.0057	U	1	0.0056	U	1	0.0056	U	1	0.0057	U	1	0.0053	LU	1	0.0055	U	1
1,1-dichloroethylene	0.24	0.98		0.0058	U	1	0.0052	U	1	0.0056	U	1	0.0056	U	1	0.0056	U	1	0.0057	U	1	0.0056	U	1	0.0056	U	1	0.0057	U	1	0.0053	LU	1	0.0055	U	1
1,2,3-Trichlorobenzene	NA	NA		0.34	U	50	0.0052	U	1	0.0056	U	1	0.32	U	50	0.0056	U	1	0.0057	U	1	0.0056	U	1	0.0056	U	1	0.0057	U	1	0.0053	LU	1	0.0055	U	1
1,2,3-Trichloropropane	NA	NA		0.34	U	50	0.0052	U	1	0.0056	U	1	0.32	U	50	0.0056	U	1	0.0057	U	1	0.0056	U	1	0.0056	U	1	0.0057	U	1	0.0053	LU	1	0.0055	U	1
1,2,4-Trichlorobenzene	NA	NA		0.34	U	50	0.0052	U	1	0.0056	U	1	0.32	U	50	0.0056	U	1	0.0057	U	1	0.0056	U	1	0.0056	U	1	0.0057	U	1	0.0053	LU	1	0.0055	U	1
1,2,4-Trimethylbenzene	5.9	100		0.34	U	50	0.0052	U	1	0.0056	U	1	0.32	U	50	0.0056	U	1	0.0057	U	1	0.0022	J	1	0.0056	U	1	0.0057	U	1	0.0053	LU	1	0.0055	U	1
1,2-Dibromo-3-chloropropane	NA	NA		0.34	U	50	0.0052	U	1	0.0056	U	1	0.32	U	50	0.0056	U	1	0.0057	U	1	0.0056	U	1	0.0056	U	1	0.0057	U	1	0.0053	LU	1	0.0055	U	1
1,2-dibromoethane	NA	NA		0.0058	U	1	0.0052	U	1	0.0056	U	1	0.0056	U	1	0.0056	U	1	0.0057	U	1	0.0056	U	1	0.0056	U	1	0.0057	U	1	0.0053	LU	1	0.0055	U	1
1,2-dichlorobenzene	1.1	100		0.34	U	50	0.0052	U	1	0.0056	U	1	0.32	U	50	0.0056	U	1	0.0057	U	1	0.0056	U	1	0.0056	U	1	0.0057	U	1	0.0053	LU	1	0.0055	U	1
1,2-dichloroethane	0.02	5.8		0.0058	U	1	0.0052	U	1	0.0056	U	1	0.0056	U	1	0.0056	U	1	0.0057	U	1	0.0056	U	1	0.0056	U	1	0.0057	U	1	0.0053	LU	1	0.0055	U	1
1,2-dichloropropane	NA	NA		0.0058	U	1	0.0052	U	1	0.0056	U	1	0.0056	U	1	0.0056	U	1	0.0057	U	1	0.0056	U	1	0.0056	U	1	0.0057	U	1	0.0053	LU	1	0.0055	U	1
1,3,5-trimethylbenzene	3.1	100		0.34	U	50	0.0052	U	1	0.0056	U	1	0.32	U	50	0.0056	U	1	0.0057	U	1	0.0018	J	1	0.0056	U	1	0.0057	U	1	0.0053	LU	1	0.0055	U	1
1,3-dichlorobenzene	2.6	38		0.34	U	50	0.0052	U	1	0.0056	U	1	0.32	U	50	0.0056	U	1	0.0057	U	1	0.0056	U	1	0.0056	U	1	0.0057	U	1	0.0053	LU	1	0.0055	U	1
1,4-dichlorobenzene	1.8	24		0.34	U	50	0.0052	U	1	0.0056	U	1	0.32	U	50	0.0056	U	1	0.0057	U	1	0.0056	U	1	0.0056	U	1	0.0057	U	1	0.0053	LU	1	0.0055	U	1
1,4-dioxane	0.1	5.7		0.087	U	1	0.078	U	1	0.084	U	1	0.084	U	1	0.084	U	1	0.086	U	1	0.083	U	1	0.084	U	1	0.085	U	1	0.08	LU	1	0.082	U	1
2-butanone (MEK)	0.1	100		0.035	U	1	0.031	U	1	0.034	U	1	0.034	U	1	0.034	U	1	0.034	U	1	0.033	U	1	0.034	U	1	0.034	U	1	0.032	LU	1	0.033	U	1
2-hexanone (MBK)	NA	NA		0.029	U	1	0.026	U	1	0.028	U	1	0.028	U	1	0.028	U	1	0.029	U	1	0.028	U	1	0.028	U	1	0.028	U	1	0.027	LU	1	0.027	U	1
4-methyl-2-pentanone	NA	NA		0.029	U	1	0.026	U	1	0.028	U	1	0.028	U	1	0.028	U	1	0.029	U	1	0.028	U	1	0.028	U	1	0.028	U	1	0.027	LU	1	0.027	U	1
acetone	0.03	100		0.058	U	1	0.052	U	1	0.056	U	1	0.056	U	1	0.056	U	1	0.013	JS	1	0.056	U	1	0.056	U	1	0.057	U	1	0.053	LU	1	0.055	U	1
acrolein	NA	NA		0.0058	U	1	0.0052	U	1	0.0056	U	1	0.0056	U	1	0.0056	U	1	0.0057	U	1	0.0056	U	1	0.0056	U	1	0.0057	U	1	0.0053	LU	1	0.0055	U	1
acrylonitrile	NA	NA		0.0058	U	1	0.0052	U	1	0.0056	U	1	0.0056	U	1	0.0056	U	1	0.0057	U	1	0.0056	U	1	0.0056	U	1	0.0057	U	1	0.0053	LU	1	0.0055	U	1
benzene	0.06	3.7		0.0058	U	1	0.0052	U	1	0.0056	U	1	0.0056	U	1	0.0056	U	1	0.0057	U	1	0.0056	U	1	0.0056	U	1	0.0057	U	1	0.0053	LU	1	0.0055	U	1
bromochloromethane	NA	NA		0.0058	U	1	0.0052	U	1	0.0056	U	1	0.0056	U	1	0.0056	U	1	0.0057	U	1	0.0056	U	1	0.0056	U	1	0.0057	U	1	0.0053	LU	1	0.0055	U	1
bromodichloromethane	NA	NA		0.0058	U	1	0.0052	U	1	0.0056	U	1	0.0056	U	1	0.0056	U	1	0.0057	U	1	0.0056	U	1	0.0056	U	1	0.0057	U	1	0.0053	LU	1	0.0055	U	1
Bromoform	NA	NA		0.0058	U	1	0.0052	U	1	0.0056	U	1	0.0056	U	1	0.0056	U	1	0.0057	U	1	0.0056	U	1	0.0056	U	1	0.0057	U	1	0.0053	LU	1	0.0055	U	1
bromomethane	NA	NA		0.0058	U	1	0.0052	U	1	0.0056	U	1	0.0056	U	1	0.0056	U	1	0.0057	U	1	0.0056	U	1	0.0056	U	1	0.0057	U	1	0.0053	LU	1	0.0055	U	1
carbon disulfide	NA	NA		0.0014	J	1	0.0052	U	1	0.0056	U	1	0.0056	U	1	0.0056	U	1	0.0057	U	1	0.0056	U	1	0.0056	U	1	0.0057	U	1	0.0053	LU	1	0.0055	U	1
carbon tetrachloride	0.76	7.1		0.0058	U	1	0.0052	U	1	0.0056	U	1	0.0056	U	1	0.0056	U	1	0.0057	U	1	0.0056	U	1	0.0056	U	1	0.0057	U	1	0.0053	LU	1	0.0055	U	1
chlorobenzene	4.5	100		0.0058	U	1	0.0052	U	1	0.0056	U	1	0.0056	U	1	0.0056	U	1	0.0057	U	1	0.0056	U	1	0.0056	U	1	0.0057	U	1	0.0053	LU	1	0.0055	U	1
chloroethane	NA	NA		0.0058	U	1	0.0052	U	1	0.0056	U	1	0.0056	U	1	0.0056	U	1	0.0057	U	1	0.0056	U	1	0.0056	U	1	0.0057	U	1	0.0053	LU	1	0.0055	U	1
chloroform	0.37	24		0.0058	U	1	0.0052	U	1	0.0056	U	1	0.0056	U	1	0.0056	U	1	0.0057	U	1	0.0056	U	1	0.0056	U	1	0.0057	U	1	0.0053	LU	1	0.0055	U	1
chloromethane	NA	NA		0.0058	U	1	0.0052	U	1	0.0056	U	1	0.0056	U	1	0.0056	U	1	0.0057	U	1	0.0056	U	1	0.0056	U	1	0.0057	U	1	0.0053	LU	1	0.0055	U	1
cis-1,2-dichloroethylene (DCE)	0.019	41		0.0058	U	1	0.0052	U	1	0.0056	U	1	0.0056	U	1	0.0056	U	1	0.0057	U	1	0.0056	U	1	0.0056	U	1	0.0057	U	1	0.0053	LU	1	0.0055	U	1
cis-1,3-dichloropropylene	NA	NA		0.0058	U	1	0.0052	U	1	0.0056	U	1	0.0056	U	1	0.0056	U	1	0.0057	U	1	0.0056	U	1	0.0056	U	1	0.0057	U	1	0.0053	LU	1	0.0055	U	1
cyclohexane	NA	NA		0.0058	U	1	0.0052	U	1	0.0056	U	1	0.0056	U	1	0.0056	U	1	0.0057	U	1	0.0056	U	1	0.0056	U	1	0.0057	U	1	0.0053	LU	1	0.0055	U	1
dibromochloromethane	NA	NA		0.0058	U	1	0.0052	U	1	0.0056	U	1	0.0056	U	1	0.0056	U	1	0.0057	U	1	0.0056	U	1	0.0056	U	1	0.0057	U	1	0.0053	LU	1	0.0055	U	1
dibromomethane	NA	NA		0.0058	U	1	0.0052	U	1	0.0056	U	1	0.0056	U	1	0.0056	U	1	0.0057	U	1	0.0056	U	1	0.0056	U	1	0.0057	U	1	0.0053	LU	1	0.0055	U	1
dichlorodifluoromethane	NA	NA		0.0058	U	1	0.0052	U	1	0.0056	U	1	0.0056	U	1	0.0056	U	1	0.0057	U	1	0.0056	U	1	0.0056	U	1	0.0057	U	1	0.0053	LU	1	0.0055	U	1
ethyl benzene	1	76		0.0058	U	1	0.0052	U	1	0.0056	U	1	0.0056	U	1	0.0056	U	1	0.0057	U	1	0.0056	U	1	0.0056	U	1	0.0057	U	1	0.0053	LU	1	0.0055	U	1
hexachlorobutadiene	NA	NA		0.34	U	50	0.0052	U	1	0.0056	U	1	0.32	U	50	0.0056	U	1	0.0057	U	1	0.0056	U	1	0.0056	U	1	0.0057	U	1	0.0053	LU	1	0.0055	U	1
isopropylbenzene	2.3	100		0.34	U	50	0.0052	U	1	0.0056	U	1	0.32	U	50	0.0056	U	1	0.0057	U	1	0.0056	U	1	0.0056	U	1	0.0057	U	1	0.0053	LU	1	0.0055	U	1
methyl acetate	NA	NA		0.058	U	1	0.052	U	1	0.056	U	1	0.056	U	1	0.056	U	1	0.057	U	1	0.056	U	1	0.056	U	1	0.057	U	1	0.053	LU	1	0.055	U	1
methyl tert-butyl ether (MTBE)	0.1	100		0.012	U	1	0.01	U	1	0.011	U	1	0.011	U	1	0.011	U	1	0.011	U	1	0.011	U	1	0.011	U	1	0.011	U	1	0.011	LU	1	0.011	U	1
methylcyclohexane	NA	NA		0.0058	U	1	0.0052	U	1	0.0056	U	1	0.0056	U	1	0.0056	U	1	0.0057	U	1	0.0056	U	1	0.0056	U	1	0.0057	U	1	0.0053	LU	1	0.0055	U	1
methylene chloride	0.05	81		0.029	U	1	0.026	U	1	0.028	U	1	0.028	U	1	0.028	U	1	0.029	U	1	0.028	U	1	0.028	U	1	0.028	U	1	0.01	JSL	1	0.027	U	1
n-butylbenzene	18	100		0.34	U	50	0.0052	U	1	0.0056	U	1	0.32	U	50	0.0056	U	1	0.0057	U	1	0.0056	U	1	0.0056	U	1	0.0057	U	1	0.0053	LU	1	0.0055	U	1
n-propylbenzene	5	100		0.34	U	50	0.0052	U	1	0.0056	U	1	0.32	U	50	0.0056	U	1	0.0057	U	1	0.0056	U	1	0.0056	U	1	0.0057	U	1	0.0053	LU	1	0.0055	U	1
o-xylene	0.26	100		0.0058	U	1	0.0052	U	1	0.0056	U	1	0.0056	U	1	0.0056	U	1	0.0057	U	1	0.0013	J	1	0.0056	U	1	0.0057	U	1	0.0053	LU	1	0.0055	U	1
p- & m- xylenes	0.26	100		0.0058	U	1	0.0052	U	1	0.0056	U	1	0.0056	U	1	0.0056	U	1	0.0057	U	1	0.0056	U	1	0.0056	U	1	0.0057	U	1	0.0053	LU	1	0.0055	U	1
p-isopropyltoluene	10	NA		0.34	U	50	0.0052	U	1	0.0056	U	1	0.32	U	50	0.0056	U	1	0.0057	U	1	0.0056	U	1	0.0056	U	1	0.0057	U	1	0.0053	LU	1	0.0055	U	1
sec-butylbenzene	25	100		0.34	U	50	0.0052	U	1	0.0056	U	1	0.32	U	50	0.0056	U	1	0.0057	U	1	0.0056	U	1	0.0056	U	1	0.0057	U	1	0.0053	LU	1	0.0055	U	1
styrene	NA	NA		0.0058	U	1	0.0052	U	1	0.0056	U	1	0.0056	U	1	0.0056	U	1	0.0057	U	1	0.00087	J	1	0.0056	U	1	0.0057	U	1	0.0053	LU	1	0.0055	U	1
tert-butyl alcohol	NA	NA		0.058	U	1	0.052	U	1	0.056	U	1	0.056	U	1	0.056	U	1	0.057	U	1	0.056	U	1	0.056	U	1	0.057	U	1	0.053	LU	1	0.055	U	1
tert-butylbenzene	11	100		0.34	U	50	0.0052	U	1	0.0056	U	1	0.32	U	50	0.0056	U	1	0.0057	U	1	0.0056	U	1	0.0056	U	1	0.0057	U	1	0.0053	LU	1	0.0055	U	1
tetrachloroethylene (PCE)	1.3	18		0.0058	U	1	0.0052	U	1	0.0056	U	1	0.0056	U	1	0.0056	U	1	0.0057	U	1	0.0056	U	1	0.0056	U	1	0.0057	U	1	0.0053	LU	1	0.0055	U	1
toluene	0.7	100		0.0058	U	1	0.0052	U	1	0.0056	U	1	0.0056	U	1	0.0056	U	1	0.0057	U	1	0.00092	J	1	0.0056	U	1	0.0057	U	1	0.0053	LU	1	0.0055	U	1
trans-1,2-dichloroethylene (DCE)	0.19	100		0.0058	U	1	0.0052	U	1	0.0056	U	1	0.0056	U	1	0.0056	U	1	0.0057	U	1	0.0056	U	1	0.0056	U	1	0.0057	U	1	0.0053	LU	1	0.0055	U	1
trans-1,3-dichloropropylene	NA	NA		0.0058	U	1	0.0052	U	1	0.0056	U	1	0.0056	U	1	0.0056	U	1	0.0057	U	1	0.0056	U	1	0.0056	U	1	0.0057	U	1	0.0053	LU	1	0.0055	U	1
trichloroethylene (TCE)	0.47	6.4		0.0058	U	1	0.0052	U	1	0.0056	U	1	0.0056	U	1	0.0056	U	1	0.0057	U	1	0.0056	U	1	0.0056	U	1	0.0057	U	1	0.0053	LU	1	0.0055	U	1
trichlorofluoromethane	NA	NA		0.0058	U	1	0.0052	U	1	0.0056	U	1	0.0056	U	1	0.0056	U	1	0.0057	U	1	0.0056	U	1	0.0056	U	1	0.0057	U	1	0.0053	LU	1	0.0055	U	1
vinyl chloride (VC)	0.03	0.48		0.0058	U	1	0.0052	U	1	0.0056	U	1	0.0056	U	1	0.0056	U	1	0.0057	U	1	0.0056	U	1	0.0056	U	1	0.0057	U	1	0.0053	LU	1	0.0055	U	1
xylenes, total	0.26	100		0.0058	U	1	0.0052	U	1	0.0056	U	1	0.0056	U	1	0.0056	U	1	0.0057	U	1	0.0056	U	1	0.0056	U	1	0.0057	U	1	0.0053	U	1	0.0055	U	1

value ≤ UU SCO
value > UU SCO

Q = Laboratory Qualifier DL = Dilution NA = not available (addtional flags: B-in blank, D-diluted, E-estimated, J-approximate, L-Biased Low, S-lab solvent)

Table 1: VOCs in Soil

The Green, Newburgh, NY
BCP ID: C336099

GALLAGHER BASSETT | TECHNICAL SERVICES

All data in mg/Kg (ppm)			Sample	2SB-25 0-2			2SB-25 5-7			2SB-26 Surf			2SB-26 0-2			2SB-26 5-7			2SB-27 Surf			2SB-27 0-2			2SB-27 5-7			2SB-27 10-12			Dup-20260309			2SB-28 Surf		
U= Not Detected ≥ value			Date	2026-03-06			2026-03-06			2026-03-06			2026-03-06			2026-03-06			2026-03-09			2026-03-09			2026-03-09			2026-03-09			2026-03-09			2026-03-06		
VOCs (8260)	**UU SCO**	**RRU SCO**	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL
1,1,1,2-tetrachloroethane	NA	NA	0.0056	U	1	0.0057	U	1	0.0057	U	1	0.0056	LU	1	0.0053	U	1	0.006	U	1	0.0056	U	1	0.0054	U	1	0.0057	U	1	0.0056	U	1	0.0061	LU	1
1,1,1-trichloroethane (TCA)	0.68	100	0.0056	U	1	0.0057	U	1	0.0057	U	1	0.0056	LU	1	0.0053	U	1	0.006	U	1	0.0056	U	1	0.0054	U	1	0.0057	U	1	0.0056	U	1	0.0061	LU	1
1,1,2,2-tetrachloroethane	NA	NA	0.0056	U	1	0.32	U	50	0.0057	U	1	0.0056	LU	1	0.28	U	50	0.006	U	1	0.0056	U	1	0.0054	U	1	0.0057	U	1	0.0056	U	1	0.36	U	50
1,1,2-trichloro-1,2,2-trifluoroethane	NA	NA	0.0056	U	1	0.0057	U	1	0.0057	U	1	0.0056	LU	1	0.0053	U	1	0.006	U	1	0.0056	U	1	0.0054	U	1	0.0057	U	1	0.0056	U	1	0.0061	LU	1
1,1,2-trichloroethane	NA	NA	0.0056	U	1	0.0057	U	1	0.0057	U	1	0.0056	LU	1	0.0053	U	1	0.006	U	1	0.0056	U	1	0.0054	U	1	0.0057	U	1	0.0056	U	1	0.0061	LU	1
1,1-dichloroethane	0.27	47	0.0056	U	1	0.0057	U	1	0.0057	U	1	0.0056	LU	1	0.0053	U	1	0.006	U	1	0.0056	U	1	0.0054	U	1	0.0057	U	1	0.0056	U	1	0.0061	LU	1
1,1-dichloroethylene	0.24	0.98	0.0056	U	1	0.0057	U	1	0.0057	U	1	0.0056	LU	1	0.0053	U	1	0.006	U	1	0.0056	U	1	0.0054	U	1	0.0057	U	1	0.0056	U	1	0.0061	LU	1
1,2,3-Trichlorobenzene	NA	NA	0.0056	U	1	0.32	U	50	0.0057	U	1	0.0056	LU	1	0.28	U	50	0.006	U	1	0.0056	U	1	0.0054	U	1	0.0057	U	1	0.0056	U	1	0.36	U	50
1,2,3-Trichloropropane	NA	NA	0.0056	U	1	0.32	U	50	0.0057	U	1	0.0056	LU	1	0.28	U	50	0.006	U	1	0.0056	U	1	0.0054	U	1	0.0057	U	1	0.0056	U	1	0.36	U	50
1,2,4-Trichlorobenzene	NA	NA	0.0056	U	1	0.32	U	50	0.0057	U	1	0.0056	LU	1	0.28	U	50	0.006	U	1	0.0056	U	1	0.0054	U	1	0.0057	U	1	0.0056	U	1	0.36	U	50
1,2,4-Trimethylbenzene	5.9	100	0.0056	U	1	0.32	U	50	0.0057	U	1	0.0056	LU	1	0.28	U	50	0.006	U	1	0.0056	U	1	0.0054	U	1	0.0057	U	1	0.0056	U	1	0.36	U	50
1,2-Dibromo-3-chloropropane	NA	NA	0.0056	U	1	0.32	U	50	0.0057	U	1	0.0056	LU	1	0.28	U	50	0.006	U	1	0.0056	U	1	0.0054	U	1	0.0057	U	1	0.0056	U	1	0.36	U	50
1,2-dibromoethane	NA	NA	0.0056	U	1	0.0057	U	1	0.0057	U	1	0.0056	LU	1	0.0053	U	1	0.006	U	1	0.0056	U	1	0.0054	U	1	0.0057	U	1	0.0056	U	1	0.0061	LU	1
1,2-dichlorobenzene	1.1	100	0.0056	U	1	0.32	U	50	0.0057	U	1	0.0056	LU	1	0.28	U	50	0.006	U	1	0.0056	U	1	0.0054	U	1	0.0057	U	1	0.0056	U	1	0.36	U	50
1,2-dichloroethane	0.02	5.8	0.0056	U	1	0.0057	U	1	0.0057	U	1	0.0056	LU	1	0.0053	U	1	0.006	U	1	0.0056	U	1	0.0054	U	1	0.0057	U	1	0.0056	U	1	0.0061	LU	1
1,2-dichloropropane	NA	NA	0.0056	U	1	0.0057	U	1	0.0057	U	1	0.0056	LU	1	0.0053	U	1	0.006	U	1	0.0056	U	1	0.0054	U	1	0.0057	U	1	0.0056	U	1	0.0061	LU	1
1,3,5-trimethylbenzene	3.1	100	0.0056	U	1	0.32	U	50	0.0057	U	1	0.0056	LU	1	0.28	U	50	0.006	U	1	0.0056	U	1	0.0054	U	1	0.0057	U	1	0.0056	U	1	0.36	U	50
1,3-dichlorobenzene	2.6	38	0.0056	U	1	0.32	U	50	0.0057	U	1	0.0056	LU	1	0.28	U	50	0.006	U	1	0.0056	U	1	0.0054	U	1	0.0057	U	1	0.0056	U	1	0.36	U	50
1,4-dichlorobenzene	1.8	24	0.0056	U	1	0.32	U	50	0.0057	U	1	0.0056	LU	1	0.28	U	50	0.006	U	1	0.0056	U	1	0.0054	U	1	0.0057	U	1	0.0056	U	1	0.36	U	50
1,4-dioxane	0.1	5.7	0.084	U	1	0.085	U	1	0.086	U	1	0.084	LU	1	0.08	U	1	0.09	U	1	0.083	U	1	0.081	U	1	0.085	U	1	0.084	U	1	0.092	LU	1
2-butanone (MEK)	0.1	100	0.034	U	1	0.034	U	1	0.034	U	1	0.034	LU	1	0.032	U	1	0.036	U	1	0.033	U	1	0.032	U	1	0.034	U	1	0.034	U	1	0.037	LU	1
2-hexanone (MBK)	NA	NA	0.028	U	1	0.028	U	1	0.029	U	1	0.028	LU	1	0.027	U	1	0.03	U	1	0.028	U	1	0.027	U	1	0.028	U	1	0.028	U	1	0.031	LU	1
4-methyl-2-pentanone	NA	NA	0.028	U	1	0.028	U	1	0.029	U	1	0.028	LU	1	0.027	U	1	0.03	U	1	0.028	U	1	0.027	U	1	0.028	U	1	0.028	U	1	0.031	LU	1
acetone	0.03	100	0.056	U	1	0.057	U	1	0.028	JS	1	0.056	LU	1	0.053	U	1	0.06	U	1	0.056	U	1	0.054	U	1	0.057	U	1	0.076	S	1	0.061	LU	1
acrolein	NA	NA	0.0056	U	1	0.0057	U	1	0.0057	U	1	0.0056	LU	1	0.0053	U	1	0.006	U	1	0.0056	U	1	0.0054	U	1	0.0057	U	1	0.0056	U	1	0.0061	LU	1
acrylonitrile	NA	NA	0.0056	U	1	0.0057	U	1	0.0057	U	1	0.0056	LU	1	0.0053	U	1	0.006	U	1	0.0056	U	1	0.0054	U	1	0.0057	U	1	0.0056	U	1	0.0061	LU	1
benzene	0.06	3.7	0.0056	U	1	0.0057	U	1	0.0057	U	1	0.0056	LU	1	0.0053	U	1	0.006	U	1	0.0056	U	1	0.0054	U	1	0.0057	U	1	0.0056	U	1	0.0061	LU	1
bromochloromethane	NA	NA	0.0056	U	1	0.0057	U	1	0.0057	U	1	0.0056	LU	1	0.0053	U	1	0.006	U	1	0.0056	U	1	0.0054	U	1	0.0057	U	1	0.0056	U	1	0.0061	LU	1
bromodichloromethane	NA	NA	0.0056	U	1	0.0057	U	1	0.0057	U	1	0.0056	LU	1	0.0053	U	1	0.006	U	1	0.0056	U	1	0.0054	U	1	0.0057	U	1	0.0056	U	1	0.0061	LU	1
Bromoform	NA	NA	0.0056	U	1	0.0057	U	1	0.0057	U	1	0.0056	LU	1	0.0053	U	1	0.006	U	1	0.0056	U	1	0.0054	U	1	0.0057	U	1	0.0056	U	1	0.0061	LU	1
bromomethane	NA	NA	0.0056	U	1	0.0057	U	1	0.0057	U	1	0.0056	LU	1	0.0053	U	1	0.006	U	1	0.0056	U	1	0.0054	U	1	0.0057	U	1	0.0056	U	1	0.0061	LU	1
carbon disulfide	NA	NA	0.0056	U	1	0.0057	U	1	0.0057	U	1	0.0056	LU	1	0.0053	U	1	0.006	U	1	0.0056	U	1	0.0054	U	1	0.0057	U	1	0.0056	U	1	0.0061	LU	1
carbon tetrachloride	0.76	7.1	0.0056	U	1	0.0057	U	1	0.0057	U	1	0.0056	LU	1	0.0053	U	1	0.006	U	1	0.0056	U	1	0.0054	U	1	0.0057	U	1	0.0056	U	1	0.0061	LU	1
chlorobenzene	4.5	100	0.0056	U	1	0.0057	U	1	0.0057	U	1	0.0056	LU	1	0.0053	U	1	0.006	U	1	0.0056	U	1	0.0054	U	1	0.0057	U	1	0.0056	U	1	0.0061	LU	1
chloroethane	NA	NA	0.0056	U	1	0.0057	U	1	0.0057	U	1	0.0056	LU	1	0.0053	U	1	0.006	U	1	0.0056	U	1	0.0054	U	1	0.0057	U	1	0.0056	U	1	0.0061	LU	1
chloroform	0.37	24	0.0056	U	1	0.0057	U	1	0.0057	U	1	0.0056	LU	1	0.0053	U	1	0.006	U	1	0.0056	U	1	0.0054	U	1	0.0057	U	1	0.0056	U	1	0.0061	LU	1
chloromethane	NA	NA	0.0056	U	1	0.0057	U	1	0.0057	U	1	0.0056	LU	1	0.0053	U	1	0.006	U	1	0.0056	U	1	0.0054	U	1	0.0057	U	1	0.0056	U	1	0.0061	LU	1
cis-1,2-dichloroethylene (DCE)	0.019	41	0.0056	U	1	0.0057	U	1	0.0057	U	1	0.0056	LU	1	0.0053	U	1	0.006	U	1	0.0056	U	1	0.0054	U	1	0.0057	U	1	0.0056	U	1	0.0061	LU	1
cis-1,3-dichloropropylene	NA	NA	0.0056	U	1	0.0057	U	1	0.0057	U	1	0.0056	LU	1	0.0053	U	1	0.006	U	1	0.0056	U	1	0.0054	U	1	0.0057	U	1	0.0056	U	1	0.0061	LU	1
cyclohexane	NA	NA	0.0056	U	1	0.0057	U	1	0.0057	U	1	0.0056	LU	1	0.0053	U	1	0.006	U	1	0.0056	U	1	0.0054	U	1	0.0057	U	1	0.0056	U	1	0.0061	LU	1
dibromochloromethane	NA	NA	0.0056	U	1	0.0057	U	1	0.0057	U	1	0.0056	LU	1	0.0053	U	1	0.006	U	1	0.0056	U	1	0.0054	U	1	0.0057	U	1	0.0056	U	1	0.0061	LU	1
dibromomethane	NA	NA	0.0056	U	1	0.0057	U	1	0.0057	U	1	0.0056	LU	1	0.0053	U	1	0.006	U	1	0.0056	U	1	0.0054	U	1	0.0057	U	1	0.0056	U	1	0.0061	LU	1
dichlorodifluoromethane	NA	NA	0.0056	U	1	0.0057	U	1	0.0057	U	1	0.0056	LU	1	0.0053	U	1	0.006	U	1	0.0056	U	1	0.0054	U	1	0.0057	U	1	0.0056	U	1	0.0061	LU	1
ethyl benzene	1	76	0.0056	U	1	0.0057	U	1	0.0057	U	1	0.0056	LU	1	0.0053	U	1	0.006	U	1	0.0056	U	1	0.0054	U	1	0.0057	U	1	0.0056	U	1	0.0061	LU	1
hexachlorobutadiene	NA	NA	0.0056	U	1	0.32	U	50	0.0057	U	1	0.0056	LU	1	0.28	U	50	0.006	U	1	0.0056	U	1	0.0054	U	1	0.0057	U	1	0.0056	U	1	0.36	U	50
isopropylbenzene	2.3	100	0.0056	U	1	0.32	U	50	0.0057	U	1	0.0056	LU	1	0.28	U	50	0.006	U	1	0.0056	U	1	0.0054	U	1	0.0057	U	1	0.0056	U	1	0.36	U	50
methyl acetate	NA	NA	0.056	U	1	0.057	U	1	0.057	U	1	0.056	LU	1	0.053	U	1	0.06	U	1	0.056	U	1	0.054	U	1	0.057	U	1	0.056	U	1	0.061	LU	1
methyl tert-butyl ether (MTBE)	0.1	100	0.011	U	1	0.011	U	1	0.011	U	1	0.011	LU	1	0.011	U	1	0.012	U	1	0.011	U	1	0.011	U	1	0.011	U	1	0.011	U	1	0.012	LU	1
methylcyclohexane	NA	NA	0.0056	U	1	0.0057	U	1	0.0057	U	1	0.0056	LU	1	0.0053	U	1	0.006	U	1	0.0056	U	1	0.0054	U	1	0.0057	U	1	0.0056	U	1	0.0061	LU	1
methylene chloride	0.05	81	0.028	U	1	0.028	U	1	0.029	U	1	0.0091	JSL	1	0.027	U	1	0.03	U	1	0.028	U	1	0.027	U	1	0.028	U	1	0.028	U	1	0.0072	JSL	1
n-butylbenzene	18	100	0.0056	U	1	0.32	U	50	0.0057	U	1	0.0056	LU	1	0.28	U	50	0.006	U	1	0.0056	U	1	0.0054	U	1	0.0057	U	1	0.0056	U	1	0.36	U	50
n-propylbenzene	5	100	0.0056	U	1	0.32	U	50	0.0057	U	1	0.0056	LU	1	0.28	U	50	0.006	U	1	0.0056	U	1	0.0054	U	1	0.0057	U	1	0.0056	U	1	0.36	U	50
o-xylene	0.26	100	0.0056	U	1	0.0057	U	1	0.0057	U	1	0.0056	LU	1	0.0053	U	1	0.006	U	1	0.0056	U	1	0.0054	U	1	0.0057	U	1	0.0056	U	1	0.0061	LU	1
p- & m- xylenes	0.26	100	0.0056	U	1	0.0057	U	1	0.0057	U	1	0.0056	LU	1	0.0053	U	1	0.006	U	1	0.0056	U	1	0.0054	U	1	0.0057	U	1	0.0056	U	1	0.0061	LU	1
p-isopropyltoluene	10	NA	0.0056	U	1	0.32	U	50	0.0057	U	1	0.0056	LU	1	0.28	U	50	0.006	U	1	0.0056	U	1	0.0054	U	1	0.0057	U	1	0.0056	U	1	0.36	U	50
sec-butylbenzene	25	100	0.0056	U	1	0.32	U	50	0.0057	U	1	0.0056	LU	1	0.28	U	50	0.006	U	1	0.0056	U	1	0.0054	U	1	0.0057	U	1	0.0056	U	1	0.36	U	50
styrene	NA	NA	0.0056	U	1	0.0057	U	1	0.0057	U	1	0.0056	LU	1	0.0053	U	1	0.006	U	1	0.0056	U	1	0.0054	U	1	0.0057	U	1	0.0056	U	1	0.0061	LU	1
tert-butyl alcohol	NA	NA	0.056	U	1	0.057	U	1	0.057	U	1	0.056	LU	1	0.053	U	1	0.06	U	1	0.056	U	1	0.054	U	1	0.057	U	1	0.056	U	1	0.061	LU	1
tert-butylbenzene	11	100	0.0056	U	1	0.32	U	50	0.0057	U	1	0.0056	LU	1	0.28	U	50	0.006	U	1	0.0056	U	1	0.0054	U	1	0.0057	U	1	0.0056	U	1	0.36	U	50
tetrachloroethylene (PCE)	1.3	18	0.0056	U	1	0.0057	U	1	0.0057	U	1	0.0056	LU	1	0.0053	U	1	0.006	U	1	0.0056	U	1	0.0054	U	1	0.0057	U	1	0.0056	U	1	0.0061	LU	1
toluene	0.7	100	0.0056	U	1	0.0057	U	1	0.0057	U	1	0.013	L	1	0.0053	U	1	0.006	U	1	0.0056	U	1	0.00073	J	1	0.0057	U	1	0.0056	U	1	0.0061	LU	1
trans-1,2-dichloroethylene (DCE)	0.19	100	0.0056	U	1	0.0057	U	1	0.0057	U	1	0.0056	LU	1	0.0053	U	1	0.006	U	1	0.0056	U	1	0.0054	U	1	0.0057	U	1	0.0056	U	1	0.0061	LU	1
trans-1,3-dichloropropylene	NA	NA	0.0056	U	1	0.0057	U	1	0.0057	U	1	0.0056	LU	1	0.0053	U	1	0.006	U	1	0.0056	U	1	0.0054	U	1	0.0057	U	1	0.0056	U	1	0.0061	LU	1
trichloroethylene (TCE)	0.47	6.4	0.0056	U	1	0.0057	U	1	0.0057	U	1	0.0056	LU	1	0.0053	U	1	0.006	U	1	0.0056	U	1	0.0054	U	1	0.0057	U	1	0.0056	U	1	0.0061	LU	1
trichlorofluoromethane	NA	NA	0.0056	U	1	0.0057	U	1	0.0057	U	1	0.0056	LU	1	0.0053	U	1	0.006	U	1	0.0056	U	1	0.0054	U	1	0.0057	U	1	0.0056	U	1	0.0061	LU	1
vinyl chloride (VC)	0.03	0.48	0.0056	U	1	0.0057	U	1	0.0057	U	1	0.0056	LU	1	0.0053	U	1	0.006	U	1	0.0056	U	1	0.0054	U	1	0.0057	U	1	0.0056	U	1	0.0061	LU	1
xylenes, total	0.26	100	0.0056	U	1	0.0057	U	1	0.0057	U	1	0.0056	U	1	0.0053	U	1	0.006	U	1	0.0056	U	1	0.0054	U	1	0.0057	U	1	0.0056	U	1	0.0061	U	1

value ≤ UU SCO
value > UU SCO

Q = Laboratory Qualifier DL = Dilution NA = not available (addtional flags: B-in blank, D-diluted, E-estimated, J-approximate, L-Biased Low, S-lab solvent)

Table 1: VOCs in Soil

The Green, Newburgh, NY
BCP ID: C336099

GALLAGHER BASSETT | TECHNICAL SERVICES

All data in mg/Kg (ppm)			Sample	2SB-28 0-2			2SB-28 7-9			2SB-29 Surf			2SB-29 0-2			2SB-28 8-10		
U= Not Detected ≥ value			Date	2026-03-06			2026-03-06			2026-03-06			2026-03-06			2026-03-06		
VOCs (8260)	**UU SCO**	**RRU SCO**		Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL
1,1,1,2-tetrachloroethane	NA	NA		0.0063	U	1	0.0055	U	1	0.0074	U	1	0.0057	U	1	0.0055	U	1
1,1,1-trichloroethane (TCA)	0.68	100		0.0063	U	1	0.0055	U	1	0.0074	U	1	0.0057	U	1	0.0055	U	1
1,1,2,2-tetrachloroethane	NA	NA		0.0063	U	1	0.0055	U	1	0.0074	U	1	0.0057	U	1	0.0055	U	1
1,1,2-trichloro-1,2,2-trifluoroethane	NA	NA		0.0063	U	1	0.0055	U	1	0.0074	U	1	0.0057	U	1	0.0055	U	1
1,1,2-trichloroethane	NA	NA		0.0063	U	1	0.0055	U	1	0.0074	U	1	0.0057	U	1	0.0055	U	1
1,1-dichloroethane	0.27	47		0.0063	U	1	0.0055	U	1	0.0074	U	1	0.0057	U	1	0.0055	U	1
1,1-dichloroethylene	0.24	0.98		0.0063	U	1	0.0055	U	1	0.0074	U	1	0.0057	U	1	0.0055	U	1
1,2,3-Trichlorobenzene	NA	NA		0.0063	U	1	0.0055	U	1	0.0074	U	1	0.0057	U	1	0.0055	U	1
1,2,3-Trichloropropane	NA	NA		0.0063	U	1	0.0055	U	1	0.0074	U	1	0.0057	U	1	0.0055	U	1
1,2,4-Trichlorobenzene	NA	NA		0.0063	U	1	0.0055	U	1	0.0074	U	1	0.0057	U	1	0.0055	U	1
1,2,4-Trimethylbenzene	5.9	100		0.0063	U	1	0.0055	U	1	0.0074	U	1	0.0057	U	1	0.0055	U	1
1,2-Dibromo-3-chloropropane	NA	NA		0.0063	U	1	0.0055	U	1	0.0074	U	1	0.0057	U	1	0.0055	U	1
1,2-dibromoethane	NA	NA		0.0063	U	1	0.0055	U	1	0.0074	U	1	0.0057	U	1	0.0055	U	1
1,2-dichlorobenzene	1.1	100		0.0063	U	1	0.0055	U	1	0.0074	U	1	0.0057	U	1	0.0055	U	1
1,2-dichloroethane	0.02	5.8		0.0063	U	1	0.0055	U	1	0.0074	U	1	0.0057	U	1	0.0055	U	1
1,2-dichloropropane	NA	NA		0.0063	U	1	0.0055	U	1	0.0074	U	1	0.0057	U	1	0.0055	U	1
1,3,5-trimethylbenzene	3.1	100		0.0063	U	1	0.0055	U	1	0.0074	U	1	0.0057	U	1	0.0055	U	1
1,3-dichlorobenzene	2.6	38		0.0063	U	1	0.0055	U	1	0.0074	U	1	0.0057	U	1	0.0055	U	1
1,4-dichlorobenzene	1.8	24		0.0063	U	1	0.0055	U	1	0.0074	U	1	0.0057	U	1	0.0055	U	1
1,4-dioxane	0.1	5.7		0.094	U	1	0.082	U	1	0.11	U	1	0.085	U	1	0.082	U	1
2-butanone (MEK)	0.1	100		0.038	U	1	0.033	U	1	0.044	U	1	0.034	U	1	0.033	U	1
2-hexanone (MBK)	NA	NA		0.031	U	1	0.027	U	1	0.037	U	1	0.028	U	1	0.027	U	1
4-methyl-2-pentanone	NA	NA		0.031	U	1	0.027	U	1	0.037	U	1	0.028	U	1	0.027	U	1
acetone	0.03	100		0.063	U	1	0.055	U	1	0.074	U	1	0.057	U	1	0.055	U	1
acrolein	NA	NA		0.0063	U	1	0.0055	U	1	0.0074	U	1	0.0057	U	1	0.0055	U	1
acrylonitrile	NA	NA		0.0063	U	1	0.0055	U	1	0.0074	U	1	0.0057	U	1	0.0055	U	1
benzene	0.06	3.7		0.0063	U	1	0.0055	U	1	0.0074	U	1	0.0057	U	1	0.0055	U	1
bromochloromethane	NA	NA		0.0063	U	1	0.0055	U	1	0.0074	U	1	0.0057	U	1	0.0055	U	1
bromodichloromethane	NA	NA		0.0063	U	1	0.0055	U	1	0.0074	U	1	0.0057	U	1	0.0055	U	1
Bromoform	NA	NA		0.0063	U	1	0.0055	U	1	0.0074	U	1	0.0057	U	1	0.0055	U	1
bromomethane	NA	NA		0.0063	U	1	0.0055	U	1	0.0074	U	1	0.0057	U	1	0.0055	U	1
carbon disulfide	NA	NA		0.0063	U	1	0.0055	U	1	0.0074	U	1	0.0057	U	1	0.0055	U	1
carbon tetrachloride	0.76	7.1		0.0063	U	1	0.0055	U	1	0.0074	U	1	0.0057	U	1	0.0055	U	1
chlorobenzene	4.5	100		0.0063	U	1	0.0055	U	1	0.0074	U	1	0.0057	U	1	0.0055	U	1
chloroethane	NA	NA		0.0063	U	1	0.0055	U	1	0.0074	U	1	0.0057	U	1	0.0055	U	1
chloroform	0.37	24		0.0063	U	1	0.0055	U	1	0.0074	U	1	0.0057	U	1	0.0055	U	1
chloromethane	NA	NA		0.0063	U	1	0.0055	U	1	0.0074	U	1	0.0057	U	1	0.0055	U	1
cis-1,2-dichloroethylene (DCE)	0.019	41		0.0063	U	1	0.0055	U	1	0.0074	U	1	0.0057	U	1	0.0055	U	1
cis-1,3-dichloropropylene	NA	NA		0.0063	U	1	0.0055	U	1	0.0074	U	1	0.0057	U	1	0.0055	U	1
cyclohexane	NA	NA		0.0063	U	1	0.0055	U	1	0.0074	U	1	0.0057	U	1	0.0055	U	1
dibromochloromethane	NA	NA		0.0063	U	1	0.0055	U	1	0.0074	U	1	0.0057	U	1	0.0055	U	1
dibromomethane	NA	NA		0.0063	U	1	0.0055	U	1	0.0074	U	1	0.0057	U	1	0.0055	U	1
dichlorodifluoromethane	NA	NA		0.0063	U	1	0.0055	U	1	0.0074	U	1	0.0057	U	1	0.0055	U	1
ethyl benzene	1	76		0.0063	U	1	0.0055	U	1	0.0074	U	1	0.0057	U	1	0.0055	U	1
hexachlorobutadiene	NA	NA		0.0063	U	1	0.0055	U	1	0.0074	U	1	0.0057	U	1	0.0055	U	1
isopropylbenzene	2.3	100		0.0063	U	1	0.0055	U	1	0.0074	U	1	0.0057	U	1	0.0055	U	1
methyl acetate	NA	NA		0.063	U	1	0.055	U	1	0.074	U	1	0.057	U	1	0.055	U	1
methyl tert-butyl ether (MTBE)	0.1	100		0.013	U	1	0.011	U	1	0.015	U	1	0.011	U	1	0.011	U	1
methylcyclohexane	NA	NA		0.0063	U	1	0.0055	U	1	0.0074	U	1	0.0057	U	1	0.0055	U	1
methylene chloride	0.05	81		0.031	U	1	0.027	U	1	0.037	U	1	0.028	U	1	0.027	U	1
n-butylbenzene	18	100		0.0063	U	1	0.0055	U	1	0.0074	U	1	0.0057	U	1	0.0055	U	1
n-propylbenzene	5	100		0.0063	U	1	0.0055	U	1	0.0074	U	1	0.0057	U	1	0.0055	U	1
o-xylene	0.26	100		0.0063	U	1	0.0055	U	1	0.0074	U	1	0.0057	U	1	0.0055	U	1
p- & m- xylenes	0.26	100		0.0063	U	1	0.0055	U	1	0.0074	U	1	0.0057	U	1	0.0055	U	1
p-isopropyltoluene	10	NA		0.0063	U	1	0.0055	U	1	0.0074	U	1	0.0057	U	1	0.0055	U	1
sec-butylbenzene	25	100		0.0063	U	1	0.0055	U	1	0.0074	U	1	0.0057	U	1	0.0055	U	1
styrene	NA	NA		0.0063	U	1	0.0055	U	1	0.0074	U	1	0.0057	U	1	0.0055	U	1
tert-butyl alcohol	NA	NA		0.063	U	1	0.055	U	1	0.074	U	1	0.057	U	1	0.055	U	1
tert-butylbenzene	11	100		0.0063	U	1	0.0055	U	1	0.0074	U	1	0.0057	U	1	0.0055	U	1
tetrachloroethylene (PCE)	1.3	18		0.0063	U	1	0.0055	U	1	0.0074	U	1	0.0057	U	1	0.0055	U	1
toluene	0.7	100		0.0063	U	1	0.0055	U	1	0.0074	U	1	0.0057	U	1	0.0055	U	1
trans-1,2-dichloroethylene (DCE)	0.19	100		0.0063	U	1	0.0055	U	1	0.0074	U	1	0.0057	U	1	0.0055	U	1
trans-1,3-dichloropropylene	NA	NA		0.0063	U	1	0.0055	U	1	0.0074	U	1	0.0057	U	1	0.0055	U	1
trichloroethylene (TCE)	0.47	6.4		0.0063	U	1	0.0055	U	1	0.0074	U	1	0.0057	U	1	0.0055	U	1
trichlorofluoromethane	NA	NA		0.0063	U	1	0.0055	U	1	0.0074	U	1	0.0057	U	1	0.0055	U	1
vinyl chloride (VC)	0.03	0.48		0.0063	U	1	0.0055	U	1	0.0074	U	1	0.0057	U	1	0.0055	U	1
xylenes, total	0.26	100		0.0063	U	1	0.0055	U	1	0.0074	U	1	0.0057	U	1	0.0055	U	1

value ≤ UU SCO
value > UU SCO

Q = Laboratory Qualifier DL = Dilution NA = not available (addtional flags: B-in blank, D-diluted, E-estimated, J-approximate, L-Biased Low, S-lab solvent)

Table 2: SVOCs in Soil

The Green, Newburgh, NY
BCP ID: C336099

GALLAGHER BASSETT | TECHNICAL SERVICES

All data in mg/Kg (ppm)		Sample	2SB-01 SURF			2SB-01 5-7.5			DUP-20251001			2SB-01 7.5-10			2SB-02 SURF			2SB-02 5-7.5		
U= Not Detected ≥ value		Date	2025-10-01			2025-10-01			2025-10-01			2025-10-01			2025-10-01			2025-10-01		
SVOCs (8270)	**UU SCO**	**RRU SCO**	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL
1,1'-biphenyl	NA	NA	0.26	U	1	0.28	U	1	0.27	U	1	0.28	U	1	0.28	U	1	0.27	U	1
1,2,4,5-tetrachlorobenzene	NA	NA	0.26	U	1	0.28	U	1	0.27	U	1	0.28	U	1	0.28	U	1	0.27	U	1
1,2,4-trichlorobenzene	NA	NA	0.26	U	1	0.28	U	1	0.27	U	1	0.28	U	1	0.28	U	1	0.27	U	1
1,2-dichlorobenzene	NA	NA	0.26	U	1	0.28	U	1	0.27	U	1	0.28	U	1	0.28	U	1	0.27	U	1
1,2-diphenylhydrazine (azobenzene)	NA	NA	0.38	U	1	0.4	U	1	0.38	U	1	0.4	U	1	0.4	U	1	0.39	U	1
1,3-dichlorobenzene	NA	NA	0.26	U	1	0.28	U	1	0.27	U	1	0.28	U	1	0.28	U	1	0.27	U	1
1,4-dichlorobenzene	NA	NA	0.26	U	1	0.28	U	1	0.27	U	1	0.28	U	1	0.28	U	1	0.27	U	1
1,4-dioxane	0.1	13	0.074	U	1	0.08	U	1	0.078	U	1	0.08	U	1	0.078	U	1	0.084	U	1
2,2'-Oxybis(1-Chloropropane)	NA	NA	0.26	U	1	0.28	U	1	0.27	U	1	0.28	U	1	0.28	U	1	0.27	U	1
2,3,4,6-tetrachlorophenol	NA	NA	0.26	U	1	0.28	U	1	0.27	U	1	0.28	U	1	0.28	U	1	0.27	U	1
2,4,5-trichlorophenol	NA	NA	0.26	U	1	0.28	U	1	0.27	U	1	0.28	U	1	0.28	U	1	0.27	U	1
2,4,6-trichlorophenol	NA	NA	0.26	U	1	0.28	U	1	0.27	U	1	0.28	U	1	0.28	U	1	0.27	U	1
2,4-dichlorophenol	NA	NA	0.26	U	1	0.28	U	1	0.27	U	1	0.28	U	1	0.28	U	1	0.27	U	1
2,4-dimethylphenol	NA	NA	0.26	U	1	0.28	U	1	0.27	U	1	0.28	U	1	0.28	U	1	0.27	U	1
2,4-dinitrophenol	NA	NA	0.6	U	1	0.64	U	1	0.61	U	1	0.64	U	1	0.63	U	1	0.62	U	1
2,4-dinitrotoluene	NA	NA	0.26	U	1	0.28	U	1	0.27	U	1	0.28	U	1	0.28	U	1	0.27	U	1
2,6-dinitrotoluene	NA	NA	0.26	U	1	0.28	U	1	0.27	U	1	0.28	U	1	0.28	U	1	0.27	U	1
2-chloronaphthalene	NA	NA	0.26	U	1	0.28	U	1	0.27	U	1	0.28	U	1	0.28	U	1	0.27	U	1
2-chlorophenol	NA	NA	0.26	U	1	0.28	U	1	0.27	U	1	0.28	U	1	0.28	U	1	0.27	U	1
2-methylnaphthalene	NA	NA	0.26	U	1	0.28	U	1	0.27	U	1	0.28	U	1	0.28	U	1	0.27	U	1
2-Methylphenol (o-cresol)	0.33	100	0.26	U	1	0.28	U	1	0.27	U	1	0.28	U	1	0.28	U	1	0.27	U	1
2-nitroaniline	NA	NA	0.6	U	1	0.64	U	1	0.61	U	1	0.64	U	1	0.63	U	1	0.62	U	1
2-nitrophenol	NA	NA	0.26	U	1	0.28	U	1	0.27	U	1	0.28	U	1	0.28	U	1	0.27	U	1
3&4-Methylphenol (m&p-cresol)	0.33	100	0.38	U	1	0.4	U	1	0.38	U	1	0.4	U	1	0.4	U	1	0.39	U	1
3,3'-dichlorobenzidine	NA	NA	0.45	U	1	0.48	U	1	0.46	U	1	0.48	U	1	0.48	U	1	0.47	U	1
3-nitroaniline	NA	NA	0.6	U	1	0.64	U	1	0.61	U	1	0.64	U	1	0.63	U	1	0.62	U	1
4,6-dinitro-2-methylphenol	NA	NA	1.1	U	1	1.2	U	1	1.1	U	1	1.2	U	1	1.2	U	1	1.1	U	1
4-bromophenyl phenyl ether	NA	NA	0.38	U	1	0.4	U	1	0.38	U	1	0.4	U	1	0.4	U	1	0.39	U	1
4-chloro-3-methylphenol	NA	NA	0.26	U	1	0.28	U	1	0.27	U	1	0.28	U	1	0.28	U	1	0.27	U	1
4-chloroaniline	NA	NA	0.26	U	1	0.28	U	1	0.27	U	1	0.28	U	1	0.28	U	1	0.27	U	1
4-chlorophenyl phenyl ether	NA	NA	0.26	U	1	0.28	U	1	0.27	U	1	0.28	U	1	0.28	U	1	0.27	U	1
4-nitroaniline	NA	NA	0.6	U	1	0.64	U	1	0.61	U	1	0.64	U	1	0.63	U	1	0.62	U	1
4-nitrophenol	NA	NA	1.1	U	1	1.2	U	1	1.1	U	1	1.2	U	1	1.2	U	1	1.1	U	1
acenaphthene	20	100	0.26	U	1	0.28	U	1	0.27	U	1	0.28	U	1	0.28	U	1	0.27	U	1
acenaphthylene	100	100	0.26	U	1	0.28	U	1	0.27	U	1	0.28	U	1	0.25	J	1	0.27	U	1
acetophenone	NA	NA	0.26	U	1	0.28	U	1	0.27	U	1	0.28	U	1	0.28	U	1	0.27	U	1
aniline	0.04	8.1	0.38	U	1	0.4	U	1	0.38	U	1	0.4	U	1	0.4	U	1	0.39	U	1
anthracene	100	100	0.26	U	1	0.28	U	1	0.27	U	1	0.28	U	1	0.17	J	1	0.27	U	1
atrazine	NA	NA	0.26	U	1	0.28	U	1	0.27	U	1	0.28	U	1	0.28	U	1	0.27	U	1
benzaldehyde	NA	NA	0.26	U	1	0.28	U	1	0.27	U	1	0.28	U	1	1.1		1	0.27	U	1
benzidine	NA	NA	0.26	U	1	0.28	U	1	0.27	U	1	0.28	U	1	0.28	U	1	0.27	U	1
benzo(a)anthracene	1	1.4	0.38	U	1	0.4	U	1	0.38	U	1	0.4	U	1	0.4	U	1	0.39	U	1
benzo(a)pyrene	1	1	0.26	U	1	0.28	U	1	0.27	U	1	0.28	U	1	1		1	0.27	U	1
benzo(b)fluoranthene	1	1.4	0.26	U	1	0.28	U	1	0.27	U	1	0.28	U	1	1.6		1	0.27	U	1
benzo(g,h,i)perylene	0.64	4.9	0.26	U	1	0.28	U	1	0.27	U	1	0.28	U	1	0.53		1	0.27	U	1
benzo(k)fluoranthene	0.8	4.9	0.26	U	1	0.28	U	1	0.27	U	1	0.28	U	1	0.58		1	0.27	U	1
benzoic acid	NA	NA	0.75	U	1	0.8	U	1	0.76	U	1	0.8	U	1	0.79	U	1	0.78	U	1
benzyl alcohol	NA	NA	0.38	U	1	0.4	U	1	0.38	U	1	0.4	U	1	0.4	U	1	0.39	U	1
benzyl butyl phthalate	NA	NA	0.26	U	1	0.28	U	1	0.27	U	1	0.28	U	1	0.28	U	1	0.27	U	1
bis(2-chloroethoxy)methane	NA	NA	0.26	U	1	0.28	U	1	0.27	U	1	0.28	U	1	0.28	U	1	0.27	U	1
bis(2-chloroethyl)ether	NA	NA	0.38	U	1	0.4	U	1	0.38	U	1	0.4	U	1	0.4	U	1	0.39	U	1
bis(2-ethylhexyl)phthalate	NA	NA	0.26	U	1	0.28	U	1	0.27	U	1	0.28	U	1	1.5		1	0.27	U	1
caprolactam	NA	NA	0.26	U	1	0.28	U	1	0.27	U	1	0.28	U	1	0.28	U	1	0.27	U	1
carbazole	NA	NA	0.38	U	1	0.4	U	1	0.38	U	1	0.4	U	1	0.4	U	1	0.39	U	1
chrysene	1	4.9	0.26	U	1	0.28	U	1	0.27	U	1	0.28	U	1	1		1	0.27	U	1
dibenzo(a,h)anthracene	0.33	0.33	0.19	U	1	0.2	U	1	0.19	U	1	0.2	U	1	0.13	J	1	0.19	U	1
dibenzofuran	2.1	18	0.26	U	1	0.28	U	1	0.27	U	1	0.28	U	1	0.28	U	1	0.27	U	1
diethyl phthalate	NA	NA	0.26	U	1	0.28	U	1	0.27	U	1	0.28	U	1	0.28	U	1	0.27	U	1
dimethyl phthalate	NA	NA	0.26	U	1	0.28	U	1	0.27	U	1	0.28	U	1	0.28	U	1	0.27	U	1
di-n-butyl phthalate	NA	NA	0.75	U	1	0.8	U	1	0.76	U	1	0.8	U	1	0.79	U	1	0.78	U	1
di-n-octyl phthalate	NA	NA	0.26	U	1	0.28	U	1	0.27	U	1	0.28	U	1	0.28	U	1	0.27	U	1
fluoranthene	85	100	0.26	U	1	0.28	U	1	0.27	U	1	0.28	U	1	1.5		1	0.27	U	1
fluorene	30	100	0.26	U	1	0.28	U	1	0.27	U	1	0.28	U	1	0.28	U	1	0.27	U	1
hexachlorobenzene	0.33	0.33	0.26	U	1	0.28	U	1	0.27	U	1	0.28	U	1	0.28	U	1	0.27	U	1
hexachlorobutadiene	NA	NA	0.26	U	1	0.28	U	1	0.27	U	1	0.28	U	1	0.28	U	1	0.27	U	1
hexachlorocyclopentadiene	NA	NA	0.26	U	1	0.28	U	1	0.27	U	1	0.28	U	1	0.28	U	1	0.27	U	1
hexachloroethane	NA	NA	0.26	U	1	0.28	U	1	0.27	U	1	0.28	U	1	0.28	U	1	0.27	U	1
indeno(1,2,3-cd)pyrene	0.5	1.4	0.26	U	1	0.28	U	1	0.27	U	1	0.28	U	1	0.55		1	0.27	U	1
isophorone	NA	NA	0.26	U	1	0.28	U	1	0.27	U	1	0.28	U	1	0.28	U	1	0.27	U	1
naphthalene	12	100	0.26	U	1	0.28	U	1	0.27	U	1	0.28	U	1	0.28	U	1	0.27	U	1
nitrobenzene	0.08	1.8	0.26	U	1	0.28	U	1	0.27	U	1	0.28	U	1	0.28	U	1	0.27	U	1
n-nitrosodimethylamine	NA	NA	0.38	U	1	0.4	U	1	0.38	U	1	0.4	U	1	0.4	U	1	0.39	U	1
n-nitroso-di-n-propylamine	NA	NA	0.19	U	1	0.2	U	1	0.19	U	1	0.2	U	1	0.2	U	1	0.19	U	1
n-nitrosodiphenylamine	NA	NA	0.38	U	1	0.4	U	1	0.38	U	1	0.4	U	1	0.4	U	1	0.39	U	1
pentachlorophenol	0.8	1.3	0.38	U	1	0.4	U	1	0.38	U	1	0.4	U	1	0.4	U	1	0.39	U	1
phenanthrene	1.1	4.9	0.26	U	1	0.28	U	1	0.27	U	1	0.28	U	1	0.63		1	0.27	U	1
phenol	0.33	100	0.26	U	1	0.28	U	1	0.27	U	1	0.28	U	1	0.28	U	1	0.27	U	1
pyrene	64	100	0.26	U	1	0.28	U	1	0.27	U	1	0.28	U	1	1.3		1	0.27	U	1

value ≤ UU SCO
value > UU SCO
value > RRU SCO

Q = Laboratory Qualifier DL = Dilution NA = not available (addtional flags: B-in blank, D-diluted, E-estimated, J-approximate)

Table 2: SVOCs in Soil

The Green, Newburgh, NY
BCP ID: C336099

GALLAGHER BASSETT | TECHNICAL SERVICES

All data in mg/Kg (ppm)		Sample	2SB-02 7.5-10			2SB-03 SURF			2SB-03 10-12.5			2SB-03 12.5-15			2SB-04 SURF			2SB-04 0-5		
U= Not Detected ≥ value		Date	2025-10-01			2025-10-01			2025-10-01			2025-10-01			2025-10-01			2025-10-01		
SVOCs (8270)	**UU SCO**	**RRU SCO**	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL
1,1'-biphenyl	NA	NA	0.29	U	1	0.27	U	1	0.26	U	1	0.26	U	1	0.27	U	1	0.27	U	1
1,2,4,5-tetrachlorobenzene	NA	NA	0.29	U	1	0.27	U	1	0.26	U	1	0.26	U	1	0.27	U	1	0.27	U	1
1,2,4-trichlorobenzene	NA	NA	0.29	U	1	0.27	U	1	0.26	U	1	0.26	U	1	0.27	U	1	0.27	U	1
1,2-dichlorobenzene	NA	NA	0.29	U	1	0.27	U	1	0.26	U	1	0.26	U	1	0.27	U	1	0.27	U	1
1,2-diphenylhydrazine (azobenzene)	NA	NA	0.42	U	1	0.39	U	1	0.38	U	1	0.37	U	1	0.39	U	1	0.38	U	1
1,3-dichlorobenzene	NA	NA	0.29	U	1	0.27	U	1	0.26	U	1	0.26	U	1	0.27	U	1	0.27	U	1
1,4-dichlorobenzene	NA	NA	0.29	U	1	0.27	U	1	0.26	U	1	0.26	U	1	0.27	U	1	0.27	U	1
1,4-dioxane	0.1	13	0.077	U	1	0.076	U	1	0.076	U	1	0.075	U	1	0.079	U	1	0.076	U	1
2,2'-Oxybis(1-Chloropropane)	NA	NA	0.29	U	1	0.27	U	1	0.26	U	1	0.26	U	1	0.27	U	1	0.27	U	1
2,3,4,6-tetrachlorophenol	NA	NA	0.29	U	1	0.27	U	1	0.26	U	1	0.26	U	1	0.27	U	1	0.27	U	1
2,4,5-trichlorophenol	NA	NA	0.29	U	1	0.27	U	1	0.26	U	1	0.26	U	1	0.27	U	1	0.27	U	1
2,4,6-trichlorophenol	NA	NA	0.29	U	1	0.27	U	1	0.26	U	1	0.26	U	1	0.27	U	1	0.27	U	1
2,4-dichlorophenol	NA	NA	0.29	U	1	0.27	U	1	0.26	U	1	0.26	U	1	0.27	U	1	0.27	U	1
2,4-dimethylphenol	NA	NA	0.29	U	1	0.27	U	1	0.26	U	1	0.26	U	1	0.27	U	1	0.27	U	1
2,4-dinitrophenol	NA	NA	0.67	U	1	0.62	U	1	0.6	U	1	0.59	U	1	0.62	U	1	0.61	U	1
2,4-dinitrotoluene	NA	NA	0.29	U	1	0.27	U	1	0.26	U	1	0.26	U	1	0.27	U	1	0.27	U	1
2,6-dinitrotoluene	NA	NA	0.29	U	1	0.27	U	1	0.26	U	1	0.26	U	1	0.27	U	1	0.27	U	1
2-chloronaphthalene	NA	NA	0.29	U	1	0.27	U	1	0.26	U	1	0.26	U	1	0.27	U	1	0.27	U	1
2-chlorophenol	NA	NA	0.29	U	1	0.27	U	1	0.26	U	1	0.26	U	1	0.27	U	1	0.27	U	1
2-methylnaphthalene	NA	NA	0.29	U	1	0.27	U	1	0.26	U	1	0.26	U	1	0.27	U	1	0.27	U	1
2-Methylphenol (o-cresol)	0.33	100	0.29	U	1	0.27	U	1	0.26	U	1	0.26	U	1	0.27	U	1	0.27	U	1
2-nitroaniline	NA	NA	0.67	U	1	0.62	U	1	0.6	U	1	0.59	U	1	0.62	U	1	0.61	U	1
2-nitrophenol	NA	NA	0.29	U	1	0.27	U	1	0.26	U	1	0.26	U	1	0.27	U	1	0.27	U	1
3&4-Methylphenol (m&p-cresol)	0.33	100	0.42	U	1	0.39	U	1	0.38	U	1	0.37	U	1	0.39	U	1	0.38	U	1
3,3'-dichlorobenzidine	NA	NA	0.5	U	1	0.47	U	1	0.45	U	1	0.45	U	1	0.47	U	1	0.46	U	1
3-nitroaniline	NA	NA	0.67	U	1	0.62	U	1	0.6	U	1	0.59	U	1	0.62	U	1	0.61	U	1
4,6-dinitro-2-methylphenol	NA	NA	1.2	U	1	1.1	U	1	1.1	U	1	1.1	U	1	1.1	U	1	1.1	U	1
4-bromophenyl phenyl ether	NA	NA	0.42	U	1	0.39	U	1	0.38	U	1	0.37	U	1	0.39	U	1	0.38	U	1
4-chloro-3-methylphenol	NA	NA	0.29	U	1	0.27	U	1	0.26	U	1	0.26	U	1	0.27	U	1	0.27	U	1
4-chloroaniline	NA	NA	0.29	U	1	0.27	U	1	0.26	U	1	0.26	U	1	0.27	U	1	0.27	U	1
4-chlorophenyl phenyl ether	NA	NA	0.29	U	1	0.27	U	1	0.26	U	1	0.26	U	1	0.27	U	1	0.27	U	1
4-nitroaniline	NA	NA	0.67	U	1	0.62	U	1	0.6	U	1	0.59	U	1	0.62	U	1	0.61	U	1
4-nitrophenol	NA	NA	1.2	U	1	1.1	U	1	1.1	U	1	1.1	U	1	1.1	U	1	1.1	U	1
acenaphthene	20	100	0.29	U	1	0.27	U	1	0.26	U	1	0.26	U	1	0.27	U	1	0.27	U	1
acenaphthylene	100	100	0.29	U	1	0.27	U	1	0.26	U	1	0.26	U	1	0.27	U	1	0.14	J	1
acetophenone	NA	NA	0.29	U	1	0.27	U	1	0.26	U	1	0.26	U	1	0.27	U	1	0.27	U	1
aniline	0.04	8.1	0.42	U	1	0.39	U	1	0.38	U	1	0.37	U	1	0.39	U	1	0.38	U	1
anthracene	100	100	0.29	U	1	0.27	U	1	0.26	U	1	0.26	U	1	0.27	U	1	0.25	J	1
atrazine	NA	NA	0.29	U	1	0.27	U	1	0.26	U	1	0.26	U	1	0.27	U	1	0.27	U	1
benzaldehyde	NA	NA	0.29	U	1	0.27	J	1	0.26	U	1	0.26	U	1	0.48		1	0.97		1
benzidine	NA	NA	0.29	U	1	0.27	U	1	0.26	U	1	0.26	U	1	0.27	U	1	0.27	U	1
benzo(a)anthracene	1	1.4	0.42	U	1	0.39	U	1	0.38	U	1	0.37	U	1	0.39	U	1	0.38	U	1
benzo(a)pyrene	1	1	0.29	U	1	0.28		1	0.26	U	1	0.26	U	1	0.46		1	0.91		1
benzo(b)fluoranthene	1	1.4	0.29	U	1	0.42		1	0.26	U	1	0.26	U	1	0.69		1	1.4		1
benzo(g,h,i)perylene	0.64	4.9	0.29	U	1	0.17	J	1	0.26	U	1	0.26	U	1	0.25	J	1	0.53		1
benzo(k)fluoranthene	0.8	4.9	0.29	U	1	0.16	J	1	0.26	U	1	0.26	U	1	0.23	J	1	0.48		1
benzoic acid	NA	NA	0.83	U	1	0.78	U	1	0.76	U	1	0.74	U	1	0.78	U	1	0.77	U	1
benzyl alcohol	NA	NA	0.42	U	1	0.39	U	1	0.38	U	1	0.37	U	1	0.39	U	1	0.38	U	1
benzyl butyl phthalate	NA	NA	0.29	U	1	0.27	U	1	0.26	U	1	0.26	U	1	0.27	U	1	0.27	U	1
bis(2-chloroethoxy)methane	NA	NA	0.29	U	1	0.27	U	1	0.26	U	1	0.26	U	1	0.27	U	1	0.27	U	1
bis(2-chloroethyl)ether	NA	NA	0.42	U	1	0.39	U	1	0.38	U	1	0.37	U	1	0.39	U	1	0.38	U	1
bis(2-ethylhexyl)phthalate	NA	NA	0.29	U	1	0.27	U	1	0.26	U	1	0.26	U	1	0.27	U	1	2.6		1
caprolactam	NA	NA	0.29	U	1	0.27	U	1	0.26	U	1	0.26	U	1	0.27	U	1	0.27	U	1
carbazole	NA	NA	0.42	U	1	0.39	U	1	0.38	U	1	0.37	U	1	0.39	U	1	0.38	U	1
chrysene	1	4.9	0.29	U	1	0.28		1	0.26	U	1	0.26	U	1	0.44		1	0.9		1
dibenzo(a,h)anthracene	0.33	0.33	0.21	U	1	0.19	U	1	0.19	U	1	0.19	U	1	0.19	U	1	0.13	J	1
dibenzofuran	2.1	18	0.29	U	1	0.27	U	1	0.26	U	1	0.26	U	1	0.27	U	1	0.27	U	1
diethyl phthalate	NA	NA	0.29	U	1	0.27	U	1	0.26	U	1	0.26	U	1	0.27	U	1	0.27	U	1
dimethyl phthalate	NA	NA	0.29	U	1	0.27	U	1	0.26	U	1	0.26	U	1	0.27	U	1	0.27	U	1
di-n-butyl phthalate	NA	NA	0.83	U	1	0.78	U	1	0.76	U	1	0.74	U	1	0.78	U	1	0.77	U	1
di-n-octyl phthalate	NA	NA	0.29	U	1	0.27	U	1	0.26	U	1	0.26	U	1	0.27	U	1	0.27	U	1
fluoranthene	85	100	0.29	U	1	0.41		1	0.26	U	1	0.26	U	1	0.77		1	2.2		1
fluorene	30	100	0.29	U	1	0.27	U	1	0.26	U	1	0.26	U	1	0.27	U	1	0.27	U	1
hexachlorobenzene	0.33	0.33	0.29	U	1	0.27	U	1	0.26	U	1	0.26	U	1	0.27	U	1	0.27	U	1
hexachlorobutadiene	NA	NA	0.29	U	1	0.27	U	1	0.26	U	1	0.26	U	1	0.27	U	1	0.27	U	1
hexachlorocyclopentadiene	NA	NA	0.29	U	1	0.27	U	1	0.26	U	1	0.26	U	1	0.27	U	1	0.27	U	1
hexachloroethane	NA	NA	0.29	U	1	0.27	U	1	0.26	U	1	0.26	U	1	0.27	U	1	0.27	U	1
indeno(1,2,3-cd)pyrene	0.5	1.4	0.29	U	1	0.17	J	1	0.26	U	1	0.26	U	1	0.28		1	0.55		1
isophorone	NA	NA	0.29	U	1	0.27	U	1	0.26	U	1	0.26	U	1	0.27	U	1	0.27	U	1
naphthalene	12	100	0.29	U	1	0.27	U	1	0.26	U	1	0.26	U	1	0.27	U	1	0.27	U	1
nitrobenzene	0.08	1.8	0.29	U	1	0.27	U	1	0.26	U	1	0.26	U	1	0.27	U	1	0.27	U	1
n-nitrosodimethylamine	NA	NA	0.42	U	1	0.39	U	1	0.38	U	1	0.37	U	1	0.39	U	1	0.38	U	1
n-nitroso-di-n-propylamine	NA	NA	0.21	U	1	0.19	U	1	0.19	U	1	0.19	U	1	0.19	U	1	0.19	U	1
n-nitrosodiphenylamine	NA	NA	0.42	U	1	0.39	U	1	0.38	U	1	0.37	U	1	0.39	U	1	0.38	U	1
pentachlorophenol	0.8	1.3	0.42	U	1	0.39	U	1	0.38	U	1	0.37	U	1	0.39	U	1	0.38	U	1
phenanthrene	1.1	4.9	0.29	U	1	0.27	J	1	0.26	U	1	0.26	U	1	0.43		1	1.3		1
phenol	0.33	100	0.29	U	1	0.27	U	1	0.26	U	1	0.26	U	1	0.27	U	1	0.27	U	1
pyrene	64	100	0.29	U	1	0.36		1	0.26	U	1	0.26	U	1	0.66		1	1.7		1

value ≤ UU SCO
value > UU SCO
value > RRU SCO

Q = Laboratory Qualifier DL = Dilution NA = not available (addtional flags: B-in blank, D-diluted, E-estimated, J-approximate)

Table 2: SVOCs in Soil

The Green, Newburgh, NY
BCP ID: C336099

GALLAGHER BASSETT | TECHNICAL SERVICES

All data in mg/Kg (ppm)		Sample	2SB-04 10-15			2SB-05 SURF			2SB-05 5-7			2SB-06 SURF			2SB-06 0-2.5			2SB-06 7.5-10		
U= Not Detected ≥ value		Date	2025-10-01			2025-10-01			2025-10-01			2025-10-01			2025-10-01			2025-10-01		
SVOCs (8270)	**UU SCO**	**RRU SCO**	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL
1,1'-biphenyl	NA	NA	0.25	U	1	0.28	U	1	0.27	U	1	0.33	U	1	0.26	U	1	0.26	U	1
1,2,4,5-tetrachlorobenzene	NA	NA	0.25	U	1	0.28	U	1	0.27	U	1	0.33	U	1	0.26	U	1	0.26	U	1
1,2,4-trichlorobenzene	NA	NA	0.25	U	1	0.28	U	1	0.27	U	1	0.33	U	1	0.26	U	1	0.26	U	1
1,2-dichlorobenzene	NA	NA	0.25	U	1	0.28	U	1	0.27	U	1	0.33	U	1	0.26	U	1	0.26	U	1
1,2-diphenylhydrazine (azobenzene)	NA	NA	0.36	U	1	0.41	U	1	0.38	U	1	0.48	U	1	0.38	U	1	0.37	U	1
1,3-dichlorobenzene	NA	NA	0.25	U	1	0.28	U	1	0.27	U	1	0.33	U	1	0.26	U	1	0.26	U	1
1,4-dichlorobenzene	NA	NA	0.25	U	1	0.28	U	1	0.27	U	1	0.33	U	1	0.26	U	1	0.26	U	1
1,4-dioxane	0.1	13	0.072	U	1	0.083	U	1	0.075	U	1	0.095	U	1	0.075	U	1	0.073	U	1
2,2'-Oxybis(1-Chloropropane)	NA	NA	0.25	U	1	0.28	U	1	0.27	U	1	0.33	U	1	0.26	U	1	0.26	U	1
2,3,4,6-tetrachlorophenol	NA	NA	0.25	U	1	0.28	U	1	0.27	U	1	0.33	U	1	0.26	U	1	0.26	U	1
2,4,5-trichlorophenol	NA	NA	0.25	U	1	0.28	U	1	0.27	U	1	0.33	U	1	0.26	U	1	0.26	U	1
2,4,6-trichlorophenol	NA	NA	0.25	U	1	0.28	U	1	0.27	U	1	0.33	U	1	0.26	U	1	0.26	U	1
2,4-dichlorophenol	NA	NA	0.25	U	1	0.28	U	1	0.27	U	1	0.33	U	1	0.26	U	1	0.26	U	1
2,4-dimethylphenol	NA	NA	0.25	U	1	0.28	U	1	0.27	U	1	0.33	U	1	0.26	U	1	0.26	U	1
2,4-dinitrophenol	NA	NA	0.58	U	1	0.65	U	1	0.61	U	1	0.76	U	1	0.6	U	1	0.59	U	1
2,4-dinitrotoluene	NA	NA	0.25	U	1	0.28	U	1	0.27	U	1	0.33	U	1	0.26	U	1	0.26	U	1
2,6-dinitrotoluene	NA	NA	0.25	U	1	0.28	U	1	0.27	U	1	0.33	U	1	0.26	U	1	0.26	U	1
2-chloronaphthalene	NA	NA	0.25	U	1	0.28	U	1	0.27	U	1	0.33	U	1	0.26	U	1	0.26	U	1
2-chlorophenol	NA	NA	0.25	U	1	0.28	U	1	0.27	U	1	0.33	U	1	0.26	U	1	0.26	U	1
2-methylnaphthalene	NA	NA	0.25	U	1	0.28	U	1	0.27	U	1	0.33	U	1	0.26	U	1	0.26	U	1
2-Methylphenol (o-cresol)	0.33	100	0.25	U	1	0.28	U	1	0.27	U	1	0.33	U	1	0.26	U	1	0.26	U	1
2-nitroaniline	NA	NA	0.58	U	1	0.65	U	1	0.61	U	1	0.76	U	1	0.6	U	1	0.59	U	1
2-nitrophenol	NA	NA	0.25	U	1	0.28	U	1	0.27	U	1	0.33	U	1	0.26	U	1	0.26	U	1
3&4-Methylphenol (m&p-cresol)	0.33	100	0.36	U	1	0.41	U	1	0.38	U	1	0.48	U	1	0.38	U	1	0.37	U	1
3,3'-dichlorobenzidine	NA	NA	0.43	U	1	0.49	U	1	0.46	U	1	0.57	U	1	0.45	U	1	0.44	U	1
3-nitroaniline	NA	NA	0.58	U	1	0.65	U	1	0.61	U	1	0.76	U	1	0.6	U	1	0.59	U	1
4,6-dinitro-2-methylphenol	NA	NA	1	U	1	1.2	U	1	1.1	U	1	1.4	U	1	1.1	U	1	1.1	U	1
4-bromophenyl phenyl ether	NA	NA	0.36	U	1	0.41	U	1	0.38	U	1	0.48	U	1	0.38	U	1	0.37	U	1
4-chloro-3-methylphenol	NA	NA	0.25	U	1	0.28	U	1	0.27	U	1	0.33	U	1	0.26	U	1	0.26	U	1
4-chloroaniline	NA	NA	0.25	U	1	0.28	U	1	0.27	U	1	0.33	U	1	0.26	U	1	0.26	U	1
4-chlorophenyl phenyl ether	NA	NA	0.25	U	1	0.28	U	1	0.27	U	1	0.33	U	1	0.26	U	1	0.26	U	1
4-nitroaniline	NA	NA	0.58	U	1	0.65	U	1	0.61	U	1	0.76	U	1	0.6	U	1	0.59	U	1
4-nitrophenol	NA	NA	1	U	1	1.2	U	1	1.1	U	1	1.4	U	1	1.1	U	1	1.1	U	1
acenaphthene	20	100	0.25	U	1	0.28	U	1	0.27	U	1	0.33	U	1	0.26	U	1	0.26	U	1
acenaphthylene	100	100	0.25	U	1	0.28	U	1	0.27	U	1	0.33	U	1	0.26	U	1	0.26	U	1
acetophenone	NA	NA	0.25	U	1	0.28	U	1	0.27	U	1	0.33	U	1	0.26	U	1	0.26	U	1
aniline	0.04	8.1	0.36	U	1	0.41	U	1	0.38	U	1	0.48	U	1	0.38	U	1	0.37	U	1
anthracene	100	100	0.25	U	1	0.28	U	1	0.27	U	1	0.33	U	1	0.26	U	1	0.26	U	1
atrazine	NA	NA	0.25	U	1	0.28	U	1	0.27	U	1	0.33	U	1	0.26	U	1	0.26	U	1
benzaldehyde	NA	NA	0.25	U	1	0.54		1	0.27	U	1	0.52		1	0.26	U	1	0.26	U	1
benzidine	NA	NA	0.25	U	1	0.28	U	1	0.27	U	1	0.33	U	1	0.26	U	1	0.26	U	1
benzo(a)anthracene	1	1.4	0.36	U	1	0.41	U	1	0.38	U	1	0.48	U	1	0.38	U	1	0.37	U	1
benzo(a)pyrene	1	1	0.25	U	1	0.54		1	0.27	U	1	0.52		1	0.26	U	1	0.26	U	1
benzo(b)fluoranthene	1	1.4	0.25	U	1	0.76		1	0.27	U	1	0.72		1	0.26	U	1	0.26	U	1
benzo(g,h,i)perylene	0.64	4.9	0.25	U	1	0.37		1	0.27	U	1	0.34		1	0.26	U	1	0.26	U	1
benzo(k)fluoranthene	0.8	4.9	0.25	U	1	0.23	J	1	0.27	U	1	0.21	J	1	0.26	U	1	0.26	U	1
benzoic acid	NA	NA	0.72	U	1	0.81	U	1	0.76	U	1	0.95	U	1	0.76	U	1	0.74	U	1
benzyl alcohol	NA	NA	0.36	U	1	0.41	U	1	0.38	U	1	0.48	U	1	0.38	U	1	0.37	U	1
benzyl butyl phthalate	NA	NA	0.25	U	1	0.28	U	1	0.27	U	1	0.33	U	1	0.26	U	1	0.26	U	1
bis(2-chloroethoxy)methane	NA	NA	0.25	U	1	0.28	U	1	0.27	U	1	0.33	U	1	0.26	U	1	0.26	U	1
bis(2-chloroethyl)ether	NA	NA	0.36	U	1	0.41	U	1	0.38	U	1	0.48	U	1	0.38	U	1	0.37	U	1
bis(2-ethylhexyl)phthalate	NA	NA	0.25	U	1	0.28	U	1	0.27	U	1	0.33	U	1	0.26	U	1	0.26	U	1
caprolactam	NA	NA	0.25	U	1	0.28	U	1	0.27	U	1	0.33	U	1	0.26	U	1	0.26	U	1
carbazole	NA	NA	0.36	U	1	0.41	U	1	0.38	U	1	0.48	U	1	0.38	U	1	0.37	U	1
chrysene	1	4.9	0.25	U	1	0.56		1	0.27	U	1	0.53		1	0.26	U	1	0.26	U	1
dibenzo(a,h)anthracene	0.33	0.33	0.18	U	1	0.2	U	1	0.19	U	1	0.24	U	1	0.19	U	1	0.18	U	1
dibenzofuran	2.1	18	0.25	U	1	0.28	U	1	0.27	U	1	0.33	U	1	0.26	U	1	0.26	U	1
diethyl phthalate	NA	NA	0.25	U	1	0.28	U	1	0.27	U	1	0.33	U	1	0.26	U	1	0.26	U	1
dimethyl phthalate	NA	NA	0.25	U	1	0.28	U	1	0.27	U	1	0.33	U	1	0.26	U	1	0.26	U	1
di-n-butyl phthalate	NA	NA	0.72	U	1	0.81	U	1	0.76	U	1	0.95	U	1	0.76	U	1	0.74	U	1
di-n-octyl phthalate	NA	NA	0.25	U	1	0.28	U	1	0.27	U	1	0.33	U	1	0.26	U	1	0.26	U	1
fluoranthene	85	100	0.25	U	1	1.2		1	0.27	U	1	1.3		1	0.26	U	1	0.26	U	1
fluorene	30	100	0.25	U	1	0.28	U	1	0.27	U	1	0.33	U	1	0.26	U	1	0.26	U	1
hexachlorobenzene	0.33	0.33	0.25	U	1	0.28	U	1	0.27	U	1	0.33	U	1	0.26	U	1	0.26	U	1
hexachlorobutadiene	NA	NA	0.25	U	1	0.28	U	1	0.27	U	1	0.33	U	1	0.26	U	1	0.26	U	1
hexachlorocyclopentadiene	NA	NA	0.25	U	1	0.28	U	1	0.27	U	1	0.33	U	1	0.26	U	1	0.26	U	1
hexachloroethane	NA	NA	0.25	U	1	0.28	U	1	0.27	U	1	0.33	U	1	0.26	U	1	0.26	U	1
indeno(1,2,3-cd)pyrene	0.5	1.4	0.25	U	1	0.39		1	0.27	U	1	0.35		1	0.26	U	1	0.26	U	1
isophorone	NA	NA	0.25	U	1	0.28	U	1	0.27	U	1	0.33	U	1	0.26	U	1	0.26	U	1
naphthalene	12	100	0.25	U	1	0.28	U	1	0.27	U	1	0.33	U	1	0.26	U	1	0.26	U	1
nitrobenzene	0.08	1.8	0.25	U	1	0.28	U	1	0.27	U	1	0.33	U	1	0.26	U	1	0.26	U	1
n-nitrosodimethylamine	NA	NA	0.36	U	1	0.41	U	1	0.38	U	1	0.48	U	1	0.38	U	1	0.37	U	1
n-nitroso-di-n-propylamine	NA	NA	0.18	U	1	0.2	U	1	0.19	U	1	0.24	U	1	0.19	U	1	0.18	U	1
n-nitrosodiphenylamine	NA	NA	0.36	U	1	0.41	U	1	0.38	U	1	0.48	U	1	0.38	U	1	0.37	U	1
pentachlorophenol	0.8	1.3	0.36	U	1	0.41	U	1	0.38	U	1	0.48	U	1	0.38	U	1	0.37	U	1
phenanthrene	1.1	4.9	0.25	U	1	0.71		1	0.27	U	1	0.85		1	0.26	U	1	0.26	U	1
phenol	0.33	100	0.25	U	1	0.28	U	1	0.27	U	1	0.33	U	1	0.26	U	1	0.26	U	1
pyrene	64	100	0.25	U	1	1		1	0.27	U	1	1.1		1	0.26	U	1	0.26	U	1

value ≤ UU SCO
value > UU SCO
value > RRU SCO

Q = Laboratory Qualifier DL = Dilution NA = not available (addtional flags: B-in blank, D-diluted, E-estimated, J-approximate)

Table 2: SVOCs in Soil

The Green, Newburgh, NY
BCP ID: C336099

GALLAGHER BASSETT | TECHNICAL SERVICES

All data in mg/Kg (ppm)			Sample	2SB-07 SURF			2SB-07 10-15			2SB-08 SURF			2SB-08 8-10			2SB-08 10-12			2SB-09 SURF		
U= Not Detected ≥ value			Date	2025-10-02			2025-10-02			2025-10-02			2025-10-02			2025-10-02			2025-10-02		
SVOCs (8270)	**UU SCO**	**RRU SCO**		Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL
1,1'-biphenyl	NA	NA		0.27	U	1	0.26	U	1	0.27	U	1	0.26	U	1	0.27	U	1	0.3	U	1
1,2,4,5-tetrachlorobenzene	NA	NA		0.27	U	1	0.26	U	1	0.27	U	1	0.26	U	1	0.27	U	1	0.3	U	1
1,2,4-trichlorobenzene	NA	NA		0.27	U	1	0.26	U	1	0.27	U	1	0.26	U	1	0.27	U	1	0.3	U	1
1,2-dichlorobenzene	NA	NA		0.27	U	1	0.26	U	1	0.27	U	1	0.26	U	1	0.27	U	1	0.3	U	1
1,2-diphenylhydrazine (azobenzene)	NA	NA		0.38	U	1	0.38	U	1	0.39	U	1	0.37	U	1	0.38	U	1	0.43	U	1
1,3-dichlorobenzene	NA	NA		0.27	U	1	0.26	U	1	0.27	U	1	0.26	U	1	0.27	U	1	0.3	U	1
1,4-dichlorobenzene	NA	NA		0.27	U	1	0.26	U	1	0.27	U	1	0.26	U	1	0.27	U	1	0.3	U	1
1,4-dioxane	0.1	13		0.076	U	1	0.075	U	1	0.077	U	1	0.075	U	1	0.075	U	1	0.086	U	1
2,2'-Oxybis(1-Chloropropane)	NA	NA		0.27	U	1	0.26	U	1	0.27	U	1	0.26	U	1	0.27	U	1	0.3	U	1
2,3,4,6-tetrachlorophenol	NA	NA		0.27	U	1	0.26	U	1	0.27	U	1	0.26	U	1	0.27	U	1	0.3	U	1
2,4,5-trichlorophenol	NA	NA		0.27	U	1	0.26	U	1	0.27	U	1	0.26	U	1	0.27	U	1	0.3	U	1
2,4,6-trichlorophenol	NA	NA		0.27	U	1	0.26	U	1	0.27	U	1	0.26	U	1	0.27	U	1	0.3	U	1
2,4-dichlorophenol	NA	NA		0.27	U	1	0.26	U	1	0.27	U	1	0.26	U	1	0.27	U	1	0.3	U	1
2,4-dimethylphenol	NA	NA		0.27	U	1	0.26	U	1	0.27	U	1	0.26	U	1	0.27	U	1	0.3	U	1
2,4-dinitrophenol	NA	NA		0.61	U	1	0.6	U	1	0.62	U	1	0.59	U	1	0.61	U	1	0.69	U	1
2,4-dinitrotoluene	NA	NA		0.27	U	1	0.26	U	1	0.27	U	1	0.26	U	1	0.27	U	1	0.3	U	1
2,6-dinitrotoluene	NA	NA		0.27	U	1	0.26	U	1	0.27	U	1	0.26	U	1	0.27	U	1	0.3	U	1
2-chloronaphthalene	NA	NA		0.27	U	1	0.26	U	1	0.27	U	1	0.26	U	1	0.27	U	1	0.3	U	1
2-chlorophenol	NA	NA		0.27	U	1	0.26	U	1	0.27	U	1	0.26	U	1	0.27	U	1	0.3	U	1
2-methylnaphthalene	NA	NA		0.27	U	1	0.26	U	1	0.27	U	1	0.26	U	1	0.27	U	1	0.3	U	1
2-Methylphenol (o-cresol)	0.33	100		0.27	U	1	0.26	U	1	0.27	U	1	0.26	U	1	0.27	U	1	0.3	U	1
2-nitroaniline	NA	NA		0.61	U	1	0.6	U	1	0.62	U	1	0.59	U	1	0.61	U	1	0.69	U	1
2-nitrophenol	NA	NA		0.27	U	1	0.26	U	1	0.27	U	1	0.26	U	1	0.27	U	1	0.3	U	1
3&4-Methylphenol (m&p-cresol)	0.33	100		0.38	U	1	0.38	U	1	0.39	U	1	0.37	U	1	0.38	U	1	0.43	U	1
3,3'-dichlorobenzidine	NA	NA		0.45	U	1	0.45	U	1	0.46	U	1	0.44	U	1	0.46	U	1	0.52	U	1
3-nitroaniline	NA	NA		0.61	U	1	0.6	U	1	0.62	U	1	0.59	U	1	0.61	U	1	0.69	U	1
4,6-dinitro-2-methylphenol	NA	NA		1.1	U	1	1.1	U	1	1.1	U	1	1.1	U	1	1.1	U	1	1.3	U	1
4-bromophenyl phenyl ether	NA	NA		0.38	U	1	0.38	U	1	0.39	U	1	0.37	U	1	0.38	U	1	0.43	U	1
4-chloro-3-methylphenol	NA	NA		0.27	U	1	0.26	U	1	0.27	U	1	0.26	U	1	0.27	U	1	0.3	U	1
4-chloroaniline	NA	NA		0.27	U	1	0.26	U	1	0.27	U	1	0.26	U	1	0.27	U	1	0.3	U	1
4-chlorophenyl phenyl ether	NA	NA		0.27	U	1	0.26	U	1	0.27	U	1	0.26	U	1	0.27	U	1	0.3	U	1
4-nitroaniline	NA	NA		0.61	U	1	0.6	U	1	0.62	U	1	0.59	U	1	0.61	U	1	0.69	U	1
4-nitrophenol	NA	NA		1.1	U	1	1.1	U	1	1.1	U	1	1.1	U	1	1.1	U	1	1.3	U	1
acenaphthene	20	100		0.27	U	1	0.26	U	1	0.19	J	1	0.26	U	1	0.27	U	1	0.3	U	1
acenaphthylene	100	100		0.13	J	1	0.26	U	1	0.27		1	0.26	U	1	0.27	U	1	0.13	J	1
acetophenone	NA	NA		0.27	U	1	0.26	U	1	0.27	U	1	0.26	U	1	0.27	U	1	0.3	U	1
aniline	0.04	8.1		0.38	U	1	0.38	U	1	0.39	U	1	0.37	U	1	0.38	U	1	0.43	U	1
anthracene	100	100		0.34		1	0.26	U	1	0.59		1	0.26	U	1	0.27	U	1	0.18	J	1
atrazine	NA	NA		0.27	U	1	0.26	U	1	0.27	U	1	0.26	U	1	0.27	U	1	0.3	U	1
benzaldehyde	NA	NA		0.27	U	1	0.26	U	1	0.27	U	1	0.26	U	1	0.27	U	1	0.3	U	1
benzidine	NA	NA		0.38	U	1	0.38	U	1	0.39	U	1	0.37	U	1	0.38	U	1	0.43	U	1
benzo(a)anthracene	1	1.4		1.1		1	0.26	U	1	1.9		1	0.26	U	1	0.19	J	1	0.8		1
benzo(a)pyrene	1	1		1.1		1	0.26	U	1	1.8		1	0.26	U	1	0.17	J	1	0.81		1
benzo(b)fluoranthene	1	1.4		1.4		1	0.26	U	1	2.5		1	0.26	U	1	0.22	J	1	1.1		1
benzo(g,h,i)perylene	0.64	4.9		0.7		1	0.26	U	1	1.1		1	0.26	U	1	0.27	U	1	0.56		1
benzo(k)fluoranthene	0.8	4.9		0.5		1	0.26	U	1	0.78		1	0.26	U	1	0.27	U	1	0.37		1
benzoic acid	NA	NA		0.76	U	1	0.75	U	1	0.77	U	1	0.73	U	1	0.76	U	1	0.87	U	1
benzyl alcohol	NA	NA		0.38	U	1	0.38	U	1	0.39	U	1	0.37	U	1	0.38	U	1	0.43	U	1
benzyl butyl phthalate	NA	NA		0.27	U	1	0.26	U	1	0.27	U	1	0.26	U	1	0.27	U	1	0.3	U	1
bis(2-chloroethoxy)methane	NA	NA		0.27	U	1	0.26	U	1	0.27	U	1	0.26	U	1	0.27	U	1	0.3	U	1
bis(2-chloroethyl)ether	NA	NA		0.38	U	1	0.38	U	1	0.39	U	1	0.37	U	1	0.38	U	1	0.43	U	1
bis(2-ethylhexyl)phthalate	NA	NA		0.27	U	1	0.26	U	1	5.3		1	0.26	U	1	0.27	U	1	0.75		1
caprolactam	NA	NA		0.27	U	1	0.26	U	1	0.27	U	1	0.26	U	1	0.27	U	1	0.3	U	1
carbazole	NA	NA		0.38	U	1	0.38	U	1	0.25	J	1	0.37	U	1	0.38	U	1	0.43	U	1
chrysene	1	4.9		1		1	0.26	U	1	1.9		1	0.26	U	1	0.17	J	1	0.8		1
dibenzo(a,h)anthracene	0.33	0.33		0.18	J	1	0.19	U	1	0.27		1	0.18	U	1	0.19	U	1	0.22	U	1
dibenzofuran	2.1	18		0.27	U	1	0.26	U	1	0.13	J	1	0.26	U	1	0.27	U	1	0.3	U	1
diethyl phthalate	NA	NA		0.27	U	1	0.26	U	1	0.27	U	1	0.26	U	1	0.27	U	1	0.3	U	1
dimethyl phthalate	NA	NA		0.27	U	1	0.26	U	1	0.27	U	1	0.26	U	1	0.27	U	1	0.3	U	1
di-n-butyl phthalate	NA	NA		0.76	U	1	0.75	U	1	0.77	U	1	0.73	U	1	0.76	U	1	0.87	U	1
di-n-octyl phthalate	NA	NA		0.27	U	1	0.26	U	1	0.27	U	1	0.26	U	1	0.27	U	1	0.3	U	1
fluoranthene	85	100		2.4		1	0.26	U	1	4		1	0.26	U	1	0.44		1	1.7		1
fluorene	30	100		0.27	U	1	0.26	U	1	0.2	J	1	0.26	U	1	0.27	U	1	0.3	U	1
hexachlorobenzene	0.33	0.33		0.27	U	1	0.26	U	1	0.27	U	1	0.26	U	1	0.27	U	1	0.3	U	1
hexachlorobutadiene	NA	NA		0.27	U	1	0.26	U	1	0.27	U	1	0.26	U	1	0.27	U	1	0.3	U	1
hexachlorocyclopentadiene	NA	NA		0.27	U	1	0.26	U	1	0.27	U	1	0.26	U	1	0.27	U	1	0.3	U	1
hexachloroethane	NA	NA		0.27	U	1	0.26	U	1	0.27	U	1	0.26	U	1	0.27	U	1	0.3	U	1
indeno(1,2,3-cd)pyrene	0.5	1.4		0.72		1	0.26	U	1	1.1		1	0.26	U	1	0.27	U	1	0.57		1
isophorone	NA	NA		0.27	U	1	0.26	U	1	0.27	U	1	0.26	U	1	0.27	U	1	0.3	U	1
naphthalene	12	100		0.27	U	1	0.26	U	1	0.17	J	1	0.26	U	1	0.27	U	1	0.3	U	1
nitrobenzene	0.08	1.8		0.27	U	1	0.26	U	1	0.27	U	1	0.26	U	1	0.27	U	1	0.3	U	1
n-nitrosodimethylamine	NA	NA		0.38	U	1	0.38	U	1	0.39	U	1	0.37	U	1	0.38	U	1	0.43	U	1
n-nitroso-di-n-propylamine	NA	NA		0.19	U	1	0.19	U	1	0.19	U	1	0.18	U	1	0.19	U	1	0.22	U	1
n-nitrosodiphenylamine	NA	NA		0.38	U	1	0.38	U	1	0.39	U	1	0.37	U	1	0.38	U	1	0.43	U	1
pentachlorophenol	0.8	1.3		0.38	U	1	0.38	U	1	0.39	U	1	0.37	U	1	0.38	U	1	0.43	U	1
phenanthrene	1.1	4.9		1.4		1	0.26	U	1	2.7		1	0.26	U	1	0.41		1	0.86		1
phenol	0.33	100		0.27	U	1	0.26	U	1	0.27	U	1	0.26	U	1	0.27	U	1	0.3	U	1
pyrene	64	100		2		1	0.26	U	1	3.6		1	0.26	U	1	0.38		1	1.5		1

value ≤ UU SCO
value > UU SCO
value > RRU SCO

Q = Laboratory Qualifier DL = Dilution NA = not available (addtional flags: B-in blank, D-diluted, E-estimated, J-approximate)

Table 2: SVOCs in Soil

The Green, Newburgh, NY
BCP ID: C336099

GALLAGHER BASSETT | TECHNICAL SERVICES

All data in mg/Kg (ppm)			Sample	2SB-09 10-12.5			2SB-09 12.5-15			2SB-10 SURF			2SB-10 5-7			2SB-10 10-12			2SB-11 SURF		
U= Not Detected ≥ value			Date	2025-10-02			2025-10-02			2025-10-02			2025-10-02			2025-10-02			2025-10-02		
SVOCs (8270)	**UU SCO**	**RRU SCO**		Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL
1,1'-biphenyl	NA	NA		0.25	U	1	0.26	U	1	0.26	U	1	0.25	U	1	0.25	U	1	0.28	U	1
1,2,4,5-tetrachlorobenzene	NA	NA		0.25	U	1	0.26	U	1	0.26	U	1	0.25	U	1	0.25	U	1	0.28	U	1
1,2,4-trichlorobenzene	NA	NA		0.25	U	1	0.26	U	1	0.26	U	1	0.25	U	1	0.25	U	1	0.28	U	1
1,2-dichlorobenzene	NA	NA		0.25	U	1	0.26	U	1	0.26	U	1	0.25	U	1	0.25	U	1	0.28	U	1
1,2-diphenylhydrazine (azobenzene)	NA	NA		0.36	U	1	0.37	U	1	0.37	U	1	0.36	U	1	0.35	U	1	0.4	U	1
1,3-dichlorobenzene	NA	NA		0.25	U	1	0.26	U	1	0.26	U	1	0.25	U	1	0.25	U	1	0.28	U	1
1,4-dichlorobenzene	NA	NA		0.25	U	1	0.26	U	1	0.26	U	1	0.25	U	1	0.25	U	1	0.28	U	1
1,4-dioxane	0.1	13		0.072	U	1	0.075	U	1	0.075	U	1	0.072	U	1	0.069	U	1	0.081	U	1
2,2'-Oxybis(1-Chloropropane)	NA	NA		0.25	U	1	0.26	U	1	0.26	U	1	0.25	U	1	0.25	U	1	0.28	U	1
2,3,4,6-tetrachlorophenol	NA	NA		0.25	U	1	0.26	U	1	0.26	U	1	0.25	U	1	0.25	U	1	0.28	U	1
2,4,5-trichlorophenol	NA	NA		0.25	U	1	0.26	U	1	0.26	U	1	0.25	U	1	0.25	U	1	0.28	U	1
2,4,6-trichlorophenol	NA	NA		0.25	U	1	0.26	U	1	0.26	U	1	0.25	U	1	0.25	U	1	0.28	U	1
2,4-dichlorophenol	NA	NA		0.25	U	1	0.26	U	1	0.26	U	1	0.25	U	1	0.25	U	1	0.28	U	1
2,4-dimethylphenol	NA	NA		0.25	U	1	0.26	U	1	0.26	U	1	0.25	U	1	0.25	U	1	0.28	U	1
2,4-dinitrophenol	NA	NA		0.57	U	1	0.6	U	1	0.6	U	1	0.57	U	1	0.56	U	1	0.65	U	1
2,4-dinitrotoluene	NA	NA		0.25	U	1	0.26	U	1	0.26	U	1	0.25	U	1	0.25	U	1	0.28	U	1
2,6-dinitrotoluene	NA	NA		0.25	U	1	0.26	U	1	0.26	U	1	0.25	U	1	0.25	U	1	0.28	U	1
2-chloronaphthalene	NA	NA		0.25	U	1	0.26	U	1	0.26	U	1	0.25	U	1	0.25	U	1	0.28	U	1
2-chlorophenol	NA	NA		0.25	U	1	0.26	U	1	0.26	U	1	0.25	U	1	0.25	U	1	0.28	U	1
2-methylnaphthalene	NA	NA		0.25	U	1	0.26	U	1	0.12	J	1	0.25	U	1	0.25	U	1	0.28	U	1
2-Methylphenol (o-cresol)	0.33	100		0.25	U	1	0.26	U	1	0.26	U	1	0.25	U	1	0.25	U	1	0.28	U	1
2-nitroaniline	NA	NA		0.57	U	1	0.6	U	1	0.6	U	1	0.57	U	1	0.56	U	1	0.65	U	1
2-nitrophenol	NA	NA		0.25	U	1	0.26	U	1	0.26	U	1	0.25	U	1	0.25	U	1	0.28	U	1
3&4-Methylphenol (m&p-cresol)	0.33	100		0.36	U	1	0.37	U	1	0.37	U	1	0.36	U	1	0.35	U	1	0.4	U	1
3,3'-dichlorobenzidine	NA	NA		0.43	U	1	0.45	U	1	0.45	U	1	0.43	U	1	0.42	U	1	0.48	U	1
3-nitroaniline	NA	NA		0.57	U	1	0.6	U	1	0.6	U	1	0.57	U	1	0.56	U	1	0.65	U	1
4,6-dinitro-2-methylphenol	NA	NA		1	U	1	1.1	U	1	1.1	U	1	1	U	1	1	U	1	1.2	U	1
4-bromophenyl phenyl ether	NA	NA		0.36	U	1	0.37	U	1	0.37	U	1	0.36	U	1	0.35	U	1	0.4	U	1
4-chloro-3-methylphenol	NA	NA		0.25	U	1	0.26	U	1	0.26	U	1	0.25	U	1	0.25	U	1	0.28	U	1
4-chloroaniline	NA	NA		0.25	U	1	0.26	U	1	0.26	U	1	0.25	U	1	0.25	U	1	0.28	U	1
4-chlorophenyl phenyl ether	NA	NA		0.25	U	1	0.26	U	1	0.26	U	1	0.25	U	1	0.25	U	1	0.28	U	1
4-nitroaniline	NA	NA		0.57	U	1	0.6	U	1	0.6	U	1	0.57	U	1	0.56	U	1	0.65	U	1
4-nitrophenol	NA	NA		1	U	1	1.1	U	1	1.1	U	1	1	U	1	1	U	1	1.2	U	1
acenaphthene	20	100		0.25	U	1	0.26	U	1	0.18	J	1	0.25	U	1	0.25	U	1	0.28	U	1
acenaphthylene	100	100		0.25	U	1	0.26	U	1	0.45		1	0.25	U	1	0.25	U	1	0.28	U	1
acetophenone	NA	NA		0.25	U	1	0.26	U	1	0.26	U	1	0.25	U	1	0.25	U	1	0.28	U	1
aniline	0.04	8.1		0.36	U	1	0.37	U	1	0.37	U	1	0.36	U	1	0.35	U	1	0.4	U	1
anthracene	100	100		0.25	U	1	0.26	U	1	0.66		1	0.25	U	1	0.25	U	1	0.28	U	1
atrazine	NA	NA		0.25	U	1	0.26	U	1	0.26	U	1	0.25	U	1	0.25	U	1	0.28	U	1
benzaldehyde	NA	NA		0.25	U	1	0.26	U	1	0.26	U	1	0.25	U	1	0.25	U	1	0.28	U	1
benzidine	NA	NA		0.36	U	1	0.37	U	1	0.37	U	1	0.36	U	1	0.35	U	1	0.4	U	1
benzo(a)anthracene	1	1.4		0.25	U	1	0.26	U	1	2.9		1	0.25	U	1	0.25	U	1	0.3		1
benzo(a)pyrene	1	1		0.25	U	1	0.26	U	1	3		1	0.25	U	1	0.25	U	1	0.31		1
benzo(b)fluoranthene	1	1.4		0.25	U	1	0.26	U	1	4.3		1	0.25	U	1	0.25	U	1	0.45		1
benzo(g,h,i)perylene	0.64	4.9		0.25	U	1	0.26	U	1	1.9		1	0.25	U	1	0.25	U	1	0.23	J	1
benzo(k)fluoranthene	0.8	4.9		0.25	U	1	0.26	U	1	1.3		1	0.25	U	1	0.25	U	1	0.14	J	1
benzoic acid	NA	NA		0.72	U	1	0.74	U	1	0.75	U	1	0.72	U	1	0.7	U	1	0.81	U	1
benzyl alcohol	NA	NA		0.36	U	1	0.37	U	1	0.37	U	1	0.36	U	1	0.35	U	1	0.4	U	1
benzyl butyl phthalate	NA	NA		0.25	U	1	0.26	U	1	0.26	U	1	0.25	U	1	0.25	U	1	0.28	U	1
bis(2-chloroethoxy)methane	NA	NA		0.25	U	1	0.26	U	1	0.26	U	1	0.25	U	1	0.25	U	1	0.28	U	1
bis(2-chloroethyl)ether	NA	NA		0.36	U	1	0.37	U	1	0.37	U	1	0.36	U	1	0.35	U	1	0.4	U	1
bis(2-ethylhexyl)phthalate	NA	NA		0.25	U	1	0.26	U	1	0.17	J	1	0.25	U	1	0.25	U	1	0.28	U	1
caprolactam	NA	NA		0.25	U	1	0.26	U	1	0.26	U	1	0.25	U	1	0.25	U	1	0.28	U	1
carbazole	NA	NA		0.36	U	1	0.37	U	1	0.54		1	0.36	U	1	0.35	U	1	0.4	U	1
chrysene	1	4.9		0.25	U	1	0.26	U	1	3		1	0.25	U	1	0.25	U	1	0.32		1
dibenzo(a,h)anthracene	0.33	0.33		0.18	U	1	0.19	U	1	0.44		1	0.18	U	1	0.18	U	1	0.2	U	1
dibenzofuran	2.1	18		0.25	U	1	0.26	U	1	0.28		1	0.25	U	1	0.25	U	1	0.28	U	1
diethyl phthalate	NA	NA		0.25	U	1	0.26	U	1	0.26	U	1	0.25	U	1	0.25	U	1	0.28	U	1
dimethyl phthalate	NA	NA		0.25	U	1	0.26	U	1	0.26	U	1	0.25	U	1	0.25	U	1	0.28	U	1
di-n-butyl phthalate	NA	NA		0.72	U	1	0.74	U	1	0.75	U	1	0.72	U	1	0.7	U	1	0.81	U	1
di-n-octyl phthalate	NA	NA		0.25	U	1	0.26	U	1	0.26	U	1	0.25	U	1	0.25	U	1	0.28	U	1
fluoranthene	85	100		0.25	U	1	0.26	U	1	7.1		1	0.25	U	1	0.25	U	1	0.62		1
fluorene	30	100		0.25	U	1	0.26	U	1	0.32		1	0.25	U	1	0.25	U	1	0.28	U	1
hexachlorobenzene	0.33	0.33		0.25	U	1	0.26	U	1	0.26	U	1	0.25	U	1	0.25	U	1	0.28	U	1
hexachlorobutadiene	NA	NA		0.25	U	1	0.26	U	1	0.26	U	1	0.25	U	1	0.25	U	1	0.28	U	1
hexachlorocyclopentadiene	NA	NA		0.25	U	1	0.26	U	1	0.26	U	1	0.25	U	1	0.25	U	1	0.28	U	1
hexachloroethane	NA	NA		0.25	U	1	0.26	U	1	0.26	U	1	0.25	U	1	0.25	U	1	0.28	U	1
indeno(1,2,3-cd)pyrene	0.5	1.4		0.25	U	1	0.26	U	1	2.1		1	0.25	U	1	0.25	U	1	0.23	J	1
isophorone	NA	NA		0.25	U	1	0.26	U	1	0.26	U	1	0.25	U	1	0.25	U	1	0.28	U	1
naphthalene	12	100		0.25	U	1	0.26	U	1	0.19	J	1	0.25	U	1	0.25	U	1	0.28	U	1
nitrobenzene	0.08	1.8		0.25	U	1	0.26	U	1	0.26	U	1	0.25	U	1	0.25	U	1	0.28	U	1
n-nitrosodimethylamine	NA	NA		0.36	U	1	0.37	U	1	0.37	U	1	0.36	U	1	0.35	U	1	0.4	U	1
n-nitroso-di-n-propylamine	NA	NA		0.18	U	1	0.19	U	1	0.19	U	1	0.18	U	1	0.18	U	1	0.2	U	1
n-nitrosodiphenylamine	NA	NA		0.36	U	1	0.37	U	1	0.37	U	1	0.36	U	1	0.35	U	1	0.4	U	1
pentachlorophenol	0.8	1.3		0.36	U	1	0.37	U	1	0.37	U	1	0.36	U	1	0.35	U	1	0.4	U	1
phenanthrene	1.1	4.9		0.25	U	1	0.26	U	1	5.8		1	0.25	U	1	0.25	U	1	0.3		1
phenol	0.33	100		0.25	U	1	0.26	U	1	0.26	U	1	0.25	U	1	0.25	U	1	0.28	U	1
pyrene	64	100		0.25	U	1	0.26	U	1	5.9		1	0.25	U	1	0.25	U	1	0.55		1

value ≤ UU SCO
value > UU SCO
value > RRU SCO

Q = Laboratory Qualifier DL = Dilution NA = not available (addtional flags: B-in blank, D-diluted, E-estimated, J-approximate)

Table 2: SVOCs in Soil

The Green, Newburgh, NY
BCP ID: C336099

GALLAGHER BASSETT | TECHNICAL SERVICES

All data in mg/Kg (ppm)			Sample	2SB-11 0-5			2SB-11 13-15			2SB-12 SURF			2SB-12 4-6			2SB-12 8-10			2SB-13 SURF		
U= Not Detected ≥ value			Date	2025-10-02			2025-10-02			2025-10-02			2025-10-02			2025-10-02			2025-10-02		
SVOCs (8270)	**UU SCO**	**RRU SCO**		Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL
1,1'-biphenyl	NA	NA		0.26	U	1	0.26	U	1	0.31	U	1	0.27	U	1	0.25	U	1	0.27	U	1
1,2,4,5-tetrachlorobenzene	NA	NA		0.26	U	1	0.26	U	1	0.31	U	1	0.27	U	1	0.25	U	1	0.27	U	1
1,2,4-trichlorobenzene	NA	NA		0.26	U	1	0.26	U	1	0.31	U	1	0.27	U	1	0.25	U	1	0.27	U	1
1,2-dichlorobenzene	NA	NA		0.26	U	1	0.26	U	1	0.31	U	1	0.27	U	1	0.25	U	1	0.27	U	1
1,2-diphenylhydrazine (azobenzene)	NA	NA		0.38	U	1	0.36	U	1	0.44	U	1	0.39	U	1	0.36	U	1	0.38	U	1
1,3-dichlorobenzene	NA	NA		0.26	U	1	0.26	U	1	0.31	U	1	0.27	U	1	0.25	U	1	0.27	U	1
1,4-dichlorobenzene	NA	NA		0.26	U	1	0.26	U	1	0.31	U	1	0.27	U	1	0.25	U	1	0.27	U	1
1,4-dioxane	0.1	13		0.075	U	1	0.086	U	1	0.09	U	1	0.08	U	1	0.087	U	1	0.078	U	1
2,2'-Oxybis(1-Chloropropane)	NA	NA		0.26	U	1	0.26	U	1	0.31	U	1	0.27	U	1	0.25	U	1	0.27	U	1
2,3,4,6-tetrachlorophenol	NA	NA		0.26	U	1	0.26	U	1	0.31	U	1	0.27	U	1	0.25	U	1	0.27	U	1
2,4,5-trichlorophenol	NA	NA		0.26	U	1	0.26	U	1	0.31	U	1	0.27	U	1	0.25	U	1	0.27	U	1
2,4,6-trichlorophenol	NA	NA		0.26	U	1	0.26	U	1	0.31	U	1	0.27	U	1	0.25	U	1	0.27	U	1
2,4-dichlorophenol	NA	NA		0.26	U	1	0.26	U	1	0.31	U	1	0.27	U	1	0.25	U	1	0.27	U	1
2,4-dimethylphenol	NA	NA		0.26	U	1	0.26	U	1	0.31	U	1	0.27	U	1	0.25	U	1	0.27	U	1
2,4-dinitrophenol	NA	NA		0.6	U	1	0.58	U	1	0.7	U	1	0.63	U	1	0.57	U	1	0.61	U	1
2,4-dinitrotoluene	NA	NA		0.26	U	1	0.26	U	1	0.31	U	1	0.27	U	1	0.25	U	1	0.27	U	1
2,6-dinitrotoluene	NA	NA		0.26	U	1	0.26	U	1	0.31	U	1	0.27	U	1	0.25	U	1	0.27	U	1
2-chloronaphthalene	NA	NA		0.26	U	1	0.26	U	1	0.31	U	1	0.27	U	1	0.25	U	1	0.27	U	1
2-chlorophenol	NA	NA		0.26	U	1	0.26	U	1	0.31	U	1	0.27	U	1	0.25	U	1	0.27	U	1
2-methylnaphthalene	NA	NA		0.26	U	1	0.26	U	1	0.31	U	1	0.27	U	1	0.25	U	1	0.27	U	1
2-Methylphenol (o-cresol)	0.33	100		0.26	U	1	0.26	U	1	0.31	U	1	0.27	U	1	0.25	U	1	0.27	U	1
2-nitroaniline	NA	NA		0.6	U	1	0.58	U	1	0.7	U	1	0.63	U	1	0.57	U	1	0.61	U	1
2-nitrophenol	NA	NA		0.26	U	1	0.26	U	1	0.31	U	1	0.27	U	1	0.25	U	1	0.27	U	1
3&4-Methylphenol (m&p-cresol)	0.33	100		0.38	U	1	0.36	U	1	0.44	U	1	0.39	U	1	0.36	U	1	0.38	U	1
3,3'-dichlorobenzidine	NA	NA		0.45	U	1	0.44	U	1	0.53	U	1	0.47	U	1	0.43	U	1	0.46	U	1
3-nitroaniline	NA	NA		0.6	U	1	0.58	U	1	0.7	U	1	0.63	U	1	0.57	U	1	0.61	U	1
4,6-dinitro-2-methylphenol	NA	NA		1.1	U	1	1.1	U	1	1.3	U	1	1.1	U	1	1	U	1	1.1	U	1
4-bromophenyl phenyl ether	NA	NA		0.38	U	1	0.36	U	1	0.44	U	1	0.39	U	1	0.36	U	1	0.38	U	1
4-chloro-3-methylphenol	NA	NA		0.26	U	1	0.26	U	1	0.31	U	1	0.27	U	1	0.25	U	1	0.27	U	1
4-chloroaniline	NA	NA		0.26	U	1	0.26	U	1	0.31	U	1	0.27	U	1	0.25	U	1	0.27	U	1
4-chlorophenyl phenyl ether	NA	NA		0.26	U	1	0.26	U	1	0.31	U	1	0.27	U	1	0.25	U	1	0.27	U	1
4-nitroaniline	NA	NA		0.6	U	1	0.58	U	1	0.7	U	1	0.63	U	1	0.57	U	1	0.61	U	1
4-nitrophenol	NA	NA		1.1	U	1	1.1	U	1	1.3	U	1	1.1	U	1	1	U	1	1.1	U	1
acenaphthene	20	100		0.26	U	1	0.26	U	1	0.31	U	1	0.27	U	1	0.25	U	1	0.27	U	1
acenaphthylene	100	100		0.26	U	1	0.26	U	1	0.31	U	1	0.27	U	1	0.25	U	1	0.18	J	1
acetophenone	NA	NA		0.26	U	1	0.26	U	1	0.31	U	1	0.27	U	1	0.25	U	1	0.27	U	1
aniline	0.04	8.1		0.38	U	1	0.36	U	1	0.44	U	1	0.39	U	1	0.36	U	1	0.38	U	1
anthracene	100	100		0.26	U	1	0.26	U	1	0.31	U	1	0.13	J	1	0.25	U	1	0.31		1
atrazine	NA	NA		0.26	U	1	0.26	U	1	0.31	U	1	0.27	U	1	0.25	U	1	0.27	U	1
benzaldehyde	NA	NA		0.26	U	1	0.26	U	1	0.13	J	1	0.27	U	1	0.25	U	1	0.12	J	1
benzidine	NA	NA		0.38	U	1	0.36	U	1	0.44	U	1	0.39	U	1	0.36	U	1	0.38	U	1
benzo(a)anthracene	1	1.4		0.26	U	1	0.26	U	1	0.49		1	0.62		1	0.25	U	1	1.6		1
benzo(a)pyrene	1	1		0.26	U	1	0.26	U	1	0.45		1	0.56		1	0.25	U	1	1.5		1
benzo(b)fluoranthene	1	1.4		0.26	U	1	0.26	U	1	0.65		1	0.82		1	0.25	U	1	2		1
benzo(g,h,i)perylene	0.64	4.9		0.26	U	1	0.26	U	1	0.29	J	1	0.35		1	0.25	U	1	0.92		1
benzo(k)fluoranthene	0.8	4.9		0.26	U	1	0.26	U	1	0.19	J	1	0.25	J	1	0.25	U	1	0.65		1
benzoic acid	NA	NA		0.75	U	1	0.73	U	1	0.88	U	1	0.78	U	1	0.72	U	1	0.77	U	1
benzyl alcohol	NA	NA		0.38	U	1	0.36	U	1	0.44	U	1	0.39	U	1	0.36	U	1	0.38	U	1
benzyl butyl phthalate	NA	NA		0.26	U	1	0.26	U	1	0.31	U	1	0.27	U	1	0.25	U	1	0.27	U	1
bis(2-chloroethoxy)methane	NA	NA		0.26	U	1	0.26	U	1	0.31	U	1	0.27	U	1	0.25	U	1	0.27	U	1
bis(2-chloroethyl)ether	NA	NA		0.38	U	1	0.36	U	1	0.44	U	1	0.39	U	1	0.36	U	1	0.38	U	1
bis(2-ethylhexyl)phthalate	NA	NA		0.26	U	1	0.26	U	1	0.31	U	1	0.27	U	1	0.25	U	1	0.27	U	1
caprolactam	NA	NA		0.26	U	1	0.26	U	1	0.31	U	1	0.27	U	1	0.25	U	1	0.27	U	1
carbazole	NA	NA		0.38	U	1	0.36	U	1	0.44	U	1	0.39	U	1	0.36	U	1	0.38	U	1
chrysene	1	4.9		0.26	U	1	0.26	U	1	0.46		1	0.6		1	0.25	U	1	1.4		1
dibenzo(a,h)anthracene	0.33	0.33		0.19	U	1	0.18	U	1	0.22	U	1	0.2	U	1	0.18	U	1	0.22		1
dibenzofuran	2.1	18		0.26	U	1	0.26	U	1	0.31	U	1	0.27	U	1	0.25	U	1	0.27	U	1
diethyl phthalate	NA	NA		0.26	U	1	0.26	U	1	0.31	U	1	0.27	U	1	0.25	U	1	0.27	U	1
dimethyl phthalate	NA	NA		0.26	U	1	0.26	U	1	0.31	U	1	0.27	U	1	0.25	U	1	0.27	U	1
di-n-butyl phthalate	NA	NA		0.75	U	1	0.73	U	1	0.88	U	1	0.78	U	1	0.72	U	1	0.77	U	1
di-n-octyl phthalate	NA	NA		0.26	U	1	0.26	U	1	0.31	U	1	0.27	U	1	0.25	U	1	0.27	U	1
fluoranthene	85	100		0.26	U	1	0.26	U	1	0.93		1	1.3		1	0.25	U	1	3		1
fluorene	30	100		0.26	U	1	0.26	U	1	0.31	U	1	0.27	U	1	0.25	U	1	0.27	U	1
hexachlorobenzene	0.33	0.33		0.26	U	1	0.26	U	1	0.31	U	1	0.27	U	1	0.25	U	1	0.27	U	1
hexachlorobutadiene	NA	NA		0.26	U	1	0.26	U	1	0.31	U	1	0.27	U	1	0.25	U	1	0.27	U	1
hexachlorocyclopentadiene	NA	NA		0.26	U	1	0.26	U	1	0.31	U	1	0.27	U	1	0.25	U	1	0.27	U	1
hexachloroethane	NA	NA		0.26	U	1	0.26	U	1	0.31	U	1	0.27	U	1	0.25	U	1	0.27	U	1
indeno(1,2,3-cd)pyrene	0.5	1.4		0.26	U	1	0.26	U	1	0.3	J	1	0.37		1	0.25	U	1	0.96		1
isophorone	NA	NA		0.26	U	1	0.26	U	1	0.31	U	1	0.27	U	1	0.25	U	1	0.27	U	1
naphthalene	12	100		0.26	U	1	0.26	U	1	0.31	U	1	0.27	U	1	0.25	U	1	0.27	U	1
nitrobenzene	0.08	1.8		0.26	U	1	0.26	U	1	0.31	U	1	0.27	U	1	0.25	U	1	0.27	U	1
n-nitrosodimethylamine	NA	NA		0.38	U	1	0.36	U	1	0.44	U	1	0.39	U	1	0.36	U	1	0.38	U	1
n-nitroso-di-n-propylamine	NA	NA		0.19	U	1	0.18	U	1	0.22	U	1	0.2	U	1	0.18	U	1	0.19	U	1
n-nitrosodiphenylamine	NA	NA		0.38	U	1	0.36	U	1	0.44	U	1	0.39	U	1	0.36	U	1	0.38	U	1
pentachlorophenol	0.8	1.3		0.38	U	1	0.36	U	1	0.44	U	1	0.39	U	1	0.36	U	1	0.38	U	1
phenanthrene	1.1	4.9		0.26	U	1	0.26	U	1	0.45		1	0.69		1	0.25	U	1	1.5		1
phenol	0.33	100		0.26	U	1	0.26	U	1	0.31	U	1	0.27	U	1	0.25	U	1	0.27	U	1
pyrene	64	100		0.26	U	1	0.26	U	1	0.82		1	1.1		1	0.25	U	1	2.8		1

value ≤ UU SCO
value > UU SCO
value > RRU SCO

Q = Laboratory Qualifier DL = Dilution NA = not available (addtional flags: B-in blank, D-diluted, E-estimated, J-approximate)

Table 2: SVOCs in Soil

The Green, Newburgh, NY
BCP ID: C336099

GALLAGHER BASSETT | TECHNICAL SERVICES

All data in mg/Kg (ppm)			Sample	2SB-13 0-5			2SB-13 8-10			2SB-14 SURF			2SB-14 0-5			2SB-14 10-12.5			2SB-15 SURF		
U= Not Detected ≥ value			Date	2025-10-02			2025-10-02			2025-10-02			2025-10-02			2025-10-02			2025-10-03		
SVOCs (8270)	**UU SCO**	**RRU SCO**		Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL
1,1'-biphenyl	NA	NA		0.25	U	1	0.25	U	1	0.25	U	1	0.24	U	1	0.25	U	1	0.26	U	1
1,2,4,5-tetrachlorobenzene	NA	NA		0.25	U	1	0.25	U	1	0.25	U	1	0.24	U	1	0.25	U	1	0.26	U	1
1,2,4-trichlorobenzene	NA	NA		0.25	U	1	0.25	U	1	0.25	U	1	0.24	U	1	0.25	U	1	0.26	U	1
1,2-dichlorobenzene	NA	NA		0.25	U	1	0.25	U	1	0.25	U	1	0.24	U	1	0.25	U	1	0.26	U	1
1,2-diphenylhydrazine (azobenzene)	NA	NA		0.36	U	1	0.36	U	1	0.36	U	1	0.35	U	1	0.36	U	1	0.37	U	1
1,3-dichlorobenzene	NA	NA		0.25	U	1	0.25	U	1	0.25	U	1	0.24	U	1	0.25	U	1	0.26	U	1
1,4-dichlorobenzene	NA	NA		0.25	U	1	0.25	U	1	0.25	U	1	0.24	U	1	0.25	U	1	0.26	U	1
1,4-dioxane	0.1	13		0.073	U	1	0.14	U	1	0.072	U	1	0.085	U	1	0.11	U	1	0.072	U	1
2,2'-Oxybis(1-Chloropropane)	NA	NA		0.25	U	1	0.25	U	1	0.25	U	1	0.24	U	1	0.25	U	1	0.26	U	1
2,3,4,6-tetrachlorophenol	NA	NA		0.25	U	1	0.25	U	1	0.25	U	1	0.24	U	1	0.25	U	1	0.26	U	1
2,4,5-trichlorophenol	NA	NA		0.25	U	1	0.25	U	1	0.25	U	1	0.24	U	1	0.25	U	1	0.26	U	1
2,4,6-trichlorophenol	NA	NA		0.25	U	1	0.25	U	1	0.25	U	1	0.24	U	1	0.25	U	1	0.26	U	1
2,4-dichlorophenol	NA	NA		0.25	U	1	0.25	U	1	0.25	U	1	0.24	U	1	0.25	U	1	0.26	U	1
2,4-dimethylphenol	NA	NA		0.25	U	1	0.25	U	1	0.25	U	1	0.24	U	1	0.25	U	1	0.26	U	1
2,4-dinitrophenol	NA	NA		0.58	U	1	0.58	U	1	0.58	U	1	0.56	U	1	0.57	U	1	0.59	U	1
2,4-dinitrotoluene	NA	NA		0.25	U	1	0.25	U	1	0.25	U	1	0.24	U	1	0.25	U	1	0.26	U	1
2,6-dinitrotoluene	NA	NA		0.25	U	1	0.25	U	1	0.25	U	1	0.24	U	1	0.25	U	1	0.26	U	1
2-chloronaphthalene	NA	NA		0.25	U	1	0.25	U	1	0.25	U	1	0.24	U	1	0.25	U	1	0.26	U	1
2-chlorophenol	NA	NA		0.25	U	1	0.25	U	1	0.25	U	1	0.24	U	1	0.25	U	1	0.26	U	1
2-methylnaphthalene	NA	NA		0.15	J	1	0.25	U	1	0.25	U	1	0.24	U	1	0.25	U	1	0.26	U	1
2-Methylphenol (o-cresol)	0.33	100		0.25	U	1	0.25	U	1	0.25	U	1	0.24	U	1	0.25	U	1	0.26	U	1
2-nitroaniline	NA	NA		0.58	U	1	0.58	U	1	0.58	U	1	0.56	U	1	0.57	U	1	0.59	U	1
2-nitrophenol	NA	NA		0.25	U	1	0.25	U	1	0.25	U	1	0.24	U	1	0.25	U	1	0.26	U	1
3&4-Methylphenol (m&p-cresol)	0.33	100		0.36	U	1	0.36	U	1	0.36	U	1	0.35	U	1	0.36	U	1	0.37	U	1
3,3'-dichlorobenzidine	NA	NA		0.44	U	1	0.43	U	1	0.43	U	1	0.42	U	1	0.43	U	1	0.44	U	1
3-nitroaniline	NA	NA		0.58	U	1	0.58	U	1	0.58	U	1	0.56	U	1	0.57	U	1	0.59	U	1
4,6-dinitro-2-methylphenol	NA	NA		1.1	U	1	1	U	1	1	U	1	1	U	1	1	U	1	1.1	U	1
4-bromophenyl phenyl ether	NA	NA		0.36	U	1	0.36	U	1	0.36	U	1	0.35	U	1	0.36	U	1	0.37	U	1
4-chloro-3-methylphenol	NA	NA		0.25	U	1	0.25	U	1	0.25	U	1	0.24	U	1	0.25	U	1	0.26	U	1
4-chloroaniline	NA	NA		0.25	U	1	0.25	U	1	0.25	U	1	0.24	U	1	0.25	U	1	0.26	U	1
4-chlorophenyl phenyl ether	NA	NA		0.25	U	1	0.25	U	1	0.25	U	1	0.24	U	1	0.25	U	1	0.26	U	1
4-nitroaniline	NA	NA		0.58	U	1	0.58	U	1	0.58	U	1	0.56	U	1	0.57	U	1	0.59	U	1
4-nitrophenol	NA	NA		1.1	U	1	1	U	1	1	U	1	1	U	1	1	U	1	1.1	U	1
acenaphthene	20	100		0.3		1	0.25	U	1	0.25	U	1	0.24	U	1	0.25	U	1	0.26	U	1
acenaphthylene	100	100		0.19	J	1	0.25	U	1	0.25	U	1	0.24	U	1	0.25	U	1	0.26	U	1
acetophenone	NA	NA		0.25	U	1	0.25	U	1	0.25	U	1	0.24	U	1	0.25	U	1	0.26	U	1
aniline	0.04	8.1		0.36	U	1	0.36	U	1	0.36	U	1	0.35	U	1	0.36	U	1	0.37	U	1
anthracene	100	100		0.67		1	0.25	U	1	0.12	J	1	0.24	U	1	0.25	U	1	0.26	U	1
atrazine	NA	NA		0.25	U	1	0.25	U	1	0.25	U	1	0.24	U	1	0.25	U	1	0.26	U	1
benzaldehyde	NA	NA		0.25	U	1	0.25	U	1	0.25	U	1	0.24	U	1	0.25	U	1	0.26	U	1
benzidine	NA	NA		0.36	U	1	0.36	U	1	0.36	U	1	0.35	U	1	0.36	U	1	0.37	U	1
benzo(a)anthracene	1	1.4		1.5		1	0.25	U	1	0.57		1	0.24	U	1	0.25	U	1	0.3		1
benzo(a)pyrene	1	1		1.4		1	0.25	U	1	0.57		1	0.24	U	1	0.25	U	1	0.29		1
benzo(b)fluoranthene	1	1.4		1.8		1	0.25	U	1	0.81		1	0.24	U	1	0.25	U	1	0.39		1
benzo(g,h,i)perylene	0.64	4.9		0.75		1	0.25	U	1	0.35		1	0.24	U	1	0.25	U	1	0.19	J	1
benzo(k)fluoranthene	0.8	4.9		0.55		1	0.25	U	1	0.25		1	0.24	U	1	0.25	U	1	0.13	J	1
benzoic acid	NA	NA		0.73	U	1	0.72	U	1	0.72	U	1	0.69	U	1	0.71	U	1	0.73	U	1
benzyl alcohol	NA	NA		0.36	U	1	0.36	U	1	0.36	U	1	0.35	U	1	0.36	U	1	0.37	U	1
benzyl butyl phthalate	NA	NA		0.25	U	1	0.25	U	1	0.25	U	1	0.24	U	1	0.25	U	1	0.26	U	1
bis(2-chloroethoxy)methane	NA	NA		0.25	U	1	0.25	U	1	0.25	U	1	0.24	U	1	0.25	U	1	0.26	U	1
bis(2-chloroethyl)ether	NA	NA		0.36	U	1	0.36	U	1	0.36	U	1	0.35	U	1	0.36	U	1	0.37	U	1
bis(2-ethylhexyl)phthalate	NA	NA		0.25	U	1	0.25	U	1	0.25	U	1	0.24	U	1	0.25	U	1	0.26	U	1
caprolactam	NA	NA		0.25	U	1	0.25	U	1	0.25	U	1	0.24	U	1	0.25	U	1	0.26	U	1
carbazole	NA	NA		0.37		1	0.36	U	1	0.36	U	1	0.35	U	1	0.36	U	1	0.37	U	1
chrysene	1	4.9		1.3		1	0.25	U	1	0.58		1	0.24	U	1	0.25	U	1	0.26		1
dibenzo(a,h)anthracene	0.33	0.33		0.18		1	0.18	U	1	0.18	U	1	0.17	U	1	0.18	U	1	0.18	U	1
dibenzofuran	2.1	18		0.27		1	0.25	U	1	0.25	U	1	0.24	U	1	0.25	U	1	0.26	U	1
diethyl phthalate	NA	NA		0.25	U	1	0.25	U	1	0.25	U	1	0.24	U	1	0.25	U	1	0.26	U	1
dimethyl phthalate	NA	NA		0.25	U	1	0.25	U	1	0.25	U	1	0.24	U	1	0.25	U	1	0.26	U	1
di-n-butyl phthalate	NA	NA		0.73	U	1	0.72	U	1	0.72	U	1	0.69	U	1	0.71	U	1	0.73	U	1
di-n-octyl phthalate	NA	NA		0.25	U	1	0.25	U	1	0.25	U	1	0.24	U	1	0.25	U	1	0.26	U	1
fluoranthene	85	100		3.6		1	0.25	U	1	1.2		1	0.24	U	1	0.25	U	1	0.49		1
fluorene	30	100		0.3		1	0.25	U	1	0.25	U	1	0.24	U	1	0.25	U	1	0.26	U	1
hexachlorobenzene	0.33	0.33		0.25	U	1	0.25	U	1	0.25	U	1	0.24	U	1	0.25	U	1	0.26	U	1
hexachlorobutadiene	NA	NA		0.25	U	1	0.25	U	1	0.25	U	1	0.24	U	1	0.25	U	1	0.26	U	1
hexachlorocyclopentadiene	NA	NA		0.25	U	1	0.25	U	1	0.25	U	1	0.24	U	1	0.25	U	1	0.26	U	1
hexachloroethane	NA	NA		0.25	U	1	0.25	U	1	0.25	U	1	0.24	U	1	0.25	U	1	0.26	U	1
indeno(1,2,3-cd)pyrene	0.5	1.4		0.8		1	0.25	U	1	0.36		1	0.24	U	1	0.25	U	1	0.19	J	1
isophorone	NA	NA		0.25	U	1	0.25	U	1	0.25	U	1	0.24	U	1	0.25	U	1	0.26	U	1
naphthalene	12	100		0.28		1	0.25	U	1	0.25	U	1	0.24	U	1	0.25	U	1	0.26	U	1
nitrobenzene	0.08	1.8		0.25	U	1	0.25	U	1	0.25	U	1	0.24	U	1	0.25	U	1	0.26	U	1
n-nitrosodimethylamine	NA	NA		0.36	U	1	0.36	U	1	0.36	U	1	0.35	U	1	0.36	U	1	0.37	U	1
n-nitroso-di-n-propylamine	NA	NA		0.18	U	1	0.18	U	1	0.18	U	1	0.17	U	1	0.18	U	1	0.18	U	1
n-nitrosodiphenylamine	NA	NA		0.36	U	1	0.36	U	1	0.36	U	1	0.35	U	1	0.36	U	1	0.37	U	1
pentachlorophenol	0.8	1.3		0.36	U	1	0.36	U	1	0.36	U	1	0.35	U	1	0.36	U	1	0.37	U	1
phenanthrene	1.1	4.9		3.4		1	0.25	U	1	0.57		1	0.24	U	1	0.25	U	1	0.35		1
phenol	0.33	100		0.25	U	1	0.25	U	1	0.25	U	1	0.24	U	1	0.25	U	1	0.26	U	1
pyrene	64	100		3.1		1	0.25	U	1	1		1	0.24	U	1	0.25	U	1	0.38		1

value ≤ UU SCO
value > UU SCO
value > RRU SCO

Q = Laboratory Qualifier DL = Dilution NA = not available (addtional flags: B-in blank, D-diluted, E-estimated, J-approximate)

Table 2: SVOCs in Soil

The Green, Newburgh, NY
BCP ID: C336099

GALLAGHER BASSETT | TECHNICAL SERVICES

All data in mg/Kg (ppm)		Sample	2SB-15 0-5			DUP-20251003			2SB-15 10-12			2SB-16 SURF			2SB-16 10-12			2SB-17 SURF		
U= Not Detected ≥ value		Date	2025-10-03			2025-10-03			2025-10-03			2025-10-03			2025-10-03			2025-10-03		
SVOCs (8270)	**UU SCO**	**RRU SCO**	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL
1,1'-biphenyl	NA	NA	0.24	U	1	0.25	U	1	0.25	U	1	0.25	U	1	0.25	U	1	0.25	U	1
1,2,4,5-tetrachlorobenzene	NA	NA	0.24	U	1	0.25	U	1	0.25	U	1	0.25	U	1	0.25	U	1	0.25	U	1
1,2,4-trichlorobenzene	NA	NA	0.24	U	1	0.25	U	1	0.25	U	1	0.25	U	1	0.25	U	1	0.25	U	1
1,2-dichlorobenzene	NA	NA	0.24	U	1	0.25	U	1	0.25	U	1	0.25	U	1	0.25	U	1	0.25	U	1
1,2-diphenylhydrazine (azobenzene)	NA	NA	0.35	U	1	0.35	U	1	0.35	U	1	0.36	U	1	0.35	U	1	0.36	U	1
1,3-dichlorobenzene	NA	NA	0.24	U	1	0.25	U	1	0.25	U	1	0.25	U	1	0.25	U	1	0.25	U	1
1,4-dichlorobenzene	NA	NA	0.24	U	1	0.25	U	1	0.25	U	1	0.25	U	1	0.25	U	1	0.25	U	1
1,4-dioxane	0.1	13	0.083	U	1	0.07	U	1	0.085	U	1	0.072	U	1	0.084	U	1	0.085	U	1
2,2'-Oxybis(1-Chloropropane)	NA	NA	0.24	U	1	0.25	U	1	0.25	U	1	0.25	U	1	0.25	U	1	0.25	U	1
2,3,4,6-tetrachlorophenol	NA	NA	0.24	U	1	0.25	U	1	0.25	U	1	0.25	U	1	0.25	U	1	0.25	U	1
2,4,5-trichlorophenol	NA	NA	0.24	U	1	0.25	U	1	0.25	U	1	0.25	U	1	0.25	U	1	0.25	U	1
2,4,6-trichlorophenol	NA	NA	0.24	U	1	0.25	U	1	0.25	U	1	0.25	U	1	0.25	U	1	0.25	U	1
2,4-dichlorophenol	NA	NA	0.24	U	1	0.25	U	1	0.25	U	1	0.25	U	1	0.25	U	1	0.25	U	1
2,4-dimethylphenol	NA	NA	0.24	U	1	0.25	U	1	0.25	U	1	0.25	U	1	0.25	U	1	0.25	U	1
2,4-dinitrophenol	NA	NA	0.56	U	1	0.56	U	1	0.57	U	1	0.58	U	1	0.56	U	1	0.58	U	1
2,4-dinitrotoluene	NA	NA	0.24	U	1	0.25	U	1	0.25	U	1	0.25	U	1	0.25	U	1	0.25	U	1
2,6-dinitrotoluene	NA	NA	0.24	U	1	0.25	U	1	0.25	U	1	0.25	U	1	0.25	U	1	0.25	U	1
2-chloronaphthalene	NA	NA	0.24	U	1	0.25	U	1	0.25	U	1	0.25	U	1	0.25	U	1	0.25	U	1
2-chlorophenol	NA	NA	0.24	U	1	0.25	U	1	0.25	U	1	0.25	U	1	0.25	U	1	0.25	U	1
2-methylnaphthalene	NA	NA	0.24	U	1	0.25	U	1	0.25	U	1	0.25	U	1	0.25	U	1	0.25	U	1
2-Methylphenol (o-cresol)	0.33	100	0.24	U	1	0.25	U	1	0.25	U	1	0.25	U	1	0.25	U	1	0.25	U	1
2-nitroaniline	NA	NA	0.56	U	1	0.56	U	1	0.57	U	1	0.58	U	1	0.56	U	1	0.58	U	1
2-nitrophenol	NA	NA	0.24	U	1	0.25	U	1	0.25	U	1	0.25	U	1	0.25	U	1	0.25	U	1
3&4-Methylphenol (m&p-cresol)	0.33	100	0.35	U	1	0.35	U	1	0.35	U	1	0.36	U	1	0.35	U	1	0.36	U	1
3,3'-dichlorobenzidine	NA	NA	0.42	U	1	0.42	U	1	0.43	U	1	0.44	U	1	0.42	U	1	0.43	U	1
3-nitroaniline	NA	NA	0.56	U	1	0.56	U	1	0.57	U	1	0.58	U	1	0.56	U	1	0.58	U	1
4,6-dinitro-2-methylphenol	NA	NA	1	U	1	1	U	1	1	U	1	1.1	U	1	1	U	1	1	U	1
4-bromophenyl phenyl ether	NA	NA	0.35	U	1	0.35	U	1	0.35	U	1	0.36	U	1	0.35	U	1	0.36	U	1
4-chloro-3-methylphenol	NA	NA	0.24	U	1	0.25	U	1	0.25	U	1	0.25	U	1	0.25	U	1	0.25	U	1
4-chloroaniline	NA	NA	0.24	U	1	0.25	U	1	0.25	U	1	0.25	U	1	0.25	U	1	0.25	U	1
4-chlorophenyl phenyl ether	NA	NA	0.24	U	1	0.25	U	1	0.25	U	1	0.25	U	1	0.25	U	1	0.25	U	1
4-nitroaniline	NA	NA	0.56	U	1	0.56	U	1	0.57	U	1	0.58	U	1	0.56	U	1	0.58	U	1
4-nitrophenol	NA	NA	1	U	1	1	U	1	1	U	1	1.1	U	1	1	U	1	1	U	1
acenaphthene	20	100	0.24	U	1	0.25	U	1	0.25	U	1	0.25	U	1	0.25	U	1	0.25	U	1
acenaphthylene	100	100	0.24	U	1	0.25	U	1	0.25	U	1	0.25	U	1	0.25	U	1	0.25	U	1
acetophenone	NA	NA	0.24	U	1	0.25	U	1	0.25	U	1	0.25	U	1	0.25	U	1	0.25	U	1
aniline	0.04	8.1	0.35	U	1	0.35	U	1	0.35	U	1	0.36	U	1	0.35	U	1	0.36	U	1
anthracene	100	100	0.24	U	1	0.25	U	1	0.25	U	1	0.25	U	1	0.25	U	1	0.25	U	1
atrazine	NA	NA	0.24	U	1	0.25	U	1	0.25	U	1	0.25	U	1	0.25	U	1	0.25	U	1
benzaldehyde	NA	NA	0.24	U	1	0.25	U	1	0.25	U	1	0.25	U	1	0.25	U	1	0.25	U	1
benzidine	NA	NA	0.35	U	1	0.35	U	1	0.35	U	1	0.36	U	1	0.35	U	1	0.36	U	1
benzo(a)anthracene	1	1.4	0.24	U	1	0.2	J	1	0.25	U	1	0.16	J	1	0.25	U	1	0.25	U	1
benzo(a)pyrene	1	1	0.24	U	1	0.21	J	1	0.25	U	1	0.17	J	1	0.25	U	1	0.25	U	1
benzo(b)fluoranthene	1	1.4	0.24	U	1	0.27		1	0.25	U	1	0.26		1	0.25	U	1	0.25	U	1
benzo(g,h,i)perylene	0.64	4.9	0.24	U	1	0.11	J	1	0.25	U	1	0.12	J	1	0.25	U	1	0.25	U	1
benzo(k)fluoranthene	0.8	4.9	0.24	U	1	0.25	U	1	0.25	U	1	0.25	U	1	0.25	U	1	0.25	U	1
benzoic acid	NA	NA	0.69	U	1	0.7	U	1	0.71	U	1	0.73	U	1	0.71	U	1	0.72	U	1
benzyl alcohol	NA	NA	0.35	U	1	0.35	U	1	0.35	U	1	0.36	U	1	0.35	U	1	0.36	U	1
benzyl butyl phthalate	NA	NA	0.24	U	1	0.25	U	1	0.25	U	1	0.25	U	1	0.25	U	1	0.25	U	1
bis(2-chloroethoxy)methane	NA	NA	0.24	U	1	0.25	U	1	0.25	U	1	0.25	U	1	0.25	U	1	0.25	U	1
bis(2-chloroethyl)ether	NA	NA	0.35	U	1	0.35	U	1	0.35	U	1	0.36	U	1	0.35	U	1	0.36	U	1
bis(2-ethylhexyl)phthalate	NA	NA	0.24	U	1	0.25	U	1	0.25	U	1	0.36	U	1	0.25	U	1	0.25	U	1
caprolactam	NA	NA	0.24	U	1	0.25	U	1	0.25	U	1	0.25	U	1	0.25	U	1	0.25	U	1
carbazole	NA	NA	0.35	U	1	0.35	U	1	0.35	U	1	0.36	U	1	0.35	U	1	0.36	U	1
chrysene	1	4.9	0.24	U	1	0.19	J	1	0.25	U	1	0.15	J	1	0.25	U	1	0.25	U	1
dibenzo(a,h)anthracene	0.33	0.33	0.17	U	1	0.18	U	1	0.18	U	1	0.18	U	1	0.18	U	1	0.18	U	1
dibenzofuran	2.1	18	0.24	U	1	0.25	U	1	0.25	U	1	0.25	U	1	0.25	U	1	0.25	U	1
diethyl phthalate	NA	NA	0.24	U	1	0.25	U	1	0.25	U	1	0.25	U	1	0.25	U	1	0.25	U	1
dimethyl phthalate	NA	NA	0.24	U	1	0.25	U	1	0.25	U	1	0.25	U	1	0.25	U	1	0.25	U	1
di-n-butyl phthalate	NA	NA	0.69	U	1	0.7	U	1	0.71	U	1	0.73	U	1	0.71	U	1	0.72	U	1
di-n-octyl phthalate	NA	NA	0.24	U	1	0.25	U	1	0.25	U	1	0.25	U	1	0.25	U	1	0.25	U	1
fluoranthene	85	100	0.24	U	1	0.52		1	0.25	U	1	0.23	J	1	0.25	U	1	0.15	J	1
fluorene	30	100	0.24	U	1	0.25	U	1	0.25	U	1	0.25	U	1	0.25	U	1	0.25	U	1
hexachlorobenzene	0.33	0.33	0.24	U	1	0.25	U	1	0.25	U	1	0.25	U	1	0.25	U	1	0.25	U	1
hexachlorobutadiene	NA	NA	0.24	U	1	0.25	U	1	0.25	U	1	0.25	U	1	0.25	U	1	0.25	U	1
hexachlorocyclopentadiene	NA	NA	0.24	U	1	0.25	U	1	0.25	U	1	0.25	U	1	0.25	U	1	0.25	U	1
hexachloroethane	NA	NA	0.24	U	1	0.25	U	1	0.25	U	1	0.25	U	1	0.25	U	1	0.25	U	1
indeno(1,2,3-cd)pyrene	0.5	1.4	0.24	U	1	0.16	J	1	0.25	U	1	0.14	J	1	0.25	U	1	0.25	U	1
isophorone	NA	NA	0.24	U	1	0.25	U	1	0.25	U	1	0.25	U	1	0.25	U	1	0.25	U	1
naphthalene	12	100	0.24	U	1	0.25	U	1	0.25	U	1	0.25	U	1	0.25	U	1	0.25	U	1
nitrobenzene	0.08	1.8	0.24	U	1	0.25	U	1	0.25	U	1	0.25	U	1	0.25	U	1	0.25	U	1
n-nitrosodimethylamine	NA	NA	0.35	U	1	0.35	U	1	0.35	U	1	0.36	U	1	0.35	U	1	0.36	U	1
n-nitroso-di-n-propylamine	NA	NA	0.17	U	1	0.18	U	1	0.18	U	1	0.18	U	1	0.18	U	1	0.18	U	1
n-nitrosodiphenylamine	NA	NA	0.35	U	1	0.35	U	1	0.35	U	1	0.36	U	1	0.35	U	1	0.36	U	1
pentachlorophenol	0.8	1.3	0.35	U	1	0.35	U	1	0.35	U	1	0.36	U	1	0.35	U	1	0.36	U	1
phenanthrene	1.1	4.9	0.24	U	1	0.41		1	0.25	U	1	0.13	J	1	0.25	U	1	0.25	U	1
phenol	0.33	100	0.24	U	1	0.25	U	1	0.25	U	1	0.25	U	1	0.25	U	1	0.25	U	1
pyrene	64	100	0.24	U	1	0.44		1	0.25	U	1	0.18	J	1	0.25	U	1	0.13	J	1

value ≤ UU SCO
value > UU SCO
value > RRU SCO

Q = Laboratory Qualifier DL = Dilution NA = not available (addtional flags: B-in blank, D-diluted, E-estimated, J-approximate)

Table 2: SVOCs in Soil

The Green, Newburgh, NY
BCP ID: C336099

GALLAGHER BASSETT | TECHNICAL SERVICES

All data in mg/Kg (ppm)		Sample	2SB-17 0-5			2SB-17 10-12			2SB-18 SURF			2SB-18 10-15			2SB-19 SURF			2SB-19 0-5		
U= Not Detected ≥ value		Date	2025-10-03			2025-10-03			2025-10-03			2025-10-03			2025-10-03			2025-10-03		
SVOCs (8270)	**UU SCO**	**RRU SCO**	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL
1,1'-biphenyl	NA	NA	0.25	U	1	0.25	U	1	0.25	U	1	0.25	U	1	0.26	U	1	0.25	U	1
1,2,4,5-tetrachlorobenzene	NA	NA	0.25	U	1	0.25	U	1	0.25	U	1	0.25	U	1	0.26	U	1	0.25	U	1
1,2,4-trichlorobenzene	NA	NA	0.25	U	1	0.25	U	1	0.25	U	1	0.25	U	1	0.26	U	1	0.25	U	1
1,2-dichlorobenzene	NA	NA	0.25	U	1	0.25	U	1	0.25	U	1	0.25	U	1	0.26	U	1	0.25	U	1
1,2-diphenylhydrazine (azobenzene)	NA	NA	0.36	U	1	0.35	U	1	0.36	U	1	0.36	U	1	0.37	U	1	0.35	U	1
1,3-dichlorobenzene	NA	NA	0.25	U	1	0.25	U	1	0.25	U	1	0.25	U	1	0.26	U	1	0.25	U	1
1,4-dichlorobenzene	NA	NA	0.25	U	1	0.25	U	1	0.25	U	1	0.25	U	1	0.26	U	1	0.25	U	1
1,4-dioxane	0.1	13	0.086	U	1	0.085	U	1	0.072	U	1	0.07	U	1	0.073	U	1	0.07	U	1
2,2'-Oxybis(1-Chloropropane)	NA	NA	0.25	U	1	0.25	U	1	0.25	U	1	0.25	U	1	0.26	U	1	0.25	U	1
2,3,4,6-tetrachlorophenol	NA	NA	0.25	U	1	0.25	U	1	0.25	U	1	0.25	U	1	0.26	U	1	0.25	U	1
2,4,5-trichlorophenol	NA	NA	0.25	U	1	0.25	U	1	0.25	U	1	0.25	U	1	0.26	U	1	0.25	U	1
2,4,6-trichlorophenol	NA	NA	0.25	U	1	0.25	U	1	0.25	U	1	0.25	U	1	0.26	U	1	0.25	U	1
2,4-dichlorophenol	NA	NA	0.25	U	1	0.25	U	1	0.25	U	1	0.25	U	1	0.26	U	1	0.25	U	1
2,4-dimethylphenol	NA	NA	0.25	U	1	0.25	U	1	0.25	U	1	0.25	U	1	0.26	U	1	0.25	U	1
2,4-dinitrophenol	NA	NA	0.57	U	1	0.56	U	1	0.58	U	1	0.57	U	1	0.59	U	1	0.56	U	1
2,4-dinitrotoluene	NA	NA	0.25	U	1	0.25	U	1	0.25	U	1	0.25	U	1	0.26	U	1	0.25	U	1
2,6-dinitrotoluene	NA	NA	0.25	U	1	0.25	U	1	0.25	U	1	0.25	U	1	0.26	U	1	0.25	U	1
2-chloronaphthalene	NA	NA	0.25	U	1	0.25	U	1	0.25	U	1	0.25	U	1	0.26	U	1	0.25	U	1
2-chlorophenol	NA	NA	0.25	U	1	0.25	U	1	0.25	U	1	0.25	U	1	0.26	U	1	0.25	U	1
2-methylnaphthalene	NA	NA	0.25	U	1	0.25	U	1	0.25	U	1	0.25	U	1	0.26	U	1	0.25	U	1
2-Methylphenol (o-cresol)	0.33	100	0.25	U	1	0.25	U	1	0.25	U	1	0.25	U	1	0.26	U	1	0.25	U	1
2-nitroaniline	NA	NA	0.57	U	1	0.56	U	1	0.58	U	1	0.57	U	1	0.59	U	1	0.56	U	1
2-nitrophenol	NA	NA	0.25	U	1	0.25	U	1	0.25	U	1	0.25	U	1	0.26	U	1	0.25	U	1
3&4-Methylphenol (m&p-cresol)	0.33	100	0.36	U	1	0.35	U	1	0.36	U	1	0.36	U	1	0.37	U	1	0.35	U	1
3,3'-dichlorobenzidine	NA	NA	0.43	U	1	0.42	U	1	0.44	U	1	0.43	U	1	0.44	U	1	0.42	U	1
3-nitroaniline	NA	NA	0.57	U	1	0.56	U	1	0.58	U	1	0.57	U	1	0.59	U	1	0.56	U	1
4,6-dinitro-2-methylphenol	NA	NA	1	U	1	1	U	1	1.1	U	1	1	U	1	1.1	U	1	1	U	1
4-bromophenyl phenyl ether	NA	NA	0.36	U	1	0.35	U	1	0.36	U	1	0.36	U	1	0.37	U	1	0.35	U	1
4-chloro-3-methylphenol	NA	NA	0.25	U	1	0.25	U	1	0.25	U	1	0.25	U	1	0.26	U	1	0.25	U	1
4-chloroaniline	NA	NA	0.25	U	1	0.25	U	1	0.25	U	1	0.25	U	1	0.26	U	1	0.25	U	1
4-chlorophenyl phenyl ether	NA	NA	0.25	U	1	0.25	U	1	0.25	U	1	0.25	U	1	0.26	U	1	0.25	U	1
4-nitroaniline	NA	NA	0.57	U	1	0.56	U	1	0.58	U	1	0.57	U	1	0.59	U	1	0.56	U	1
4-nitrophenol	NA	NA	1	U	1	1	U	1	1.1	U	1	1	U	1	1.1	U	1	1	U	1
acenaphthene	20	100	0.25	U	1	0.25	U	1	0.25	U	1	0.25	U	1	0.26	U	1	0.25	U	1
acenaphthylene	100	100	0.25	U	1	0.25	U	1	0.25	U	1	0.25	U	1	0.11	J	1	0.25	U	1
acetophenone	NA	NA	0.25	U	1	0.25	U	1	0.25	U	1	0.25	U	1	0.26	U	1	0.25	U	1
aniline	0.04	8.1	0.36	U	1	0.35	U	1	0.36	U	1	0.36	U	1	0.37	U	1	0.35	U	1
anthracene	100	100	0.25	U	1	0.12	J	1	0.25	U	1	0.25	U	1	0.26	U	1	0.25	U	1
atrazine	NA	NA	0.25	U	1	0.25	U	1	0.25	U	1	0.25	U	1	0.26	U	1	0.25	U	1
benzaldehyde	NA	NA	0.25	U	1	0.25	U	1	0.25	U	1	0.25	U	1	0.26	U	1	0.25	U	1
benzidine	NA	NA	0.36	U	1	0.35	U	1	0.36	U	1	0.36	U	1	0.37	U	1	0.35	U	1
benzo(a)anthracene	1	1.4	0.25	U	1	0.3		1	0.21	J	1	0.25	U	1	0.35		1	0.25	U	1
benzo(a)pyrene	1	1	0.25	U	1	0.4		1	0.29		1	0.25	U	1	0.52		1	0.17	J	1
benzo(b)fluoranthene	1	1.4	0.25	U	1	0.53		1	0.38		1	0.25	U	1	0.69		1	0.19	J	1
benzo(g,h,i)perylene	0.64	4.9	0.25	U	1	0.27		1	0.21	J	1	0.25	U	1	0.27		1	0.25	U	1
benzo(k)fluoranthene	0.8	4.9	0.25	U	1	0.15	J	1	0.25	U	1	0.25	U	1	0.2	J	1	0.25	U	1
benzoic acid	NA	NA	0.71	U	1	0.71	U	1	0.73	U	1	0.72	U	1	0.73	U	1	0.7	U	1
benzyl alcohol	NA	NA	0.36	U	1	0.35	U	1	0.36	U	1	0.36	U	1	0.37	U	1	0.35	U	1
benzyl butyl phthalate	NA	NA	0.25	U	1	0.25	U	1	0.25	U	1	0.25	U	1	0.26	U	1	0.25	U	1
bis(2-chloroethoxy)methane	NA	NA	0.25	U	1	0.25	U	1	0.25	U	1	0.25	U	1	0.26	U	1	0.25	U	1
bis(2-chloroethyl)ether	NA	NA	0.36	U	1	0.35	U	1	0.36	U	1	0.36	U	1	0.37	U	1	0.35	U	1
bis(2-ethylhexyl)phthalate	NA	NA	0.25	U	1	0.35	U	1	0.36	U	1	0.25	U	1	0.73	U	1	0.25	U	1
caprolactam	NA	NA	0.25	U	1	0.25	U	1	0.25	U	1	0.25	U	1	0.26	U	1	0.25	U	1
carbazole	NA	NA	0.36	U	1	0.35	U	1	0.36	U	1	0.36	U	1	0.37	U	1	0.35	U	1
chrysene	1	4.9	0.25	U	1	0.31		1	0.22	J	1	0.25	U	1	0.4		1	0.25	U	1
dibenzo(a,h)anthracene	0.33	0.33	0.18	U	1	0.18	U	1	0.18	U	1	0.18	U	1	0.18	U	1	0.18	U	1
dibenzofuran	2.1	18	0.25	U	1	0.25	U	1	0.25	U	1	0.25	U	1	0.26	U	1	0.25	U	1
diethyl phthalate	NA	NA	0.25	U	1	0.25	U	1	0.25	U	1	0.25	U	1	0.26	U	1	0.25	U	1
dimethyl phthalate	NA	NA	0.25	U	1	0.25	U	1	0.25	U	1	0.25	U	1	0.26	U	1	0.25	U	1
di-n-butyl phthalate	NA	NA	0.71	U	1	0.71	U	1	0.73	U	1	0.72	U	1	0.73	U	1	0.7	U	1
di-n-octyl phthalate	NA	NA	0.25	U	1	0.25	U	1	0.25	U	1	0.25	U	1	0.26	U	1	0.25	U	1
fluoranthene	85	100	0.25	U	1	0.72		1	0.47		1	0.25	U	1	0.86		1	0.15	J	1
fluorene	30	100	0.25	U	1	0.25	U	1	0.25	U	1	0.25	U	1	0.26	U	1	0.25	U	1
hexachlorobenzene	0.33	0.33	0.25	U	1	0.25	U	1	0.25	U	1	0.25	U	1	0.26	U	1	0.25	U	1
hexachlorobutadiene	NA	NA	0.25	U	1	0.25	U	1	0.25	U	1	0.25	U	1	0.26	U	1	0.25	U	1
hexachlorocyclopentadiene	NA	NA	0.25	U	1	0.25	U	1	0.25	U	1	0.25	U	1	0.26	U	1	0.25	U	1
hexachloroethane	NA	NA	0.25	U	1	0.25	U	1	0.25	U	1	0.25	U	1	0.26	U	1	0.25	U	1
indeno(1,2,3-cd)pyrene	0.5	1.4	0.25	U	1	0.35		1	0.26		1	0.25	U	1	0.37		1	0.13	J	1
isophorone	NA	NA	0.25	U	1	0.25	U	1	0.25	U	1	0.25	U	1	0.26	U	1	0.25	U	1
naphthalene	12	100	0.25	U	1	0.25	U	1	0.25	U	1	0.25	U	1	0.26	U	1	0.25	U	1
nitrobenzene	0.08	1.8	0.25	U	1	0.25	U	1	0.25	U	1	0.25	U	1	0.26	U	1	0.25	U	1
n-nitrosodimethylamine	NA	NA	0.36	U	1	0.35	U	1	0.36	U	1	0.36	U	1	0.37	U	1	0.35	U	1
n-nitroso-di-n-propylamine	NA	NA	0.18	U	1	0.18	U	1	0.18	U	1	0.18	U	1	0.18	U	1	0.18	U	1
n-nitrosodiphenylamine	NA	NA	0.36	U	1	0.35	U	1	0.36	U	1	0.36	U	1	0.37	U	1	0.35	U	1
pentachlorophenol	0.8	1.3	0.36	U	1	0.35	U	1	0.36	U	1	0.36	U	1	0.37	U	1	0.35	U	1
phenanthrene	1.1	4.9	0.25	U	1	0.39		1	0.21	J	1	0.25	U	1	0.33		1	0.25	U	1
phenol	0.33	100	0.25	U	1	0.25	U	1	0.25	U	1	0.25	U	1	0.26	U	1	0.25	U	1
pyrene	64	100	0.25	U	1	0.62		1	0.41		1	0.25	U	1	0.75		1	0.19	J	1

value ≤ UU SCO
value > UU SCO
value > RRU SCO

Q = Laboratory Qualifier DL = Dilution NA = not available (addtional flags: B-in blank, D-diluted, E-estimated, J-approximate)

Table 2: SVOCs in Soil

The Green, Newburgh, NY
BCP ID: C336099

GALLAGHER BASSETT | TECHNICAL SERVICES

All data in mg/Kg (ppm)		Sample	DUP2-20251003			2SB-19 10-13			2SB-20 SURF			2SB-20 0-5			2SB-20 5-8			2SB-21 Surf		
U= Not Detected ≥ value		Date	2025-10-03			2025-10-03			2025-10-03			2025-10-03			2025-10-03			2026-03-06		
SVOCs (8270)	**UU SCO**	**RRU SCO**	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL
1,1'-biphenyl	NA	NA	0.24	U	1	0.24	U	1	0.26	U	1	0.24	U	1	0.25	U	1	0.32	U	1
1,2,4,5-tetrachlorobenzene	NA	NA	0.24	U	1	0.24	U	1	0.26	U	1	0.24	U	1	0.25	U	1	0.32	U	1
1,2,4-trichlorobenzene	NA	NA	0.24	U	1	0.24	U	1	0.26	U	1	0.24	U	1	0.25	U	1	0.32	U	1
1,2-dichlorobenzene	NA	NA	0.24	U	1	0.24	U	1	0.26	U	1	0.24	U	1	0.25	U	1	0.32	U	1
1,2-diphenylhydrazine (azobenzene)	NA	NA	0.34	U	1	0.35	U	1	0.37	U	1	0.35	U	1	0.35	U	1	0.46	U	1
1,3-dichlorobenzene	NA	NA	0.24	U	1	0.24	U	1	0.26	U	1	0.24	U	1	0.25	U	1	0.32	U	1
1,4-dichlorobenzene	NA	NA	0.24	U	1	0.24	U	1	0.26	U	1	0.24	U	1	0.25	U	1	0.32	U	1
1,4-dioxane	0.1	13	0.069	U	1	0.069	U	1	0.073	U	1	0.07	U	1	0.071	U	1	0.091	U	1
2,2'-Oxybis(1-Chloropropane)	NA	NA	0.24	U	1	0.24	U	1	0.26	U	1	0.24	U	1	0.25	U	1	0.32	U	1
2,3,4,6-tetrachlorophenol	NA	NA	0.24	U	1	0.24	U	1	0.26	U	1	0.24	U	1	0.25	U	1	0.32	U	1
2,4,5-trichlorophenol	NA	NA	0.24	U	1	0.24	U	1	0.26	U	1	0.24	U	1	0.25	U	1	0.32	U	1
2,4,6-trichlorophenol	NA	NA	0.24	U	1	0.24	U	1	0.26	U	1	0.24	U	1	0.25	U	1	0.32	U	1
2,4-dichlorophenol	NA	NA	0.24	U	1	0.24	U	1	0.26	U	1	0.24	U	1	0.25	U	1	0.32	U	1
2,4-dimethylphenol	NA	NA	0.24	U	1	0.24	U	1	0.26	U	1	0.24	U	1	0.25	U	1	0.32	U	1
2,4-dinitrophenol	NA	NA	0.55	U	1	0.55	U	1	0.6	U	1	0.56	U	1	0.57	U	1	0.74	U	1
2,4-dinitrotoluene	NA	NA	0.24	U	1	0.24	U	1	0.26	U	1	0.24	U	1	0.25	U	1	0.32	U	1
2,6-dinitrotoluene	NA	NA	0.24	U	1	0.24	U	1	0.26	U	1	0.24	U	1	0.25	U	1	0.32	U	1
2-chloronaphthalene	NA	NA	0.24	U	1	0.24	U	1	0.26	U	1	0.24	U	1	0.25	U	1	0.32	U	1
2-chlorophenol	NA	NA	0.24	U	1	0.24	U	1	0.26	U	1	0.24	U	1	0.25	U	1	0.32	U	1
2-methylnaphthalene	NA	NA	0.24	U	1	0.24	U	1	0.26	U	1	0.24	U	1	0.25	U	1	0.32	U	1
2-Methylphenol (o-cresol)	0.33	100	0.24	U	1	0.24	U	1	0.26	U	1	0.24	U	1	0.25	U	1	0.32	U	1
2-nitroaniline	NA	NA	0.55	U	1	0.55	U	1	0.6	U	1	0.56	U	1	0.57	U	1	0.74	U	1
2-nitrophenol	NA	NA	0.24	U	1	0.24	U	1	0.26	U	1	0.24	U	1	0.25	U	1	0.32	U	1
3&4-Methylphenol (m&p-cresol)	0.33	100	0.34	U	1	0.35	U	1	0.37	U	1	0.35	U	1	0.35	U	1	0.46	U	1
3,3'-dichlorobenzidine	NA	NA	0.41	U	1	0.41	U	1	0.45	U	1	0.42	U	1	0.43	U	1	0.55	U	1
3-nitroaniline	NA	NA	0.55	U	1	0.55	U	1	0.6	U	1	0.56	U	1	0.57	U	1	0.74	U	1
4,6-dinitro-2-methylphenol	NA	NA	1	U	1	1	U	1	1.1	U	1	1	U	1	1	U	1	1.3	U	1
4-bromophenyl phenyl ether	NA	NA	0.34	U	1	0.35	U	1	0.37	U	1	0.35	U	1	0.35	U	1	0.46	U	1
4-chloro-3-methylphenol	NA	NA	0.24	U	1	0.24	U	1	0.26	U	1	0.24	U	1	0.25	U	1	0.32	U	1
4-chloroaniline	NA	NA	0.24	U	1	0.24	U	1	0.26	U	1	0.24	U	1	0.25	U	1	0.32	U	1
4-chlorophenyl phenyl ether	NA	NA	0.24	U	1	0.24	U	1	0.26	U	1	0.24	U	1	0.25	U	1	0.32	U	1
4-nitroaniline	NA	NA	0.55	U	1	0.55	U	1	0.6	U	1	0.56	U	1	0.57	U	1	0.74	U	1
4-nitrophenol	NA	NA	1	U	1	1	U	1	1.1	U	1	1	U	1	1	U	1	1.3	U	1
acenaphthene	20	100	0.24	U	1	0.24	U	1	0.26	U	1	0.24	U	1	0.25	U	1	0.32	U	1
acenaphthylene	100	100	0.24	U	1	0.24	U	1	0.11	J	1	0.24	U	1	0.25	U	1	0.21	J	1
acetophenone	NA	NA	0.24	U	1	0.24	U	1	0.26	U	1	0.24	U	1	0.25	U	1	0.32	U	1
aniline	0.04	8.1	0.34	U	1	0.35	U	1	0.37	U	1	0.35	U	1	0.35	U	1	0.46	U	1
anthracene	100	100	0.24	U	1	0.24	U	1	0.26	U	1	0.24	U	1	0.25	U	1	0.31	J	1
atrazine	NA	NA	0.24	U	1	0.24	U	1	0.26	U	1	0.24	U	1	0.25	U	1	0.32	U	1
benzaldehyde	NA	NA	0.24	U	1	0.24	U	1	0.26	U	1	0.24	U	1	0.25	U	1	0.32	U	1
benzidine	NA	NA	0.34	U	1	0.35	U	1	0.37	U	1	0.35	U	1	0.35	U	1	0.46	U	1
benzo(a)anthracene	1	1.4	0.24	U	1	0.24	U	1	0.39		1	0.22	J	1	0.17	J	1	1.4		1
benzo(a)pyrene	1	1	0.24	U	1	0.19	J	1	0.55		1	0.28		1	0.21	J	1	1.7		1
benzo(b)fluoranthene	1	1.4	0.24	U	1	0.22	J	1	0.73		1	0.37		1	0.26		1	2.4		1
benzo(g,h,i)perylene	0.64	4.9	0.24	U	1	0.24	U	1	0.32		1	0.15	J	1	0.12	J	1	1.4		1
benzo(k)fluoranthene	0.8	4.9	0.24	U	1	0.24	U	1	0.2	J	1	0.24	U	1	0.25	U	1	0.77		1
benzoic acid	NA	NA	0.69	U	1	0.69	U	1	0.75	U	1	0.7	U	1	0.71	U	1	0.21	J	1
benzyl alcohol	NA	NA	0.34	U	1	0.35	U	1	0.37	U	1	0.35	U	1	0.35	U	1	0.46	U	1
benzyl butyl phthalate	NA	NA	0.24	U	1	0.24	U	1	0.26	U	1	0.24	U	1	0.25	U	1	0.32	U	1
bis(2-chloroethoxy)methane	NA	NA	0.24	U	1	0.24	U	1	0.26	U	1	0.24	U	1	0.25	U	1	0.32	U	1
bis(2-chloroethyl)ether	NA	NA	0.34	U	1	0.35	U	1	0.37	U	1	0.35	U	1	0.35	U	1	0.46	U	1
bis(2-ethylhexyl)phthalate	NA	NA	0.24	U	1	0.24	U	1	0.75	U	1	0.24	U	1	0.25	U	1	0.45	U	1
caprolactam	NA	NA	0.24	U	1	0.24	U	1	0.26	U	1	0.24	U	1	0.25	U	1	0.32	U	1
carbazole	NA	NA	0.34	U	1	0.35	U	1	0.37	U	1	0.35	U	1	0.35	U	1	0.25	J	1
chrysene	1	4.9	0.24	U	1	0.24	U	1	0.43		1	0.23	J	1	0.2	J	1	1.6		1
dibenzo(a,h)anthracene	0.33	0.33	0.17	U	1	0.17	U	1	0.19	U	1	0.17	U	1	0.18	U	1	0.29		1
dibenzofuran	2.1	18	0.24	U	1	0.24	U	1	0.26	U	1	0.24	U	1	0.25	U	1	0.32	U	1
diethyl phthalate	NA	NA	0.24	U	1	0.24	U	1	0.26	U	1	0.24	U	1	0.25	U	1	0.32	U	1
dimethyl phthalate	NA	NA	0.24	U	1	0.24	U	1	0.26	U	1	0.24	U	1	0.25	U	1	0.32	U	1
di-n-butyl phthalate	NA	NA	0.69	U	1	0.69	U	1	0.75	U	1	0.7	U	1	0.71	U	1	5.6		1
di-n-octyl phthalate	NA	NA	0.24	U	1	0.24	U	1	0.26	U	1	0.24	U	1	0.25	U	1	0.32	U	1
fluoranthene	85	100	0.24	U	1	0.18	J	1	0.98		1	0.46		1	0.27		1	3.6		1
fluorene	30	100	0.24	U	1	0.24	U	1	0.26	U	1	0.24	U	1	0.25	U	1	0.32	U	1
hexachlorobenzene	0.33	0.33	0.24	U	1	0.24	U	1	0.26	U	1	0.24	U	1	0.25	U	1	0.32	U	1
hexachlorobutadiene	NA	NA	0.24	U	1	0.24	U	1	0.26	U	1	0.24	U	1	0.25	U	1	0.32	U	1
hexachlorocyclopentadiene	NA	NA	0.24	U	1	0.24	U	1	0.26	U	1	0.24	U	1	0.25	U	1	0.32	U	1
hexachloroethane	NA	NA	0.24	U	1	0.24	U	1	0.26	U	1	0.24	U	1	0.25	U	1	0.32	U	1
indeno(1,2,3-cd)pyrene	0.5	1.4	0.24	U	1	0.14	J	1	0.37		1	0.21	J	1	0.15	J	1	1.3		1
isophorone	NA	NA	0.24	U	1	0.24	U	1	0.26	U	1	0.24	U	1	0.25	U	1	0.32	U	1
naphthalene	12	100	0.24	U	1	0.24	U	1	0.26	U	1	0.24	U	1	0.25	U	1	0.32	U	1
nitrobenzene	0.08	1.8	0.24	U	1	0.24	U	1	0.26	U	1	0.24	U	1	0.25	U	1	0.32	U	1
n-nitrosodimethylamine	NA	NA	0.34	U	1	0.35	U	1	0.37	U	1	0.35	U	1	0.35	U	1	0.46	U	1
n-nitroso-di-n-propylamine	NA	NA	0.17	U	1	0.17	U	1	0.19	U	1	0.17	U	1	0.18	U	1	0.23	U	1
n-nitrosodiphenylamine	NA	NA	0.34	U	1	0.35	U	1	0.37	U	1	0.35	U	1	0.35	U	1	0.46	U	1
pentachlorophenol	0.8	1.3	0.34	U	1	0.35	U	1	0.37	U	1	0.35	U	1	0.35	U	1	0.46	U	1
phenanthrene	1.1	4.9	0.24	U	1	0.24	U	1	0.41		1	0.2	J	1	0.25	U	1	1.5		1
phenol	0.33	100	0.24	U	1	0.24	U	1	0.26	U	1	0.24	U	1	0.25	U	1	0.32	U	1
pyrene	64	100	0.24	U	1	0.22	J	1	0.83		1	0.4		1	0.3		1	3.3		1

value ≤ UU SCO
value > UU SCO
value > RRU SCO

Q = Laboratory Qualifier DL = Dilution NA = not available (addtional flags: B-in blank, D-diluted, E-estimated, J-approximate)

Table 2: SVOCs in Soil

The Green, Newburgh, NY
BCP ID: C336099

GALLAGHER BASSETT | TECHNICAL SERVICES

All data in mg/Kg (ppm)		Sample	2SB-21 0-2			2SB-21 3-5			2SB-21 10-12			2SB-22 Surf			2SB-22 0-2			2SB-22 3-5		
U= Not Detected ≥ value		Date	2026-03-06			2026-03-06			2026-03-06			2026-03-06			2026-03-06			2026-03-06		
SVOCs (8270)	**UU SCO**	**RRU SCO**	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL
1,1'-biphenyl	NA	NA	0.25	U	1	0.26	U	1	0.27	U	1	0.25	U	1	0.26	U	1	0.26	U	1
1,2,4,5-tetrachlorobenzene	NA	NA	0.25	U	1	0.26	U	1	0.27	U	1	0.25	U	1	0.26	U	1	0.26	U	1
1,2,4-trichlorobenzene	NA	NA	0.25	U	1	0.26	U	1	0.27	U	1	0.25	U	1	0.26	U	1	0.26	U	1
1,2-dichlorobenzene	NA	NA	0.25	U	1	0.26	U	1	0.27	U	1	0.25	U	1	0.26	U	1	0.26	U	1
1,2-diphenylhydrazine (azobenzene)	NA	NA	0.36	U	1	0.38	U	1	0.38	U	1	0.35	U	1	0.37	U	1	0.37	U	1
1,3-dichlorobenzene	NA	NA	0.25	U	1	0.26	U	1	0.27	U	1	0.25	U	1	0.26	U	1	0.26	U	1
1,4-dichlorobenzene	NA	NA	0.25	U	1	0.26	U	1	0.27	U	1	0.25	U	1	0.26	U	1	0.26	U	1
1,4-dioxane	0.1	13	0.072	U	1	0.075	U	1	0.092	U	1	0.07	U	1	0.072	U	1	0.074	U	1
2,2'-Oxybis(1-Chloropropane)	NA	NA	0.25	U	1	0.26	U	1	0.27	U	1	0.25	U	1	0.26	U	1	0.26	U	1
2,3,4,6-tetrachlorophenol	NA	NA	0.25	U	1	0.26	U	1	0.27	U	1	0.25	U	1	0.26	U	1	0.26	U	1
2,4,5-trichlorophenol	NA	NA	0.25	U	1	0.26	U	1	0.27	U	1	0.25	U	1	0.26	U	1	0.26	U	1
2,4,6-trichlorophenol	NA	NA	0.25	U	1	0.26	U	1	0.27	U	1	0.25	U	1	0.26	U	1	0.26	U	1
2,4-dichlorophenol	NA	NA	0.25	U	1	0.26	U	1	0.27	U	1	0.25	U	1	0.26	U	1	0.26	U	1
2,4-dimethylphenol	NA	NA	0.25	U	1	0.26	U	1	0.27	U	1	0.25	U	1	0.26	U	1	0.26	U	1
2,4-dinitrophenol	NA	NA	0.58	U	1	0.6	U	1	0.61	U	1	0.56	U	1	0.58	U	1	0.59	U	1
2,4-dinitrotoluene	NA	NA	0.25	U	1	0.26	U	1	0.27	U	1	0.25	U	1	0.26	U	1	0.26	U	1
2,6-dinitrotoluene	NA	NA	0.25	U	1	0.26	U	1	0.27	U	1	0.25	U	1	0.26	U	1	0.26	U	1
2-chloronaphthalene	NA	NA	0.25	U	1	0.26	U	1	0.27	U	1	0.25	U	1	0.26	U	1	0.26	U	1
2-chlorophenol	NA	NA	0.25	U	1	0.26	U	1	0.27	U	1	0.25	U	1	0.26	U	1	0.26	U	1
2-methylnaphthalene	NA	NA	0.33		1	0.21	J	1	0.39		1	0.25	U	1	0.26	U	1	0.26	U	1
2-Methylphenol (o-cresol)	0.33	100	0.25	U	1	0.26	U	1	0.27	U	1	0.25	U	1	0.26	U	1	0.26	U	1
2-nitroaniline	NA	NA	0.58	U	1	0.6	U	1	0.61	U	1	0.56	U	1	0.58	U	1	0.59	U	1
2-nitrophenol	NA	NA	0.25	U	1	0.26	U	1	0.27	U	1	0.25	U	1	0.26	U	1	0.26	U	1
3&4-Methylphenol (m&p-cresol)	0.33	100	0.36	U	1	0.38	U	1	0.38	U	1	0.35	U	1	0.37	U	1	0.37	U	1
3,3'-dichlorobenzidine	NA	NA	0.43	U	1	0.45	U	1	0.46	U	1	0.42	U	1	0.44	U	1	0.45	U	1
3-nitroaniline	NA	NA	0.58	U	1	0.6	U	1	0.61	U	1	0.56	U	1	0.58	U	1	0.59	U	1
4,6-dinitro-2-methylphenol	NA	NA	1	U	1	1.1	U	1	1.1	U	1	1	U	1	1.1	U	1	1.1	U	1
4-bromophenyl phenyl ether	NA	NA	0.36	U	1	0.38	U	1	0.38	U	1	0.35	U	1	0.37	U	1	0.37	U	1
4-chloro-3-methylphenol	NA	NA	0.25	U	1	0.26	U	1	0.27	U	1	0.25	U	1	0.26	U	1	0.26	U	1
4-chloroaniline	NA	NA	0.25	U	1	0.26	U	1	0.27	U	1	0.25	U	1	0.26	U	1	0.26	U	1
4-chlorophenyl phenyl ether	NA	NA	0.25	U	1	0.26	U	1	0.27	U	1	0.25	U	1	0.26	U	1	0.26	U	1
4-nitroaniline	NA	NA	0.58	U	1	0.6	U	1	0.61	U	1	0.56	U	1	0.58	U	1	0.59	U	1
4-nitrophenol	NA	NA	1	U	1	1.1	U	1	1.1	U	1	1	U	1	1.1	U	1	1.1	U	1
acenaphthene	20	100	2.8		1	1.7		1	3.2		1	0.25	U	1	0.26	U	1	0.26	U	1
acenaphthylene	100	100	0.25	U	1	0.26	U	1	0.27	U	1	0.25	U	1	0.26	U	1	0.26	U	1
acetophenone	NA	NA	0.25	U	1	0.26	U	1	0.27	U	1	0.25	U	1	0.26	U	1	0.26	U	1
aniline	0.04	8.1	0.36	U	1	0.38	U	1	0.38	U	1	0.35	U	1	0.37	U	1	0.37	U	1
anthracene	100	100	6.7		1	5.3		1	7.1		5	0.25	U	1	0.26	U	1	0.26	U	1
atrazine	NA	NA	0.25	U	1	0.26	U	1	0.27	U	1	0.25	U	1	0.26	U	1	0.26	U	1
benzaldehyde	NA	NA	0.25	U	1	0.26	U	1	0.27	U	1	0.25	U	1	0.26	U	1	0.26	U	1
benzidine	NA	NA	0.36	U	1	0.38	U	1	0.38	U	1	0.35	U	1	0.37	U	1	0.37	U	1
benzo(a)anthracene	1	1.4	14		5	11		5	15		5	0.25	U	1	0.26	U	1	0.26	U	1
benzo(a)pyrene	1	1	10		5	8		5	12		5	0.25	U	1	0.26	U	1	0.26	U	1
benzo(b)fluoranthene	1	1.4	15		5	11		5	16		5	0.25	U	1	0.26	U	1	0.26	U	1
benzo(g,h,i)perylene	0.64	4.9	5.9		1	4.3		1	5.8		1	0.25	U	1	0.26	U	1	0.26	U	1
benzo(k)fluoranthene	0.8	4.9	5.1		1	4.3		1	5.2		1	0.25	U	1	0.26	U	1	0.26	U	1
benzoic acid	NA	NA	0.72	U	1	0.76	U	1	0.76	U	1	0.7	U	1	0.73	U	1	0.74	U	1
benzyl alcohol	NA	NA	0.36	U	1	0.38	U	1	0.38	U	1	0.35	U	1	0.37	U	1	0.37	U	1
benzyl butyl phthalate	NA	NA	0.25	U	1	0.26	U	1	0.27	U	1	0.25	U	1	0.26	U	1	0.26	U	1
bis(2-chloroethoxy)methane	NA	NA	0.25	U	1	0.26	U	1	0.27	U	1	0.25	U	1	0.26	U	1	0.26	U	1
bis(2-chloroethyl)ether	NA	NA	0.36	U	1	0.38	U	1	0.38	U	1	0.35	U	1	0.37	U	1	0.37	U	1
bis(2-ethylhexyl)phthalate	NA	NA	0.25	U	1	0.26	U	1	0.27	U	1	0.25	U	1	0.26	U	1	0.26	U	1
caprolactam	NA	NA	0.25	U	1	0.26	U	1	0.27	U	1	0.25	U	1	0.26	U	1	0.26	U	1
carbazole	NA	NA	2.9		1	1.8		1	3		1	0.35	U	1	0.37	U	1	0.37	U	1
chrysene	1	4.9	10		5	7.8		5	12		5	0.25	U	1	0.26	U	1	0.26	U	1
dibenzo(a,h)anthracene	0.33	0.33	2		1	1.4		1	2		1	0.18	U	1	0.18	U	1	0.19	U	1
dibenzofuran	2.1	18	1.3		1	0.81		1	1.6		1	0.25	U	1	0.26	U	1	0.26	U	1
diethyl phthalate	NA	NA	0.25	U	1	0.26	U	1	0.27	U	1	0.25	U	1	0.26	U	1	0.26	U	1
dimethyl phthalate	NA	NA	0.25	U	1	0.26	U	1	0.27	U	1	0.25	U	1	0.26	U	1	0.26	U	1
di-n-butyl phthalate	NA	NA	0.72	U	1	0.76	U	1	0.76	U	1	0.7	U	1	0.73	U	1	0.74	U	1
di-n-octyl phthalate	NA	NA	0.25	U	1	0.26	U	1	0.27	U	1	0.25	U	1	0.26	U	1	0.26	U	1
fluoranthene	85	100	28		5	27		5	37		5	0.25	U	1	0.26	U	1	0.26	U	1
fluorene	30	100	2.8		1	1.9		1	3.4		1	0.25	U	1	0.26	U	1	0.26	U	1
hexachlorobenzene	0.33	0.33	0.25	U	1	0.26	U	1	0.27	U	1	0.25	U	1	0.26	U	1	0.26	U	1
hexachlorobutadiene	NA	NA	0.25	U	1	0.26	U	1	0.27	U	1	0.25	U	1	0.26	U	1	0.26	U	1
hexachlorocyclopentadiene	NA	NA	0.25	U	1	0.26	U	1	0.27	U	1	0.25	U	1	0.26	U	1	0.26	U	1
hexachloroethane	NA	NA	0.25	U	1	0.26	U	1	0.27	U	1	0.25	U	1	0.26	U	1	0.26	U	1
indeno(1,2,3-cd)pyrene	0.5	1.4	5.4		5	5.2		1	7.2		1	0.25	U	1	0.26	U	1	0.26	U	1
isophorone	NA	NA	0.25	U	1	0.26	U	1	0.27	U	1	0.25	U	1	0.26	U	1	0.26	U	1
naphthalene	12	100	0.29		1	0.2	J	1	0.33		1	0.25	U	1	0.26	U	1	0.26	U	1
nitrobenzene	0.08	1.8	0.25	U	1	0.26	U	1	0.27	U	1	0.25	U	1	0.26	U	1	0.26	U	1
n-nitrosodimethylamine	NA	NA	0.36	U	1	0.38	U	1	0.38	U	1	0.35	U	1	0.37	U	1	0.37	U	1
n-nitroso-di-n-propylamine	NA	NA	0.18	U	1	0.19	U	1	0.19	U	1	0.18	U	1	0.18	U	1	0.19	U	1
n-nitrosodiphenylamine	NA	NA	0.36	U	1	0.38	U	1	0.38	U	1	0.35	U	1	0.37	U	1	0.37	U	1
pentachlorophenol	0.8	1.3	0.36	U	1	0.38	U	1	0.38	U	1	0.35	U	1	0.37	U	1	0.37	U	1
phenanthrene	1.1	4.9	18		5	15		5	25		5	0.25	U	1	0.26	U	1	0.26	U	1
phenol	0.33	100	0.25	U	1	0.26	U	1	0.27	U	1	0.25	U	1	0.26	U	1	0.26	U	1
pyrene	64	100	23		5	21		5	31		5	0.25	U	1	0.26	U	1	0.26	U	1

value ≤ UU SCO
value > UU SCO
value > RRU SCO

Q = Laboratory Qualifier DL = Dilution NA = not available (addtional flags: B-in blank, D-diluted, E-estimated, J-approximate)

Table 2: SVOCs in Soil

The Green, Newburgh, NY
BCP ID: C336099

GALLAGHER BASSETT | TECHNICAL SERVICES

All data in mg/Kg (ppm)			Sample	2SB-22 5-7			2SB-23 Surf			2SB-23 0-2			2SB-23 4-6			2SB-23 7-9			2SB-24 Surf		
U= Not Detected ≥ value			Date	2026-03-06			2026-03-06			2026-03-06			2026-03-06			2026-03-06			2026-03-06		
SVOCs (8270)	**UU SCO**	**RRU SCO**		Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL
1,1'-biphenyl	NA	NA		0.27	U	1	2.4	U	10	0.26	U	1	0.26	U	1	0.26	U	1	0.26	U	1
1,2,4,5-tetrachlorobenzene	NA	NA		0.27	U	1	2.4	U	10	0.26	U	1	0.26	U	1	0.26	U	1	0.26	U	1
1,2,4-trichlorobenzene	NA	NA		0.27	U	1	2.4	U	10	0.26	U	1	0.26	U	1	0.26	U	1	0.26	U	1
1,2-dichlorobenzene	NA	NA		0.27	U	1	2.4	U	10	0.26	U	1	0.26	U	1	0.26	U	1	0.26	U	1
1,2-diphenylhydrazine (azobenzene)	NA	NA		0.39	U	1	3.4	U	10	0.37	U	1	0.37	U	1	0.37	U	1	0.38	U	1
1,3-dichlorobenzene	NA	NA		0.27	U	1	2.4	U	10	0.26	U	1	0.26	U	1	0.26	U	1	0.26	U	1
1,4-dichlorobenzene	NA	NA		0.27	U	1	2.4	U	10	0.26	U	1	0.26	U	1	0.26	U	1	0.26	U	1
1,4-dioxane	0.1	13		0.076	U	1	0.068	U	1	0.074	U	1	0.073	U	1	0.073	U	1	0.075	U	1
2,2'-Oxybis(1-Chloropropane)	NA	NA		0.27	U	1	2.4	U	10	0.26	U	1	0.26	U	1	0.26	U	1	0.26	U	1
2,3,4,6-tetrachlorophenol	NA	NA		0.27	U	1	2.4	U	10	0.26	U	1	0.26	U	1	0.26	U	1	0.26	U	1
2,4,5-trichlorophenol	NA	NA		0.27	U	1	2.4	U	10	0.26	U	1	0.26	U	1	0.26	U	1	0.26	U	1
2,4,6-trichlorophenol	NA	NA		0.27	U	1	2.4	U	10	0.26	U	1	0.26	U	1	0.26	U	1	0.26	U	1
2,4-dichlorophenol	NA	NA		0.27	U	1	2.4	U	10	0.26	U	1	0.26	U	1	0.26	U	1	0.26	U	1
2,4-dimethylphenol	NA	NA		0.27	U	1	2.4	U	10	0.26	U	1	0.26	U	1	0.26	U	1	0.26	U	1
2,4-dinitrophenol	NA	NA		0.62	U	1	5.5	U	10	0.59	U	1	0.59	U	1	0.59	U	1	0.61	U	1
2,4-dinitrotoluene	NA	NA		0.27	U	1	2.4	U	10	0.26	U	1	0.26	U	1	0.26	U	1	0.26	U	1
2,6-dinitrotoluene	NA	NA		0.27	U	1	2.4	U	10	0.26	U	1	0.26	U	1	0.26	U	1	0.26	U	1
2-chloronaphthalene	NA	NA		0.27	U	1	2.4	U	10	0.26	U	1	0.26	U	1	0.26	U	1	0.26	U	1
2-chlorophenol	NA	NA		0.27	U	1	2.4	U	10	0.26	U	1	0.26	U	1	0.26	U	1	0.26	U	1
2-methylnaphthalene	NA	NA		0.27	U	1	2.4	U	10	0.26	U	1	0.26	U	1	0.26	U	1	0.26	U	1
2-Methylphenol (o-cresol)	0.33	100		0.27	U	1	2.4	U	10	0.26	U	1	0.26	U	1	0.26	U	1	0.26	U	1
2-nitroaniline	NA	NA		0.62	U	1	5.5	U	10	0.59	U	1	0.59	U	1	0.59	U	1	0.61	U	1
2-nitrophenol	NA	NA		0.27	U	1	2.4	U	10	0.26	U	1	0.26	U	1	0.26	U	1	0.26	U	1
3&4-Methylphenol (m&p-cresol)	0.33	100		0.39	U	1	3.4	U	10	0.37	U	1	0.37	U	1	0.37	U	1	0.38	U	1
3,3'-dichlorobenzidine	NA	NA		0.46	U	1	4.1	U	10	0.45	U	1	0.45	U	1	0.44	U	1	0.45	U	1
3-nitroaniline	NA	NA		0.62	U	1	5.5	U	10	0.59	U	1	0.59	U	1	0.59	U	1	0.61	U	1
4,6-dinitro-2-methylphenol	NA	NA		1.1	U	1	9.9	U	10	1.1	U	1	1.1	U	1	1.1	U	1	1.1	U	1
4-bromophenyl phenyl ether	NA	NA		0.39	U	1	3.4	U	10	0.37	U	1	0.37	U	1	0.37	U	1	0.38	U	1
4-chloro-3-methylphenol	NA	NA		0.27	U	1	2.4	U	10	0.26	U	1	0.26	U	1	0.26	U	1	0.26	U	1
4-chloroaniline	NA	NA		0.27	U	1	2.4	U	10	0.26	U	1	0.26	U	1	0.26	U	1	0.26	U	1
4-chlorophenyl phenyl ether	NA	NA		0.27	U	1	2.4	U	10	0.26	U	1	0.26	U	1	0.26	U	1	0.26	U	1
4-nitroaniline	NA	NA		0.62	U	1	5.5	U	10	0.59	U	1	0.59	U	1	0.59	U	1	0.61	U	1
4-nitrophenol	NA	NA		1.1	U	1	9.9	U	10	1.1	U	1	1.1	U	1	1.1	U	1	1.1	U	1
acenaphthene	20	100		0.27	U	1	2.4	U	10	0.26	U	1	0.26	U	1	0.26	U	1	0.26	U	1
acenaphthylene	100	100		0.27	U	1	2.4	U	10	0.26	U	1	0.26	U	1	0.26	U	1	0.11	J	1
acetophenone	NA	NA		0.27	U	1	2.4	U	10	0.26	U	1	0.26	U	1	0.26	U	1	0.26	U	1
aniline	0.04	8.1		0.39	U	1	3.4	U	10	0.37	U	1	0.37	U	1	0.37	U	1	0.38	U	1
anthracene	100	100		0.27	U	1	2.4	U	10	0.26	U	1	0.26	U	1	0.26	U	1	0.26	U	1
atrazine	NA	NA		0.27	U	1	2.4	U	10	0.26	U	1	0.26	U	1	0.26	U	1	0.26	U	1
benzaldehyde	NA	NA		0.27	U	1	2.4	U	10	0.26	U	1	0.26	U	1	0.26	U	1	0.26	U	1
benzidine	NA	NA		0.39	U	1	3.4	U	10	0.37	U	1	0.37	U	1	0.37	U	1	0.38	U	1
benzo(a)anthracene	1	1.4		0.27	U	1	1.4	U	10	0.3		1	0.26	U	1	0.26	U	1	0.52		1
benzo(a)pyrene	1	1		0.27	U	1	1.8		10	0.3		1	0.26	U	1	0.26	U	1	0.84		1
benzo(b)fluoranthene	1	1.4		0.27	U	1	2.3		10	0.39		1	0.17	J	1	0.26	U	1	1.3		1
benzo(g,h,i)perylene	0.64	4.9		0.27	U	1	1.6	J	10	0.13	J	1	0.26	U	1	0.26	U	1	0.75		1
benzo(k)fluoranthene	0.8	4.9		0.27	U	1	2.4	U	10	0.13	J	1	0.26	U	1	0.26	U	1	0.43		1
benzoic acid	NA	NA		0.77	U	1	6.8	U	10	0.74	U	1	0.74	U	1	0.74	U	1	0.76	U	1
benzyl alcohol	NA	NA		0.39	U	1	3.4	U	10	0.37	U	1	0.37	U	1	0.37	U	1	0.38	U	1
benzyl butyl phthalate	NA	NA		0.27	U	1	2.4	U	10	0.26	U	1	0.26	U	1	0.26	U	1	0.26	U	1
bis(2-chloroethoxy)methane	NA	NA		0.27	U	1	2.4	U	10	0.26	U	1	0.26	U	1	0.26	U	1	0.26	U	1
bis(2-chloroethyl)ether	NA	NA		0.39	U	1	3.4	U	10	0.37	U	1	0.37	U	1	0.37	U	1	0.38	U	1
bis(2-ethylhexyl)phthalate	NA	NA		0.27	U	1	2.4	U	10	0.26	U	1	0.26	U	1	0.26	U	1	0.26	U	1
caprolactam	NA	NA		0.27	U	1	2.4	U	10	0.26	U	1	0.26	U	1	0.26	U	1	0.26	U	1
carbazole	NA	NA		0.39	U	1	3.4	U	10	0.37	U	1	0.37	U	1	0.37	U	1	0.38	U	1
chrysene	1	4.9		0.27	U	1	2.4	U	10	0.32		1	0.13	J	1	0.26	U	1	0.72		1
dibenzo(a,h)anthracene	0.33	0.33		0.19	U	1	0.45		10	0.19	U	1	0.19	U	1	0.18	U	1	0.16	J	1
dibenzofuran	2.1	18		0.27	U	1	2.4	U	10	0.26	U	1	0.26	U	1	0.26	U	1	0.26	U	1
diethyl phthalate	NA	NA		0.27	U	1	2.4	U	10	0.26	U	1	0.26	U	1	0.26	U	1	0.26	U	1
dimethyl phthalate	NA	NA		0.27	U	1	2.4	U	10	0.26	U	1	0.26	U	1	0.26	U	1	0.26	U	1
di-n-butyl phthalate	NA	NA		0.77	U	1	6.8	U	10	0.74	U	1	0.74	U	1	0.74	U	1	0.76	U	1
di-n-octyl phthalate	NA	NA		0.27	U	1	2.4	U	10	0.26	U	1	0.26	U	1	0.26	U	1	0.26	U	1
fluoranthene	85	100		0.27	U	1	2.4	U	10	0.76		1	0.14	J	1	0.26	U	1	0.79		1
fluorene	30	100		0.27	U	1	2.4	U	10	0.26	U	1	0.26	U	1	0.26	U	1	0.26	U	1
hexachlorobenzene	0.33	0.33		0.27	U	1	0.33	U	10	0.26	U	1	0.26	U	1	0.26	U	1	0.26	U	1
hexachlorobutadiene	NA	NA		0.27	U	1	2.4	U	10	0.26	U	1	0.26	U	1	0.26	U	1	0.26	U	1
hexachlorocyclopentadiene	NA	NA		0.27	U	1	2.4	U	10	0.26	U	1	0.26	U	1	0.26	U	1	0.26	U	1
hexachloroethane	NA	NA		0.27	U	1	2.4	U	10	0.26	U	1	0.26	U	1	0.26	U	1	0.26	U	1
indeno(1,2,3-cd)pyrene	0.5	1.4		0.27	U	1	1.8		10	0.15	J	1	0.26	U	1	0.26	U	1	0.83		1
isophorone	NA	NA		0.27	U	1	2.4	U	10	0.26	U	1	0.26	U	1	0.26	U	1	0.26	U	1
naphthalene	12	100		0.27	U	1	2.4	U	10	0.26	U	1	0.26	U	1	0.26	U	1	0.26	U	1
nitrobenzene	0.08	1.8		0.27	U	1	2.4	U	10	0.26	U	1	0.26	U	1	0.26	U	1	0.26	U	1
n-nitrosodimethylamine	NA	NA		0.39	U	1	3.4	U	10	0.37	U	1	0.37	U	1	0.37	U	1	0.38	U	1
n-nitroso-di-n-propylamine	NA	NA		0.19	U	1	1.7	U	10	0.19	U	1	0.19	U	1	0.18	U	1	0.19	U	1
n-nitrosodiphenylamine	NA	NA		0.39	U	1	3.4	U	10	0.37	U	1	0.37	U	1	0.37	U	1	0.38	U	1
pentachlorophenol	0.8	1.3		0.39	U	1	1.3	U	10	0.37	U	1	0.37	U	1	0.37	U	1	0.38	U	1
phenanthrene	1.1	4.9		0.27	U	1	2.4	U	10	0.52		1	0.26	U	1	0.26	U	1	0.23	J	1
phenol	0.33	100		0.27	U	1	2.4	U	10	0.26	U	1	0.26	U	1	0.26	U	1	0.26	U	1
pyrene	64	100		0.27	U	1	2.4	U	10	0.69		1	0.16	J	1	0.26	U	1	0.77		1

value ≤ UU SCO
value > UU SCO
value > RRU SCO

Q = Laboratory Qualifier DL = Dilution NA = not available (addtional flags: B-in blank, D-diluted, E-estimated, J-approximate)

Table 2: SVOCs in Soil

The Green, Newburgh, NY
BCP ID: C336099

GALLAGHER BASSETT | TECHNICAL SERVICES

All data in mg/Kg (ppm)		Sample	2SB-24 0-2			2SB-24 3-5			Dup-20260306			2SB-24 6-8			2SB-25 Surf			2SB-25 0-2		
U= Not Detected ≥ value		Date	2026-03-06			2026-03-06			2026-03-06			2026-03-06			2026-03-06			2026-03-06		
SVOCs (8270)	**UU SCO**	**RRU SCO**	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL
1,1'-biphenyl	NA	NA	1.2		1	0.26	U	1	0.26	U	1	0.25	U	1	2.6	U	10	0.26	U	1
1,2,4,5-tetrachlorobenzene	NA	NA	0.25	U	1	0.26	U	1	0.26	U	1	0.25	U	1	2.6	U	10	0.26	U	1
1,2,4-trichlorobenzene	NA	NA	0.25	U	1	0.26	U	1	0.26	U	1	0.25	U	1	2.6	U	10	0.26	U	1
1,2-dichlorobenzene	NA	NA	0.25	U	1	0.26	U	1	0.26	U	1	0.25	U	1	2.6	U	10	0.26	U	1
1,2-diphenylhydrazine (azobenzene)	NA	NA	0.36	U	1	0.37	U	1	0.38	U	1	0.36	U	1	3.6	U	10	0.37	U	1
1,3-dichlorobenzene	NA	NA	0.25	U	1	0.26	U	1	0.26	U	1	0.25	U	1	2.6	U	10	0.26	U	1
1,4-dichlorobenzene	NA	NA	0.25	U	1	0.26	U	1	0.26	U	1	0.25	U	1	2.6	U	10	0.26	U	1
1,4-dioxane	0.1	13	0.073	U	1	0.074	U	1	0.075	U	1	0.072	U	1	0.072	U	1	0.073	U	1
2,2'-Oxybis(1-Chloropropane)	NA	NA	0.25	U	1	0.26	U	1	0.26	U	1	0.25	U	1	2.6	U	10	0.26	U	1
2,3,4,6-tetrachlorophenol	NA	NA	0.25	U	1	0.26	U	1	0.26	U	1	0.25	U	1	2.6	U	10	0.26	U	1
2,4,5-trichlorophenol	NA	NA	0.25	U	1	0.26	U	1	0.26	U	1	0.25	U	1	2.6	U	10	0.26	U	1
2,4,6-trichlorophenol	NA	NA	0.25	U	1	0.26	U	1	0.26	U	1	0.25	U	1	2.6	U	10	0.26	U	1
2,4-dichlorophenol	NA	NA	0.25	U	1	0.26	U	1	0.26	U	1	0.25	U	1	2.6	U	10	0.26	U	1
2,4-dimethylphenol	NA	NA	0.13	J	1	0.26	U	1	0.26	U	1	0.25	U	1	2.6	U	10	0.26	U	1
2,4-dinitrophenol	NA	NA	0.58	U	1	0.6	U	1	0.6	U	1	0.58	U	1	5.8	U	10	0.59	U	1
2,4-dinitrotoluene	NA	NA	0.25	U	1	0.26	U	1	0.26	U	1	0.25	U	1	2.6	U	10	0.26	U	1
2,6-dinitrotoluene	NA	NA	0.25	U	1	0.26	U	1	0.26	U	1	0.25	U	1	2.6	U	10	0.26	U	1
2-chloronaphthalene	NA	NA	0.25	U	1	0.26	U	1	0.26	U	1	0.25	U	1	2.6	U	10	0.26	U	1
2-chlorophenol	NA	NA	0.25	U	1	0.26	U	1	0.26	U	1	0.25	U	1	2.6	U	10	0.26	U	1
2-methylnaphthalene	NA	NA	7.7		5	0.26	U	1	0.26	U	1	0.25	U	1	2.6	U	10	0.26	U	1
2-Methylphenol (o-cresol)	0.33	100	0.25	U	1	0.26	U	1	0.26	U	1	0.25	U	1	2.6	U	10	0.26	U	1
2-nitroaniline	NA	NA	0.58	U	1	0.6	U	1	0.6	U	1	0.58	U	1	5.8	U	10	0.59	U	1
2-nitrophenol	NA	NA	0.25	U	1	0.26	U	1	0.26	U	1	0.25	U	1	2.6	U	10	0.26	U	1
3&4-Methylphenol (m&p-cresol)	0.33	100	0.17	J	1	0.37	U	1	0.38	U	1	0.36	U	1	3.6	U	10	0.37	U	1
3,3'-dichlorobenzidine	NA	NA	0.43	U	1	0.45	U	1	0.45	U	1	0.43	U	1	4.4	U	10	0.45	U	1
3-nitroaniline	NA	NA	0.58	U	1	0.6	U	1	0.6	U	1	0.58	U	1	5.8	U	10	0.59	U	1
4,6-dinitro-2-methylphenol	NA	NA	1	U	1	1.1	U	1	1.1	U	1	1	U	1	11	U	10	1.1	U	1
4-bromophenyl phenyl ether	NA	NA	0.36	U	1	0.37	U	1	0.38	U	1	0.36	U	1	3.6	U	10	0.37	U	1
4-chloro-3-methylphenol	NA	NA	0.25	U	1	0.26	U	1	0.26	U	1	0.25	U	1	2.6	U	10	0.26	U	1
4-chloroaniline	NA	NA	0.25	U	1	0.26	U	1	0.26	U	1	0.25	U	1	2.6	U	10	0.26	U	1
4-chlorophenyl phenyl ether	NA	NA	0.25	U	1	0.26	U	1	0.26	U	1	0.25	U	1	2.6	U	10	0.26	U	1
4-nitroaniline	NA	NA	0.58	U	1	0.6	U	1	0.6	U	1	0.58	U	1	5.8	U	10	0.59	U	1
4-nitrophenol	NA	NA	1	U	1	1.1	U	1	1.1	U	1	1	U	1	11	U	10	1.1	U	1
acenaphthene	20	100	1.8		1	0.26	U	1	0.26	U	1	0.25	U	1	2.6	U	10	0.26	U	1
acenaphthylene	100	100	13		5	0.26	U	1	0.26	U	1	0.25	U	1	2.6	U	10	0.38		1
acetophenone	NA	NA	0.25	U	1	0.26	U	1	0.26	U	1	0.25	U	1	2.6	U	10	0.26	U	1
aniline	0.04	8.1	0.36	U	1	0.37	U	1	0.38	U	1	0.36	U	1	3.6	U	10	0.37	U	1
anthracene	100	100	14		5	0.26	U	1	0.26	U	1	0.25	U	1	2.6	U	10	0.26	U	1
atrazine	NA	NA	0.25	U	1	0.26	U	1	0.26	U	1	0.25	U	1	2.6	U	10	0.26	U	1
benzaldehyde	NA	NA	0.25	U	1	0.26	U	1	0.26	U	1	0.25	U	1	2.6	U	10	0.26	U	1
benzidine	NA	NA	0.36	U	1	0.37	U	1	0.38	U	1	0.36	U	1	3.6	U	10	0.37	U	1
benzo(a)anthracene	1	1.4	27		5	0.26	U	1	0.26	U	1	0.25	U	1	1.4	U	10	1		1
benzo(a)pyrene	1	1	23		5	0.26	U	1	0.26	U	1	0.25	U	1	1.1		10	3.3		1
benzo(b)fluoranthene	1	1.4	30		5	0.26	U	1	0.26	U	1	0.25	U	1	1.4	J	10	4.6		1
benzo(g,h,i)perylene	0.64	4.9	10		5	0.26	U	1	0.26	U	1	0.25	U	1	1.7	J	10	0.59		1
benzo(k)fluoranthene	0.8	4.9	9.6		5	0.26	U	1	0.26	U	1	0.25	U	1	2.6	U	10	1.5		1
benzoic acid	NA	NA	0.72	U	1	0.75	U	1	0.75	U	1	0.72	U	1	7.3	U	10	0.74	U	1
benzyl alcohol	NA	NA	0.36	U	1	0.37	U	1	0.38	U	1	0.36	U	1	3.6	U	10	0.37	U	1
benzyl butyl phthalate	NA	NA	0.25	U	1	0.26	U	1	0.26	U	1	0.25	U	1	2.6	U	10	0.26	U	1
bis(2-chloroethoxy)methane	NA	NA	0.25	U	1	0.26	U	1	0.26	U	1	0.25	U	1	2.6	U	10	0.26	U	1
bis(2-chloroethyl)ether	NA	NA	0.36	U	1	0.37	U	1	0.38	U	1	0.36	U	1	3.6	U	10	0.37	U	1
bis(2-ethylhexyl)phthalate	NA	NA	0.25	U	1	0.26	U	1	0.26	U	1	0.25	U	1	2.6	U	10	0.26	U	1
caprolactam	NA	NA	0.25	U	1	0.26	U	1	0.26	U	1	0.25	U	1	2.6	U	10	0.26	U	1
carbazole	NA	NA	5.9		1	0.37	U	1	0.38	U	1	0.36	U	1	3.6	U	10	0.37	U	1
chrysene	1	4.9	24		5	0.26	U	1	0.26	U	1	0.25	U	1	2.6	U	10	0.97		1
dibenzo(a,h)anthracene	0.33	0.33	3.4		1	0.19	U	1	0.19	U	1	0.18	U	1	0.43		10	0.23		1
dibenzofuran	2.1	18	7.4		1	0.26	U	1	0.26	U	1	0.25	U	1	2.6	U	10	0.26	U	1
diethyl phthalate	NA	NA	0.25	U	1	0.26	U	1	0.26	U	1	0.25	U	1	2.6	U	10	0.26	U	1
dimethyl phthalate	NA	NA	0.25	U	1	0.26	U	1	0.26	U	1	0.25	U	1	2.6	U	10	0.26	U	1
di-n-butyl phthalate	NA	NA	0.72	U	1	0.75	U	1	0.75	U	1	0.72	U	1	7.3	U	10	0.74	U	1
di-n-octyl phthalate	NA	NA	0.25	U	1	0.26	U	1	0.26	U	1	0.25	U	1	2.6	U	10	0.26	U	1
fluoranthene	85	100	65		25	0.26	U	1	0.26	U	1	0.25	U	1	2.6	U	10	0.26	U	1
fluorene	30	100	15		5	0.26	U	1	0.26	U	1	0.25	U	1	2.6	U	10	0.26	U	1
hexachlorobenzene	0.33	0.33	0.25	U	1	0.26	U	1	0.26	U	1	0.25	U	1	0.33	U	10	0.26	U	1
hexachlorobutadiene	NA	NA	0.25	U	1	0.26	U	1	0.26	U	1	0.25	U	1	2.6	U	10	0.26	U	1
hexachlorocyclopentadiene	NA	NA	0.25	U	1	0.26	U	1	0.26	U	1	0.25	U	1	2.6	U	10	0.26	U	1
hexachloroethane	NA	NA	0.25	U	1	0.26	U	1	0.26	U	1	0.25	U	1	2.6	U	10	0.26	U	1
indeno(1,2,3-cd)pyrene	0.5	1.4	13		5	0.26	U	1	0.26	U	1	0.25	U	1	2		10	0.85		1
isophorone	NA	NA	0.25	U	1	0.26	U	1	0.26	U	1	0.25	U	1	2.6	U	10	0.26	U	1
naphthalene	12	100	11		5	0.26	U	1	0.26	U	1	0.25	U	1	2.6	U	10	0.26	U	1
nitrobenzene	0.08	1.8	0.25	U	1	0.26	U	1	0.26	U	1	0.25	U	1	2.6	U	10	0.26	U	1
n-nitrosodimethylamine	NA	NA	0.36	U	1	0.37	U	1	0.38	U	1	0.36	U	1	3.6	U	10	0.37	U	1
n-nitroso-di-n-propylamine	NA	NA	0.18	U	1	0.19	U	1	0.19	U	1	0.18	U	1	1.8	U	10	0.19	U	1
n-nitrosodiphenylamine	NA	NA	0.36	U	1	0.37	U	1	0.38	U	1	0.36	U	1	3.6	U	10	0.37	U	1
pentachlorophenol	0.8	1.3	0.36	U	1	0.37	U	1	0.38	U	1	0.36	U	1	1.3	U	10	0.37	U	1
phenanthrene	1.1	4.9	73		25	0.26	U	1	0.26	U	1	0.25	U	1	2.6	U	10	0.26	U	1
phenol	0.33	100	0.25	U	1	0.26	U	1	0.26	U	1	0.25	U	1	2.6	U	10	0.26	U	1
pyrene	64	100	34		5	0.26	U	1	0.26	U	1	0.25	U	1	2.6	U	10	0.26	U	1

value ≤ UU SCO
value > UU SCO
value > RRU SCO

Q = Laboratory Qualifier DL = Dilution NA = not available (addtional flags: B-in blank, D-diluted, E-estimated, J-approximate)

Table 2: SVOCs in Soil

The Green, Newburgh, NY
BCP ID: C336099

GALLAGHER BASSETT | TECHNICAL SERVICES

All data in mg/Kg (ppm)			Sample	2SB-25 5-7			2SB-26 Surf			2SB-26 0-2			2SB-26 5-7			2SB-27 Surf			2SB-27 0-2		
U= Not Detected ≥ value			Date	2026-03-06			2026-03-06			2026-03-06			2026-03-06			2026-03-09			2026-03-09		
SVOCs (8270)	**UU SCO**	**RRU SCO**		Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL
1,1'-biphenyl	NA	NA		0.26	U	1	0.26	U	1	0.26	U	1	0.24	U	1	0.27	U	1	0.26	U	1
1,2,4,5-tetrachlorobenzene	NA	NA		0.26	U	1	0.26	U	1	0.26	U	1	0.24	U	1	0.27	U	1	0.26	U	1
1,2,4-trichlorobenzene	NA	NA		0.26	U	1	0.26	U	1	0.26	U	1	0.24	U	1	0.27	U	1	0.26	U	1
1,2-dichlorobenzene	NA	NA		0.26	U	1	0.26	U	1	0.26	U	1	0.24	U	1	0.27	U	1	0.26	U	1
1,2-diphenylhydrazine (azobenzene)	NA	NA		0.38	U	1	0.38	U	1	0.38	U	1	0.35	U	1	0.39	U	1	0.37	U	1
1,3-dichlorobenzene	NA	NA		0.26	U	1	0.26	U	1	0.26	U	1	0.24	U	1	0.27	U	1	0.26	U	1
1,4-dichlorobenzene	NA	NA		0.26	U	1	0.26	U	1	0.26	U	1	0.24	U	1	0.27	U	1	0.26	U	1
1,4-dioxane	0.1	13		0.075	U	1	0.076	U	1	0.075	U	1	0.07	U	1	0.078	U	1	0.073	U	1
2,2'-Oxybis(1-Chloropropane)	NA	NA		0.26	U	1	0.26	U	1	0.26	U	1	0.24	U	1	0.27	U	1	0.26	U	1
2,3,4,6-tetrachlorophenol	NA	NA		0.26	U	1	0.26	U	1	0.26	U	1	0.24	U	1	0.27	U	1	0.26	U	1
2,4,5-trichlorophenol	NA	NA		0.26	U	1	0.26	U	1	0.26	U	1	0.24	U	1	0.27	U	1	0.26	U	1
2,4,6-trichlorophenol	NA	NA		0.26	U	1	0.26	U	1	0.26	U	1	0.24	U	1	0.27	U	1	0.26	U	1
2,4-dichlorophenol	NA	NA		0.26	U	1	0.26	U	1	0.26	U	1	0.24	U	1	0.27	U	1	0.26	U	1
2,4-dimethylphenol	NA	NA		0.26	U	1	0.26	U	1	0.26	U	1	0.24	U	1	0.27	U	1	0.26	U	1
2,4-dinitrophenol	NA	NA		0.6	U	1	0.6	U	1	0.6	U	1	0.56	U	1	0.62	U	1	0.59	U	1
2,4-dinitrotoluene	NA	NA		0.26	U	1	0.26	U	1	0.26	U	1	0.24	U	1	0.27	U	1	0.26	U	1
2,6-dinitrotoluene	NA	NA		0.26	U	1	0.26	U	1	0.26	U	1	0.24	U	1	0.27	U	1	0.26	U	1
2-chloronaphthalene	NA	NA		0.26	U	1	0.26	U	1	0.26	U	1	0.24	U	1	0.27	U	1	0.26	U	1
2-chlorophenol	NA	NA		0.26	U	1	0.26	U	1	0.26	U	1	0.24	U	1	0.27	U	1	0.26	U	1
2-methylnaphthalene	NA	NA		0.26	U	1	0.26	U	1	0.26	U	1	0.24	U	1	0.27	U	1	0.26	U	1
2-Methylphenol (o-cresol)	0.33	100		0.26	U	1	0.26	U	1	0.26	U	1	0.24	U	1	0.27	U	1	0.26	U	1
2-nitroaniline	NA	NA		0.6	U	1	0.6	U	1	0.6	U	1	0.56	U	1	0.62	U	1	0.59	U	1
2-nitrophenol	NA	NA		0.26	U	1	0.26	U	1	0.26	U	1	0.24	U	1	0.27	U	1	0.26	U	1
3&4-Methylphenol (m&p-cresol)	0.33	100		0.38	U	1	0.38	U	1	0.38	U	1	0.35	U	1	0.39	U	1	0.37	U	1
3,3'-dichlorobenzidine	NA	NA		0.45	U	1	0.45	U	1	0.45	U	1	0.42	U	1	0.47	U	1	0.44	U	1
3-nitroaniline	NA	NA		0.6	U	1	0.6	U	1	0.6	U	1	0.56	U	1	0.62	U	1	0.59	U	1
4,6-dinitro-2-methylphenol	NA	NA		1.1	U	1	1.1	U	1	1.1	U	1	1	U	1	1.1	U	1	1.1	U	1
4-bromophenyl phenyl ether	NA	NA		0.38	U	1	0.38	U	1	0.38	U	1	0.35	U	1	0.39	U	1	0.37	U	1
4-chloro-3-methylphenol	NA	NA		0.26	U	1	0.26	U	1	0.26	U	1	0.24	U	1	0.27	U	1	0.26	U	1
4-chloroaniline	NA	NA		0.26	U	1	0.26	U	1	0.26	U	1	0.24	U	1	0.27	U	1	0.26	U	1
4-chlorophenyl phenyl ether	NA	NA		0.26	U	1	0.26	U	1	0.26	U	1	0.24	U	1	0.27	U	1	0.26	U	1
4-nitroaniline	NA	NA		0.6	U	1	0.6	U	1	0.6	U	1	0.56	U	1	0.62	U	1	0.59	U	1
4-nitrophenol	NA	NA		1.1	U	1	1.1	U	1	1.1	U	1	1	U	1	1.1	U	1	1.1	U	1
acenaphthene	20	100		0.26	U	1	0.26	U	1	0.12	J	1	0.24	U	1	0.27	U	1	0.26	U	1
acenaphthylene	100	100		0.26	U	1	0.17	J	1	0.18	J	1	0.24	U	1	0.13	J	1	0.26	U	1
acetophenone	NA	NA		0.26	U	1	0.26	U	1	0.26	U	1	0.24	U	1	0.27	U	1	0.26	U	1
aniline	0.04	8.1		0.38	U	1	0.38	U	1	0.38	U	1	0.35	U	1	0.39	U	1	0.37	U	1
anthracene	100	100		0.26	U	1	0.26	U	1	0.37		1	0.24	U	1	0.34		1	0.26	U	1
atrazine	NA	NA		0.26	U	1	0.26	U	1	0.26	U	1	0.24	U	1	0.27	U	1	0.26	U	1
benzaldehyde	NA	NA		0.26	U	1	0.26	U	1	0.26	U	1	0.24	U	1	0.27	U	1	0.26	U	1
benzidine	NA	NA		0.38	U	1	0.38	U	1	0.38	U	1	0.35	U	1	0.39	U	1	0.37	U	1
benzo(a)anthracene	1	1.4		0.26	U	1	0.27		1	1		1	0.24	U	1	2.9		1	0.15	J	1
benzo(a)pyrene	1	1		0.26	U	1	1.9		1	1		1	0.24	U	1	5.9		1	0.14	J	1
benzo(b)fluoranthene	1	1.4		0.26	U	1	2.4		1	1.3		1	0.24	U	1	9.5		5	0.19	J	1
benzo(g,h,i)perylene	0.64	4.9		0.26	U	1	0.68		1	0.58		1	0.24	U	1	5.5		1	0.26	U	1
benzo(k)fluoranthene	0.8	4.9		0.26	U	1	0.84		1	0.47		1	0.24	U	1	2.7		1	0.26	U	1
benzoic acid	NA	NA		0.75	U	1	0.76	U	1	0.75	U	1	0.69	U	1	0.78	U	1	0.74	U	1
benzyl alcohol	NA	NA		0.38	U	1	0.38	U	1	0.38	U	1	0.35	U	1	0.39	U	1	0.37	U	1
benzyl butyl phthalate	NA	NA		0.26	U	1	0.26	U	1	0.26	U	1	0.24	U	1	0.27	U	1	0.26	U	1
bis(2-chloroethoxy)methane	NA	NA		0.26	U	1	0.26	U	1	0.26	U	1	0.24	U	1	0.27	U	1	0.26	U	1
bis(2-chloroethyl)ether	NA	NA		0.38	U	1	0.38	U	1	0.38	U	1	0.35	U	1	0.39	U	1	0.37	U	1
bis(2-ethylhexyl)phthalate	NA	NA		0.26	U	1	0.26	U	1	0.26	U	1	0.24	U	1	5		1	0.26	U	1
caprolactam	NA	NA		0.26	U	1	0.26	U	1	0.26	U	1	0.24	U	1	0.27	U	1	0.26	U	1
carbazole	NA	NA		0.38	U	1	0.38	U	1	0.38	U	1	0.35	U	1	0.5		1	0.37	U	1
chrysene	1	4.9		0.26	U	1	0.33		1	1		1	0.24	U	1	4.4		1	0.14	J	1
dibenzo(a,h)anthracene	0.33	0.33		0.19	U	1	0.2		1	0.15	J	1	0.17	U	1	0.98		1	0.18	U	1
dibenzofuran	2.1	18		0.26	U	1	0.26	U	1	0.26	U	1	0.24	U	1	0.27	U	1	0.26	U	1
diethyl phthalate	NA	NA		0.26	U	1	0.26	U	1	0.26	U	1	0.24	U	1	0.27	U	1	0.26	U	1
dimethyl phthalate	NA	NA		0.26	U	1	0.26	U	1	0.26	U	1	0.24	U	1	0.27	U	1	0.26	U	1
di-n-butyl phthalate	NA	NA		0.75	U	1	0.76	U	1	0.75	U	1	0.69	U	1	0.78	U	1	0.74	U	1
di-n-octyl phthalate	NA	NA		0.26	U	1	0.26	U	1	0.26	U	1	0.24	U	1	0.27	U	1	0.26	U	1
fluoranthene	85	100		0.26	U	1	0.36		1	2.6		1	0.24	U	1	4.1		1	0.27		1
fluorene	30	100		0.26	U	1	0.26	U	1	0.26	U	1	0.24	U	1	0.27	U	1	0.26	U	1
hexachlorobenzene	0.33	0.33		0.26	U	1	0.26	U	1	0.26	U	1	0.24	U	1	0.27	U	1	0.26	U	1
hexachlorobutadiene	NA	NA		0.26	U	1	0.26	U	1	0.26	U	1	0.24	U	1	0.27	U	1	0.26	U	1
hexachlorocyclopentadiene	NA	NA		0.26	U	1	0.26	U	1	0.26	U	1	0.24	U	1	0.27	U	1	0.26	U	1
hexachloroethane	NA	NA		0.26	U	1	0.26	U	1	0.26	U	1	0.24	U	1	0.27	U	1	0.26	U	1
indeno(1,2,3-cd)pyrene	0.5	1.4		0.26	U	1	0.87		1	0.65		1	0.24	U	1	5.3		1	0.26	U	1
isophorone	NA	NA		0.26	U	1	0.26	U	1	0.26	U	1	0.24	U	1	0.27	U	1	0.26	U	1
naphthalene	12	100		0.26	U	1	0.26	U	1	0.26	U	1	0.24	U	1	0.27	U	1	0.26	U	1
nitrobenzene	0.08	1.8		0.26	U	1	0.26	U	1	0.26	U	1	0.24	U	1	0.27	U	1	0.26	U	1
n-nitrosodimethylamine	NA	NA		0.38	U	1	0.38	U	1	0.38	U	1	0.35	U	1	0.39	U	1	0.37	U	1
n-nitroso-di-n-propylamine	NA	NA		0.19	U	1	0.19	U	1	0.19	U	1	0.17	U	1	0.19	U	1	0.18	U	1
n-nitrosodiphenylamine	NA	NA		0.38	U	1	0.38	U	1	0.38	U	1	0.35	U	1	0.39	U	1	0.37	U	1
pentachlorophenol	0.8	1.3		0.38	U	1	0.38	U	1	0.38	U	1	0.35	U	1	0.39	U	1	0.37	U	1
phenanthrene	1.1	4.9		0.26	U	1	0.26	U	1	1.5		1	0.24	U	1	0.89		1	0.2	J	1
phenol	0.33	100		0.26	U	1	0.26	U	1	0.26	U	1	0.24	U	1	0.27	U	1	0.26	U	1
pyrene	64	100		0.26	U	1	0.33		1	2.3		1	0.24	U	1	3.9		1	0.23	J	1

value ≤ UU SCO
value > UU SCO
value > RRU SCO

Q = Laboratory Qualifier DL = Dilution NA = not available (addtional flags: B-in blank, D-diluted, E-estimated, J-approximate)

Table 2: SVOCs in Soil

The Green, Newburgh, NY
BCP ID: C336099

GALLAGHER BASSETT | TECHNICAL SERVICES

All data in mg/Kg (ppm)		Sample	2SB-27 5-7			2SB-27 10-12			Dup-20260309			2SB-28 Surf			2SB-28 0-2			2SB-28 7-9		
U= Not Detected ≥ value		Date	2026-03-09			2026-03-09			2026-03-09			2026-03-06			2026-03-06			2026-03-06		
SVOCs (8270)	**UU SCO**	**RRU SCO**	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL
1,1'-biphenyl	NA	NA	0.25	U	1	0.26	U	1	0.26	U	1	0.28	U	1	0.29	U	1	0.25	U	1
1,2,4,5-tetrachlorobenzene	NA	NA	0.25	U	1	0.26	U	1	0.26	U	1	0.28	U	1	0.29	U	1	0.25	U	1
1,2,4-trichlorobenzene	NA	NA	0.25	U	1	0.26	U	1	0.26	U	1	0.28	U	1	0.29	U	1	0.25	U	1
1,2-dichlorobenzene	NA	NA	0.25	U	1	0.26	U	1	0.26	U	1	0.28	U	1	0.29	U	1	0.25	U	1
1,2-diphenylhydrazine (azobenzene)	NA	NA	0.35	U	1	0.38	U	1	0.37	U	1	0.4	U	1	0.42	U	1	0.36	U	1
1,3-dichlorobenzene	NA	NA	0.25	U	1	0.26	U	1	0.26	U	1	0.28	U	1	0.29	U	1	0.25	U	1
1,4-dichlorobenzene	NA	NA	0.25	U	1	0.26	U	1	0.26	U	1	0.28	U	1	0.29	U	1	0.25	U	1
1,4-dioxane	0.1	13	0.069	U	1	0.074	U	1	0.075	U	1	0.081	U	1	0.083	U	1	0.073	U	1
2,2'-Oxybis(1-Chloropropane)	NA	NA	0.25	U	1	0.26	U	1	0.26	U	1	0.28	U	1	0.29	U	1	0.25	U	1
2,3,4,6-tetrachlorophenol	NA	NA	0.25	U	1	0.26	U	1	0.26	U	1	0.28	U	1	0.29	U	1	0.25	U	1
2,4,5-trichlorophenol	NA	NA	0.25	U	1	0.26	U	1	0.26	U	1	0.28	U	1	0.29	U	1	0.25	U	1
2,4,6-trichlorophenol	NA	NA	0.25	U	1	0.26	U	1	0.26	U	1	0.28	U	1	0.29	U	1	0.25	U	1
2,4-dichlorophenol	NA	NA	0.25	U	1	0.26	U	1	0.26	U	1	0.28	U	1	0.29	U	1	0.25	U	1
2,4-dimethylphenol	NA	NA	0.25	U	1	0.26	U	1	0.26	U	1	0.28	U	1	0.29	U	1	0.25	U	1
2,4-dinitrophenol	NA	NA	0.56	U	1	0.6	U	1	0.59	U	1	0.64	U	1	0.66	U	1	0.58	U	1
2,4-dinitrotoluene	NA	NA	0.25	U	1	0.26	U	1	0.26	U	1	0.28	U	1	0.29	U	1	0.25	U	1
2,6-dinitrotoluene	NA	NA	0.25	U	1	0.26	U	1	0.26	U	1	0.28	U	1	0.29	U	1	0.25	U	1
2-chloronaphthalene	NA	NA	0.25	U	1	0.26	U	1	0.26	U	1	0.28	U	1	0.29	U	1	0.25	U	1
2-chlorophenol	NA	NA	0.25	U	1	0.26	U	1	0.26	U	1	0.28	U	1	0.29	U	1	0.25	U	1
2-methylnaphthalene	NA	NA	0.19	J	1	0.26	U	1	0.26	U	1	0.28	U	1	0.29	U	1	0.25	U	1
2-Methylphenol (o-cresol)	0.33	100	0.25	U	1	0.26	U	1	0.26	U	1	0.28	U	1	0.29	U	1	0.25	U	1
2-nitroaniline	NA	NA	0.56	U	1	0.6	U	1	0.59	U	1	0.64	U	1	0.66	U	1	0.58	U	1
2-nitrophenol	NA	NA	0.25	U	1	0.26	U	1	0.26	U	1	0.28	U	1	0.29	U	1	0.25	U	1
3&4-Methylphenol (m&p-cresol)	0.33	100	0.35	U	1	0.38	U	1	0.37	U	1	0.4	U	1	0.42	U	1	0.36	U	1
3,3'-dichlorobenzidine	NA	NA	0.42	U	1	0.45	U	1	0.44	U	1	0.48	U	1	0.5	U	1	0.43	U	1
3-nitroaniline	NA	NA	0.56	U	1	0.6	U	1	0.59	U	1	0.64	U	1	0.66	U	1	0.58	U	1
4,6-dinitro-2-methylphenol	NA	NA	1	U	1	1.1	U	1	1.1	U	1	1.2	U	1	1.2	U	1	1	U	1
4-bromophenyl phenyl ether	NA	NA	0.35	U	1	0.38	U	1	0.37	U	1	0.4	U	1	0.42	U	1	0.36	U	1
4-chloro-3-methylphenol	NA	NA	0.25	U	1	0.26	U	1	0.26	U	1	0.28	U	1	0.29	U	1	0.25	U	1
4-chloroaniline	NA	NA	0.25	U	1	0.26	U	1	0.26	U	1	0.28	U	1	0.29	U	1	0.25	U	1
4-chlorophenyl phenyl ether	NA	NA	0.25	U	1	0.26	U	1	0.26	U	1	0.28	U	1	0.29	U	1	0.25	U	1
4-nitroaniline	NA	NA	0.56	U	1	0.6	U	1	0.59	U	1	0.64	U	1	0.66	U	1	0.58	U	1
4-nitrophenol	NA	NA	1	U	1	1.1	U	1	1.1	U	1	1.2	U	1	1.2	U	1	1	U	1
acenaphthene	20	100	0.51		1	0.26	U	1	0.26	U	1	0.28	U	1	0.29	U	1	0.25	U	1
acenaphthylene	100	100	0.25	U	1	0.26	U	1	0.26	U	1	0.28	U	1	0.29	U	1	0.25	U	1
acetophenone	NA	NA	0.25	U	1	0.26	U	1	0.26	U	1	0.28	U	1	0.29	U	1	0.25	U	1
aniline	0.04	8.1	0.35	U	1	0.38	U	1	0.37	U	1	0.4	U	1	0.42	U	1	0.36	U	1
anthracene	100	100	0.93		1	0.26	U	1	0.26	U	1	0.28	U	1	0.29	U	1	0.25	U	1
atrazine	NA	NA	0.25	U	1	0.26	U	1	0.26	U	1	0.28	U	1	0.29	U	1	0.25	U	1
benzaldehyde	NA	NA	0.25	U	1	0.26	U	1	0.26	U	1	0.28	U	1	0.29	U	1	0.25	U	1
benzidine	NA	NA	0.35	U	1	0.38	U	1	0.37	U	1	0.4	U	1	0.42	U	1	0.36	U	1
benzo(a)anthracene	1	1.4	1.3		1	0.26	U	1	0.26	U	1	0.34		1	0.29	U	1	0.25	U	1
benzo(a)pyrene	1	1	1.2		1	0.26	U	1	0.26	U	1	0.35		1	0.29	U	1	0.25	U	1
benzo(b)fluoranthene	1	1.4	1.5		1	0.26	U	1	0.26	U	1	0.48		1	0.29	U	1	0.25	U	1
benzo(g,h,i)perylene	0.64	4.9	0.64		1	0.26	U	1	0.26	U	1	0.21	J	1	0.29	U	1	0.25	U	1
benzo(k)fluoranthene	0.8	4.9	0.51		1	0.26	U	1	0.26	U	1	0.17	J	1	0.29	U	1	0.25	U	1
benzoic acid	NA	NA	0.7	U	1	0.76	U	1	0.73	U	1	0.81	U	1	0.83	U	1	0.72	U	1
benzyl alcohol	NA	NA	0.35	U	1	0.38	U	1	0.37	U	1	0.4	U	1	0.42	U	1	0.36	U	1
benzyl butyl phthalate	NA	NA	0.25	U	1	0.26	U	1	0.26	U	1	0.28	U	1	0.29	U	1	0.25	U	1
bis(2-chloroethoxy)methane	NA	NA	0.25	U	1	0.26	U	1	0.26	U	1	0.28	U	1	0.29	U	1	0.25	U	1
bis(2-chloroethyl)ether	NA	NA	0.35	U	1	0.38	U	1	0.37	U	1	0.4	U	1	0.42	U	1	0.36	U	1
bis(2-ethylhexyl)phthalate	NA	NA	0.25	U	1	0.26	U	1	0.26	U	1	0.28	U	1	0.29	U	1	0.25	U	1
caprolactam	NA	NA	0.25	U	1	0.26	U	1	0.26	U	1	0.28	U	1	0.29	U	1	0.25	U	1
carbazole	NA	NA	0.42		1	0.38	U	1	0.37	U	1	0.4	U	1	0.42	U	1	0.36	U	1
chrysene	1	4.9	1.2		1	0.26	U	1	0.26	U	1	0.34		1	0.29	U	1	0.25	U	1
dibenzo(a,h)anthracene	0.33	0.33	0.13	J	1	0.19	U	1	0.18	U	1	0.2	U	1	0.21	U	1	0.18	U	1
dibenzofuran	2.1	18	0.4		1	0.26	U	1	0.26	U	1	0.28	U	1	0.29	U	1	0.25	U	1
diethyl phthalate	NA	NA	0.25	U	1	0.26	U	1	0.26	U	1	0.28	U	1	0.29	U	1	0.25	U	1
dimethyl phthalate	NA	NA	0.25	U	1	0.26	U	1	0.26	U	1	0.28	U	1	0.29	U	1	0.25	U	1
di-n-butyl phthalate	NA	NA	0.7	U	1	0.76	U	1	0.73	U	1	0.81	U	1	0.83	U	1	0.72	U	1
di-n-octyl phthalate	NA	NA	0.25	U	1	0.26	U	1	0.26	U	1	0.28	U	1	0.29	U	1	0.25	U	1
fluoranthene	85	100	3.1		1	0.26	U	1	0.26	U	1	0.62		1	0.29	U	1	0.25	U	1
fluorene	30	100	0.45		1	0.26	U	1	0.26	U	1	0.28	U	1	0.29	U	1	0.25	U	1
hexachlorobenzene	0.33	0.33	0.25	U	1	0.26	U	1	0.26	U	1	0.28	U	1	0.29	U	1	0.25	U	1
hexachlorobutadiene	NA	NA	0.25	U	1	0.26	U	1	0.26	U	1	0.28	U	1	0.29	U	1	0.25	U	1
hexachlorocyclopentadiene	NA	NA	0.25	U	1	0.26	U	1	0.26	U	1	0.28	U	1	0.29	U	1	0.25	U	1
hexachloroethane	NA	NA	0.25	U	1	0.26	U	1	0.26	U	1	0.28	U	1	0.29	U	1	0.25	U	1
indeno(1,2,3-cd)pyrene	0.5	1.4	0.68		1	0.26	U	1	0.26	U	1	0.22	J	1	0.29	U	1	0.25	U	1
isophorone	NA	NA	0.25	U	1	0.26	U	1	0.26	U	1	0.28	U	1	0.29	U	1	0.25	U	1
naphthalene	12	100	0.33		1	0.26	U	1	0.26	U	1	0.28	U	1	0.29	U	1	0.25	U	1
nitrobenzene	0.08	1.8	0.25	U	1	0.26	U	1	0.26	U	1	0.28	U	1	0.29	U	1	0.25	U	1
n-nitrosodimethylamine	NA	NA	0.35	U	1	0.38	U	1	0.37	U	1	0.4	U	1	0.42	U	1	0.36	U	1
n-nitroso-di-n-propylamine	NA	NA	0.18	U	1	0.19	U	1	0.18	U	1	0.2	U	1	0.21	U	1	0.18	U	1
n-nitrosodiphenylamine	NA	NA	0.35	U	1	0.38	U	1	0.37	U	1	0.4	U	1	0.42	U	1	0.36	U	1
pentachlorophenol	0.8	1.3	0.35	U	1	0.38	U	1	0.37	U	1	0.4	U	1	0.42	U	1	0.36	U	1
phenanthrene	1.1	4.9	3.9		1	0.26	U	1	0.26	U	1	0.32		1	0.29	U	1	0.25	U	1
phenol	0.33	100	0.25	U	1	0.26	U	1	0.26	U	1	0.28	U	1	0.29	U	1	0.25	U	1
pyrene	64	100	2.7		1	0.26	U	1	0.26	U	1	0.56		1	0.29	U	1	0.25	U	1

value ≤ UU SCO
value > UU SCO
value > RRU SCO

Q = Laboratory Qualifier DL = Dilution NA = not available (addtional flags: B-in blank, D-diluted, E-estimated, J-approximate)

Table 2: SVOCs in Soil

The Green, Newburgh, NY
BCP ID: C336099

GALLAGHER BASSETT | TECHNICAL SERVICES

All data in mg/Kg (ppm)			Sample	2SB-29 Surf			2SB-29 0-2			2SB-28 8-10		
U= Not Detected ≥ value			Date	2026-03-06			2026-03-06			2026-03-06		
SVOCs (8270)	**UU SCO**	**RRU SCO**		Result	Q	DL	Result	Q	DL	Result	Q	DL
1,1'-biphenyl	NA	NA		0.34	U	1	0.26	U	1	0.25	U	1
1,2,4,5-tetrachlorobenzene	NA	NA		0.34	U	1	0.26	U	1	0.25	U	1
1,2,4-trichlorobenzene	NA	NA		0.34	U	1	0.26	U	1	0.25	U	1
1,2-dichlorobenzene	NA	NA		0.34	U	1	0.26	U	1	0.25	U	1
1,2-diphenylhydrazine (azobenzene)	NA	NA		0.49	U	1	0.37	U	1	0.36	U	1
1,3-dichlorobenzene	NA	NA		0.34	U	1	0.26	U	1	0.25	U	1
1,4-dichlorobenzene	NA	NA		0.34	U	1	0.26	U	1	0.25	U	1
1,4-dioxane	0.1	13		0.098	U	1	0.074	U	1	0.073	U	1
2,2'-Oxybis(1-Chloropropane)	NA	NA		0.34	U	1	0.26	U	1	0.25	U	1
2,3,4,6-tetrachlorophenol	NA	NA		0.34	U	1	0.26	U	1	0.25	U	1
2,4,5-trichlorophenol	NA	NA		0.34	U	1	0.26	U	1	0.25	U	1
2,4,6-trichlorophenol	NA	NA		0.34	U	1	0.26	U	1	0.25	U	1
2,4-dichlorophenol	NA	NA		0.34	U	1	0.26	U	1	0.25	U	1
2,4-dimethylphenol	NA	NA		0.34	U	1	0.26	U	1	0.25	U	1
2,4-dinitrophenol	NA	NA		0.78	U	1	0.59	U	1	0.58	U	1
2,4-dinitrotoluene	NA	NA		0.34	U	1	0.26	U	1	0.25	U	1
2,6-dinitrotoluene	NA	NA		0.34	U	1	0.26	U	1	0.25	U	1
2-chloronaphthalene	NA	NA		0.34	U	1	0.26	U	1	0.25	U	1
2-chlorophenol	NA	NA		0.34	U	1	0.26	U	1	0.25	U	1
2-methylnaphthalene	NA	NA		0.34	U	1	0.26	U	1	0.25	U	1
2-Methylphenol (o-cresol)	0.33	100		0.34	U	1	0.26	U	1	0.25	U	1
2-nitroaniline	NA	NA		0.78	U	1	0.59	U	1	0.58	U	1
2-nitrophenol	NA	NA		0.34	U	1	0.26	U	1	0.25	U	1
3&4-Methylphenol (m&p-cresol)	0.33	100		0.49	U	1	0.37	U	1	0.36	U	1
3,3'-dichlorobenzidine	NA	NA		0.58	U	1	0.44	U	1	0.43	U	1
3-nitroaniline	NA	NA		0.78	U	1	0.59	U	1	0.58	U	1
4,6-dinitro-2-methylphenol	NA	NA		1.4	U	1	1.1	U	1	1	U	1
4-bromophenyl phenyl ether	NA	NA		0.49	U	1	0.37	U	1	0.36	U	1
4-chloro-3-methylphenol	NA	NA		0.34	U	1	0.26	U	1	0.25	U	1
4-chloroaniline	NA	NA		0.34	U	1	0.26	U	1	0.25	U	1
4-chlorophenyl phenyl ether	NA	NA		0.34	U	1	0.26	U	1	0.25	U	1
4-nitroaniline	NA	NA		0.78	U	1	0.59	U	1	0.58	U	1
4-nitrophenol	NA	NA		1.4	U	1	1.1	U	1	1	U	1
acenaphthene	20	100		0.34	U	1	0.26	U	1	0.25	U	1
acenaphthylene	100	100		0.34	U	1	0.26	U	1	0.25	U	1
acetophenone	NA	NA		0.34	U	1	0.26	U	1	0.25	U	1
aniline	0.04	8.1		0.49	U	1	0.37	U	1	0.36	U	1
anthracene	100	100		0.34	U	1	0.26	U	1	0.25	U	1
atrazine	NA	NA		0.34	U	1	0.26	U	1	0.25	U	1
benzaldehyde	NA	NA		0.34	U	1	0.26	U	1	0.25	U	1
benzidine	NA	NA		0.49	U	1	0.37	U	1	0.36	U	1
benzo(a)anthracene	1	1.4		0.33	J	1	0.26	U	1	0.25	U	1
benzo(a)pyrene	1	1		0.42		1	0.26	U	1	0.25	U	1
benzo(b)fluoranthene	1	1.4		0.65		1	0.26	U	1	0.25	U	1
benzo(g,h,i)perylene	0.64	4.9		0.28	J	1	0.26	U	1	0.25	U	1
benzo(k)fluoranthene	0.8	4.9		0.24	J	1	0.26	U	1	0.25	U	1
benzoic acid	NA	NA		0.97	U	1	0.74	U	1	0.72	U	1
benzyl alcohol	NA	NA		0.49	U	1	0.37	U	1	0.36	U	1
benzyl butyl phthalate	NA	NA		0.34	U	1	0.26	U	1	0.25	U	1
bis(2-chloroethoxy)methane	NA	NA		0.34	U	1	0.26	U	1	0.25	U	1
bis(2-chloroethyl)ether	NA	NA		0.49	U	1	0.37	U	1	0.36	U	1
bis(2-ethylhexyl)phthalate	NA	NA		0.34	U	1	0.26	U	1	0.25	U	1
caprolactam	NA	NA		0.34	U	1	0.26	U	1	0.25	U	1
carbazole	NA	NA		0.49	U	1	0.37	U	1	0.36	U	1
chrysene	1	4.9		0.46		1	0.26	U	1	0.25	U	1
dibenzo(a,h)anthracene	0.33	0.33		0.24	U	1	0.19	U	1	0.18	U	1
dibenzofuran	2.1	18		0.34	U	1	0.26	U	1	0.25	U	1
diethyl phthalate	NA	NA		0.34	U	1	0.26	U	1	0.25	U	1
dimethyl phthalate	NA	NA		0.34	U	1	0.26	U	1	0.25	U	1
di-n-butyl phthalate	NA	NA		0.97	U	1	0.74	U	1	0.72	U	1
di-n-octyl phthalate	NA	NA		0.34	U	1	0.26	U	1	0.25	U	1
fluoranthene	85	100		0.72		1	0.13	J	1	0.25	U	1
fluorene	30	100		0.34	U	1	0.26	U	1	0.25	U	1
hexachlorobenzene	0.33	0.33		0.33	U	1	0.26	U	1	0.25	U	1
hexachlorobutadiene	NA	NA		0.34	U	1	0.26	U	1	0.25	U	1
hexachlorocyclopentadiene	NA	NA		0.34	U	1	0.26	U	1	0.25	U	1
hexachloroethane	NA	NA		0.34	U	1	0.26	U	1	0.25	U	1
indeno(1,2,3-cd)pyrene	0.5	1.4		0.3	J	1	0.26	U	1	0.25	U	1
isophorone	NA	NA		0.34	U	1	0.26	U	1	0.25	U	1
naphthalene	12	100		0.34	U	1	0.26	U	1	0.25	U	1
nitrobenzene	0.08	1.8		0.34	U	1	0.26	U	1	0.25	U	1
n-nitrosodimethylamine	NA	NA		0.49	U	1	0.37	U	1	0.36	U	1
n-nitroso-di-n-propylamine	NA	NA		0.24	U	1	0.19	U	1	0.18	U	1
n-nitrosodiphenylamine	NA	NA		0.49	U	1	0.37	U	1	0.36	U	1
pentachlorophenol	0.8	1.3		0.49	U	1	0.37	U	1	0.36	U	1
phenanthrene	1.1	4.9		0.38		1	0.26	U	1	0.25	U	1
phenol	0.33	100		0.34	U	1	0.26	U	1	0.25	U	1
pyrene	64	100		0.62		1	0.26	U	1	0.25	U	1

value ≤ UU SCO
value > UU SCO
value > RRU SCO

Q = Laboratory Qualifier DL = Dilution NA = not available (addtional flags: B-in blank, D-diluted, E-estimated, J-approximate)

Table 3: VOC and SVOC TICs in Soil

The Green, Newburgh, NY
BCP ID: C336099

GALLAGHER BASSETT | TECHNICAL SERVICES

		Sample	2SB-01 SURF		2SB-01 5-7.5		DUP-20251001		2SB-01 7.5-10		2SB-02 SURF		2SB-02 5-7.5		2SB-02 7.5-10		2SB-03 SURF		2SB-03 10-12.5		2SB-03 12.5-15		2SB-04 SURF		2SB-04 0-5		2SB-04 10-15		2SB-05 SURF		2SB-05 5-7		2SB-06 SURF	
All data in mg/Kg (ppm)		Date	2025-10-01		2025-10-01		2025-10-01		2025-10-01		2025-10-01		2025-10-01		2025-10-01		2025-10-01		2025-10-01		2025-10-01		2025-10-01		2025-10-01		2025-10-01		2025-10-01		2025-10-01		2025-10-01	
VOCs (8260)	**UU SCO**	**RRU SCO**	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q
1,2,3-Trimethylbenzene	NA	NA																																
1-Butene	NA	NA																																
1-Propene, 2-methyl-	NA	NA																																
2-Benzothiophene	NA	NA																																
2-Methylindene	NA	NA																																
Benzene, 1-ethynyl-4-methyl-	NA	NA																																
Biphenylene	NA	NA																																
Borane-methyl sulfide complex	NA	NA																																
Dimethyl sulfide	NA	NA																																
Naphthalene	NA	NA																																
Naphthalene, 1,4-dimethyl-	NA	NA																																
Naphthalene, 1,7-dimethyl-	NA	NA																																
Naphthalene, 1-methyl-	NA	NA																																
Naphthalene, 2,7-dimethyl-	NA	NA																																
Naphthalene, 2-ethenyl-	NA	NA																																
Naphthalene, 2-methyl-	NA	NA																																
Undecane	NA	NA																																
unknown	NA	NA																																
SVOCs (8260)																																		
.beta.-Sitosterol	NA	NA																															2.2	JN
.gamma.-Sitosterol	NA	NA																											1.7	JN				
1,19-Eicosadiene	NA	NA																																
1,2:4,5-Dibenzopyrene	NA	NA																																
1,2:4,5-Dibenzopyrene Isomer	NA	NA																																
1,2:7,8-Dibenzophenanthrene	NA	NA																																
1,2:7,8-Dibenzophenanthrene Isomer	NA	NA																																
10-Methylnonadecane	NA	NA																																
11H-Benzo[a]fluorene	NA	NA																																
11H-Indeno[2,1-a]phenanthrene	NA	NA																																
13-Docosen-1-ol, (Z)-	NA	NA																																
13-Octadecenal	NA	NA																																
17-Octadecenal	NA	NA																																
17-Octadecenal Isomer	NA	NA																																
1-Docosene	NA	NA																											0.47	JN			0.69	JN
1-Docosene Isomer	NA	NA																											0.56	JN				
1-Heneicosanol	NA	NA																																
1-Heptacosanol	NA	NA																																
1-Hexadecene	NA	NA																											0.4	JN			0.56	JN
1-Nonadecene	NA	NA		1.4	JN	0.51	JN	1.3	JN			1.7	JN					1.5	JN	1.4	JN				0.43	JN							
1-Nonadecene Isomer	NA	NA																		1.4	JN												
1-Octacosanol	NA	NA																																
1-Octadecene	NA	NA				0.43	JN																		0.32	JN						0.65	JN
1-Tridecene	NA	NA																																
2(1H)Naphthalenone, 3,5,6,7,8,8a-h	NA	NA																																
2-Pentanone, 4-hydroxy-4-methyl-	NA	NA	1.4	JNA	1.5	JNA	1.6	JNA	1.6	JNA	1.8	JNA	1.6	JNA	2	JNA	1.7	JNA	1.5	JNA	1.5	JNA	2	JNA	1.9	JNA	1.5	JNA	2.2	JNA	1.1	JNA	2.3	JNA
2-Phenylnaphthalene	NA	NA																																
2-Tritriacontanone	NA	NA																																
3,4:8,9-Dibenzopyrene	NA	NA																																
3-Eicosene, (E)-	NA	NA																																
3-Octadecene, (E)-	NA	NA																																
4H-Cyclopenta[def]phenanthrene	NA	NA																																
5-Eicosene, (E)-	NA	NA		1.4	JN										1.7	JN															0.72	JN		
5-Octadecene, (E)-	NA	NA						1.3	JN						1.7	JN							1.3	JN										
6-Octadecenoic acid, (Z)-	NA	NA																																
7-Hexadecene, (Z)-	NA	NA																																
9,10-Anthracenedione	NA	NA																							0.34	JN								
9-Eicosene, (E)-	NA	NA										1.5	JN					1.4	JN														
9H-Fluoren-9-one	NA	NA																																
9-Octadecene, (E)-	NA	NA									1.2	JN					1.2	JN																
9-Octadecenoic acid, (E)-	NA	NA																																
Anthracene, 1-methyl-	NA	NA																																
Anthracene, 2-methyl-	NA	NA																																
Benz[e]acephenanthrylene	NA	NA																																
Benzenamine, 4-(1-methyl-1-phenyle	NA	NA																																
Benzenesulfonamide, 4-methyl-	NA	NA																																
Benzo[a]pyrene	NA	NA																																
Benzo[a]naphthacene	NA	NA																																
Benzo[b]triphenylene	NA	NA																																
Benzo[b]triphenylene Isomer	NA	NA																																
Benzo[e]pyrene	NA	NA																																
Benzo[ghi]perylene	NA	NA																																
Benzo[j]fluoranthene	NA	NA																																
Benzo[k]fluoranthene	NA	NA																							0.35	JN								
Benzoic acid, 4-ethoxy-, ethyl est	NA	NA	1.8	JNC	1.6	JNC	0.9	JNC	1.5	JNC	1.4	JNC	1.7	JNC	1.8	JNC	1.4	JNC	1.6	JNC	1.6	JNC	1.6	JNC	1.6	JNC	0.63	JNC	0.88	JNC	1.4	JNC	1.3	JNC
Boroxin, ethyldiphenyl-	NA	NA																																
cis-9-Hexadecenoic acid	NA	NA																																
cis-Vaccenic acid	NA	NA																																
Coronene	NA	NA																																
Cyclopenta(def)phenanthrenone	NA	NA																																
Cyclotetracosane	NA	NA																																
Cyclotetracosane Isomer	NA	NA																																
Dibenz[a,e]aceanthrylene	NA	NA																																
Dibenzo[def,mno]chrysene	NA	NA																																
Dibenzofuran, 4-methyl-	NA	NA																																
dl-.alpha.-Tocopherol	NA	NA																															0.44	JN
E-15-Heptadecenal	NA	NA																							1.3	JN					0.66	JN		
Eicosane	NA	NA																																
Fluoranthene, 2-methyl-	NA	NA																																
Fluorene	NA	NA																																
Furan, 2,5-dimethyl-	NA	NA																																
Heneicosane	NA	NA																					0.86	JN	0.41	JN								
Hentriacontane	NA	NA																																
Heptacosane	NA	NA																																
Heptacosane, 1-chloro-	NA	NA																																
Heptadecane, 9-octyl-	NA	NA																																
Heptane, 2,5-methyl-	NA	NA																																
Hexadecane	NA	NA																																
Hexadecenoic acid, Z-11-	NA	NA																																
n-Hexadecanoic acid	NA	NA									1.6	JN													0.61	JN			0.88	JN			0.91	JN
n-Nonadecanol-1	NA	NA	2.1	JN																														
Naphthalene	NA	NA																																
Naphthalene, 1,4,6-trimethyl-	NA	NA																																
Naphthalene, 1,6-dimethyl-	NA	NA																																
Naphthalene, 1,7-dimethyl-	NA	NA																																
Naphthalene, 2,3,6-trimethyl-	NA	NA																																
Naphthalene, 2,3-dimethyl-	NA	NA																																
Naphthalene, 2,6-dimethyl-	NA	NA																																
Naphthalene, 2-phenyl-	NA	NA																																
Naphtho[2,1-b]thiophene	NA	NA																																
Nonacosane	NA	NA																																
Nonadecane	NA	NA																																
Nonadecane, 9-methyl-	NA	NA															1.2	JN																
Octacosane	NA	NA																																
Octadec-9-enoic acid	NA	NA																																
Octadecanal	NA	NA															0.86	JN																
Octadecanal Isomer	NA	NA																																
Octadecane	NA	NA																																
Octadecanoic acid	NA	NA									0.82	JN													0.46	JN								
Oxirane, heptadecyl-	NA	NA																																
Oxirane, hexadecyl-	NA	NA																																
Oxirane, hexadecyl- Isomer	NA	NA																																
Perylene	NA	NA									1.2	JN											0.33	JN	0.81	JN								
Perylene Isomer	NA	NA																																
Phenanthrene, 1-methyl-	NA	NA																																
Phenanthrene, 2-methyl-	NA	NA																																
Phenanthrene, 2-methyl- Isomer	NA	NA																																
Phenanthrene, 3,6-dimethyl-	NA	NA																																
Stigmast-4-en-3-one	NA	NA																											0.9	JNA			0.72	JNA
Sulfurous acid, 2-propyl tetradecy	NA	NA																																
Sulfurous acid, butyl dodecyl este	NA	NA																																
Tetracosane	NA	NA															0.36	JN											0.82	JN		0.87	JN
Tetracosane	NA	NA																																
Tetradecanal	NA	NA																																
Tetratetracontane	NA	NA																																
Trichloroacetic acid, tetradecyl e	NA	NA	1.3	JN																														
Tridecanoic acid	NA	NA																																
unknown hydrocarbon	NA	NA	0.34	J							0.78	J	0.32	J			0.52	J					0.32	J	0.34	J			0.42	J			0.53	J
Z-7-Tetradecenoic acid	NA	NA																																
TOTAL VOC and SVOC TICs (suspect extraction artifacts 2-pentanone, 4-hydroxy-4-methyl- and benzoic acid, 4-ethoxy-, ethyl est are excluded from total)			3.74		2.80		0.94		2.60		5.60		3.52		3.40		4.14		2.90		2.80		2.81		4.62		0.75		6.15		1.38		7.57	

Analyte Detected
Detected TICs

Q = Laboratory Qualifier (J-estimated, N-value based on response of nearest internal, A and C-suspect artifact of extraction)

Table 3: VOC and SVOC TICs in Soil

The Green, Newburgh, NY
BCP ID: C336099

GALLAGHER BASSETT | TECHNICAL SERVICES

			Sample	2SB-06 0-2.5		2SB-06 7.5-10		2SB-07 SURF		2SB-07 10-15		2SB-08 SURF		2SB-08 8-10		2SB-08 10-12		2SB-09 SURF		2SB-09 10-12.5		2SB-09 12.5-15		2SB-10 SURF		2SB-10 5-7		2SB-10 10-12		2SB-11 SURF		2SB-11 0-5		2SB-11 13-15	
All data in mg/Kg (ppm)			Date	2025-10-01		2025-10-01		2025-10-02		2025-10-02		2025-10-02		2025-10-02		2025-10-02		2025-10-02		2025-10-02		2025-10-02		2025-10-02		2025-10-02		2025-10-02		2025-10-02		2025-10-02		2025-10-02	
VOCs (8260)	**UU SCO**	**RRU SCO**		Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q
1,2,3-Trimethylbenzene	NA	NA																																	
1-Butene	NA	NA																																	
1-Propene, 2-methyl-	NA	NA														0.0044	JN																		
2-Benzothiophene	NA	NA																																	
2-Methylindene	NA	NA																																	
Benzene, 1-ethynyl-4-methyl-	NA	NA																																	
Biphenylene	NA	NA																																	
Borane-methyl sulfide complex	NA	NA																																	
Dimethyl sulfide	NA	NA																																	
Naphthalene	NA	NA																																	
Naphthalene, 1,4-dimethyl-	NA	NA																																	
Naphthalene, 1,7-dimethyl-	NA	NA																																	
Naphthalene, 1-methyl-	NA	NA																																	
Naphthalene, 2,7-dimethyl-	NA	NA																																	
Naphthalene, 2-ethenyl-	NA	NA																																	
Naphthalene, 2-methyl-	NA	NA																																	
Undecane	NA	NA																																	
unknown	NA	NA																																	
SVOCs (8260)																																			
.beta.-Sitosterol	NA	NA		0.35	JN																														
.gamma.-Sitosterol	NA	NA						0.6	JN			1.4	JN																	0.48	JN				
1,19-Eicosadiene	NA	NA																																	
1,2:4,5-Dibenzopyrene	NA	NA																						0.65	JN										
1,2:4,5-Dibenzopyrene Isomer	NA	NA																																	
1,2:7,8-Dibenzophenanthrene	NA	NA																																	
1,2:7,8-Dibenzophenanthrene Isomer	NA	NA																																	
10-Methylnonadecane	NA	NA																																	
11H-Benzo[a]fluorene	NA	NA																																	
11H-Indeno[2,1-a]phenanthrene	NA	NA																																	
13-Docosen-1-ol, (Z)-	NA	NA																																	
13-Octadecenal	NA	NA																												0.36	JN				
17-Octadecenal	NA	NA																																	
17-Octadecenal Isomer	NA	NA																																	
1-Docosene	NA	NA												0.73	JN	0.71	JN			0.67	JN					0.68	JN	0.7	JN	0.63	JN	0.74	JN		
1-Docosene Isomer	NA	NA																																	
1-Heneicosanol	NA	NA																																	
1-Heptacosanol	NA	NA																																	
1-Hexadecene	NA	NA																																	
1-Nonadecene	NA	NA		0.56	JN	0.58	JN											0.64	JN			0.7	JN											0.45	JN
1-Nonadecene Isomer	NA	NA																																	
1-Octacosanol	NA	NA																																	
1-Octadecene	NA	NA				0.5	JN			0.63	JN					0.66	JN	0.8	JN			0.63	JN							0.73	JN			0.42	JN
1-Tridecene	NA	NA										0.73	JN																						
2(1H)Naphthalenone, 3,5,6,7,8,8a-h	NA	NA																																	
2-Pentanone, 4-hydroxy-4-methyl-	NA	NA		1.5	JNA	1.5	JNA	2.4	JNA	2.5	JNA	2.5	JNA	1.9	JNA	2.1	JNA	2.5	JNA	1.7	JNA	1.7	JNA	2	JNA	1.8	JNA	1.6	JNA	2.1	JNA	1.7	JNA	6.7	JNA
2-Phenylnaphthalene	NA	NA																						0.6	JN										
2-Tritriacontanone	NA	NA																																	
3,4:8,9-Dibenzopyrene	NA	NA																																	
3-Eicosene, (E)-	NA	NA																																	
3-Octadecene, (E)-	NA	NA																										0.67	JN						
4H-Cyclopenta[def]phenanthrene	NA	NA										0.83	JN											0.83	JN										
5-Eicosene, (E)-	NA	NA																																	
5-Octadecene, (E)-	NA	NA																																	
6-Octadecenoic acid, (Z)-	NA	NA																																	
7-Hexadecene, (Z)-	NA	NA																																	
9,10-Anthracenedione	NA	NA																						0.64	JN										
9-Eicosene, (E)-	NA	NA																																	
9H-Fluoren-9-one	NA	NA																						0.56	JN										
9-Octadecene, (E)-	NA	NA																																	
9-Octadecenoic acid, (E)-	NA	NA																																	
Anthracene, 1-methyl-	NA	NA						0.43	JN																										
Anthracene, 2-methyl-	NA	NA																						0.91	JN										
Benz[e]acephenanthrylene	NA	NA																																	
Benzenamine, 4-(1-methyl-1-phenyle	NA	NA																																	
Benzenesulfonamide, 4-methyl-	NA	NA																																	
Benzo[a]pyrene	NA	NA																																	
Benzo[a]naphthacene	NA	NA																																	
Benzo[b]triphenylene	NA	NA						0.32	JN															1	JN										
Benzo[b]triphenylene Isomer	NA	NA																																	
Benzo[e]pyrene	NA	NA																0.57	JN					2.4	JN										
Benzo[ghi]perylene	NA	NA																																	
Benzo[j]fluoranthene	NA	NA						0.44	JN																										
Benzo[k]fluoranthene	NA	NA																						0.8	JN										
Benzoic acid, 4-ethoxy-, ethyl est	NA	NA		1.2	JNC	0.96	JNC	0.75	JNC	0.87	JNC	0.84	JNC	1.2	JNC	1.3	JNC	1.6	JNC	1.1	JNC	1.2	JNC			1.3	JNC	1.2	JNC	1.3	JNC	1.3	JNC	0.79	JNC
Boroxin, ethyldiphenyl-	NA	NA																																	
cis-9-Hexadecenoic acid	NA	NA																																	
cis-Vaccenic acid	NA	NA																																	
Coronene	NA	NA																						0.73	JN										
Cyclopenta(def)phenanthrenone	NA	NA																						0.72	JN										
Cyclotetracosane	NA	NA																																	
Cyclotetracosane Isomer	NA	NA																																	
Dibenz[a,e]aceanthrylene	NA	NA																						1	JN										
Dibenzo[def,mno]chrysene	NA	NA																																	
Dibenzofuran, 4-methyl-	NA	NA																																	
dl-.alpha.-Tocopherol	NA	NA																																	
E-15-Heptadecenal	NA	NA		0.46	JN									0.65	JN					0.58	JN					0.64	JN					0.67	JN		
Eicosane	NA	NA																												0.4	JN				
Fluoranthene, 2-methyl-	NA	NA																																	
Fluorene	NA	NA																																	
Furan, 2,5-dimethyl-	NA	NA																																	
Heneicosane	NA	NA						0.47	JN																										
Hentriacontane	NA	NA																												1.2	JN				
Heptacosane	NA	NA																																	
Heptacosane, 1-chloro-	NA	NA																																	
Heptadecane, 9-octyl-	NA	NA										0.46	JN																						
Heptane, 2,5-dimethyl-	NA	NA																																	
Hexadecane	NA	NA																																	
Hexadecenoic acid, Z-11-	NA	NA																																	
n-Hexadecanoic acid	NA	NA						0.64	JN	0.3	JN	1.8	JN					1.3	JN											0.98	JN				
n-Nonadecanol-1	NA	NA																																	
Naphthalene	NA	NA																																	
Naphthalene, 1,4,6-trimethyl-	NA	NA																																	
Naphthalene, 1,6-dimethyl-	NA	NA																																	
Naphthalene, 1,7-dimethyl-	NA	NA																																	
Naphthalene, 2,3,6-trimethyl-	NA	NA																																	
Naphthalene, 2,3-dimethyl-	NA	NA																																	
Naphthalene, 2,6-dimethyl-	NA	NA																																	
Naphthalene, 2-phenyl-	NA	NA																																	
Naphtho[2,1-b]thiophene	NA	NA																																	
Nonacosane	NA	NA																1.1	JN																
Nonadecane	NA	NA																																	
Nonadecane, 9-methyl-	NA	NA																																	
Octacosane	NA	NA																																	
Octadec-9-enoic acid	NA	NA																																	
Octadecanal	NA	NA																																	
Octadecanal Isomer	NA	NA																																	
Octadecane	NA	NA																																	
Octadecanoic acid	NA	NA										0.57	JN																						
Oxirane, heptadecyl-	NA	NA																																	
Oxirane, hexadecyl-	NA	NA																												0.35	JN				
Oxirane, hexadecyl- Isomer	NA	NA																												0.44	JN				
Perylene	NA	NA						0.87	JN			0.86	JN																						
Perylene Isomer	NA	NA										1.4	JN																						
Phenanthrene, 1-methyl-	NA	NA																						0.72	JN										
Phenanthrene, 2-methyl-	NA	NA										0.77	JN											0.54	JN										
Phenanthrene, 2-methyl- Isomer	NA	NA																																	
Phenanthrene, 3,6-dimethyl-	NA	NA																																	
Stigmast-4-en-3-one	NA	NA																0.53	JNA											0.84	JNA				
Sulfurous acid, 2-propyl tetradecy	NA	NA						0.34	JN																										
Sulfurous acid, butyl dodecyl este	NA	NA																																	
Tetracosane	NA	NA																																	
Tetracosane	NA	NA										1.2	JN																						
Tetradecanal	NA	NA																																	
Tetratetracontane	NA	NA																																	
Trichloroacetic acid, tetradecyl e	NA	NA																																	
Tridecanoic acid	NA	NA																																	
unknown hydrocarbon	NA	NA										4.3	J																	0.33	J				
Z-7-Tetradecenoic acid	NA	NA																																	
TOTAL VOC and SVOC TICs (suspect extraction artifacts 2-pentanone, 4-hydroxy-4-methyl- and benzoic acid, 4-ethoxy-, ethyl est are excluded from total)				1.37		1.08		4.11		0.93		14.3		1.38		1.37		4.94		1.25		1.33		12.1		1.32		1.37		6.74		1.41		0.87	

Analyte Detected
Detected TICs

Q = Laboratory Qualifier (J-estimated, N-value based on response of nearest internal, A and C-suspect artifact of extraction)

Table 3: VOC and SVOC TICs in Soil

The Green, Newburgh, NY
BCP ID: C336099

GALLAGHER BASSETT | TECHNICAL SERVICES

		Sample	2SB-12 SURF		2SB-12 4-6		2SB-12 8-10		2SB-13 SURF		2SB-13 0-5		2SB-13 8-10		2SB-14 SURF		2SB-14 0-5		2SB-14 10-12.5		2SB-15 SURF		2SB-15 0-5		DUP-20251003		2SB-15 10-12		2SB-16 SURF		2SB-16 10-12		2SB-17 SURF	
All data in mg/Kg (ppm)		Date	2025-10-02		2025-10-02		2025-10-02		2025-10-02		2025-10-02		2025-10-02		2025-10-02		2025-10-02		2025-10-02		2025-10-03		2025-10-03		2025-10-03		2025-10-03		2025-10-03		2025-10-03		2025-10-03	
VOCs (8260)	**UU SCO**	**RRU SCO**	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q
1,2,3-Trimethylbenzene	NA	NA																																
1-Butene	NA	NA																																
1-Propene, 2-methyl-	NA	NA																																
2-Benzothiophene	NA	NA																																
2-Methylindene	NA	NA																																
Benzene, 1-ethynyl-4-methyl-	NA	NA																																
Biphenylene	NA	NA																																
Borane-methyl sulfide complex	NA	NA																																
Dimethyl sulfide	NA	NA																													0.044	JN		
Naphthalene	NA	NA									0.0029	Q																						
Naphthalene, 1,4-dimethyl-	NA	NA																																
Naphthalene, 1,7-dimethyl-	NA	NA																																
Naphthalene, 1-methyl-	NA	NA																																
Naphthalene, 2,7-dimethyl-	NA	NA																																
Naphthalene, 2-ethenyl-	NA	NA																																
Naphthalene, 2-methyl-	NA	NA																																
Undecane	NA	NA			0.033	JN																												
unknown	NA	NA																																
SVOCs (8260)																																		
.beta.-Sitosterol	NA	NA																			2	JN												
.gamma.-Sitosterol	NA	NA																																
1,19-Eicosadiene	NA	NA	0.43	JN											1.1	JN																		
1,2:4,5-Dibenzopyrene	NA	NA																																
1,2:4,5-Dibenzopyrene Isomer	NA	NA																																
1,2:7,8-Dibenzophenanthrene	NA	NA																																
1,2:7,8-Dibenzophenanthrene Isomer	NA	NA																																
10-Methylnonadecane	NA	NA																																
11H-Benzo[a]fluorene	NA	NA									0.38	JN																						
11H-Indeno[2,1-a]phenanthrene	NA	NA																																
13-Docosen-1-ol, (Z)-	NA	NA																																
13-Octadecenal	NA	NA																																
17-Octadecenal	NA	NA																																
17-Octadecenal Isomer	NA	NA																																
1-Docosene	NA	NA			0.36	JN	0.37	JN					0.43	JN	0.56	JN	0.34	JN	0.34	JN	0.93	JN							1.1	JN				
1-Docosene Isomer	NA	NA																																
1-Heneicosanol	NA	NA																																
1-Heptacosanol	NA	NA																																
1-Hexadecene	NA	NA			0.4	JN																	1.2	JN										
1-Nonadecene	NA	NA											0.41	JN									1.3	JN			1.2	JN			0.83	JN		
1-Nonadecene Isomer	NA	NA																																
1-Octacosanol	NA	NA													0.59	JN																		
1-Octadecene	NA	NA					0.36	JN	0.37	JN									0.3	JN														
1-Tridecene	NA	NA																																
2(1H)Naphthalenone, 3,5,6,7,8,8a-h	NA	NA																																
2-Pentanone, 4-hydroxy-4-methyl-	NA	NA	5.6	JNA	1.7	JNA	3.5	JNA	4.3	JNA	2.9	JNA	2.8	JNA	5.3	JNA	12	JNA	8.4	JNA	2.6	JNA	3.6	JNA	1.9	JNA	2.2	JNA	2.3	JNA	1.5	JNA	9.4	JNA
2-Phenylnaphthalene	NA	NA																																
2-Tritriacontanone	NA	NA													0.41	JNA																		
3,4:8,9-Dibenzopyrene	NA	NA							0.5	JN																								
3-Eicosene, (E)-	NA	NA																																
3-Octadecene, (E)-	NA	NA																							0.66	JN								
4H-Cyclopenta[def]phenanthrene	NA	NA																																
5-Eicosene, (E)-	NA	NA																									1.1	JN						
5-Octadecene, (E)-	NA	NA																																
6-Octadecenoic acid, (Z)-	NA	NA																																
7-Hexadecene, (Z)-	NA	NA																																
9,10-Anthracenedione	NA	NA																																
9-Eicosene, (E)-	NA	NA																																
9H-Fluoren-9-one	NA	NA																																
9-Octadecene, (E)-	NA	NA																																
9-Octadecenoic acid, (E)-	NA	NA																																
Anthracene, 1-methyl-	NA	NA																																
Anthracene, 2-methyl-	NA	NA																																
Benz[e]acephenanthrylene	NA	NA																																
Benzenamine, 4-(1-methyl-1-phenyle	NA	NA																																
Benzenesulfonamide, 4-methyl-	NA	NA																																
Benzo[a]pyrene	NA	NA																																
Benzo[a]naphthacene	NA	NA																																
Benzo[b]triphenylene	NA	NA																																
Benzo[b]triphenylene Isomer	NA	NA																																
Benzo[e]pyrene	NA	NA			0.41	JN			0.98	JN	0.32	JN			0.54	JN																		
Benzo[ghi]perylene	NA	NA																																
Benzo[j]fluoranthene	NA	NA																																
Benzo[k]fluoranthene	NA	NA									0.96	JN																						
Benzoic acid, 4-ethoxy-, ethyl est	NA	NA	0.93	JNC	1.3	JNC	0.68	JNC	0.84	JNC			0.82	JNC	1.3	JNC	0.65	JNC	0.59	JNC	1.2	JNC	1.6	JNC	1.3	JNC	1.4	JNC	1.5	JNC	1.1	JNC	1.2	JNC
Boroxin, ethyldiphenyl-	NA	NA																																
cis-9-Hexadecenoic acid	NA	NA													0.64	JN																		
cis-Vaccenic acid	NA	NA																			0.69	JN							1.2	JN				
Coronene	NA	NA																																
Cyclopenta(def)phenanthrenone	NA	NA							0.31	JN																								
Cyclotetracosane	NA	NA	0.86	JN																														
Cyclotetracosane Isomer	NA	NA	1.5	JN																														
Dibenz[a,e]aceanthrylene	NA	NA																																
Dibenzo[def,mno]chrysene	NA	NA																																
Dibenzofuran, 4-methyl-	NA	NA																																
dl-.alpha.-Tocopherol	NA	NA	1.9	JN																														
E-15-Heptadecenal	NA	NA									0.3	JN					0.31	JN																
Eicosane	NA	NA																											0.61	JN				
Fluoranthene, 2-methyl-	NA	NA																																
Fluorene	NA	NA																																
Furan, 2,5-dimethyl-	NA	NA																																
Heneicosane	NA	NA																																
Hentriacontane	NA	NA																																
Heptacosane	NA	NA																			1.8	JN												
Heptacosane, 1-chloro-	NA	NA																																
Heptadecane, 9-octyl-	NA	NA																																
Heptane, 2,5-dimethyl-	NA	NA																																
Hexadecane	NA	NA																			0.73	JN												
Hexadecenoic acid, Z-11-	NA	NA																											4.8	JN				
n-Hexadecanoic acid	NA	NA	1.2	JN	0.48	JN			0.76	JN					0.86	JN					1.5	JN							2	JN				
n-Nonadecanol-1	NA	NA																																
Naphthalene	NA	NA																																
Naphthalene, 1,4,6-trimethyl-	NA	NA																																
Naphthalene, 1,6-dimethyl-	NA	NA																																
Naphthalene, 1,7-dimethyl-	NA	NA																																
Naphthalene, 2,3,6-trimethyl-	NA	NA																																
Naphthalene, 2,3-dimethyl-	NA	NA																																
Naphthalene, 2,6-dimethyl-	NA	NA																																
Naphthalene, 2-phenyl-	NA	NA																																
Naphtho[2,1-b]thiophene	NA	NA																																
Nonacosane	NA	NA	2.4	JN					0.77	JN																								
Nonadecane	NA	NA			0.41	JN																												
Nonadecane, 9-methyl-	NA	NA																																
Octacosane	NA	NA																																
Octadec-9-enoic acid	NA	NA																																
Octadecanal	NA	NA													0.4	JN					1.8	JN							0.72	JN				
Octadecanal Isomer	NA	NA																											0.37	JN				
Octadecane	NA	NA													3.2	JN																		
Octadecanoic acid	NA	NA																																
Oxirane, heptadecyl-	NA	NA													0.64	JN																		
Oxirane, hexadecyl-	NA	NA																																
Oxirane, hexadecyl- Isomer	NA	NA																																
Perylene	NA	NA																																
Perylene Isomer	NA	NA																																
Phenanthrene, 1-methyl-	NA	NA							0.31	JN	0.45	JN																						
Phenanthrene, 2-methyl-	NA	NA									0.33	JN																						
Phenanthrene, 2-methyl- Isomer	NA	NA																																
Phenanthrene, 3,6-dimethyl-	NA	NA									0.32	JN																						
Stigmast-4-en-3-one	NA	NA	2.1	JNA											1.3	JNA																		
Sulfurous acid, 2-propyl tetradecy	NA	NA																																
Sulfurous acid, butyl dodecyl este	NA	NA																											1.2	JN				
Tetracosane	NA	NA																																
Tetracosane	NA	NA																																
Tetradecanal	NA	NA																			0.92	JN												
Tetratetracontane	NA	NA																																
Trichloroacetic acid, tetradecyl e	NA	NA																																
Tridecanoic acid	NA	NA																																
unknown hydrocarbon	NA	NA	8.7	J					0.44	J	0.51	J			1	J					0.59	J							0.53	J				
Z-7-Tetradecenoic acid	NA	NA																			1.1	JN												
TOTAL VOC and SVOC TICs (suspect extraction artifacts 2-pentanone, 4-hydroxy-4-methyl- and benzoic acid, 4-ethoxy-, ethyl est are excluded from total)			19.1		2.09		0.73		4.44		3.57		0.84		11.2		0.65		0.64		12.1		2.50		0.66		2.30		12.5		0.87		ND	

Analyte Detected
Detected TICs

Q = Laboratory Qualifier (J-estimated, N-value based on response of nearest internal, A and C-suspect artifact of extraction)

Table 3: VOC and SVOC TICs in Soil

The Green, Newburgh, NY
BCP ID: C336099

GALLAGHER BASSETT | TECHNICAL SERVICES

		Sample	2SB-17 0-5		2SB-17 10-12		2SB-18 SURF		2SB-18 10-15		2SB-19 SURF		2SB-19 0-5		2SB-19 10-13		DUP2-20251003		2SB-20 SURF		2SB-20 0-5		2SB-20 5-8		2SB-21 Surf		2SB-21 0-2		2SB-21 3-5		2SB-21 10-12		2SB-22 Surf	
All data in mg/Kg (ppm)		Date	2025-10-03		2025-10-03		2025-10-03		2025-10-03		2025-10-03		2025-10-03		2025-10-03		2025-10-03		2025-10-03		2025-10-03		2025-10-03		2026-03-06		2026-03-06		2026-03-06		2026-03-06		2026-03-06	
VOCs (8260)	**UU SCO**	**RRU SCO**	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q
1,2,3-Trimethylbenzene	NA	NA																																
1-Butene	NA	NA																																
1-Propene, 2-methyl-	NA	NA																																
2-Benzothiophene	NA	NA																																
2-Methylindene	NA	NA																																
Benzene, 1-ethynyl-4-methyl-	NA	NA																																
Biphenylene	NA	NA																																
Borane-methyl sulfide complex	NA	NA																																
Dimethyl sulfide	NA	NA									0.0084	JN							0.027	JN					0.02	JN								
Naphthalene	NA	NA																																
Naphthalene, 1,4-dimethyl-	NA	NA																																
Naphthalene, 1,7-dimethyl-	NA	NA																																
Naphthalene, 1-methyl-	NA	NA																																
Naphthalene, 2,7-dimethyl-	NA	NA																																
Naphthalene, 2-ethenyl-	NA	NA																																
Naphthalene, 2-methyl-	NA	NA																																
Undecane	NA	NA																																
unknown	NA	NA																																
SVOCs (8260)																																		
.beta.-Sitosterol	NA	NA									0.55	JN																						
.gamma.-Sitosterol	NA	NA																	3.9	JN														
1,19-Eicosadiene	NA	NA																																
1,2:4,5-Dibenzopyrene	NA	NA																									3.9	JN	3.2	JN	3.4	JN		
1,2:4,5-Dibenzopyrene Isomer	NA	NA																											2.1	JN				
1,2:7,8-Dibenzophenanthrene	NA	NA																									2.1	JN	1.6	JN	2.3	JN		
1,2:7,8-Dibenzophenanthrene Isomer	NA	NA																									1.6	JN						
10-Methylnonadecane	NA	NA									1.4	JN																						
11H-Benzo[a]fluorene	NA	NA																									1.1	JN						
11H-Indeno[2,1-a]phenanthrene	NA	NA																									0.84	JN	2	JN				
13-Docosen-1-ol, (Z)-	NA	NA																	3.1	JN														
13-Octadecenal	NA	NA																																
17-Octadecenal	NA	NA																	2.2	JN														
17-Octadecenal Isomer	NA	NA																	1.2	JN														
1-Docosene	NA	NA	0.57	JN					0.7	JN																								
1-Docosene Isomer	NA	NA																																
1-Heneicosanol	NA	NA																																
1-Heptacosanol	NA	NA																	5.9	JN														
1-Hexadecene	NA	NA																																
1-Nonadecene	NA	NA											0.77	JN			0.77	JN					0.68	JN									0.67	JN
1-Nonadecene Isomer	NA	NA																																
1-Octacosanol	NA	NA																																
1-Octadecene	NA	NA									0.48	JN																						
1-Tridecene	NA	NA																																
2(1H)Naphthalenone, 3,5,6,7,8,8a-h	NA	NA																																
2-Pentanone, 4-hydroxy-4-methyl-	NA	NA	1.7	JNA	1.8	JNA	1.9	JNA	1.6	JNA	2.2	JNA	1.6	JNA	1.5	JNA	1.5	JNA	2.1	JNA	1.7	JNA	1.9	JNA	1.20	JNA							0.74	JNA
2-Phenylnaphthalene	NA	NA																																
2-Tritriacontanone	NA	NA																																
3,4:8,9-Dibenzopyrene	NA	NA																									3.2	JN						
3-Eicosene, (E)-	NA	NA																																
3-Octadecene, (E)-	NA	NA																			0.68	JN												
4H-Cyclopenta[def]phenanthrene	NA	NA																																
5-Eicosene, (E)-	NA	NA																							0.37	JN								
5-Octadecene, (E)-	NA	NA																			0.68	JN			0.43	JN							0.7	JN
6-Octadecenoic acid, (Z)-	NA	NA																																
7-Hexadecene, (Z)-	NA	NA	0.47	JN					0.56	JN	0.51	JN	0.59	JN																				
9,10-Anthracenedione	NA	NA																																
9-Eicosene, (E)-	NA	NA																																
9H-Fluoren-9-one	NA	NA																																
9-Octadecene, (E)-	NA	NA																																
9-Octadecenoic acid, (E)-	NA	NA																																
Anthracene, 1-methyl-	NA	NA																																
Anthracene, 2-methyl-	NA	NA																																
Benz[e]acephenanthrylene	NA	NA			0.29	JN	0.31	JN																										
Benzenamine, 4-(1-methyl-1-phenyle	NA	NA															0.5	JN																
Benzenesulfonamide, 4-methyl-	NA	NA																							0.86	JN								
Benzo[a]pyrene	NA	NA																									8.1	JN	6.1	JN	8.9	JN		
Benzo[a]naphthacene	NA	NA																																
Benzo[b]triphenylene	NA	NA																									2.8	JN	2	JN	1.5	JN		
Benzo[b]triphenylene Isomer	NA	NA																													2.7	JN		
Benzo[e]pyrene	NA	NA																							0.54	JN	4.1	JN	3	JN	4.5	JN		
Benzo[ghi]perylene	NA	NA																									2.5	JN	1.8	JN	2.8	JN		
Benzo[j]fluoranthene	NA	NA																																
Benzoic acid, 4-ethoxy-, ethyl est	NA	NA	0.85	JNC	1.2	JNC	1.2	JNC	0.99	JNC	0.98	JNC	1	JNC	1.2	JNC	1.1	JNC	0.79	JNC	1.2	JNC	1.3	JNC	0.87	JNC					0.98	JNC	1.2	JNC
Boroxin, ethyldiphenyl-	NA	NA																									1.8	JN						
cis-9-Hexadecenoic acid	NA	NA																																
cis-Vaccenic acid	NA	NA																																
Coronene	NA	NA																									1.9	JN	1.6	JN	1.8	JN		
Cyclopenta(def)phenanthrenone	NA	NA																																
Cyclotetracosane	NA	NA																																
Cyclotetracosane Isomer	NA	NA																																
Dibenz[a,e]aceanthrylene	NA	NA																													4.5	JN		
Dibenzo[def,mno]chrysene	NA	NA																																
Dibenzofuran, 4-methyl-	NA	NA																																
dl-.alpha.-Tocopherol	NA	NA																																
E-15-Heptadecenal	NA	NA																																
Eicosane	NA	NA																																
Fluoranthene, 2-methyl-	NA	NA																																
Fluorene	NA	NA																																
Furan, 2,5-dimethyl-	NA	NA																																
Heneicosane	NA	NA																																
Hentriacontane	NA	NA																	2.2	JN														
Heptacosane	NA	NA																																
Heptacosane, 1-chloro-	NA	NA																	0.9	JN														
Heptadecane, 9-octyl-	NA	NA																																
Heptane, 2,5-dimethyl-	NA	NA																																
Hexadecane	NA	NA																																
Hexadecenoic acid, Z-11-	NA	NA																																
n-Hexadecanoic acid	NA	NA					0.31	JN													0.28	JN												
n-Nonadecanol-1	NA	NA																																
Naphthalene	NA	NA																																
Naphthalene, 1,4,6-trimethyl-	NA	NA																																
Naphthalene, 1,6-dimethyl-	NA	NA																																
Naphthalene, 1,7-dimethyl-	NA	NA																																
Naphthalene, 2,3,6-trimethyl-	NA	NA																																
Naphthalene, 2,3-dimethyl-	NA	NA																																
Naphthalene, 2,6-dimethyl-	NA	NA																																
Naphthalene, 2-phenyl-	NA	NA																																
Naphtho[2,1-b]thiophene	NA	NA																																
Nonacosane	NA	NA																																
Nonadecane	NA	NA																																
Nonadecane, 9-methyl-	NA	NA																																
Octacosane	NA	NA																							0.84	JN								
Octadec-9-enoic acid	NA	NA																	0.81	JN														
Octadecanal	NA	NA			0.47	JN					0.61	JN																						
Octadecanal Isomer	NA	NA									1.2	JN																						
Octadecane	NA	NA																																
Octadecanoic acid	NA	NA																																
Oxirane, heptadecyl-	NA	NA					0.57	JN																										
Oxirane, hexadecyl-	NA	NA																																
Oxirane, hexadecyl- Isomer	NA	NA																																
Perylene	NA	NA									0.29	JN													1.40	JN	2.9	JN	2.3	JN	3.3	JN		
Perylene Isomer	NA	NA																																
Phenanthrene, 1-methyl-	NA	NA																											1.6	JN				
Phenanthrene, 2-methyl-	NA	NA																							0.38	JN			2.7	JN				
Phenanthrene, 2-methyl- Isomer	NA	NA																											1.9	JN				
Phenanthrene, 3,6-dimethyl-	NA	NA																																
Stigmast-4-en-3-one	NA	NA			0.3	JN	0.4	JN											4.3	JN														
Sulfurous acid, 2-propyl tetradecy	NA	NA																																
Sulfurous acid, butyl dodecyl este	NA	NA																																
Tetracosane	NA	NA																																
Tetracosane	NA	NA																																
Tetradecanal	NA	NA																																
Tetratetracontane	NA	NA																																
Trichloroacetic acid, tetradecyl e	NA	NA																																
Tridecanoic acid	NA	NA																	1.5	JN														
unknown hydrocarbon	NA	NA			0.4	J	0.31	J			0.35	J							0.74	J					0.55	J	1	J	1.4	J	1.2	J		
Z-7-Tetradecenoic acid	NA	NA																																
TOTAL VOC and SVOC TICs (suspect extraction artifacts 2-pentanone, 4-hydroxy-4-methyl- and benzoic acid, 4-ethoxy-, ethyl est are excluded from total)			1.04		1.46		1.90		1.26		5.40		1.36		ND		1.27		26.8		1.64		0.68		5.39		37.8		33.3		36.9		1.37	

Analyte Detected
Detected TICs

Q = Laboratory Qualifier (J-estimated, N-value based on response of nearest internal, A and C-suspect artifact of extraction)

Table 3: VOC and SVOC TICs in Soil

The Green, Newburgh, NY
BCP ID: C336099

GALLAGHER BASSETT | TECHNICAL SERVICES

		Sample	2SB-22 0-2		2SB-22 3-5		2SB-22 5-7		2SB-23 Surf		2SB-23 0-2		2SB-23 4-6		2SB-23 7-9		2SB-24 Surf		2SB-24 0-2		2SB-24 3-5		DUP-20260306		2SB-24 6-8		2SB-25 Surf		2SB-25 0-2		2SB-25 5-7		2SB-26 Surf	
All data in mg/Kg (ppm)		Date	2026-03-06		2026-03-06		2026-03-06		2026-03-06		2026-03-06		2026-03-06		2026-03-06		2026-03-06		2026-03-06		2026-03-06		2026-03-06		2026-03-06		2026-03-06		2026-03-06		2026-03-06		2026-03-06	
VOCs (8260)	**UU SCO**	**RRU SCO**	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q
1,2,3-Trimethylbenzene	NA	NA																	0.0025	Q														
1-Butene	NA	NA																															0.0078	JN		
1-Propene, 2-methyl-	NA	NA					0.0095	JN																												
2-Benzothiophene	NA	NA																	0.017	JN																
2-Methylindene	NA	NA																	0.017	JN																
Benzene, 1-ethynyl-4-methyl-	NA	NA																	0.028	JN																
Biphenylene	NA	NA																	0.036	JN																
Borane-methyl sulfide complex	NA	NA															0.036	JN																		
Dimethyl sulfide	NA	NA																																		
Naphthalene	NA	NA																																		
Naphthalene, 1,4-dimethyl-	NA	NA																	0.063	JN																
Naphthalene, 1,7-dimethyl-	NA	NA																	0.028	JN																
Naphthalene, 1-methyl-	NA	NA																	0.2	JN																
Naphthalene, 2,7-dimethyl-	NA	NA																	0.053	JN																
Naphthalene, 2-ethenyl-	NA	NA																	0.023	JN																
Naphthalene, 2-methyl-	NA	NA																	0.29	JN																
Undecane	NA	NA																																		
unknown	NA	NA																																	0.0064	J
SVOCs (8260)																																				
.beta.-Sitosterol	NA	NA																																		
.gamma.-Sitosterol	NA	NA																																		
1,19-Eicosadiene	NA	NA																																		
1,2:4,5-Dibenzopyrene	NA	NA																																		
1,2:4,5-Dibenzopyrene Isomer	NA	NA																																		
1,2:7,8-Dibenzophenanthrene	NA	NA																																		
1,2:7,8-Dibenzophenanthrene Isomer	NA	NA																																		
10-Methylnonadecane	NA	NA																																		
11H-Benzo[a]fluorene	NA	NA																																		
11H-Indeno[2,1-a]phenanthrene	NA	NA																																		
13-Docosen-1-ol, (Z)-	NA	NA																																		
13-Octadecenal	NA	NA																																		
17-Octadecenal	NA	NA																																		
17-Octadecenal Isomer	NA	NA																																		
1-Docosene	NA	NA	0.6	JN	1.2	JN																														
1-Docosene Isomer	NA	NA																																		
1-Heneicosanol	NA	NA																											1.6	JN						
1-Heptacosanol	NA	NA																																		
1-Hexadecene	NA	NA																																		
1-Nonadecene	NA	NA													1.4	JN	1.2	JN			0.75	JN							1.3	JN			1.2	JN
1-Nonadecene Isomer	NA	NA																			0.81	JN														
1-Octacosanol	NA	NA																																		
1-Octadecene	NA	NA																																		
1-Tridecene	NA	NA																																		
2(1H)Naphthalenone, 3,5,6,7,8,8a-h	NA	NA																																		
2-Pentanone, 4-hydroxy-4-methyl-	NA	NA	0.66	JNA	0.76	JNA	0.76	JNA			0.75	JNA	0.77	JNA	0.69	JNA	0.85	JNA			3.8	JNA	3.2	JNA	0.69	JNA			0.77	JNA	0.85	JNA	0.81	JNA
2-Phenylnaphthalene	NA	NA																																		
2-Tritriacontanone	NA	NA																																		
3,4:8,9-Dibenzopyrene	NA	NA																																		
3-Eicosene, (E)-	NA	NA																																		
3-Octadecene, (E)-	NA	NA																																		
4H-Cyclopenta[def]phenanthrene	NA	NA																																		
5-Eicosene, (E)-	NA	NA					1.2	JN															0.57	JN	1.1	JN					1.6	JN		
5-Octadecene, (E)-	NA	NA	0.55	JN	0.95	JN	0.84	JN			0.98	JN	0.94	JN	1	JN							0.48	JN	0.89	JN					1.2	JN		
6-Octadecenoic acid, (Z)-	NA	NA																																		
7-Hexadecene, (Z)-	NA	NA																																		
9,10-Anthracenedione	NA	NA																																		
9-Eicosene, (E)-	NA	NA																																		
9H-Fluoren-9-one	NA	NA																																		
9-Octadecene, (E)-	NA	NA																																		
9-Octadecenoic acid, (E)-	NA	NA																																		
Anthracene, 1-methyl-	NA	NA																																		
Anthracene, 2-methyl-	NA	NA																																		
Benz[e]acephenanthrylene	NA	NA																																		
Benzenamine, 4-(1-methyl-1-phenyle	NA	NA																																		
Benzenesulfonamide, 4-methyl-	NA	NA																																		
Benzo[a]pyrene	NA	NA																																		
Benzo[a]naphthacene	NA	NA																																		
Benzo[b]triphenylene	NA	NA																	2.4	JN																
Benzo[b]triphenylene Isomer	NA	NA																																		
Benzo[e]pyrene	NA	NA																	3.6	JN																
Benzo[ghi]perylene	NA	NA																	1.9	JN																
Benzo[j]fluoranthene	NA	NA																																		
Benzoic acid, 4-ethoxy-, ethyl est	NA	NA	1.1	JNC	1.5	JNC	1.4	JNC			1.9	JNC	1.6	JNC	1.5	JNC	2.3	JNC	2.1	JNC	1.2	JNC	0.77	JNC	1.4	JNC			2.1	JNC	1.9	JNC	1.9	JNC
Boroxin, ethyldiphenyl-	NA	NA																																		
cis-9-Hexadecenoic acid	NA	NA																																		
cis-Vaccenic acid	NA	NA																																		
Coronene	NA	NA																																		
Cyclopenta(def)phenanthrenone	NA	NA																																		
Cyclotetracosane	NA	NA																																		
Cyclotetracosane Isomer	NA	NA																																		
Dibenz[a,e]aceanthrylene	NA	NA																																		
Dibenzo[def,mno]chrysene	NA	NA																																		
Dibenzofuran, 4-methyl-	NA	NA																	4.3	JN																
dl-.alpha.-Tocopherol	NA	NA																																		
E-15-Heptadecenal	NA	NA																																		
Eicosane	NA	NA																																		
Fluoranthene, 2-methyl-	NA	NA																																		
Fluorene	NA	NA																	1.9	JN																
Furan, 2,5-dimethyl-	NA	NA			1	JN									1.3	JN									0.76	JN										
Heneicosane	NA	NA																																		
Hentriacontane	NA	NA																																		
Heptacosane	NA	NA																																		
Heptacosane, 1-chloro-	NA	NA																																		
Heptadecane, 9-octyl-	NA	NA																																		
Heptane, 2,5-dimethyl-	NA	NA																			0.32	JN														
Hexadecane	NA	NA																																		
Hexadecenoic acid, Z-11-	NA	NA															1.6	JN																		
n-Hexadecanoic acid	NA	NA			0.32	JN	0.36	JN			0.42	JN	0.38	JN	0.31	JN	1.4	JN															0.31	JN	0.51	JN
n-Nonadecanol-1	NA	NA																																		
Naphthalene	NA	NA																																		
Naphthalene, 1,4,6-trimethyl-	NA	NA																	1.9	JN																
Naphthalene, 1,6-dimethyl-	NA	NA																	2.7	JN																
Naphthalene, 1,7-dimethyl-	NA	NA																	3.3	JN																
Naphthalene, 2,3,6-trimethyl-	NA	NA																	2.6	JN																
Naphthalene, 2,3-dimethyl-	NA	NA																	5.6	JN																
Naphthalene, 2,6-dimethyl-	NA	NA																	4.3	JN																
Naphthalene, 2-phenyl-	NA	NA																																		
Naphtho[2,1-b]thiophene	NA	NA																																		
Nonacosane	NA	NA																																		
Nonadecane	NA	NA															0.36	JN																		
Nonadecane, 9-methyl-	NA	NA																																		
Octacosane	NA	NA																																		
Octadec-9-enoic acid	NA	NA																																		
Octadecanal	NA	NA																																		
Octadecanal Isomer	NA	NA																																		
Octadecane	NA	NA																																		
Octadecanoic acid	NA	NA																																		
Oxirane, heptadecyl-	NA	NA																																		
Oxirane, hexadecyl-	NA	NA																																		
Oxirane, hexadecyl- Isomer	NA	NA																																		
Perylene	NA	NA																	2.9	JN															1.5	JN
Perylene Isomer	NA	NA																																		
Phenanthrene, 1-methyl-	NA	NA																																		
Phenanthrene, 2-methyl-	NA	NA																																		
Phenanthrene, 2-methyl- Isomer	NA	NA																																		
Phenanthrene, 3,6-dimethyl-	NA	NA																																		
Stigmast-4-en-3-one	NA	NA																																		
Sulfurous acid, 2-propyl tetradecy	NA	NA																																		
Sulfurous acid, butyl dodecyl este	NA	NA																																		
Tetracosane	NA	NA																																		
Tetracosane	NA	NA																																		
Tetradecanal	NA	NA																																		
Tetratetracontane	NA	NA																																		
Trichloroacetic acid, tetradecyl e	NA	NA																																		
Tridecanoic acid	NA	NA																																		
unknown hydrocarbon	NA	NA															0.32	J	1.6	J									0.31	J			0.33	J
Z-7-Tetradecenoic acid	NA	NA																																		
TOTAL VOC and SVOC TICs (suspect extraction artifacts 2-pentanone, 4-hydroxy-4-methyl- and benzoic acid, 4-ethoxy-, ethyl est are excluded from total)			1.15		3.47		2.41		ND		1.40		1.32		4.01		5.80		47.6		1.88		1.05		2.75		ND		5.11		3.12		3.55	

Analyte Detected
Detected TICs

Q = Laboratory Qualifier (J-estimated, N-value based on response of nearest internal, A and C-suspect artifact of extraction)

Table 3: VOC and SVOC TICs in Soil

The Green, Newburgh, NY
BCP ID: C336099

GALLAGHER BASSETT | TECHNICAL SERVICES

		Sample	2SB-26 0-2		2SB-26 5-7		2SB-27 Surf		2SB-27 0-2		2SB-27 5-7		2SB-27 10-12		Dup-20260309		2SB-28 Surf		2SB-28 0-2		2SB-28 7-9		2SB-29 Surf		2SB-29 0-2		2SB-28 8-10	
All data in mg/Kg (ppm)		Date	2026-03-06		2026-03-06		2026-03-09		2026-03-09		2026-03-09		2026-03-09		2026-03-06		2026-03-06		2026-03-06		2026-03-06		2026-03-06		2026-03-06		2026-03-06	
VOCs (8260)	**UU SCO**	**RRU SCO**	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q
1,2,3-Trimethylbenzene	NA	NA																										
1-Butene	NA	NA																										
1-Propene, 2-methyl-	NA	NA																										
2-Benzothiophene	NA	NA																										
2-Methylindene	NA	NA																										
Benzene, 1-ethynyl-4-methyl-	NA	NA																										
Biphenylene	NA	NA																										
Borane-methyl sulfide complex	NA	NA																										
Dimethyl sulfide	NA	NA																										
Naphthalene	NA	NA									0.0028	Q																
Naphthalene, 1,4-dimethyl-	NA	NA																										
Naphthalene, 1,7-dimethyl-	NA	NA																										
Naphthalene, 1-methyl-	NA	NA																										
Naphthalene, 2,7-dimethyl-	NA	NA																										
Naphthalene, 2-ethenyl-	NA	NA																										
Naphthalene, 2-methyl-	NA	NA																										
Undecane	NA	NA																										
unknown	NA	NA																										
SVOCs (8260)																												
.beta.-Sitosterol	NA	NA																										
.gamma.-Sitosterol	NA	NA																										
1,19-Eicosadiene	NA	NA															1.1	JN										
1,2:4,5-Dibenzopyrene	NA	NA																										
1,2:4,5-Dibenzopyrene Isomer	NA	NA																										
1,2:7,8-Dibenzophenanthrene	NA	NA																										
1,2:7,8-Dibenzophenanthrene Isomer	NA	NA																										
10-Methylnonadecane	NA	NA																										
11H-Benzo[a]fluorene	NA	NA																										
11H-Indeno[2,1-a]phenanthrene	NA	NA																										
13-Docosen-1-ol, (Z)-	NA	NA																										
13-Octadecenal	NA	NA																										
17-Octadecenal	NA	NA																										
17-Octadecenal Isomer	NA	NA																										
1-Docosene	NA	NA											1.4	JN	1.2	JN												
1-Docosene Isomer	NA	NA																										
1-Heneicosanol	NA	NA																										
1-Heptacosanol	NA	NA																										
1-Hexadecene	NA	NA	1.3	JN																								
1-Nonadecene	NA	NA			0.58	JN													0.75	JN							0.7	JN
1-Nonadecene Isomer	NA	NA																										
1-Octacosanol	NA	NA																										
1-Octadecene	NA	NA																										
1-Tridecene	NA	NA																										
2(1H)Naphthalenone, 3,5,6,7,8,8a-h	NA	NA															0.43	JN										
2-Pentanone, 4-hydroxy-4-methyl-	NA	NA	0.85	JNA	3.2	JNA	2.6	JNA	2.7	JNA	3.7	JNA	2.6	JNA	2.5	JNA	4.2	JNA	4.1	JNA	3.7	JNA	5.3	JNA	3.7	JNA	3.9	JNA
2-Phenylnaphthalene	NA	NA																										
2-Tritriacontanone	NA	NA																										
3,4:8,9-Dibenzopyrene	NA	NA																										
3-Eicosene, (E)-	NA	NA																			0.79	JN						
3-Octadecene, (E)-	NA	NA																										
4H-Cyclopenta[def]phenanthrene	NA	NA									0.71	JN																
5-Eicosene, (E)-	NA	NA																										
5-Octadecene, (E)-	NA	NA			0.5	JN											0.93	JN			0.68	JN			0.46	JN	0.62	JN
6-Octadecenoic acid, (Z)-	NA	NA																					0.87	JN				
7-Hexadecene, (Z)-	NA	NA																										
9,10-Anthracenedione	NA	NA																										
9-Eicosene, (E)-	NA	NA																	0.64	JN			0.62	JN				
9H-Fluoren-9-one	NA	NA																										
9-Octadecene, (E)-	NA	NA																										
9-Octadecenoic acid, (E)-	NA	NA															0.75	JN										
Anthracene, 1-methyl-	NA	NA									0.64	JN																
Anthracene, 2-methyl-	NA	NA																										
Benz[e]acephenanthrylene	NA	NA					1.1	JN																				
Benzenamine, 4-(1-methyl-1-phenyle	NA	NA																										
Benzenesulfonamide, 4-methyl-	NA	NA																										
Benzo[a]pyrene	NA	NA					1.9	JN																				
Benzo[a]naphthacene	NA	NA																										
Benzo[b]triphenylene	NA	NA					1.3	JN																				
Benzo[b]triphenylene Isomer	NA	NA																										
Benzo[e]pyrene	NA	NA					7	JN			0.86	JN					0.33	JN										
Benzo[ghi]perylene	NA	NA																										
Benzo[j]fluoranthene	NA	NA																										
Benzoic acid, 4-ethoxy-, ethyl est	NA	NA	2.1	JNC	0.8	JNC	1.9	JNC	1.7	JNC	1.5	JNC	1.9	JNC	1.7	JNC	1.5	JNC	1	JNC	1.1	JNC	1	JNC	0.74	JNC	1	JNC
Boroxin, ethyldiphenyl-	NA	NA																										
cis-9-Hexadecenoic acid	NA	NA															0.83	JN					2.6	JN				
cis-Vaccenic acid	NA	NA																										
Coronene	NA	NA																										
Cyclopenta(def)phenanthrenone	NA	NA																										
Cyclotetracosane	NA	NA																										
Cyclotetracosane Isomer	NA	NA																										
Dibenz[a,e]aceanthrylene	NA	NA					1.1	JN																				
Dibenzo[def,mno]chrysene	NA	NA					1.4	JN																				
Dibenzofuran, 4-methyl-	NA	NA																										
dl-.alpha.-Tocopherol	NA	NA																										
E-15-Heptadecenal	NA	NA					0.89	JN	0.79	JN	0.82	JN	1	JN	0.88	JN												
Eicosane	NA	NA															0.81	JN					0.44	JN				
Fluoranthene, 2-methyl-	NA	NA									0.32	JN																
Fluorene	NA	NA																										
Furan, 2,5-dimethyl-	NA	NA																										
Heneicosane	NA	NA					0.69	JN																				
Hentriacontane	NA	NA																										
Heptacosane	NA	NA																										
Heptacosane, 1-chloro-	NA	NA																										
Heptadecane, 9-octyl-	NA	NA																										
Heptane, 2,5-methyl-	NA	NA			0.29	JN													0.36	JN	0.3	JN			0.3	JN	0.33	JN
Hexadecane	NA	NA					2.4	JN																				
Hexadecenoic acid, Z-11-	NA	NA																										
n-Hexadecanoic acid	NA	NA	0.71	JN			1.5	JN	0.31	JN							1.2	JN					1.7	JN				
n-Nonadecanol-1	NA	NA																										
Naphthalene	NA	NA																										
Naphthalene, 1,4,6-trimethyl-	NA	NA																										
Naphthalene, 1,6-dimethyl-	NA	NA																										
Naphthalene, 1,7-dimethyl-	NA	NA																										
Naphthalene, 2,3,6-trimethyl-	NA	NA																										
Naphthalene, 2,3-dimethyl-	NA	NA																										
Naphthalene, 2,6-dimethyl-	NA	NA									0.42	JN																
Naphthalene, 2-phenyl-	NA	NA									0.29	JN																
Naphtho[2,1-b]thiophene	NA	NA																										
Nonacosane	NA	NA																										
Nonadecane	NA	NA																					0.4	JN				
Nonadecane, 9-methyl-	NA	NA																										
Octacosane	NA	NA																					0.98	JN				
Octadec-9-enoic acid	NA	NA																										
Octadecanal	NA	NA																										
Octadecanal Isomer	NA	NA																										
Octadecane	NA	NA															1.4	JN					0.75	JN				
Octadecanoic acid	NA	NA															0.48	JN					0.69	JN				
Oxirane, heptadecyl-	NA	NA																										
Oxirane, hexadecyl-	NA	NA																										
Oxirane, hexadecyl- Isomer	NA	NA																										
Perylene	NA	NA	0.82	JN			2.1	JN			0.31	JN											0.48	JN				
Perylene Isomer	NA	NA																										
Phenanthrene, 1-methyl-	NA	NA																										
Phenanthrene, 2-methyl-	NA	NA									0.53	JN																
Phenanthrene, 2-methyl- Isomer	NA	NA																										
Phenanthrene, 3,6-dimethyl-	NA	NA																										
Stigmast-4-en-3-one	NA	NA					1.9	JN									1.2	JN										
Sulfurous acid, 2-propyl tetradecy	NA	NA																										
Sulfurous acid, butyl dodecyl este	NA	NA																										
Tetracosane	NA	NA																										
Tetracosane	NA	NA																										
Tetradecanal	NA	NA																										
Tetratetracontane	NA	NA															0.39	JN										
Trichloroacetic acid, tetradecyl e	NA	NA																										
Tridecanoic acid	NA	NA																										
unknown hydrocarbon	NA	NA	0.45	J			1.8	J	0.65	JNC	0.58	JNC					0.5	J					0.52	J				
Z-7-Tetradecenoic acid	NA	NA																										
TOTAL VOC and SVOC TICs (suspect extraction artifacts 2-pentanone, 4-hydroxy-4-methyl- and benzoic acid, 4-ethoxy-, ethyl est are excluded from total)			3.28		1.37		25.1		1.75		5.48		2.40		2.08		10.4		1.75		1.77		10.1		0.76		1.65	

Analyte Detected
Detected TICs

Q = Laboratory Qualifier (J-estimated, N-value based on response of nearest internal, A and C-suspect artifact of extraction)

Table 4: TAL Metals in Soil

All data in mg/Kg (ppm)		Sample	2SB-01 SURF			2SB-01 5-7.5			DUP-20251001			2SB-01 7.5-10			2SB-02 SURF			2SB-02 5-7.5		
U= Not Detected ≥ value		Date	2025-10-01			2025-10-01			2025-10-01			2025-10-01			2025-10-01			2025-10-01		
Metals (6010/7473)	**UU SCO**	**RRU SCO**	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL
Aluminum	NA	NA	15,000		*10*	14,800		*10*	10,900		*10*	9,390		*10*	14,100		*10*	15,500		*10*
Antimony	NA	NA	3.6	*U*	*1*	4	*U*	*1*	3.5	*U*	*1*	3.8	*U*	*1*	3.9	*U*	*1*	3.9	*U*	*1*
Arsenic	13	16	3.51		*1*	6.34		*1*	4.75		*1*	4		*1*	16.6		*1*	10.5		*1*
Barium	410	410	72.8		*1*	77.9		*1*	37.3		*1*	28.8		*1*	264		*1*	75		*1*
Beryllium	4.4	43	0.5		*1*	0.69		*1*	0.46		*1*	0.4		*1*	0.62		*1*	0.84		*1*
Cadmium	2.5	2.5	0.36	*U*	*1*	0.4	*U*	*1*	0.35	*U*	*1*	0.38	*U*	*1*	0.9		*1*	0.43		*1*
Calcium	NA	NA	1,280		*1*	2,320		*1*	1,260		*1*	1,110		*1*	4,920		*1*	2,260		*1*
Chromium	30	110	14.6		*1*	17.7		*1*	13.6		*1*	11.7		*1*	19.9		*1*	21		*1*
Chromium (+6)	1	1	0.41	*U*	*1*	0.42	*U*	*1*	0.43	*U*	*1*	0.43	*U*	*1*	0.42	*U*	*1*	0.43	*U*	*1*
Cobalt	NA	NA	8.93		*1*	12.6		*1*	9.39		*1*	8.82		*1*	10.8		*1*	15		*1*
Copper	50	280	13.4		*1*	33.1		*1*	30.4		*1*	20.7		*1*	50.8		*1*	33.8		*1*
Iron	NA	NA	21,100		*1*	29,700		*1*	24,400		*1*	21,000		*1*	24,800		*1*	36,900		*1*
Lead	63	400	43.3		*1*	14.6		*1*	10.7		*1*	9.4		*1*	745		*1*	21.7		*1*
Magnesium	NA	NA	3,510		*1*	5,160		*1*	4,520		*1*	4,220		*1*	5,450		*1*	5,130		*1*
Manganese	1,600	2,000	380		*1*	834		*1*	574		*1*	621		*1*	750		*1*	853		*1*
Mercury	0.18	0.3	0.228		*1*	0.09	*U*	*1*	0.088	*U*	*1*	0.09	*U*	*1*	0.837		*1*	0.089	*U*	*1*
Nickel	30	320	15.8		*1*	26.2		*1*	19		*1*	17.6		*1*	27.8		*1*	27.1		*1*
Potassium	NA	NA	992		*10*	1,440		*10*	1,440		*10*	1,250		*10*	1,470		*10*	1,940		*10*
Selenium	3.9	110	1.4	*U*	*1*	1.6	*U*	*1*	1.4	*U*	*1*	1.5	*U*	*1*	1.5	*U*	*1*	1.5	*U*	*1*
Silver	2	110	0.36	*U*	*1*	0.4	*U*	*1*	0.35	*U*	*1*	0.38	*U*	*1*	0.39	*U*	*1*	0.39	*U*	*1*
Sodium	NA	NA	50		*1*	336		*1*	275		*1*	197		*1*	107		*1*	156		*1*
Thallium	NA	NA	1.4	*U*	*1*	1.6	*U*	*1*	1.4	*U*	*1*	1.5	*U*	*1*	1.5	*U*	*1*	1.5	*U*	*1*
Vanadium	NA	NA	21.7		*1*	21.9		*1*	18.6		*1*	14.5		*1*	33.4		*1*	24.3		*1*
Zinc	109	6,600	63.6		*1*	75.1		*1*	63.7		*1*	59.1		*1*	363		*1*	73.6		*1*
Cyanide (total)	2.3	13	0.57	*U*	*1*	0.6	*U*	*1*	0.59	*U*	*1*	0.6	*U*	*1*	0.78		*1*	0.6	*U*	*1*

value ≤ UU SCO
value > UU SCO
value > RRU SCO

Q = Laboratory Qualifier DL = Dilution NA = not available (addtional flags: B-in blank, D-diluted, E-estimated, J-approximate)

Table 4: TAL Metals in Soil

All data in mg/Kg (ppm)		Sample	2SB-02 7.5-10			2SB-03 SURF			2SB-03 10-12.5			2SB-03 12.5-15			2SB-04 SURF			2SB-04 0-5		
U= Not Detected ≥ value		Date	2025-10-01			2025-10-01			2025-10-01			2025-10-01			2025-10-01			2025-10-01		
Metals (6010/7473)	**UU SCO**	**RRU SCO**	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL
Aluminum	NA	NA	14,000		*10*	15,800		*10*	20,800		*10*	17,400		*10*	14,700		*10*	11,000		*10*
Antimony	NA	NA	3.7	*U*	*1*	3.6	*U*	*1*	4	*U*	*1*	3.8	*U*	*1*	3.9	*U*	*1*	5.8	*U*	*1*
Arsenic	13	16	4.57		*1*	9.13		*1*	7.63		*1*	5.78		*1*	8.98		*1*	16.7		*1*
Barium	410	410	67.9		*1*	250		*1*	90		*1*	148		*1*	237		*1*	276		*1*
Beryllium	4.4	43	0.64		*1*	0.66		*1*	1.2		*1*	0.97		*1*	0.55		*1*	0.44		*1*
Cadmium	2.5	2.5	0.39		*1*	0.82		*1*	0.57		*1*	0.57		*1*	0.8		*1*	2.35		*1*
Calcium	NA	NA	12,700		*10*	2,660		*1*	3,170		*1*	3,300		*1*	33,200		*10*	22,300		*10*
Chromium	30	110	17.4		*1*	18.9		*1*	25.8		*1*	22.8		*1*	17.6		*1*	15.5		*1*
Chromium (+6)	1	1	0.46	*U*	*1*	0.44	*U*	*1*	0.45	*U*	*1*	0.42	*U*	*1*	0.44	*U*	*1*	0.44	*U*	*1*
Cobalt	NA	NA	10.6		*1*	11.1		*1*	18.4		*1*	16.2		*1*	9.01		*1*	19.9		*1*
Copper	50	280	33		*1*	47.9		*1*	53.9		*1*	46.5		*1*	39.6		*1*	82.6		*1*
Iron	NA	NA	26,600		*1*	25,300		*1*	44,300		*1*	39,100		*1*	23,100		*1*	154,000		*10*
Lead	63	400	12.4		*1*	931		*1*	25.1		*1*	19.8		*1*	1,350		*1*	1,410		*1*
Magnesium	NA	NA	5,510		*1*	4,650		*1*	6,630		*1*	6,130		*1*	8,930		*1*	6,060		*1*
Manganese	1,600	2,000	558		*1*	701		*1*	835		*1*	1,310		*1*	574		*1*	454		*1*
Mercury	0.18	0.3	0.095	*U*	*1*	0.837		*1*	0.086	*U*	*1*	0.085	*U*	*1*	0.935		*1*	1.34		*1*
Nickel	30	320	23.3		*1*	22.6		*1*	36.3		*1*	32.5		*1*	21		*1*	29.4		*1*
Potassium	NA	NA	2,160		*10*	1,310		*10*	2,210		*10*	1,930		*10*	1,410		*10*	1,150		*10*
Selenium	3.9	110	1.5	*U*	*1*	2	*U*	*1*	1.6	*U*	*1*	1.5	*U*	*1*	1.6	*U*	*1*	1.7	*U*	*1*
Silver	2	110	0.37	*U*	*1*	0.36	*U*	*1*	0.4	*U*	*1*	0.38	*U*	*1*	0.39	*U*	*1*	0.41	*U*	*1*
Sodium	NA	NA	145		*1*	51		*1*	253		*1*	199		*1*	137		*1*	244		*1*
Thallium	NA	NA	1.5	*U*	*1*	1.5	*U*	*1*	1.6	*U*	*1*	1.5	*U*	*1*	1.6	*U*	*1*	1.7	*U*	*1*
Vanadium	NA	NA	21.2		*1*	27.5		*1*	29.1		*1*	24.8		*1*	34.1		*1*	38.1		*1*
Zinc	109	6,600	81.5		*1*	328		*1*	122		*1*	127		*1*	377		*1*	436		*1*
Cyanide (total)	2.3	13	0.63	*U*	*1*	0.59	*U*	*1*	0.57	*U*	*1*	0.57	*U*	*1*	0.6	*U*	*1*	0.59	*U*	*1*

value ≤ UU SCO
value > UU SCO
value > RRU SCO

Q = Laboratory Qualifier DL = Dilution NA = not available (addtional flags: B-in blank, D-diluted, E-estimated, J-approximate)

Table 4: TAL Metals in Soil

All data in mg/Kg (ppm)		Sample	2SB-04 10-15			2SB-05 SURF			2SB-05 5-7			2SB-06 SURF			2SB-06 0-2.5			2SB-06 7.5-10		
U= Not Detected ≥ value		Date	2025-10-01			2025-10-01			2025-10-01			2025-10-01			2025-10-01			2025-10-01		
Metals (6010/7473)	**UU SCO**	**RRU SCO**	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL
Aluminum	NA	NA	14,800		*10*	12,700		*10*	12,900		*10*	14,000		*10*	14,700		*10*	16,300		*10*
Antimony	NA	NA	3.5	*U*	*1*	3.9	*U*	*1*	3.5	*U*	*1*	4.8	*U*	*1*	4	*U*	*1*	4	*U*	*1*
Arsenic	13	16	5.22		*1*	8.17		*1*	4.42		*1*	5.43		*1*	4.78		*1*	5.33		*1*
Barium	410	410	44.8		*1*	717		*1*	57.4		*1*	161		*1*	70.3		*1*	62.7		*1*
Beryllium	4.4	43	0.73		*1*	0.51		*1*	0.53		*1*	0.53		*1*	0.55		*1*	0.82		*1*
Cadmium	2.5	2.5	0.46		*1*	1.12		*1*	0.35	*U*	*1*	0.65		*1*	0.4	*U*	*1*	0.49		*1*
Calcium	NA	NA	27,300		*10*	18,700		*10*	1,390		*1*	6,740		*1*	1,160		*1*	29,500		*10*
Chromium	30	110	18.2		*1*	25.2		*1*	16.4		*1*	16.4		*1*	15.8		*1*	20.3		*1*
Chromium (+6)	1	1	0.38	*U*	*1*	0.48	*U*	*1*	0.43	*U*	*1*	5.8	*U*	*10*	0.4	*U*	*1*	0.4	*U*	*1*
Cobalt	NA	NA	12.2		*1*	8.86		*1*	9.12		*1*	8.68		*1*	9.16		*1*	14.7		*1*
Copper	50	280	46.1		*1*	40.3		*1*	25.2		*1*	32.9		*1*	25.2		*1*	36.8		*1*
Iron	NA	NA	30,700		*1*	23,400		*1*	24,500		*1*	21,000		*1*	24,000		*1*	32,800		*1*
Lead	63	400	17.2		*1*	5,670		*10*	102		*1*	697		*1*	129		*1*	15.6		*1*
Magnesium	NA	NA	6,990		*1*	6,460		*1*	5,280		*1*	4,790		*1*	4,760		*1*	6,900		*1*
Manganese	1,600	2,000	435		*1*	582		*1*	577		*1*	550		*1*	508		*1*	644		*1*
Mercury	0.18	0.3	0.082	*U*	*1*	0.833		*1*	0.086	*U*	*1*	1.01		*1*	0.157		*1*	0.083	*U*	*1*
Nickel	30	320	26.9		*1*	22.5		*1*	21.5		*1*	24.1		*1*	20.1		*1*	29.5		*1*
Potassium	NA	NA	1,890		*10*	1,430		*10*	1,770		*10*	1,590		*10*	1,570		*10*	2,230		*10*
Selenium	3.9	110	1.4	*U*	*1*	1.5	*U*	*1*	1.4	*U*	*1*	1.9	*U*	*1*	1.6	*U*	*1*	1.6	*U*	*1*
Silver	2	110	0.35	*U*	*1*	0.39	*U*	*1*	0.35	*U*	*1*	0.48	*U*	*1*	0.4	*U*	*1*	0.4	*U*	*1*
Sodium	NA	NA	354		*1*	123		*1*	253		*1*	70		*1*	41		*1*	225		*1*
Thallium	NA	NA	1.4	*U*	*1*	1.5	*U*	*1*	1.4	*U*	*1*	1.9	*U*	*1*	1.6	*U*	*1*	1.6	*U*	*1*
Vanadium	NA	NA	22.1		*1*	36.3		*1*	19.7		*1*	34.5		*1*	22.2		*1*	23.9		*1*
Zinc	109	6,600	115		*1*	777		*1*	74.6		*1*	275		*1*	79.1		*1*	94.1		*1*
Cyanide (total)	2.3	13	0.54	*U*	*1*	0.81		*1*	0.57	*U*	*1*	0.72	*U*	*1*	0.57	*U*	*1*	0.56	*U*	*1*

value ≤ UU SCO
value > UU SCO
value > RRU SCO

Q = Laboratory Qualifier DL = Dilution NA = not available (addtional flags: B-in blank, D-diluted, E-estimated, J-approximate)

Table 4: TAL Metals in Soil

All data in mg/Kg (ppm)		Sample	2SB-07 SURF			2SB-07 10-15			2SB-08 SURF			2SB-08 8-10			2SB-08 10-12			2SB-09 SURF		
U= Not Detected ≥ value		Date	2025-10-02			2025-10-02			2025-10-02			2025-10-02			2025-10-02			2025-10-02		
Metals (6010/7473)	**UU SCO**	**RRU SCO**	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL
Aluminum	NA	NA	14,100		*10*	14,600		*10*	13,700		*10*	12,600		*10*	12,000		*10*	12,500		*10*
Antimony	NA	NA	4	*U*	*1*	3.8	*U*	*1*	3.4	*U*	*1*	3.6	*U*	*1*	4.1	*U*	*1*	3.9	*U*	*1*
Arsenic	13	16	6.92		*1*	5.66		*1*	8.27		*1*	4.71		*1*	5		*1*	5.72		*1*
Barium	410	410	286		*1*	95.4		*1*	337		*1*	54.8		*1*	104		*1*	189		*1*
Beryllium	4.4	43	0.62		*1*	0.73		*1*	0.59		*1*	0.66		*1*	0.61		*1*	0.56		*1*
Cadmium	2.5	2.5	0.65		*1*	0.5		*1*	1.31		*1*	0.57		*1*	0.55		*1*	0.67		*1*
Calcium	NA	NA	4,770		*1*	24,600		*10*	5,040		*1*	21,100		*10*	17,400		*10*	4,160		*1*
Chromium	30	110	18.7		*1*	27.6		*1*	21.3		*1*	18.3		*1*	28.9		*1*	20		*1*
Chromium (+6)	1	1	0.39	*U*	*1*	0.41	*U*	*1*	0.42	*U*	*1*	0.43	*U*	*1*	0.4	*U*	*1*	0.49	*U*	*1*
Cobalt	NA	NA	10.4		*1*	11.1		*1*	10.4		*1*	12.9		*1*	10.6		*1*	9.3		*1*
Copper	50	280	36.2		*1*	34.5		*1*	39.3		*1*	29.2		*1*	31		*1*	30		*1*
Iron	NA	NA	25,200		*1*	31,100		*1*	32,700		*1*	29,200		*1*	25,400		*1*	21,400		*1*
Lead	63	400	891		*1*	215		*1*	2,260		*1*	14.6		*1*	308		*1*	933		*1*
Magnesium	NA	NA	5,550		*1*	6,760		*1*	5,530		*1*	6,870		*1*	5,610		*1*	4,180		*1*
Manganese	1,600	2,000	659		*1*	680		*1*	590		*1*	968		*1*	650		*1*	609		*1*
Mercury	0.18	0.3	0.82		*2*	0.08		*2*	1.95		*5*	0.03	*J*	*2*	0.4		*2*	0.76		*2*
Nickel	30	320	23.5		*1*	26.8		*1*	26.9		*1*	26		*1*	23.2		*1*	22.9		*1*
Potassium	NA	NA	1,350		*10*	1,780		*10*	1,260		*10*	1,390		*10*	1,720		*10*	1,300		*10*
Selenium	3.9	110	1.6	*U*	*1*	1.5	*U*	*1*	2	*U*	*1*	1.4	*U*	*1*	1.6	*U*	*1*	1.5	*J*	*1*
Silver	2	110	0.4	*U*	*1*	0.38	*U*	*1*	0.34	*U*	*1*	0.36	*U*	*1*	0.41	*U*	*1*	0.39	*U*	*1*
Sodium	NA	NA	77		*1*	233		*1*	73		*1*	191		*1*	268		*1*	52		*1*
Thallium	NA	NA	1.6	*U*	*1*	1.5	*U*	*1*	1.4	*U*	*1*	1.4	*U*	*1*	1.6	*U*	*1*	1.5	*U*	*1*
Vanadium	NA	NA	29.7		*1*	23.7		*1*	37.6		*1*	19.8		*1*	22.5		*1*	33.3		*1*
Zinc	109	6,600	227		*1*	123		*1*	535		*1*	88.9		*1*	129		*1*	234		*1*
Cyanide (total)	2.3	13	0.57	*U*	*1*	0.57	*U*	*1*	3.21		*1*	0.57	*U*	*1*	0.58	*U*	*1*	1.01		*1*

value ≤ UU SCO
value > UU SCO
value > RRU SCO

Q = Laboratory Qualifier DL = Dilution NA = not available (addtional flags: B-in blank, D-diluted, E-estimated, J-approximate)

Table 4: TAL Metals in Soil

All data in mg/Kg (ppm)		Sample	2SB-09 10-12.5			2SB-09 12.5-15			2SB-10 SURF			2SB-10 5-7			2SB-10 10-12			2SB-11 SURF		
U= Not Detected ≥ value		Date	2025-10-02			2025-10-02			2025-10-02			2025-10-02			2025-10-02			2025-10-02		
Metals (6010/7473)	**UU SCO**	**RRU SCO**	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL
Aluminum	NA	NA	14,600		*10*	12,700		*10*	14,400		*10*	15,300		*10*	12,300		*10*	14,100		*10*
Antimony	NA	NA	3.3	*U*	*1*	3.6	*U*	*1*	3.8	*U*	*1*	3.6	*U*	*1*	3.6	*U*	*1*	4.1	*U*	*1*
Arsenic	13	16	5.32		*1*	4.59		*1*	9.01		*1*	4.95		*1*	6.77		*1*	8.56		*1*
Barium	410	410	55.8		*1*	44.7		*1*	595		*1*	57.4		*1*	46.5		*1*	179		*1*
Beryllium	4.4	43	0.79		*1*	0.73		*1*	0.58		*1*	0.8		*1*	0.58		*1*	0.73		*1*
Cadmium	2.5	2.5	0.6		*1*	0.49		*1*	1.17		*1*	0.59		*1*	1.25		*1*	0.71		*1*
Calcium	NA	NA	2,080		*1*	1,910		*1*	21,200		*10*	2,360		*1*	52,300		*10*	5,040		*1*
Chromium	30	110	21.3		*1*	18.1		*1*	20.5		*1*	20		*1*	15.9		*1*	20.4		*1*
Chromium (+6)	1	1	0.38	*U*	*1*	0.43	*U*	*1*	0.4	*U*	*1*	0.4	*U*	*1*	0.4	*U*	*1*	0.47	*U*	*1*
Cobalt	NA	NA	13.4		*1*	11.9		*1*	9.23		*1*	12.6		*1*	12.4		*1*	10		*1*
Copper	50	280	41.3		*1*	36.3		*1*	43.1		*1*	38.8		*1*	56.9		*1*	51.2		*1*
Iron	NA	NA	33,000		*1*	30,300		*1*	24,100		*1*	34,700		*1*	29,200		*1*	25,200		*1*
Lead	63	400	18.3		*1*	14.5		*1*	3,170		*1*	33		*1*	33.6		*1*	899		*1*
Magnesium	NA	NA	5,500		*1*	5,340		*1*	6,070		*1*	5,920		*1*	8,650		*1*	4,530		*1*
Manganese	1,600	2,000	852		*1*	534		*1*	567		*1*	805		*1*	965		*1*	591		*1*
Mercury	0.18	0.3	0.04		*2*	0.03	*U*	*2*	1.23		*2*	0.02	*J*	*2*	0.03	*J*	*2*	2.03		*5*
Nickel	30	320	30.5		*1*	26.1		*1*	20.2		*1*	28.3		*1*	41.4		*1*	23.7		*1*
Potassium	NA	NA	1,630		*10*	1,450		*10*	1,520		*10*	1,700		*10*	1,540		*10*	1,790		*10*
Selenium	3.9	110	1.3	*U*	*1*	1.4	*U*	*1*	1.5	*U*	*1*	1.4	*U*	*1*	1.4	*U*	*1*	1.6	*U*	*1*
Silver	2	110	0.33	*U*	*1*	0.36	*U*	*1*	0.38	*U*	*1*	0.36	*U*	*1*	0.36	*U*	*1*	0.51		*1*
Sodium	NA	NA	118		*1*	138		*1*	176		*1*	339		*1*	193		*1*	75		*1*
Thallium	NA	NA	1.3	*U*	*1*	1.4	*U*	*1*	1.5	*U*	*1*	1.4	*U*	*1*	1.4	*U*	*1*	1.6	*U*	*1*
Vanadium	NA	NA	23.4		*1*	22.1		*1*	24.3		*1*	22		*1*	22.7		*1*	30.1		*1*
Zinc	109	6,600	105		*1*	99.6		*1*	529		*10*	105		*1*	470		*10*	256		*1*
Cyanide (total)	2.3	13	0.55	*U*	*1*	0.56	*U*	*1*	0.57	*U*	*1*	0.55	*U*	*1*	0.53	*U*	*1*	0.62	*U*	*1*

value ≤ UU SCO
value > UU SCO
value > RRU SCO

Q = Laboratory Qualifier DL = Dilution NA = not available (addtional flags: B-in blank, D-diluted, E-estimated, J-approximate)

Table 4: TAL Metals in Soil

All data in mg/Kg (ppm)		Sample	2SB-11 0-5			2SB-11 13-15			2SB-12 SURF			2SB-12 4-6			2SB-12 8-10			2SB-13 SURF		
U= Not Detected ≥ value		Date	2025-10-02			2025-10-02			2025-10-02			2025-10-02			2025-10-02			2025-10-02		
Metals (6010/7473)	**UU SCO**	**RRU SCO**	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL
Aluminum	NA	NA	15,700		*10*	12,800		*10*	12,700		*10*	11,600		*10*	19,300		*10*	13,000		*10*
Antimony	NA	NA	4.1	*U*	*1*	3.2	*U*	*1*	4.5	*U*	*1*	3.6	*U*	*1*	3.5	*U*	*1*	3.5	*U*	*1*
Arsenic	13	16	7.4		*1*	4.54		*1*	7.38		*1*	14.2		*1*	8.37		*1*	7.87		*1*
Barium	410	410	156		*1*	49.8		*1*	226		*1*	352		*1*	89.1		*1*	525		*1*
Beryllium	4.4	43	0.66		*1*	0.68		*1*	0.61		*1*	0.86		*1*	1.12		*1*	0.57		*1*
Cadmium	2.5	2.5	0.44		*1*	0.48		*1*	0.72		*1*	1.15		*1*	0.59		*1*	1.18		*1*
Calcium	NA	NA	2,120		*1*	24,800		*10*	7,100		*1*	8,080		*1*	5,850		*1*	21,400		*10*
Chromium	30	110	20.1		*1*	16.6		*1*	18.8		*1*	24.4		*1*	24.6		*1*	29.6		*1*
Chromium (+6)	1	1	0.41	*U*	*1*	0.42	*U*	*1*	1.3	*U*	*1*	0.44	*U*	*1*	0.41	*U*	*1*	0.44	*U*	*1*
Cobalt	NA	NA	11		*1*	11		*1*	10.2		*1*	10.1		*1*	15.6		*1*	9.75		*1*
Copper	50	280	49.3		*1*	35.9		*1*	51.2		*1*	405		*1*	52.9		*1*	81.1		*1*
Iron	NA	NA	27,600		*1*	29,200		*1*	22,900		*1*	20,500		*1*	40,600		*10*	24,700		*1*
Lead	63	400	558		*1*	11		*1*	940		*1*	1,480		*1*	21.8		*1*	2,130		*1*
Magnesium	NA	NA	4,790		*1*	7,530		*1*	4,340		*1*	4,180		*1*	7,790		*1*	5,940		*1*
Manganese	1,600	2,000	693		*1*	482		*1*	663		*1*	705		*1*	423		*1*	633		*1*
Mercury	0.18	0.3	2.69		*5*	0.02	*J*	*2*	3.42		*10*	1.74		*5*	0.13		*2*	1.24		*5*
Nickel	30	320	23		*1*	24.2		*1*	23.2		*1*	23.7		*1*	33.7		*1*	24.2		*1*
Potassium	NA	NA	1,610		*10*	1,510		*10*	1,750		*10*	1,210		*10*	2,400		*10*	1,550		*10*
Selenium	3.9	110	1.6	*U*	*1*	1.3	*U*	*1*	1.8	*U*	*1*	1.4	*U*	*1*	1.4	*U*	*1*	1.4	*U*	*1*
Silver	2	110	0.48		*1*	0.32	*U*	*1*	0.45	*U*	*1*	0.72		*1*	0.35	*U*	*1*	0.49		*1*
Sodium	NA	NA	76		*1*	149		*1*	88		*1*	151		*1*	71		*1*	157		*1*
Thallium	NA	NA	1.6	*U*	*1*	1.3	*U*	*1*	1.8	*U*	*1*	1.4	*U*	*1*	1.4	*U*	*1*	1.4	*U*	*1*
Vanadium	NA	NA	23.1		*1*	19.3		*1*	29.7		*1*	35.3		*1*	29.4		*1*	40.8		*1*
Zinc	109	6,600	124		*1*	85.3		*1*	319		*1*	368		*1*	135		*1*	524		*10*
Cyanide (total)	2.3	13	0.57	*U*	*1*	0.55	*U*	*1*	0.68	*U*	*1*	0.3	*J*	*1*	0.55	*U*	*1*	0.59	*U*	*1*

value ≤ UU SCO
value > UU SCO
value > RRU SCO

Q = Laboratory Qualifier DL = Dilution NA = not available (addtional flags: B-in blank, D-diluted, E-estimated, J-approximate)

Table 4: TAL Metals in Soil

All data in mg/Kg (ppm)		**Sample**	**2SB-13 0-5**			**2SB-13 8-10**			**2SB-14 SURF**			**2SB-14 0-5**			**2SB-14 10-12.5**			**2SB-15 SURF**		
U= Not Detected ≥ value		Date	2025-10-02			2025-10-02			2025-10-02			2025-10-02			2025-10-02			2025-10-03		
Metals (6010/7473)	**UU SCO**	**RRU SCO**	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL
Aluminum	NA	NA	16,900		*10*	13,300		*10*	12,700		*10*	15,500		*10*	14,200		*10*	13,300		*10*
Antimony	NA	NA	3.7	*U*	*1*	3.9	*U*	*1*	3.4	*U*	*1*	3.1	*U*	*1*	3.4	*U*	*1*	3.8	*U*	*1*
Arsenic	13	16	8.27		*1*	4.28		*1*	5.66		*1*	4.28		*1*	4.05		*1*	5.65		*1*
Barium	410	410	73.1		*1*	53.3		*1*	178		*1*	78.1		*1*	63.7		*1*	205		*1*
Beryllium	4.4	43	0.9		*1*	0.65		*1*	0.57		*1*	0.68		*1*	0.61		*1*	0.63		*1*
Cadmium	2.5	2.5	0.56		*1*	0.44		*1*	0.64		*1*	0.41		*1*	0.6		*1*	0.62		*1*
Calcium	NA	NA	1,880		*1*	56,700		*10*	5,040		*1*	5,530		*1*	1,730		*1*	14,400		*10*
Chromium	30	110	23.8		*1*	17.1		*1*	16.6		*1*	17.5		*1*	16.9		*1*	19.1		*1*
Chromium (+6)	1	1	0.4	*U*	*1*	0.43	*U*	*1*	0.41	*U*	*1*	0.39	*U*	*1*	0.41	*U*	*1*	0.4	*U*	*1*
Cobalt	NA	NA	14.2		*1*	9.83		*1*	8.49		*1*	10.1		*1*	12		*1*	10		*1*
Copper	50	280	44.6		*1*	30		*1*	43.8		*1*	30.9		*1*	34.6		*1*	36.8		*1*
Iron	NA	NA	37,200		*1*	27,100		*1*	21,600		*1*	27,300		*1*	33,000		*1*	24,700		*1*
Lead	63	400	78.1		*1*	11.9		*1*	670		*1*	70.9		*1*	12.3		*1*	667		*1*
Magnesium	NA	NA	6,020		*1*	24,300		*1*	4,140		*1*	4,770		*1*	6,340		*1*	7,090		*1*
Manganese	1,600	2,000	633		*1*	488		*1*	624		*1*	665		*1*	1,140		*1*	569		*1*
Mercury	0.18	0.3	0.66		*2*	0.03	*J*	*2*	1.18		*5*	0.31		*2*	0.03	*U*	*2*	0.52		*2*
Nickel	30	320	28.6		*1*	22.8		*1*	21.1		*1*	21.3		*1*	28.3		*1*	25.4		*1*
Potassium	NA	NA	2,010		*10*	2,010		*10*	1,460		*10*	1,190		*10*	1,370		*10*	1,700		*10*
Selenium	3.9	110	1.5	*U*	*1*	1.5	*U*	*1*	1.4	*U*	*1*	1.3	*U*	*1*	1.4	*U*	*1*	1.5	*U*	*1*
Silver	2	110	0.37	*U*	*1*	0.39	*U*	*1*	0.34	*U*	*1*	0.31	*U*	*1*	0.34	*U*	*1*	0.38	*U*	*1*
Sodium	NA	NA	55		*1*	132		*1*	74		*1*	44		*1*	54		*1*	118		*1*
Thallium	NA	NA	1.5	*U*	*1*	1.5	*U*	*1*	1.4	*U*	*1*	1.3	*U*	*1*	1.4	*U*	*1*	1.5	*U*	*1*
Vanadium	NA	NA	28.8		*1*	19.2		*1*	27.5		*1*	21.1		*1*	19.3		*1*	32		*1*
Zinc	109	6,600	101		*1*	78		*1*	226		*1*	81.8		*1*	90.8		*1*	284		*1*
Cyanide (total)	2.3	13	0.55	*U*	*1*	0.55	*U*	*1*	0.55	*U*	*1*	0.53	*U*	*1*	0.55	*U*	*1*	0.55	*U*	*1*

value ≤ UU SCO
value > UU SCO
value > RRU SCO

Q = Laboratory Qualifier DL = Dilution NA = not available (addtional flags: B-in blank, D-diluted, E-estimated, J-approximate)

Table 4: TAL Metals in Soil

All data in mg/Kg (ppm)		Sample	2SB-15 0-5			DUP-20251003			2SB-15 10-12			2SB-16 SURF			2SB-16 10-12			2SB-17 SURF		
U= Not Detected ≥ value		Date	2025-10-03			2025-10-03			2025-10-03			2025-10-03			2025-10-03			2025-10-03		
Metals (6010/7473)	**UU SCO**	**RRU SCO**	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL
Aluminum	NA	NA	16,200		*10*	15,600		*10*	16,100		*10*	10,000		*10*	14,600		*10*	13,800		*10*
Antimony	NA	NA	3.3	*U*	*1*	3.6	*U*	*1*	3.2	*U*	*1*	3.5	*U*	*1*	3.8	*U*	*1*	3.5	*U*	*1*
Arsenic	13	16	3.33		*1*	7.03		*1*	6.05		*1*	5.94		*1*	4.95		*1*	4.96		*1*
Barium	410	410	81.4		*1*	278		*1*	67.5		*1*	187		*1*	98.8		*1*	368		*1*
Beryllium	4.4	43	0.63		*1*	0.72		*1*	0.89		*1*	0.47		*1*	0.66		*1*	0.58		*1*
Cadmium	2.5	2.5	0.33	*U*	*1*	0.5		*1*	0.37		*1*	0.49		*1*	0.38	*U*	*1*	0.46		*1*
Calcium	NA	NA	1,110		*1*	25,300		*10*	9,910		*1*	4,790		*1*	31,500		*10*	47,700		*10*
Chromium	30	110	16.3		*1*	20.7		*1*	21.1		*1*	13.2		*1*	19.3		*1*	20.4		*1*
Chromium (+6)	1	1	0.4	*U*	*1*	0.4	*U*	*1*	0.37	*U*	*1*	0.39	*U*	*1*	0.4	*U*	*1*	0.41	*U*	*1*
Cobalt	NA	NA	10.3		*1*	10		*1*	15		*1*	6.31		*1*	9.58		*1*	8.56		*1*
Copper	50	280	19.4		*1*	61.9		*1*	42.4		*1*	29.3		*1*	29.9		*1*	27.2		*1*
Iron	NA	NA	23,600		*1*	25,700		*1*	33,300		*1*	16,300		*1*	28,000		*1*	23,100		*1*
Lead	63	400	66.5		*1*	668		*1*	16.9		*1*	500		*1*	105		*1*	1,120		*1*
Magnesium	NA	NA	4,000		*1*	5,800		*1*	6,000		*1*	3,300		*1*	7,980		*1*	5,820		*1*
Manganese	1,600	2,000	838		*1*	624		*1*	648		*1*	548		*1*	594		*1*	600		*1*
Mercury	0.18	0.3	0.23		*2*	3.47		*20*	0.03	*U*	*2*	0.36		*2*	0.06		*2*	0.24		*2*
Nickel	30	320	18.3		*1*	22.2		*1*	31.8		*1*	16.7		*1*	23.9		*1*	18.6		*1*
Potassium	NA	NA	1,270		*10*	1,770		*10*	2,010		*10*	1,180		*10*	2,160		*10*	1,780		*10*
Selenium	3.9	110	1.3	*U*	*1*	1.4	*U*	*1*	1.3	*U*	*1*	2	*U*	*1*	1.5	*U*	*1*	1.4	*U*	*1*
Silver	2	110	0.33	*U*	*1*	0.36	*U*	*1*	0.32	*U*	*1*	0.35	*U*	*1*	0.38	*U*	*1*	0.35	*U*	*1*
Sodium	NA	NA	68		*1*	159		*1*	157		*1*	50		*1*	154		*1*	283		*1*
Thallium	NA	NA	1.3	*U*	*1*	1.4	*U*	*1*	1.3	*U*	*1*	1.4	*U*	*1*	1.5	*U*	*1*	1.4	*U*	*1*
Vanadium	NA	NA	24.4		*1*	28		*1*	22.7		*1*	24.1		*1*	22.3		*1*	21.9		*1*
Zinc	109	6,600	80.3		*1*	335		*1*	91.4		*1*	238		*1*	101		*1*	206		*1*
Cyanide (total)	2.3	13	0.53	*U*	*1*	0.53	*U*	*1*	0.54	*U*	*1*	0.55	*U*	*1*	0.53	*U*	*1*	0.54	*U*	*1*

value ≤ UU SCO
value > UU SCO
value > RRU SCO

Q = Laboratory Qualifier DL = Dilution NA = not available (addtional flags: B-in blank, D-diluted, E-estimated, J-approximate)

Table 4: TAL Metals in Soil

All data in mg/Kg (ppm)		Sample	2SB-17 0-5			2SB-17 10-12			2SB-18 SURF			2SB-18 10-15			2SB-19 SURF			2SB-19 0-5		
U= Not Detected ≥ value		Date	2025-10-03			2025-10-03			2025-10-03			2025-10-03			2025-10-03			2025-10-03		
Metals (6010/7473)	**UU SCO**	**RRU SCO**	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL
Aluminum	NA	NA	16,700		*10*	13,000		*10*	12,200		*10*	14,000		*10*	12,600		*10*	17,100		*10*
Antimony	NA	NA	3.6	*U*	*1*	3.5	*U*	*1*	3.9	*U*	*1*	3.4	*U*	*1*	3.7	*U*	*1*	3.2	*U*	*1*
Arsenic	13	16	5.28		*1*	4.44		*1*	6.16		*1*	4.52		*1*	6.03		*1*	7.88		*1*
Barium	410	410	86.8		*1*	90.2		*1*	383		*1*	57.9		*1*	188		*1*	106		*1*
Beryllium	4.4	43	0.83		*1*	0.66		*1*	0.53		*1*	0.63		*1*	0.62		*1*	0.96		*1*
Cadmium	2.5	2.5	0.36	*U*	*1*	0.35	*U*	*1*	0.73		*1*	0.34	*U*	*1*	0.58		*1*	0.41		*1*
Calcium	NA	NA	1,710		*1*	10,000		*1*	35,400		*10*	20,700		*10*	5,640		*1*	2,530		*1*
Chromium	30	110	20.9		*1*	27.9		*1*	17.8		*1*	15.2		*1*	17.8		*1*	23.4		*1*
Chromium (+6)	1	1	0.41	*U*	*1*	0.36	*U*	*1*	0.42	*U*	*1*	0.4	*U*	*1*	0.43	*U*	*1*	0.41	*U*	*1*
Cobalt	NA	NA	12.8		*1*	11.8		*1*	9.43		*1*	9.97		*1*	9.65		*1*	13.7		*1*
Copper	50	280	32.6		*1*	26.3		*1*	44.1		*1*	25.7		*1*	37.7		*1*	56		*1*
Iron	NA	NA	31,000		*1*	29,300		*1*	23,500		*1*	29,300		*1*	22,600		*1*	37,200		*1*
Lead	63	400	41.3		*1*	39.3		*1*	1,640		*1*	13.7		*1*	770		*1*	177		*1*
Magnesium	NA	NA	5,360		*1*	5,690		*1*	7,110		*1*	9,240		*1*	4,680		*1*	5,880		*1*
Manganese	1,600	2,000	684		*1*	2,170		*1*	615		*1*	616		*1*	644		*1*	497		*1*
Mercury	0.18	0.3	0.05		*2*	0.06		*2*	0.49		*2*	0.03	*U*	*2*	0.51		*2*	0.41		*2*
Nickel	30	320	26.9		*1*	22.9		*1*	22.1		*1*	23.9		*1*	22.8		*1*	29.5		*1*
Potassium	NA	NA	1,910		*10*	2,020		*10*	1,460		*10*	1,490		*10*	2,010		*10*	1,730		*10*
Selenium	3.9	110	1.4	*U*	*1*	1.4	*U*	*1*	1.5	*U*	*1*	1.4	*U*	*1*	1.5	*U*	*1*	1.3	*U*	*1*
Silver	2	110	0.36	*U*	*1*	0.35	*U*	*1*	0.39	*U*	*1*	0.34	*U*	*1*	0.37	*U*	*1*	0.32	*U*	*1*
Sodium	NA	NA	92		*1*	165		*1*	163		*1*	124		*1*	106		*1*	157		*1*
Thallium	NA	NA	1.4	*U*	*1*	1.4	*U*	*1*	1.5	*U*	*1*	1.4	*U*	*1*	1.5	*U*	*1*	1.3	*U*	*1*
Vanadium	NA	NA	25.4		*1*	20.8		*1*	26.7		*1*	20.9		*1*	31.1		*1*	28.5		*1*
Zinc	109	6,600	103		*1*	71.9		*1*	443		*1*	62.8		*1*	266		*1*	151		*1*
Cyanide (total)	2.3	13	0.54	*U*	*1*	0.53	*U*	*1*	0.55	*U*	*1*	0.54	*U*	*1*	0.55	*U*	*1*	0.54	*U*	*1*

value ≤ UU SCO
value > UU SCO
value > RRU SCO

Q = Laboratory Qualifier DL = Dilution NA = not available (addtional flags: B-in blank, D-diluted, E-estimated, J-approximate)

Table 4: TAL Metals in Soil

All data in mg/Kg (ppm)		Sample	DUP2-20251003			2SB-19 10-13			2SB-20 SURF			2SB-20 0-5			2SB-21 Surf			2SB-21 0-2		
U= Not Detected ≥ value		Date	2025-10-03			2025-10-03			2025-10-03			2025-10-03			2026-03-06			2026-03-06		
Metals (6010/7473)	**UU SCO**	**RRU SCO**	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL
Aluminum	NA	NA	12,300		*10*	12,500		*10*	10,900		*10*	15,200		*10*	12,100		*10*	18,700		*10*
Antimony	NA	NA	3.2	*U*	*1*	3.1	*U*	*1*	3.8	*U*	*1*	3.6	*U*	*1*	4.4	*U*	*1*	3.5	*U*	*1*
Arsenic	13	16	3.75		*1*	3.99		*1*	5.9		*1*	6.28		*1*	6.4		*1*	7.23		*1*
Barium	410	410	57.6		*1*	56.1		*1*	232		*1*	267		*1*	184		*1*	139		*10*
Beryllium	4.4	43	0.63		*1*	0.65		*1*	0.52		*1*	0.69		*1*	0.55		*1*	0.95		*1*
Cadmium	2.5	2.5	0.32	*U*	*1*	0.31	*U*	*1*	0.64		*1*	0.51		*1*	1.07		*1*	0.57		*1*
Calcium	NA	NA	27,300		*10*	22,600		*10*	6,290		*1*	6,630		*1*	30,600		*10*	3,420		*1*
Chromium	30	110	16		*1*	15.2		*1*	16.1		*1*	20.6		*1*	24.5		*1*	25.9		*1*
Chromium (+6)	1	1	0.38	*U*	*1*	0.37	*U*	*1*	0.43	*U*	*1*	0.36	*U*	*1*	1	*U*	*1*	0.39	*U*	*1*
Cobalt	NA	NA	9.87		*1*	10.3		*1*	7.47		*1*	11.6		*1*	9.63		*1*	13.7		*1*
Copper	50	280	41.4		*1*	26.5		*1*	31.5		*1*	40		*1*	54.7		*1*	28.2		*1*
Iron	NA	NA	23,200		*1*	26,400		*1*	19,200		*1*	27,200		*1*	26,700		*1*	36,800		*1*
Lead	63	400	44.8		*1*	14.9		*1*	1,050		*1*	1,470		*1*	328		*1*	47.5		*1*
Magnesium	NA	NA	6,580		*1*	6,900		*1*	4,090		*1*	5,500		*1*	12,300		*1*	6,060		*1*
Manganese	1,600	2,000	548		*1*	584		*1*	573		*1*	615		*1*	619		*1*	1,460		*1*
Mercury	0.18	0.3	0.05		*2*	0.03	*U*	*2*	0.41		*2*	0.51		*2*	0.286		*1*	0.0873		*1*
Nickel	30	320	20.8		*1*	21.9		*1*	20		*1*	24.7		*1*	33		*1*	32.5		*1*
Potassium	NA	NA	1,930		*10*	1,690		*10*	1,520		*10*	1,790		*10*	1,380		*10*	1,860		*10*
Selenium	3.9	110	1.3	*U*	*1*	1.2	*U*	*1*	1.5	*U*	*1*	1.4	*U*	*1*	1.8	*U*	*1*	1.4	*U*	*1*
Silver	2	110	0.32	*U*	*1*	0.31	*U*	*1*	0.38	*U*	*1*	0.36	*U*	*1*	0.44	*U*	*1*	0.35	*U*	*1*
Sodium	NA	NA	255		*1*	250		*1*	107		*1*	127		*1*	197		*1*	107		*1*
Thallium	NA	NA	1.3	*U*	*1*	1.2	*U*	*1*	1.5	*U*	*1*	1.4	*U*	*1*	4	*U*	*1*	3.1	*U*	*1*
Vanadium	NA	NA	19.2		*1*	18.5		*1*	30.5		*1*	27.5		*1*	42.7		*1*	30.3		*1*
Zinc	109	6,600	76.1		*1*	65.7		*1*	337		*1*	263		*1*	487		*1*	116		*1*
Cyanide (total)	2.3	13	0.53	*U*	*1*	0.53	*U*	*1*	0.56	*U*	*1*	0.53	*U*	*1*	0.69	*U*	*1*	0.56	*U*	*1*

value ≤ UU SCO
value > UU SCO
value > RRU SCO

Q = Laboratory Qualifier DL = Dilution NA = not available (addtional flags: B-in blank, D-diluted, E-estimated, J-approximate)

Table 4: TAL Metals in Soil

All data in mg/Kg (ppm)		Sample	2SB-21 3-5			2SB-21 10-12			2SB-22 Surf			2SB-22 0-2			2SB-22 3-5			2SB-22 5-7		
U= Not Detected ≥ value		Date	2026-03-06			2026-03-06			2026-03-06			2026-03-06			2026-03-06			2026-03-06		
Metals (6010/7473)	**UU SCO**	**RRU SCO**	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL
Aluminum	NA	NA	17,400		*10*	14,800		*10*	14,100		*10*	18,200		*10*	16,700		*10*	17,800		*10*
Antimony	NA	NA	3.3	*U*	*1*	3.4	*U*	*1*	3.2	*U*	*1*	3.7	*U*	*1*	3.7	*U*	*1*	3.7	*U*	*1*
Arsenic	13	16	5.07		*1*	5.27		*1*	7.39		*1*	6.31		*1*	6.09		*1*	6.71		*1*
Barium	410	410	89.1		*1*	77.5		*1*	59.6		*1*	81.2		*1*	82		*1*	90.6		*1*
Beryllium	4.4	43	0.92		*1*	0.83		*1*	0.73		*1*	0.97		*1*	1		*1*	1.01		*1*
Cadmium	2.5	2.5	0.68		*1*	0.44		*1*	0.38		*1*	0.53		*1*	0.57		*1*	0.6		*1*
Calcium	NA	NA	9,870		*1*	21,900		*10*	63,100		*10*	6,530		*1*	2,380		*1*	7,120		*1*
Chromium	30	110	25.1		*1*	24.1		*1*	19.8		*1*	26.3		*1*	24.5		*1*	28.7		*1*
Chromium (+6)	1	1	0.41	*U*	*1*	0.41	*U*	*1*	0.41	*U*	*1*	0.42	*U*	*1*	0.38	*U*	*1*	0.39	*U*	*1*
Cobalt	NA	NA	15.2		*1*	13.5		*1*	13.5		*1*	14.5		*1*	15.8		*1*	16.8		*1*
Copper	50	280	48.8		*1*	35.9		*1*	26.5		*1*	41.5		*1*	47.1		*1*	50		*1*
Iron	NA	NA	36,400		*1*	30,200		*1*	25,700		*1*	37,100		*1*	36,200		*1*	37,300		*1*
Lead	63	400	40		*1*	31.3		*1*	17.4		*1*	16.5		*1*	21.2		*1*	22.2		*1*
Magnesium	NA	NA	7,760		*1*	6,830		*1*	33,800		*1*	8,390		*1*	6,010		*1*	8,350		*1*
Manganese	1,600	2,000	676		*1*	697		*1*	487		*1*	477		*1*	1,040		*1*	970		*1*
Mercury	0.18	0.3	0.085	*U*	*1*	0.0863		*1*	0.03	*U*	*2*	0.03	*J*	*2*	0.03	*U*	*2*	0.02	*J*	*2*
Nickel	30	320	33.1		*1*	28.4		*1*	26		*1*	33.9		*1*	34.2		*1*	34.5		*1*
Potassium	NA	NA	1,740		*10*	1,760		*10*	1,560		*10*	1,930		*10*	1,790		*10*	1,990		*10*
Selenium	3.9	110	1.3	*U*	*1*	1.4	*U*	*1*	1.3	*U*	*1*	1.5	*U*	*1*	1.5	*U*	*1*	1.5	*U*	*1*
Silver	2	110	0.33	*U*	*1*	0.34	*U*	*1*	0.32	*U*	*1*	0.37	*U*	*1*	0.37	*U*	*1*	0.37	*U*	*1*
Sodium	NA	NA	144		*1*	142		*1*	159		*1*	172		*1*	189		*1*	221		*1*
Thallium	NA	NA	3	*U*	*1*	3.1	*U*	*1*	2.9	*U*	*1*	3.3	*U*	*1*	3.3	*U*	*1*	3.3	*U*	*1*
Vanadium	NA	NA	28.5		*1*	24.1		*1*	27.2		*1*	29.9		*1*	27.6		*1*	29.9		*1*
Zinc	109	6,600	145		*1*	87.1		*1*	82.3		*1*	120		*1*	114		*1*	125		*1*
Cyanide (total)	2.3	13	0.57	*U*	*1*	0.57	*U*	*1*	0.53	*U*	*1*	0.55	*U*	*1*	0.56	*U*	*1*	0.58	*U*	*1*

value ≤ UU SCO
value > UU SCO
value > RRU SCO

Q = Laboratory Qualifier DL = Dilution NA = not available (addtional flags: B-in blank, D-diluted, E-estimated, J-approximate)

Table 4: TAL Metals in Soil

All data in mg/Kg (ppm)		Sample	2SB-23 Surf			2SB-23 0-2			2SB-23 4-6			2SB-23 7-9			2SB-24 Surf			2SB-24 0-2		
U= Not Detected ≥ value		Date	2026-03-06			2026-03-06			2026-03-06			2026-03-06			2026-03-06			2026-03-06		
Metals (6010/7473)	**UU SCO**	**RRU SCO**	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL
Aluminum	NA	NA	9,320		*10*	16,900		*10*	17,900		*10*	17,300		*10*	15,000		*10*	9,650		*10*
Antimony	NA	NA	3.3	*U*	*1*	3.6	*U*	*1*	3.8	*U*	*1*	3.9	*U*	*1*	3.5	*U*	*1*	3.4	*U*	*1*
Arsenic	13	16	6		*1*	7.65		*1*	6.36		*1*	18.8		*1*	5.49		*1*	5.06		*1*
Barium	410	410	19.8		*1*	89		*1*	73.4		*1*	396		*1*	70.4		*1*	51.8		*1*
Beryllium	4.4	43	0.5		*1*	0.98		*1*	1.03		*1*	1.18		*1*	0.58		*1*	0.48		*1*
Cadmium	2.5	2.5	0.33	*U*	*1*	0.74		*1*	0.63		*1*	0.76		*1*	0.7		*1*	0.35		*1*
Calcium	NA	NA	74,200		*10*	20,300		*10*	7,370		*1*	9,820		*1*	8,970		*1*	98,700		*10*
Chromium	30	110	15.4		*1*	24.1		*1*	28.3		*1*	24.7		*1*	20.2		*1*	13.1		*1*
Chromium (+6)	1	1	0.39	*U*	*1*	0.44	*U*	*1*	0.41	*U*	*1*	0.38	*U*	*1*	0.44	*U*	*1*	0.43	*U*	*1*
Cobalt	NA	NA	11.8		*1*	15.8		*1*	14.6		*1*	23.5		*1*	10.1		*1*	7.54		*1*
Copper	50	280	12.7		*1*	52		*1*	49.3		*1*	53		*1*	30.9		*1*	27.2		*1*
Iron	NA	NA	20,200		*1*	33,900		*1*	37,700		*1*	37,200		*1*	26,600		*1*	17,300		*1*
Lead	63	400	13.1		*1*	72.5		*1*	18.6		*1*	16.9		*1*	101		*1*	53.8		*1*
Magnesium	NA	NA	43,500		*10*	11,100		*1*	8,860		*1*	7,120		*1*	8,060		*1*	51,300		*10*
Manganese	1,600	2,000	412		*1*	1,080		*1*	990		*1*	3,030		*1*	703		*1*	500		*1*
Mercury	0.18	0.3	0.03	*U*	*2*	0.1		*2*	0.03		*2*	0.03	*U*	*2*	0.06		*2*	0.14		*2*
Nickel	30	320	27.4		*1*	33.6		*1*	34.9		*1*	38.3		*1*	25.2		*1*	17.1		*1*
Potassium	NA	NA	955		*10*	2,100		*10*	2,200		*10*	1,930		*10*	1,380		*10*	1,310		*10*
Selenium	3.9	110	1.3	*U*	*1*	1.4	*U*	*1*	1.5	*U*	*1*	1.6	*U*	*1*	1.4	*U*	*1*	1.4	*U*	*1*
Silver	2	110	0.33	*U*	*1*	0.36	*U*	*1*	0.38	*U*	*1*	0.39	*U*	*1*	0.35	*U*	*1*	0.34	*U*	*1*
Sodium	NA	NA	177		*1*	246		*1*	183		*1*	152		*1*	99.3		*1*	176		*1*
Thallium	NA	NA	3	*U*	*1*	3.2	*U*	*1*	3.4	*U*	*1*	3.5	*U*	*1*	3.2	*U*	*1*	3.1	*U*	*1*
Vanadium	NA	NA	39.9		*1*	32		*1*	33		*1*	28.1		*1*	27.3		*1*	23.3		*1*
Zinc	109	6,600	52.8		*1*	155		*1*	142		*1*	148		*1*	126		*1*	86.9		*1*
Cyanide (total)	2.3	13	0.27	*J*	*1*	0.56	*U*	*1*	0.56	*U*	*1*	0.56	*U*	*1*	0.57	*U*	*1*	0.56	*U*	*1*

value ≤ UU SCO
value > UU SCO
value > RRU SCO

Q = Laboratory Qualifier DL = Dilution NA = not available (addtional flags: B-in blank, D-diluted, E-estimated, J-approximate)

Table 4: TAL Metals in Soil

All data in mg/Kg (ppm)		Sample	2SB-24 3-5			Dup-20260306			2SB-24 6-8			2SB-25 Surf			2SB-25 0-2			2SB-25 5-7		
U= Not Detected ≥ value		Date	2026-03-06			2026-03-06			2026-03-06			2026-03-06			2026-03-06			2026-03-06		
Metals (6010/7473)	**UU SCO**	**RRU SCO**	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL
Aluminum	NA	NA	16,000		*10*	15,500		*10*	14,600		*10*	14,400		*10*	16,500		*10*	14,600		*10*
Antimony	NA	NA	3.8	*U*	*1*	3.4	*U*	*1*	3.4	*U*	*1*	3.6	*U*	*1*	4	*U*	*1*	3.3	*U*	*1*
Arsenic	13	16	5.59		*1*	5.9		*1*	5.56		*1*	5.66		*1*	5.21		*1*	5.71		*1*
Barium	410	410	90.6		*1*	75.2		*1*	130		*1*	55.1		*1*	61.5		*1*	54.9		*1*
Beryllium	4.4	43	0.95		*1*	0.86		*1*	0.8		*1*	0.82		*1*	0.88		*1*	0.85		*1*
Cadmium	2.5	2.5	0.72		*1*	0.48		*1*	0.41		*1*	0.47		*1*	0.56		*1*	0.42		*1*
Calcium	NA	NA	2,340		*1*	2,130		*1*	25,700		*10*	14,300		*10*	2,820		*1*	3,170		*1*
Chromium	30	110	23.3		*1*	21.9		*1*	19.3		*1*	19.9		*1*	22		*1*	21.1		*1*
Chromium (+6)	1	1	0.45	*U*	*1*	0.39	*U*	*1*	0.39	*U*	*1*	0.42	*U*	*1*	0.4	*U*	*1*	0.43	*U*	*1*
Cobalt	NA	NA	16.7		*1*	13.6		*1*	11		*1*	14.3		*1*	17.5		*1*	13.3		*1*
Copper	50	280	47.6		*1*	36.4		*1*	42.4		*1*	38.1		*1*	43.3		*1*	42.8		*1*
Iron	NA	NA	34,300		*1*	34,600		*1*	29,500		*1*	30,900		*1*	35,300		*1*	32,900		*1*
Lead	63	400	17.8		*1*	12.5		*1*	12.1		*1*	13.9		*1*	13.2		*1*	12.8		*1*
Magnesium	NA	NA	5,830		*1*	6,040		*1*	6,640		*1*	11,400		*1*	6,840		*1*	6,770		*1*
Manganese	1,600	2,000	1,660		*1*	904		*1*	728		*1*	1,070		*1*	1,150		*1*	702		*1*
Mercury	0.18	0.3	0.04		*2*	0.03	*J*		0.03	*U*	*2*	0.09		*2*	0.03	*J*	*2*	0.03	*J*	*2*
Nickel	30	320	33.6		*1*	29.3		*1*	25.5		*1*	29.3		*1*	32.7		*1*	28.4		*1*
Potassium	NA	NA	1,880		*10*	1,790		*10*	1,900		*10*	1,840		*10*	1,910		*10*	1,770		*10*
Selenium	3.9	110	1.5	*U*	*1*	1.4	*U*	*1*	1.4	*U*	*1*	1.4	*U*	*1*	1.6	*U*	*1*	1.3	*U*	*1*
Silver	2	110	0.38	*U*	*1*	0.34	*U*	*1*	0.34	*U*	*1*	0.36	*U*	*1*	0.4	*U*	*1*	0.33	*U*	*1*
Sodium	NA	NA	572		*1*	208		*1*	134		*1*	259		*1*	128		*1*	145		*1*
Thallium	NA	NA	3.5	*U*	*1*	3.1	*U*	*1*	3.1	*U*	*1*	3.2	*U*	*1*	3.6	*U*	*1*	3	*U*	*1*
Vanadium	NA	NA	26.7		*1*	23.4		*1*	21		*1*	31.1		*1*	26		*1*	23.9		*1*
Zinc	109	6,600	116		*1*	104		*1*	103		*1*	100		*1*	113		*1*	106		*1*
Cyanide (total)	2.3	13	0.56	*U*	*1*	0.57	*U*	*1*	0.55	*U*	*1*	0.55	*U*	*1*	0.56	*U*	*1*	0.57	*U*	*1*

value ≤ UU SCO
value > UU SCO
value > RRU SCO

Q = Laboratory Qualifier DL = Dilution NA = not available (addtional flags: B-in blank, D-diluted, E-estimated, J-approximate)

Table 4: TAL Metals in Soil

All data in mg/Kg (ppm)		Sample	2SB-26 Surf			2SB-26 0-2			2SB-26 5-7			2SB-27 Surf			2SB-27 0-2			2SB-27 5-7		
U= Not Detected ≥ value		Date	2026-03-06			2026-03-06			2026-03-06			2026-03-09			2026-03-09			2026-03-09		
Metals (6010/7473)	**UU SCO**	**RRU SCO**	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL
Aluminum	NA	NA	12,400		*10*	16,200		*10*	20,700		*10*	13,200		*10*	12,700		*10*	12,700		*10*
Antimony	NA	NA	4.1	*U*	*1*	3.5	*U*	*1*	3.4	*U*	*1*	3.8	*U*	*1*	3.6	*U*	*1*	3.4	*U*	*1*
Arsenic	13	16	5.66		*1*	6.02		*1*	5.77		*1*	5.96		*1*	5.74		*1*	9.11		*1*
Barium	410	410	54.7		*1*	77.8		*1*	57.4		*1*	89.3		*1*	142		*10*	949		*1*
Beryllium	4.4	43	0.49		*1*	0.8		*1*	1.23		*1*	0.59		*1*	0.61		*1*	0.57		*1*
Cadmium	2.5	2.5	0.41	*U*	*1*	0.59		*1*	0.46		*1*	0.49		*1*	0.36	*U*	*1*	0.58		*1*
Calcium	NA	NA	14,600		*10*	3,680		*1*	3,160		*1*	14,700		*10*	29,100		*10*	74,100		*10*
Chromium	30	110	16.6		*1*	22.4		*1*	28		*1*	28.2		*1*	23.6		*1*	25.3		*1*
Chromium (+6)	1	1	0.41	*U*	*1*	0.42	*U*	*1*	0.41	*U*	*1*	0.46	*U*	*1*	0.41	*U*	*1*	0.4	*U*	*1*
Cobalt	NA	NA	8.53		*1*	13.9		*1*	17.1		*1*	19.8		*1*	13.2		*1*	18.5		*1*
Copper	50	280	28.2		*1*	168		*1*	37.4		*1*	38		*1*	32.6		*1*	39.4		*1*
Iron	NA	NA	23,200		*1*	35,100		*1*	50,300		*10*	28,400		*1*	26,100		*1*	26,400		*1*
Lead	63	400	27.2		*1*	90.8		*1*	13.6		*1*	224		*1*	782		*1*	332		*1*
Magnesium	NA	NA	11,100		*1*	6,730		*1*	8,470		*1*	7,530		*1*	7,250		*1*	16,600		*1*
Manganese	1,600	2,000	761		*1*	587		*1*	677		*1*	650		*1*	657		*1*	961		*1*
Mercury	0.18	0.3	0.04		*2*	0.16		*2*	0.04			0.06		*2*	0.09		*2*	0.03	*U*	*2*
Nickel	30	320	19.6		*1*	31.4		*1*	39.1		*1*	46.4		*1*	28.9		*1*	37.3		*1*
Potassium	NA	NA	1,140		*10*	1,860		*10*	2,070		*10*	1,320		*10*	1,290		*10*	1,490		*10*
Selenium	3.9	110	1.6	*U*	*1*	1.4	*U*	*1*	1.3	*U*	*1*	1.5	*U*	*1*	1.4	*U*	*1*	1.4	*U*	*1*
Silver	2	110	0.41	*U*	*1*	0.35	*U*	*1*	0.34	*U*	*1*	0.38	*U*	*1*	0.36	*U*	*1*	0.34	*U*	*1*
Sodium	NA	NA	44.4		*1*	92.5		*1*	79.4		*1*	108		*1*	386		*1*	406		*1*
Thallium	NA	NA	3.7	*U*	*1*	3.2	*U*	*1*	3	*U*	*1*	3.4	*U*	*1*	3.2	*U*	*1*	3.1	*U*	*1*
Vanadium	NA	NA	19.1		*1*	27.1		*1*	23.6		*1*	27.8		*1*	22.5		*1*	23.8		*1*
Zinc	109	6,600	87.1		*1*	179		*1*	109		*1*	190		*1*	165		*1*	606		*1*
Cyanide (total)	2.3	13	0.57	*U*	*1*	0.57	*U*	*1*	0.53	*U*	*1*	0.6	*U*	*1*	0.56	*U*	*1*	0.54	*U*	*1*

value ≤ UU SCO
value > UU SCO
value > RRU SCO

Q = Laboratory Qualifier DL = Dilution NA = not available (addtional flags: B-in blank, D-diluted, E-estimated, J-approximate)

Table 4: TAL Metals in Soil

All data in mg/Kg (ppm)		Sample	2SB-27 10-12			Dup-20260309			2SB-28 Surf			2SB-28 0-2			2SB-28 7-9			2SB-29 Surf		
U= Not Detected ≥ value		Date	2026-03-09			2026-03-09			2026-03-06			2026-03-06			2026-03-06			2026-03-06		
Metals (6010/7473)	**UU SCO**	**RRU SCO**	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL
Aluminum	NA	NA	16,200		10	14,900		10	10,600		10	18,500		10	12,900		10	13,200		10
Antimony	NA	NA	3.9	U	1	3.9	U	1	4	U	1	3.8	U	1	3.7	U	1	4.6	U	1
Arsenic	13	16	5.58		1	7.78		1	6.62		1	6.91		1	4.79		1	10.1		1
Barium	410	410	71.1		1	75.4		1	326		1	112		1	52.3		1	1,030		1
Beryllium	4.4	43	0.89		1	0.63		1	0.48		1	1.03		1	0.71		1	0.59		1
Cadmium	2.5	2.5	0.39	U	1	0.39	U	1	0.63		1	0.38	U	1	0.37	U	1	2.48		1
Calcium	NA	NA	3,590		1	4,940		1	24,200		10	4,120		1	19,200		10	36,500		10
Chromium	30	110	22.8		1	22.8		1	16.3		1	22.2		1	16.6		1	28.8		1
Chromium (+6)	1	1	0.43	U	1	0.43	U	1	0.45	U	1	0.45	U	1	0.4	U	1	0.56	U	1
Cobalt	NA	NA	13.4		1	13.5		1	7.56		1	10.9		1	12.7		1	9.7		1
Copper	50	280	37.9		1	32.2		1	27.8		1	32.3		1	29.2		1	46.1		1
Iron	NA	NA	35,200		1	36,300		1	19,500		1	32,300		1	27,000		1	23,500		1
Lead	63	400	18.1		1	21.7		1	1,710		1	37.7		1	10.4		1	9,130		10
Magnesium	NA	NA	7,300		1	7,910		1	5,650		1	5,280		1	6,470		1	7,360		1
Manganese	1,600	2,000	601		1	917		1	566		1	704		1	523		1	700		1
Mercury	0.18	0.3	0.28		2	0.03	U		0.68		2	0.28			0.03	U		0.58		
Nickel	30	320	31.1		1	34.2		1	16.6		1	26.4		1	25.2		1	20.6		1
Potassium	NA	NA	1,870		10	1,560		10	1,330		10	2,040		10	1,760		10	1,500		10
Selenium	3.9	110	1.6	U	1	1.6	U	1	1.6	U	1	1.5	U	1	1.5	U	1	1.8	U	1
Silver	2	110	0.39	U	1	0.39	U	1	0.4	U	1	0.38	U	1	0.37	U	1	0.46	U	1
Sodium	NA	NA	267		1	187		1	266		1	56.9		1	225		1	346		1
Thallium	NA	NA	3.6	U	1	3.5	U	1	3.6	U	1	3.4	U	1	3.3	U	1	4.1	U	1
Vanadium	NA	NA	25.3		1	23.3		1	22.7		1	29.6		1	20.1		1	31.5		1
Zinc	109	6,600	85		1	79.7		1	344		1	101		1	76		1	1,020		10
Cyanide (total)	2.3	13	0.57	U	1	0.56	U	1	0.62	U	1	0.63	U	1	0.55	U	1	0.38	J	1

value ≤ UU SCO
value > UU SCO
value > RRU SCO

Q = Laboratory Qualifier DL = Dilution NA = not available (addtional flags: B-in blank, D-diluted, E-estimated, J-approximate)

GALLAGHER BASSETT | TECHNICAL SERVICES

Table 4: TAL Metals in Soil

All data in mg/Kg (ppm)		**Sample**	**2SB-29 0-2**			**2SB-28 8-10**		
U= Not Detected ≥ value		Date	2026-03-06			2026-03-06		
Metals (6010/7473)	**UU SCO**	**RRU SCO**	Result	Q	DL	Result	Q	DL
Aluminum	NA	NA	13,600		*10*	15,800		*10*
Antimony	NA	NA	3.7	*U*	*1*	3.8	*U*	*1*
Arsenic	13	16	6.84		*1*	4.3		*1*
Barium	410	410	271		*1*	75.2		*1*
Beryllium	4.4	43	0.65		*1*	0.82		*1*
Cadmium	2.5	2.5	0.93		*1*	0.38	*U*	*1*
Calcium	NA	NA	31,200		*10*	27,100		*10*
Chromium	30	110	20.3		*1*	19.1		*1*
Chromium (+6)	1	1	0.39	*U*	*1*	0.38	*U*	*1*
Cobalt	NA	NA	11.1		*1*	10.5		*1*
Copper	50	280	39.7		*1*	27.9		*1*
Iron	NA	NA	27,500		*1*	27,900		*1*
Lead	63	400	1,220		*1*	9.3		*1*
Magnesium	NA	NA	7,520		*1*	9,190		*1*
Manganese	1,600	2,000	1,570		*1*	521		*1*
Mercury	0.18	0.3	0.38			0.03	*U*	
Nickel	30	320	24.9		*1*	24.2		*1*
Potassium	NA	NA	1,540		*10*	2,710		*10*
Selenium	3.9	110	1.5	*U*	*1*	1.5	*U*	*1*
Silver	2	110	0.37	*U*	*1*	0.38	*U*	*1*
Sodium	NA	NA	244		*1*	122		*1*
Thallium	NA	NA	3.3	*U*	*1*	3.4	*U*	*1*
Vanadium	NA	NA	22.8		*1*	21.5		*1*
Zinc	109	6,600	407		*10*	66.4		*1*
Cyanide (total)	2.3	13	0.57	*U*	*1*	0.55	*U*	*1*

value ≤ UU SCO
value > UU SCO
value > RRU SCO

Q = Laboratory Qualifier DL = Dilution NA = not available (addtional flags: B-in blank, D-diluted, E-estimated, J-approximate)

Table 5: Pesticides, PCBs, and Herbicides in Soil

The Green, Newburgh, NY
BCP ID: C336099

GALLAGHER BASSETT | TECHNICAL SERVICES

All data in mg/Kg (ppm)		Sample	2SB-01 SURF			2SB-01 5-7.5			DUP-20251001			2SB-01 7.5-10			2SB-02 SURF		
U= Not Detected ≥ value		Date	2025-10-01			2025-10-01			2025-10-01			2025-10-01			2025-10-01		
Pesticides (8081)	**UU SCO**	**RRU SCO**	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL
4,4' -DDD	0.0033	5	0.0022	U	2	0.0023	U	2	0.0023	U	2	0.0024	U	2	0.0023	U	2
4,4' -DDE	0.0033	3.4	0.0022	U	2	0.0023	U	2	0.0023	U	2	0.0024	U	2	0.0023	U	2
4,4' -DDT	0.0033	3.8	0.0022	U	2	0.0023	U	2	0.0023	U	2	0.0024	U	2	0.031		2
a-BHC	0.02	0.1	0.0073	U	2	0.0078	U	2	0.0076	U	2	0.0079	U	2	0.0077	U	2
a-Chlordane	0.014	0.65	0.0037	U	2	0.0039	U	2	0.0038	U	2	0.004	U	2	0.0039	U	2
Alachlor	NA	NA	0.0037	U	2	0.0039	U	2	0.0038	U	2	0.004	U	2	0.0039	U	2
Aldrin	0.0048	0.044	0.0037	U	2	0.0039	U	2	0.0038	U	2	0.004	U	2	0.0039	U	2
b-BHC	0.021	0.1	0.0073	U	2	0.0078	U	2	0.0076	U	2	0.0079	U	2	0.0077	U	2
Chlordane	NA	NA	0.037	U	2	0.039	U	2	0.038	U	2	0.04	U	2	0.039	U	2
d-BHC	0.04	100	0.0073	U	2	0.0078	U	2	0.0076	U	2	0.0079	U	2	0.0077	U	2
Dieldrin	0.005	0.075	0.0037	U	2	0.0039	U	2	0.0038	U	2	0.004	U	2	0.0039	U	2
Endosulfan I	4.3	35	0.0073	U	2	0.0078	U	2	0.0076	U	2	0.0079	U	2	0.0077	U	2
Endosulfan II	4.3	35	0.0073	U	2	0.0078	U	2	0.0076	U	2	0.0079	U	2	0.0077	U	2
Endosulfan sulfate	4.3	35	0.0073	U	2	0.0078	U	2	0.0076	U	2	0.0079	U	2	0.0077	U	2
Endrin	0.014	5.3	0.0073	U	2	0.0078	U	2	0.0076	U	2	0.0079	U	2	0.0077	U	2
Endrin aldehyde	NA	NA	0.0073	U	2	0.0078	U	2	0.0076	U	2	0.0079	U	2	0.0077	U	2
Endrin ketone	NA	NA	0.0073	U	2	0.0078	U	2	0.0076	U	2	0.0079	U	2	0.0077	U	2
g-BHC (lindane)	0.025	0.21	0.0015	U	2	0.0016	U	2	0.0015	U	2	0.0016	U	2	0.0015	U	2
g-Chlordane	NA	NA	0.0037	U	2	0.0039	U	2	0.0038	U	2	0.004	U	2	0.0039	U	2
Heptachlor	0.013	0.53	0.0073	U	2	0.0078	U	2	0.0076	U	2	0.0079	U	2	0.0077	U	2
Heptachlor epoxide	NA	NA	0.0073	U	2	0.0078	U	2	0.0076	U	2	0.0079	U	2	0.0077	U	2
Methoxychlor	NA	NA	0.037	U	2	0.039	U	2	0.038	U	2	0.04	U	2	0.039	U	2
Toxaphene	NA	NA	0.15	U	2	0.16	U	2	0.15	U	2	0.16	U	2	0.15	U	2

		Sample	2SB-01 SURF			2SB-01 5-7.5			DUP-20251001			2SB-01 7.5-10			2SB-02 SURF		
		Date	2025-10-01			2025-10-01			2025-10-01			2025-10-01			2025-10-01		
PBCs (8082)	**UU SCO**	**RRU SCO**	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL
PCB-1016	0.1	1	0.073	U	2	0.078	U	2	0.076	U	2	0.079	U	2	0.077	U	2
PCB-1221	0.1	1	0.073	U	2	0.078	U	2	0.076	U	2	0.079	U	2	0.077	U	2
PCB-1232	0.1	1	0.073	U	2	0.078	U	2	0.076	U	2	0.079	U	2	0.077	U	2
PCB-1242	0.1	1	0.073	U	2	0.078	U	2	0.076	U	2	0.079	U	2	0.077	U	2
PCB-1248	0.1	1	0.073	U	2	0.078	U	2	0.076	U	2	0.079	U	2	0.077	U	2
PCB-1254	0.1	1	0.073	U	2	0.078	U	2	0.076	U	2	0.079	U	2	0.077	U	2
PCB-1260	0.1	1	0.073	U	2	0.078	U	2	0.076	U	2	0.079	U	2	0.077	U	2
PCB-1262	0.1	1	0.073	U	2	0.078	U	2	0.076	U	2	0.079	U	2	0.077	U	2
PCB-1268	0.1	1	0.073	U	2	0.078	U	2	0.076	U	2	0.079	U	2	0.077	U	2
Total PCBs	0.1	1	ND			ND			ND			ND			ND		

		Sample	2SB-01 SURF			2SB-01 5-7.5			DUP-20251001			2SB-01 7.5-10			2SB-02 SURF		
		Date	2025-10-01			2025-10-01			2025-10-01			2025-10-01			2025-10-01		
Herbicides (8151)	**UU SCO**	**RRU SCO**	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL
2,4,5-T	NA	NA	0.14	U	10	0.15	U	10	0.15	U	10	0.15	U	10	0.15	U	10
2,4,5-TP (Silvex)	3.8	100	0.14	U	10	0.15	U	10	0.15	U	10	0.15	U	10	0.15	U	10
2,4-D	NA	NA	0.28	U	10	0.3	U	10	0.29	U	10	0.29	U	10	0.3	U	10
2,4-DB	NA	NA	1.4	U	10	1.5	U	10	1.5	U	10	1.5	U	10	1.5	U	10
Dalapon	NA	NA	0.14	U	10	0.15	U	10	0.15	U	10	0.15	U	10	0.15	U	10
Dicamba	NA	NA	0.14	U	10	0.15	U	10	0.15	U	10	0.15	U	10	0.15	U	10
Dichloroprop	NA	NA	0.28	U	10	0.3	U	10	0.29	U	10	0.29	U	10	0.3	U	10
Dinoseb	NA	NA	0.28	U	10	0.3	U	10	0.29	U	10	0.29	U	10	0.3	U	10

value ≤ UU SCO
value > UU SCO

Q = Laboratory Qualifier DL = Dilution NA = not available (addtional flags: B-in blank, D-diluted, E-estimated, J-approximate)

Table 5: Pesticides, PCBs, and Herbicides in Soil

The Green, Newburgh, NY
BCP ID: C336099

GALLAGHER BASSETT | TECHNICAL SERVICES

All data in mg/Kg (ppm)		**Sample**	**2SB-02 5-7.5**			**2SB-02 7.5-10**			**2SB-03 SURF**			**2SB-03 10-12.5**			**2SB-03 12.5-15**		
U= Not Detected ≥ value		Date	2025-10-01			2025-10-01			2025-10-01			2025-10-01			2025-10-01		
Pesticides (8081)	**UU SCO**	**RRU SCO**	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL
4,4' -DDD	0.0033	5	0.0023	*U*	*2*	0.0025	*U*	*2*	0.0023	*U*	*2*	0.0023	*U*	*2*	0.0023	*U*	*2*
4,4' -DDE	0.0033	3.4	0.0023	*U*	*2*	0.0025	*U*	*2*	0.0028		*2*	0.0023	*U*	*2*	0.0023	*U*	*2*
4,4' -DDT	0.0033	3.8	0.0023	*U*	*2*	0.0025	*U*	*2*	0.012		*2*	0.0023	*U*	*2*	0.0023	*U*	*2*
a-BHC	0.02	0.1	0.0077	*U*	*2*	0.0083	*U*	*2*	0.0078	*U*	*2*	0.0076	*U*	*2*	0.0075	*U*	*2*
a-Chlordane	0.014	0.65	0.0039	*U*	*2*	0.0041	*U*	*2*	0.0039	*U*	*2*	0.0038	*U*	*2*	0.0038	*U*	*2*
Alachlor	NA	NA	0.0039	*U*	*2*	0.0041	*U*	*2*	0.0039	*U*	*2*	0.0038	*U*	*2*	0.0038	*U*	*2*
Aldrin	0.0048	0.044	0.0039	*U*	*2*	0.0041	*U*	*2*	0.0039	*U*	*2*	0.0038	*U*	*2*	0.0038	*U*	*2*
b-BHC	0.021	0.1	0.0077	*U*	*2*	0.0083	*U*	*2*	0.0078	*U*	*2*	0.0076	*U*	*2*	0.0075	*U*	*2*
Chlordane	NA	NA	0.039	*U*	*2*	0.041	*U*	*2*	0.039	*U*	*2*	0.038	*U*	*2*	0.038	*U*	*2*
d-BHC	0.04	100	0.0077	*U*	*2*	0.0083	*U*	*2*	0.0078	*U*	*2*	0.0076	*U*	*2*	0.0075	*U*	*2*
Dieldrin	0.005	0.075	0.0039	*U*	*2*	0.0041	*U*	*2*	0.0039	*U*	*2*	0.0038	*U*	*2*	0.0038	*U*	*2*
Endosulfan I	4.3	35	0.0077	*U*	*2*	0.0083	*U*	*2*	0.0078	*U*	*2*	0.0076	*U*	*2*	0.0075	*U*	*2*
Endosulfan II	4.3	35	0.0077	*U*	*2*	0.0083	*U*	*2*	0.0078	*U*	*2*	0.0076	*U*	*2*	0.0075	*U*	*2*
Endosulfan sulfate	4.3	35	0.0077	*U*	*2*	0.0083	*U*	*2*	0.0078	*U*	*2*	0.0076	*U*	*2*	0.0075	*U*	*2*
Endrin	0.014	5.3	0.0077	*U*	*2*	0.0083	*U*	*2*	0.0078	*U*	*2*	0.0076	*U*	*2*	0.0075	*U*	*2*
Endrin aldehyde	NA	NA	0.0077	*U*	*2*	0.0083	*U*	*2*	0.0078	*U*	*2*	0.0076	*U*	*2*	0.0075	*U*	*2*
Endrin ketone	NA	NA	0.0077	*U*	*2*	0.0083	*U*	*2*	0.0078	*U*	*2*	0.0076	*U*	*2*	0.0075	*U*	*2*
g-BHC (lindane)	0.025	0.21	0.0015	*U*	*2*	0.0017	*U*	*2*	0.0016	*U*	*2*	0.0015	*U*	*2*	0.0015	*U*	*2*
g-Chlordane	NA	NA	0.0039	*U*	*2*	0.0041	*U*	*2*	0.0045		*2*	0.0038	*U*	*2*	0.0038	*U*	*2*
Heptachlor	0.013	0.53	0.0077	*U*	*2*	0.0083	*U*	*2*	0.0078	*U*	*2*	0.0076	*U*	*2*	0.0075	*U*	*2*
Heptachlor epoxide	NA	NA	0.0077	*U*	*2*	0.0083	*U*	*2*	0.0078	*U*	*2*	0.0076	*U*	*2*	0.0075	*U*	*2*
Methoxychlor	NA	NA	0.039	*U*	*2*	0.041	*U*	*2*	0.039	*U*	*2*	0.038	*U*	*2*	0.038	*U*	*2*
Toxaphene	NA	NA	0.15	*U*	*2*	0.17	*U*	*2*	0.16	*U*	*2*	0.15	*U*	*2*	0.15	*U*	*2*

		Sample	**2SB-02 5-7.5**			**2SB-02 7.5-10**			**2SB-03 SURF**			**2SB-03 10-12.5**			**2SB-03 12.5-15**		
		Date	2025-10-01			2025-10-01			2025-10-01			2025-10-01			2025-10-01		
PBCs (8082)	**UU SCO**	**RRU SCO**	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL
PCB-1016	0.1	1	0.077	*U*	*2*	0.083	*U*	*2*	0.078	*U*	*2*	0.076	*U*	*2*	0.075	*U*	*2*
PCB-1221	0.1	1	0.077	*U*	*2*	0.083	*U*	*2*	0.078	*U*	*2*	0.076	*U*	*2*	0.075	*U*	*2*
PCB-1232	0.1	1	0.077	*U*	*2*	0.083	*U*	*2*	0.078	*U*	*2*	0.076	*U*	*2*	0.075	*U*	*2*
PCB-1242	0.1	1	0.077	*U*	*2*	0.083	*U*	*2*	0.078	*U*	*2*	0.076	*U*	*2*	0.075	*U*	*2*
PCB-1248	0.1	1	0.077	*U*	*2*	0.083	*U*	*2*	0.078	*U*	*2*	0.076	*U*	*2*	0.075	*U*	*2*
PCB-1254	0.1	1	0.077	*U*	*2*	0.083	*U*	*2*	0.078	*U*	*2*	0.076	*U*	*2*	0.075	*U*	*2*
PCB-1260	0.1	1	0.077	*U*	*2*	0.083	*U*	*2*	0.078	*U*	*2*	0.076	*U*	*2*	0.075	*U*	*2*
PCB-1262	0.1	1	0.077	*U*	*2*	0.083	*U*	*2*	0.078	*U*	*2*	0.076	*U*	*2*	0.075	*U*	*2*
PCB-1268	0.1	1	0.077	*U*	*2*	0.083	*U*	*2*	0.078	*U*	*2*	0.076	*U*	*2*	0.075	*U*	*2*
Total PCBs	0.1	1	ND			ND			ND			ND			ND		

		Sample	**2SB-02 5-7.5**			**2SB-02 7.5-10**			**2SB-03 SURF**			**2SB-03 10-12.5**			**2SB-03 12.5-15**		
		Date	2025-10-01			2025-10-01			2025-10-01			2025-10-01			2025-10-01		
Herbicides (8151)	**UU SCO**	**RRU SCO**	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL
2,4,5-T	NA	NA	0.15	*U*	*10*	0.16	*U*	*10*	0.15	*U*	*10*	0.14	*U*	*10*	0.14	*U*	*10*
2,4,5-TP (Silvex)	3.8	100	0.15	*U*	*10*	0.16	*U*	*10*	0.15	*U*	*10*	0.14	*U*	*10*	0.14	*U*	*10*
2,4-D	NA	NA	0.29	*U*	*10*	0.31	*U*	*10*	0.29	*U*	*10*	0.28	*U*	*10*	0.28	*U*	*10*
2,4-DB	NA	NA	1.5	*U*	*10*	1.6	*U*	*10*	1.5	*U*	*10*	1.4	*U*	*10*	1.4	*U*	*10*
Dalapon	NA	NA	0.15	*U*	*10*	0.16	*U*	*10*	0.15	*U*	*10*	0.14	*U*	*10*	0.14	*U*	*10*
Dicamba	NA	NA	0.15	*U*	*10*	0.16	*U*	*10*	0.15	*U*	*10*	0.14	*U*	*10*	0.14	*U*	*10*
Dichloroprop	NA	NA	0.29	*U*	*10*	0.31	*U*	*10*	0.29	*U*	*10*	0.28	*U*	*10*	0.28	*U*	*10*
Dinoseb	NA	NA	0.29	*U*	*10*	0.31	*U*	*10*	0.29	*U*	*10*	0.28	*U*	*10*	0.28	*U*	*10*

value ≤ UU SCO
value > UU SCO

Q = Laboratory Qualifier DL = Dilution NA = not available (addtional flags: B-in blank, D-diluted, E-estimated, J-approximate)

Table 5: Pesticides, PCBs, and Herbicides in Soil

The Green, Newburgh, NY
BCP ID: C336099

GALLAGHER BASSETT | TECHNICAL SERVICES

All data in mg/Kg (ppm)		Sample	2SB-04 SURF			2SB-04 0-5			2SB-04 10-15			2SB-05 SURF			2SB-05 5-7		
U= Not Detected ≥ value		Date	2025-10-01			2025-10-01			2025-10-01			2025-10-01			2025-10-01		
Pesticides (8081)	**UU SCO**	**RRU SCO**	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL
4,4' -DDD	0.0033	5	0.0024	*U*	*2*	0.0023	*U*	*2*	0.0021	*U*	*2*	0.0025	*U*	*2*	0.0023	*U*	*2*
4,4' -DDE	0.0033	3.4	0.042		*2*	0.023		*2*	0.0021	*U*	*2*	0.017		*2*	0.0023	*U*	*2*
4,4' -DDT	0.0033	3.8	0.039		*2*	0.049		*2*	0.0021	*U*	*2*	0.031		*2*	0.0023	*U*	*2*
a-BHC	0.02	0.1	0.0079	*U*	*2*	0.0077	*U*	*2*	0.0071	*U*	*2*	0.0083	*U*	*2*	0.0076	*U*	*2*
a-Chlordane	0.014	0.65	0.02		*2*	0.018		*2*	0.0036	*U*	*2*	0.031		*2*	0.0038	*U*	*2*
Alachlor	NA	NA	0.0039	*U*	*2*	0.0039	*U*	*2*	0.0036	*U*	*2*	0.0042	*U*	*2*	0.0038	*U*	*2*
Aldrin	0.0048	0.044	0.0039	*U*	*2*	0.0039	*U*	*2*	0.0036	*U*	*2*	0.0042	*U*	*2*	0.0038	*U*	*2*
b-BHC	0.021	0.1	0.0079	*U*	*2*	0.0077	*U*	*2*	0.0071	*U*	*2*	0.0083	*U*	*2*	0.0076	*U*	*2*
Chlordane	NA	NA	0.11		*2*	0.087		*2*	0.036	*U*	*2*	0.19		*2*	0.038	*U*	*2*
d-BHC	0.04	100	0.0079	*U*	*2*	0.0077	*U*	*2*	0.0071	*U*	*2*	0.0083	*U*	*2*	0.0076	*U*	*2*
Dieldrin	0.005	0.075	0.006		*2*	0.013		*2*	0.0036	*U*	*2*	0.0042	*U*	*2*	0.0038	*U*	*2*
Endosulfan I	4.3	35	0.0079	*U*	*2*	0.0077	*U*	*2*	0.0071	*U*	*2*	0.0083	*U*	*2*	0.0076	*U*	*2*
Endosulfan II	4.3	35	0.0079	*U*	*2*	0.0077	*U*	*2*	0.0071	*U*	*2*	0.0083	*U*	*2*	0.0076	*U*	*2*
Endosulfan sulfate	4.3	35	0.0079	*U*	*2*	0.0077	*U*	*2*	0.0071	*U*	*2*	0.0083	*U*	*2*	0.0076	*U*	*2*
Endrin	0.014	5.3	0.0079	*U*	*2*	0.0077	*U*	*2*	0.0071	*U*	*2*	0.0083	*U*	*2*	0.0076	*U*	*2*
Endrin aldehyde	NA	NA	0.0079	*U*	*2*	0.0077	*U*	*2*	0.0071	*U*	*2*	0.0083	*U*	*2*	0.0076	*U*	*2*
Endrin ketone	NA	NA	0.0079	*U*	*2*	0.0077	*U*	*2*	0.0071	*U*	*2*	0.0083	*U*	*2*	0.0076	*U*	*2*
g-BHC (lindane)	0.025	0.21	0.0016	*U*	*2*	0.0015	*U*	*2*	0.0014	*U*	*2*	0.0017	*U*	*2*	0.0015	*U*	*2*
g-Chlordane	NA	NA	0.027		*2*	0.02		*2*	0.0036	*U*	*2*	0.035		*2*	0.0038	*U*	*2*
Heptachlor	0.013	0.53	0.0079	*U*	*2*	0.0077	*U*	*2*	0.0071	*U*	*2*	0.0083	*U*	*2*	0.0076	*U*	*2*
Heptachlor epoxide	NA	NA	0.0079	*U*	*2*	0.0077	*U*	*2*	0.0071	*U*	*2*	0.0083	*U*	*2*	0.0076	*U*	*2*
Methoxychlor	NA	NA	0.039	*U*	*2*	0.039	*U*	*2*	0.036	*U*	*2*	0.042	*U*	*2*	0.038	*U*	*2*
Toxaphene	NA	NA	0.16	*U*	*2*	0.15	*U*	*2*	0.14	*U*	*2*	0.17	*U*	*2*	0.15	*U*	*2*

		Sample	2SB-04 SURF			2SB-04 0-5			2SB-04 10-15			2SB-05 SURF			2SB-05 5-7		
		Date	2025-10-01			2025-10-01			2025-10-01			2025-10-01			2025-10-01		
PBCs (8082)	**UU SCO**	**RRU SCO**	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL
PCB-1016	0.1	1	0.079	*U*	*2*	0.077	*U*	*2*	0.071	*U*	*2*	0.083	*U*	*2*	0.076	*U*	*2*
PCB-1221	0.1	1	0.079	*U*	*2*	0.077	*U*	*2*	0.071	*U*	*2*	0.083	*U*	*2*	0.076	*U*	*2*
PCB-1232	0.1	1	0.079	*U*	*2*	0.077	*U*	*2*	0.071	*U*	*2*	0.083	*U*	*2*	0.076	*U*	*2*
PCB-1242	0.1	1	0.079	*U*	*2*	0.077	*U*	*2*	0.071	*U*	*2*	0.083	*U*	*2*	0.076	*U*	*2*
PCB-1248	0.1	1	0.079	*U*	*2*	0.077	*U*	*2*	0.071	*U*	*2*	0.083	*U*	*2*	0.076	*U*	*2*
PCB-1254	0.1	1	0.079	*U*	*2*	0.077	*U*	*2*	0.071	*U*	*2*	0.083	*U*	*2*	0.076	*U*	*2*
PCB-1260	0.1	1	0.079	*U*	*2*	0.077	*U*	*2*	0.071	*U*	*2*	0.083	*U*	*2*	0.076	*U*	*2*
PCB-1262	0.1	1	0.079	*U*	*2*	0.077	*U*	*2*	0.071	*U*	*2*	0.083	*U*	*2*	0.076	*U*	*2*
PCB-1268	0.1	1	0.079	*U*	*2*	0.077	*U*	*2*	0.071	*U*	*2*	0.083	*U*	*2*	0.076	*U*	*2*
Total PCBs	0.1	1	ND			ND			ND			ND			ND		

		Sample	2SB-04 SURF			2SB-04 0-5			2SB-04 10-15			2SB-05 SURF			2SB-05 5-7		
		Date	2025-10-01			2025-10-01			2025-10-01			2025-10-01			2025-10-01		
Herbicides (8151)	**UU SCO**	**RRU SCO**	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL
2,4,5-T	NA	NA	0.15	*U*	*10*	0.15	*U*	*10*	0.13	*U*	*10*	0.16	*U*	*10*	0.14	*U*	*10*
2,4,5-TP (Silvex)	3.8	100	0.15	*U*	*10*	0.15	*U*	*10*	0.13	*U*	*10*	0.16	*U*	*10*	0.14	*U*	*10*
2,4-D	NA	NA	0.29	*U*	*10*	0.29	*U*	*10*	0.27	*U*	*10*	0.31	*U*	*10*	0.29	*U*	*10*
2,4-DB	NA	NA	1.5	*U*	*10*	1.5	*U*	*10*	1.3	*U*	*10*	1.6	*U*	*10*	1.4	*U*	*10*
Dalapon	NA	NA	0.15	*U*	*10*	0.15	*U*	*10*	0.13	*U*	*10*	0.16	*U*	*10*	0.14	*U*	*10*
Dicamba	NA	NA	0.15	*U*	*10*	0.15	*U*	*10*	0.13	*U*	*10*	0.16	*U*	*10*	0.14	*U*	*10*
Dichloroprop	NA	NA	0.29	*U*	*10*	0.29	*U*	*10*	0.27	*U*	*10*	0.31	*U*	*10*	0.29	*U*	*10*
Dinoseb	NA	NA	0.29	*U*	*10*	0.29	*U*	*10*	0.27	*U*	*10*	0.31	*U*	*10*	0.29	*U*	*10*

value ≤ UU SCO
value > UU SCO

Q = Laboratory Qualifier DL = Dilution NA = not available (addtional flags: B-in blank, D-diluted, E-estimated, J-approximate)

Table 5: Pesticides, PCBs, and Herbicides in Soil

The Green, Newburgh, NY
BCP ID: C336099

GALLAGHER BASSETT | TECHNICAL SERVICES

All data in mg/Kg (ppm)		Sample	2SB-06 SURF			2SB-06 0-2.5			2SB-06 7.5-10			2SB-07 SURF			2SB-07 10-15		
U= Not Detected ≥ value		Date	2025-10-01			2025-10-01			2025-10-01			2025-10-02			2025-10-02		
Pesticides (8081)	**UU SCO**	**RRU SCO**	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL
4,4' -DDD	0.0033	5	0.0029	U	2	0.0023	U	2	0.0022	U	2	0.0023	U	2	0.0022	U	2
4,4' -DDE	0.0033	3.4	0.0029	U	2	0.0023	U	2	0.0022	U	2	0.0045		2	0.0022	U	2
4,4' -DDT	0.0033	3.8	0.0029	U	2	0.0023	U	2	0.0022	U	2	0.017		2	0.0022	U	2
a-BHC	0.02	0.1	0.0096	U	2	0.0075	U	2	0.0072	U	2	0.0076	U	2	0.0075	U	2
a-Chlordane	0.014	0.65	0.0048	U	2	0.0038	U	2	0.0036	U	2	0.0038	U	2	0.0037	U	2
Alachlor	NA	NA	0.0048	U	2	0.0038	U	2	0.0036	U	2	0.0038	U	2	0.0037	U	2
Aldrin	0.0048	0.044	0.0048	U	2	0.0038	U	2	0.0036	U	2	0.0038	U	2	0.0037	U	2
b-BHC	0.021	0.1	0.0096	U	2	0.0075	U	2	0.0072	U	2	0.0076	U	2	0.0075	U	2
Chlordane	NA	NA	0.048	U	2	0.038	U	2	0.036	U	2	0.038	U	2	0.037	U	2
d-BHC	0.04	100	0.0096	U	2	0.0075	U	2	0.0072	U	2	0.0076	U	2	0.0075	U	2
Dieldrin	0.005	0.075	0.0048	U	2	0.0038	U	2	0.0036	U	2	0.0038	U	2	0.0037	U	2
Endosulfan I	4.3	35	0.0096	U	2	0.0075	U	2	0.0072	U	2	0.0076	U	2	0.0075	U	2
Endosulfan II	4.3	35	0.0096	U	2	0.0075	U	2	0.0072	U	2	0.0076	U	2	0.0075	U	2
Endosulfan sulfate	4.3	35	0.0096	U	2	0.0075	U	2	0.0072	U	2	0.0076	U	2	0.0075	U	2
Endrin	0.014	5.3	0.0096	U	2	0.0075	U	2	0.0072	U	2	0.0076	U	2	0.0075	U	2
Endrin aldehyde	NA	NA	0.0096	U	2	0.0075	U	2	0.0072	U	2	0.0076	U	2	0.0075	U	2
Endrin ketone	NA	NA	0.0096	U	2	0.0075	U	2	0.0072	U	2	0.0076	U	2	0.0075	U	2
g-BHC (lindane)	0.025	0.21	0.0019	U	2	0.0015	U	2	0.0014	U	2	0.0015	U	2	0.0015	U	2
g-Chlordane	NA	NA	0.0048	U	2	0.0038	U	2	0.0036	U	2	0.0038	U	2	0.0037	U	2
Heptachlor	0.013	0.53	0.0096	U	2	0.0075	U	2	0.0072	U	2	0.0076	U	2	0.0075	U	2
Heptachlor epoxide	NA	NA	0.0096	U	2	0.0075	U	2	0.0072	U	2	0.0076	U	2	0.0075	U	2
Methoxychlor	NA	NA	0.048	U	2	0.038	U	2	0.036	U	2	0.038	U	2	0.037	U	2
Toxaphene	NA	NA	0.19	U	2	0.15	U	2	0.14	U	2	0.15	U	2	0.15	U	2

		Sample	2SB-06 SURF			2SB-06 0-2.5			2SB-06 7.5-10			2SB-07 SURF			2SB-07 10-15		
		Date	2025-10-01			2025-10-01			2025-10-01			2025-10-02			2025-10-02		
PBCs (8082)	**UU SCO**	**RRU SCO**	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL
PCB-1016	0.1	1	0.096	U	2	0.075	U	2	0.072	U	2	0.076	U	2	0.075	U	2
PCB-1221	0.1	1	0.096	U	2	0.075	U	2	0.072	U	2	0.076	U	2	0.075	U	2
PCB-1232	0.1	1	0.096	U	2	0.075	U	2	0.072	U	2	0.076	U	2	0.075	U	2
PCB-1242	0.1	1	0.096	U	2	0.075	U	2	0.072	U	2	0.076	U	2	0.075	U	2
PCB-1248	0.1	1	0.096	U	2	0.075	U	2	0.072	U	2	0.076	U	2	0.075	U	2
PCB-1254	0.1	1	0.096	U	2	0.075	U	2	0.072	U	2	0.076	U	2	0.075	U	2
PCB-1260	0.1	1	0.096	U	2	0.075	U	2	0.072	U	2	0.076	U	2	0.075	U	2
PCB-1262	0.1	1	0.096	U	2	0.075	U	2	0.072	U	2	0.076	U	2	0.075	U	2
PCB-1268	0.1	1	0.096	U	2	0.075	U	2	0.072	U	2	0.076	U	2	0.075	U	2
Total PCBs	0.1	1	ND			ND			ND			ND			ND		

		Sample	2SB-06 SURF			2SB-06 0-2.5			2SB-06 7.5-10			2SB-07 SURF			2SB-07 10-15		
		Date	2025-10-01			2025-10-01			2025-10-01			2025-10-02			2025-10-02		
Herbicides (8151)	**UU SCO**	**RRU SCO**	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL
2,4,5-T	NA	NA	0.18	U	10	0.14	U	10	0.14	U	10	0.14	U	10	0.14	U	10
2,4,5-TP (Silvex)	3.8	100	0.18	U	10	0.14	U	10	0.14	U	10	0.14	U	10	0.14	U	10
2,4-D	NA	NA	0.35	U	10	0.28	U	10	0.28	U	10	0.28	U	10	0.28	U	10
2,4-DB	NA	NA	1.8	U	10	1.4	U	10	1.4	U	10	1.4	U	10	1.4	U	10
Dalapon	NA	NA	0.18	U	10	0.14	U	10	0.14	U	10	0.14	U	10	0.14	U	10
Dicamba	NA	NA	0.18	U	10	0.14	U	10	0.14	U	10	0.14	U	10	0.14	U	10
Dichloroprop	NA	NA	0.35	U	10	0.28	U	10	0.28	U	10	0.28	U	10	0.28	U	10
Dinoseb	NA	NA	0.35	U	10	0.28	U	10	0.28	U	10	0.28	U	10	0.28	U	10

value ≤ UU SCO
value > UU SCO

Q = Laboratory Qualifier DL = Dilution NA = not available (addtional flags: B-in blank, D-diluted, E-estimated, J-approximate)

Table 5: Pesticides, PCBs, and Herbicides in Soil

The Green, Newburgh, NY
BCP ID: C336099

GALLAGHER BASSETT | TECHNICAL SERVICES

All data in mg/Kg (ppm)		**Sample**	**2SB-08 SURF**			**2SB-08 8-10**			**2SB-08 10-12**			**2SB-09 SURF**			**2SB-09 10-12.5**		
U= Not Detected ≥ value		Date	2025-10-02			2025-10-02			2025-10-02			2025-10-02			2025-10-02		
Pesticides (8081)	**UU SCO**	**RRU SCO**	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL
4,4' -DDD	0.0033	5	0.0023	U	2	0.0023	U	2	0.0023	U	2	0.0026	U	2	0.0022	U	2
4,4' -DDE	0.0033	3.4	0.0069		2	0.0023	U	2	0.0023	U	2	0.0026	U	2	0.0022	U	2
4,4' -DDT	0.0033	3.8	0.02		2	0.0023	U	2	0.0023	U	2	0.0073		2	0.0022	U	2
a-BHC	0.02	0.1	0.0076	U	2	0.0075	U	2	0.0076	U	2	0.0086	U	2	0.0073	U	2
a-Chlordane	0.014	0.65	0.0038	U	2	0.0038	U	2	0.0038	U	2	0.0043	U	2	0.0036	U	2
Alachlor	NA	NA	0.0038	U	2	0.0038	U	2	0.0038	U	2	0.0043	U	2	0.0036	U	2
Aldrin	0.0048	0.044	0.0038	U	2	0.0038	U	2	0.0038	U	2	0.0043	U	2	0.0036	U	2
b-BHC	0.021	0.1	0.0076	U	2	0.0075	U	2	0.0076	U	2	0.0086	U	2	0.0073	U	2
Chlordane	NA	NA	0.038	U	2	0.038	U	2	0.038	U	2	0.043	U	2	0.036	U	2
d-BHC	0.04	100	0.0076	U	2	0.0075	U	2	0.0076	U	2	0.0086	U	2	0.0073	U	2
Dieldrin	0.005	0.075	0.0038	U	2	0.0038	U	2	0.0038	U	2	0.0043	U	2	0.0036	U	2
Endosulfan I	4.3	35	0.0076	U	2	0.0075	U	2	0.0076	U	2	0.0086	U	2	0.0073	U	2
Endosulfan II	4.3	35	0.0076	U	2	0.0075	U	2	0.0076	U	2	0.0086	U	2	0.0073	U	2
Endosulfan sulfate	4.3	35	0.0076	U	2	0.0075	U	2	0.0076	U	2	0.0086	U	2	0.0073	U	2
Endrin	0.014	5.3	0.0076	U	2	0.0075	U	2	0.0076	U	2	0.0086	U	2	0.0073	U	2
Endrin aldehyde	NA	NA	0.0076	U	2	0.0075	U	2	0.0076	U	2	0.0086	U	2	0.0073	U	2
Endrin ketone	NA	NA	0.0076	U	2	0.0075	U	2	0.0076	U	2	0.0086	U	2	0.0073	U	2
g-BHC (lindane)	0.025	0.21	0.0015	U	2	0.0015	U	2	0.0015	U	2	0.0017	U	2	0.0015	U	2
g-Chlordane	NA	NA	0.0038	U	2	0.0038	U	2	0.0038	U	2	0.0043	U	2	0.0036	U	2
Heptachlor	0.013	0.53	0.0076	U	2	0.0075	U	2	0.0076	U	2	0.0086	U	2	0.0073	U	2
Heptachlor epoxide	NA	NA	0.0076	U	2	0.0075	U	2	0.0076	U	2	0.0086	U	2	0.0073	U	2
Methoxychlor	NA	NA	0.038	U	2	0.038	U	2	0.038	U	2	0.043	U	2	0.036	U	2
Toxaphene	NA	NA	0.15	U	2	0.15	U	2	0.15	U	2	0.17	U	2	0.15	U	2

		Sample	**2SB-08 SURF**			**2SB-08 8-10**			**2SB-08 10-12**			**2SB-09 SURF**			**2SB-09 10-12.5**		
		Date	2025-10-02			2025-10-02			2025-10-02			2025-10-02			2025-10-02		
PBCs (8082)	**UU SCO**	**RRU SCO**	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL
PCB-1016	0.1	1	0.076	U	2	0.075	U	2	0.076	U	2	0.086	U	2	0.073	U	2
PCB-1221	0.1	1	0.076	U	2	0.075	U	2	0.076	U	2	0.086	U	2	0.073	U	2
PCB-1232	0.1	1	0.076	U	2	0.075	U	2	0.076	U	2	0.086	U	2	0.073	U	2
PCB-1242	0.1	1	0.076	U	2	0.075	U	2	0.076	U	2	0.086	U	2	0.073	U	2
PCB-1248	0.1	1	0.076	U	2	0.075	U	2	0.076	U	2	0.086	U	2	0.073	U	2
PCB-1254	0.1	1	0.076	U	2	0.075	U	2	0.076	U	2	0.086	U	2	0.073	U	2
PCB-1260	0.1	1	0.076	U	2	0.075	U	2	0.076	U	2	0.086	U	2	0.073	U	2
PCB-1262	0.1	1	0.076	U	2	0.075	U	2	0.076	U	2	0.086	U	2	0.073	U	2
PCB-1268	0.1	1	0.076	U	2	0.075	U	2	0.076	U	2	0.086	U	2	0.073	U	2
Total PCBs	0.1	1	ND			ND			ND			ND			ND		

		Sample	**2SB-08 SURF**			**2SB-08 8-10**			**2SB-08 10-12**			**2SB-09 SURF**			**2SB-09 10-12.5**		
		Date	2025-10-02			2025-10-02			2025-10-02			2025-10-02			2025-10-02		
Herbicides (8151)	**UU SCO**	**RRU SCO**	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL
2,4,5-T	NA	NA	0.14	U	10	0.14	U	10	0.14	U	10	0.16	U	10	0.14	U	10
2,4,5-TP (Silvex)	3.8	100	0.14	U	10	0.14	U	10	0.14	U	10	0.16	U	10	0.14	U	10
2,4-D	NA	NA	0.29	U	10	0.28	U	10	0.29	U	10	0.32	U	10	0.27	U	10
2,4-DB	NA	NA	1.4	U	10	1.4	U	10	1.4	U	10	1.6	U	10	1.4	U	10
Dalapon	NA	NA	0.14	U	10	0.14	U	10	0.14	U	10	0.16	U	10	0.14	U	10
Dicamba	NA	NA	0.14	U	10	0.14	U	10	0.14	U	10	0.16	U	10	0.14	U	10
Dichloroprop	NA	NA	0.29	U	10	0.28	U	10	0.29	U	10	0.32	U	10	0.27	U	10
Dinoseb	NA	NA	0.29	U	10	0.28	U	10	0.29	U	10	0.32	U	10	0.27	U	10

value ≤ UU SCO
value > UU SCO

Q = Laboratory Qualifier DL = Dilution NA = not available (addtional flags: B-in blank, D-diluted, E-estimated, J-approximate)

Table 5: Pesticides, PCBs, and Herbicides in Soil

The Green, Newburgh, NY
BCP ID: C336099

GALLAGHER BASSETT | TECHNICAL SERVICES

All data in mg/Kg (ppm)		Sample	2SB-09 12.5-15			2SB-10 SURF			2SB-10 5-7			2SB-10 10-12			2SB-11 SURF		
U= Not Detected ≥ value		Date	2025-10-02			2025-10-02			2025-10-02			2025-10-02			2025-10-02		
Pesticides (8081)	**UU SCO**	**RRU SCO**	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL
4,4' -DDD	0.0033	5	0.0022	U	2	0.028		2	0.0021	U	2	0.0021	U	2	0.0024	U	2
4,4' -DDE	0.0033	3.4	0.0022	U	2	0.033		2	0.0021	U	2	0.0021	U	2	0.0049		2
4,4' -DDT	0.0033	3.8	0.0022	U	2	0.029		2	0.005	U	2	0.0021	U	2	0.0065		2
a-BHC	0.02	0.1	0.0074	U	2	0.0075	U	2	0.0071	U	2	0.007	U	2	0.0081	U	2
a-Chlordane	0.014	0.65	0.0037	U	2	0.011		2	0.0036	U	2	0.0035	U	2	0.008	U	2
Alachlor	NA	NA	0.0037	U	2	0.0037	U	2	0.0036	U	2	0.0035	U	2	0.004	U	2
Aldrin	0.0048	0.044	0.0037	U	2	0.0037	U	2	0.0036	U	2	0.0035	U	2	0.004	U	2
b-BHC	0.021	0.1	0.0074	U	2	0.02	U	2	0.0071	U	2	0.007	U	2	0.0081	U	2
Chlordane	NA	NA	0.037	U	2	0.07		2	0.036	U	2	0.035	U	2	0.04	U	2
d-BHC	0.04	100	0.0074	U	2	0.0075	U	2	0.0071	U	2	0.007	U	2	0.0081	U	2
Dieldrin	0.005	0.075	0.0037	U	2	0.026		2	0.0036	U	2	0.0035	U	2	0.004	U	2
Endosulfan I	4.3	35	0.0074	U	2	0.0075	U	2	0.0071	U	2	0.007	U	2	0.0081	U	2
Endosulfan II	4.3	35	0.0074	U	2	0.0075	U	2	0.0071	U	2	0.007	U	2	0.0081	U	2
Endosulfan sulfate	4.3	35	0.0074	U	2	0.0075	U	2	0.0071	U	2	0.007	U	2	0.0081	U	2
Endrin	0.014	5.3	0.0074	U	2	0.0075	U	2	0.0071	U	2	0.007	U	2	0.0081	U	2
Endrin aldehyde	NA	NA	0.0074	U	2	0.0075	U	2	0.0071	U	2	0.007	U	2	0.0081	U	2
Endrin ketone	NA	NA	0.0074	U	2	0.0075	U	2	0.0071	U	2	0.007	U	2	0.0081	U	2
g-BHC (lindane)	0.025	0.21	0.0015	U	2	0.075	U	2	0.0014	U	2	0.0014	U	2	0.0016	U	2
g-Chlordane	NA	NA	0.0037	U	2	0.015		2	0.0036	U	2	0.0035	U	2	0.008	U	2
Heptachlor	0.013	0.53	0.0074	U	2	0.02	U	2	0.0071	U	2	0.007	U	2	0.0081	U	2
Heptachlor epoxide	NA	NA	0.0074	U	2	0.0075	U	2	0.0071	U	2	0.007	U	2	0.0081	U	2
Methoxychlor	NA	NA	0.037	U	2	0.037	U	2	0.036	U	2	0.035	U	2	0.04	U	2
Toxaphene	NA	NA	0.15	U	2	0.15	U	2	0.14	U	2	0.14	U	2	0.16	U	2

		Sample	2SB-09 12.5-15			2SB-10 SURF			2SB-10 5-7			2SB-10 10-12			2SB-11 SURF		
		Date	2025-10-02			2025-10-02			2025-10-02			2025-10-02			2025-10-02		
PBCs (8082)	**UU SCO**	**RRU SCO**	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL
PCB-1016	0.1	1	0.074	U	2	0.075	U	2	0.071	U	2	0.07	U	2	0.081	U	2
PCB-1221	0.1	1	0.074	U	2	0.075	U	2	0.071	U	2	0.07	U	2	0.081	U	2
PCB-1232	0.1	1	0.074	U	2	0.075	U	2	0.071	U	2	0.07	U	2	0.081	U	2
PCB-1242	0.1	1	0.074	U	2	0.075	U	2	0.071	U	2	0.07	U	2	0.081	U	2
PCB-1248	0.1	1	0.074	U	2	0.075	U	2	0.071	U	2	0.07	U	2	0.081	U	2
PCB-1254	0.1	1	0.074	U	2	0.075	U	2	0.071	U	2	0.07	U	2	0.081	U	2
PCB-1260	0.1	1	0.074	U	2	0.075	U	2	0.071	U	2	0.07	U	2	0.081	U	2
PCB-1262	0.1	1	0.074	U	2	0.075	U	2	0.071	U	2	0.07	U	2	0.081	U	2
PCB-1268	0.1	1	0.074	U	2	0.075	U	2	0.071	U	2	0.07	U	2	0.081	U	2
Total PCBs	0.1	1	ND			ND			ND			ND			ND		

		Sample	2SB-09 12.5-15			2SB-10 SURF			2SB-10 5-7			2SB-10 10-12			2SB-11 SURF		
		Date	2025-10-02			2025-10-02			2025-10-02			2025-10-02			2025-10-02		
Herbicides (8151)	**UU SCO**	**RRU SCO**	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL
2,4,5-T	NA	NA	0.14	U	10	0.14	U	10	0.14	U	10	0.13	U	10	0.15	U	10
2,4,5-TP (Silvex)	3.8	100	0.14	U	10	0.14	U	10	0.14	U	10	0.13	U	10	0.15	U	10
2,4-D	NA	NA	0.28	U	10	0.28	U	10	0.27	U	10	0.26	U	10	0.31	U	10
2,4-DB	NA	NA	1.4	U	10	1.4	U	10	1.4	U	10	1.3	U	10	1.5	U	10
Dalapon	NA	NA	0.14	U	10	0.14	U	10	0.14	U	10	0.13	U	10	0.15	U	10
Dicamba	NA	NA	0.14	U	10	0.14	U	10	0.14	U	10	0.13	U	10	0.15	U	10
Dichloroprop	NA	NA	0.28	U	10	0.28	U	10	0.27	U	10	0.26	U	10	0.31	U	10
Dinoseb	NA	NA	0.28	U	10	0.28	U	10	0.27	U	10	0.26	U	10	0.31	U	10

value ≤ UU SCO
value > UU SCO

Q = Laboratory Qualifier DL = Dilution NA = not available (addtional flags: B-in blank, D-diluted, E-estimated, J-approximate)

Table 5: Pesticides, PCBs, and Herbicides in Soil

The Green, Newburgh, NY
BCP ID: C336099

GALLAGHER BASSETT | TECHNICAL SERVICES

All data in mg/Kg (ppm)		**Sample**	**2SB-11 0-5**			**2SB-11 13-15**			**2SB-12 SURF**			**2SB-12 4-6**			**2SB-12 8-10**		
U= Not Detected ≥ value		Date	2025-10-02			2025-10-02			2025-10-02			2025-10-02			2025-10-02		
Pesticides (8081)	**UU SCO**	**RRU SCO**	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL
4,4' -DDD	0.0033	5	0.0022	U	2	0.0021	U	2	0.0027	U	2	0.01	U	2	0.0022	U	2
4,4' -DDE	0.0033	3.4	0.0022	U	2	0.0021	U	2	0.008	U	2	0.01	U	2	0.0022	U	2
4,4' -DDT	0.0033	3.8	0.003	U	2	0.0021	U	2	0.0027	U	2	0.01	U	2	0.0022	U	2
a-BHC	0.02	0.1	0.0074	U	2	0.0072	U	2	0.0089	U	2	0.0079	U	2	0.0072	U	2
a-Chlordane	0.014	0.65	0.0037	U	2	0.0036	U	2	0.0044	U	2	0.004	U	2	0.0036	U	2
Alachlor	NA	NA	0.0037	U	2	0.0036	U	2	0.0044	U	2	0.004	U	2	0.0036	U	2
Aldrin	0.0048	0.044	0.0037	U	2	0.0036	U	2	0.0044	U	2	0.004	U	2	0.0036	U	2
b-BHC	0.021	0.1	0.0074	U	2	0.0072	U	2	0.015	U	2	0.0079	U	2	0.0072	U	2
Chlordane	NA	NA	0.037	U	2	0.036	U	2	0.044	U	2	0.04	U	2	0.036	U	2
d-BHC	0.04	100	0.0074	U	2	0.0072	U	2	0.0089	U	2	0.0079	U	2	0.0072	U	2
Dieldrin	0.005	0.075	0.0037	U	2	0.0036	U	2	0.0044	U	2	0.004	U	2	0.0036	U	2
Endosulfan I	4.3	35	0.0074	U	2	0.0072	U	2	0.0089	U	2	0.0079	U	2	0.0072	U	2
Endosulfan II	4.3	35	0.0074	U	2	0.0072	U	2	0.0089	U	2	0.0079	U	2	0.0072	U	2
Endosulfan sulfate	4.3	35	0.0074	U	2	0.0072	U	2	0.0089	U	2	0.0079	U	2	0.0072	U	2
Endrin	0.014	5.3	0.0074	U	2	0.0072	U	2	0.0089	U	2	0.0079	U	2	0.0072	U	2
Endrin aldehyde	NA	NA	0.0074	U	2	0.0072	U	2	0.0089	U	2	0.0079	U	2	0.0072	U	2
Endrin ketone	NA	NA	0.0074	U	2	0.0072	U	2	0.0089	U	2	0.0079	U	2	0.0072	U	2
g-BHC (lindane)	0.025	0.21	0.0015	U	2	0.0014	U	2	0.0018	U	2	0.0016	U	2	0.0014	U	2
g-Chlordane	NA	NA	0.0037	U	2	0.0036	U	2	0.0044	U	2	0.004	U	2	0.0036	U	2
Heptachlor	0.013	0.53	0.0074	U	2	0.0072	U	2	0.0089	U	2	0.0079	U	2	0.0072	U	2
Heptachlor epoxide	NA	NA	0.0074	U	2	0.0072	U	2	0.0089	U	2	0.0079	U	2	0.0072	U	2
Methoxychlor	NA	NA	0.037	U	2	0.036	U	2	0.044	U	2	0.04	U	2	0.036	U	2
Toxaphene	NA	NA	0.15	U	2	0.14	U	2	0.18	U	2	0.16	U	2	0.14	U	2

		Sample	**2SB-11 0-5**			**2SB-11 13-15**			**2SB-12 SURF**			**2SB-12 4-6**			**2SB-12 8-10**		
		Date	2025-10-02			2025-10-02			2025-10-02			2025-10-02			2025-10-02		
PBCs (8082)	**UU SCO**	**RRU SCO**	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL
PCB-1016	0.1	1	0.074	U	2	0.072	U	2	0.089	U	2	0.079	U	2	0.072	U	2
PCB-1221	0.1	1	0.074	U	2	0.072	U	2	0.089	U	2	0.079	U	2	0.072	U	2
PCB-1232	0.1	1	0.074	U	2	0.072	U	2	0.089	U	2	0.079	U	2	0.072	U	2
PCB-1242	0.1	1	0.074	U	2	0.072	U	2	0.089	U	2	0.079	U	2	0.072	U	2
PCB-1248	0.1	1	0.074	U	2	0.072	U	2	0.089	U	2	0.079	U	2	0.072	U	2
PCB-1254	0.1	1	0.074	U	2	0.072	U	2	0.089	U	2	0.079	U	2	0.072	U	2
PCB-1260	0.1	1	0.074	U	2	0.072	U	2	0.089	U	2	0.079	U	2	0.072	U	2
PCB-1262	0.1	1	0.074	U	2	0.072	U	2	0.089	U	2	0.079	U	2	0.072	U	2
PCB-1268	0.1	1	0.074	U	2	0.072	U	2	0.089	U	2	0.079	U	2	0.072	U	2
Total PCBs	0.1	1	ND			ND			ND			ND			ND		

		Sample	**2SB-11 0-5**			**2SB-11 13-15**			**2SB-12 SURF**			**2SB-12 4-6**			**2SB-12 8-10**		
		Date	2025-10-02			2025-10-02			2025-10-02			2025-10-02			2025-10-02		
Herbicides (8151)	**UU SCO**	**RRU SCO**	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL
2,4,5-T	NA	NA	0.14	U	10	0.13	U	10	0.17	U	10	0.15	U	10	0.14	U	10
2,4,5-TP (Silvex)	3.8	100	0.14	U	10	0.13	U	10	0.17	U	10	0.15	U	10	0.14	U	10
2,4-D	NA	NA	0.28	U	10	0.27	U	10	0.34	U	10	0.29	U	10	0.27	U	10
2,4-DB	NA	NA	1.4	U	10	1.3	U	10	1.7	U	10	1.5	U	10	1.4	U	10
Dalapon	NA	NA	0.14	U	10	0.13	U	10	0.17	U	10	0.15	U	10	0.14	U	10
Dicamba	NA	NA	0.14	U	10	0.13	U	10	0.17	U	10	0.15	U	10	0.14	U	10
Dichloroprop	NA	NA	0.28	U	10	0.27	U	10	0.34	U	10	0.29	U	10	0.27	U	10
Dinoseb	NA	NA	0.28	U	10	0.27	U	10	0.34	U	10	0.29	U	10	0.27	U	10

value ≤ UU SCO
value > UU SCO

Q = Laboratory Qualifier DL = Dilution NA = not available (addtional flags: B-in blank, D-diluted, E-estimated, J-approximate)

Table 5: Pesticides, PCBs, and Herbicides in Soil

The Green, Newburgh, NY
BCP ID: C336099

GALLAGHER BASSETT | TECHNICAL SERVICES

All data in mg/Kg (ppm)		**Sample**	**2SB-13 SURF**			**2SB-13 0-5**			**2SB-13 8-10**			**2SB-14 SURF**			**2SB-14 0-5**		
U= Not Detected ≥ value		Date	2025-10-02			2025-10-02			2025-10-02			2025-10-02			2025-10-02		
Pesticides (8081)	**UU SCO**	**RRU SCO**	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL
4,4' -DDD	0.0033	5	0.0023	*U*	*2*	0.0046		*2*	0.0021	*U*	*2*	0.0022	*U*	*2*	0.0021	*U*	*2*
4,4' -DDE	0.0033	3.4	0.035		*2*	0.027		*2*	0.0021	*U*	*2*	0.0031		*2*	0.0021	*U*	*2*
4,4' -DDT	0.0033	3.8	0.056		*2*	0.038		*2*	0.0021	*U*	*2*	0.0086		*2*	0.0021	*U*	*2*
a-BHC	0.02	0.1	0.0077	*U*	*2*	0.0073	*U*	*2*	0.0072	*U*	*2*	0.0073	*U*	*2*	0.0069	*U*	*2*
a-Chlordane	0.014	0.65	0.01	*U*	*2*	0.0036	*U*	*2*	0.0036	*U*	*2*	0.0037	*U*	*2*	0.0035	*U*	*2*
Alachlor	NA	NA	0.0038	*U*	*2*	0.0036	*U*	*2*	0.0036	*U*	*2*	0.0037	*U*	*2*	0.0035	*U*	*2*
Aldrin	0.0048	0.044	0.0038	*U*	*2*	0.0036	*U*	*2*	0.0036	*U*	*2*	0.0037	*U*	*2*	0.0035	*U*	*2*
b-BHC	0.021	0.1	0.0077	*U*	*2*	0.0073	*U*	*2*	0.0072	*U*	*2*	0.0073	*U*	*2*	0.0069	*U*	*2*
Chlordane	NA	NA	0.038	*U*	*2*	0.036	*U*	*2*	0.036	*U*	*2*	0.037	*U*	*2*	0.035	*U*	*2*
d-BHC	0.04	100	0.0077	*U*	*2*	0.0073	*U*	*2*	0.0072	*U*	*2*	0.0073	*U*	*2*	0.0069	*U*	*2*
Dieldrin	0.005	0.075	0.0038	*U*	*2*	0.0036	*U*	*2*	0.0036	*U*	*2*	0.0037	*U*	*2*	0.0035	*U*	*2*
Endosulfan I	4.3	35	0.0077	*U*	*2*	0.0073	*U*	*2*	0.0072	*U*	*2*	0.0073	*U*	*2*	0.0069	*U*	*2*
Endosulfan II	4.3	35	0.0077	*U*	*2*	0.0073	*U*	*2*	0.0072	*U*	*2*	0.0073	*U*	*2*	0.0069	*U*	*2*
Endosulfan sulfate	4.3	35	0.0077	*U*	*2*	0.0073	*U*	*2*	0.0072	*U*	*2*	0.0073	*U*	*2*	0.0069	*U*	*2*
Endrin	0.014	5.3	0.0077	*U*	*2*	0.0073	*U*	*2*	0.0072	*U*	*2*	0.0073	*U*	*2*	0.0069	*U*	*2*
Endrin aldehyde	NA	NA	0.0077	*U*	*2*	0.0073	*U*	*2*	0.0072	*U*	*2*	0.0073	*U*	*2*	0.0069	*U*	*2*
Endrin ketone	NA	NA	0.0077	*U*	*2*	0.0073	*U*	*2*	0.0072	*U*	*2*	0.0073	*U*	*2*	0.0069	*U*	*2*
g-BHC (lindane)	0.025	0.21	0.0015	*U*	*2*	0.0015	*U*	*2*	0.0014	*U*	*2*	0.0015	*U*	*2*	0.0014	*U*	*2*
g-Chlordane	NA	NA	0.01	*U*	*2*	0.0036	*U*	*2*	0.0036	*U*	*2*	0.0037	*U*	*2*	0.0035	*U*	*2*
Heptachlor	0.013	0.53	0.0077	*U*	*2*	0.0073	*U*	*2*	0.0072	*U*	*2*	0.0073	*U*	*2*	0.0069	*U*	*2*
Heptachlor epoxide	NA	NA	0.0077	*U*	*2*	0.0073	*U*	*2*	0.0072	*U*	*2*	0.0073	*U*	*2*	0.0069	*U*	*2*
Methoxychlor	NA	NA	0.038	*U*	*2*	0.036	*U*	*2*	0.036	*U*	*2*	0.037	*U*	*2*	0.035	*U*	*2*
Toxaphene	NA	NA	0.15	*U*	*2*	0.15	*U*	*2*	0.14	*U*	*2*	0.15	*U*	*2*	0.14	*U*	*2*

		Sample	**2SB-13 SURF**			**2SB-13 0-5**			**2SB-13 8-10**			**2SB-14 SURF**			**2SB-14 0-5**		
		Date	2025-10-02			2025-10-02			2025-10-02			2025-10-02			2025-10-02		
PBCs (8082)	**UU SCO**	**RRU SCO**	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL
PCB-1016	0.1	1	0.077	*U*	*2*	0.073	*U*	*2*	0.072	*U*	*2*	0.073	*U*	*2*	0.069	*U*	*2*
PCB-1221	0.1	1	0.077	*U*	*2*	0.073	*U*	*2*	0.072	*U*	*2*	0.073	*U*	*2*	0.069	*U*	*2*
PCB-1232	0.1	1	0.077	*U*	*2*	0.073	*U*	*2*	0.072	*U*	*2*	0.073	*U*	*2*	0.069	*U*	*2*
PCB-1242	0.1	1	0.077	*U*	*2*	0.073	*U*	*2*	0.072	*U*	*2*	0.073	*U*	*2*	0.069	*U*	*2*
PCB-1248	0.1	1	0.077	*U*	*2*	0.073	*U*	*2*	0.072	*U*	*2*	0.073	*U*	*2*	0.069	*U*	*2*
PCB-1254	0.1	1	0.077	*U*	*2*	0.073	*U*	*2*	0.072	*U*	*2*	0.073	*U*	*2*	0.069	*U*	*2*
PCB-1260	0.1	1	0.077	*U*	*2*	0.073	*U*	*2*	0.072	*U*	*2*	0.073	*U*	*2*	0.069	*U*	*2*
PCB-1262	0.1	1	0.077	*U*	*2*	0.073	*U*	*2*	0.072	*U*	*2*	0.073	*U*	*2*	0.069	*U*	*2*
PCB-1268	0.1	1	0.077	*U*	*2*	0.073	*U*	*2*	0.072	*U*	*2*	0.073	*U*	*2*	0.069	*U*	*2*
Total PCBs	0.1	1	ND			ND			ND			ND			ND		

		Sample	**2SB-13 SURF**			**2SB-13 0-5**			**2SB-13 8-10**			**2SB-14 SURF**			**2SB-14 0-5**		
		Date	2025-10-02			2025-10-02			2025-10-02			2025-10-02			2025-10-02		
Herbicides (8151)	**UU SCO**	**RRU SCO**	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL
2,4,5-T	NA	NA	0.15	*U*	*10*	0.14	*U*	*10*	0.14	*U*	*10*	0.14	*U*	*10*	0.13	*U*	*10*
2,4,5-TP (Silvex)	3.8	100	0.15	*U*	*10*	0.14	*U*	*10*	0.14	*U*	*10*	0.14	*U*	*10*	0.13	*U*	*10*
2,4-D	NA	NA	0.29	*U*	*10*	0.27	*U*	*10*	0.27	*U*	*10*	0.27	*U*	*10*	0.26	*U*	*10*
2,4-DB	NA	NA	1.5	*U*	*10*	1.4	*U*	*10*	1.4	*U*	*10*	1.4	*U*	*10*	1.3	*U*	*10*
Dalapon	NA	NA	0.15	*U*	*10*	0.14	*U*	*10*	0.14	*U*	*10*	0.14	*U*	*10*	0.13	*U*	*10*
Dicamba	NA	NA	0.15	*U*	*10*	0.14	*U*	*10*	0.14	*U*	*10*	0.14	*U*	*10*	0.13	*U*	*10*
Dichloroprop	NA	NA	0.29	*U*	*10*	0.27	*U*	*10*	0.27	*U*	*10*	0.27	*U*	*10*	0.26	*U*	*10*
Dinoseb	NA	NA	0.29	*U*	*10*	0.27	*U*	*10*	0.27	*U*	*10*	0.27	*U*	*10*	0.26	*U*	*10*

value ≤ UU SCO
value > UU SCO

Q = Laboratory Qualifier DL = Dilution NA = not available (addtional flags: B-in blank, D-diluted, E-estimated, J-approximate)

Table 5: Pesticides, PCBs, and Herbicides in Soil

The Green, Newburgh, NY
BCP ID: C336099

GALLAGHER BASSETT | TECHNICAL SERVICES

All data in mg/Kg (ppm)		Sample	2SB-14 10-12.5			2SB-15 SURF			2SB-15 0-5			DUP-20251003			2SB-15 10-12		
U= Not Detected ≥ value		Date	2025-10-02			2025-10-03			2025-10-03			2025-10-03			2025-10-03		
Pesticides (8081)	**UU SCO**	**RRU SCO**	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL
4,4' -DDD	0.0033	5	0.0022	U	2	0.0071		2	0.0021	U	2	0.0021	U	2	0.0021	U	2
4,4' -DDE	0.0033	3.4	0.0022	U	2	0.013		2	0.0021	U	2	0.038		2	0.0021	U	2
4,4' -DDT	0.0033	3.8	0.0022	U	2	0.069		2	0.0021	U	2	0.043		2	0.0021	U	2
a-BHC	0.02	0.1	0.0072	U	2	0.0073	U	2	0.0069	U	2	0.007	U	2	0.0071	U	2
a-Chlordane	0.014	0.65	0.0036	U	2	0.0089		2	0.0034	U	2	0.0035	U	2	0.0036	U	2
Alachlor	NA	NA	0.0036	U	2	0.0037	U	2	0.0034	U	2	0.0035	U	2	0.0036	U	2
Aldrin	0.0048	0.044	0.0036	U	2	0.0037	U	2	0.0034	U	2	0.0035	U	2	0.0036	U	2
b-BHC	0.021	0.1	0.0072	U	2	0.0073	U	2	0.0069	U	2	0.007	U	2	0.0071	U	2
Chlordane	NA	NA	0.036	U	2	0.05	U	2	0.034	U	2	0.035	U	2	0.036	U	2
d-BHC	0.04	100	0.0072	U	2	0.0073	U	2	0.0069	U	2	0.007	U	2	0.0071	U	2
Dieldrin	0.005	0.075	0.0036	U	2	0.0037	U	2	0.0034	U	2	0.0035	U	2	0.0036	U	2
Endosulfan I	4.3	35	0.0072	U	2	0.0073	U	2	0.0069	U	2	0.007	U	2	0.0071	U	2
Endosulfan II	4.3	35	0.0072	U	2	0.0073	U	2	0.0069	U	2	0.007	U	2	0.0071	U	2
Endosulfan sulfate	4.3	35	0.0072	U	2	0.0073	U	2	0.0069	U	2	0.007	U	2	0.0071	U	2
Endrin	0.014	5.3	0.0072	U	2	0.0073	U	2	0.0069	U	2	0.007	U	2	0.0071	U	2
Endrin aldehyde	NA	NA	0.0072	U	2	0.0073	U	2	0.0069	U	2	0.007	U	2	0.0071	U	2
Endrin ketone	NA	NA	0.0072	U	2	0.0073	U	2	0.0069	U	2	0.007	U	2	0.0071	U	2
g-BHC (lindane)	0.025	0.21	0.0014	U	2	0.0015	U	2	0.0014	U	2	0.0014	U	2	0.0014	U	2
g-Chlordane	NA	NA	0.0036	U	2	0.0055		2	0.0034	U	2	0.0035	U	2	0.0036	U	2
Heptachlor	0.013	0.53	0.0072	U	2	0.0073	U	2	0.0069	U	2	0.007	U	2	0.0071	U	2
Heptachlor epoxide	NA	NA	0.0072	U	2	0.0073	U	2	0.0069	U	2	0.007	U	2	0.0071	U	2
Methoxychlor	NA	NA	0.036	U	2	0.037	U	2	0.034	U	2	0.035	U	2	0.036	U	2
Toxaphene	NA	NA	0.14	U	2	0.15	U	2	0.14	U	2	0.14	U	2	0.14	U	2

		Sample	2SB-14 10-12.5			2SB-15 SURF			2SB-15 0-5			DUP-20251003			2SB-15 10-12		
		Date	2025-10-02			2025-10-03			2025-10-03			2025-10-03			2025-10-03		
PBCs (8082)	**UU SCO**	**RRU SCO**	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL
PCB-1016	0.1	1	0.072	U	2	0.073	U	2	0.069	U	2	0.07	U	2	0.071	U	2
PCB-1221	0.1	1	0.072	U	2	0.073	U	2	0.069	U	2	0.07	U	2	0.071	U	2
PCB-1232	0.1	1	0.072	U	2	0.073	U	2	0.069	U	2	0.07	U	2	0.071	U	2
PCB-1242	0.1	1	0.072	U	2	0.073	U	2	0.069	U	2	0.07	U	2	0.071	U	2
PCB-1248	0.1	1	0.072	U	2	0.073	U	2	0.069	U	2	0.07	U	2	0.071	U	2
PCB-1254	0.1	1	0.072	U	2	0.073	U	2	0.069	U	2	0.07	U	2	0.071	U	2
PCB-1260	0.1	1	0.072	U	2	0.073	U	2	0.069	U	2	0.07	U	2	0.071	U	2
PCB-1262	0.1	1	0.072	U	2	0.073	U	2	0.069	U	2	0.07	U	2	0.071	U	2
PCB-1268	0.1	1	0.072	U	2	0.073	U	2	0.069	U	2	0.07	U	2	0.071	U	2
Total PCBs	0.1	1	ND			ND			ND			ND			ND		

		Sample	2SB-14 10-12.5			2SB-15 SURF			2SB-15 0-5			DUP-20251003			2SB-15 10-12		
		Date	2025-10-02			2025-10-03			2025-10-03			2025-10-03			2025-10-03		
Herbicides (8151)	**UU SCO**	**RRU SCO**	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL
2,4,5-T	NA	NA	0.14	U	10	0.14	U	10	0.13	U	10	0.13	U	10	0.13	U	10
2,4,5-TP (Silvex)	3.8	100	0.14	U	10	0.14	U	10	0.13	U	10	0.13	U	10	0.13	U	10
2,4-D	NA	NA	0.27	U	10	0.27	U	10	0.26	U	10	0.26	U	10	0.26	U	10
2,4-DB	NA	NA	1.4	U	10	1.4	U	10	1.3	U	10	1.3	U	10	1.3	U	10
Dalapon	NA	NA	0.14	U	10	0.14	U	10	0.13	U	10	0.13	U	10	0.13	U	10
Dicamba	NA	NA	0.14	U	10	0.14	U	10	0.13	U	10	0.13	U	10	0.13	U	10
Dichloroprop	NA	NA	0.27	U	10	0.27	U	10	0.26	U	10	0.26	U	10	0.26	U	10
Dinoseb	NA	NA	0.27	U	10	0.27	U	10	0.26	U	10	0.26	U	10	0.26	U	10

value ≤ UU SCO
value > UU SCO

Q = Laboratory Qualifier DL = Dilution NA = not available (addtional flags: B-in blank, D-diluted, E-estimated, J-approximate)

Table 5: Pesticides, PCBs, and Herbicides in Soil

The Green, Newburgh, NY
BCP ID: C336099

GALLAGHER BASSETT | TECHNICAL SERVICES

All data in mg/Kg (ppm)		**Sample**	**2SB-16 SURF**			**2SB-16 10-12**			**2SB-17 SURF**			**2SB-17 0-5**			**2SB-17 10-12**		
U= Not Detected ≥ value		Date	2025-10-03			2025-10-03			2025-10-03			2025-10-03			2025-10-03		
Pesticides (8081)	**UU SCO**	**RRU SCO**	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL
4,4' -DDD	0.0033	5	0.0021	U	2	0.0021	U	2	0.0021	U	2	0.0021	U	2	0.0021	U	2
4,4' -DDE	0.0033	3.4	0.01	U	2	0.0021	U	2	0.0021	U	2	0.0021	U	2	0.0021	U	2
4,4' -DDT	0.0033	3.8	0.01	U	2	0.0021	U	2	0.0021	U	2	0.0021	U	2	0.0021	U	2
a-BHC	0.02	0.1	0.0071	U	2	0.0069	U	2	0.0071	U	2	0.0071	U	2	0.0069	U	2
a-Chlordane	0.014	0.65	0.0036	U	2	0.0034	U	2	0.0035	U	2	0.0036	U	2	0.0034	U	2
Alachlor	NA	NA	0.0036	U	2	0.0034	U	2	0.0035	U	2	0.0036	U	2	0.0034	U	2
Aldrin	0.0048	0.044	0.0036	U	2	0.0034	U	2	0.0035	U	2	0.0036	U	2	0.0034	U	2
b-BHC	0.021	0.1	0.0071	U	2	0.0069	U	2	0.0071	U	2	0.0071	U	2	0.0069	U	2
Chlordane	NA	NA	0.036	U	2	0.034	U	2	0.035	U	2	0.036	U	2	0.034	U	2
d-BHC	0.04	100	0.0071	U	2	0.0069	U	2	0.0071	U	2	0.0071	U	2	0.0069	U	2
Dieldrin	0.005	0.075	0.0036	U	2	0.0034	U	2	0.0035	U	2	0.0036	U	2	0.0034	U	2
Endosulfan I	4.3	35	0.0071	U	2	0.0069	U	2	0.0071	U	2	0.0071	U	2	0.0069	U	2
Endosulfan II	4.3	35	0.0071	U	2	0.0069	U	2	0.0071	U	2	0.0071	U	2	0.0069	U	2
Endosulfan sulfate	4.3	35	0.0071	U	2	0.0069	U	2	0.0071	U	2	0.0071	U	2	0.0069	U	2
Endrin	0.014	5.3	0.0071	U	2	0.0069	U	2	0.0071	U	2	0.0071	U	2	0.0069	U	2
Endrin aldehyde	NA	NA	0.0071	U	2	0.0069	U	2	0.0071	U	2	0.0071	U	2	0.0069	U	2
Endrin ketone	NA	NA	0.0071	U	2	0.0069	U	2	0.0071	U	2	0.0071	U	2	0.0069	U	2
g-BHC (lindane)	0.025	0.21	0.0014	U	2	0.0014	U	2	0.0014	U	2	0.0014	U	2	0.0014	U	2
g-Chlordane	NA	NA	0.0036	U	2	0.0034	U	2	0.0035	U	2	0.0036	U	2	0.0034	U	2
Heptachlor	0.013	0.53	0.0071	U	2	0.0069	U	2	0.0071	U	2	0.0071	U	2	0.0069	U	2
Heptachlor epoxide	NA	NA	0.0071	U	2	0.0069	U	2	0.0071	U	2	0.0071	U	2	0.0069	U	2
Methoxychlor	NA	NA	0.036	U	2	0.034	U	2	0.035	U	2	0.036	U	2	0.034	U	2
Toxaphene	NA	NA	0.14	U	2	0.14	U	2	0.14	U	2	0.14	U	2	0.14	U	2

		Sample	**2SB-16 SURF**			**2SB-16 10-12**			**2SB-17 SURF**			**2SB-17 0-5**			**2SB-17 10-12**		
		Date	2025-10-03			2025-10-03			2025-10-03			2025-10-03			2025-10-03		
PBCs (8082)	**UU SCO**	**RRU SCO**	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL
PCB-1016	0.1	1	0.071	U	2	0.069	U	2	0.071	U	2	0.071	U	2	0.069	U	2
PCB-1221	0.1	1	0.071	U	2	0.069	U	2	0.071	U	2	0.071	U	2	0.069	U	2
PCB-1232	0.1	1	0.071	U	2	0.069	U	2	0.071	U	2	0.071	U	2	0.069	U	2
PCB-1242	0.1	1	0.071	U	2	0.069	U	2	0.071	U	2	0.071	U	2	0.069	U	2
PCB-1248	0.1	1	0.071	U	2	0.069	U	2	0.071	U	2	0.071	U	2	0.069	U	2
PCB-1254	0.1	1	0.071	U	2	0.069	U	2	0.071	U	2	0.071	U	2	0.069	U	2
PCB-1260	0.1	1	0.071	U	2	0.069	U	2	0.071	U	2	0.071	U	2	0.069	U	2
PCB-1262	0.1	1	0.071	U	2	0.069	U	2	0.071	U	2	0.071	U	2	0.069	U	2
PCB-1268	0.1	1	0.071	U	2	0.069	U	2	0.071	U	2	0.071	U	2	0.069	U	2
Total PCBs	0.1	1	ND			ND			ND			ND			ND		

		Sample	**2SB-16 SURF**			**2SB-16 10-12**			**2SB-17 SURF**			**2SB-17 0-5**			**2SB-17 10-12**		
		Date	2025-10-03			2025-10-03			2025-10-03			2025-10-03			2025-10-03		
Herbicides (8151)	**UU SCO**	**RRU SCO**	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL
2,4,5-T	NA	NA	0.14	U	10	0.13	U	10	0.13	U	10	0.13	U	10	0.13	U	10
2,4,5-TP (Silvex)	3.8	100	0.14	U	10	0.13	U	10	0.13	U	10	0.13	U	10	0.13	U	10
2,4-D	NA	NA	0.27	U	10	0.26	U	10	0.27	U	10	0.26	U	10	0.26	U	10
2,4-DB	NA	NA	1.4	U	10	1.3	U	10	1.3	U	10	1.3	U	10	1.3	U	10
Dalapon	NA	NA	0.14	U	10	0.13	U	10	0.13	U	10	0.13	U	10	0.13	U	10
Dicamba	NA	NA	0.14	U	10	0.13	U	10	0.13	U	10	0.13	U	10	0.13	U	10
Dichloroprop	NA	NA	0.27	U	10	0.26	U	10	0.27	U	10	0.26	U	10	0.26	U	10
Dinoseb	NA	NA	0.27	U	10	0.26	U	10	0.27	U	10	0.26	U	10	0.26	U	10

value ≤ UU SCO
value > UU SCO

Q = Laboratory Qualifier DL = Dilution NA = not available (addtional flags: B-in blank, D-diluted, E-estimated, J-approximate)

Table 5: Pesticides, PCBs, and Herbicides in Soil

The Green, Newburgh, NY
BCP ID: C336099

GALLAGHER BASSETT | TECHNICAL SERVICES

All data in mg/Kg (ppm)		Sample	2SB-18 SURF			2SB-18 10-15			2SB-19 SURF			2SB-19 0-5			2SB-19 10-13		
U= Not Detected ≥ value		Date	2025-10-03			2025-10-03			2025-10-03			2025-10-03			2025-10-03		
Pesticides (8081)	**UU SCO**	**RRU SCO**	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL
4,4' -DDD	0.0033	5	0.0022	*U*	*2*	0.0021	*U*	*2*	0.0022	*U*	*2*	0.0021	*U*	*2*	0.0021	*U*	*2*
4,4' -DDE	0.0033	3.4	0.01		*2*	0.0021	*U*	*2*	0.01	*U*	*2*	0.0021	*U*	*2*	0.0021	*U*	*2*
4,4' -DDT	0.0033	3.8	0.037		*2*	0.0021	*U*	*2*	0.015	*U*	*2*	0.0021	*U*	*2*	0.0021	*U*	*2*
a-BHC	0.02	0.1	0.0073	*U*	*2*	0.0071	*U*	*2*	0.0072	*U*	*2*	0.007	*U*	*2*	0.0069	*U*	*2*
a-Chlordane	0.014	0.65	0.01		*2*	0.0036	*U*	*2*	0.0036	*U*	*2*	0.0035	*U*	*2*	0.0034	*U*	*2*
Alachlor	NA	NA	0.0036	*U*	*2*	0.0036	*U*	*2*	0.0036	*U*	*2*	0.0035	*U*	*2*	0.0034	*U*	*2*
Aldrin	0.0048	0.044	0.0036	*U*	*2*	0.0036	*U*	*2*	0.0036	*U*	*2*	0.0035	*U*	*2*	0.0034	*U*	*2*
b-BHC	0.021	0.1	0.0073	*U*	*2*	0.0071	*U*	*2*	0.0072	*U*	*2*	0.007	*U*	*2*	0.0069	*U*	*2*
Chlordane	NA	NA	0.048		*2*	0.036	*U*	*2*	0.036	*U*	*2*	0.035	*U*	*2*	0.034	*U*	*2*
d-BHC	0.04	100	0.0073	*U*	*2*	0.0071	*U*	*2*	0.0072	*U*	*2*	0.007	*U*	*2*	0.0069	*U*	*2*
Dieldrin	0.005	0.075	0.0054		*2*	0.0036	*U*	*2*	0.0036	*U*	*2*	0.0035	*U*	*2*	0.0034	*U*	*2*
Endosulfan I	4.3	35	0.0073	*U*	*2*	0.0071	*U*	*2*	0.0072	*U*	*2*	0.007	*U*	*2*	0.0069	*U*	*2*
Endosulfan II	4.3	35	0.0073	*U*	*2*	0.0071	*U*	*2*	0.0072	*U*	*2*	0.007	*U*	*2*	0.0069	*U*	*2*
Endosulfan sulfate	4.3	35	0.0073	*U*	*2*	0.0071	*U*	*2*	0.0072	*U*	*2*	0.007	*U*	*2*	0.0069	*U*	*2*
Endrin	0.014	5.3	0.0073	*U*	*2*	0.0071	*U*	*2*	0.0072	*U*	*2*	0.007	*U*	*2*	0.0069	*U*	*2*
Endrin aldehyde	NA	NA	0.0073	*U*	*2*	0.0071	*U*	*2*	0.015	*U*	*2*	0.007	*U*	*2*	0.0069	*U*	*2*
Endrin ketone	NA	NA	0.0073	*U*	*2*	0.0071	*U*	*2*	0.0072	*U*	*2*	0.007	*U*	*2*	0.0069	*U*	*2*
g-BHC (lindane)	0.025	0.21	0.0015	*U*	*2*	0.0014	*U*	*2*	0.0014	*U*	*2*	0.0014	*U*	*2*	0.0014	*U*	*2*
g-Chlordane	NA	NA	0.007		*2*	0.0036	*U*	*2*	0.0036	*U*	*2*	0.0035	*U*	*2*	0.0034	*U*	*2*
Heptachlor	0.013	0.53	0.0073	*U*	*2*	0.0071	*U*	*2*	0.0072	*U*	*2*	0.007	*U*	*2*	0.0069	*U*	*2*
Heptachlor epoxide	NA	NA	0.0073	*U*	*2*	0.0071	*U*	*2*	0.0072	*U*	*2*	0.007	*U*	*2*	0.0069	*U*	*2*
Methoxychlor	NA	NA	0.036	*U*	*2*	0.036	*U*	*2*	0.036	*U*	*2*	0.035	*U*	*2*	0.034	*U*	*2*
Toxaphene	NA	NA	0.15	*U*	*2*	0.14	*U*	*2*	0.14	*U*	*2*	0.14	*U*	*2*	0.14	*U*	*2*

		Sample	2SB-18 SURF			2SB-18 10-15			2SB-19 SURF			2SB-19 0-5			2SB-19 10-13		
		Date	2025-10-03			2025-10-03			2025-10-03			2025-10-03			2025-10-03		
PBCs (8082)	**UU SCO**	**RRU SCO**	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL
PCB-1016	0.1	1	0.073	*U*	*2*	0.071	*U*	*2*	0.072	*U*	*2*	0.07	*U*	*2*	0.069	*U*	*2*
PCB-1221	0.1	1	0.073	*U*	*2*	0.071	*U*	*2*	0.072	*U*	*2*	0.07	*U*	*2*	0.069	*U*	*2*
PCB-1232	0.1	1	0.073	*U*	*2*	0.071	*U*	*2*	0.072	*U*	*2*	0.07	*U*	*2*	0.069	*U*	*2*
PCB-1242	0.1	1	0.073	*U*	*2*	0.071	*U*	*2*	0.072	*U*	*2*	0.07	*U*	*2*	0.069	*U*	*2*
PCB-1248	0.1	1	0.073	*U*	*2*	0.071	*U*	*2*	0.072	*U*	*2*	0.07	*U*	*2*	0.069	*U*	*2*
PCB-1254	0.1	1	0.073	*U*	*2*	0.071	*U*	*2*	0.072	*U*	*2*	0.07	*U*	*2*	0.069	*U*	*2*
PCB-1260	0.1	1	0.073	*U*	*2*	0.071	*U*	*2*	0.072	*U*	*2*	0.07	*U*	*2*	0.069	*U*	*2*
PCB-1262	0.1	1	0.073	*U*	*2*	0.071	*U*	*2*	0.072	*U*	*2*	0.07	*U*	*2*	0.069	*U*	*2*
PCB-1268	0.1	1	0.073	*U*	*2*	0.071	*U*	*2*	0.072	*U*	*2*	0.07	*U*	*2*	0.069	*U*	*2*
Total PCBs	0.1	1	ND			ND			ND			ND			ND		

		Sample	2SB-18 SURF			2SB-18 10-15			2SB-19 SURF			2SB-19 0-5			2SB-19 10-13		
		Date	2025-10-03			2025-10-03			2025-10-03			2025-10-03			2025-10-03		
Herbicides (8151)	**UU SCO**	**RRU SCO**	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL
2,4,5-T	NA	NA	0.14	*U*	*10*	0.13	*U*	*10*	0.13	*U*	*10*	0.13	*U*	*10*	0.13	*U*	*10*
2,4,5-TP (Silvex)	3.8	100	0.14	*U*	*10*	0.13	*U*	*10*	0.13	*U*	*10*	0.13	*U*	*10*	0.13	*U*	*10*
2,4-D	NA	NA	0.27	*U*	*10*	0.26	*U*	*10*	0.27	*U*	*10*	0.27	*U*	*10*	0.26	*U*	*10*
2,4-DB	NA	NA	1.4	*U*	*10*	1.3	*U*	*10*	1.3	*U*	*10*	1.3	*U*	*10*	1.3	*U*	*10*
Dalapon	NA	NA	0.14	*U*	*10*	0.13	*U*	*10*	0.13	*U*	*10*	0.13	*U*	*10*	0.13	*U*	*10*
Dicamba	NA	NA	0.14	*U*	*10*	0.13	*U*	*10*	0.13	*U*	*10*	0.13	*U*	*10*	0.13	*U*	*10*
Dichloroprop	NA	NA	0.27	*U*	*10*	0.26	*U*	*10*	0.27	*U*	*10*	0.27	*U*	*10*	0.26	*U*	*10*
Dinoseb	NA	NA	0.27	*U*	*10*	0.26	*U*	*10*	0.27	*U*	*10*	0.27	*U*	*10*	0.26	*U*	*10*

value ≤ UU SCO
value > UU SCO

Q = Laboratory Qualifier DL = Dilution NA = not available (addtional flags: B-in blank, D-diluted, E-estimated, J-approximate)

Table 5: Pesticides, PCBs, and Herbicides in Soil

The Green, Newburgh, NY
BCP ID: C336099

GALLAGHER BASSETT | TECHNICAL SERVICES

All data in mg/Kg (ppm)		Sample	DUP2-20251003			2SB-20 SURF			2SB-20 0-5			2SB-20 5-8			2SB-21 Surf		
U= Not Detected ≥ value		Date	2025-10-03			2025-10-03			2025-10-03			2025-10-03			2026-03-06		
Pesticides (8081)	**UU SCO**	**RRU SCO**	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL
4,4' -DDD	0.0033	5	0.0021	U	2	0.0022	U	2	0.0021	U	2	0.0021	U	2	0.0027	U	2
4,4' -DDE	0.0033	3.4	0.0021	U	2	0.0022	U	2	0.0021	U	2	0.0021	U	2	0.0027	U	2
4,4' -DDT	0.0033	3.8	0.0021	U	2	0.008	U	2	0.005	U	2	0.0021	U	2	0.0088		2
a-BHC	0.02	0.1	0.0069	U	2	0.0074	U	2	0.007	U	2	0.0071	U	2	0.009	U	2
a-Chlordane	0.014	0.65	0.0035	U	2	0.0037	U	2	0.0035	U	2	0.0035	U	2	0.0045	U	2
Alachlor	NA	NA	0.0035	U	2	0.0037	U	2	0.0035	U	2	0.0035	U	2	0.0045	U	2
Aldrin	0.0048	0.044	0.0035	U	2	0.0037	U	2	0.0035	U	2	0.0035	U	2	0.0045	U	2
b-BHC	0.021	0.1	0.0069	U	2	0.0074	U	2	0.007	U	2	0.0071	U	2	0.009	U	2
Chlordane	NA	NA	0.035	U	2	0.037	U	2	0.035	U	2	0.035	U	2	0.045	U	2
d-BHC	0.04	100	0.0069	U	2	0.0074	U	2	0.007	U	2	0.0071	U	2	0.009	U	2
Dieldrin	0.005	0.075	0.0035	U	2	0.0037	U	2	0.0035	U	2	0.0035	U	2	0.0045	U	2
Endosulfan I	4.3	35	0.0069	U	2	0.0074	U	2	0.007	U	2	0.0071	U	2	0.009	U	2
Endosulfan II	4.3	35	0.0069	U	2	0.0074	U	2	0.007	U	2	0.0071	U	2	0.009	U	2
Endosulfan sulfate	4.3	35	0.0069	U	2	0.0074	U	2	0.007	U	2	0.0071	U	2	0.009	U	2
Endrin	0.014	5.3	0.0069	U	2	0.0074	U	2	0.007	U	2	0.0071	U	2	0.009	U	2
Endrin aldehyde	NA	NA	0.0069	U	2	0.0074	U	2	0.007	U	2	0.0071	U	2	0.009	U	2
Endrin ketone	NA	NA	0.0069	U	2	0.0074	U	2	0.007	U	2	0.0071	U	2	0.009	U	2
g-BHC (lindane)	0.025	0.21	0.0014	U	2	0.0015	U	2	0.0014	U	2	0.0014	U	2	0.0018	U	2
g-Chlordane	NA	NA	0.0035	U	2	0.0037	U	2	0.0035	U	2	0.0035	U	2	0.0045	U	2
Heptachlor	0.013	0.53	0.0069	U	2	0.0074	U	2	0.007	U	2	0.0071	U	2	0.009	U	2
Heptachlor epoxide	NA	NA	0.0069	U	2	0.0074	U	2	0.007	U	2	0.0071	U	2	0.009	U	2
Methoxychlor	NA	NA	0.035	U	2	0.037	U	2	0.035	U	2	0.035	U	2	0.045	U	2
Toxaphene	NA	NA	0.14	U	2	0.15	U	2	0.14	U	2	0.14	U	2	0.18	U	2

		Sample	DUP2-20251003			2SB-20 SURF			2SB-20 0-5			2SB-20 5-8			2SB-21 Surf		
		Date	2025-10-03			2025-10-03			2025-10-03			2025-10-03			2026-03-06		
PBCs (8082)	**UU SCO**	**RRU SCO**	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL
PCB-1016	0.1	1	0.069	U	2	0.074	U	2	0.07	U	2	0.071	U	2	0.45	U	10
PCB-1221	0.1	1	0.069	U	2	0.074	U	2	0.07	U	2	0.071	U	2	0.45	U	10
PCB-1232	0.1	1	0.069	U	2	0.074	U	2	0.07	U	2	0.071	U	2	0.45	U	10
PCB-1242	0.1	1	0.069	U	2	0.074	U	2	0.07	U	2	0.071	U	2	0.45	U	10
PCB-1248	0.1	1	0.069	U	2	0.074	U	2	0.07	U	2	0.071	U	2	0.45	U	10
PCB-1254	0.1	1	0.069	U	2	0.074	U	2	0.07	U	2	0.071	U	2	0.45	U	10
PCB-1260	0.1	1	0.069	U	2	0.074	U	2	0.07	U	2	0.071	U	2	0.45	U	10
PCB-1262	0.1	1	0.069	U	2	0.074	U	2	0.07	U	2	0.071	U	2	0.45	U	10
PCB-1268	0.1	1	0.069	U	2	0.074	U	2	0.07	U	2	0.071	U	2	0.45	U	10
Total PCBs	0.1	1	ND			ND			ND			ND			ND		

		Sample	DUP2-20251003			2SB-20 SURF			2SB-20 0-5			2SB-20 5-8			2SB-21 Surf		
		Date	2025-10-03			2025-10-03			2025-10-03			2025-10-03			2026-03-06		
Herbicides (8151)	**UU SCO**	**RRU SCO**	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL
2,4,5-T	NA	NA	0.13	U	10	0.14	U	10	0.13	U	10	0.13	U	10	0.17	U	10
2,4,5-TP (Silvex)	3.8	100	0.13	U	10	0.14	U	10	0.13	U	10	0.13	U	10	0.17	U	10
2,4-D	NA	NA	0.26	U	10	0.28	U	10	0.26	U	10	0.27	U	10	0.34	U	10
2,4-DB	NA	NA	1.3	U	10	1.4	U	10	1.3	U	10	1.3	U	10	1.7	U	10
Dalapon	NA	NA	0.13	U	10	0.14	U	10	0.13	U	10	0.13	U	10	0.17	U	10
Dicamba	NA	NA	0.13	U	10	0.14	U	10	0.13	U	10	0.13	U	10	0.17	U	10
Dichloroprop	NA	NA	0.26	U	10	0.28	U	10	0.26	U	10	0.27	U	10	0.34	U	10
Dinoseb	NA	NA	0.26	U	10	0.28	U	10	0.26	U	10	0.27	U	10	0.34	U	10

value ≤ UU SCO
value > UU SCO

Q = Laboratory Qualifier DL = Dilution NA = not available (addtional flags: B-in blank, D-diluted, E-estimated, J-approximate)

Table 5: Pesticides, PCBs, and Herbicides in Soil

The Green, Newburgh, NY
BCP ID: C336099

GALLAGHER BASSETT | TECHNICAL SERVICES

All data in mg/Kg (ppm)		Sample	2SB-21 0-2			2SB-21 3-5			2SB-21 10-12			2SB-22 Surf			2SB-22 0-2		
U= Not Detected ≥ value		Date	2026-03-06			2026-03-06			2026-03-06			2026-03-06			2026-03-06		
Pesticides (8081)	**UU SCO**	**RRU SCO**	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL
4,4' -DDD	0.0033	5	0.011	U	10	0.0023	U	2	0.0022	U	2	0.0021	U	2	0.0021	U	2
4,4' -DDE	0.0033	3.4	0.011	U	10	0.0023	U	2	0.0022	U	2	0.0021	U	2	0.0021	U	2
4,4' -DDT	0.0033	3.8	0.011	U	10	0.0033		2	0.0022	U	2	0.0021	U	2	0.0021	U	2
a-BHC	0.02	0.1	0.036	U	10	0.0075	U	2	0.0074	U	2	0.007	U	2	0.0072	U	2
a-Chlordane	0.014	0.65	0.018	U	10	0.0038	U	2	0.0037	U	2	0.0035	U	2	0.0036	U	2
Alachlor	NA	NA	0.018	U	10	0.0038	U	2	0.0037	U	2	0.0035	U	2	0.0036	U	2
Aldrin	0.0048	0.044	0.018	U	10	0.0038	U	2	0.0037	U	2	0.0035	U	2	0.0036	U	2
b-BHC	0.021	0.1	0.036	U	10	0.0075	U	2	0.0074	U	2	0.007	U	2	0.0072	U	2
Chlordane	NA	NA	0.18	U	10	0.038	U	2	0.037	U	2	0.035	U	2	0.036	U	2
d-BHC	0.04	100	0.036	U	10	0.0075	U	2	0.0074	U	2	0.007	U	2	0.0072	U	2
Dieldrin	0.005	0.075	0.018	U	10	0.0038	U	2	0.0037	U	2	0.0035	U	2	0.0036	U	2
Endosulfan I	4.3	35	0.036	U	10	0.0075	U	2	0.0074	U	2	0.007	U	2	0.0072	U	2
Endosulfan II	4.3	35	0.036	U	10	0.0075	U	2	0.0074	U	2	0.007	U	2	0.0072	U	2
Endosulfan sulfate	4.3	35	0.036	U	10	0.0075	U	2	0.0074	U	2	0.007	U	2	0.0072	U	2
Endrin	0.014	5.3	0.036	U	10	0.0075	U	2	0.0074	U	2	0.007	U	2	0.0072	U	2
Endrin aldehyde	NA	NA	0.036	U	10	0.0075	U	2	0.0074	U	2	0.007	U	2	0.0072	U	2
Endrin ketone	NA	NA	0.036	U	10	0.0075	U	2	0.0074	U	2	0.007	U	2	0.0072	U	2
g-BHC (lindane)	0.025	0.21	0.0072	U	10	0.0015	U	2	0.0015	U	2	0.0014	U	2	0.0014	U	2
g-Chlordane	NA	NA	0.018	U	10	0.0038	U	2	0.0037	U	2	0.0035	U	2	0.0036	U	2
Heptachlor	0.013	0.53	0.036	U	10	0.0075	U	2	0.0074	U	2	0.007	U	2	0.0072	U	2
Heptachlor epoxide	NA	NA	0.036	U	10	0.0075	U	2	0.0074	U	2	0.007	U	2	0.0072	U	2
Methoxychlor	NA	NA	0.18	U	10	0.038	U	2	0.037	U	2	0.035	U	2	0.036	U	2
Toxaphene	NA	NA	0.72	U	10	0.15	U	2	0.15	U	2	0.14	U	2	0.14	U	2

		Sample	2SB-21 0-2			2SB-21 3-5			2SB-21 10-12			2SB-22 Surf			2SB-22 0-2		
		Date	2026-03-06			2026-03-06			2026-03-06			2026-03-06			2026-03-06		
PBCs (8082)	**UU SCO**	**RRU SCO**	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL
PCB-1016	0.1	1	0.36	U	10	0.38	U	10	0.37	U	10	0.35	U	10	0.36	U	10
PCB-1221	0.1	1	0.36	U	10	0.38	U	10	0.37	U	10	0.35	U	10	0.36	U	10
PCB-1232	0.1	1	0.36	U	10	0.38	U	10	0.37	U	10	0.35	U	10	0.36	U	10
PCB-1242	0.1	1	0.36	U	10	0.38	U	10	0.37	U	10	0.35	U	10	0.36	U	10
PCB-1248	0.1	1	0.36	U	10	0.38	U	10	0.37	U	10	0.35	U	10	0.36	U	10
PCB-1254	0.1	1	0.36	U	10	0.38	U	10	0.37	U	10	0.35	U	10	0.36	U	10
PCB-1260	0.1	1	0.36	U	10	0.38	U	10	0.37	U	10	0.35	U	10	0.36	U	10
PCB-1262	0.1	1	0.36	U	10	0.38	U	10	0.37	U	10	0.35	U	10	0.36	U	10
PCB-1268	0.1	1	0.36	U	10	0.38	U	10	0.37	U	10	0.35	U	10	0.36	U	10
Total PCBs	0.1	1	ND			ND			ND			ND			ND		

		Sample	2SB-21 0-2			2SB-21 3-5			2SB-21 10-12			2SB-22 Surf			2SB-22 0-2		
		Date	2026-03-06			2026-03-06			2026-03-06			2026-03-06			2026-03-06		
Herbicides (8151)	**UU SCO**	**RRU SCO**	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL
2,4,5-T	NA	NA	0.14	U	10	0.14	U	10	0.14	U	10	0.13	U	10	0.13	U	10
2,4,5-TP (Silvex)	3.8	100	0.14	U	10	0.14	U	10	0.14	U	10	0.13	U	10	0.13	U	10
2,4-D	NA	NA	0.27	U	10	0.28	U	10	0.29	U	10	0.26	U	10	0.27	U	10
2,4-DB	NA	NA	1.4	U	10	1.4	U	10	1.4	U	10	1.3	U	10	1.3	U	10
Dalapon	NA	NA	0.14	U	10	0.14	U	10	0.14	U	10	0.13	U	10	0.13	U	10
Dicamba	NA	NA	0.14	U	10	0.14	U	10	0.14	U	10	0.13	U	10	0.13	U	10
Dichloroprop	NA	NA	0.27	U	10	0.28	U	10	0.29	U	10	0.26	U	10	0.27	U	10
Dinoseb	NA	NA	0.27	U	10	0.28	U	10	0.29	U	10	0.26	U	10	0.27	U	10

value ≤ UU SCO
value > UU SCO

Q = Laboratory Qualifier DL = Dilution NA = not available (addtional flags: B-in blank, D-diluted, E-estimated, J-approximate)

Table 5: Pesticides, PCBs, and Herbicides in Soil

The Green, Newburgh, NY
BCP ID: C336099

GALLAGHER BASSETT | TECHNICAL SERVICES

All data in mg/Kg (ppm)		**Sample**	**2SB-22 3-5**			**2SB-22 5-7**			**2SB-23 Surf**			**2SB-23 0-2**			**2SB-23 4-6**		
U= Not Detected ≥ value		Date	2026-03-06			2026-03-06			2026-03-06			2026-03-06			2026-03-06		
Pesticides (8081)	**UU SCO**	**RRU SCO**	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL
4,4' -DDD	0.0033	5	0.0022	U	2	0.0023	U	2	0.002	U	2	0.0022	U	2	0.0022	U	2
4,4' -DDE	0.0033	3.4	0.0022	U	2	0.0023	U	2	0.002	U	2	0.0022	U	2	0.0022	U	2
4,4' -DDT	0.0033	3.8	0.0022	U	2	0.0023	U	2	0.002	U	2	0.0022	U	2	0.0022	U	2
a-BHC	0.02	0.1	0.0073	U	2	0.0077	U	2	0.0068	U	2	0.0073	U	2	0.0073	U	2
a-Chlordane	0.014	0.65	0.0037	U	2	0.0038	U	2	0.0034	U	2	0.0037	U	2	0.0037	U	2
Alachlor	NA	NA	0.0037	U	2	0.0038	U	2	0.0034	U	2	0.0037	U	2	0.0037	U	2
Aldrin	0.0048	0.044	0.0037	U	2	0.0038	U	2	0.0034	U	2	0.0037	U	2	0.0037	U	2
b-BHC	0.021	0.1	0.0073	U	2	0.0077	U	2	0.0068	U	2	0.0073	U	2	0.0073	U	2
Chlordane	NA	NA	0.037	U	2	0.038	U	2	0.034	U	2	0.037	U	2	0.037	U	2
d-BHC	0.04	100	0.0073	U	2	0.0077	U	2	0.0068	U	2	0.0073	U	2	0.0073	U	2
Dieldrin	0.005	0.075	0.0037	U	2	0.0038	U	2	0.0034	U	2	0.0037	U	2	0.0037	U	2
Endosulfan I	4.3	35	0.0073	U	2	0.0077	U	2	0.0068	U	2	0.0073	U	2	0.0073	U	2
Endosulfan II	4.3	35	0.0073	U	2	0.0077	U	2	0.0068	U	2	0.0073	U	2	0.0073	U	2
Endosulfan sulfate	4.3	35	0.0073	U	2	0.0077	U	2	0.0068	U	2	0.0073	U	2	0.0073	U	2
Endrin	0.014	5.3	0.0073	U	2	0.0077	U	2	0.0068	U	2	0.0073	U	2	0.0073	U	2
Endrin aldehyde	NA	NA	0.0073	U	2	0.0077	U	2	0.0068	U	2	0.0073	U	2	0.0073	U	2
Endrin ketone	NA	NA	0.0073	U	2	0.0077	U	2	0.0068	U	2	0.0073	U	2	0.0073	U	2
g-BHC (lindane)	0.025	0.21	0.0015	U	2	0.0015	U	2	0.0014	U	2	0.0015	U	2	0.0015	U	2
g-Chlordane	NA	NA	0.0037	U	2	0.0038	U	2	0.0034	U	2	0.0037	U	2	0.0037	U	2
Heptachlor	0.013	0.53	0.0073	U	2	0.0077	U	2	0.0068	U	2	0.0073	U	2	0.0073	U	2
Heptachlor epoxide	NA	NA	0.0073	U	2	0.0077	U	2	0.0068	U	2	0.0073	U	2	0.0073	U	2
Methoxychlor	NA	NA	0.037	U	2	0.038	U	2	0.034	U	2	0.037	U	2	0.037	U	2
Toxaphene	NA	NA	0.15	U	2	0.15	U	2	0.14	U	2	0.15	U	2	0.15	U	2

		Sample	**2SB-22 3-5**			**2SB-22 5-7**			**2SB-23 Surf**			**2SB-23 0-2**			**2SB-23 4-6**		
		Date	2026-03-06			2026-03-06			2026-03-06			2026-03-06			2026-03-06		
PBCs (8082)	**UU SCO**	**RRU SCO**	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL
PCB-1016	0.1	1	0.37	U	10	0.38	U	10	0.34	U	10	0.37	U	10	0.37	U	10
PCB-1221	0.1	1	0.37	U	10	0.38	U	10	0.34	U	10	0.37	U	10	0.37	U	10
PCB-1232	0.1	1	0.37	U	10	0.38	U	10	0.34	U	10	0.37	U	10	0.37	U	10
PCB-1242	0.1	1	0.37	U	10	0.38	U	10	0.34	U	10	0.37	U	10	0.37	U	10
PCB-1248	0.1	1	0.37	U	10	0.38	U	10	0.34	U	10	0.37	U	10	0.37	U	10
PCB-1254	0.1	1	0.37	U	10	0.38	U	10	0.34	U	10	0.37	U	10	0.37	U	10
PCB-1260	0.1	1	0.37	U	10	0.38	U	10	0.34	U	10	0.37	U	10	0.37	U	10
PCB-1262	0.1	1	0.37	U	10	0.38	U	10	0.34	U	10	0.37	U	10	0.37	U	10
PCB-1268	0.1	1	0.37	U	10	0.38	U	10	0.34	U	10	0.37	U	10	0.37	U	10
Total PCBs	0.1	1	ND			ND			ND			ND			ND		

		Sample	**2SB-22 3-5**			**2SB-22 5-7**			**2SB-23 Surf**			**2SB-23 0-2**			**2SB-23 4-6**		
		Date	2026-03-06			2026-03-06			2026-03-06			2026-03-06			2026-03-06		
Herbicides (8151)	**UU SCO**	**RRU SCO**	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL
2,4,5-T	NA	NA	0.14	U	10	0.14	U	10	0.13	U	10	0.14	U	10	0.14	U	10
2,4,5-TP (Silvex)	3.8	100	0.14	U	10	0.14	U	10	0.13	U	10	0.14	U	10	0.14	U	10
2,4-D	NA	NA	0.28	U	10	0.28	U	10	0.25	U	10	0.28	U	10	0.28	U	10
2,4-DB	NA	NA	1.4	U	10	1.4	U	10	1.3	U	10	1.4	U	10	1.4	U	10
Dalapon	NA	NA	0.14	U	10	0.14	U	10	0.13	U	10	0.14	U	10	0.14	U	10
Dicamba	NA	NA	0.14	U	10	0.14	U	10	0.13	U	10	0.14	U	10	0.14	U	10
Dichloroprop	NA	NA	0.28	U	10	0.28	U	10	0.25	U	10	0.28	U	10	0.28	U	10
Dinoseb	NA	NA	0.28	U	10	0.28	U	10	0.25	U	10	0.28	U	10	0.28	U	10

value ≤ UU SCO
value > UU SCO

Q = Laboratory Qualifier DL = Dilution NA = not available (addtional flags: B-in blank, D-diluted, E-estimated, J-approximate)

Table 5: Pesticides, PCBs, and Herbicides in Soil

The Green, Newburgh, NY
BCP ID: C336099

GALLAGHER BASSETT | TECHNICAL SERVICES

All data in mg/Kg (ppm)		**Sample**	**2SB-23 7-9**			**2SB-24 Surf**			**2SB-24 0-2**			**2SB-24 3-5**			**Dup-20260306**		
U= Not Detected ≥ value		Date	2026-03-06			2026-03-06			2026-03-06			2026-03-06			2026-03-06		
Pesticides (8081)	**UU SCO**	**RRU SCO**	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL
4,4' -DDD	0.0033	5	0.0022	U	2	0.0023	U	2	0.0022	U	2	0.0022	U	2	0.0022	U	2
4,4' -DDE	0.0033	3.4	0.0022	U	2	0.0039		2	0.0022	U	2	0.0022	U	2	0.0022	U	2
4,4' -DDT	0.0033	3.8	0.0022	U	2	0.013		2	0.012		2	0.0022	U	2	0.0022	U	2
a-BHC	0.02	0.1	0.0075	U	2	0.0075	U	2	0.0072	U	2	0.0073	U	2	0.0075	U	2
a-Chlordane	0.014	0.65	0.0037	U	2	0.0038	U	2	0.0036	U	2	0.0037	U	2	0.0037	U	2
Alachlor	NA	NA	0.0037	U	2	0.0038	U	2	0.0036	U	2	0.0037	U	2	0.0037	U	2
Aldrin	0.0048	0.044	0.0037	U	2	0.0038	U	2	0.0036	U	2	0.0037	U	2	0.0037	U	2
b-BHC	0.021	0.1	0.0075	U	2	0.0075	U	2	0.0072	U	2	0.0073	U	2	0.0075	U	2
Chlordane	NA	NA	0.037	U	2	0.038	U	2	0.036	U	2	0.037	U	2	0.037	U	2
d-BHC	0.04	100	0.0075	U	2	0.0075	U	2	0.0072	U	2	0.0073	U	2	0.0075	U	2
Dieldrin	0.005	0.075	0.0037	U	2	0.0038	U	2	0.0036	U	2	0.0037	U	2	0.0037	U	2
Endosulfan I	4.3	35	0.0075	U	2	0.0075	U	2	0.0072	U	2	0.0073	U	2	0.0075	U	2
Endosulfan II	4.3	35	0.0075	U	2	0.0075	U	2	0.0072	U	2	0.0073	U	2	0.0075	U	2
Endosulfan sulfate	4.3	35	0.0075	U	2	0.0075	U	2	0.0072	U	2	0.0073	U	2	0.0075	U	2
Endrin	0.014	5.3	0.0075	U	2	0.0075	U	2	0.0072	U	2	0.0073	U	2	0.0075	U	2
Endrin aldehyde	NA	NA	0.0075	U	2	0.0075	U	2	0.0072	U	2	0.0073	U	2	0.0075	U	2
Endrin ketone	NA	NA	0.0075	U	2	0.0075	U	2	0.0072	U	2	0.0073	U	2	0.0075	U	2
g-BHC (lindane)	0.025	0.21	0.0015	U	2	0.0015	U	2	0.0014	U	2	0.0015	U	2	0.0015	U	2
g-Chlordane	NA	NA	0.0037	U	2	0.0038	U	2	0.0036	U	2	0.0037	U	2	0.0037	U	2
Heptachlor	0.013	0.53	0.0075	U	2	0.0075	U	2	0.0072	U	2	0.0073	U	2	0.0075	U	2
Heptachlor epoxide	NA	NA	0.0075	U	2	0.0075	U	2	0.0072	U	2	0.0073	U	2	0.0075	U	2
Methoxychlor	NA	NA	0.037	U	2	0.038	U	2	0.036	U	2	0.037	U	2	0.037	U	2
Toxaphene	NA	NA	0.15	U	2	0.15	U	2	0.14	U	2	0.15	U	2	0.15	U	2

		Sample	**2SB-23 7-9**			**2SB-24 Surf**			**2SB-24 0-2**			**2SB-24 3-5**			**FD-01**		
		Date	2026-03-06			2026-03-06			2026-03-06			2026-03-06			2026-03-06		
PBCs (8082)	**UU SCO**	**RRU SCO**	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL
PCB-1016	0.1	1	0.37	U	10	0.38	U	10	0.36	U	10	0.37	U	10	0.37	U	10
PCB-1221	0.1	1	0.37	U	10	0.38	U	10	0.36	U	10	0.37	U	10	0.37	U	10
PCB-1232	0.1	1	0.37	U	10	0.38	U	10	0.36	U	10	0.37	U	10	0.37	U	10
PCB-1242	0.1	1	0.37	U	10	0.38	U	10	0.36	U	10	0.37	U	10	0.37	U	10
PCB-1248	0.1	1	0.37	U	10	0.38	U	10	0.36	U	10	0.37	U	10	0.37	U	10
PCB-1254	0.1	1	0.37	U	10	0.38	U	10	0.36	U	10	0.37	U	10	0.37	U	10
PCB-1260	0.1	1	0.37	U	10	0.38	U	10	0.36	U	10	0.37	U	10	0.37	U	10
PCB-1262	0.1	1	0.37	U	10	0.38	U	10	0.36	U	10	0.37	U	10	0.37	U	10
PCB-1268	0.1	1	0.37	U	10	0.38	U	10	0.36	U	10	0.37	U	10	0.37	U	10
Total PCBs	0.1	1	ND			ND			ND			ND			ND		

		Sample	**2SB-23 7-9**			**2SB-24 Surf**			**2SB-24 0-2**			**2SB-24 3-5**			**FD-01**		
		Date	2026-03-06			2026-03-06			2026-03-06			2026-03-06			2026-03-06		
Herbicides (8151)	**UU SCO**	**RRU SCO**	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL
2,4,5-T	NA	NA	0.14	U	10	0.14	U	10	0.14	U	10	0.14	U	10	0.14	U	10
2,4,5-TP (Silvex)	3.8	100	0.14	U	10	0.14	U	10	0.14	U	10	0.14	U	10	0.14	U	10
2,4-D	NA	NA	0.28	U	10	0.29	U	10	0.27	U	10	0.28	U	10	0.28	U	10
2,4-DB	NA	NA	1.4	U	10	1.4	U	10	1.4	U	10	1.4	U	10	1.4	U	10
Dalapon	NA	NA	0.14	U	10	0.14	U	10	0.14	U	10	0.14	U	10	0.14	U	10
Dicamba	NA	NA	0.14	U	10	0.14	U	10	0.14	U	10	0.14	U	10	0.14	U	10
Dichloroprop	NA	NA	0.28	U	10	0.29	U	10	0.27	U	10	0.28	U	10	0.28	U	10
Dinoseb	NA	NA	0.28	U	10	0.29	U	10	0.27	U	10	0.28	U	10	0.28	U	10

value ≤ UU SCO
value > UU SCO

Q = Laboratory Qualifier DL = Dilution NA = not available (addtional flags: B-in blank, D-diluted, E-estimated, J-approximate)

Table 5: Pesticides, PCBs, and Herbicides in Soil

The Green, Newburgh, NY
BCP ID: C336099

GALLAGHER BASSETT | TECHNICAL SERVICES

All data in mg/Kg (ppm)		**Sample**	**2SB-24 6-8**			**2SB-25 Surf**			**2SB-25 0-2**			**2SB-25 5-7**			**2SB-26 Surf**		
U= Not Detected ≥ value		Date	2026-03-06			2026-03-06			2026-03-06			2026-03-06			2026-03-06		
Pesticides (8081)	**UU SCO**	**RRU SCO**	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL
4,4' -DDD	0.0033	5	0.0021	U	2	0.0022	U	2	0.0022	U	2	0.0022	U	2	0.0036		2
4,4' -DDE	0.0033	3.4	0.0021	U	2	0.0022	U	2	0.0022	U	2	0.0022	U	2	0.017		2
4,4' -DDT	0.0033	3.8	0.0021	U	2	0.0022	U	2	0.0022	U	2	0.0022	U	2	0.04		2
a-BHC	0.02	0.1	0.0072	U	2	0.0073	U	2	0.0073	U	2	0.0075	U	2	0.0074	U	2
a-Chlordane	0.014	0.65	0.0036	U	2	0.0036	U	2	0.0037	U	2	0.0037	U	2	0.0037	U	2
Alachlor	NA	NA	0.0036	U	2	0.0036	U	2	0.0037	U	2	0.0037	U	2	0.0037	U	2
Aldrin	0.0048	0.044	0.0036	U	2	0.0036	U	2	0.0037	U	2	0.0037	U	2	0.0037	U	2
b-BHC	0.021	0.1	0.0072	U	2	0.0073	U	2	0.0073	U	2	0.0075	U	2	0.0074	U	2
Chlordane	NA	NA	0.036	U	2	0.036	U	2	0.037	U	2	0.037	U	2	0.037	U	2
d-BHC	0.04	100	0.0072	U	2	0.0073	U	2	0.0073	U	2	0.0075	U	2	0.0074	U	2
Dieldrin	0.005	0.075	0.0036	U	2	0.0036	U	2	0.0037	U	2	0.0037	U	2	0.0037	U	2
Endosulfan I	4.3	35	0.0072	U	2	0.0073	U	2	0.0073	U	2	0.0075	U	2	0.0074	U	2
Endosulfan II	4.3	35	0.0072	U	2	0.0073	U	2	0.0073	U	2	0.0075	U	2	0.0074	U	2
Endosulfan sulfate	4.3	35	0.0072	U	2	0.0073	U	2	0.0073	U	2	0.0075	U	2	0.0074	U	2
Endrin	0.014	5.3	0.0072	U	2	0.0073	U	2	0.0073	U	2	0.0075	U	2	0.0074	U	2
Endrin aldehyde	NA	NA	0.0072	U	2	0.0073	U	2	0.0073	U	2	0.0075	U	2	0.0074	U	2
Endrin ketone	NA	NA	0.0072	U	2	0.0073	U	2	0.0073	U	2	0.0075	U	2	0.0074	U	2
g-BHC (lindane)	0.025	0.21	0.0014	U	2	0.0015	U	2	0.0015	U	2	0.0015	U	2	0.0015	U	2
g-Chlordane	NA	NA	0.0036	U	2	0.0036	U	2	0.0037	U	2	0.0037	U	2	0.0037	U	2
Heptachlor	0.013	0.53	0.0072	U	2	0.0073	U	2	0.0073	U	2	0.0075	U	2	0.0074	U	2
Heptachlor epoxide	NA	NA	0.0072	U	2	0.0073	U	2	0.0073	U	2	0.0075	U	2	0.0074	U	2
Methoxychlor	NA	NA	0.036	U	2	0.036	U	2	0.037	U	2	0.037	U	2	0.037	U	2
Toxaphene	NA	NA	0.14	U	2	0.15	U	2	0.15	U	2	0.15	U	2	0.15	U	2

		Sample	**2SB-24 6-8**			**2SB-25 Surf**			**2SB-25 0-2**			**2SB-25 5-7**			**2SB-26 Surf**		
		Date	2026-03-06			2026-03-06			2026-03-06			2026-03-06			2026-03-06		
PBCs (8082)	**UU SCO**	**RRU SCO**	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL
PCB-1016	0.1	1	0.36	U	10	0.36	U	10	0.37	U	10	0.37	U	10	0.37	U	10
PCB-1221	0.1	1	0.36	U	10	0.36	U	10	0.37	U	10	0.37	U	10	0.37	U	10
PCB-1232	0.1	1	0.36	U	10	0.36	U	10	0.37	U	10	0.37	U	10	0.37	U	10
PCB-1242	0.1	1	0.36	U	10	0.36	U	10	0.37	U	10	0.37	U	10	0.37	U	10
PCB-1248	0.1	1	0.36	U	10	0.36	U	10	0.37	U	10	0.37	U	10	0.37	U	10
PCB-1254	0.1	1	0.36	U	10	0.36	U	10	0.37	U	10	0.37	U	10	0.37	U	10
PCB-1260	0.1	1	0.36	U	10	0.36	U	10	0.37	U	10	0.37	U	10	0.37	U	10
PCB-1262	0.1	1	0.36	U	10	0.36	U	10	0.37	U	10	0.37	U	10	0.37	U	10
PCB-1268	0.1	1	0.36	U	10	0.36	U	10	0.37	U	10	0.37	U	10	0.37	U	10
Total PCBs	0.1	1	ND			ND			ND			ND			ND		

		Sample	**2SB-24 6-8**			**2SB-25 Surf**			**2SB-25 0-2**			**2SB-25 5-7**			**2SB-26 Surf**		
		Date	2026-03-06			2026-03-06			2026-03-06			2026-03-06			2026-03-06		
Herbicides (8151)	**UU SCO**	**RRU SCO**	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL
2,4,5-T	NA	NA	0.14	U	10	0.14	U	10	0.14	U	10	0.14	U	10	0.14	U	10
2,4,5-TP (Silvex)	3.8	100	0.14	U	10	0.14	U	10	0.14	U	10	0.14	U	10	0.14	U	10
2,4-D	NA	NA	0.27	U	10	0.27	U	10	0.28	U	10	0.28	U	10	0.29	U	10
2,4-DB	NA	NA	1.4	U	10	1.4	U	10	1.4	U	10	1.4	U	10	1.4	U	10
Dalapon	NA	NA	0.14	U	10	0.14	U	10	0.14	U	10	0.14	U	10	0.14	U	10
Dicamba	NA	NA	0.14	U	10	0.14	U	10	0.14	U	10	0.14	U	10	0.14	U	10
Dichloroprop	NA	NA	0.27	U	10	0.27	U	10	0.28	U	10	0.28	U	10	0.29	U	10
Dinoseb	NA	NA	0.27	U	10	0.27	U	10	0.28	U	10	0.28	U	10	0.29	U	10

value ≤ UU SCO
value > UU SCO

Q = Laboratory Qualifier DL = Dilution NA = not available (addtional flags: B-in blank, D-diluted, E-estimated, J-approximate)

Table 5: Pesticides, PCBs, and Herbicides in Soil

The Green, Newburgh, NY
BCP ID: C336099

GALLAGHER BASSETT | TECHNICAL SERVICES

All data in mg/Kg (ppm)		Sample	2SB-26 0-2			2SB-26 5-7			2SB-27 Surf			2SB-27 0-2			2SB-27 5-7		
U= Not Detected ≥ value		Date	2026-03-06			2026-03-06			2026-03-09			2026-03-09			2026-03-09		
Pesticides (8081)	**UU SCO**	**RRU SCO**	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL
4,4' -DDD	0.0033	5	0.0022	U	2	0.0021	U	2	0.0024	U	2	0.0022	U	2	0.0076		2
4,4' -DDE	0.0033	3.4	0.0028		2	0.0021	U	2	0.0024	U	2	0.0022	U	2	0.059		2
4,4' -DDT	0.0033	3.8	0.0079		2	0.0021	U	2	0.0096		2	0.0047		2	0.11		10
a-BHC	0.02	0.1	0.0074	U	2	0.007	U	2	0.008	U	2	0.0073	U	2	0.0071	U	2
a-Chlordane	0.014	0.65	0.0037	U	2	0.0035	U	2	0.004	U	2	0.0037	U	2	0.017		2
Alachlor	NA	NA	0.0037	U	2	0.0035	U	2	0.004	U	2	0.0037	U	2	0.0035	U	2
Aldrin	0.0048	0.044	0.0037	U	2	0.0035	U	2	0.004	U	2	0.0037	U	2	0.0035	U	2
b-BHC	0.021	0.1	0.0074	U	2	0.007	U	2	0.008	U	2	0.0073	U	2	0.0071	U	2
Chlordane	NA	NA	0.037	U	2	0.035	U	2	0.04	U	2	0.037	U	2	0.087		2
d-BHC	0.04	100	0.0074	U	2	0.007	U	2	0.008	U	2	0.0073	U	2	0.0071	U	2
Dieldrin	0.005	0.075	0.0037	U	2	0.0035	U	2	0.004	U	2	0.0037	U	2	0.01		2
Endosulfan I	4.3	35	0.0074	U	2	0.007	U	2	0.008	U	2	0.0073	U	2	0.0071	U	2
Endosulfan II	4.3	35	0.0074	U	2	0.007	U	2	0.008	U	2	0.0073	U	2	0.0071	U	2
Endosulfan sulfate	4.3	35	0.0074	U	2	0.007	U	2	0.008	U	2	0.0073	U	2	0.0071	U	2
Endrin	0.014	5.3	0.0074	U	2	0.007	U	2	0.008	U	2	0.0073	U	2	0.0071	U	2
Endrin aldehyde	NA	NA	0.0074	U	2	0.007	U	2	0.008	U	2	0.0073	U	2	0.0071	U	2
Endrin ketone	NA	NA	0.0074	U	2	0.007	U	2	0.008	U	2	0.0073	U	2	0.0071	U	2
g-BHC (lindane)	0.025	0.21	0.0015	U	2	0.0014	U	2	0.0016	U	2	0.0015	U	2	0.0014	U	2
g-Chlordane	NA	NA	0.0037	U	2	0.0035	U	2	0.004	U	2	0.0037	U	2	0.014		2
Heptachlor	0.013	0.53	0.0074	U	2	0.007	U	2	0.008	U	2	0.0073	U	2	0.0071	U	2
Heptachlor epoxide	NA	NA	0.0074	U	2	0.007	U	2	0.008	U	2	0.0073	U	2	0.0071	U	2
Methoxychlor	NA	NA	0.037	U	2	0.035	U	2	0.04	U	2	0.037	U	2	0.035	U	2
Toxaphene	NA	NA	0.15	U	2	0.14	U	2	0.16	U	2	0.15	U	2	0.14	U	2

		Sample	2SB-26 0-2			2SB-26 5-7			2SB-27 Surf			2SB-27 0-2			2SB-27 5-7		
		Date	2026-03-06			2026-03-06			2026-03-09			2026-03-09			2026-03-09		
PBCs (8082)	**UU SCO**	**RRU SCO**	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL
PCB-1016	0.1	1	0.37	U	10	0.35	U	10	0.4	U	10	0.37	U	10	0.35	U	10
PCB-1221	0.1	1	0.37	U	10	0.35	U	10	0.4	U	10	0.37	U	10	0.35	U	10
PCB-1232	0.1	1	0.37	U	10	0.35	U	10	0.4	U	10	0.37	U	10	0.35	U	10
PCB-1242	0.1	1	0.37	U	10	0.35	U	10	0.4	U	10	0.37	U	10	0.35	U	10
PCB-1248	0.1	1	0.37	U	10	0.35	U	10	0.4	U	10	0.37	U	10	0.35	U	10
PCB-1254	0.1	1	0.37	U	10	0.35	U	10	0.4	U	10	0.37	U	10	0.35	U	10
PCB-1260	0.1	1	0.37	U	10	0.35	U	10	0.4	U	10	0.37	U	10	0.35	U	10
PCB-1262	0.1	1	0.37	U	10	0.35	U	10	0.4	U	10	0.37	U	10	0.35	U	10
PCB-1268	0.1	1	0.37	U	10	0.35	U	10	0.4	U	10	0.37	U	10	0.35	U	10
Total PCBs	0.1	1	ND			ND			ND			ND			ND		

		Sample	2SB-26 0-2			2SB-26 5-7			2SB-27 Surf			2SB-27 0-2			2SB-27 5-7		
		Date	2026-03-06			2026-03-06			2026-03-09			2026-03-09			2026-03-09		
Herbicides (8151)	**UU SCO**	**RRU SCO**	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL
2,4,5-T	NA	NA	0.14	U	10	0.13	U	10	0.15	U	10	0.14	U	10	0.13	U	10
2,4,5-TP (Silvex)	3.8	100	0.14	U	10	0.13	U	10	0.15	U	10	0.14	U	10	0.13	U	10
2,4-D	NA	NA	0.28	U	10	0.27	U	10	0.3	U	10	0.27	U	10	0.26	U	10
2,4-DB	NA	NA	1.4	U	10	1.3	U	10	1.5	U	10	1.4	U	10	1.3	U	10
Dalapon	NA	NA	0.14	U	10	0.13	U	10	0.15	U	10	0.14	U	10	0.13	U	10
Dicamba	NA	NA	0.14	U	10	0.13	U	10	0.15	U	10	0.14	U	10	0.13	U	10
Dichloroprop	NA	NA	0.28	U	10	0.27	U	10	0.3	U	10	0.27	U	10	0.26	U	10
Dinoseb	NA	NA	0.28	U	10	0.27	U	10	0.3	U	10	0.27	U	10	0.26	U	10

value ≤ UU SCO
value > UU SCO

Q = Laboratory Qualifier DL = Dilution NA = not available (addtional flags: B-in blank, D-diluted, E-estimated, J-approximate)

Table 5: Pesticides, PCBs, and Herbicides in Soil

The Green, Newburgh, NY
BCP ID: C336099

GALLAGHER BASSETT | TECHNICAL SERVICES

All data in mg/Kg (ppm)		**Sample**	**2SB-27 10-12**			**Dup-20260309**			**2SB-28 Surf**			**2SB-28 0-2**			**2SB-28 7-9**		
U= Not Detected ≥ value		Date	2026-03-09			2026-03-06			2026-03-06			2026-03-06			2026-03-06		
Pesticides (8081)	**UU SCO**	**RRU SCO**	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL
4,4' -DDD	0.0033	5	0.0022	U	2	0.0022	U	2	0.0024	U	2	0.0025	U	2	0.0022	U	2
4,4' -DDE	0.0033	3.4	0.0022	U	2	0.0022	U	2	0.0041		2	0.0025	U	2	0.0022	U	2
4,4' -DDT	0.0033	3.8	0.0022	U	2	0.0022	U	2	0.012		2	0.0025	U	2	0.0022	U	2
a-BHC	0.02	0.1	0.0074	U	2	0.0073	U	2	0.0081	U	2	0.0082	U	2	0.0072	U	2
a-Chlordane	0.014	0.65	0.0037	U	2	0.0036	U	2	0.004	U	2	0.0041	U	2	0.0036	U	2
Alachlor	NA	NA	0.0037	U	2	0.0036	U	2	0.004	U	2	0.0041	U	2	0.0036	U	2
Aldrin	0.0048	0.044	0.0037	U	2	0.0036	U	2	0.004	U	2	0.0041	U	2	0.0036	U	2
b-BHC	0.021	0.1	0.0074	U	2	0.0073	U	2	0.0081	U	2	0.0082	U	2	0.0072	U	2
Chlordane	NA	NA	0.037	U	2	0.036	U	2	0.04	U	2	0.041	U	2	0.036	U	2
d-BHC	0.04	100	0.0074	U	2	0.0073	U	2	0.0081	U	2	0.0082	U	2	0.0072	U	2
Dieldrin	0.005	0.075	0.0037	U	2	0.0036	U	2	0.004	U	2	0.0041	U	2	0.0036	U	2
Endosulfan I	4.3	35	0.0074	U	2	0.0073	U	2	0.0081	U	2	0.0082	U	2	0.0072	U	2
Endosulfan II	4.3	35	0.0074	U	2	0.0073	U	2	0.0081	U	2	0.0082	U	2	0.0072	U	2
Endosulfan sulfate	4.3	35	0.0074	U	2	0.0073	U	2	0.0081	U	2	0.0082	U	2	0.0072	U	2
Endrin	0.014	5.3	0.0074	U	2	0.0073	U	2	0.0081	U	2	0.0082	U	2	0.0072	U	2
Endrin aldehyde	NA	NA	0.0074	U	2	0.0073	U	2	0.0081	U	2	0.0082	U	2	0.0072	U	2
Endrin ketone	NA	NA	0.0074	U	2	0.0073	U	2	0.0081	U	2	0.0082	U	2	0.0072	U	2
g-BHC (lindane)	0.025	0.21	0.0015	U	2	0.0015	U	2	0.0016	U	2	0.0016	U	2	0.0014	U	2
g-Chlordane	NA	NA	0.0037	U	2	0.0036	U	2	0.004	U	2	0.0041	U	2	0.0036	U	2
Heptachlor	0.013	0.53	0.0074	U	2	0.0073	U	2	0.0081	U	2	0.0082	U	2	0.0072	U	2
Heptachlor epoxide	NA	NA	0.0074	U	2	0.0073	U	2	0.0081	U	2	0.0082	U	2	0.0072	U	2
Methoxychlor	NA	NA	0.037	U	2	0.036	U	2	0.04	U	2	0.041	U	2	0.036	U	2
Toxaphene	NA	NA	0.15	U	2	0.15	U	2	0.16	U	2	0.16	U	2	0.14	U	2

		Sample	**2SB-27 10-12**			**Dup-20260309**			**2SB-28 Surf**			**2SB-28 0-2**			**2SB-28 7-9**		
		Date	2026-03-09			2026-03-06			2026-03-06			2026-03-06			2026-03-06		
PBCs (8082)	**UU SCO**	**RRU SCO**	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL
PCB-1016	0.1	1	0.37	U	10	0.36	U	10	0.4	U	10	0.41	U	10	0.36	U	10
PCB-1221	0.1	1	0.37	U	10	0.36	U	10	0.4	U	10	0.41	U	10	0.36	U	10
PCB-1232	0.1	1	0.37	U	10	0.36	U	10	0.4	U	10	0.41	U	10	0.36	U	10
PCB-1242	0.1	1	0.37	U	10	0.36	U	10	0.4	U	10	0.41	U	10	0.36	U	10
PCB-1248	0.1	1	0.37	U	10	0.36	U	10	0.4	U	10	0.41	U	10	0.36	U	10
PCB-1254	0.1	1	0.37	U	10	0.36	U	10	0.4	U	10	0.41	U	10	0.36	U	10
PCB-1260	0.1	1	0.37	U	10	0.36	U	10	0.4	U	10	0.41	U	10	0.36	U	10
PCB-1262	0.1	1	0.37	U	10	0.36	U	10	0.4	U	10	0.41	U	10	0.36	U	10
PCB-1268	0.1	1	0.37	U	10	0.36	U	10	0.4	U	10	0.41	U	10	0.36	U	10
Total PCBs	0.1	1	ND			ND			ND			ND			ND		

		Sample	**2SB-27 10-12**			**Dup-20260309**			**2SB-28 Surf**			**2SB-28 0-2**			**2SB-28 7-9**		
		Date	2026-03-09			2026-03-06			2026-03-06			2026-03-06			2026-03-06		
Herbicides (8151)	**UU SCO**	**RRU SCO**	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL
2,4,5-T	NA	NA	0.14	U	10	0.14	U	10	0.15	U	10	0.15	U	10	0.13	U	10
2,4,5-TP (Silvex)	3.8	100	0.14	U	10	0.14	U	10	0.15	U	10	0.15	U	10	0.13	U	10
2,4-D	NA	NA	0.28	U	10	0.28	U	10	0.31	U	10	0.31	U	10	0.27	U	10
2,4-DB	NA	NA	1.4	U	10	1.4	U	10	1.5	U	10	1.5	U	10	1.3	U	10
Dalapon	NA	NA	0.14	U	10	0.14	U	10	0.15	U	10	0.15	U	10	0.13	U	10
Dicamba	NA	NA	0.14	U	10	0.14	U	10	0.15	U	10	0.15	U	10	0.13	U	10
Dichloroprop	NA	NA	0.28	U	10	0.28	U	10	0.31	U	10	0.31	U	10	0.27	U	10
Dinoseb	NA	NA	0.28	U	10	0.28	U	10	0.31	U	10	0.31	U	10	0.27	U	10

value ≤ UU SCO
value > UU SCO

Q = Laboratory Qualifier DL = Dilution NA = not available (addtional flags: B-in blank, D-diluted, E-estimated, J-approximate)

Table 5: Pesticides, PCBs, and Herbicides in Soil

The Green, Newburgh, NY
BCP ID: C336099

GALLAGHER BASSETT | TECHNICAL SERVICES

All data in mg/Kg (ppm)		**Sample**	**2SB-29 Surf**			**2SB-29 0-2**			**2SB-28 8-10**		
U= Not Detected ≥ value		Date	2026-03-06			2026-03-06			2026-03-06		
Pesticides (8081)	**UU SCO**	**RRU SCO**	Result	Q	DL	Result	Q	DL	Result	Q	DL
4,4' -DDD	0.0033	5	0.029		2	0.0023	U	2	0.0022	U	2
4,4' -DDE	0.0033	3.4	0.048		2	0.012		2	0.0022	U	2
4,4' -DDT	0.0033	3.8	0.33		10	0.022		2	0.0022	U	2
a-BHC	0.02	0.1	0.0097	U	2	0.0075	U	2	0.0073	U	2
a-Chlordane	0.014	0.65	0.02		2	0.01		2	0.0036	U	2
Alachlor	NA	NA	0.0049	U	2	0.0038	U	2	0.0036	U	2
Aldrin	0.0048	0.044	0.0049	U	2	0.0038	U	2	0.0036	U	2
b-BHC	0.021	0.1	0.0097	U	2	0.0075	U	2	0.0073	U	2
Chlordane	NA	NA	0.11		2	0.052		2	0.036	U	2
d-BHC	0.04	100	0.0097	U	2	0.0075	U	2	0.0073	U	2
Dieldrin	0.005	0.075	0.015		2	0.0057		2	0.0036	U	2
Endosulfan I	4.3	35	0.0097	U	2	0.0075	U	2	0.0073	U	2
Endosulfan II	4.3	35	0.0097	U	2	0.0075	U	2	0.0073	U	2
Endosulfan sulfate	4.3	35	0.0097	U	2	0.0075	U	2	0.0073	U	2
Endrin	0.014	5.3	0.0097	U	2	0.0075	U	2	0.0073	U	2
Endrin aldehyde	NA	NA	0.0097	U	2	0.0075	U	2	0.0073	U	2
Endrin ketone	NA	NA	0.0097	U	2	0.0075	U	2	0.0073	U	2
g-BHC (lindane)	0.025	0.21	0.0019	U	2	0.0015	U	2	0.0015	U	2
g-Chlordane	NA	NA	0.015		2	0.008		2	0.0036	U	2
Heptachlor	0.013	0.53	0.0097	U	2	0.0075	U	2	0.0073	U	2
Heptachlor epoxide	NA	NA	0.0097	U	2	0.0075	U	2	0.0073	U	2
Methoxychlor	NA	NA	0.049	U	2	0.038	U	2	0.036	U	2
Toxaphene	NA	NA	0.19	U	2	0.15	U	2	0.15	U	2

		Sample	**2SB-29 Surf**			**2SB-29 0-2**			**2SB-28 8-10**		
		Date	2026-03-06			2026-03-06			2026-03-06		
PBCs (8082)	**UU SCO**	**RRU SCO**	Result	Q	DL	Result	Q	DL	Result	Q	DL
PCB-1016	0.1	1	0.49	U	10	0.38	U	10	0.36	U	10
PCB-1221	0.1	1	0.49	U	10	0.38	U	10	0.36	U	10
PCB-1232	0.1	1	0.49	U	10	0.38	U	10	0.36	U	10
PCB-1242	0.1	1	0.49	U	10	0.38	U	10	0.36	U	10
PCB-1248	0.1	1	0.49	U	10	0.38	U	10	0.36	U	10
PCB-1254	0.1	1	0.49	U	10	0.38	U	10	0.36	U	10
PCB-1260	0.1	1	0.49	U	10	0.38	U	10	0.36	U	10
PCB-1262	0.1	1	0.49	U	10	0.38	U	10	0.36	U	10
PCB-1268	0.1	1	0.49	U	10	0.38	U	10	0.36	U	10
Total PCBs	0.1	1	ND			ND			ND		

		Sample	**2SB-29 Surf**			**2SB-29 0-2**			**2SB-28 8-10**		
		Date	2026-03-06			2026-03-06			2026-03-06		
Herbicides (8151)	**UU SCO**	**RRU SCO**	Result	Q	DL	Result	Q	DL	Result	Q	DL
2,4,5-T	NA	NA	0.18	U	10	0.14	U	10	0.14	U	10
2,4,5-TP (Silvex)	3.8	100	0.18	U	10	0.14	U	10	0.14	U	10
2,4-D	NA	NA	0.37	U	10	0.28	U	10	0.27	U	10
2,4-DB	NA	NA	1.8	U	10	1.4	U	10	1.4	U	10
Dalapon	NA	NA	0.18	U	10	0.14	U	10	0.14	U	10
Dicamba	NA	NA	0.18	U	10	0.14	U	10	0.14	U	10
Dichloroprop	NA	NA	0.37	U	10	0.28	U	10	0.27	U	10
Dinoseb	NA	NA	0.37	U	10	0.28	U	10	0.27	U	10

value ≤ UU SCO
value > UU SCO

Q = Laboratory Qualifier DL = Dilution NA = not available (addtional flags: B-in blank, D-diluted, E-estimated, J-approximate)

Table 6: PFAS in Soil

The Green, Newburgh, NY
BCP ID: C336099

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All data in µg/Kg (ppb)			Sample	2SB-01 SURF			2SB-01 5-7.5			DUP-20251001			2SB-01 7.5-10			2SB-02 SURF			2SB-(
U= Not Detected ≥ value			Date	2025-10-01			2025-10-01			2025-10-01			2025-10-01			2025-10-01			2025
PFAS (1633)	**POG**	**RRU**		Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result
11Cl-PF3OUdS	NA	NA		0.599	*U*	*1*	0.759	*U*	*1*	0.558	*U*	*1*	0.525	*U*	*1*	0.666	*U*	*1*	0.54
1H,1H,2H,2H-Perfluorodecanesulfonic acid	NA	NA		0.599	*U*	*1*	0.759	*U*	*1*	0.558	*U*	*1*	0.525	*U*	*1*	0.666	*U*	*1*	0.54
1H,1H,2H,2H-Perfluorohexanesulfonic Acid	NA	NA		0.599	*U*	*1*	0.759	*U*	*1*	0.558	*U*	*1*	0.525	*U*	*1*	0.666	*U*	*1*	0.54
1H,1H,2H,2H-Perfluorooctanesulfonic acid	NA	NA		0.599	*U*	*1*	0.759	*U*	*1*	0.558	*U*	*1*	0.525	*U*	*1*	0.666	*U*	*1*	0.54
3:3FTCA	NA	NA		0.749	*U*	*1*	0.949	*U*	*1*	0.698	*U*	*1*	0.656	*U*	*1*	0.833	*U*	*1*	0.675
5:3FTCA	NA	NA		3.75	*U*	*1*	4.74	*U*	*1*	3.49	*U*	*1*	3.28	*U*	*1*	4.16	*U*	*1*	3.37
7:3FTCA	NA	NA		3.75	*U*	*1*	4.74	*U*	*1*	3.49	*U*	*1*	3.28	*U*	*1*	4.16	*U*	*1*	3.37
9Cl-PF3ONS	NA	NA		0.599	*U*	*1*	0.759	*U*	*1*	0.558	*U*	*1*	0.525	*U*	*1*	0.666	*U*	*1*	0.54
ADONA	NA	NA		0.599	*U*	*1*	0.759	*U*	*1*	0.558	*U*	*1*	0.525	*U*	*1*	0.666	*U*	*1*	0.54
HFPO-DA	NA	NA		0.599	*U*	*1*	0.759	*U*	*1*	0.558	*U*	*1*	0.525	*U*	*1*	0.666	*U*	*1*	0.54
NEtFOSA	NA	NA		0.15	*U*	*1*	0.19	*U*	*1*	0.14	*U*	*1*	0.131	*U*	*1*	0.166	*U*	*1*	0.135
NEtFOSAA	NA	NA		0.15	*U*	*1*	0.19	*U*	*1*	0.14	*U*	*1*	0.131	*U*	*1*	0.166	*U*	*1*	0.135
NEtFOSE	NA	NA		1.5	*U*	*1*	1.9	*U*	*1*	1.4	*U*	*1*	1.31	*U*	*1*	1.66	*U*	*1*	1.35
NFDHA	NA	NA		0.3	*U*	*1*	0.38	*U*	*1*	0.279	*U*	*1*	0.262	*U*	*1*	0.333	*U*	*1*	0.27
NMeFOSA	NA	NA		0.15	*U*	*1*	0.19	*U*	*1*	0.14	*U*	*1*	0.131	*U*	*1*	0.166	*U*	*1*	0.135
NMeFOSAA	NA	NA		0.15	*U*	*1*	0.19	*U*	*1*	0.14	*U*	*1*	0.131	*U*	*1*	0.166	*U*	*1*	0.135
NMeFOSE	NA	NA		1.5	*U*	*1*	1.9	*U*	*1*	1.4	*U*	*1*	1.31	*U*	*1*	1.66	*U*	*1*	1.35
Perfluoro-1-decanesulfonic acid (PFDS)	NA	NA		0.15	*U*	*1*	0.19	*U*	*1*	0.14	*U*	*1*	0.131	*U*	*1*	0.166	*U*	*1*	0.135
Perfluoro-1-heptanesulfonic acid (PFHpS)	NA	NA		0.15	*U*	*1*	0.19	*U*	*1*	0.14	*U*	*1*	0.131	*U*	*1*	0.166	*U*	*1*	0.135
Perfluoro-1-octanesulfonamide (FOSA)	NA	NA		0.15	*U*	*1*	0.19	*U*	*1*	0.14	*U*	*1*	0.131	*U*	*1*	0.166	*U*	*1*	0.135
Perfluorobutanesulfonic acid (PFBS)	NA	NA		0.15	*U*	*1*	0.19	*U*	*1*	0.14	*U*	*1*	0.131	*U*	*1*	0.166	*U*	*1*	0.135
Perfluorodecanoic acid (PFDA)	NA	NA		0.0572	*J*	*1*	0.19	*U*	*1*	0.14	*U*	*1*	0.131	*U*	*1*	0.211		*1*	0.0356
Perfluorododecane Sulfonic Acid (PFDoDS)	NA	NA		0.15	*U*	*1*	0.19	*U*	*1*	0.14	*U*	*1*	0.131	*U*	*1*	0.166	*U*	*1*	0.135
Perfluorododecanoic acid (PFDoA)	NA	NA		0.15	*U*	*1*	0.19	*U*	*1*	0.14	*U*	*1*	0.131	*U*	*1*	0.101	*J*	*1*	0.135
Perfluoroheptanoic acid (PFHpA)	NA	NA		0.122	*J*	*1*	0.0665	*J*	*1*	0.0618	*J*	*1*	0.112	*J*	*1*	0.136	*J*	*1*	0.0316
Perfluorohexanesulfonic Acid (PFHxS)	NA	NA		0.15	*U*	*1*	0.19	*U*	*1*	0.14	*U*	*1*	0.131	*U*	*1*	0.166	*U*	*1*	0.135
Perfluorohexanoic acid (PFHxA)	NA	NA		0.144	*J*	*1*	0.13	*J*	*1*	0.0461	*J*	*1*	0.0957	*J*	*1*	0.154	*J*	*1*	0.0437
Perfluoro-n-butanoic acid (PFBA)	NA	NA		0.126	*J*	*1*	0.759	*U*	*1*	0.558	*U*	*1*	0.525	*U*	*1*	0.223	*J*	*1*	0.54
Perfluorononanesulfonic Acid (PFNS)	NA	NA		0.15	*U*	*1*	0.19	*U*	*1*	0.14	*U*	*1*	0.131	*U*	*1*	0.166	*U*	*1*	0.135
Perfluorononanoic acid (PFNA)	NA	NA		0.087	*J*	*1*	0.19	*U*	*1*	0.14	*U*	*1*	0.131	*U*	*1*	0.226		*1*	0.0393
Perfluorooctanesulfonic Acid (PFOS)	1	44		0.502		*1*	0.448		*1*	0.111	*J*	*1*	0.532		*1*	1.68		*1*	0.388
Perfluorooctanoic acid (PFOA)	0.8	33		0.629		*1*	0.163	*J*	*1*	0.251		*1*	0.227		*1*	0.37		*1*	0.0833
Perfluoropentanesulfonic Acid (PFPeS)	NA	NA		0.15	*U*	*1*	0.19	*U*	*1*	0.14	*U*	*1*	0.131	*U*	*1*	0.166	*U*	*1*	0.135
Perfluoropentanoic acid (PFPeA)	NA	NA		0.21	*J*	*1*	0.103	*J*	*1*	0.279	*U*	*1*	0.0694	*J*	*1*	0.258	*J*	*1*	0.0738
Perfluorotetradecanoic acid (PFTA)	NA	NA		0.15	*U*	*1*	0.19	*U*	*1*	0.14	*U*	*1*	0.131	*U*	*1*	0.166	*U*	*1*	0.135
Perfluorotridecanoic acid (PFTrDA)	NA	NA		0.15	*U*	*1*	0.19	*U*	*1*	0.14	*U*	*1*	0.131	*U*	*1*	0.07	*J*	*1*	0.135
Perfluoroundecanoic acid (PFUnA)	NA	NA		0.04	*J*	*1*	0.19	*U*	*1*	0.14	*U*	*1*	0.131	*U*	*1*	0.151	*J*	*1*	0.027
PFEESA	NA	NA		0.3	*U*	*1*	0.38	*U*	*1*	0.279	*U*	*1*	0.262	*U*	*1*	0.333	*U*	*1*	0.27
PFMBA	NA	NA		0.3	*U*	*1*	0.38	*U*	*1*	0.279	*U*	*1*	0.262	*U*	*1*	0.333	*U*	*1*	0.27
PFMPA	NA	NA		0.3	*U*	*1*	0.38	*U*	*1*	0.279	*U*	*1*	0.262	*U*	*1*	0.333	*U*	*1*	0.27

value ≤ POG SCO

value > POG Guidance Value/SCO

Q = Laboratory Qualifier DL = Dilution NA = not available (addtional flags: B-in blank, D-diluted, E-estimated, J-approximate)

Table 6: PFAS in Soil

All data in µg/Kg (ppb)			Sample	02 5-7.5		2SB-02 7.5-10			2SB-03 SURF			2SB-03 10-12.5			2SB-03 12.5-15			2SB-04 SURF		
U= Not Detected ≥ value			Date	-10-01		2025-10-01			2025-10-01			2025-10-01			2025-10-01			2025-10-01		
PFAS (1633)	**POG**	**RRU**	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL
11Cl-PF3OUdS	NA	NA	*U*	*1*	0.574	*U*	*1*	0.665	*U*	*1*	0.505	*U*	*1*	0.543	*U*	*1*	0.699	*U*	*1*
1H,1H,2H,2H-Perfluorodecanesulfonic acid	NA	NA	*U*	*1*	0.574	*U*	*1*	0.665	*U*	*1*	0.505	*U*	*1*	0.543	*U*	*1*	0.699	*U*	*1*
1H,1H,2H,2H-Perfluorohexanesulfonic Acid	NA	NA	*U*	*1*	0.574	*U*	*1*	0.665	*U*	*1*	0.505	*U*	*1*	0.543	*U*	*1*	0.699	*U*	*1*
1H,1H,2H,2H-Perfluorooctanesulfonic acid	NA	NA	*U*	*1*	0.574	*U*	*1*	0.665	*U*	*1*	0.505	*U*	*1*	0.543	*U*	*1*	0.699	*U*	*1*
3:3FTCA	NA	NA	*U*	*1*	0.718	*U*	*1*	0.831	*U*	*1*	0.631	*U*	*1*	0.679	*U*	*1*	0.873	*U*	*1*
5:3FTCA	NA	NA	*U*	*1*	3.59	*U*	*1*	4.16	*U*	*1*	3.15	*U*	*1*	3.39	*U*	*1*	4.37	*U*	*1*
7:3FTCA	NA	NA	*U*	*1*	3.59	*U*	*1*	4.16	*U*	*1*	3.15	*U*	*1*	3.39	*U*	*1*	4.37	*U*	*1*
9Cl-PF3ONS	NA	NA	*U*	*1*	0.574	*U*	*1*	0.665	*U*	*1*	0.505	*U*	*1*	0.543	*U*	*1*	0.699	*U*	*1*
ADONA	NA	NA	*U*	*1*	0.574	*U*	*1*	0.665	*U*	*1*	0.505	*U*	*1*	0.543	*U*	*1*	0.699	*U*	*1*
HFPO-DA	NA	NA	*U*	*1*	0.574	*U*	*1*	0.665	*U*	*1*	0.505	*U*	*1*	0.543	*U*	*1*	0.699	*U*	*1*
NEtFOSA	NA	NA	*U*	*1*	0.144	*U*	*1*	0.166	*U*	*1*	0.126	*U*	*1*	0.136	*U*	*1*	0.175	*U*	*1*
NEtFOSAA	NA	NA	*U*	*1*	0.144	*U*	*1*	0.166	*U*	*1*	0.126	*U*	*1*	0.136	*U*	*1*	0.175	*U*	*1*
NEtFOSE	NA	NA	*U*	*1*	1.44	*U*	*1*	1.66	*U*	*1*	1.26	*U*	*1*	1.36	*U*	*1*	1.75	*U*	*1*
NFDHA	NA	NA	*U*	*1*	0.287	*U*	*1*	0.332	*U*	*1*	0.252	*U*	*1*	0.272	*U*	*1*	0.349	*U*	*1*
NMeFOSA	NA	NA	*U*	*1*	0.144	*U*	*1*	0.166	*U*	*1*	0.126	*U*	*1*	0.136	*U*	*1*	0.175	*U*	*1*
NMeFOSAA	NA	NA	*U*	*1*	0.144	*U*	*1*	0.166	*U*	*1*	0.126	*U*	*1*	0.136	*U*	*1*	0.175	*U*	*1*
NMeFOSE	NA	NA	*U*	*1*	1.44	*U*	*1*	1.66	*U*	*1*	1.26	*U*	*1*	1.36	*U*	*1*	1.75	*U*	*1*
Perfluoro-1-decanesulfonic acid (PFDS)	NA	NA	*U*	*1*	0.144	*U*	*1*	0.166	*U*	*1*	0.126	*U*	*1*	0.136	*U*	*1*	0.175	*U*	*1*
Perfluoro-1-heptanesulfonic acid (PFHpS)	NA	NA	*U*	*1*	0.144	*U*	*1*	0.166	*U*	*1*	0.126	*U*	*1*	0.136	*U*	*1*	0.175	*U*	*1*
Perfluoro-1-octanesulfonamide (FOSA)	NA	NA	*U*	*1*	0.144	*U*	*1*	0.166	*U*	*1*	0.126	*U*	*1*	0.136	*U*	*1*	0.175	*U*	*1*
Perfluorobutanesulfonic acid (PFBS)	NA	NA	*U*	*1*	0.144	*U*	*1*	0.166	*U*	*1*	0.126	*U*	*1*	0.136	*U*	*1*	0.175	*U*	*1*
Perfluorodecanoic acid (PFDA)	NA	NA	*J*	*1*	0.144	*U*	*1*	0.0679	*J*	*1*	0.126	*U*	*1*	0.136	*U*	*1*	0.104	*J*	*1*
Perfluorododecane Sulfonic Acid (PFDoDS)	NA	NA	*U*	*1*	0.144	*U*	*1*	0.166	*U*	*1*	0.126	*U*	*1*	0.136	*U*	*1*	0.175	*U*	*1*
Perfluorododecanoic acid (PFDoA)	NA	NA	*U*	*1*	0.144	*U*	*1*	0.166	*U*	*1*	0.126	*U*	*1*	0.136	*U*	*1*	0.175	*U*	*1*
Perfluoroheptanoic acid (PFHpA)	NA	NA	*J*	*1*	0.144	*U*	*1*	0.153	*J*	*1*	0.126	*U*	*1*	0.136	*U*	*1*	0.14	*J*	*1*
Perfluorohexanesulfonic Acid (PFHxS)	NA	NA	*U*	*1*	0.144	*U*	*1*	0.166	*U*	*1*	0.126	*U*	*1*	0.136	*U*	*1*	0.175	*U*	*1*
Perfluorohexanoic acid (PFHxA)	NA	NA	*J*	*1*	0.144	*U*	*1*	0.133	*J*	*1*	0.126	*U*	*1*	0.136	*U*	*1*	0.126	*J*	*1*
Perfluoro-n-butanoic acid (PFBA)	NA	NA	*U*	*1*	0.574	*U*	*1*	0.245	*J*	*1*	0.505	*U*	*1*	0.543	*U*	*1*	0.176	*J*	*1*
Perfluorononanesulfonic Acid (PFNS)	NA	NA	*U*	*1*	0.144	*U*	*1*	0.166	*U*	*1*	0.126	*U*	*1*	0.136	*U*	*1*	0.175	*U*	*1*
Perfluorononanoic acid (PFNA)	NA	NA	*J*	*1*	0.144	*U*	*1*	0.143	*J*	*1*	0.126	*U*	*1*	0.136	*U*	*1*	0.243		*1*
Perfluorooctanesulfonic Acid (PFOS)	1	44		*1*	0.144	*U*	*1*	0.893		*1*	0.126	*U*	*1*	0.136	*U*	*1*	1.1		*1*
Perfluorooctanoic acid (PFOA)	0.8	33	*J*	*1*	0.0344	*J*	*1*	0.851		*1*	0.0345	*J*	*1*	0.0278	*J*	*1*	0.768		*1*
Perfluoropentanesulfonic Acid (PFPeS)	NA	NA	*U*	*1*	0.144	*U*	*1*	0.166	*U*	*1*	0.126	*U*	*1*	0.136	*U*	*1*	0.175	*U*	*1*
Perfluoropentanoic acid (PFPeA)	NA	NA	*J*	*1*	0.287	*U*	*1*	0.264	*J*	*1*	0.252	*U*	*1*	0.272	*U*	*1*	0.158	*J*	*1*
Perfluorotetradecanoic acid (PFTA)	NA	NA	*U*	*1*	0.144	*U*	*1*	0.166	*U*	*1*	0.126	*U*	*1*	0.136	*U*	*1*	0.175	*U*	*1*
Perfluorotridecanoic acid (PFTrDA)	NA	NA	*U*	*1*	0.144	*U*	*1*	0.166	*U*	*1*	0.126	*U*	*1*	0.136	*U*	*1*	0.175	*U*	*1*
Perfluoroundecanoic acid (PFUnA)	NA	NA	*J*	*1*	0.144	*U*	*1*	0.0646	*J*	*1*	0.126	*U*	*1*	0.136	*U*	*1*	0.101	*J*	*1*
PFEESA	NA	NA	*U*	*1*	0.287	*U*	*1*	0.332	*U*	*1*	0.252	*U*	*1*	0.272	*U*	*1*	0.349	*U*	*1*
PFMBA	NA	NA	*U*	*1*	0.287	*U*	*1*	0.332	*U*	*1*	0.252	*U*	*1*	0.272	*U*	*1*	0.349	*U*	*1*
PFMPA	NA	NA	*U*	*1*	0.287	*U*	*1*	0.332	*U*	*1*	0.252	*U*	*1*	0.272	*U*	*1*	0.349	*U*	*1*

value ≤ POG SCO

value > POG Guidance Value/SCO

Q = Laboratory Qualifier DL = Dilution NA = not available (addtional flags: B-in blank, D-diluted, E-estimated, J-approximate)

Table 6: PFAS in Soil

The Green, Newburgh, NY
BCP ID: C336099

GALLAGHER BASSETT | TECHNICAL SERVICES

All data in µg/Kg (ppb)		Sample	2SB-04 0-5			2SB-04 10-15			2SB-05 SURF			2SB-05 5-7			2SB-06 SURF			2SB-(
U= Not Detected ≥ value		Date	2025-10-01			2025-10-01			2025-10-01			2025-10-01			2025-10-01			2025
PFAS (1633)	**POG**	**RRU**	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result
11Cl-PF3OUdS	NA	NA	0.716	*U*	*1*	0.664	*U*	*1*	0.745	*U*	*1*	0.612	*U*	*1*	0.748	*U*	*1*	0.574
1H,1H,2H,2H-Perfluorodecanesulfonic acid	NA	NA	0.716	*U*	*1*	0.664	*U*	*1*	0.745	*U*	*1*	0.612	*U*	*1*	0.748	*U*	*1*	0.574
1H,1H,2H,2H-Perfluorohexanesulfonic Acid	NA	NA	0.716	*U*	*1*	0.664	*U*	*1*	0.745	*U*	*1*	0.612	*U*	*1*	0.748	*U*	*1*	0.574
1H,1H,2H,2H-Perfluorooctanesulfonic acid	NA	NA	0.716	*U*	*1*	0.664	*U*	*1*	0.745	*U*	*1*	0.612	*U*	*1*	0.748	*U*	*1*	0.574
3:3FTCA	NA	NA	0.894	*U*	*1*	0.83	*U*	*1*	0.932	*U*	*1*	0.765	*U*	*1*	0.935	*U*	*1*	0.718
5:3FTCA	NA	NA	4.47	*U*	*1*	4.15	*U*	*1*	4.66	*U*	*1*	3.83	*U*	*1*	4.68	*U*	*1*	3.59
7:3FTCA	NA	NA	4.47	*U*	*1*	4.15	*U*	*1*	4.66	*U*	*1*	3.83	*U*	*1*	4.68	*U*	*1*	3.59
9Cl-PF3ONS	NA	NA	0.716	*U*	*1*	0.664	*U*	*1*	0.745	*U*	*1*	0.612	*U*	*1*	0.748	*U*	*1*	0.574
ADONA	NA	NA	0.716	*U*	*1*	0.664	*U*	*1*	0.745	*U*	*1*	0.612	*U*	*1*	0.748	*U*	*1*	0.574
HFPO-DA	NA	NA	0.716	*U*	*1*	0.664	*U*	*1*	0.745	*U*	*1*	0.612	*U*	*1*	0.748	*U*	*1*	0.574
NEtFOSA	NA	NA	0.179	*U*	*1*	0.166	*U*	*1*	0.186	*U*	*1*	0.153	*U*	*1*	0.187	*U*	*1*	0.144
NEtFOSAA	NA	NA	0.179	*U*	*1*	0.166	*U*	*1*	0.186	*U*	*1*	0.153	*U*	*1*	0.187	*U*	*1*	0.144
NEtFOSE	NA	NA	1.79	*U*	*1*	1.66	*U*	*1*	1.86	*U*	*1*	1.53	*U*	*1*	1.87	*U*	*1*	1.44
NFDHA	NA	NA	0.358	*U*	*1*	0.332	*U*	*1*	0.373	*U*	*1*	0.306	*U*	*1*	0.374	*U*	*1*	0.287
NMeFOSA	NA	NA	0.179	*U*	*1*	0.166	*U*	*1*	0.186	*U*	*1*	0.153	*U*	*1*	0.187	*U*	*1*	0.144
NMeFOSAA	NA	NA	0.179	*U*	*1*	0.166	*U*	*1*	0.186	*U*	*1*	0.153	*U*	*1*	0.187	*U*	*1*	0.144
NMeFOSE	NA	NA	1.79	*U*	*1*	1.66	*U*	*1*	1.86	*U*	*1*	1.53	*U*	*1*	1.87	*U*	*1*	1.44
Perfluoro-1-decanesulfonic acid (PFDS)	NA	NA	0.179	*U*	*1*	0.166	*U*	*1*	0.186	*U*	*1*	0.153	*U*	*1*	0.187	*U*	*1*	0.144
Perfluoro-1-heptanesulfonic acid (PFHpS)	NA	NA	0.179	*U*	*1*	0.166	*U*	*1*	0.186	*U*	*1*	0.153	*U*	*1*	0.187	*U*	*1*	0.144
Perfluoro-1-octanesulfonamide (FOSA)	NA	NA	0.179	*U*	*1*	0.166	*U*	*1*	0.186	*U*	*1*	0.153	*U*	*1*	0.187	*U*	*1*	0.144
Perfluorobutanesulfonic acid (PFBS)	NA	NA	0.179	*U*	*1*	0.166	*U*	*1*	0.186	*U*	*1*	0.153	*U*	*1*	0.187	*U*	*1*	0.144
Perfluorodecanoic acid (PFDA)	NA	NA	0.0539	*J*	*1*	0.166	*U*	*1*	0.344		*1*	0.153	*U*	*1*	0.431		*1*	0.0631
Perfluorododecane Sulfonic Acid (PFDoDS)	NA	NA	0.179	*U*	*1*	0.166	*U*	*1*	0.186	*U*	*1*	0.153	*U*	*1*	0.187	*U*	*1*	0.144
Perfluorododecanoic acid (PFDoA)	NA	NA	0.179	*U*	*1*	0.166	*U*	*1*	0.184	*J*	*1*	0.153	*U*	*1*	0.246		*1*	0.144
Perfluoroheptanoic acid (PFHpA)	NA	NA	0.109	*J*	*1*	0.166	*U*	*1*	0.16	*J*	*1*	0.0559	*J*	*1*	0.162	*J*	*1*	0.143
Perfluorohexanesulfonic Acid (PFHxS)	NA	NA	0.179	*U*	*1*	0.166	*U*	*1*	0.186	*U*	*1*	0.153	*U*	*1*	0.187	*U*	*1*	0.144
Perfluorohexanoic acid (PFHxA)	NA	NA	0.107	*J*	*1*	0.166	*U*	*1*	0.168	*J*	*1*	0.0422	*J*	*1*	0.189		*1*	0.142
Perfluoro-n-butanoic acid (PFBA)	NA	NA	0.163	*J*	*1*	0.664	*U*	*1*	0.334	*J*	*1*	0.612	*U*	*1*	0.404	*J*	*1*	0.229
Perfluorononanesulfonic Acid (PFNS)	NA	NA	0.179	*U*	*1*	0.166	*U*	*1*	0.186	*U*	*1*	0.153	*U*	*1*	0.187	*U*	*1*	0.144
Perfluorononanoic acid (PFNA)	NA	NA	0.161	*J*	*1*	0.166	*U*	*1*	0.4		*1*	0.153	*U*	*1*	0.394		*1*	0.197
Perfluorooctanesulfonic Acid (PFOS)	1	44	1.16		*1*	0.166	*U*	*1*	1.64		*1*	0.144	*J*	*1*	1.8		*1*	0.591
Perfluorooctanoic acid (PFOA)	0.8	33	0.579		*1*	0.166	*U*	*1*	0.576		*1*	0.108	*J*	*1*	0.5		*1*	0.733
Perfluoropentanesulfonic Acid (PFPeS)	NA	NA	0.179	*U*	*1*	0.166	*U*	*1*	0.186	*U*	*1*	0.153	*U*	*1*	0.187	*U*	*1*	0.144
Perfluoropentanoic acid (PFPeA)	NA	NA	0.157	*J*	*1*	0.332	*U*	*1*	0.271	*J*	*1*	0.306	*U*	*1*	0.305	*J*	*1*	0.251
Perfluorotetradecanoic acid (PFTA)	NA	NA	0.179	*U*	*1*	0.166	*U*	*1*	0.128	*J*	*1*	0.153	*U*	*1*	0.0927	*J*	*1*	0.144
Perfluorotridecanoic acid (PFTrDA)	NA	NA	0.179	*U*	*1*	0.166	*U*	*1*	0.189		*1*	0.153	*U*	*1*	0.189		*1*	0.144
Perfluoroundecanoic acid (PFUnA)	NA	NA	0.179	*U*	*1*	0.166	*U*	*1*	0.353		*1*	0.153	*U*	*1*	0.548		*1*	0.0483
PFEESA	NA	NA	0.358	*U*	*1*	0.332	*U*	*1*	0.373	*U*	*1*	0.306	*U*	*1*	0.374	*U*	*1*	0.287
PFMBA	NA	NA	0.358	*U*	*1*	0.332	*U*	*1*	0.373	*U*	*1*	0.306	*U*	*1*	0.374	*U*	*1*	0.287
PFMPA	NA	NA	0.358	*U*	*1*	0.332	*U*	*1*	0.373	*U*	*1*	0.306	*U*	*1*	0.374	*U*	*1*	0.287

value ≤ POG SCO

value > POG Guidance Value/SCO

Q = Laboratory Qualifier DL = Dilution NA = not available (addtional flags: B-in blank, D-diluted, E-estimated, J-approximate)

Table 6: PFAS in Soil

The Green, Newburgh, NY
BCP ID: C336099

GALLAGHER BASSETT | TECHNICAL SERVICES

All data in µg/Kg (ppb)			Sample	06 0-2.5		2SB-06 7.5-10			2SB-07 SURF			2SB-07 10-15			2SB-08 SURF			2SB-08 8-10		
U= Not Detected ≥ value			Date	-10-01		2025-10-01			2025-10-02			2025-10-02			2025-10-02			2025-10-02		
PFAS (1633)	**POG**	**RRU**	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL
11Cl-PF3OUdS	NA	NA	*U*	*1*	0.489	*U*	*1*	0.754	*U*	*1*	0.736	*U*	*1*	0.712	*U*	*1*	0.683	*U*	*1*
1H,1H,2H,2H-Perfluorodecanesulfonic acid	NA	NA	*U*	*1*	0.489	*U*	*1*	0.754	*U*	*1*	0.736	*U*	*1*	0.712	*U*	*1*	0.683	*U*	*1*
1H,1H,2H,2H-Perfluorohexanesulfonic Acid	NA	NA	*U*	*1*	0.489	*U*	*1*	0.754	*U*	*1*	0.736	*U*	*1*	0.712	*U*	*1*	0.683	*U*	*1*
1H,1H,2H,2H-Perfluorooctanesulfonic acid	NA	NA	*U*	*1*	0.489	*U*	*1*	0.754	*U*	*1*	0.337	*J*	*1*	0.712	*U*	*1*	0.683	*U*	*1*
3:3FTCA	NA	NA	*U*	*1*	0.611	*U*	*1*	0.942	*U*	*1*	0.921	*U*	*1*	0.89	*U*	*1*	0.854	*U*	*1*
5:3FTCA	NA	NA	*U*	*1*	3.06	*U*	*1*	4.71	*U*	*1*	4.6	*U*	*1*	4.45	*U*	*1*	4.27	*U*	*1*
7:3FTCA	NA	NA	*U*	*1*	3.06	*U*	*1*	4.71	*U*	*1*	4.6	*U*	*1*	4.45	*U*	*1*	4.27	*U*	*1*
9Cl-PF3ONS	NA	NA	*U*	*1*	0.489	*U*	*1*	0.754	*U*	*1*	0.736	*U*	*1*	0.712	*U*	*1*	0.683	*U*	*1*
ADONA	NA	NA	*U*	*1*	0.489	*U*	*1*	0.754	*U*	*1*	0.736	*U*	*1*	0.712	*U*	*1*	0.683	*U*	*1*
HFPO-DA	NA	NA	*U*	*1*	0.489	*U*	*1*	0.754	*U*	*1*	0.736	*U*	*1*	0.712	*U*	*1*	0.683	*U*	*1*
NEtFOSA	NA	NA	*U*	*1*	0.122	*U*	*1*	0.188	*U*	*1*	0.184	*U*	*1*	0.178	*U*	*1*	0.171	*U*	*1*
NEtFOSAA	NA	NA	*U*	*1*	0.122	*U*	*1*	0.188	*U*	*1*	0.184	*U*	*1*	0.0968	*J*	*1*	0.171	*U*	*1*
NEtFOSE	NA	NA	*U*	*1*	1.22	*U*	*1*	1.88	*U*	*1*	1.84	*U*	*1*	1.78	*U*	*1*	1.71	*U*	*1*
NFDHA	NA	NA	*U*	*1*	0.244	*U*	*1*	0.377	*U*	*1*	0.368	*U*	*1*	0.356	*U*	*1*	0.341	*U*	*1*
NMeFOSA	NA	NA	*U*	*1*	0.122	*U*	*1*	0.188	*U*	*1*	0.184	*U*	*1*	0.178	*U*	*1*	0.171	*U*	*1*
NMeFOSAA	NA	NA	*U*	*1*	0.122	*U*	*1*	0.188	*U*	*1*	0.184	*U*	*1*	0.178	*U*	*1*	0.171	*U*	*1*
NMeFOSE	NA	NA	*U*	*1*	1.22	*U*	*1*	1.88	*U*	*1*	1.84	*U*	*1*	1.78	*U*	*1*	1.71	*U*	*1*
Perfluoro-1-decanesulfonic acid (PFDS)	NA	NA	*U*	*1*	0.122	*U*	*1*	0.188	*U*	*1*	0.184	*U*	*1*	0.178	*U*	*1*	0.171	*U*	*1*
Perfluoro-1-heptanesulfonic acid (PFHpS)	NA	NA	*U*	*1*	0.122	*U*	*1*	0.188	*U*	*1*	0.184	*U*	*1*	0.178	*U*	*1*	0.171	*U*	*1*
Perfluoro-1-octanesulfonamide (FOSA)	NA	NA	*U*	*1*	0.122	*U*	*1*	0.188	*U*	*1*	0.184	*U*	*1*	0.178	*U*	*1*	0.171	*U*	*1*
Perfluorobutanesulfonic acid (PFBS)	NA	NA	*U*	*1*	0.122	*U*	*1*	0.188	*U*	*1*	0.184	*U*	*1*	0.178	*U*	*1*	0.171	*U*	*1*
Perfluorodecanoic acid (PFDA)	NA	NA	*J*	*1*	0.122	*U*	*1*	0.087	*J*	*1*	0.184	*U*	*1*	0.288		*1*	0.171	*U*	*1*
Perfluorododecane Sulfonic Acid (PFDoDS)	NA	NA	*U*	*1*	0.122	*U*	*1*	0.188	*U*	*1*	0.184	*U*	*1*	0.178	*U*	*1*	0.171	*U*	*1*
Perfluorododecanoic acid (PFDoA)	NA	NA	*U*	*1*	0.122	*U*	*1*	0.188	*U*	*1*	0.184	*U*	*1*	0.124	*J*	*1*	0.171	*U*	*1*
Perfluoroheptanoic acid (PFHpA)	NA	NA	*J*	*1*	0.122	*U*	*1*	0.0986	*J*	*1*	0.0531	*J*	*1*	0.187		*1*	0.171	*U*	*1*
Perfluorohexanesulfonic Acid (PFHxS)	NA	NA	*U*	*1*	0.122	*U*	*1*	0.188	*U*	*1*	0.184	*U*	*1*	0.178	*U*	*1*	0.171	*U*	*1*
Perfluorohexanoic acid (PFHxA)	NA	NA	*J*	*1*	0.122	*U*	*1*	0.0804	*J*	*1*	0.0494	*J*	*1*	0.151	*J*	*1*	0.171	*U*	*1*
Perfluoro-n-butanoic acid (PFBA)	NA	NA	*J*	*1*	0.489	*U*	*1*	0.754	*U*	*1*	0.736	*U*	*1*	0.226	*J*	*1*	0.683	*U*	*1*
Perfluorononanesulfonic Acid (PFNS)	NA	NA	*U*	*1*	0.122	*U*	*1*	0.188	*U*	*1*	0.184	*U*	*1*	0.178	*U*	*1*	0.171	*U*	*1*
Perfluorononanoic acid (PFNA)	NA	NA		*1*	0.122	*U*	*1*	0.233		*1*	0.0772	*J*	*1*	0.511		*1*	0.171	*U*	*1*
Perfluorooctanesulfonic Acid (PFOS)	1	44		*1*	0.122	*U*	*1*	1		*1*	0.374		*1*	1.81		*1*	0.171	*U*	*1*
Perfluorooctanoic acid (PFOA)	0.8	33		*1*	0.122	*U*	*1*	0.753		*1*	0.272		*1*	1.22		*1*	0.171	*U*	*1*
Perfluoropentanesulfonic Acid (PFPeS)	NA	NA	*U*	*1*	0.122	*U*	*1*	0.188	*U*	*1*	0.184	*U*	*1*	0.178	*U*	*1*	0.171	*U*	*1*
Perfluoropentanoic acid (PFPeA)	NA	NA	*J*	*1*	0.244	*U*	*1*	0.0873	*J*	*1*	0.368	*U*	*1*	0.154	*J*	*1*	0.341	*U*	*1*
Perfluorotetradecanoic acid (PFTA)	NA	NA	*U*	*1*	0.122	*U*	*1*	0.188	*U*	*1*	0.184	*U*	*1*	0.0948	*J*	*1*	0.171	*U*	*1*
Perfluorotridecanoic acid (PFTrDA)	NA	NA	*U*	*1*	0.122	*U*	*1*	0.188	*U*	*1*	0.184	*U*	*1*	0.117	*J*	*1*	0.171	*U*	*1*
Perfluoroundecanoic acid (PFUnA)	NA	NA	*J*	*1*	0.122	*U*	*1*	0.0828	*J*	*1*	0.184	*U*	*1*	0.288		*1*	0.171	*U*	*1*
PFEESA	NA	NA	*U*	*1*	0.244	*U*	*1*	0.377	*U*	*1*	0.368	*U*	*1*	0.356	*U*	*1*	0.341	*U*	*1*
PFMBA	NA	NA	*U*	*1*	0.244	*U*	*1*	0.377	*U*	*1*	0.368	*U*	*1*	0.356	*U*	*1*	0.341	*U*	*1*
PFMPA	NA	NA	*U*	*1*	0.244	*U*	*1*	0.377	*U*	*1*	0.368	*U*	*1*	0.356	*U*	*1*	0.341	*U*	*1*

value ≤ POG SCO

value > POG Guidance Value/SCO

Q = Laboratory Qualifier DL = Dilution NA = not available (addtional flags: B-in blank, D-diluted, E-estimated, J-approximate)

Table 6: PFAS in Soil

The Green, Newburgh, NY
BCP ID: C336099

GALLAGHER BASSETT | TECHNICAL SERVICES

All data in µg/Kg (ppb)			Sample	2SB-08 10-12			2SB-09 SURF			2SB-09 10-12.5			2SB-09 12.5-15			2SB-10 SURF			2SB
U= Not Detected ≥ value			Date	2025-10-02			2025-10-02			2025-10-02			2025-10-02			2025-10-02			2025
PFAS (1633)	**POG**	**RRU**		Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result
11Cl-PF3OUdS	NA	NA		0.629	U	1	0.778	U	1	0.608	U	1	0.665	U	1	0.789	U	1	0.829
1H,1H,2H,2H-Perfluorodecanesulfonic acid	NA	NA		0.629	U	1	0.778	U	1	0.608	U	1	0.665	U	1	0.789	U	1	0.829
1H,1H,2H,2H-Perfluorohexanesulfonic Acid	NA	NA		0.629	U	1	0.778	U	1	0.608	U	1	0.665	U	1	0.789	U	1	0.829
1H,1H,2H,2H-Perfluorooctanesulfonic acid	NA	NA		0.629	U	1	0.778	U	1	0.608	U	1	0.665	U	1	0.789	U	1	0.829
3:3FTCA	NA	NA		0.786	U	1	0.973	U	1	0.76	U	1	0.831	U	1	0.986	U	1	1.04
5:3FTCA	NA	NA		3.93	U	1	4.86	U	1	3.8	U	1	4.16	U	1	4.93	U	1	5.18
7:3FTCA	NA	NA		3.93	U	1	4.86	U	1	3.8	U	1	4.16	U	1	4.93	U	1	5.18
9Cl-PF3ONS	NA	NA		0.629	U	1	0.778	U	1	0.608	U	1	0.665	U	1	0.789	U	1	0.829
ADONA	NA	NA		0.629	U	1	0.778	U	1	0.608	U	1	0.665	U	1	0.789	U	1	0.829
HFPO-DA	NA	NA		0.629	U	1	0.778	U	1	0.608	U	1	0.665	U	1	0.789	U	1	0.829
NEtFOSA	NA	NA		0.157	U	1	0.194	U	1	0.152	U	1	0.166	U	1	0.197	U	1	0.207
NEtFOSAA	NA	NA		0.157	U	1	0.194	U	1	0.152	U	1	0.166	U	1	0.197	U	1	0.207
NEtFOSE	NA	NA		1.57	U	1	1.94	U	1	1.52	U	1	1.66	U	1	1.97	U	1	2.07
NFDHA	NA	NA		0.314	U	1	0.389	U	1	0.304	U	1	0.332	U	1	0.394	U	1	0.414
NMeFOSA	NA	NA		0.157	U	1	0.194	U	1	0.152	U	1	0.166	U	1	0.197	U	1	0.207
NMeFOSAA	NA	NA		0.157	U	1	0.194	U	1	0.152	U	1	0.166	U	1	0.197	U	1	0.207
NMeFOSE	NA	NA		1.57	U	1	1.94	U	1	1.52	U	1	1.66	U	1	1.97	U	1	2.07
Perfluoro-1-decanesulfonic acid (PFDS)	NA	NA		0.157	U	1	0.194	U	1	0.152	U	1	0.166	U	1	0.197	U	1	0.207
Perfluoro-1-heptanesulfonic acid (PFHpS)	NA	NA		0.157	U	1	0.194	U	1	0.152	U	1	0.166	U	1	0.197	U	1	0.207
Perfluoro-1-octanesulfonamide (FOSA)	NA	NA		0.157	U	1	0.194	U	1	0.152	U	1	0.166	U	1	0.197	U	1	0.207
Perfluorobutanesulfonic acid (PFBS)	NA	NA		0.157	U	1	0.194	U	1	0.152	U	1	0.166	U	1	0.197	U	1	0.207
Perfluorodecanoic acid (PFDA)	NA	NA		0.157	U	1	0.374		1	0.152	U	1	0.166	U	1	0.197	U	1	0.207
Perfluorododecane Sulfonic Acid (PFDoDS)	NA	NA		0.157	U	1	0.194	U	1	0.152	U	1	0.166	U	1	0.197	U	1	0.207
Perfluorododecanoic acid (PFDoA)	NA	NA		0.157	U	1	0.186	J	1	0.152	U	1	0.166	U	1	0.197	U	1	0.207
Perfluoroheptanoic acid (PFHpA)	NA	NA		0.157	U	1	0.204		1	0.152	U	1	0.166	U	1	0.105	J	1	0.207
Perfluorohexanesulfonic Acid (PFHxS)	NA	NA		0.157	U	1	0.194	U	1	0.152	U	1	0.166	U	1	0.197	U	1	0.207
Perfluorohexanoic acid (PFHxA)	NA	NA		0.157	U	1	0.189	J	1	0.152	U	1	0.166	U	1	0.11	J	1	0.207
Perfluoro-n-butanoic acid (PFBA)	NA	NA		0.629	U	1	0.512	J	1	0.608	U	1	0.665	U	1	0.789	U	1	0.829
Perfluorononanesulfonic Acid (PFNS)	NA	NA		0.157	U	1	0.194	U	1	0.152	U	1	0.166	U	1	0.197	U	1	0.207
Perfluorononanoic acid (PFNA)	NA	NA		0.157	U	1	0.43		1	0.152	U	1	0.166	U	1	0.109	J	1	0.207
Perfluorooctanesulfonic Acid (PFOS)	1	44		0.0823	J	1	1.54		1	0.152	U	1	0.166	U	1	1.14		1	0.0708
Perfluorooctanoic acid (PFOA)	0.8	33		0.0447	J	1	0.652		1	0.152	U	1	0.166	U	1	0.68		1	0.0372
Perfluoropentanesulfonic Acid (PFPeS)	NA	NA		0.157	U	1	0.194	U	1	0.152	U	1	0.166	U	1	0.197	U	1	0.207
Perfluoropentanoic acid (PFPeA)	NA	NA		0.314	U	1	0.271	J	1	0.304	U	1	0.332	U	1	0.125	J	1	0.414
Perfluorotetradecanoic acid (PFTA)	NA	NA		0.157	U	1	0.111	J	1	0.152	U	1	0.166	U	1	0.197	U	1	0.207
Perfluorotridecanoic acid (PFTrDA)	NA	NA		0.157	U	1	0.163	J	1	0.152	U	1	0.166	U	1	0.197	U	1	0.207
Perfluoroundecanoic acid (PFUnA)	NA	NA		0.157	U	1	0.421		1	0.152	U	1	0.166	U	1	0.197	U	1	0.207
PFEESA	NA	NA		0.314	U	1	0.389	U	1	0.304	U	1	0.332	U	1	0.394	U	1	0.414
PFMBA	NA	NA		0.314	U	1	0.389	U	1	0.304	U	1	0.332	U	1	0.394	U	1	0.414
PFMPA	NA	NA		0.314	U	1	0.389	U	1	0.304	U	1	0.332	U	1	0.394	U	1	0.414

value ≤ POG SCO

value > POG Guidance Value/SCO

Q = Laboratory Qualifier DL = Dilution NA = not available (addtional flags: B-in blank, D-diluted, E-estimated, J-approximate)

Table 6: PFAS in Soil

The Green, Newburgh, NY
BCP ID: C336099

GALLAGHER BASSETT | TECHNICAL SERVICES

All data in µg/Kg (ppb)			Sample -10 5-7		2SB-10 10-12			2SB-11 SURF			2SB-11 0-5			2SB-11 13-15			2SB-12 SURF		
U= Not Detected ≥ value			Date -10-02		2025-10-02			2025-10-02			2025-10-02			2025-10-02			2025-10-02		
PFAS (1633)	**POG**	**RRU**	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL
11Cl-PF3OUdS	NA	NA	*U*	*1*	0.625	*U*	*1*	0.797	*U*	*1*	0.733	*U*	*1*	0.606	*U*	*1*	0.964	*U*	*1*
1H,1H,2H,2H-Perfluorodecanesulfonic acid	NA	NA	*U*	*1*	0.625	*U*	*1*	0.797	*U*	*1*	0.733	*U*	*1*	0.606	*U*	*1*	0.964	*U*	*1*
1H,1H,2H,2H-Perfluorohexanesulfonic Acid	NA	NA	*U*	*1*	0.625	*U*	*1*	0.797	*U*	*1*	0.733	*U*	*1*	0.606	*U*	*1*	0.964	*U*	*1*
1H,1H,2H,2H-Perfluorooctanesulfonic acid	NA	NA	*U*	*1*	0.625	*U*	*1*	0.797	*U*	*1*	0.733	*U*	*1*	0.606	*U*	*1*	0.964	*U*	*1*
3:3FTCA	NA	NA	*U*	*1*	0.781	*U*	*1*	0.996	*U*	*1*	0.917	*U*	*1*	0.758	*U*	*1*	1.2	*U*	*1*
5:3FTCA	NA	NA	*U*	*1*	3.9	*U*	*1*	4.98	*U*	*1*	4.58	*U*	*1*	3.79	*U*	*1*	6.02	*U*	*1*
7:3FTCA	NA	NA	*U*	*1*	3.9	*U*	*1*	4.98	*U*	*1*	4.58	*U*	*1*	3.79	*U*	*1*	6.02	*U*	*1*
9Cl-PF3ONS	NA	NA	*U*	*1*	0.625	*U*	*1*	0.797	*U*	*1*	0.733	*U*	*1*	0.606	*U*	*1*	0.964	*U*	*1*
ADONA	NA	NA	*U*	*1*	0.625	*U*	*1*	0.797	*U*	*1*	0.733	*U*	*1*	0.606	*U*	*1*	0.964	*U*	*1*
HFPO-DA	NA	NA	*U*	*1*	0.625	*U*	*1*	0.797	*U*	*1*	0.733	*U*	*1*	0.606	*U*	*1*	0.964	*U*	*1*
NEtFOSA	NA	NA	*U*	*1*	0.156	*U*	*1*	0.199	*U*	*1*	0.183	*U*	*1*	0.152	*U*	*1*	0.241	*U*	*1*
NEtFOSAA	NA	NA	*U*	*1*	0.156	*U*	*1*	0.199	*U*	*1*	0.183	*U*	*1*	0.152	*U*	*1*	0.241	*U*	*1*
NEtFOSE	NA	NA	*U*	*1*	1.56	*U*	*1*	1.99	*U*	*1*	1.83	*U*	*1*	1.52	*U*	*1*	2.41	*U*	*1*
NFDHA	NA	NA	*U*	*1*	0.312	*U*	*1*	0.398	*U*	*1*	0.367	*U*	*1*	0.303	*U*	*1*	0.482	*U*	*1*
NMeFOSA	NA	NA	*U*	*1*	0.156	*U*	*1*	0.199	*U*	*1*	0.183	*U*	*1*	0.152	*U*	*1*	0.241	*U*	*1*
NMeFOSAA	NA	NA	*U*	*1*	0.156	*U*	*1*	0.199	*U*	*1*	0.183	*U*	*1*	0.152	*U*	*1*	0.241	*U*	*1*
NMeFOSE	NA	NA	*U*	*1*	1.56	*U*	*1*	1.99	*U*	*1*	1.83	*U*	*1*	1.52	*U*	*1*	2.41	*U*	*1*
Perfluoro-1-decanesulfonic acid (PFDS)	NA	NA	*U*	*1*	0.156	*U*	*1*	0.199	*U*	*1*	0.183	*U*	*1*	0.152	*U*	*1*	0.241	*U*	*1*
Perfluoro-1-heptanesulfonic acid (PFHpS)	NA	NA	*U*	*1*	0.156	*U*	*1*	0.199	*U*	*1*	0.183	*U*	*1*	0.152	*U*	*1*	0.241	*U*	*1*
Perfluoro-1-octanesulfonamide (FOSA)	NA	NA	*U*	*1*	0.156	*U*	*1*	0.199	*U*	*1*	0.183	*U*	*1*	0.152	*U*	*1*	0.241	*U*	*1*
Perfluorobutanesulfonic acid (PFBS)	NA	NA	*U*	*1*	0.156	*U*	*1*	0.199	*U*	*1*	0.183	*U*	*1*	0.152	*U*	*1*	0.241	*U*	*1*
Perfluorodecanoic acid (PFDA)	NA	NA	*U*	*1*	0.156	*U*	*1*	0.29		*1*	0.183	*U*	*1*	0.152	*U*	*1*	0.327		*1*
Perfluorododecane Sulfonic Acid (PFDoDS)	NA	NA	*U*	*1*	0.156	*U*	*1*	0.199	*U*	*1*	0.183	*U*	*1*	0.152	*U*	*1*	0.241	*U*	*1*
Perfluorododecanoic acid (PFDoA)	NA	NA	*U*	*1*	0.156	*U*	*1*	0.148	*J*	*1*	0.183	*U*	*1*	0.152	*U*	*1*	0.185	*J*	*1*
Perfluoroheptanoic acid (PFHpA)	NA	NA	*U*	*1*	0.156	*U*	*1*	0.189	*J*	*1*	0.183	*U*	*1*	0.152	*U*	*1*	0.144	*J*	*1*
Perfluorohexanesulfonic Acid (PFHxS)	NA	NA	*U*	*1*	0.156	*U*	*1*	0.199	*U*	*1*	0.0107	*J*	*1*	0.152	*U*	*1*	0.241	*U*	*1*
Perfluorohexanoic acid (PFHxA)	NA	NA	*U*	*1*	0.156	*U*	*1*	0.174	*J*	*1*	0.183	*U*	*1*	0.152	*U*	*1*	0.123	*J*	*1*
Perfluoro-n-butanoic acid (PFBA)	NA	NA	*U*	*1*	0.625	*U*	*1*	0.454	*J*	*1*	0.733	*U*	*1*	0.606	*U*	*1*	0.313	*J*	*1*
Perfluorononanesulfonic Acid (PFNS)	NA	NA	*U*	*1*	0.156	*U*	*1*	0.199	*U*	*1*	0.183	*U*	*1*	0.152	*U*	*1*	0.241	*U*	*1*
Perfluorononanoic acid (PFNA)	NA	NA	*U*	*1*	0.156	*U*	*1*	0.334		*1*	0.183	*U*	*1*	0.152	*U*	*1*	0.468		*1*
Perfluorooctanesulfonic Acid (PFOS)	1	44	*J*	*1*	0.156	*U*	*1*	1.2		*1*	0.0962	*J*	*1*	0.152	*U*	*1*	1.16		*1*
Perfluorooctanoic acid (PFOA)	0.8	33	*J*	*1*	0.156	*U*	*1*	0.708		*1*	0.0833	*J*	*1*	0.152	*U*	*1*	0.398		*1*
Perfluoropentanesulfonic Acid (PFPeS)	NA	NA	*U*	*1*	0.156	*U*	*1*	0.199	*U*	*1*	0.183	*U*	*1*	0.152	*U*	*1*	0.241	*U*	*1*
Perfluoropentanoic acid (PFPeA)	NA	NA	*U*	*1*	0.312	*U*	*1*	0.243	*J*	*1*	0.367	*U*	*1*	0.303	*U*	*1*	0.168	*J*	*1*
Perfluorotetradecanoic acid (PFTA)	NA	NA	*U*	*1*	0.156	*U*	*1*	0.199	*U*	*1*	0.183	*U*	*1*	0.152	*U*	*1*	0.241	*U*	*1*
Perfluorotridecanoic acid (PFTrDA)	NA	NA	*U*	*1*	0.156	*U*	*1*	0.136	*J*	*1*	0.183	*U*	*1*	0.152	*U*	*1*	0.171	*J*	*1*
Perfluoroundecanoic acid (PFUnA)	NA	NA	*U*	*1*	0.156	*U*	*1*	0.327		*1*	0.183	*U*	*1*	0.152	*U*	*1*	0.418		*1*
PFEESA	NA	NA	*U*	*1*	0.312	*U*	*1*	0.398	*U*	*1*	0.367	*U*	*1*	0.303	*U*	*1*	0.482	*U*	*1*
PFMBA	NA	NA	*U*	*1*	0.312	*U*	*1*	0.398	*U*	*1*	0.367	*U*	*1*	0.303	*U*	*1*	0.482	*U*	*1*
PFMPA	NA	NA	*U*	*1*	0.312	*U*	*1*	0.398	*U*	*1*	0.367	*U*	*1*	0.303	*U*	*1*	0.482	*U*	*1*

value ≤ POG SCO

value > POG Guidance Value/SCO

Q = Laboratory Qualifier DL = Dilution NA = not available (addtional flags: B-in blank, D-diluted, E-estimated, J-approximate)

Table 6: PFAS in Soil

The Green, Newburgh, NY
BCP ID: C336099

GALLAGHER BASSETT | TECHNICAL SERVICES

All data in µg/Kg (ppb)		Sample	2SB-12 4-6			2SB-12 8-10			2SB-13 SURF			2SB-13 0-5			2SB-13 8-10			2SB-1
U= Not Detected ≥ value		Date	2025-10-02			2025-10-02			2025-10-02			2025-10-02			2025-10-02			2025
PFAS (1633)	**POG**	**RRU**	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result
11Cl-PF3OUdS	NA	NA	0.782	*U*	*1*	0.776	*U*	*1*	0.789	*U*	*1*	0.777	*U*	*1*	0.669	*U*	*1*	0.788
1H,1H,2H,2H-Perfluorodecanesulfonic acid	NA	NA	0.782	*U*	*1*	0.776	*U*	*1*	0.789	*U*	*1*	0.777	*U*	*1*	0.669	*U*	*1*	0.788
1H,1H,2H,2H-Perfluorohexanesulfonic Acid	NA	NA	0.782	*U*	*1*	0.776	*U*	*1*	0.789	*U*	*1*	0.777	*U*	*1*	0.669	*U*	*1*	0.788
1H,1H,2H,2H-Perfluorooctanesulfonic acid	NA	NA	0.782	*U*	*1*	0.776	*U*	*1*	0.126	*J*	*1*	0.777	*U*	*1*	0.669	*U*	*1*	0.788
3:3FTCA	NA	NA	0.977	*U*	*1*	0.97	*U*	*1*	0.987	*U*	*1*	0.971	*U*	*1*	0.836	*U*	*1*	0.985
5:3FTCA	NA	NA	4.89	*U*	*1*	4.85	*U*	*1*	4.93	*U*	*1*	4.85	*U*	*1*	4.18	*U*	*1*	4.92
7:3FTCA	NA	NA	4.89	*U*	*1*	4.85	*U*	*1*	4.93	*U*	*1*	4.85	*U*	*1*	4.18	*U*	*1*	4.92
9Cl-PF3ONS	NA	NA	0.782	*U*	*1*	0.776	*U*	*1*	0.789	*U*	*1*	0.777	*U*	*1*	0.669	*U*	*1*	0.788
ADONA	NA	NA	0.782	*U*	*1*	0.776	*U*	*1*	0.789	*U*	*1*	0.777	*U*	*1*	0.669	*U*	*1*	0.788
HFPO-DA	NA	NA	0.782	*U*	*1*	0.776	*U*	*1*	0.789	*U*	*1*	0.777	*U*	*1*	0.669	*U*	*1*	0.788
NEtFOSA	NA	NA	0.195	*U*	*1*	0.194	*U*	*1*	0.197	*U*	*1*	0.194	*U*	*1*	0.167	*U*	*1*	0.197
NEtFOSAA	NA	NA	0.195	*U*	*1*	0.194	*U*	*1*	0.197	*U*	*1*	0.194	*U*	*1*	0.167	*U*	*1*	0.197
NEtFOSE	NA	NA	1.95	*U*	*1*	1.94	*U*	*1*	1.97	*U*	*1*	1.94	*U*	*1*	1.67	*U*	*1*	1.97
NFDHA	NA	NA	0.391	*U*	*1*	0.388	*U*	*1*	0.395	*U*	*1*	0.388	*U*	*1*	0.334	*U*	*1*	0.394
NMeFOSA	NA	NA	0.195	*U*	*1*	0.194	*U*	*1*	0.197	*U*	*1*	0.194	*U*	*1*	0.167	*U*	*1*	0.197
NMeFOSAA	NA	NA	0.195	*U*	*1*	0.194	*U*	*1*	0.197	*U*	*1*	0.194	*U*	*1*	0.167	*U*	*1*	0.197
NMeFOSE	NA	NA	1.95	*U*	*1*	1.94	*U*	*1*	1.97	*U*	*1*	1.94	*U*	*1*	1.67	*U*	*1*	1.97
Perfluoro-1-decanesulfonic acid (PFDS)	NA	NA	0.195	*U*	*1*	0.194	*U*	*1*	0.197	*U*	*1*	0.194	*U*	*1*	0.167	*U*	*1*	0.197
Perfluoro-1-heptanesulfonic acid (PFHpS)	NA	NA	0.195	*U*	*1*	0.194	*U*	*1*	0.197	*U*	*1*	0.194	*U*	*1*	0.167	*U*	*1*	0.197
Perfluoro-1-octanesulfonamide (FOSA)	NA	NA	0.195	*U*	*1*	0.194	*U*	*1*	0.197	*U*	*1*	0.194	*U*	*1*	0.167	*U*	*1*	0.197
Perfluorobutanesulfonic acid (PFBS)	NA	NA	0.195	*U*	*1*	0.194	*U*	*1*	0.197	*U*	*1*	0.194	*U*	*1*	0.167	*U*	*1*	0.197
Perfluorodecanoic acid (PFDA)	NA	NA	0.195	*U*	*1*	0.194	*U*	*1*	0.232		*1*	0.194	*U*	*1*	0.167	*U*	*1*	0.344
Perfluorododecane Sulfonic Acid (PFDoDS)	NA	NA	0.195	*U*	*1*	0.194	*U*	*1*	0.197	*U*	*1*	0.194	*U*	*1*	0.167	*U*	*1*	0.197
Perfluorododecanoic acid (PFDoA)	NA	NA	0.195	*U*	*1*	0.194	*U*	*1*	0.112	*J*	*1*	0.194	*U*	*1*	0.167	*U*	*1*	0.167
Perfluoroheptanoic acid (PFHpA)	NA	NA	0.0492	*J*	*1*	0.194	*U*	*1*	0.154	*J*	*1*	0.0519	*J*	*1*	0.167	*U*	*1*	0.13
Perfluorohexanesulfonic Acid (PFHxS)	NA	NA	0.195	*U*	*1*	0.194	*U*	*1*	0.197	*U*	*1*	0.194	*U*	*1*	0.167	*U*	*1*	0.197
Perfluorohexanoic acid (PFHxA)	NA	NA	0.0502	*J*	*1*	0.194	*U*	*1*	0.154	*J*	*1*	0.0616	*J*	*1*	0.167	*U*	*1*	0.113
Perfluoro-n-butanoic acid (PFBA)	NA	NA	0.782	*U*	*1*	0.776	*U*	*1*	0.356	*J*	*1*	0.777	*U*	*1*	0.669	*U*	*1*	0.242
Perfluorononanesulfonic Acid (PFNS)	NA	NA	0.195	*U*	*1*	0.194	*U*	*1*	0.197	*U*	*1*	0.194	*U*	*1*	0.167	*U*	*1*	0.197
Perfluorononanoic acid (PFNA)	NA	NA	0.195	*U*	*1*	0.194	*U*	*1*	0.364		*1*	0.194	*U*	*1*	0.167	*U*	*1*	0.357
Perfluorooctanesulfonic Acid (PFOS)	1	44	0.32		*1*	0.0841	*J*	*1*	1.68		*1*	0.327		*1*	0.167	*U*	*1*	1.45
Perfluorooctanoic acid (PFOA)	0.8	33	0.379		*1*	0.194	*U*	*1*	0.924		*1*	0.436		*1*	0.167	*U*	*1*	0.588
Perfluoropentanesulfonic Acid (PFPeS)	NA	NA	0.195	*U*	*1*	0.194	*U*	*1*	0.197	*U*	*1*	0.194	*U*	*1*	0.167	*U*	*1*	0.197
Perfluoropentanoic acid (PFPeA)	NA	NA	0.391	*U*	*1*	0.388	*U*	*1*	0.195	*J*	*1*	0.388	*U*	*1*	0.334	*U*	*1*	0.14
Perfluorotetradecanoic acid (PFTA)	NA	NA	0.195	*U*	*1*	0.194	*U*	*1*	0.197	*U*	*1*	0.194	*U*	*1*	0.167	*U*	*1*	0.197
Perfluorotridecanoic acid (PFTrDA)	NA	NA	0.195	*U*	*1*	0.194	*U*	*1*	0.109	*J*	*1*	0.194	*U*	*1*	0.167	*U*	*1*	0.123
Perfluoroundecanoic acid (PFUnA)	NA	NA	0.195	*U*	*1*	0.194	*U*	*1*	0.246		*1*	0.194	*U*	*1*	0.167	*U*	*1*	0.351
PFEESA	NA	NA	0.391	*U*	*1*	0.388	*U*	*1*	0.395	*U*	*1*	0.388	*U*	*1*	0.334	*U*	*1*	0.394
PFMBA	NA	NA	0.391	*U*	*1*	0.388	*U*	*1*	0.395	*U*	*1*	0.388	*U*	*1*	0.334	*U*	*1*	0.394
PFMPA	NA	NA	0.391	*U*	*1*	0.388	*U*	*1*	0.395	*U*	*1*	0.388	*U*	*1*	0.334	*U*	*1*	0.394

value ≤ POG SCO

value > POG Guidance Value/SCO

Q = Laboratory Qualifier DL = Dilution NA = not available (addtional flags: B-in blank, D-diluted, E-estimated, J-approximate)

Table 6: PFAS in Soil

The Green, Newburgh, NY
BCP ID: C336099

GALLAGHER BASSETT | TECHNICAL SERVICES

All data in µg/Kg (ppb)			Sample	4 SURF		2SB-14 0-5			2SB-14 10-12.5			2SB-15 SURF			2SB-15 0-5			DUP-20251003		
U= Not Detected ≥ value			Date	-10-02		2025-10-02			2025-10-02			2025-10-03			2025-10-03			2025-10-03		
PFAS (1633)	**POG**	**RRU**	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL
11Cl-PF3OUdS	NA	NA	*U*	*1*	0.693	*U*	*1*	0.718	*U*	*1*	0.734	*U*	*1*	0.652	*U*	*1*	0.682	*U*	*1*
1H,1H,2H,2H-Perfluorodecanesulfonic acid	NA	NA	*U*	*1*	0.693	*U*	*1*	0.718	*U*	*1*	0.734	*U*	*1*	0.652	*U*	*1*	0.682	*U*	*1*
1H,1H,2H,2H-Perfluorohexanesulfonic Acid	NA	NA	*U*	*1*	0.693	*U*	*1*	0.718	*U*	*1*	0.734	*U*	*1*	0.652	*U*	*1*	0.682	*U*	*1*
1H,1H,2H,2H-Perfluorooctanesulfonic acid	NA	NA	*U*	*1*	0.693	*U*	*1*	0.718	*U*	*1*	0.734	*U*	*1*	0.118	*J*	*1*	0.682	*U*	*1*
3:3FTCA	NA	NA	*U*	*1*	0.866	*U*	*1*	0.898	*U*	*1*	0.917	*U*	*1*	0.815	*U*	*1*	0.852	*U*	*1*
5:3FTCA	NA	NA	*U*	*1*	4.33	*U*	*1*	4.49	*U*	*1*	4.59	*U*	*1*	4.08	*U*	*1*	4.26	*U*	*1*
7:3FTCA	NA	NA	*U*	*1*	4.33	*U*	*1*	4.49	*U*	*1*	4.59	*U*	*1*	4.08	*U*	*1*	4.26	*U*	*1*
9Cl-PF3ONS	NA	NA	*U*	*1*	0.693	*U*	*1*	0.718	*U*	*1*	0.734	*U*	*1*	0.652	*U*	*1*	0.682	*U*	*1*
ADONA	NA	NA	*U*	*1*	0.693	*U*	*1*	0.718	*U*	*1*	0.734	*U*	*1*	0.652	*U*	*1*	0.682	*U*	*1*
HFPO-DA	NA	NA	*U*	*1*	0.693	*U*	*1*	0.718	*U*	*1*	0.734	*U*	*1*	0.652	*U*	*1*	0.682	*U*	*1*
NEtFOSA	NA	NA	*U*	*1*	0.173	*U*	*1*	0.18	*U*	*1*	0.183	*U*	*1*	0.163	*U*	*1*	0.17	*U*	*1*
NEtFOSAA	NA	NA	*U*	*1*	0.173	*U*	*1*	0.18	*U*	*1*	0.183	*U*	*1*	0.163	*U*	*1*	0.17	*U*	*1*
NEtFOSE	NA	NA	*U*	*1*	1.73	*U*	*1*	1.8	*U*	*1*	1.83	*U*	*1*	1.63	*U*	*1*	1.7	*U*	*1*
NFDHA	NA	NA	*U*	*1*	0.346	*U*	*1*	0.359	*U*	*1*	0.367	*U*	*1*	0.326	*U*	*1*	0.341	*U*	*1*
NMeFOSA	NA	NA	*U*	*1*	0.173	*U*	*1*	0.18	*U*	*1*	0.183	*U*	*1*	0.163	*U*	*1*	0.17	*U*	*1*
NMeFOSAA	NA	NA	*U*	*1*	0.173	*U*	*1*	0.18	*U*	*1*	0.183	*U*	*1*	0.163	*U*	*1*	0.17	*U*	*1*
NMeFOSE	NA	NA	*U*	*1*	1.73	*U*	*1*	1.8	*U*	*1*	1.83	*U*	*1*	1.63	*U*	*1*	1.7	*U*	*1*
Perfluoro-1-decanesulfonic acid (PFDS)	NA	NA	*U*	*1*	0.173	*U*	*1*	0.18	*U*	*1*	0.0475	*J*	*1*	0.163	*U*	*1*	0.17	*U*	*1*
Perfluoro-1-heptanesulfonic acid (PFHpS)	NA	NA	*U*	*1*	0.173	*U*	*1*	0.18	*U*	*1*	0.183	*U*	*1*	0.163	*U*	*1*	0.17	*U*	*1*
Perfluoro-1-octanesulfonamide (FOSA)	NA	NA	*U*	*1*	0.173	*U*	*1*	0.18	*U*	*1*	0.183	*U*	*1*	0.163	*U*	*1*	0.17	*U*	*1*
Perfluorobutanesulfonic acid (PFBS)	NA	NA	*U*	*1*	0.173	*U*	*1*	0.18	*U*	*1*	0.183	*U*	*1*	0.163	*U*	*1*	0.17	*U*	*1*
Perfluorodecanoic acid (PFDA)	NA	NA		*1*	0.0576	*J*	*1*	0.18	*U*	*1*	0.313		*1*	0.163	*U*	*1*	0.17	*U*	*1*
Perfluorododecane Sulfonic Acid (PFDoDS)	NA	NA	*U*	*1*	0.173	*U*	*1*	0.18	*U*	*1*	0.183	*U*	*1*	0.163	*U*	*1*	0.17	*U*	*1*
Perfluorododecanoic acid (PFDoA)	NA	NA	*J*	*1*	0.173	*U*	*1*	0.18	*U*	*1*	0.134	*J*	*1*	0.163	*U*	*1*	0.17	*U*	*1*
Perfluoroheptanoic acid (PFHpA)	NA	NA	*J*	*1*	0.0605	*J*	*1*	0.18	*U*	*1*	0.292		*1*	0.0366	*J*	*1*	0.17	*U*	*1*
Perfluorohexanesulfonic Acid (PFHxS)	NA	NA	*U*	*1*	0.173	*U*	*1*	0.18	*U*	*1*	0.183	*U*	*1*	0.163	*U*	*1*	0.17	*U*	*1*
Perfluorohexanoic acid (PFHxA)	NA	NA	*J*	*1*	0.06	*J*	*1*	0.18	*U*	*1*	0.28		*1*	0.163	*U*	*1*	0.17	*U*	*1*
Perfluoro-n-butanoic acid (PFBA)	NA	NA	*J*	*1*	0.693	*U*	*1*	0.718	*U*	*1*	0.733	*J*	*1*	0.652	*U*	*1*	0.682	*U*	*1*
Perfluorononanesulfonic Acid (PFNS)	NA	NA	*U*	*1*	0.173	*U*	*1*	0.18	*U*	*1*	0.183	*U*	*1*	0.163	*U*	*1*	0.17	*U*	*1*
Perfluorononanoic acid (PFNA)	NA	NA		*1*	0.0889	*J*	*1*	0.18	*U*	*1*	0.456		*1*	0.163	*U*	*1*	0.17	*U*	*1*
Perfluorooctanesulfonic Acid (PFOS)	1	44		*1*	0.295		*1*	0.18	*U*	*1*	1.92		*1*	0.16	*J*	*1*	0.0984	*J*	*1*
Perfluorooctanoic acid (PFOA)	0.8	33		*1*	0.319		*1*	0.18	*U*	*1*	1.12		*1*	0.18		*1*	0.0981	*J*	*1*
Perfluoropentanesulfonic Acid (PFPeS)	NA	NA	*U*	*1*	0.173	*U*	*1*	0.18	*U*	*1*	0.183	*U*	*1*	0.163	*U*	*1*	0.17	*U*	*1*
Perfluoropentanoic acid (PFPeA)	NA	NA	*J*	*1*	0.0734	*J*	*1*	0.359	*U*	*1*	0.316	*J*	*1*	0.326	*U*	*1*	0.341	*U*	*1*
Perfluorotetradecanoic acid (PFTA)	NA	NA	*U*	*1*	0.173	*U*	*1*	0.18	*U*	*1*	0.183	*U*	*1*	0.163	*U*	*1*	0.17	*U*	*1*
Perfluorotridecanoic acid (PFTrDA)	NA	NA	*J*	*1*	0.173	*U*	*1*	0.18	*U*	*1*	0.108	*J*	*1*	0.163	*U*	*1*	0.17	*U*	*1*
Perfluoroundecanoic acid (PFUnA)	NA	NA		*1*	0.0502	*J*	*1*	0.18	*U*	*1*	0.31		*1*	0.163	*U*	*1*	0.17	*U*	*1*
PFEESA	NA	NA	*U*	*1*	0.346	*U*	*1*	0.359	*U*	*1*	0.367	*U*	*1*	0.326	*U*	*1*	0.341	*U*	*1*
PFMBA	NA	NA	*U*	*1*	0.346	*U*	*1*	0.359	*U*	*1*	0.367	*U*	*1*	0.326	*U*	*1*	0.341	*U*	*1*
PFMPA	NA	NA	*U*	*1*	0.346	*U*	*1*	0.359	*U*	*1*	0.367	*U*	*1*	0.326	*U*	*1*	0.341	*U*	*1*

value ≤ POG SCO

value > POG Guidance Value/SCO

Q = Laboratory Qualifier DL = Dilution NA = not available (addtional flags: B-in blank, D-diluted, E-estimated, J-approximate)

Table 6: PFAS in Soil

The Green, Newburgh, NY
BCP ID: C336099

GALLAGHER BASSETT | TECHNICAL SERVICES

All data in µg/Kg (ppb)			Sample	2SB-15 10-12			2SB-16 SURF			2SB-16 10-12			2SB-17 SURF			2SB-17 0-5			2SB-1
U= Not Detected ≥ value			Date	2025-10-03			2025-10-03			2025-10-03			2025-10-03			2025-10-03			2025
PFAS (1633)	**POG**	**RRU**		Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result
11Cl-PF3OUdS	NA	NA		0.662	U	1	0.721	U	1	0.653	U	1	0.816	U	1	0.714	U	1	0.676
1H,1H,2H,2H-Perfluorodecanesulfonic acid	NA	NA		0.662	U	1	0.721	U	1	0.653	U	1	0.816	U	1	0.714	U	1	0.676
1H,1H,2H,2H-Perfluorohexanesulfonic Acid	NA	NA		0.662	U	1	0.721	U	1	0.653	U	1	0.816	U	1	0.714	U	1	0.676
1H,1H,2H,2H-Perfluorooctanesulfonic acid	NA	NA		0.662	U	1	0.721	U	1	0.653	U	1	0.816	U	1	0.714	U	1	0.676
3:3FTCA	NA	NA		0.827	U	1	0.901	U	1	0.816	U	1	1.02	U	1	0.892	U	1	0.845
5:3FTCA	NA	NA		4.14	U	1	4.51	U	1	4.08	U	1	5.1	U	1	4.46	U	1	4.22
7:3FTCA	NA	NA		4.14	U	1	4.51	U	1	4.08	U	1	5.1	U	1	4.46	U	1	4.22
9Cl-PF3ONS	NA	NA		0.662	U	1	0.721	U	1	0.653	U	1	0.816	U	1	0.714	U	1	0.676
ADONA	NA	NA		0.662	U	1	0.721	U	1	0.653	U	1	0.816	U	1	0.714	U	1	0.676
HFPO-DA	NA	NA		0.662	U	1	0.721	U	1	0.653	U	1	0.816	U	1	0.714	U	1	0.676
NEtFOSA	NA	NA		0.165	U	1	0.18	U	1	0.163	U	1	0.204	U	1	0.178	U	1	0.169
NEtFOSAA	NA	NA		0.165	U	1	0.2		1	0.163	U	1	0.204	U	1	0.178	U	1	0.169
NEtFOSE	NA	NA		1.65	U	1	1.8	U	1	1.63	U	1	2.04	U	1	1.78	U	1	1.69
NFDHA	NA	NA		0.331	U	1	0.36	U	1	0.326	U	1	0.408	U	1	0.357	U	1	0.338
NMeFOSA	NA	NA		0.165	U	1	0.18	U	1	0.163	U	1	0.204	U	1	0.178	U	1	0.169
NMeFOSAA	NA	NA		0.165	U	1	0.18	U	1	0.163	U	1	0.204	U	1	0.178	U	1	0.169
NMeFOSE	NA	NA		1.65	U	1	1.8	U	1	1.63	U	1	2.04	U	1	1.78	U	1	1.69
Perfluoro-1-decanesulfonic acid (PFDS)	NA	NA		0.165	U	1	0.105	J	1	0.163	U	1	0.204	U	1	0.178	U	1	0.169
Perfluoro-1-heptanesulfonic acid (PFHpS)	NA	NA		0.165	U	1	0.18	U	1	0.163	U	1	0.204	U	1	0.178	U	1	0.169
Perfluoro-1-octanesulfonamide (FOSA)	NA	NA		0.165	U	1	0.18	U	1	0.163	U	1	0.204	U	1	0.178	U	1	0.169
Perfluorobutanesulfonic acid (PFBS)	NA	NA		0.165	U	1	0.18	U	1	0.163	U	1	0.204	U	1	0.178	U	1	0.169
Perfluorodecanoic acid (PFDA)	NA	NA		0.165	U	1	0.72		1	0.163	U	1	0.204	U	1	0.178	U	1	0.169
Perfluorododecane Sulfonic Acid (PFDoDS)	NA	NA		0.165	U	1	0.18	U	1	0.163	U	1	0.204	U	1	0.178	U	1	0.169
Perfluorododecanoic acid (PFDoA)	NA	NA		0.165	U	1	0.287		1	0.163	U	1	0.204	U	1	0.178	U	1	0.169
Perfluoroheptanoic acid (PFHpA)	NA	NA		0.165	U	1	0.135	J	1	0.163	U	1	0.204	U	1	0.0622	J	1	0.169
Perfluorohexanesulfonic Acid (PFHxS)	NA	NA		0.165	U	1	0.18	U	1	0.163	U	1	0.204	U	1	0.178	U	1	0.169
Perfluorohexanoic acid (PFHxA)	NA	NA		0.165	U	1	0.135	J	1	0.163	U	1	0.204	U	1	0.0745	J	1	0.169
Perfluoro-n-butanoic acid (PFBA)	NA	NA		0.662	U	1	0.721	U	1	0.653	U	1	0.816	U	1	0.714	U	1	0.676
Perfluorononanesulfonic Acid (PFNS)	NA	NA		0.165	U	1	0.18	U	1	0.163	U	1	0.204	U	1	0.178	U	1	0.169
Perfluorononanoic acid (PFNA)	NA	NA		0.165	U	1	0.386		1	0.03	J	1	0.204	U	1	0.178	U	1	0.169
Perfluorooctanesulfonic Acid (PFOS)	1	44		0.165	U	1	3.05		1	0.197		1	0.306		1	0.212		1	0.103
Perfluorooctanoic acid (PFOA)	0.8	33		0.165	U	1	0.683		1	0.0798	J	1	0.0846	J	1	0.212		1	0.0477
Perfluoropentanesulfonic Acid (PFPeS)	NA	NA		0.165	U	1	0.18	U	1	0.163	U	1	0.204	U	1	0.178	U	1	0.169
Perfluoropentanoic acid (PFPeA)	NA	NA		0.331	U	1	0.148	J	1	0.326	U	1	0.408	U	1	0.357	U	1	0.338
Perfluorotetradecanoic acid (PFTA)	NA	NA		0.165	U	1	0.18	U	1	0.163	U	1	0.204	U	1	0.178	U	1	0.169
Perfluorotridecanoic acid (PFTrDA)	NA	NA		0.165	U	1	0.0787	J	1	0.163	U	1	0.204	U	1	0.178	U	1	0.169
Perfluoroundecanoic acid (PFUnA)	NA	NA		0.165	U	1	0.31		1	0.163	U	1	0.204	U	1	0.178	U	1	0.169
PFEESA	NA	NA		0.331	U	1	0.36	U	1	0.326	U	1	0.408	U	1	0.357	U	1	0.338
PFMBA	NA	NA		0.331	U	1	0.36	U	1	0.326	U	1	0.408	U	1	0.357	U	1	0.338
PFMPA	NA	NA		0.331	U	1	0.36	U	1	0.326	U	1	0.408	U	1	0.357	U	1	0.338

value ≤ POG SCO

value > POG Guidance Value/SCO

Q = Laboratory Qualifier DL = Dilution NA = not available (addtional flags: B-in blank, D-diluted, E-estimated, J-approximate)

Table 6: PFAS in Soil

The Green, Newburgh, NY
BCP ID: C336099

GALLAGHER BASSETT | TECHNICAL SERVICES

All data in µg/Kg (ppb)			Sample	7 10-12		2SB-18 SURF			2SB-18 10-15			2SB-19 SURF			2SB-19 0-5			2SB-19 10-13		
U= Not Detected ≥ value			Date	-10-03		2025-10-03			2025-10-03			2025-10-03			2025-10-03			2025-10-03		
PFAS (1633)	**POG**	**RRU**	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL
11Cl-PF3OUdS	NA	NA	*U*	*1*	0.663	*U*	*1*	0.709	*U*	*1*	0.784	*U*	*1*	0.703	*U*	*1*	0.76	*U*	*1*
1H,1H,2H,2H-Perfluorodecanesulfonic acid	NA	NA	*U*	*1*	0.663	*U*	*1*	0.709	*U*	*1*	0.784	*U*	*1*	0.703	*U*	*1*	0.76	*U*	*1*
1H,1H,2H,2H-Perfluorohexanesulfonic Acid	NA	NA	*U*	*1*	0.663	*U*	*1*	0.709	*U*	*1*	0.784	*U*	*1*	0.703	*U*	*1*	0.76	*U*	*1*
1H,1H,2H,2H-Perfluorooctanesulfonic acid	NA	NA	*U*	*1*	0.663	*U*	*1*	0.709	*U*	*1*	0.784	*U*	*1*	0.703	*U*	*1*	0.76	*U*	*1*
3:3FTCA	NA	NA	*U*	*1*	0.829	*U*	*1*	0.886	*U*	*1*	0.98	*U*	*1*	0.879	*U*	*1*	0.95	*U*	*1*
5:3FTCA	NA	NA	*U*	*1*	4.15	*U*	*1*	4.43	*U*	*1*	4.9	*U*	*1*	4.39	*U*	*1*	4.75	*U*	*1*
7:3FTCA	NA	NA	*U*	*1*	4.15	*U*	*1*	4.43	*U*	*1*	4.9	*U*	*1*	4.39	*U*	*1*	4.75	*U*	*1*
9Cl-PF3ONS	NA	NA	*U*	*1*	0.663	*U*	*1*	0.709	*U*	*1*	0.784	*U*	*1*	0.703	*U*	*1*	0.76	*U*	*1*
ADONA	NA	NA	*U*	*1*	0.663	*U*	*1*	0.709	*U*	*1*	0.784	*U*	*1*	0.703	*U*	*1*	0.76	*U*	*1*
HFPO-DA	NA	NA	*U*	*1*	0.663	*U*	*1*	0.709	*U*	*1*	0.784	*U*	*1*	0.703	*U*	*1*	0.76	*U*	*1*
NEtFOSA	NA	NA	*U*	*1*	0.166	*U*	*1*	0.177	*U*	*1*	0.196	*U*	*1*	0.176	*U*	*1*	0.19	*U*	*1*
NEtFOSAA	NA	NA	*U*	*1*	0.166	*U*	*1*	0.177	*U*	*1*	0.196	*U*	*1*	0.176	*U*	*1*	0.19	*U*	*1*
NEtFOSE	NA	NA	*U*	*1*	1.66	*U*	*1*	1.77	*U*	*1*	1.96	*U*	*1*	1.76	*U*	*1*	1.9	*U*	*1*
NFDHA	NA	NA	*U*	*1*	0.332	*U*	*1*	0.354	*U*	*1*	0.392	*U*	*1*	0.352	*U*	*1*	0.38	*U*	*1*
NMeFOSA	NA	NA	*U*	*1*	0.166	*U*	*1*	0.177	*U*	*1*	0.196	*U*	*1*	0.176	*U*	*1*	0.19	*U*	*1*
NMeFOSAA	NA	NA	*U*	*1*	0.166	*U*	*1*	0.177	*U*	*1*	0.196	*U*	*1*	0.176	*U*	*1*	0.19	*U*	*1*
NMeFOSE	NA	NA	*U*	*1*	1.66	*U*	*1*	1.77	*U*	*1*	1.96	*U*	*1*	1.76	*U*	*1*	1.9	*U*	*1*
Perfluoro-1-decanesulfonic acid (PFDS)	NA	NA	*U*	*1*	0.0392	*J*	*1*	0.177	*U*	*1*	0.0713	*J*	*1*	0.176	*U*	*1*	0.19	*U*	*1*
Perfluoro-1-heptanesulfonic acid (PFHpS)	NA	NA	*U*	*1*	0.166	*U*	*1*	0.177	*U*	*1*	0.196	*U*	*1*	0.176	*U*	*1*	0.19	*U*	*1*
Perfluoro-1-octanesulfonamide (FOSA)	NA	NA	*U*	*1*	0.166	*U*	*1*	0.177	*U*	*1*	0.196	*U*	*1*	0.176	*U*	*1*	0.19	*U*	*1*
Perfluorobutanesulfonic acid (PFBS)	NA	NA	*U*	*1*	0.166	*U*	*1*	0.177	*U*	*1*	0.196	*U*	*1*	0.176	*U*	*1*	0.19	*U*	*1*
Perfluorodecanoic acid (PFDA)	NA	NA	*U*	*1*	0.135	*J*	*1*	0.177	*U*	*1*	0.342		*1*	0.046	*J*	*1*	0.19	*U*	*1*
Perfluorododecane Sulfonic Acid (PFDoDS)	NA	NA	*U*	*1*	0.166	*U*	*1*	0.177	*U*	*1*	0.196	*U*	*1*	0.176	*U*	*1*	0.19	*U*	*1*
Perfluorododecanoic acid (PFDoA)	NA	NA	*U*	*1*	0.166	*U*	*1*	0.177	*U*	*1*	0.143	*J*	*1*	0.176	*U*	*1*	0.19	*U*	*1*
Perfluoroheptanoic acid (PFHpA)	NA	NA	*U*	*1*	0.0692	*J*	*1*	0.177	*U*	*1*	0.169	*J*	*1*	0.106	*J*	*1*	0.0514	*J*	*1*
Perfluorohexanesulfonic Acid (PFHxS)	NA	NA	*U*	*1*	0.166	*U*	*1*	0.177	*U*	*1*	0.196	*U*	*1*	0.176	*U*	*1*	0.19	*U*	*1*
Perfluorohexanoic acid (PFHxA)	NA	NA	*U*	*1*	0.0688	*J*	*1*	0.177	*U*	*1*	0.131	*J*	*1*	0.109	*J*	*1*	0.0519	*J*	*1*
Perfluoro-n-butanoic acid (PFBA)	NA	NA	*U*	*1*	0.663	*U*	*1*	0.709	*U*	*1*	0.784	*U*	*1*	0.703	*U*	*1*	0.76	*U*	*1*
Perfluorononanesulfonic Acid (PFNS)	NA	NA	*U*	*1*	0.166	*U*	*1*	0.177	*U*	*1*	0.196	*U*	*1*	0.176	*U*	*1*	0.19	*U*	*1*
Perfluorononanoic acid (PFNA)	NA	NA	*U*	*1*	0.132	*J*	*1*	0.177	*U*	*1*	0.374		*1*	0.132	*J*	*1*	0.0781	*J*	*1*
Perfluorooctanesulfonic Acid (PFOS)	1	44	*J*	*1*	1.43		*1*	0.177	*U*	*1*	4.2		*1*	0.982		*1*	0.767		*1*
Perfluorooctanoic acid (PFOA)	0.8	33	*J*	*1*	0.258		*1*	0.177	*U*	*1*	1.01		*1*	0.548		*1*	0.284		*1*
Perfluoropentanesulfonic Acid (PFPeS)	NA	NA	*U*	*1*	0.166	*U*	*1*	0.177	*U*	*1*	0.196	*U*	*1*	0.176	*U*	*1*	0.19	*U*	*1*
Perfluoropentanoic acid (PFPeA)	NA	NA	*U*	*1*	0.0913	*J*	*1*	0.354	*U*	*1*	0.149	*J*	*1*	0.118	*J*	*1*	0.38	*U*	*1*
Perfluorotetradecanoic acid (PFTA)	NA	NA	*U*	*1*	0.166	*U*	*1*	0.177	*U*	*1*	0.196	*U*	*1*	0.176	*U*	*1*	0.19	*U*	*1*
Perfluorotridecanoic acid (PFTrDA)	NA	NA	*U*	*1*	0.166	*U*	*1*	0.177	*U*	*1*	0.0742	*J*	*1*	0.0529	*J*	*1*	0.19	*U*	*1*
Perfluoroundecanoic acid (PFUnA)	NA	NA	*U*	*1*	0.108	*J*	*1*	0.177	*U*	*1*	0.238		*1*	0.176	*U*	*1*	0.19	*U*	*1*
PFEESA	NA	NA	*U*	*1*	0.332	*U*	*1*	0.354	*U*	*1*	0.392	*U*	*1*	0.352	*U*	*1*	0.38	*U*	*1*
PFMBA	NA	NA	*U*	*1*	0.332	*U*	*1*	0.354	*U*	*1*	0.392	*U*	*1*	0.352	*U*	*1*	0.38	*U*	*1*
PFMPA	NA	NA	*U*	*1*	0.332	*U*	*1*	0.354	*U*	*1*	0.392	*U*	*1*	0.352	*U*	*1*	0.38	*U*	*1*

value ≤ POG SCO

value > POG Guidance Value/SCO

Q = Laboratory Qualifier DL = Dilution NA = not available (addtional flags: B-in blank, D-diluted, E-estimated, J-approximate)

Table 6: PFAS in Soil

The Green, Newburgh, NY
BCP ID: C336099

GALLAGHER BASSETT | TECHNICAL SERVICES

All data in µg/Kg (ppb)			Sample	DUP2-20251003			2SB-20 SURF			2SB-20 0-5			2SB-20 5-8			2SB-21 Surf			2SB
U= Not Detected ≥ value			Date	2025-10-03			2025-10-03			2025-10-03			2025-10-03			2026-03-06			2026
PFAS (1633)	**POG**	**RRU**		Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result
11Cl-PF3OUdS	NA	NA		0.65	U	1	0.771	U	1	0.723	U	1	0.674	U	1	0.828	U	1	0.725
1H,1H,2H,2H-Perfluorodecanesulfonic acid	NA	NA		0.65	U	1	0.771	U	1	0.723	U	1	0.674	U	1	0.828	U	1	0.725
1H,1H,2H,2H-Perfluorohexanesulfonic Acid	NA	NA		0.65	U	1	0.771	U	1	0.723	U	1	0.674	U	1	0.828	U	1	0.725
1H,1H,2H,2H-Perfluorooctanesulfonic acid	NA	NA		0.65	U	1	0.771	U	1	0.723	U	1	0.674	U	1	0.828	U	1	0.725
3:3FTCA	NA	NA		0.812	U	1	0.964	U	1	0.904	U	1	0.842	U	1	1.04	U	1	0.906
5:3FTCA	NA	NA		4.06	U	1	4.82	U	1	4.52	U	1	4.21	U	1	5.18	U	1	4.53
7:3FTCA	NA	NA		4.06	U	1	4.82	U	1	4.52	U	1	4.21	U	1	5.18	U	1	4.53
9Cl-PF3ONS	NA	NA		0.65	U	1	0.771	U	1	0.723	U	1	0.674	U	1	0.828	U	1	0.725
ADONA	NA	NA		0.65	U	1	0.771	U	1	0.723	U	1	0.674	U	1	0.828	U	1	0.725
HFPO-DA	NA	NA		0.65	U	1	0.771	U	1	0.723	U	1	0.674	U	1	0.828	U	1	0.725
NEtFOSA	NA	NA		0.162	U	1	0.193	U	1	0.181	U	1	0.168	U	1	0.207	U	1	0.181
NEtFOSAA	NA	NA		0.162	U	1	0.193	U	1	0.181	U	1	0.168	U	1	0.146	J	1	0.181
NEtFOSE	NA	NA		1.62	U	1	1.93	U	1	1.81	U	1	1.68	U	1	2.07	U	1	1.81
NFDHA	NA	NA		0.325	U	1	0.386	U	1	0.362	U	1	0.337	U	1	0.414	U	1	0.362
NMeFOSA	NA	NA		0.162	U	1	0.193	U	1	0.181	U	1	0.168	U	1	0.207	U	1	0.181
NMeFOSAA	NA	NA		0.162	U	1	0.193	U	1	0.181	U	1	0.168	U	1	0.207	U	1	0.181
NMeFOSE	NA	NA		1.62	U	1	1.93	U	1	1.81	U	1	1.68	U	1	2.07	U	1	1.81
Perfluoro-1-decanesulfonic acid (PFDS)	NA	NA		0.162	U	1	0.084	J	1	0.181	U	1	0.168	U	1	0.313		1	0.181
Perfluoro-1-heptanesulfonic acid (PFHpS)	NA	NA		0.162	U	1	0.193	U	1	0.181	U	1	0.168	U	1	0.207	U	1	0.181
Perfluoro-1-octanesulfonamide (FOSA)	NA	NA		0.162	U	1	0.193	U	1	0.181	U	1	0.168	U	1	0.207	U	1	0.181
Perfluorobutanesulfonic acid (PFBS)	NA	NA		0.162	U	1	0.193	U	1	0.181	U	1	0.168	U	1	0.207	U	1	0.181
Perfluorodecanoic acid (PFDA)	NA	NA		0.162	U	1	0.293		1	0.181	U	1	0.168	U	1	0.517		1	0.053
Perfluorododecane Sulfonic Acid (PFDoDS)	NA	NA		0.162	U	1	0.193	U	1	0.181	U	1	0.168	U	1	0.207	U	1	0.181
Perfluorododecanoic acid (PFDoA)	NA	NA		0.162	U	1	0.122	J	1	0.181	U	1	0.168	U	1	0.312		1	0.181
Perfluoroheptanoic acid (PFHpA)	NA	NA		0.162	U	1	0.157	J	1	0.0984	J	1	0.168	U	1	0.173	J	1	0.087
Perfluorohexanesulfonic Acid (PFHxS)	NA	NA		0.162	U	1	0.193	U	1	0.181	U	1	0.168	U	1	0.0443	J	1	0.181
Perfluorohexanoic acid (PFHxA)	NA	NA		0.162	U	1	0.134	J	1	0.119	J	1	0.168	U	1	0.253		1	0.114
Perfluoro-n-butanoic acid (PFBA)	NA	NA		0.65	U	1	0.204	J	1	0.723	U	1	0.674	U	1	0.215	J	1	0.725
Perfluorononanesulfonic Acid (PFNS)	NA	NA		0.162	U	1	0.193	U	1	0.181	U	1	0.168	U	1	0.207	U	1	0.181
Perfluorononanoic acid (PFNA)	NA	NA		0.0325	J	1	0.304		1	0.0466	J	1	0.168	U	1	0.34		1	0.0885
Perfluorooctanesulfonic Acid (PFOS)	1	44		0.309		1	2.84		1	0.671		1	0.155	J	1	4.56		1	1.72
Perfluorooctanoic acid (PFOA)	0.8	33		0.113	J	1	0.677		1	0.641		1	0.0589	J	1	0.615		1	0.46
Perfluoropentanesulfonic Acid (PFPeS)	NA	NA		0.162	U	1	0.193	U	1	0.181	U	1	0.168	U	1	0.207	U	1	0.181
Perfluoropentanoic acid (PFPeA)	NA	NA		0.325	U	1	0.142	J	1	0.106	J	1	0.337	U	1	0.594		1	0.239
Perfluorotetradecanoic acid (PFTA)	NA	NA		0.162	U	1	0.193	U	1	0.181	U	1	0.168	U	1	0.204	J	1	0.181
Perfluorotridecanoic acid (PFTrDA)	NA	NA		0.162	U	1	0.0695	J	1	0.181	U	1	0.168	U	1	0.142	J	1	0.181
Perfluoroundecanoic acid (PFUnA)	NA	NA		0.162	U	1	0.242		1	0.181	U	1	0.168	U	1	0.285		1	0.181
PFEESA	NA	NA		0.325	U	1	0.386	U	1	0.362	U	1	0.337	U	1	0.414	U	1	0.362
PFMBA	NA	NA		0.325	U	1	0.386	U	1	0.362	U	1	0.337	U	1	0.414	U	1	0.362
PFMPA	NA	NA		0.325	U	1	0.386	U	1	0.362	U	1	0.337	U	1	0.414	U	1	0.362

value ≤ POG SCO

value > POG Guidance Value/SCO

Q = Laboratory Qualifier DL = Dilution NA = not available (addtional flags: B-in blank, D-diluted, E-estimated, J-approximate)

Table 6: PFAS in Soil

The Green, Newburgh, NY
BCP ID: C336099

GALLAGHER BASSETT | TECHNICAL SERVICES

All data in µg/Kg (ppb)			Sample -21 0-2		2SB-21 3-5			2SB-21 10-12			2SB-22 Surf			2SB-22 0-2			2SB-22 3-5		
U= Not Detected ≥ value			Date -03-06		2026-03-06			2026-03-06			2026-03-06			2026-03-06			2026-03-06		
PFAS (1633)	**POG**	**RRU**	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL
11Cl-PF3OUdS	NA	NA	*U*	*1*	0.718	*U*	*1*	0.607	*U*	*1*	0.718	*U*	*1*	0.707	*U*	*1*	0.634	*U*	*1*
1H,1H,2H,2H-Perfluorodecanesulfonic acid	NA	NA	*U*	*1*	0.718	*U*	*1*	0.607	*U*	*1*	0.718	*U*	*1*	0.707	*U*	*1*	0.634	*U*	*1*
1H,1H,2H,2H-Perfluorohexanesulfonic Acid	NA	NA	*U*	*1*	0.718	*U*	*1*	0.607	*U*	*1*	0.718	*U*	*1*	0.707	*U*	*1*	0.634	*U*	*1*
1H,1H,2H,2H-Perfluorooctanesulfonic acid	NA	NA	*U*	*1*	0.718	*U*	*1*	0.607	*U*	*1*	0.718	*U*	*1*	0.707	*U*	*1*	0.634	*U*	*1*
3:3FTCA	NA	NA	*U*	*1*	0.898	*U*	*1*	0.759	*U*	*1*	0.898	*U*	*1*	0.884	*U*	*1*	0.792	*U*	*1*
5:3FTCA	NA	NA	*U*	*1*	4.49	*U*	*1*	3.8	*U*	*1*	4.49	*U*	*1*	4.42	*U*	*1*	3.96	*U*	*1*
7:3FTCA	NA	NA	*U*	*1*	4.49	*U*	*1*	3.8	*U*	*1*	4.49	*U*	*1*	4.42	*U*	*1*	3.96	*U*	*1*
9Cl-PF3ONS	NA	NA	*U*	*1*	0.718	*U*	*1*	0.607	*U*	*1*	0.718	*U*	*1*	0.707	*U*	*1*	0.634	*U*	*1*
ADONA	NA	NA	*U*	*1*	0.718	*U*	*1*	0.607	*U*	*1*	0.718	*U*	*1*	0.707	*U*	*1*	0.634	*U*	*1*
HFPO-DA	NA	NA	*U*	*1*	0.718	*U*	*1*	0.607	*U*	*1*	0.718	*U*	*1*	0.707	*U*	*1*	0.634	*U*	*1*
NEtFOSA	NA	NA	*U*	*1*	0.18	*U*	*1*	0.152	*U*	*1*	0.18	*U*	*1*	0.177	*U*	*1*	0.158	*U*	*1*
NEtFOSAA	NA	NA	*U*	*1*	0.18	*U*	*1*	0.152	*U*	*1*	0.18	*U*	*1*	0.177	*U*	*1*	0.158	*U*	*1*
NEtFOSE	NA	NA	*U*	*1*	1.8	*U*	*1*	1.52	*U*	*1*	1.8	*U*	*1*	1.77	*U*	*1*	1.58	*U*	*1*
NFDHA	NA	NA	*U*	*1*	0.359	*U*	*1*	0.304	*U*	*1*	0.359	*U*	*1*	0.353	*U*	*1*	0.317	*U*	*1*
NMeFOSA	NA	NA	*U*	*1*	0.18	*U*	*1*	0.152	*U*	*1*	0.18	*U*	*1*	0.177	*U*	*1*	0.158	*U*	*1*
NMeFOSAA	NA	NA	*U*	*1*	0.18	*U*	*1*	0.152	*U*	*1*	0.18	*U*	*1*	0.177	*U*	*1*	0.158	*U*	*1*
NMeFOSE	NA	NA	*U*	*1*	1.8	*U*	*1*	1.52	*U*	*1*	1.8	*U*	*1*	1.77	*U*	*1*	1.58	*U*	*1*
Perfluoro-1-decanesulfonic acid (PFDS)	NA	NA	*U*	*1*	0.18	*U*	*1*	0.152	*U*	*1*	0.18	*U*	*1*	0.177	*U*	*1*	0.158	*U*	*1*
Perfluoro-1-heptanesulfonic acid (PFHpS)	NA	NA	*U*	*1*	0.18	*U*	*1*	0.152	*U*	*1*	0.18	*U*	*1*	0.177	*U*	*1*	0.158	*U*	*1*
Perfluoro-1-octanesulfonamide (FOSA)	NA	NA	*U*	*1*	0.18	*U*	*1*	0.152	*U*	*1*	0.18	*U*	*1*	0.177	*U*	*1*	0.158	*U*	*1*
Perfluorobutanesulfonic acid (PFBS)	NA	NA	*U*	*1*	0.18	*U*	*1*	0.152	*U*	*1*	0.18	*U*	*1*	0.177	*U*	*1*	0.158	*U*	*1*
Perfluorodecanoic acid (PFDA)	NA	NA	*J*	*1*	0.18	*U*	*1*	0.152	*U*	*1*	0.18	*U*	*1*	0.177	*U*	*1*	0.158	*U*	*1*
Perfluorododecane Sulfonic Acid (PFDoDS)	NA	NA	*U*	*1*	0.18	*U*	*1*	0.152	*U*	*1*	0.18	*U*	*1*	0.177	*U*	*1*	0.158	*U*	*1*
Perfluorododecanoic acid (PFDoA)	NA	NA	*U*	*1*	0.18	*U*	*1*	0.152	*U*	*1*	0.18	*U*	*1*	0.177	*U*	*1*	0.158	*U*	*1*
Perfluoroheptanoic acid (PFHpA)	NA	NA	*J*	*1*	0.18	*U*	*1*	0.152	*U*	*1*	0.18	*U*	*1*	0.177	*U*	*1*	0.158	*U*	*1*
Perfluorohexanesulfonic Acid (PFHxS)	NA	NA	*U*	*1*	0.18	*U*	*1*	0.152	*U*	*1*	0.18	*U*	*1*	0.177	*U*	*1*	0.158	*U*	*1*
Perfluorohexanoic acid (PFHxA)	NA	NA	*J*	*1*	0.18	*U*	*1*	0.152	*U*	*1*	0.18	*U*	*1*	0.177	*U*	*1*	0.158	*U*	*1*
Perfluoro-n-butanoic acid (PFBA)	NA	NA	*U*	*1*	0.718	*U*	*1*	0.607	*U*	*1*	0.718	*U*	*1*	0.707	*U*	*1*	0.634	*U*	*1*
Perfluorononanesulfonic Acid (PFNS)	NA	NA	*U*	*1*	0.18	*U*	*1*	0.152	*U*	*1*	0.18	*U*	*1*	0.177	*U*	*1*	0.158	*U*	*1*
Perfluorononanoic acid (PFNA)	NA	NA	*J*	*1*	0.18	*U*	*1*	0.152	*U*	*1*	0.18	*U*	*1*	0.177	*U*	*1*	0.158	*U*	*1*
Perfluorooctanesulfonic Acid (PFOS)	1	44		*1*	0.0712	*J*	*1*	0.392		*1*	0.206		*1*	0.177	*U*	*1*	0.158	*U*	*1*
Perfluorooctanoic acid (PFOA)	0.8	33		*1*	0.0527	*J*	*1*	0.0714	*J*	*1*	0.0285	*J*	*1*	0.0417	*J*	*1*	0.0628	*J*	*1*
Perfluoropentanesulfonic Acid (PFPeS)	NA	NA	*U*	*1*	0.18	*U*	*1*	0.152	*U*	*1*	0.18	*U*	*1*	0.177	*U*	*1*	0.158	*U*	*1*
Perfluoropentanoic acid (PFPeA)	NA	NA	*J*	*1*	0.359	*U*	*1*	0.304	*U*	*1*	0.359	*U*	*1*	0.353	*U*	*1*	0.317	*U*	*1*
Perfluorotetradecanoic acid (PFTA)	NA	NA	*U*	*1*	0.18	*U*	*1*	0.152	*U*	*1*	0.18	*U*	*1*	0.177	*U*	*1*	0.158	*U*	*1*
Perfluorotridecanoic acid (PFTrDA)	NA	NA	*U*	*1*	0.18	*U*	*1*	0.152	*U*	*1*	0.18	*U*	*1*	0.177	*U*	*1*	0.158	*U*	*1*
Perfluoroundecanoic acid (PFUnA)	NA	NA	*U*	*1*	0.18	*U*	*1*	0.152	*U*	*1*	0.18	*U*	*1*	0.177	*U*	*1*	0.158	*U*	*1*
PFEESA	NA	NA	*U*	*1*	0.359	*U*	*1*	0.304	*U*	*1*	0.359	*U*	*1*	0.353	*U*	*1*	0.317	*U*	*1*
PFMBA	NA	NA	*U*	*1*	0.359	*U*	*1*	0.304	*U*	*1*	0.359	*U*	*1*	0.353	*U*	*1*	0.317	*U*	*1*
PFMPA	NA	NA	*U*	*1*	0.359	*U*	*1*	0.304	*U*	*1*	0.359	*U*	*1*	0.353	*U*	*1*	0.317	*U*	*1*

value ≤ POG SCO

value > POG Guidance Value/SCO

Q = Laboratory Qualifier DL = Dilution NA = not available (addtional flags: B-in blank, D-diluted, E-estimated, J-approximate)

Table 6: PFAS in Soil

The Green, Newburgh, NY
BCP ID: C336099

GALLAGHER BASSETT | TECHNICAL SERVICES

All data in µg/Kg (ppb)			Sample	2SB-22 5-7			2SB-23 Surf			2SB-23 0-2			2SB-23 4-6			2SB-23 7-9			2SB-
U= Not Detected ≥ value			Date	2026-03-06			2026-03-06			2026-03-06			2026-03-06			2026-03-06			2026
PFAS (1633)	**POG**	**RRU**		Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result
11Cl-PF3OUdS	NA	NA		0.709	U	1	0.655	U	1	0.726	U	1	0.716	U	1	0.635	U	1	0.69
1H,1H,2H,2H-Perfluorodecanesulfonic acid	NA	NA		0.709	U	1	0.655	U	1	0.726	U	1	0.716	U	1	0.635	U	1	0.69
1H,1H,2H,2H-Perfluorohexanesulfonic Acid	NA	NA		0.709	U	1	0.655	U	1	0.726	U	1	0.716	U	1	0.635	U	1	0.69
1H,1H,2H,2H-Perfluorooctanesulfonic acid	NA	NA		0.709	U	1	0.655	U	1	0.726	U	1	0.716	U	1	0.635	U	1	0.69
3:3FTCA	NA	NA		0.886	U	1	0.819	U	1	0.907	U	1	0.895	U	1	0.794	U	1	0.862
5:3FTCA	NA	NA		4.43	U	1	4.1	U	1	4.54	U	1	4.47	U	1	3.97	U	1	4.31
7:3FTCA	NA	NA		4.43	U	1	4.1	U	1	4.54	U	1	4.47	U	1	3.97	U	1	4.31
9Cl-PF3ONS	NA	NA		0.709	U	1	0.655	U	1	0.726	U	1	0.716	U	1	0.635	U	1	0.69
ADONA	NA	NA		0.709	U	1	0.655	U	1	0.726	U	1	0.716	U	1	0.635	U	1	0.69
HFPO-DA	NA	NA		0.709	U	1	0.655	U	1	0.726	U	1	0.716	U	1	0.635	U	1	0.69
NEtFOSA	NA	NA		0.177	U	1	0.164	U	1	0.181	U	1	0.179	U	1	0.159	U	1	0.172
NEtFOSAA	NA	NA		0.177	U	1	0.164	U	1	0.181	U	1	0.179	U	1	0.159	U	1	0.172
NEtFOSE	NA	NA		1.77	U	1	1.64	U	1	1.81	U	1	1.79	U	1	1.59	U	1	1.72
NFDHA	NA	NA		0.354	U	1	0.328	U	1	0.363	U	1	0.358	U	1	0.317	U	1	0.345
NMeFOSA	NA	NA		0.177	U	1	0.164	U	1	0.181	U	1	0.179	U	1	0.159	U	1	0.172
NMeFOSAA	NA	NA		0.177	U	1	0.164	U	1	0.181	U	1	0.179	U	1	0.159	U	1	0.172
NMeFOSE	NA	NA		1.77	U	1	1.64	U	1	1.81	U	1	1.79	U	1	1.59	U	1	1.72
Perfluoro-1-decanesulfonic acid (PFDS)	NA	NA		0.177	U	1	0.164	U	1	0.181	U	1	0.179	U	1	0.159	U	1	0.172
Perfluoro-1-heptanesulfonic acid (PFHpS)	NA	NA		0.177	U	1	0.164	U	1	0.181	U	1	0.179	U	1	0.159	U	1	0.172
Perfluoro-1-octanesulfonamide (FOSA)	NA	NA		0.177	U	1	0.164	U	1	0.181	U	1	0.179	U	1	0.159	U	1	0.172
Perfluorobutanesulfonic acid (PFBS)	NA	NA		0.177	U	1	0.164	U	1	0.181	U	1	0.179	U	1	0.159	U	1	0.172
Perfluorodecanoic acid (PFDA)	NA	NA		0.177	U	1	0.164	U	1	0.181	U	1	0.179	U	1	0.159	U	1	0.051
Perfluorododecane Sulfonic Acid (PFDoDS)	NA	NA		0.177	U	1	0.164	U	1	0.181	U	1	0.179	U	1	0.159	U	1	0.172
Perfluorododecanoic acid (PFDoA)	NA	NA		0.177	U	1	0.164	U	1	0.181	U	1	0.179	U	1	0.159	U	1	0.172
Perfluoroheptanoic acid (PFHpA)	NA	NA		0.177	U	1	0.164	U	1	0.181	U	1	0.179	U	1	0.159	U	1	0.0614
Perfluorohexanesulfonic Acid (PFHxS)	NA	NA		0.177	U	1	0.164	U	1	0.181	U	1	0.179	U	1	0.159	U	1	0.172
Perfluorohexanoic acid (PFHxA)	NA	NA		0.177	U	1	0.164	U	1	0.181	U	1	0.179	U	1	0.159	U	1	0.0994
Perfluoro-n-butanoic acid (PFBA)	NA	NA		0.709	U	1	0.655	U	1	0.726	U	1	0.716	U	1	0.635	U	1	0.69
Perfluorononanesulfonic Acid (PFNS)	NA	NA		0.177	U	1	0.164	U	1	0.181	U	1	0.179	U	1	0.159	U	1	0.172
Perfluorononanoic acid (PFNA)	NA	NA		0.177	U	1	0.164	U	1	0.181	U	1	0.179	U	1	0.159	U	1	0.0609
Perfluorooctanesulfonic Acid (PFOS)	1	44		0.177	U	1	0.232		1	0.115	J	1	0.179	U	1	0.159	U	1	0.702
Perfluorooctanoic acid (PFOA)	0.8	33		0.0257	J	1	0.164	U	1	0.181	U	1	0.179	U	1	0.159	U	1	0.137
Perfluoropentanesulfonic Acid (PFPeS)	NA	NA		0.177	U	1	0.164	U	1	0.181	U	1	0.179	U	1	0.159	U	1	0.172
Perfluoropentanoic acid (PFPeA)	NA	NA		0.354	U	1	0.328	U	1	0.363	U	1	0.358	U	1	0.317	U	1	0.102
Perfluorotetradecanoic acid (PFTA)	NA	NA		0.177	U	1	0.164	U	1	0.181	U	1	0.179	U	1	0.159	U	1	0.172
Perfluorotridecanoic acid (PFTrDA)	NA	NA		0.177	U	1	0.164	U	1	0.181	U	1	0.179	U	1	0.159	U	1	0.172
Perfluoroundecanoic acid (PFUnA)	NA	NA		0.177	U	1	0.164	U	1	0.181	U	1	0.179	U	1	0.159	U	1	0.0427
PFEESA	NA	NA		0.354	U	1	0.328	U	1	0.363	U	1	0.358	U	1	0.317	U	1	0.345
PFMBA	NA	NA		0.354	U	1	0.328	U	1	0.363	U	1	0.358	U	1	0.317	U	1	0.345
PFMPA	NA	NA		0.354	U	1	0.328	U	1	0.363	U	1	0.358	U	1	0.317	U	1	0.345

value ≤ POG SCO

value > POG Guidance Value/SCO

Q = Laboratory Qualifier DL = Dilution NA = not available (addtional flags: B-in blank, D-diluted, E-estimated, J-approximate)

Table 6: PFAS in Soil

The Green, Newburgh, NY
BCP ID: C336099

GALLAGHER BASSETT | TECHNICAL SERVICES

All data in µg/Kg (ppb)			Sample 24 Surf		2SB-24 0-2			2SB-24 3-5			Dup-20260306			2SB-24 6-8			2SB-25 Surf		
U= Not Detected ≥ value			Date -03-06		2026-03-06			2026-03-06			2026-03-06			2026-03-06			2026-03-06		
PFAS (1633)	**POG**	**RRU**	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL
11Cl-PF3OUdS	NA	NA	*U*	*1*	0.788	*U*	*1*	0.756	*U*	*1*	0.768	*U*	*1*	0.69	*U*	*1*	0.713	*U*	*1*
1H,1H,2H,2H-Perfluorodecanesulfonic acid	NA	NA	*U*	*1*	0.788	*U*	*1*	0.756	*U*	*1*	0.768	*U*	*1*	0.69	*U*	*1*	0.713	*U*	*1*
1H,1H,2H,2H-Perfluorohexanesulfonic Acid	NA	NA	*U*	*1*	0.788	*U*	*1*	0.756	*U*	*1*	0.768	*U*	*1*	0.69	*U*	*1*	0.713	*U*	*1*
1H,1H,2H,2H-Perfluorooctanesulfonic acid	NA	NA	*U*	*1*	0.788	*U*	*1*	0.756	*U*	*1*	0.768	*U*	*1*	0.69	*U*	*1*	0.713	*U*	*1*
3:3FTCA	NA	NA	*U*	*1*	0.985	*U*	*1*	0.946	*U*	*1*	0.96	*U*	*1*	0.862	*U*	*1*	0.892	*U*	*1*
5:3FTCA	NA	NA	*U*	*1*	4.92	*U*	*1*	4.73	*U*	*1*	4.8	*U*	*1*	4.31	*U*	*1*	4.46	*U*	*1*
7:3FTCA	NA	NA	*U*	*1*	4.92	*U*	*1*	4.73	*U*	*1*	4.8	*U*	*1*	4.31	*U*	*1*	4.46	*U*	*1*
9Cl-PF3ONS	NA	NA	*U*	*1*	0.788	*U*	*1*	0.756	*U*	*1*	0.768	*U*	*1*	0.69	*U*	*1*	0.713	*U*	*1*
ADONA	NA	NA	*U*	*1*	0.788	*U*	*1*	0.756	*U*	*1*	0.768	*U*	*1*	0.69	*U*	*1*	0.713	*U*	*1*
HFPO-DA	NA	NA	*U*	*1*	0.788	*U*	*1*	0.756	*U*	*1*	0.768	*U*	*1*	0.69	*U*	*1*	0.713	*U*	*1*
NEtFOSA	NA	NA	*U*	*1*	0.197	*U*	*1*	0.189	*U*	*1*	0.192	*U*	*1*	0.172	*U*	*1*	0.178	*U*	*1*
NEtFOSAA	NA	NA	*U*	*1*	0.197	*U*	*1*	0.189	*U*	*1*	0.192	*U*	*1*	0.172	*U*	*1*	0.178	*U*	*1*
NEtFOSE	NA	NA	*U*	*1*	1.97	*U*	*1*	1.89	*U*	*1*	1.92	*U*	*1*	1.72	*U*	*1*	1.78	*U*	*1*
NFDHA	NA	NA	*U*	*1*	0.394	*U*	*1*	0.378	*U*	*1*	0.384	*U*	*1*	0.345	*U*	*1*	0.357	*U*	*1*
NMeFOSA	NA	NA	*U*	*1*	0.197	*U*	*1*	0.189	*U*	*1*	0.192	*U*	*1*	0.172	*U*	*1*	0.178	*U*	*1*
NMeFOSAA	NA	NA	*U*	*1*	0.197	*U*	*1*	0.189	*U*	*1*	0.192	*U*	*1*	0.172	*U*	*1*	0.178	*U*	*1*
NMeFOSE	NA	NA	*U*	*1*	1.97	*U*	*1*	1.89	*U*	*1*	1.92	*U*	*1*	1.72	*U*	*1*	1.78	*U*	*1*
Perfluoro-1-decanesulfonic acid (PFDS)	NA	NA	*U*	*1*	0.197	*U*	*1*	0.189	*U*	*1*	0.192	*U*	*1*	0.172	*U*	*1*	0.178	*U*	*1*
Perfluoro-1-heptanesulfonic acid (PFHpS)	NA	NA	*U*	*1*	0.197	*U*	*1*	0.189	*U*	*1*	0.192	*U*	*1*	0.172	*U*	*1*	0.178	*U*	*1*
Perfluoro-1-octanesulfonamide (FOSA)	NA	NA	*U*	*1*	0.197	*U*	*1*	0.189	*U*	*1*	0.192	*U*	*1*	0.172	*U*	*1*	0.178	*U*	*1*
Perfluorobutanesulfonic acid (PFBS)	NA	NA	*U*	*1*	0.197	*U*	*1*	0.189	*U*	*1*	0.192	*U*	*1*	0.172	*U*	*1*	0.178	*U*	*1*
Perfluorodecanoic acid (PFDA)	NA	NA	*J*	*1*	0.197	*U*	*1*	0.189	*U*	*1*	0.192	*U*	*1*	0.172	*U*	*1*	0.178	*U*	*1*
Perfluorododecane Sulfonic Acid (PFDoDS)	NA	NA	*U*	*1*	0.197	*U*	*1*	0.189	*U*	*1*	0.192	*U*	*1*	0.172	*U*	*1*	0.178	*U*	*1*
Perfluorododecanoic acid (PFDoA)	NA	NA	*U*	*1*	0.197	*U*	*1*	0.189	*U*	*1*	0.192	*U*	*1*	0.172	*U*	*1*	0.178	*U*	*1*
Perfluoroheptanoic acid (PFHpA)	NA	NA	*J*	*1*	0.0447	*J*	*1*	0.189	*U*	*1*	0.192	*U*	*1*	0.172	*U*	*1*	0.178	*U*	*1*
Perfluorohexanesulfonic Acid (PFHxS)	NA	NA	*U*	*1*	0.197	*U*	*1*	0.189	*U*	*1*	0.192	*U*	*1*	0.172	*U*	*1*	0.178	*U*	*1*
Perfluorohexanoic acid (PFHxA)	NA	NA	*J*	*1*	0.0674	*J*	*1*	0.189	*U*	*1*	0.192	*U*	*1*	0.172	*U*	*1*	0.178	*U*	*1*
Perfluoro-n-butanoic acid (PFBA)	NA	NA	*U*	*1*	0.788	*U*	*1*	0.756	*U*	*1*	0.768	*U*	*1*	0.69	*U*	*1*	0.713	*U*	*1*
Perfluorononanesulfonic Acid (PFNS)	NA	NA	*U*	*1*	0.197	*U*	*1*	0.189	*U*	*1*	0.192	*U*	*1*	0.172	*U*	*1*	0.178	*U*	*1*
Perfluorononanoic acid (PFNA)	NA	NA	*J*	*1*	0.0437	*J*	*1*	0.189	*U*	*1*	0.192	*U*	*1*	0.172	*U*	*1*	0.178	*U*	*1*
Perfluorooctanesulfonic Acid (PFOS)	1	44		*1*	0.815		*1*	0.0723	*J*	*1*	0.0768	*J*	*1*	0.172	*U*	*1*	0.0962	*J*	*1*
Perfluorooctanoic acid (PFOA)	0.8	33	*J*	*1*	0.104	*J*	*1*	0.189	*U*	*1*	0.192	*U*	*1*	0.172	*U*	*1*	0.0345	*J*	*1*
Perfluoropentanesulfonic Acid (PFPeS)	NA	NA	*U*	*1*	0.197	*U*	*1*	0.189	*U*	*1*	0.192	*U*	*1*	0.172	*U*	*1*	0.178	*U*	*1*
Perfluoropentanoic acid (PFPeA)	NA	NA	*J*	*1*	0.394	*U*	*1*	0.378	*U*	*1*	0.384	*U*	*1*	0.345	*U*	*1*	0.357	*U*	*1*
Perfluorotetradecanoic acid (PFTA)	NA	NA	*U*	*1*	0.197	*U*	*1*	0.189	*U*	*1*	0.192	*U*	*1*	0.172	*U*	*1*	0.178	*U*	*1*
Perfluorotridecanoic acid (PFTrDA)	NA	NA	*U*	*1*	0.197	*U*	*1*	0.189	*U*	*1*	0.192	*U*	*1*	0.172	*U*	*1*	0.178	*U*	*1*
Perfluoroundecanoic acid (PFUnA)	NA	NA	*J*	*1*	0.197	*U*	*1*	0.189	*U*	*1*	0.192	*U*	*1*	0.172	*U*	*1*	0.178	*U*	*1*
PFEESA	NA	NA	*U*	*1*	0.394	*U*	*1*	0.378	*U*	*1*	0.384	*U*	*1*	0.345	*U*	*1*	0.357	*U*	*1*
PFMBA	NA	NA	*U*	*1*	0.394	*U*	*1*	0.378	*U*	*1*	0.384	*U*	*1*	0.345	*U*	*1*	0.357	*U*	*1*
PFMPA	NA	NA	*U*	*1*	0.394	*U*	*1*	0.378	*U*	*1*	0.384	*U*	*1*	0.345	*U*	*1*	0.357	*U*	*1*

value ≤ POG SCO

value > POG Guidance Value/SCO

Q = Laboratory Qualifier DL = Dilution NA = not available (addtional flags: B-in blank, D-diluted, E-estimated, J-approximate)

Table 6: PFAS in Soil

The Green, Newburgh, NY
BCP ID: C336099

GALLAGHER BASSETT | TECHNICAL SERVICES

All data in µg/Kg (ppb)			Sample	2SB-25 0-2			2SB-25 5-7			2SB-26 Surf			2SB-26 0-2			2SB-26 5-7			2SB-
U= Not Detected ≥ value			Date	2026-03-06			2026-03-06			2026-03-06			2026-03-06			2026-03-06			2026
PFAS (1633)	**POG**	**RRU**		Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result
11Cl-PF3OUdS	NA	NA		0.7	U	1	0.726	U	1	0.777	U	1	0.738	U	1	0.789	U	1	0.786
1H,1H,2H,2H-Perfluorodecanesulfonic acid	NA	NA		0.7	U	1	0.726	U	1	0.777	U	1	0.738	U	1	0.789	U	1	0.786
1H,1H,2H,2H-Perfluorohexanesulfonic Acid	NA	NA		0.7	U	1	0.726	U	1	0.777	U	1	0.738	U	1	0.789	U	1	0.786
1H,1H,2H,2H-Perfluorooctanesulfonic acid	NA	NA		0.7	U	1	0.726	U	1	0.777	U	1	0.738	U	1	0.789	U	1	0.786
3:3FTCA	NA	NA		0.875	U	1	0.908	U	1	0.971	U	1	0.923	U	1	0.987	U	1	0.983
5:3FTCA	NA	NA		4.38	U	1	4.54	U	1	4.86	U	1	4.62	U	1	4.93	U	1	4.92
7:3FTCA	NA	NA		4.38	U	1	4.54	U	1	4.86	U	1	4.62	U	1	4.93	U	1	4.92
9Cl-PF3ONS	NA	NA		0.7	U	1	0.726	U	1	0.777	U	1	0.738	U	1	0.789	U	1	0.786
ADONA	NA	NA		0.7	U	1	0.726	U	1	0.777	U	1	0.738	U	1	0.789	U	1	0.786
HFPO-DA	NA	NA		0.7	U	1	0.726	U	1	0.777	U	1	0.738	U	1	0.789	U	1	0.786
NEtFOSA	NA	NA		0.175	U	1	0.182	U	1	0.194	U	1	0.185	U	1	0.197	U	1	0.197
NEtFOSAA	NA	NA		0.175	U	1	0.182	U	1	0.182	J	1	0.185	U	1	0.197	U	1	0.107
NEtFOSE	NA	NA		1.75	U	1	1.82	U	1	1.94	U	1	1.85	U	1	1.97	U	1	1.97
NFDHA	NA	NA		0.35	U	1	0.363	U	1	0.388	U	1	0.369	U	1	0.395	U	1	0.393
NMeFOSA	NA	NA		0.175	U	1	0.182	U	1	0.194	U	1	0.185	U	1	0.197	U	1	0.197
NMeFOSAA	NA	NA		0.175	U	1	0.182	U	1	0.194	U	1	0.185	U	1	0.197	U	1	0.197
NMeFOSE	NA	NA		1.75	U	1	1.82	U	1	1.94	U	1	1.85	U	1	1.97	U	1	1.97
Perfluoro-1-decanesulfonic acid (PFDS)	NA	NA		0.175	U	1	0.182	U	1	0.0684	J	1	0.185	U	1	0.197	U	1	0.178
Perfluoro-1-heptanesulfonic acid (PFHpS)	NA	NA		0.175	U	1	0.182	U	1	0.194	U	1	0.185	U	1	0.197	U	1	0.197
Perfluoro-1-octanesulfonamide (FOSA)	NA	NA		0.175	U	1	0.182	U	1	0.194	U	1	0.185	U	1	0.197	U	1	0.197
Perfluorobutanesulfonic acid (PFBS)	NA	NA		0.175	U	1	0.182	U	1	0.194	U	1	0.185	U	1	0.197	U	1	0.197
Perfluorodecanoic acid (PFDA)	NA	NA		0.175	U	1	0.182	U	1	0.066	J	1	0.0735	J	1	0.197	U	1	0.323
Perfluorododecane Sulfonic Acid (PFDoDS)	NA	NA		0.175	U	1	0.182	U	1	0.194	U	1	0.185	U	1	0.197	U	1	0.197
Perfluorododecanoic acid (PFDoA)	NA	NA		0.175	U	1	0.182	U	1	0.194	U	1	0.185	U	1	0.197	U	1	0.149
Perfluoroheptanoic acid (PFHpA)	NA	NA		0.175	U	1	0.182	U	1	0.194	U	1	0.185	U	1	0.197	U	1	0.0664
Perfluorohexanesulfonic Acid (PFHxS)	NA	NA		0.175	U	1	0.182	U	1	0.194	U	1	0.185	U	1	0.197	U	1	0.197
Perfluorohexanoic acid (PFHxA)	NA	NA		0.175	U	1	0.182	U	1	0.194	U	1	0.0448	J	1	0.197	U	1	0.0598
Perfluoro-n-butanoic acid (PFBA)	NA	NA		0.7	U	1	0.726	U	1	0.777	U	1	0.738	U	1	0.789	U	1	0.786
Perfluorononanesulfonic Acid (PFNS)	NA	NA		0.175	U	1	0.182	U	1	0.194	U	1	0.185	U	1	0.197	U	1	0.197
Perfluorononanoic acid (PFNA)	NA	NA		0.175	U	1	0.182	U	1	0.0515	J	1	0.0655	J	1	0.197	U	1	0.186
Perfluorooctanesulfonic Acid (PFOS)	1	44		0.0951	J	1	0.0555	J	1	0.525		1	0.736		1	0.11	J	1	1.58
Perfluorooctanoic acid (PFOA)	0.8	33		0.175	U	1	0.182	U	1	0.0733	J	1	0.101	J	1	0.197	U	1	0.169
Perfluoropentanesulfonic Acid (PFPeS)	NA	NA		0.175	U	1	0.182	U	1	0.194	U	1	0.185	U	1	0.197	U	1	0.197
Perfluoropentanoic acid (PFPeA)	NA	NA		0.35	U	1	0.363	U	1	0.388	U	1	0.369	U	1	0.395	U	1	0.393
Perfluorotetradecanoic acid (PFTA)	NA	NA		0.175	U	1	0.182	U	1	0.194	U	1	0.185	U	1	0.197	U	1	0.197
Perfluorotridecanoic acid (PFTrDA)	NA	NA		0.175	U	1	0.182	U	1	0.194	U	1	0.185	U	1	0.197	U	1	0.0943
Perfluoroundecanoic acid (PFUnA)	NA	NA		0.175	U	1	0.182	U	1	0.0376	J	1	0.185	U	1	0.197	U	1	0.221
PFEESA	NA	NA		0.35	U	1	0.363	U	1	0.388	U	1	0.369	U	1	0.395	U	1	0.393
PFMBA	NA	NA		0.35	U	1	0.363	U	1	0.388	U	1	0.369	U	1	0.395	U	1	0.393
PFMPA	NA	NA		0.35	U	1	0.363	U	1	0.388	U	1	0.369	U	1	0.395	U	1	0.393

value ≤ POG SCO

value > POG Guidance Value/SCO

Q = Laboratory Qualifier DL = Dilution NA = not available (addtional flags: B-in blank, D-diluted, E-estimated, J-approximate)

Table 6: PFAS in Soil

The Green, Newburgh, NY
BCP ID: C336099

GALLAGHER BASSETT | TECHNICAL SERVICES

All data in µg/Kg (ppb)			Sample	27 Surf		2SB-27 0-2			2SB-27 5-7			2SB-27 10-12			Dup-20260309			2SB-28 Surf		
U= Not Detected ≥ value			Date	-03-09		2026-03-09			2026-03-09			2026-03-09			2026-03-06			2026-03-06		
PFAS (1633)	**POG**	**RRU**	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL
11Cl-PF3OUdS	NA	NA	*U*	*1*	0.77	*U*	*1*	0.797	*U*	*1*	0.84	*U*	*1*	0.736	*U*	*1*	0.674	*U*	*1*
1H,1H,2H,2H-Perfluorodecanesulfonic acid	NA	NA	*U*	*1*	0.77	*U*	*1*	0.797	*U*	*1*	0.84	*U*	*1*	0.736	*U*	*1*	0.674	*U*	*1*
1H,1H,2H,2H-Perfluorohexanesulfonic Acid	NA	NA	*U*	*1*	0.77	*U*	*1*	0.797	*U*	*1*	0.84	*U*	*1*	0.736	*U*	*1*	0.674	*U*	*1*
1H,1H,2H,2H-Perfluorooctanesulfonic acid	NA	NA	*U*	*1*	0.77	*U*	*1*	0.797	*U*	*1*	0.84	*U*	*1*	0.736	*U*	*1*	0.674	*U*	*1*
3:3FTCA	NA	NA	*U*	*1*	0.962	*U*	*1*	0.996	*U*	*1*	1.05	*U*	*1*	0.919	*U*	*1*	0.843	*U*	*1*
5:3FTCA	NA	NA	*U*	*1*	4.81	*U*	*1*	4.98	*U*	*1*	5.25	*U*	*1*	4.6	*U*	*1*	4.21	*U*	*1*
7:3FTCA	NA	NA	*U*	*1*	4.81	*U*	*1*	4.98	*U*	*1*	5.25	*U*	*1*	4.6	*U*	*1*	4.21	*U*	*1*
9Cl-PF3ONS	NA	NA	*U*	*1*	0.77	*U*	*1*	0.797	*U*	*1*	0.84	*U*	*1*	0.736	*U*	*1*	0.674	*U*	*1*
ADONA	NA	NA	*U*	*1*	0.77	*U*	*1*	0.797	*U*	*1*	0.84	*U*	*1*	0.736	*U*	*1*	0.674	*U*	*1*
HFPO-DA	NA	NA	*U*	*1*	0.77	*U*	*1*	0.797	*U*	*1*	0.84	*U*	*1*	0.736	*U*	*1*	0.674	*U*	*1*
NEtFOSA	NA	NA	*U*	*1*	0.192	*U*	*1*	0.199	*U*	*1*	0.21	*U*	*1*	0.184	*U*	*1*	0.168	*U*	*1*
NEtFOSAA	NA	NA	*J*	*1*	0.192	*U*	*1*	0.199	*U*	*1*	0.21	*U*	*1*	0.184	*U*	*1*	0.168	*U*	*1*
NEtFOSE	NA	NA	*U*	*1*	1.92	*U*	*1*	1.99	*U*	*1*	2.1	*U*	*1*	1.84	*U*	*1*	1.68	*U*	*1*
NFDHA	NA	NA	*U*	*1*	0.385	*U*	*1*	0.399	*U*	*1*	0.42	*U*	*1*	0.368	*U*	*1*	0.337	*U*	*1*
NMeFOSA	NA	NA	*U*	*1*	0.192	*U*	*1*	0.199	*U*	*1*	0.21	*U*	*1*	0.184	*U*	*1*	0.168	*U*	*1*
NMeFOSAA	NA	NA	*U*	*1*	0.192	*U*	*1*	0.199	*U*	*1*	0.21	*U*	*1*	0.184	*U*	*1*	0.168	*U*	*1*
NMeFOSE	NA	NA	*U*	*1*	1.92	*U*	*1*	1.99	*U*	*1*	2.1	*U*	*1*	1.84	*U*	*1*	1.68	*U*	*1*
Perfluoro-1-decanesulfonic acid (PFDS)	NA	NA	*J*	*1*	0.192	*U*	*1*	0.199	*U*	*1*	0.21	*U*	*1*	0.184	*U*	*1*	0.168	*U*	*1*
Perfluoro-1-heptanesulfonic acid (PFHpS)	NA	NA	*U*	*1*	0.192	*U*	*1*	0.199	*U*	*1*	0.21	*U*	*1*	0.184	*U*	*1*	0.168	*U*	*1*
Perfluoro-1-octanesulfonamide (FOSA)	NA	NA	*U*	*1*	0.192	*U*	*1*	0.199	*U*	*1*	0.21	*U*	*1*	0.184	*U*	*1*	0.168	*U*	*1*
Perfluorobutanesulfonic acid (PFBS)	NA	NA	*U*	*1*	0.192	*U*	*1*	0.199	*U*	*1*	0.21	*U*	*1*	0.184	*U*	*1*	0.168	*U*	*1*
Perfluorodecanoic acid (PFDA)	NA	NA		*1*	0.0803	*J*	*1*	0.199	*U*	*1*	0.21	*U*	*1*	0.184	*U*	*1*	0.168	*U*	*1*
Perfluorododecane Sulfonic Acid (PFDoDS)	NA	NA	*U*	*1*	0.192	*U*	*1*	0.199	*U*	*1*	0.21	*U*	*1*	0.184	*U*	*1*	0.168	*U*	*1*
Perfluorododecanoic acid (PFDoA)	NA	NA	*J*	*1*	0.192	*U*	*1*	0.199	*U*	*1*	0.21	*U*	*1*	0.184	*U*	*1*	0.168	*U*	*1*
Perfluoroheptanoic acid (PFHpA)	NA	NA	*J*	*1*	0.043	*J*	*1*	0.199	*U*	*1*	0.21	*U*	*1*	0.184	*U*	*1*	0.168	*U*	*1*
Perfluorohexanesulfonic Acid (PFHxS)	NA	NA	*U*	*1*	0.192	*U*	*1*	0.199	*U*	*1*	0.21	*U*	*1*	0.184	*U*	*1*	0.168	*U*	*1*
Perfluorohexanoic acid (PFHxA)	NA	NA	*J*	*1*	0.192	*U*	*1*	0.199	*U*	*1*	0.21	*U*	*1*	0.184	*U*	*1*	0.168	*U*	*1*
Perfluoro-n-butanoic acid (PFBA)	NA	NA	*U*	*1*	0.77	*U*	*1*	0.797	*U*	*1*	0.84	*U*	*1*	0.736	*U*	*1*	0.674	*U*	*1*
Perfluorononanesulfonic Acid (PFNS)	NA	NA	*U*	*1*	0.192	*U*	*1*	0.199	*U*	*1*	0.21	*U*	*1*	0.184	*U*	*1*	0.168	*U*	*1*
Perfluorononanoic acid (PFNA)	NA	NA	*J*	*1*	0.0737	*J*	*1*	0.199	*U*	*1*	0.21	*U*	*1*	0.184	*U*	*1*	0.0985	*J*	*1*
Perfluorooctanesulfonic Acid (PFOS)	1	44		*1*	0.676		*1*	0.588		*1*	0.21	*U*	*1*	0.184	*U*	*1*	0.458		*1*
Perfluorooctanoic acid (PFOA)	0.8	33	*J*	*1*	0.126	*J*	*1*	0.0794	*J*	*1*	0.21	*U*	*1*	0.184	*U*	*1*	0.0904	*J*	*1*
Perfluoropentanesulfonic Acid (PFPeS)	NA	NA	*U*	*1*	0.192	*U*	*1*	0.199	*U*	*1*	0.21	*U*	*1*	0.184	*U*	*1*	0.168	*U*	*1*
Perfluoropentanoic acid (PFPeA)	NA	NA	*U*	*1*	0.385	*U*	*1*	0.399	*U*	*1*	0.42	*U*	*1*	0.368	*U*	*1*	0.337	*U*	*1*
Perfluorotetradecanoic acid (PFTA)	NA	NA	*U*	*1*	0.192	*U*	*1*	0.199	*U*	*1*	0.21	*U*	*1*	0.184	*U*	*1*	0.168	*U*	*1*
Perfluorotridecanoic acid (PFTrDA)	NA	NA	*J*	*1*	0.192	*U*	*1*	0.199	*U*	*1*	0.21	*U*	*1*	0.184	*U*	*1*	0.168	*U*	*1*
Perfluoroundecanoic acid (PFUnA)	NA	NA		*1*	0.0452	*J*	*1*	0.199	*U*	*1*	0.21	*U*	*1*	0.184	*U*	*1*	0.168	*U*	*1*
PFEESA	NA	NA	*U*	*1*	0.385	*U*	*1*	0.399	*U*	*1*	0.42	*U*	*1*	0.368	*U*	*1*	0.337	*U*	*1*
PFMBA	NA	NA	*U*	*1*	0.385	*U*	*1*	0.399	*U*	*1*	0.42	*U*	*1*	0.368	*U*	*1*	0.337	*U*	*1*
PFMPA	NA	NA	*U*	*1*	0.385	*U*	*1*	0.399	*U*	*1*	0.42	*U*	*1*	0.368	*U*	*1*	0.337	*U*	*1*

value ≤ POG SCO

value > POG Guidance Value/SCO

Q = Laboratory Qualifier DL = Dilution NA = not available (addtional flags: B-in blank, D-diluted, E-estimated, J-approximate)

Table 6: PFAS in Soil

The Green, Newburgh, NY
BCP ID: C336099

GALLAGHER BASSETT | TECHNICAL SERVICES

All data in µg/Kg (ppb)			Sample	2SB-28 0-2			2SB-28 7-9			2SB-29 Surf			2SB-29 0-2			2SB-29 8-10		
U= Not Detected ≥ value			Date	2026-03-06			2026-03-06			2026-03-06			2026-03-06			2026-03-06		
PFAS (1633)	**POG**	**RRU**		Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL
11Cl-PF3OUdS	NA	NA		0.779	U	1	0.74	U	1	0.626	U	1	0.715	U	1	0.762	U	1
1H,1H,2H,2H-Perfluorodecanesulfonic acid	NA	NA		0.779	U	1	0.74	U	1	0.626	U	1	0.715	U	1	0.762	U	1
1H,1H,2H,2H-Perfluorohexanesulfonic Acid	NA	NA		0.779	U	1	0.74	U	1	0.626	U	1	0.715	U	1	0.762	U	1
1H,1H,2H,2H-Perfluorooctanesulfonic acid	NA	NA		0.779	U	1	0.74	U	1	0.626	U	1	0.715	U	1	0.762	U	1
3:3FTCA	NA	NA		0.974	U	1	0.926	U	1	0.782	U	1	0.893	U	1	0.953	U	1
5:3FTCA	NA	NA		4.87	U	1	4.63	U	1	3.91	U	1	4.47	U	1	4.76	U	1
7:3FTCA	NA	NA		4.87	U	1	4.63	U	1	3.91	U	1	4.47	U	1	4.76	U	1
9Cl-PF3ONS	NA	NA		0.779	U	1	0.74	U	1	0.626	U	1	0.715	U	1	0.762	U	1
ADONA	NA	NA		0.779	U	1	0.74	U	1	0.626	U	1	0.715	U	1	0.762	U	1
HFPO-DA	NA	NA		0.779	U	1	0.74	U	1	0.626	U	1	0.715	U	1	0.762	U	1
NEtFOSA	NA	NA		0.195	U	1	0.185	U	1	0.156	U	1	0.179	U	1	0.19	U	1
NEtFOSAA	NA	NA		0.195	U	1	0.185	U	1	0.0851	J	1	0.179	U	1	0.19	U	1
NEtFOSE	NA	NA		1.95	U	1	1.85	U	1	1.56	U	1	1.79	U	1	1.9	U	1
NFDHA	NA	NA		0.39	U	1	0.37	U	1	0.313	U	1	0.357	U	1	0.381	U	1
NMeFOSA	NA	NA		0.195	U	1	0.185	U	1	0.156	U	1	0.179	U	1	0.19	U	1
NMeFOSAA	NA	NA		0.195	U	1	0.185	U	1	0.156	U	1	0.179	U	1	0.19	U	1
NMeFOSE	NA	NA		1.95	U	1	1.85	U	1	1.56	U	1	1.79	U	1	1.9	U	1
Perfluoro-1-decanesulfonic acid (PFDS)	NA	NA		0.195	U	1	0.185	U	1	0.0684	J	1	0.179	U	1	0.19	U	1
Perfluoro-1-heptanesulfonic acid (PFHpS)	NA	NA		0.195	U	1	0.185	U	1	0.156	U	1	0.179	U	1	0.19	U	1
Perfluoro-1-octanesulfonamide (FOSA)	NA	NA		0.195	U	1	0.185	U	1	0.156	U	1	0.179	U	1	0.19	U	1
Perfluorobutanesulfonic acid (PFBS)	NA	NA		0.195	U	1	0.185	U	1	0.156	U	1	0.179	U	1	0.19	U	1
Perfluorodecanoic acid (PFDA)	NA	NA		0.195	U	1	0.185	U	1	0.318		1	0.179	U	1	0.19	U	1
Perfluorododecane Sulfonic Acid (PFDoDS)	NA	NA		0.195	U	1	0.185	U	1	0.156	U	1	0.179	U	1	0.19	U	1
Perfluorododecanoic acid (PFDoA)	NA	NA		0.195	U	1	0.185	U	1	0.157		1	0.179	U	1	0.19	U	1
Perfluoroheptanoic acid (PFHpA)	NA	NA		0.195	U	1	0.185	U	1	0.119	J	1	0.0493	J	1	0.19	U	1
Perfluorohexanesulfonic Acid (PFHxS)	NA	NA		0.195	U	1	0.185	U	1	0.156	U	1	0.179	U	1	0.19	U	1
Perfluorohexanoic acid (PFHxA)	NA	NA		0.195	U	1	0.185	U	1	0.105	J	1	0.0778	J	1	0.19	U	1
Perfluoro-n-butanoic acid (PFBA)	NA	NA		0.779	U	1	0.74	U	1	0.626	U	1	0.715	U	1	0.762	U	1
Perfluorononanesulfonic Acid (PFNS)	NA	NA		0.195	U	1	0.185	U	1	0.156	U	1	0.179	U	1	0.19	U	1
Perfluorononanoic acid (PFNA)	NA	NA		0.0467	J	1	0.185	U	1	0.276		1	0.0482	J	1	0.19	U	1
Perfluorooctanesulfonic Acid (PFOS)	1	44		0.23		1	0.185	U	1	1.94		1	0.382		1	0.19	U	1
Perfluorooctanoic acid (PFOA)	0.8	33		0.0418	J	1	0.185	U	1	0.558		1	0.12	J	1	0.19	U	1
Perfluoropentanesulfonic Acid (PFPeS)	NA	NA		0.195	U	1	0.185	U	1	0.156	U	1	0.179	U	1	0.19	U	1
Perfluoropentanoic acid (PFPeA)	NA	NA		0.39	U	1	0.37	U	1	0.116	J	1	0.0855	J	1	0.381	U	1
Perfluorotetradecanoic acid (PFTA)	NA	NA		0.195	U	1	0.185	U	1	0.156	U	1	0.179	U	1	0.19	U	1
Perfluorotridecanoic acid (PFTrDA)	NA	NA		0.195	U	1	0.185	U	1	0.0793	J	1	0.179	U	1	0.19	U	1
Perfluoroundecanoic acid (PFUnA)	NA	NA		0.195	U	1	0.185	U	1	0.177		1	0.179	U	1	0.19	U	1
PFEESA	NA	NA		0.39	U	1	0.37	U	1	0.313	U	1	0.357	U	1	0.381	U	1
PFMBA	NA	NA		0.39	U	1	0.37	U	1	0.313	U	1	0.357	U	1	0.381	U	1
PFMPA	NA	NA		0.39	U	1	0.37	U	1	0.313	U	1	0.357	U	1	0.381	U	1

value ≤ POG SCO

value > POG Guidance Value/SCO

Q = Laboratory Qualifier DL = Dilution NA = not available (addtional flags: B-in blank, D-diluted, E-estimated, J-approximate)

Table 7: VOCs in Groundwater

The Green, Newburgh, NY
BCP ID: C336099

GALLAGHER BASSETT | TECHNICAL SERVICES

All data in µg/L (ppb)	Sample	MW-01-20251106			DUP-20251106			MW-02-20251106			MW-03-20251106			MW-04-20251106			MW-05-20251106		
U= Not Detected ≥ value	Date	2025-11-06			2025-11-06			2025-11-06			2025-11-06			2025-11-06			2025-11-06		
VOCs (8260)	**AWQS**	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL
1,1,1,2-tetrachloroethane	5	1	U	1	1	U	1	1	U	1	1	U	1	1	U	1	1	U	1
1,1,1-trichloroethane (TCA)	5	5	U	1	5	U	1	5	U	1	5	U	1	5	U	1	5	U	1
1,1,2,2-tetrachloroethane	5	1	U	1	1	U	1	1	U	1	1	U	1	1	U	1	1	U	1
1,1,2-trichloroethane	1	1	U	1	1	U	1	1	U	1	1	U	1	1	U	1	1	U	1
1,1-dichloroethane	5	5	U	1	5	U	1	5	U	1	5	U	1	5	U	1	5	U	1
1,1-dichloroethylene	5	1	U	1	1	U	1	1	U	1	1	U	1	1	U	1	1	U	1
1,2,3-Trichlorobenzene	5	1	U	1	1	U	1	1	U	1	1	U	1	1	U	1	1	U	1
1,2,3-Trichloropropane	0.04	1	U	1	1	U	1	1	U	1	1	U	1	1	U	1	1	U	1
1,2,4-Trichlorobenzene	5	1	U	1	1	U	1	1	U	1	1	U	1	1	U	1	1	U	1
1,2,4-Trimethylbenzene	5	1	U	1	1	U	1	1	U	1	1	U	1	1	U	1	1	U	1
1,2-Dibromo-3-chloropropane	0.04	1	U	1	1	U	1	1	U	1	1	U	1	1	U	1	1	U	1
1,2-dibromoethane	5	1	U	1	1	U	1	1	U	1	1	U	1	1	U	1	1	U	1
1,2-dichlorobenzene	3	1	U	1	1	U	1	1	U	1	1	U	1	1	U	1	1	U	1
1,2-dichloroethane	0.6	0.6	U	1	0.6	U	1	0.6	U	1	0.6	U	1	0.6	U	1	0.6	U	1
1,2-dichloropropane	1	1	U	1	1	U	1	1	U	1	1	U	1	1	U	1	1	U	1
1,3,5-trimethylbenzene	5	1	U	1	1	U	1	1	U	1	1	U	1	1	U	1	1	U	1
1,3-dichlorobenzene	3	1	U	1	1	U	1	1	U	1	1	U	1	1	U	1	1	U	1
1,4-dichlorobenzene	3	1	U	1	1	U	1	1	U	1	1	U	1	1	U	1	1	U	1
1,4-dioxane	0.35	100	U	1	100	U	1	100	U	1	100	U	1	100	U	1	100	U	1
2-butanone (MEK)	50	2.5	U	1	2.5	U	1	2.5	U	1	2.5	U	1	2.5	U	1	2.5	U	1
2-hexanone (MBK)	50	2.5	U	1	2.5	U	1	2.5	U	1	2.5	U	1	2.5	U	1	2.5	U	1
4-methyl-2-pentanone	NA	2.5	U	1	2.5	U	1	2.5	U	1	2.5	U	1	2.5	U	1	2.5	U	1
acetone	50	5	U	1	5	U	1	5	U	1	5	U	1	5	U	1	5	U	1
acrolein	5	5	U	1	5	U	1	5	U	1	5	U	1	5	U	1	5	U	1
acrylonitrile	5	5	U	1	5	U	1	5	U	1	5	U	1	5	U	1	5	U	1
benzene	1	0.7	U	1	0.7	U	1	0.7	U	1	0.7	U	1	0.7	U	1	0.7	U	1
bromochloromethane	5	1	U	1	1	U	1	1	U	1	1	U	1	1	U	1	1	U	1
bromodichloromethane	50	1	U	1	1	U	1	1	U	1	1	U	1	1	U	1	1	U	1
Bromoform	50	5	U	1	5	U	1	5	U	1	5	U	1	5	U	1	5	U	1
bromomethane	5	5	U	1	5	U	1	5	U	1	5	U	1	5	U	1	5	U	1
carbon disulfide	NA	1	U	1	1	U	1	1	U	1	1	U	1	1	U	1	1	U	1
carbon tetrachloride	5	1	U	1	1	U	1	1	U	1	1	U	1	1	U	1	1	U	1
chlorobenzene	5	5	U	1	5	U	1	5	U	1	5	U	1	5	U	1	5	U	1
chloroethane	5	5	U	1	5	U	1	5	U	1	5	U	1	5	U	1	5	U	1
chloroform	7	5	U	1	5	U	1	5	U	1	5	U	1	5	U	1	5	U	1
chloromethane	5	5	U	1	5	U	1	5	U	1	5	U	1	5	U	1	5	U	1
cis-1,2-dichloroethylene (DCE)	5	1	U	1	1	U	1	1	U	1	1	U	1	1	U	1	1	U	1
cis-1,3-dichloropropylene	0.4	0.4	U	1	0.4	U	1	0.4	U	1	0.4	U	1	0.4	U	1	0.4	U	1
cyclohexane	NA	5	U	1	5	U	1	5	U	1	5	U	1	5	U	1	5	U	1
dibromochloromethane	5	1	U	1	1	U	1	1	U	1	1	U	1	1	U	1	1	U	1
dibromomethane	5	1	U	1	1	U	1	1	U	1	1	U	1	1	U	1	1	U	1
dichlorodifluoromethane	5	1	U	1	1	U	1	1	U	1	1	U	1	1	U	1	1	U	1
ethyl benzene	5	1	U	1	1	U	1	1	U	1	1	U	1	1	U	1	1	U	1
hexachlorobutadiene	0.5	1	U	1	1	U	1	1	U	1	1	U	1	1	U	1	1	U	1
isopropylbenzene	5	1	U	1	1	U	1	1	U	1	1	U	1	1	U	1	1	U	1
m- & p- xylenes	5	1	U	1	1	U	1	1	U	1	1	U	1	1	U	1	1	U	1
methyl tert-butyl ether (MTBE)	NA	1	U	1	1	U	1	1	U	1	1	U	1	1	U	1	0.41	J	1
methylacetate	10	50	U	1	50	U	1	50	U	1	50	U	1	50	U	1	50	U	1
methylcyclohexane	NA	5	U	1	5	U	1	5	U	1	5	U	1	5	U	1	5	U	1
methylene chloride	5	3	U	1	3	U	1	3	U	1	3	U	1	3	U	1	3	U	1
n-butylbenzene	5	1	U	1	1	U	1	1	U	1	1	U	1	1	U	1	1	U	1
n-propylbenzene	5	1	U	1	1	U	1	1	U	1	1	U	1	1	U	1	1	U	1
o-xylene	5	1	U	1	1	U	1	1	U	1	1	U	1	1	U	1	1	U	1
p-isopropyltoluene	5	1	U	1	1	U	1	1	U	1	1	U	1	1	U	1	1	U	1
sec-butylbenzene	5	1	U	1	1	U	1	1	U	1	1	U	1	1	U	1	1	U	1
styrene	5	1	U	1	1	U	1	1	U	1	1	U	1	1	U	1	1	U	1
tert-butyl alcohol	NA	50	U	1	50	U	1	50	U	1	50	U	1	50	U	1	50	U	1
tert-butylbenzene	5	1	U	1	1	U	1	1	U	1	1	U	1	1	U	1	1	U	1
tetrachloroethylene (PCE)	5	1	U	1	1	U	1	1	U	1	1	U	1	1	U	1	1	U	1
toluene	5	1	U	1	1	U	1	1	U	1	1	U	1	1	U	1	1	U	1
trans-1,2-dichloroethylene (DCE)	5	5	U	1	5	U	1	5	U	1	5	U	1	5	U	1	5	U	1
trans-1,3-dichloropropylene	0.4	0.4	U	1	0.4	U	1	0.4	U	1	0.4	U	1	0.4	U	1	0.4	U	1
trichloroethylene (TCE)	5	1	U	1	1	U	1	1	U	1	1	U	1	1	U	1	1	U	1
trichlorofluoromethane	5	1	U	1	1	U	1	1	U	1	1	U	1	1	U	1	1	U	1
Trichlorotrifluoroethane	5	1	U	1	1	U	1	1	U	1	1	U	1	1	U	1	1	U	1
vinyl chloride (VC)	2	1	U	1	1	U	1	1	U	1	1	U	1	1	U	1	1	U	1
xylenes, total	5	1	U	1	1	U	1	1	U	1	1	U	1	1	U	1	1	U	1
VOC TICs	AWQS																		
unknown hydrocarbon	NA	4.2	J		ND			5.1	J		ND			4.9	J		ND		

value ≤ AWQS
Detected TICs

Q = Laboratory Qualifier DL = Dilution NA = not available (addtional flags: B-in blank, D-diluted, E-estimated, J-approximate)

Table 7: VOCs in Groundwater

The Green, Newburgh, NY
BCP ID: C336099

GALLAGHER BASSETT | TECHNICAL SERVICES

All data in µg/L (ppb)	**Sample**	**MW-06-20251106**			**MW-07-20260316**			**DUP-20260316**			**MW-08-20260316**		
U= Not Detected ≥ value	Date	2025-11-06			2026-03-16			2026-03-16			2026-03-16		
VOCs (8260)	**AWQS**	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL
1,1,1,2-tetrachloroethane	5	1	U	1	1	U	1	1	U	1	1	U	1
1,1,1-trichloroethane (TCA)	5	5	U	1	5	U	1	5	U	1	5	U	1
1,1,2,2-tetrachloroethane	5	1	U	1	1	U	1	1	U	1	1	U	1
1,1,2-trichloroethane	1	1	U	1	1	U	1	1	U	1	1	U	1
1,1-dichloroethane	5	5	U	1	5	U	1	5	U	1	5	U	1
1,1-dichloroethylene	5	1	U	1	1	U	1	1	U	1	1	U	1
1,2,3-Trichlorobenzene	5	1	U	1	1	U	1	1	U	1	1	U	1
1,2,3-Trichloropropane	0.04	1	U	1	0.25	U	1	0.25	U	1	0.25	U	1
1,2,4-Trichlorobenzene	5	1	U	1	1	U	1	1	U	1	1	U	1
1,2,4-Trimethylbenzene	5	1	U	1	1	U	1	1	U	1	1	U	1
1,2-Dibromo-3-chloropropane	0.04	1	U	1	0.5	U	1	0.5	U	1	0.5	U	1
1,2-dibromoethane	5	1	U	1	0.25	U	1	0.25	U	1	0.25	U	1
1,2-dichlorobenzene	3	1	U	1	1	U	1	1	U	1	1	U	1
1,2-dichloroethane	0.6	0.6	U	1	0.6	U	1	0.6	U	1	0.6	U	1
1,2-dichloropropane	1	1	U	1	1	U	1	1	U	1	1	U	1
1,3,5-trimethylbenzene	5	1	U	1	1	U	1	1	U	1	1	U	1
1,3-dichlorobenzene	3	1	U	1	1	U	1	1	U	1	1	U	1
1,4-dichlorobenzene	3	1	U	1	1	U	1	1	U	1	1	U	1
1,4-dioxane	0.35	100	U	1	100	U	1	100	U	1	100	U	1
2-butanone (MEK)	50	2.5	U	1	2.5	U	1	2.5	U	1	2.5	U	1
2-hexanone (MBK)	50	2.5	U	1	2.5	U	1	2.5	U	1	2.5	U	1
4-methyl-2-pentanone	NA	2.5	U	1	5	U	1	5	U	1	5	U	1
acetone	50	5	U	1	5	U	1	5	U	1	5	U	1
acrolein	5	5	U	1	5	U	1	5	U	1	5	U	1
acrylonitrile	5	5	U	1	0.7	U	1	0.7	U	1	0.7	U	1
benzene	1	0.7	U	1	1	U	1	1	U	1	1	U	1
bromochloromethane	5	1	U	1	1	U	1	1	U	1	1	U	1
bromodichloromethane	50	1	U	1	5	U	1	5	U	1	5	U	1
Bromoform	50	5	U	1	5	U	1	5	U	1	5	U	1
bromomethane	5	5	U	1	1	U	1	1	U	1	1	U	1
carbon disulfide	NA	1	U	1	1	U	1	1	U	1	1	U	1
carbon tetrachloride	5	1	U	1	5	U	1	5	U	1	5	U	1
chlorobenzene	5	5	U	1	5	U	1	5	U	1	5	U	1
chloroethane	5	5	U	1	5	U	1	5	U	1	5	U	1
chloroform	7	5	U	1	5	U	1	5	U	1	5	U	1
chloromethane	5	5	U	1	1	U	1	1	U	1	1	U	1
cis-1,2-dichloroethylene (DCE)	5	1	U	1	0.4	U	1	0.4	U	1	0.4	U	1
cis-1,3-dichloropropylene	0.4	0.4	U	1	5	U	1	5	U	1	5	U	1
cyclohexane	NA	5	U	1	1	U	1	1	U	1	1	U	1
dibromochloromethane	5	1	U	1	1	U	1	1	U	1	1	U	1
dibromomethane	5	1	U	1	1	U	1	1	U	1	1	U	1
dichlorodifluoromethane	5	1	U	1	1	U	1	1	U	1	1	U	1
ethyl benzene	5	1	U	1	0.5	U	1	0.5	U	1	0.5	U	1
hexachlorobutadiene	0.5	1	U	1	1	U	1	1	U	1	1	U	1
isopropylbenzene	5	1	U	1	1	U	1	1	U	1	1	U	1
m- & p- xylenes	5	1	U	1	2.5	U	1	2.5	U	1	2.5	U	1
methyl tert-butyl ether (MTBE)	NA	1	U	1	1	U	1	1	U	1	1	U	1
methylacetate	10	50	U	1	50	U	1	50	U	1	50	U	1
methylcyclohexane	NA	5	U	1	5	U	1	5	U	1	5	U	1
methylene chloride	5	3	U	1	3	U	1	3	U	1	3	U	1
n-butylbenzene	5	1	U	1	1	U	1	1	U	1	1	U	1
n-propylbenzene	5	1	U	1	1	U	1	1	U	1	1	U	1
o-xylene	5	1	U	1	1	U	1	1	U	1	1	U	1
p-isopropyltoluene	5	1	U	1	1	U	1	1	U	1	1	U	1
sec-butylbenzene	5	1	U	1	1	U	1	1	U	1	1	U	1
styrene	5	1	U	1	1	U	1	1	U	1	1	U	1
tert-butyl alcohol	NA	50	U	1	50	U	1	50	U	1	50	U	1
tert-butylbenzene	5	1	U	1	1	U	1	1	U	1	1	U	1
tetrachloroethylene (PCE)	5	1	U	1	1	U	1	1	U	1	1	U	1
toluene	5	1	U	1	1	U	1	1	U	1	1	U	1
trans-1,2-dichloroethylene (DCE)	5	5	U	1	1	U	1	1	U	1	1	U	1
trans-1,3-dichloropropylene	0.4	0.4	U	1	5	U	1	5	U	1	5	U	1
trichloroethylene (TCE)	5	1	U	1	0.4	U	1	0.4	U	1	0.4	U	1
trichlorofluoromethane	5	1	U	1	1	U	1	1	U	1	1	U	1
Trichlorotrifluoroethane	5	1	U	1	1	U	1	1	U	1	1	U	1
vinyl chloride (VC)	2	1	U	1	1	U	1	1	U	1	1	U	1
xylenes, total	5	1	U	1	1	U	1	1	U	1	1	U	1
VOC TICs	AWQS												
unknown hydrocarbon	NA	45	J		ND			ND			ND		

value ≤ AWQS
Detected TICs

Q = Laboratory Qualifier DL = Dilution NA = not available (addtional flags: B-in blank, D-diluted, E-estimated, J-approximate)

Table 8: SVOCs in Groundwater

The Green, Newburgh, NY
BCP ID: C336099

GALLAGHER BASSETT | TECHNICAL SERVICES

All data in µg/L (ppb)	Sample	MW-01-20251106			DUP-20251106			MW-02-20251106			MW-03-20251106			MW-04-20251106			MW-05-20251106		
U= Not Detected ≥ value	Date	2025-11-06			2025-11-06			2025-11-06			2025-11-06			2025-11-06			2025-11-06		
SVOCs (8270)	**AWQS**	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL
1,1-biphenyl	NA	3.4	U	1	3.4	U	1	3.4	U	1	3.5	U	1	3.5	U	1	3.3	U	1
1,2,4,5-tetrachlorobenzene	NA	3.4	U	1	3.4	U	1	3.4	U	1	3.5	U	1	3.5	U	1	3.3	U	1
1,2,4-trichlorobenzene	5	4.9	U	1	4.9	U	1	4.8	U	1	5	U	1	5	U	1	4.7	U	1
1,2-dichlorobenzene	3	0.97	U	1	0.98	U	1	0.96	U	1	1	U	1	1	U	1	0.94	U	1
1,2-diphenylhydrazine (azobenzene)	ND	4.9	U	1	4.9	U	1	4.8	U	1	5	U	1	5	U	1	4.7	U	1
1,3-dichlorobenzene	3	0.97	U	1	0.98	U	1	0.96	U	1	1	U	1	1	U	1	0.94	U	1
1,4-dichlorobenzene	3	0.97	U	1	0.98	U	1	0.96	U	1	1	U	1	1	U	1	0.94	U	1
1,4-dioxane	0.35	0.2	U	1	0.2	U	1	0.2	U	1	0.2	U	1	0.2	U	1	0.2	U	1
2,2'-Oxybis(1-Chloropropane)	5	4.9	U	1	4.9	U	1	4.8	U	1	5	U	1	5	U	1	4.7	U	1
2,3,4,6-tetrachlorophenol	NA	4.9	U	1	4.9	U	1	4.8	U	1	5	U	1	5	U	1	4.7	U	1
2,4,5-trichlorophenol	1	0.97	U	1	0.98	U	1	0.96	U	1	1	U	1	1	U	1	0.94	U	1
2,4,6-trichlorophenol	1	0.97	U	1	0.98	U	1	0.96	U	1	1	U	1	1	U	1	0.94	U	1
2,4-dichlorophenol	5	0.97	U	1	0.98	U	1	0.96	U	1	1	U	1	1	U	1	0.94	U	1
2,4-dimethylphenol	50	0.97	U	1	0.98	U	1	0.96	U	1	1	U	1	1	U	1	0.94	U	1
2,4-dinitrophenol	10	0.97	U	1	0.98	U	1	0.96	U	1	1	U	1	1	U	1	0.94	U	1
2,4-dinitrotoluene	5	4.9	U	1	4.9	U	1	4.8	U	1	5	U	1	5	U	1	4.7	U	1
2,6-dinitrotoluene	5	4.9	U	1	4.9	U	1	4.8	U	1	5	U	1	5	U	1	4.7	U	1
2-chloronaphthalene	10	4.9	U	1	4.9	U	1	4.8	U	1	5	U	1	5	U	1	4.7	U	1
2-chlorophenol	1	0.97	U	1	0.98	U	1	0.96	U	1	1	U	1	1	U	1	0.94	U	1
2-methylnaphthalene	NA	4.9	U	1	4.9	U	1	4.8	U	1	5	U	1	5	U	1	4.7	U	1
2-methylphenol	1	0.97	U	1	0.98	U	1	0.96	U	1	1	U	1	1	U	1	0.94	U	1
2-nitroaniline	5	4.9	U	1	4.9	U	1	4.8	U	1	5	U	1	5	U	1	4.7	U	1
2-nitrophenol	1	0.97	U	1	0.98	U	1	0.96	U	1	1	U	1	1	U	1	0.94	U	1
3- & 4-methylphenols	1	0.97	U	1	0.98	U	1	0.96	U	1	1	U	1	1	U	1	0.94	U	1
3,3-dichlorobenzidine	5	4.9	U	1	4.9	U	1	4.8	U	1	5	U	1	5	U	1	4.7	U	1
3-nitroaniline	5	4.9	U	1	4.9	U	1	4.8	U	1	5	U	1	5	U	1	4.7	U	1
4,6-dinitro-2-methylphenol	NA	0.97	U	1	0.98	U	1	0.96	U	1	1	U	1	1	U	1	0.94	U	1
4-bromophenyl phenyl ether	NA	4.9	U	1	4.9	U	1	4.8	U	1	5	U	1	5	U	1	4.7	U	1
4-chloro-3-methylphenol	1	0.97	U	1	0.98	U	1	0.96	U	1	1	U	1	1	U	1	0.94	U	1
4-chloroaniline	5	3.4	U	1	3.4	U	1	3.4	U	1	3.5	U	1	3.5	U	1	3.3	U	1
4-chlorophenyl phenyl ether	NA	4.9	U	1	4.9	U	1	4.8	U	1	5	U	1	5	U	1	4.7	U	1
4-nitroaniline	5	4.9	U	1	4.9	U	1	4.8	U	1	5	U	1	5	U	1	4.7	U	1
4-nitrophenol	1	0.97	U	1	0.98	U	1	0.96	U	1	1	U	1	1	U	1	0.94	U	1
acenaphthene	20	4.9	U	1	4.9	U	1	4.8	U	1	5	U	1	5	U	1	4.7	U	1
acenaphthylene	NA	0.49	U	1	0.49	U	1	0.48	U	1	0.5	U	1	0.5	U	1	0.47	U	1
acetophenone	NA	4.9	U	1	4.9	U	1	4.8	U	1	5	U	1	5	U	1	4.7	U	1
aniline	5	3.4	U	1	3.4	U	1	3.4	U	1	3.5	U	1	3.5	U	1	3.3	U	1
anthracene	50	4.9	U	1	4.9	U	1	4.8	U	1	5	U	1	5	U	1	4.7	U	1
atrazine	NA	3.4	U	1	3.4	U	1	3.4	U	1	3.5	U	1	3.5	U	1	3.3	U	1
benzaldehyde	NA	3.4	U	1	3.4	U	1	3.4	U	1	3.5	U	1	3.5	U	1	3.3	U	1
benzidine	NA	4.4	U	1	4.4	U	1	4.3	U	1	4.5	U	1	4.5	U	1	4.2	U	1
benzo(a)anthracene	0.002	0.02	U	1	0.02	U	1	0.02	U	1	0.02	U	1	0.02	U	1	0.02	U	1
benzo(a)pyrene	ND	0.02	U	1	0.02	U	1	0.02	U	1	0.02	U	1	0.02	U	1	0.02	U	1
benzo(b)fluoranthene	0.002	0.02	U	1	0.02	U	1	0.02	U	1	0.02	U	1	0.02	U	1	0.02	U	1
benzo(g,h,i)perylene	NA	0.49	U	1	0.49	U	1	0.48	U	1	0.5	U	1	0.5	U	1	0.47	U	1
benzo(k)fluoranthene	0.002	0.02	U	1	0.02	U	1	0.02	U	1	0.02	U	1	0.02	U	1	0.02	U	1
benzoic acid	NA	24	U	1	25	U	1	24	U	1	25	U	1	25	U	1	24	U	1
benzoic acid	NA	4.9	U	1	4.9	U	1	4.8	U	1	5	U	1	5	U	1	4.7	U	1
benzyl butyl phthalate	50	4.9	U	1	4.9	U	1	4.8	U	1	5	U	1	5	U	1	4.7	U	1
bis(2-chloroethoxy)methane	5	4.9	U	1	4.9	U	1	4.8	U	1	5	U	1	5	U	1	4.7	U	1
bis(2-chloroethyl)ether	1	0.97	U	1	0.98	U	1	0.96	U	1	1	U	1	1	U	1	0.94	U	1
bis(2-ethylhexyl)phthalate	5	0.97	U	1	0.98	U	1	0.96	U	1	1	U	1	1	U	1	0.94	U	1
caprolactam	NA	3.4	U	1	3.4	U	1	3.4	U	1	3.5	U	1	3.5	U	1	3.3	U	1
carbazole	NA	4.9	U	1	4.9	U	1	4.8	U	1	5	U	1	5	U	1	4.7	U	1
chrysene	0.002	0.02	U	1	0.02	U	1	0.02	U	1	0.02	U	1	0.02	U	1	0.02	U	1
dibenzo(a,h)anthracene	NA	0.49	U	1	0.49	U	1	0.48	U	1	0.5	U	1	0.5	U	1	0.47	U	1
dibenzofuran	NA	4.9	U	1	4.9	U	1	4.8	U	1	5	U	1	5	U	1	4.7	U	1
diethyl phthalate	50	4.9	U	1	4.9	U	1	4.8	U	1	5	U	1	5	U	1	4.7	U	1
dimethyl phthalate	50	4.9	U	1	4.9	U	1	4.8	U	1	5	U	1	5	U	1	4.7	U	1
di-n-butyl phthalate	50	4.9	U	1	4.9	U	1	4.8	U	1	5	U	1	5	U	1	4.7	U	1
di-n-octyl phthalate	50	4.9	U	1	4.9	U	1	4.8	U	1	5	U	1	5	U	1	4.7	U	1
fluoranthene	50	4.9	U	1	4.9	U	1	4.8	U	1	5	U	1	5	U	1	4.7	U	1
fluorene	50	4.9	U	1	4.9	U	1	4.8	U	1	5	U	1	5	U	1	4.7	U	1
hexachlorobenzene	0.04	0.04	U	1	0.04	U	1	0.04	U	1	0.04	U	1	0.04	U	1	0.04	U	1
hexachlorobutadiene	0.5	0.49	U	1	0.49	U	1	0.48	U	1	0.5	U	1	0.5	U	1	0.47	U	1
hexachlorocyclopentadiene	5	0.49	U	1	0.49	U	1	0.48	U	1	0.5	U	1	0.5	U	1	0.47	U	1
hexachloroethane	5	0.97	U	1	0.98	U	1	0.96	U	1	1	U	1	1	U	1	0.94	U	1
indeno(1,2,3-cd)pyrene	0.002	0.02	U	1	0.02	U	1	0.02	U	1	0.02	U	1	0.02	U	1	0.02	U	1
isophorone	50	4.9	U	1	4.9	U	1	4.8	U	1	5	U	1	5	U	1	4.7	U	1
naphthalene	10	4.9	U	1	4.9	U	1	4.8	U	1	5	U	1	5	U	1	4.7	U	1
nitrobenzene	0.4	0.39	U	1	0.39	U	1	0.38	U	1	0.4	U	1	0.4	U	1	0.38	U	1
n-nitrosodimethylamine	NA	0.1	U	1	0.1	U	1	0.1	U	1	0.1	U	1	0.1	U	1	0.09	U	1
n-nitroso-di-n-propylamine	NA	4.9	U	1	4.9	U	1	4.8	U	1	5	U	1	5	U	1	4.7	U	1
n-nitrosodiphenylamine	50	4.9	U	1	4.9	U	1	4.8	U	1	5	U	1	5	U	1	4.7	U	1
pentachlorophenol	1	0.49	U	1	0.49	U	1	0.48	U	1	0.5	U	1	0.5	U	1	0.47	U	1
phenanthrene	50	0.49	U	1	0.49	U	1	0.48	U	1	0.5	U	1	0.5	U	1	0.47	U	1
phenol	1	0.97	U	1	0.98	U	1	0.96	U	1	1	U	1	1	U	1	0.94	U	1
pyrene	50	4.9	U	1	4.9	U	1	4.8	U	1	5	U	1	5	U	1	4.7	U	1
SVOC TICs	AWQS																		
1-Butene	NA	ND			ND			ND			ND			ND			ND		
Propene	NA	ND			ND			ND			ND			ND			ND		
unknown	NA	ND			ND			ND			ND			6.9	J		ND		

value ≤ AWQS
Detected TICs

Q = Laboratory Qualifier DL = Dilution NA = not available (addtional flags: B-in blank, D-diluted, E-estimated, J-approximate)

Table 8: SVOCs in Groundwater

The Green, Newburgh, NY
BCP ID: C336099

GALLAGHER BASSETT | TECHNICAL SERVICES

All data in µg/L (ppb)	Sample	MW-06-20251106			MW-07-20260316			DUP-20260316			MW-08-20260316		
U= Not Detected ≥ value	Date	2025-11-06			2026-03-16			2026-03-16			2026-03-16		
SVOCs (8270)	**AWQS**	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL
1,1-biphenyl	NA	3.3	U	1	3.3	U	1	3.4	U	1	3.3	U	1
1,2,4,5-tetrachlorobenzene	NA	3.3	U	1	3.3	U	1	3.4	U	1	3.3	U	1
1,2,4-trichlorobenzene	5	4.7	U	1	4.8	U	1	4.9	U	1	4.8	U	1
1,2-dichlorobenzene	3	0.94	U	1	0.95	U	1	0.97	U	1	0.95	U	1
1,2-diphenylhydrazine (azobenzene)	ND	4.7	U	1	4.8	U	1	4.9	U	1	4.8	U	1
1,3-dichlorobenzene	3	0.94	U	1	0.95	U	1	0.97	U	1	0.95	U	1
1,4-dichlorobenzene	3	0.94	U	1	0.95	U	1	0.97	U	1	0.95	U	1
1,4-dioxane	0.35	0.2	U	1	0.2	U	1	0.2	U	1	0.2	U	1
2,2'-Oxybis(1-Chloropropane)	5	4.7	U	1	4.8	U	1	4.9	U	1	4.8	U	1
2,3,4,6-tetrachlorophenol	NA	4.7	U	1	1	U	1	1	U	1	1	U	1
2,4,5-trichlorophenol	1	0.94	U	1	0.95	U	1	0.97	U	1	0.95	U	1
2,4,6-trichlorophenol	1	0.94	U	1	0.95	U	1	0.97	U	1	0.95	U	1
2,4-dichlorophenol	5	0.94	U	1	0.95	U	1	0.97	U	1	0.95	U	1
2,4-dimethylphenol	50	0.94	U	1	0.95	U	1	0.97	U	1	0.95	U	1
2,4-dinitrophenol	10	0.94	U	1	0.95	U	1	0.97	U	1	0.95	U	1
2,4-dinitrotoluene	5	4.7	U	1	4.8	U	1	4.9	U	1	4.8	U	1
2,6-dinitrotoluene	5	4.7	U	1	4.8	U	1	4.9	U	1	4.8	U	1
2-chloronaphthalene	10	4.7	U	1	4.8	U	1	4.9	U	1	4.8	U	1
2-chlorophenol	1	0.94	U	1	0.95	U	1	0.97	U	1	0.95	U	1
2-methylnaphthalene	NA	4.7	U	1	4.8	U	1	4.9	U	1	4.8	U	1
2-methylphenol	1	0.94	U	1	0.95	U	1	0.97	U	1	0.95	U	1
2-nitroaniline	5	4.7	U	1	4.8	U	1	4.9	U	1	4.8	U	1
2-nitrophenol	1	0.94	U	1	0.95	U	1	0.97	U	1	0.95	U	1
3- & 4-methylphenols	1	0.94	U	1	0.95	U	1	0.97	U	1	0.95	U	1
3,3-dichlorobenzidine	5	4.7	U	1	4.8	U	1	4.9	U	1	4.8	U	1
3-nitroaniline	5	4.7	U	1	4.8	U	1	4.9	U	1	4.8	U	1
4,6-dinitro-2-methylphenol	NA	0.94	U	1	0.95	U	1	0.97	U	1	0.95	U	1
4-bromophenyl phenyl ether	NA	4.7	U	1	4.8	U	1	4.9	U	1	4.8	U	1
4-chloro-3-methylphenol	1	0.94	U	1	0.95	U	1	0.97	U	1	0.95	U	1
4-chloroaniline	5	3.3	U	1	3.3	U	1	3.4	U	1	3.3	U	1
4-chlorophenyl phenyl ether	NA	4.7	U	1	4.8	U	1	4.9	U	1	4.8	U	1
4-nitroaniline	5	4.7	U	1	4.8	U	1	4.9	U	1	4.8	U	1
4-nitrophenol	1	0.94	U	1	0.95	U	1	0.97	U	1	0.95	U	1
acenaphthene	20	4.7	U	1	4.8	U	1	4.9	U	1	4.8	U	1
acenaphthylene	NA	0.47	U	1	0.48	U	1	0.49	U	1	0.48	U	1
acetophenone	NA	4.7	U	1	4.8	U	1	4.9	U	1	4.8	U	1
aniline	5	3.3	U	1	3.3	U	1	3.4	U	1	3.3	U	1
anthracene	50	4.7	U	1	4.8	U	1	4.9	U	1	4.8	U	1
atrazine	NA	3.3	U	1	3.3	U	1	3.4	U	1	3.3	U	1
benzaldehyde	NA	3.3	U	1	3.3	U	1	3.4	U	1	3.3	U	1
benzidine	NA	4.2	U	1	4.3	U	1	4.4	U	1	4.3	U	1
benzo(a)anthracene	0.002	0.02	U	1	0.02	U	1	0.02	U	1	0.02	U	1
benzo(a)pyrene	ND	0.02	U	1	0.02	U	1	0.02	U	1	0.02	U	1
benzo(b)fluoranthene	0.002	0.02	U	1	0.02	U	1	0.02	U	1	0.02	U	1
benzo(g,h,i)perylene	NA	0.47	U	1	0.48	U	1	0.49	U	1	0.48	U	1
benzo(k)fluoranthene	0.002	0.02	U	1	0.02	U	1	0.02	U	1	0.02	U	1
benzoic acid	NA	24	U	1	24	U	1	24	U	1	24	U	1
benzoic acid	NA	4.7	U	1	4.8	U	1	4.9	U	1	4.8	U	1
benzyl butyl phthalate	50	4.7	U	1	4.8	U	1	4.9	U	1	4.8	U	1
bis(2-chloroethoxy)methane	5	4.7	U	1	4.8	U	1	4.9	U	1	4.8	U	1
bis(2-chloroethyl)ether	1	0.94	U	1	0.95	U	1	0.97	U	1	0.95	U	1
bis(2-ethylhexyl)phthalate	5	0.94	U	1	5	U	1	5	U	1	5	U	1
caprolactam	NA	3.3	U	1	3.3	U	1	3.4	U	1	3.3	U	1
carbazole	NA	4.7	U	1	4.8	U	1	4.9	U	1	4.8	U	1
chrysene	0.002	0.02	U	1	0.02	U	1	0.02	U	1	0.02	U	1
dibenzo(a,h)anthracene	NA	0.47	U	1	0.48	U	1	0.49	U	1	0.48	U	1
dibenzofuran	NA	4.7	U	1	4.8	U	1	4.9	U	1	4.8	U	1
diethyl phthalate	50	4.7	U	1	4.8	U	1	4.9	U	1	4.8	U	1
dimethyl phthalate	50	4.7	U	1	4.8	U	1	4.9	U	1	4.8	U	1
di-n-butyl phthalate	50	4.7	U	1	4.8	U	1	4.9	U	1	4.8	U	1
di-n-octyl phthalate	50	4.7	U	1	4.8	U	1	4.9	U	1	4.8	U	1
fluoranthene	50	4.7	U	1	4.8	U	1	4.9	U	1	4.8	U	1
fluorene	50	4.7	U	1	4.8	U	1	4.9	U	1	4.8	U	1
hexachlorobenzene	0.04	0.04	U	1	0.04	U	1	0.04	U	1	0.04	U	1
hexachlorobutadiene	0.5	0.47	U	1	0.48	U	1	0.49	U	1	0.48	U	1
hexachlorocyclopentadiene	5	0.47	U	1	0.48	U	1	0.49	U	1	0.48	U	1
hexachloroethane	5	0.94	U	1	0.95	U	1	0.97	U	1	0.95	U	1
indeno(1,2,3-cd)pyrene	0.002	0.02	U	1	0.02	U	1	0.02	U	1	0.02	U	1
isophorone	50	4.7	U	1	4.8	U	1	4.9	U	1	4.8	U	1
naphthalene	10	4.7	U	1	4.8	U	1	4.9	U	1	4.8	U	1
nitrobenzene	0.4	0.38	U	1	0.38	U	1	0.39	U	1	0.38	U	1
n-nitrosodimethylamine	NA	0.09	U	1	0.1	U	1	0.1	U	1	0.1	U	1
n-nitroso-di-n-propylamine	NA	4.7	U	1	4.8	U	1	4.9	U	1	4.8	U	1
n-nitrosodiphenylamine	50	4.7	U	1	4.8	U	1	4.9	U	1	4.8	U	1
pentachlorophenol	1	0.47	U	1	0.48	U	1	0.49	U	1	0.48	U	1
phenanthrene	50	0.47	U	1	0.48	U	1	0.49	U	1	0.48	U	1
phenol	1	0.94	U	1	0.95	U	1	0.97	U	1	0.95	U	1
pyrene	50	4.7	U	1	4.8	U	1	4.9	U	1	4.8	U	1
SVOC TICs	AWQS												
1-Butene	NA	6	JN		ND			ND			ND		
Propene	NA	25	JN		ND			ND			ND		
unknown	NA	ND			ND			ND			ND		

value ≤ AWQS
Detected TICs

Q = Laboratory Qualifier DL = Dilution NA = not available (addtional flags: B-in blank, D-diluted, E-estimated, J-approximate)

GALLAGHER BASSETT | TECHNICAL SERVICES

Table 9: TAL Metals (Total) in Groundwater

All data in µg/L (ppb)	Sample	MW-01-20251106			DUP-20251106			MW-02-20251106			MW-03-20251106			MW-04-20251106		
U= Not Detected ≥ value	Date	2025-11-06**			2025-11-06**			2025-11-06**			2025-11-06**			2025-11-06**		
Metals (6010/7473)	**AWQS**	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL
Aluminum	NA	1,230		*1*	187		*1*	20	*U*	*1*	87		*1*	20	*U*	*1*
Antimony	3	3	*U*	*5*	3	*U*	*5*	3	*U*	*5*	3	*U*	*5*	3	*JU*	*5*
Arsenic	25	4	*U*	*1*	4	*U*	*1*	4	*U*	*1*	4	*U*	*1*	4	*U*	*1*
Barium	1,000	34		*1*	27		*1*	79		*1*	200		*1*	153		*1*
Beryllium	3	1	*U*	*1*	1	*U*	*1*	1	*U*	*1*	1	*U*	*1*	1	*U*	*1*
Cadmium	5	4	*U*	*1*	4	*U*	*1*	4	*U*	*1*	4	*U*	*1*	4	*U*	*1*
Calcium	NA	94,000		*1*	91,500		*1*	104,000		*1*	126,000		*1*	240,000		*10*
Chromium (+3)	50	1	*U*	*1*	1	*U*	*1*	1	*U*	*1*	1	*U*	*1*	1	*U*	*1*
Chromium (+6)	50	10	*U*	*1*	NA			10	*U*	*1*	10	*U*	*1*	10	*U*	*1*
Cobalt	5	1	*J*	*1*	5	*U*	*1*	5	*U*	*1*	2	*J*	*1*	1	*J*	*1*
Copper	200	5	*J*	*1*	5	*U*	*1*	5	*U*	*1*	5	*U*	*1*	5		*1*
Iron	300	2,290		*1*	380		*1*	10	*U*	*1*	150		*1*	30		*1*
Lead	25	1	*U*	*1*	1	*U*	*1*	1	*U*	*1*	1	*U*	*1*	1		*1*
Magnesium	35,000	30,800		*1*	31,100		*1*	40,800		*1*	42,300		*1*	58,800		*1*
Manganese	300	140		*1*	34		*1*	109		*1*	468		*1*	1,890		*1*
Mercury	0.7	0.2	*U*	*0*	0.2	*U*	*0*	0.2	*U*	*0*	0.2	*U*	*0*	0.2	*U*	*0*
Nickel	100	1	*J*	*1*	4	*U*	*1*	4	*U*	*1*	5		*1*	2	*J*	*1*
Potassium	NA	4,900		*1*	4,400		*1*	3,300		*1*	4,800		*10*	6,800		*10*
Selenium	10	10	*JU*	*5*	10	*JU*	*5*	10	*JU*	*5*	10	*U*	*5*	10	*U*	*5*
Silver	50	5	*U*	*1*	5	*U*	*1*	5	*U*	*1*	5	*U*	*1*	5	*U*	*1*
Sodium	20,000	90,200		*10*	91,000		*10*	174,000		*10*	494,000		*100*	191,000		*10*
Thallium	0.5	0.5	*U*	*5*	0.5	*U*	*5*	0.5	*U*	*5*	0.5	*U*	*5*	0.5	*U*	*5*
Vanadium	14	2	*J*	*1*	10	*U*	*1*	10	*U*	*1*	10	*U*	*1*	10	*U*	*1*
Zinc	2,000	11		*1*	3	*J*	*1*	2	*J*	*1*	4	*J*	*1*	4	*J*	*1*
Cyanide (total)	200	10	*U*	*1*	10	*U*	*1*	10	*U*	*1*	10	*U*	*1*	10	*U*	*1*

value ≤ AWQS
value > AWQS

**** Cr^{+6} sampled 12/04/2025**

Q = Laboratory Qualifier DL = Dilution NA = not available (addtional flags: B-in blank, D-diluted, E-estimated, J-approximate)

Table 9: TAL Metals (Total) in Groundwater

All data in µg/L (ppb)	**Sample**	**MW-05-20251106**			**MW-06-20251106**			**MW-07-20260316**			**DUP-20260316**			**MW-08-20260316**		
U= Not Detected ≥ value	Date	2025-11-06*			2025-11-06**			2026-03-16			2026-03-16			2026-03-16		
Metals (6010/7473)	**AWQS**	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL
Aluminum	NA	172		*1*	979		*1*	979		*1*	970		*1*	129		*1*
Antimony	3	3	*JU*	*5*	3	*U*	*5*	3	*U*	*1*	3	*U*	*1*	3	*U*	*1*
Arsenic	25	4	*U*	*1*	4	*U*	*1*	4	*U*	*1*	4	*U*	*1*	4	*U*	*1*
Barium	1,000	305		*1*	116		*1*	119		*1*	118		*1*	59		*1*
Beryllium	3	1	*U*	*1*	1	*U*	*1*	1	*U*	*1*	1	*U*	*1*	1	*U*	*1*
Cadmium	5	4	*U*	*1*	4	*U*	*1*	1	*J*	*1*	1	*J*	*1*	1	*J*	*1*
Calcium	NA	160,000		*10*	210,000		*10*	156,000		*10*	155,000		*10*	100,000		*1*
Chromium (+3)	50	1	*U*	*1*	1	*U*	*1*	1		*1*	1	*U*	*1*	1	*U*	*1*
Chromium (+6)	50	10	*U*	*1*	10	*U*	*1*	10	*U*	*1*	10	*U*	*1*	10	*U*	*1*
Cobalt	5	5	*U*	*1*	1	*J*	*1*	2	*J*	*1*	2	*J*	*1*	5	*U*	*1*
Copper	200	2	*J*	*1*	2	*J*	*1*	3	*J*	*1*	3	*J*	*1*	3	*J*	*1*
Iron	300	210		*1*	1,140		*1*	980		*1*	980		*1*	120		*1*
Lead	25	1	*U*	*1*	2		*1*	2		*1*	1	*U*	*1*	1	*U*	*1*
Magnesium	35,000	43,000		*1*	65,300		*1*	40,700		*1*	41,000		*1*	51,900		*1*
Manganese	300	754		*1*	2,970		*10*	942		*1*	951		*1*	33		*1*
Mercury	0.7	0.2	*U*	*0*	0.2	*U*	*0*	0.2	*U*		0.2	*U*		0.2	*U*	
Nickel	100	4	*U*	*1*	2	*J*	*1*	2	*J*	*1*	2	*J*	*1*	4	*U*	*1*
Potassium	NA	11,900		*10*	7,200		*10*	7,800		*10*	7,900		*10*	6,000		*10*
Selenium	10	10	*JU*	*5*	10	*U*	*5*	10	*U*	*1*	10	*U*	*1*	10	*U*	*1*
Silver	50	5	*U*	*1*	5	*U*	*1*	5	*U*	*1*	5	*U*	*1*	5	*U*	*1*
Sodium	20,000	106,000		*10*	255,000		*10*	159,000		*10*	159,000		*10*	84,300		*10*
Thallium	0.5	0.5	*U*	*5*	0.5	*U*	*5*	0.5	*U*	*1*	0.5	*U*	*1*	0.5	*U*	*1*
Vanadium	14	10	*U*	*1*	1	*J*	*1*	1	*J*	*1*	1	*J*	*1*	10	*U*	*1*
Zinc	2,000	3	*J*	*1*	4	*J*	*1*	7	*J*	*1*	7	*J*	*1*	10	*U*	*1*
Cyanide (total)	200	10	*U*	*1*	10	*U*	*1*	10	*U*	*1*	10	*U*	*1*	10	*U*	*1*

value ≤ AWQS
value > AWQS

**** Cr^{+6} sampled 12/04/2025**

Q = Laboratory Qualifier DL = Dilution NA = not available (addtional flags: B-in blank, D-diluted, E-estimated, J-approximate)

Table 10: TAL Metals (Dissolved) in Groundwater

All data in µg/L (ppb)	Sample	MW-01-20251106			DUP-20251106			MW-02-20251106			MW-03-20251106			MW-04-20251106		
U= Not Detected ≥ value	Date	2025-11-06			2025-11-06			2025-11-06			2025-11-06			2025-11-06		
Metals (6010/7473)	**AWQS**	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL
Aluminum	NA	11	*U*	*1*	11	*U*	*1*	11	*U*	*1*	11	*U*	*1*	11	*U*	*1*
Antimony	3	0.6	*JU*	*2*	0.6	*JU*	*2*	0.6	*JU*	*2*	0.6	*JU*	*2*	0.6	*JU*	*2*
Arsenic	25	3	*U*	*1*	3	*U*	*1*	3	*U*	*1*	4		*1*	4		*1*
Barium	1,000	25		*1*	25		*1*	76		*1*	178		*1*	145		*1*
Beryllium	3	1	*U*	*1*	1	*U*	*1*	1	*U*	*1*	1	*U*	*1*	1	*U*	*1*
Cadmium	5	4	*U*	*1*	4	*U*	*1*	4	*U*	*1*	4	*U*	*1*	4	*U*	*1*
Calcium	NA	94,000		*1*	95,500		*1*	107,000		*1*	126,000		*1*	240,000		*10*
Chromium (+3)	50	1	*U*	*1*	1	*U*	*1*	1	*U*	*1*	1	*U*	*1*	1	*U*	*1*
Cobalt	5	5	*U*	*1*	5	*U*	*1*	5	*U*	*1*	2	*J*	*1*	1	*J*	*1*
Copper	200	5	*U*	*1*	5	*U*	*1*	5	*U*	*1*	5	*U*	*1*	4	*J*	*1*
Iron	300	10	*U*	*1*	10	*U*	*1*	10	*U*	*1*	10	*U*	*1*	10	*U*	*1*
Lead	25	2	*U*	*1*	2	*U*	*1*	2	*U*	*1*	2	*U*	*1*	2	*U*	*1*
Magnesium	35,000	30,400		*1*	31,100		*1*	40,300		*1*	42,800		*1*	59,100		*1*
Manganese	300	24		*1*	24		*1*	112		*1*	472		*1*	1,820		*1*
Mercury	0.7	0.2	*U*	*0*	0.2	*U*	*0*	0.2	*U*	*0*	0.2	*U*	*0*	0.2	*U*	*0*
Nickel	100	4	*U*	*1*	4	*U*	*1*	4	*U*	*1*	5		*1*	3	*J*	*1*
Potassium	NA	4,200		*1*	4,200		*1*	2,900		*1*	4,300		*1*	5,400		*10*
Selenium	10	4	*JU*	*2*	4	*JU*	*2*	4	*JU*	*2*	4	*U*	*2*	4	*U*	*2*
Silver	50	5	*U*	*1*	5	*U*	*1*	5	*U*	*1*	5	*U*	*1*	5	*U*	*1*
Sodium	20,000	87,300		*10*	83,100		*10*	169,000		*10*	523,000		*100*	184,000		*10*
Thallium	0.5	0.6	*U*	*2*	0.6	*U*	*2*	0.6	*U*	*2*	0.6	*U*	*2*	0.6	*U*	*2*
Vanadium	14	11	*U*	*1*	11	*U*	*1*	11	*U*	*1*	11	*U*	*1*	11	*U*	*1*
Zinc	2,000	4	*J*	*1*	4	*J*	*1*	4	*J*	*1*	5	*J*	*1*	7	*J*	*1*

value ≤ AWQS
value > AWQS

Q = Laboratory Qualifier DL = Dilution NA = not available (addtional flags: B-in blank, D-diluted, E-estimated, J-approximate)

Table 10: TAL Metals (Dissolved) in Groundwater

All data in µg/L (ppb)	**Sample**	**MW-05-20251106**			**MW-06-20251106**			**MW-07-20260316**			**DUP-20260316**			**MW-08-20260316**		
U= Not Detected ≥ value	Date	2025-11-06			2025-11-06			2026-03-16			2026-03-16			2026-03-16		
Metals (6010/7473)	**AWQS**	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL
Aluminum	NA	11	*U*	*1*	11	*U*	*1*	11	*U*	*1*	11	*U*	*1*	11	*U*	*1*
Antimony	3	0.6	*JU*	*2*	0.6	*JU*	*2*	3	*U*	*1*	3	*U*	*1*	3	*U*	*1*
Arsenic	25	3	*U*	*1*	3		*1*	9		*1*	8		*1*	10		*1*
Barium	1,000	302		*1*	109		*1*	117		*1*	113		*1*	58		*1*
Beryllium	3	1	*U*	*1*	1	*U*	*1*	1	*U*	*1*	1	*U*	*1*	1	*U*	*1*
Cadmium	5	4	*U*	*1*	4	*U*	*1*	1	*J*	*1*	4	*U*	*1*	1	*J*	*1*
Calcium	NA	156,000		*1*	204,000		*10*	148,000		*1*	152,000		*1*	97,100		*1*
Chromium (+3)	50	1	*U*	*1*	1	*U*	*1*	1	*U*	*1*	1	*U*	*1*	1	*U*	*1*
Cobalt	5	5	*U*	*1*	1	*J*	*1*	2	*J*	*1*	2	*J*	*1*	5	*U*	*1*
Copper	200	5	*U*	*1*	5	*U*	*1*	1	*J*	*1*	5	*U*	*1*	5	*J*	*1*
Iron	300	10	*U*	*1*	10	*U*	*1*	10	*U*	*1*	10	*U*	*1*	10	*U*	*1*
Lead	25	2	*U*	*1*	1	*J*	*1*	2	*U*	*1*	2	*U*	*1*	2	*U*	*1*
Magnesium	35,000	41,500		*1*	62,600		*1*	39,700		*1*	40,000		*1*	49,100		*1*
Manganese	300	726		*1*	2,970		*10*	1,120		*1*	912		*1*	36		*1*
Mercury	0.7	0.2	*U*	*0*	0.2	*U*	*0*	0.2	*U*		0.2	*U*		0.2	*U*	
Nickel	100	4	*U*	*1*	1	*J*	*1*	4	*U*	*1*	4	*U*	*1*	4	*U*	*1*
Potassium	NA	10,700		*10*	7,100		*10*	9,400		*10*	7,600		*10*	6,300		*10*
Selenium	10	4	*JU*	*2*	4	*U*	*2*	10	*U*	*1*	10	*U*	*1*	10	*U*	*1*
Silver	50	5	*U*	*1*	5	*U*	*1*	5	*U*	*1*	5	*U*	*1*	5	*U*	*1*
Sodium	20,000	92,200		*10*	244,000		*10*	161,000		*10*	162,000		*10*	80,200		*10*
Thallium	0.5	0.6	*U*	*2*	0.6	*U*	*2*	0.5	*U*	*1*	0.5	*U*	*1*	0.5	*U*	*1*
Vanadium	14	11	*U*	*1*	1	*J*	*1*	11	*U*	*1*	11	*U*	*1*	11	*U*	*1*
Zinc	2,000	4	*J*	*1*	4	*J*	*1*	10	*J*	*1*	9	*J*	*1*	7	*J*	*1*

value ≤ AWQS
value > AWQS

Q = Laboratory Qualifier DL = Dilution NA = not available (addtional flags: B-in blank, D-diluted, E-estimated, J-approximate)

Table 11: Pesticides, PCBs, and Herbicides in Groundwater

The Green, Newburgh, NY
BCP ID: C336099

GALLAGHER BASSETT | TECHNICAL SERVICES

All data in µg/L (ppb)	Sample	MW-01-20251106			DUP-20251106			MW-02-20251106			MW-03-20251106			MW-04-20251106		
U= Not Detected ≥ value	Date	2025-11-06			2025-11-06			2025-11-06			2025-11-06			2025-11-06		
Pesticides (8081)	**AWQS**	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL
4,4' -DDD	0	0.005	U	1	0.005	U	1	0.005	U	1	0.005	U	1	0.005	U	1
4,4' -DDE	0.2	0.005	U	1	0.005	U	1	0.005	U	1	0.005	U	1	0.005	U	1
4,4' -DDT	0.2	0.005	U	1	0.005	U	1	0.005	U	1	0.005	U	1	0.005	U	1
a-BHC	0.01	0.005	U	1	0.005	U	1	0.005	U	1	0.005	U	1	0.005	U	1
a-Chlordane	0.05	0.01	U	1	0.01	U	1	0.01	U	1	0.009	U	1	0.01	U	1
Alachlor	0.5	0.074	U	1	0.074	U	1	0.072	U	1	0.071	U	1	0.075	U	1
Aldrin	ND	0.002	U	1	0.002	U	1	0.001	U	1	0.001	U	1	0.002	U	1
b-BHC	0.04	0.005	U	1	0.005	U	1	0.005	U	1	0.005	U	1	0.005	U	1
Chlordane	0.05	0.049	U	1	0.049	U	1	0.048	U	1	0.047	U	1	0.05	U	1
d-BHC	0.04	0.005	U	1	0.005	U	1	0.005	U	1	0.005	U	1	0.005	U	1
Dieldrin	0.004	0.002	U	1	0.002	U	1	0.001	U	1	0.01	U	1	0.002	U	1
Endosulfan I	NA	0.01	U	1	0.01	U	1	0.01	U	1	0.009	U	1	0.01	U	1
Endosulfan II	NA	0.01	U	1	0.01	U	1	0.01	U	1	0.009	U	1	0.01	U	1
Endosulfan sulfate	NA	0.01	U	1	0.01	U	1	0.01	U	1	0.009	U	1	0.01	U	1
Endrin	ND	0.01	U	1	0.01	U	1	0.01	U	1	0.009	U	1	0.01	U	1
Endrin aldehyde	5	0.01	U	1	0.01	U	1	0.01	U	1	0.009	U	1	0.01	U	1
Endrin ketone	5	0.01	U	1	0.01	U	1	0.01	U	1	0.009	U	1	0.01	U	1
g-BHC	0.05	0.005	U	1	0.005	U	1	0.005	U	1	0.005	U	1	0.005	U	1
g-Chlordane	0.05	0.01	U	1	0.01	U	1	0.01	U	1	0.009	U	1	0.01	U	1
Heptachlor	0.04	0.01	U	1	0.01	U	1	0.01	U	1	0.009	U	1	0.01	U	1
Heptachlor epoxide	0.03	0.01	U	1	0.01	U	1	0.01	U	1	0.009	U	1	0.01	U	1
Methoxychlor	35	0.098	U	1	0.098	U	1	0.096	U	1	0.094	U	1	0.1	U	1
Toxaphene	0.06	0.2	U	1	0.2	U	1	0.19	U	1	0.19	U	1	0.2	U	1

	Sample	MW-01-20251106			DUP-20251106			MW-02-20251106			MW-03-20251106			MW-04-20251106		
	Date	2025-11-06			2025-11-06			2025-11-06			2025-11-06			2025-11-06		
PBCs (8082)	**AWQS**	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL
PCB-1016	0.09	0.049	U	1	0.049	U	1	0.048	U	1	0.047	U	1	0.05	U	1
PCB-1221	0.09	0.049	U	1	0.049	U	1	0.048	U	1	0.047	U	1	0.05	U	1
PCB-1232	0.09	0.049	U	1	0.049	U	1	0.048	U	1	0.047	U	1	0.05	U	1
PCB-1242	0.09	0.049	U	1	0.049	U	1	0.048	U	1	0.047	U	1	0.05	U	1
PCB-1248	0.09	0.049	U	1	0.049	U	1	0.048	U	1	0.047	U	1	0.05	U	1
PCB-1254	0.09	0.049	U	1	0.049	U	1	0.048	U	1	0.047	U	1	0.05	U	1
PCB-1260	0.09	0.049	U	1	0.049	U	1	0.048	U	1	0.047	U	1	0.05	U	1
PCB-1262	0.09	0.049	U	1	0.049	U	1	0.048	U	1	0.047	U	1	0.05	U	1
PCB-1268	0.09	0.049	U	1	0.049	U	1	0.048	U	1	0.047	U	1	0.05	U	1
Total PCBs	0.09	ND			ND			ND			ND			ND		

	Sample	MW-01-20251106			DUP-20251106			MW-02-20251106			MW-03-20251106			MW-04-20251106		
	Date	2025-11-06			2025-11-06			2025-11-06			2025-11-06			2025-11-06		
Herbicides (8151)	**AWQS**	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL
2,4,5-T	35	0.25	U	1	0.24	U	1	0.24	U	1	0.25	U	1	0.25	U	1
2,4,5-TP (Silvex)	0.26	0.27	U	1	0.24	U	1	0.24	U	1	0.25	U	1	0.25	U	1
2,4-D	50	0.49	U	1	0.47	U	1	0.48	U	1	0.49	U	1	0.5	U	1
2,4-DB	NA	4.9	U	1	4.7	U	1	4.8	U	1	4.9	U	1	5	U	1
Dalapon	50	0.25	U	1	0.24	U	1	0.24	U	1	0.25	U	1	0.25	U	1
Dicamba	0.44	0.25	U	1	0.24	U	1	0.24	U	1	0.25	U	1	0.25	U	1
Dichloroprop	NA	0.49	U	1	0.47	U	1	0.48	U	1	0.49	U	1	0.5	U	1
Dinoseb	1	0.49	U	1	0.47	U	1	0.48	U	1	0.49	U	1	0.5	U	1

value ≤ AWQS

Q = Laboratory Qualifier DL = Dilution NA = not available (addtional flags: B-in blank, D-diluted, E-estimated, J-approximate)

Table 11: Pesticides, PCBs, and Herbicides in Groundwater

The Green, Newburgh, NY
BCP ID: C336099

GALLAGHER BASSETT | TECHNICAL SERVICES

All data in µg/L (ppb)	Sample	MW-05-20251106			MW-06-20251106			MW-07-20260316			DUP-20260316			MW-08-20260316		
U= Not Detected ≥ value	Date	2025-11-06			2025-11-06			2026-03-16			2026-03-16			2026-03-16		
Pesticides (8081)	**AWQS**	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL
4,4' -DDD	0	0.005	U	1	0.005	U	1	0.005	U	1	0.005	U	1	0.005	U	1
4,4' -DDE	0.2	0.005	U	1	0.005	U	1	0.005	U	1	0.005	U	1	0.005	U	1
4,4' -DDT	0.2	0.005	U	1	0.005	U	1	0.005	U	1	0.005	U	1	0.005	U	1
a-BHC	0.01	0.005	U	1	0.005	U	1	0.005	U	1	0.005	U	1	0.005	U	1
a-Chlordane	0.05	0.009	U	1	0.01	U	1	0.009	U	1	0.01	U	1	0.01	U	1
Alachlor	0.5	0.071	U	1	0.071	U	1	0.071	U	1	0.073	U	1	0.071	U	1
Aldrin	ND	0.001	U	1	0.001	U	1	0.001	U	1	0.002	U	1	0.001	U	1
b-BHC	0.04	0.005	U	1	0.005	U	1	0.005	U	1	0.005	U	1	0.005	U	1
Chlordane	0.05	0.047	U	1	0.048	U	1	0.047	U	1	0.049	U	1	0.048	U	1
d-BHC	0.04	0.005	U	1	0.005	U	1	0.005	U	1	0.005	U	1	0.005	U	1
Dieldrin	0.004	0.001	U	1	0.001	U	1	0.001	U	1	0.002	U	1	0.001	U	1
Endosulfan I	NA	0.009	U	1	0.01	U	1	0.009	U	1	0.01	U	1	0.01	U	1
Endosulfan II	NA	0.009	U	1	0.01	U	1	0.009	U	1	0.01	U	1	0.01	U	1
Endosulfan sulfate	NA	0.009	U	1	0.01	U	1	0.009	U	1	0.01	U	1	0.01	U	1
Endrin	ND	0.009	U	1	0.01	U	1	0.009	U	1	0.01	U	1	0.01	U	1
Endrin aldehyde	5	0.009	U	1	0.01	U	1	0.009	U	1	0.01	U	1	0.01	U	1
Endrin ketone	5	0.009	U	1	0.01	U	1	0.009	U	1	0.01	U	1	0.01	U	1
g-BHC	0.05	0.005	U	1	0.005	U	1	0.005	U	1	0.005	U	1	0.005	U	1
g-Chlordane	0.05	0.009	U	1	0.01	U	1	0.009	U	1	0.01	U	1	0.01	U	1
Heptachlor	0.04	0.009	U	1	0.01	U	1	0.009	U	1	0.01	U	1	0.01	U	1
Heptachlor epoxide	0.03	0.009	U	1	0.01	U	1	0.009	U	1	0.01	U	1	0.01	U	1
Methoxychlor	35	0.094	U	1	0.095	U	1	0.094	U	1	0.097	U	1	0.095	U	1
Toxaphene	0.06	0.19	U	1	0.19	U	1	0.19	U	1	0.19	U	1	0.19	U	1

	Sample	MW-05-20251106			MW-06-20251106			MW-07-20260316			DUP-20260316			MW-08-20260316		
	Date	2025-11-06			2025-11-06			2026-03-16			2026-03-16			2026-03-16		
PBCs (8082)	**AWQS**	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL
PCB-1016	0.09	0.047	U	1	0.048	U	1	0.047	U	1	0.049	U	1	0.048	U	1
PCB-1221	0.09	0.047	U	1	0.048	U	1	0.047	U	1	0.049	U	1	0.048	U	1
PCB-1232	0.09	0.047	U	1	0.048	U	1	0.047	U	1	0.049	U	1	0.048	U	1
PCB-1242	0.09	0.047	U	1	0.048	U	1	0.047	U	1	0.049	U	1	0.048	U	1
PCB-1248	0.09	0.047	U	1	0.048	U	1	0.047	U	1	0.049	U	1	0.048	U	1
PCB-1254	0.09	0.047	U	1	0.048	U	1	0.047	U	1	0.049	U	1	0.048	U	1
PCB-1260	0.09	0.047	U	1	0.048	U	1	0.047	U	1	0.049	U	1	0.048	U	1
PCB-1262	0.09	0.047	U	1	0.048	U	1	0.047	U	1	0.049	U	1	0.048	U	1
PCB-1268	0.09	0.047	U	1	0.048	U	1	0.047	U	1	0.049	U	1	0.048	U	1
Total PCBs	0.09	ND			ND			ND			ND			ND		

	Sample	MW-05-20251106			MW-06-20251106			MW-07-20260316			DUP-20260316			MW-08-20260316		
	Date	2025-11-06			2025-11-06			2026-03-16			2026-03-16			2026-03-16		
Herbicides (8151)	**AWQS**	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL
2,4,5-T	35	0.23	U	1	0.24	U	1	0.24	U	1	0.24	U	1	0.24	U	1
2,4,5-TP (Silvex)	0.26	0.23	U	1	0.24	U	1	0.24	U	1	0.24	U	1	0.24	U	1
2,4-D	50	0.47	U	1	0.47	U	1	0.47	U	1	0.47	U	1	0.47	U	1
2,4-DB	NA	4.7	U	1	4.7	U	1	4.7	U	1	4.7	U	1	4.7	U	1
Dalapon	50	0.23	U	1	0.24	U	1	0.24	U	1	0.24	U	1	0.24	U	1
Dicamba	0.44	0.23	U	1	0.24	U	1	0.24	U	1	0.24	U	1	0.24	U	1
Dichloroprop	NA	0.47	U	1	0.47	U	1	0.47	U	1	0.47	U	1	0.47	U	1
Dinoseb	1	0.47	U	1	0.47	U	1	0.47	U	1	0.47	U	1	0.47	U	1

value ≤ AWQS

Q = Laboratory Qualifier DL = Dilution NA = not available (addtional flags: B-in blank, D-diluted, E-estimated, J-approximate)

All data in ng/L (ppt)	Sample	MW-01-20251106			DUP-20251106			MW-02-20251106			MW-03-20251106			MW-04-20251106			MW-05-20251106		
U= Not Detected ≥ value	Date	2025-11-06			2025-11-06			2025-11-06			2025-11-06			2025-11-06			2025-11-06		
PFAS (1633)	WQGV	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL
11Cl-PF3OUdS	NA	8.33	*U*	*1*	8.07	*U*	*1*	8.09	*U*	*1*	7.85	*U*	*1*	7.73	*U*	*1*	7.24	*U*	*1*
1H,1H,2H,2H-Perfluorodecanesulfonic acid	NA	8.33	*U*	*1*	8.07	*U*	*1*	8.09	*U*	*1*	7.85	*U*	*1*	7.73	*U*	*1*	7.24	*U*	*1*
1H,1H,2H,2H-Perfluorohexanesulfonic acid	NA	8.33	*U*	*1*	8.07	*U*	*1*	8.09	*U*	*1*	7.85	*U*	*1*	7.73	*U*	*1*	7.24	*U*	*1*
1H,1H,2H,2H-Perfluorooctanesulfonic acid	NA	8.33	*U*	*1*	8.07	*U*	*1*	8.09	*U*	*1*	7.85	*U*	*1*	7.73	*U*	*1*	7.24	*U*	*1*
3:3FTCA	NA	10.4	*U*	*1*	10.1	*U*	*1*	10.1	*U*	*1*	9.81	*U*	*1*	9.66	*U*	*1*	9.05	*U*	*1*
5:3FTCA	NA	52	*U*	*1*	50.4	*U*	*1*	50.5	*U*	*1*	49.1	*U*	*1*	48.3	*U*	*1*	45.2	*U*	*1*
7:3FTCA	NA	52	*U*	*1*	50.4	*U*	*1*	50.5	*U*	*1*	49.1	*U*	*1*	48.3	*U*	*1*	45.2	*U*	*1*
9Cl-PF3ONS	NA	8.33	*U*	*1*	8.07	*U*	*1*	8.09	*U*	*1*	7.85	*U*	*1*	7.73	*U*	*1*	7.24	*U*	*1*
ADONA	NA	8.33	*U*	*1*	8.07	*U*	*1*	8.09	*U*	*1*	7.85	*U*	*1*	7.73	*U*	*1*	7.24	*U*	*1*
HFPO-DA	NA	8.33	*U*	*1*	8.07	*U*	*1*	8.09	*U*	*1*	7.85	*U*	*1*	7.73	*U*	*1*	7.24	*U*	*1*
NEtFOSA	NA	2.08	*U*	*1*	2.02	*U*	*1*	2.02	*U*	*1*	0.564	*J*	*1*	1.93	*U*	*1*	1.81	*U*	*1*
NEtFOSAA	NA	2.08	*U*	*1*	2.02	*U*	*1*	2.02	*U*	*1*	1.96	*U*	*1*	1.93	*U*	*1*	1.81	*U*	*1*
NEtFOSE	NA	20.8	*U*	*1*	20.2	*U*	*1*	20.2	*U*	*1*	19.6	*U*	*1*	19.3	*U*	*1*	18.1	*U*	*1*
NFDHA	NA	4.16	*U*	*1*	4.03	*U*	*1*	4.04	*U*	*1*	3.92	*U*	*1*	3.86	*U*	*1*	3.62	*U*	*1*
NMeFOSA	NA	2.08	*U*	*1*	2.02	*U*	*1*	2.02	*U*	*1*	0.426	*J*	*1*	1.93	*U*	*1*	1.81	*U*	*1*
NMeFOSAA	NA	2.08	*U*	*1*	2.02	*U*	*1*	2.02	*U*	*1*	1.96	*U*	*1*	1.93	*U*	*1*	1.81	*U*	*1*
NMeFOSE	NA	20.8	*U*	*1*	20.2	*U*	*1*	20.2	*U*	*1*	19.6	*U*	*1*	19.3	*U*	*1*	18.1	*U*	*1*
Perfluoro-1-decanesulfonic acid (PFDS)	NA	2.08	*U*	*1*	2.02	*U*	*1*	2.02	*U*	*1*	1.96	*U*	*1*	1.93	*U*	*1*	1.81	*U*	*1*
Perfluoro-1-heptanesulfonic acid (PFHpS)	NA	2.08	*U*	*1*	2.02	*U*	*1*	2.02	*U*	*1*	1.96	*U*	*1*	1.93	*U*	*1*	1.81	*U*	*1*
Perfluoro-1-octanesulfonamide (FOSA)	NA	2.08	*U*	*1*	2.02	*U*	*1*	2.02	*U*	*1*	1.96	*U*	*1*	1.93	*U*	*1*	1.81	*U*	*1*
Perfluorobutanesulfonic acid (PFBS)	NA	2.73		*1*	2.13		*1*	2.25		*1*	4.88		*1*	1.63	*J*	*1*	1.81	*U*	*1*
Perfluorodecanoic acid (PFDA)	NA	2.08	*U*	*1*	2.02	*U*	*1*	2.02	*U*	*1*	1.96	*U*	*1*	1.93	*U*	*1*	1.81	*U*	*1*
Perfluorododecane Sulfonic Acid (PFDoDS)	NA	2.08	*U*	*1*	2.02	*U*	*1*	2.02	*U*	*1*	1.96	*U*	*1*	1.93	*U*	*1*	1.81	*U*	*1*
Perfluorododecanoic acid (PFDoA)	NA	2.08	*U*	*1*	2.02	*U*	*1*	2.02	*U*	*1*	1.96	*U*	*1*	1.93	*U*	*1*	1.81	*U*	*1*
Perfluoroheptanoic acid (PFHpA)	NA	38.4		*1*	26.4		*1*	35.9		*1*	0.617	*J*	*1*	1.93	*U*	*1*	1.81	*U*	*1*
Perfluorohexanesulfonic Acid (PFHxS)	NA	4.17		*1*	3.04		*1*	2.52		*1*	1.88	*J*	*1*	0.534	*J*	*1*	1.81	*U*	*1*
Perfluorohexanoic acid (PFHxA)	NA	41.5		*1*	28.2		*1*	53.6		*1*	1.06	*J*	*1*	1.93	*U*	*1*	1.81	*U*	*1*
Perfluoro-n-butanoic acid (PFBA)	NA	28.9		*1*	19.6		*1*	16.8		*1*	9.69		*1*	3.82	*J*	*1*	7.24	*U*	*1*
Perfluorononanesulfonic Acid (PFNS)	NA	2.08	*U*	*1*	2.02	*U*	*1*	2.02	*U*	*1*	1.96	*U*	*1*	1.93	*U*	*1*	1.81	*U*	*1*
Perfluorononanoic acid (PFNA)	NA	1.81	*J*	*1*	1.53	*J*	*1*	2.02	*U*	*1*	1.96	*U*	*1*	1.93	*U*	*1*	1.81	*U*	*1*
Perfluorooctanesulfonic Acid (PFOS)	2.7	1.18	*J*	*1*	1.22	*J*	*1*	2.39		*1*	2.17		*1*	0.83	*J*	*1*	1.81	*U*	*1*
Perfluorooctanoic acid (PFOA)	6.7	106		*1*	76.3		*1*	55.5		*1*	5.26		*1*	1.93	*U*	*1*	1.81	*U*	*1*
Perfluoropentanesulfonic Acid (PFPeS)	NA	1.04	*J*	*1*	0.826	*J*	*1*	0.81	*J*	*1*	1.96	*U*	*1*	1.93	*U*	*1*	1.81	*U*	*1*
Perfluoropentanoic acid (PFPeA)	NA	100		*1*	63.4		*1*	61.4		*1*	1.72	*J*	*1*	3.86	*U*	*1*	3.62	*U*	*1*
Perfluorotetradecanoic acid (PFTA)	NA	2.08	*U*	*1*	2.02	*U*	*1*	2.02	*U*	*1*	1.96	*U*	*1*	1.93	*U*	*1*	1.81	*U*	*1*
Perfluorotridecanoic acid (PFTrDA)	NA	2.08	*U*	*1*	2.02	*U*	*1*	2.02	*U*	*1*	1.96	*U*	*1*	1.93	*U*	*1*	1.81	*U*	*1*
Perfluoroundecanoic acid (PFUnA)	NA	2.08	*U*	*1*	2.02	*U*	*1*	2.02	*U*	*1*	1.96	*U*	*1*	1.93	*U*	*1*	1.81	*U*	*1*
PFEESA	NA	4.16	*U*	*1*	4.03	*U*	*1*	4.04	*U*	*1*	3.92	*U*	*1*	3.86	*U*	*1*	3.62	*U*	*1*
PFMBA	NA	4.16	*U*	*1*	4.03	*U*	*1*	4.04	*U*	*1*	3.92	*U*	*1*	3.86	*U*	*1*	3.62	*U*	*1*
PFMPA	NA	4.16	*U*	*1*	4.03	*U*	*1*	4.04	*U*	*1*	3.92	*U*	*1*	3.86	*U*	*1*	3.62	*U*	*1*

value ≤ AWQS
value > AWQS

Q = Laboratory Qualifier DL = Dilution NA = not available (additional flags: B-in blank, D-diluted, E-estimated, J-approximate)

Table 12: PFAS in Groundwater

All data in ng/L (ppt)	Sample	MW-06-20251106			MW-07-20260316			DUP-20260316			MW-08-20260316		
U= Not Detected ≥ value	Date	2025-11-06			2026-03-16			2026-03-16			2026-03-16		
PFAS (1633)	WQGV	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL
11Cl-PF3OUdS	NA	7.17	*U*	*1*	8.16	*U*	*1*	8.19	*U*	*1*	7.34	*U*	*1*
1H,1H,2H,2H-Perfluorodecanesulfonic acid	NA	7.17	*U*	*1*	8.16	*U*	*1*	8.19	*U*	*1*	7.34	*U*	*1*
1H,1H,2H,2H-Perfluorohexanesulfonic acid	NA	7.17	*U*	*1*	8.16	*U*	*1*	8.19	*U*	*1*	7.34	*U*	*1*
1H,1H,2H,2H-Perfluorooctanesulfonic acid	NA	7.17	*U*	*1*	8.16	*U*	*1*	8.19	*U*	*1*	7.34	*U*	*1*
3:3FTCA	NA	8.96	*U*	*1*	10.2	*U*	*1*	10.2	*U*	*1*	9.18	*U*	*1*
5:3FTCA	NA	44.8	*U*	*1*	51	*U*	*1*	51.2	*U*	*1*	45.9	*U*	*1*
7:3FTCA	NA	44.8	*U*	*1*	51	*U*	*1*	51.2	*U*	*1*	45.9	*U*	*1*
9Cl-PF3ONS	NA	7.17	*U*	*1*	8.16	*U*	*1*	8.19	*U*	*1*	7.34	*U*	*1*
ADONA	NA	7.17	*U*	*1*	8.16	*U*	*1*	8.19	*U*	*1*	7.34	*U*	*1*
HFPO-DA	NA	7.17	*U*	*1*	8.16	*U*	*1*	8.19	*U*	*1*	7.34	*U*	*1*
NEtFOSA	NA	1.79	*U*	*1*	2.04	*U*	*1*	2.05	*U*	*1*	1.84	*U*	*1*
NEtFOSAA	NA	1.79	*U*	*1*	2.04	*U*	*1*	2.05	*U*	*1*	1.84	*U*	*1*
NEtFOSE	NA	17.9	*U*	*1*	20.4	*U*	*1*	20.5	*U*	*1*	18.4	*U*	*1*
NFDHA	NA	3.58	*U*	*1*	4.08	*U*	*1*	4.09	*U*	*1*	3.67	*U*	*1*
NMeFOSA	NA	1.79	*U*	*1*	2.04	*U*	*1*	2.05	*U*	*1*	1.84	*U*	*1*
NMeFOSAA	NA	1.79	*U*	*1*	2.04	*U*	*1*	2.05	*U*	*1*	1.84	*U*	*1*
NMeFOSE	NA	17.9	*U*	*1*	20.4	*U*	*1*	20.5	*U*	*1*	18.4	*U*	*1*
Perfluoro-1-decanesulfonic acid (PFDS)	NA	1.79	*U*	*1*	2.04	*U*	*1*	2.05	*U*	*1*	1.84	*U*	*1*
Perfluoro-1-heptanesulfonic acid (PFHpS)	NA	1.79	*U*	*1*	2.04	*U*	*1*	2.05	*U*	*1*	1.84	*U*	*1*
Perfluoro-1-octanesulfonamide (FOSA)	NA	1.79	*U*	*1*	2.04	*U*	*1*	2.05	*U*	*1*	1.84	*U*	*1*
Perfluorobutanesulfonic acid (PFBS)	NA	4.33		*1*	0.866	*J*	*1*	0.834	*J*	*1*	4.3		*1*
Perfluorodecanoic acid (PFDA)	NA	1.79	*U*	*1*	2.04	*U*	*1*	2.05	*U*	*1*	1.84	*U*	*1*
Perfluorododecane Sulfonic Acid (PFDoDS)	NA	1.79	*U*	*1*	2.04	*U*	*1*	2.05	*U*	*1*	1.84	*U*	*1*
Perfluorododecanoic acid (PFDoA)	NA	1.79	*U*	*1*	2.04	*U*	*1*	2.05	*U*	*1*	1.84	*U*	*1*
Perfluoroheptanoic acid (PFHpA)	NA	5.89		*1*	3.54		*1*	3.57		*1*	1.68	*J*	*1*
Perfluorohexanesulfonic Acid (PFHxS)	NA	1.89		*1*	0.131	*J*	*1*	0.133	*J*	*1*	1.34	*J*	*1*
Perfluorohexanoic acid (PFHxA)	NA	11.2		*1*	8.83		*1*	8.74		*1*	2.98		*1*
Perfluoro-n-butanoic acid (PFBA)	NA	17.4		*1*	11.8		*1*	11.6		*1*	6.93	*J*	*1*
Perfluorononanesulfonic Acid (PFNS)	NA	1.79	*U*	*1*	2.04	*U*	*1*	2.05	*U*	*1*	1.84	*U*	*1*
Perfluorononanoic acid (PFNA)	NA	0.908	*J*	*1*	2.04	*U*	*1*	2.05	*U*	*1*	1.84	*U*	*1*
Perfluorooctanesulfonic Acid (PFOS)	2.7	4.88		*1*	2.04	*U*	*1*	2.05	*U*	*1*	7.24		*1*
Perfluorooctanoic acid (PFOA)	6.7	13.6		*1*	4.33		*1*	4.25		*1*	7.15		*1*
Perfluoropentanesulfonic Acid (PFPeS)	NA	1.79	*U*	*1*	2.04	*U*	*1*	2.05	*U*	*1*	1.84	*U*	*1*
Perfluoropentanoic acid (PFPeA)	NA	16.4		*1*	23.2		*1*	23		*1*	3.56	*J*	*1*
Perfluorotetradecanoic acid (PFTA)	NA	1.79	*U*	*1*	2.04	*U*	*1*	2.05	*U*	*1*	1.84	*U*	*1*
Perfluorotridecanoic acid (PFTrDA)	NA	1.79	*U*	*1*	2.04	*U*	*1*	2.05	*U*	*1*	1.84	*U*	*1*
Perfluoroundecanoic acid (PFUnA)	NA	1.79	*U*	*1*	2.04	*U*	*1*	2.05	*U*	*1*	1.84	*U*	*1*
PFEESA	NA	3.58	*U*	*1*	4.08	*U*	*1*	4.09	*U*	*1*	3.67	*U*	*1*
PFMBA	NA	3.58	*U*	*1*	4.08	*U*	*1*	4.09	*U*	*1*	3.67	*U*	*1*
PFMPA	NA	3.58	*U*	*1*	4.08	*U*	*1*	4.09	*U*	*1*	3.67	*U*	*1*

value ≤ AWQS
value > AWQS

Q = Laboratory Qualifier DL = Dilution NA = not available (additional flags: B-in blank, D-diluted, E-estimated, J-approximate)

Table 13: VOCs in Soil Vapor

The Green, Newburgh, NY
BCP: C336099

GALLAGHER BASSETT | TECHNICAL SERVICES

All data in µg/m³ Sample	SV-01			SV-02			SV-03			SV-04			SV-05		
U= Not Detected ≥ value Date	2025-10-03			2025-10-03			2025-10-03			2025-10-03			2025-10-03		
VOCs, TO-15	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL
1,1,1,2-tetrachloroethane	5	U	5	5	U	5	5	U	5	5	U	5	5	U	5
1,1,1-trichloroethane (TCA)	5	U	5	5	U	5	5	U	5	5	U	5	5	U	5
1,1,2,2-tetrachloroethane	5	U	5	5	U	5	5	U	5	5	U	5	5	U	5
1,1,2-trichloroethane	5	U	5	5	U	5	5	U	5	5	U	5	5	U	5
1,1-dichloroethane	5.02	U	5	5.02	U	5	5.02	U	5	5.02	U	5	5.02	U	5
1,1-dichloroethene (1,1-DCE)	1	U	5	1	U	5	1	U	5	1	U	5	1	U	5
1,2,4-trichlorobenzene	5	U	5	5	U	5	5	U	5	5	U	5	5	U	5
1,2,4-trimethylbenzene	12.1		5	5.01	U	5	11.3		5	10.7		5	9.8		5
1,2-dibromoethane (EDB)	5	U	5	5	U	5	5	U	5	5	U	5	5	U	5
1,2-dichlorobenzene	5	U	5	5	U	5	5	U	5	5	U	5	5	U	5
1,2-dichloroethane	5.02	U	5	5.02	U	5	5.02	U	5	5.02	U	5	5.02	U	5
1,2-dichloropropane	4.99	U	5	4.99	U	5	4.99	U	5	4.99	U	5	4.99	U	5
1,2-dichlorotetrafluoroethane	5	U	5	5	U	5	5	U	5	5	U	5	5	U	5
1,3,5-trimethylbenzene	5.01	U	5	5.01	U	5	5.01	U	5	5.01	U	5	5.01	U	5
1,3-butadiene	5	U	5	5	U	5	5	U	5	5	U	5	5	U	5
1,3-dichlorobenzene	5	U	5	5	U	5	5	U	5	5	U	5	5	U	5
1,4-dichlorobenzene	5	U	5	5	U	5	5	U	5	5	U	5	5	U	5
1,4-dioxane	5.01	U	5	5.01	U	5	5.01	U	5	5.01	U	5	5.01	U	5
2-butanone	161		5	150		5	80.2		5	86.1		5	117		5
2-hexanone (MBK)	10.6		5	8.52		5	7.21		5	7.9		5	10.3		5
4-ethyltoluene	13.7		5	5.01	U	5	12.7		5	12.8		5	9.5		5
4-isopropyltoluene	5	U	5	5	U	5	5	U	5	5	U	5	5	U	5
4-methyl-2-pentanone (MIBK)	4.99	U	5	4.99	U	5	4.99	U	5	4.99	U	5	4.99	U	5
acetone	144		5	174		5	105		5	119		5	105		5
acrylonitrile	5.01	U	5	5.01	U	5	5.01	U	5	5.01	U	5	5.01	U	5
benzene	13.1		5	11.4		5	19.8		5	20.9		5	15.1		5
benzyl chloride	5	U	5	5	U	5	5	U	5	5	U	5	5	U	5
bromodichloromethane	5	U	5	5	U	5	5	U	5	5	U	5	5	U	5
bromoform	5	U	5	5	U	5	5	U	5	5	U	5	5	U	5
bromomethane	5.01	U	5	5.01	U	5	5.01	U	5	5.01	U	5	5.01	U	5
carbon disulfide	5.01	U	5	5.01	U	5	5.01	U	5	5.01	U	5	5.01	U	5
carbon tetrachloride	1	U	5	1	U	5	1	U	5	1	U	5	1	U	5
chlorobenzene	5.01	U	5	5.01	U	5	5.01	U	5	5.01	U	5	5.01	U	5
chloroethane	5.01	U	5	5.01	U	5	5.01	U	5	5.01	U	5	5.01	U	5
chloroform	4.98	U	5	4.98	U	5	4.98	U	5	4.98	U	5	4.98	U	5
chloromethane	4.99	U	5	4.99	U	5	4.99	U	5	4.99	U	5	4.99	U	5
cis-1,2-dichloroethene (cis-DCE)	1	U	5	1	U	5	1	U	5	1	U	5	1	U	5
cis-1,3-dichloropropene	4.99	U	5	4.99	U	5	4.99	U	5	4.99	U	5	4.99	U	5
cyclohexane	4.99	U	5	4.99	U	5	4.99	U	5	4.99	U	5	4.99	U	5
dibromochloromethane	5	U	5	5	U	5	5	U	5	5	U	5	5	U	5
dichlorodifluoromethane	4.99	U	5	4.99	U	5	4.99	U	5	4.99	U	5	4.99	U	5
ethanol	12.4		5	17.2		5	6.7		5	6.85		5	7.98		5
ethyl acetate	5.01	U	5	5.01	U	5	5.01	U	5	5.01	U	5	5.01	U	5
ethylbenzene	18.8		5	11.3		5	12.5		5	15		5	8.38		5
heptane	5.32		5	5.49		5	5	U	5	5.37		5	5	U	5
hexachlorobutadiene	5	U	5	5	U	5	5	U	5	5	U	5	5	U	5
hexane	5	U	5	5	U	5	5	U	5	5	U	5	5	U	5
isooctane	9.6		5	9.13		5	6.9		5	12.4		5	4.99	U	5
isopropylalcohol	36.1		5	57.5		5	9.7		5	81.8		5	33.7		5
isopropylbenzene	5.01	U	5	5.01	U	5	5.01	U	5	5.01	U	5	5.01	U	5
m,p-xylene	77.2		5	33.5		5	49.9		5	57.3		5	32.6		5
methyl tert-butyl ether (MTBE)	5.01	U	5	5.01	U	5	5.01	U	5	5.01	U	5	5.01	U	5
methylene chloride	15	U	5	15	U	5	15	U	5	15	U	5	15	U	5
naphthalene	5.23	U	5	5.23	U	5	5.23	U	5	5.23	U	5	5.23	U	5
n-butylbenzene	5	U	5	5	U	5	5	U	5	5	U	5	5	U	5
o-xylene	27.8		5	9.8		5	17.5		5	20.3		5	11.8		5
propylene	8.6		5	7.5		5	5.01	U	5	7.41		5	7.83		5
sec-butylbenzene	5	U	5	5	U	5	5	U	5	5	U	5	5	U	5
styrene	4.98	U	5	4.98	U	5	4.98	U	5	4.98	U	5	4.98	U	5
tetrachloroethene (PCE)	453		5	454		5	333		5	474		5	210		5
tetrahydrofuran	5.01	U	5	5.01	U	5	5.01	U	5	5.01	U	5	5.01	U	5
toluene	64.8		5	63.3		5	49.7		5	67.8		5	31.6		5
trans-1,2-dichloroethene (trans-DCE)	4.99	U	5	4.99	U	5	4.99	U	5	4.99	U	5	4.99	U	5
trans-1,3-dichloropropene	4.99	U	5	4.99	U	5	4.99	U	5	4.99	U	5	4.99	U	5
trichloroethene (TCE)	0.99	U	5	0.99	U	5	0.99	U	5	0.99	U	5	0.99	U	5
trichlorofluoromethane	5	U	5	5	U	5	5	U	5	5	U	5	5	U	5
trichlorotrifluoroethane	5	U	5	5	U	5	5	U	5	5	U	5	5	U	5
vinyl chloride	1	U	5	1	U	5	1	U	5	1	U	5	1	U	5

Detected concentrations
Relatively elevated concentrations

Q = Laboratory Qualifier DL = Dilution NA = not available (addtional flags: B-in blank, D-diluted, E-estimated, J-approximate)

Table 13: VOCs in Soil Vapor

The Green, Newburgh, NY
BCP: C336099

GALLAGHER BASSETT | TECHNICAL SERVICES

All data in µg/m³ Sample	SV-06			SV-07			SV-08			SV-09			SV-11		
U= Not Detected ≥ value Date	2025-10-03			2025-10-03			2025-10-03			2026-03-09			2026-03-09		
VOCs, TO-15	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL
1,1,1,2-tetrachloroethane	5	U	5	5	U	5	5	U	5	5	U	5	5	U	5
1,1,1-trichloroethane (TCA)	5	U	5	5	U	5	5	U	5	5	U	5	5	U	5
1,1,2,2-tetrachloroethane	5	U	5	5	U	5	5	U	5	5	U	5	5	U	5
1,1,2-trichloroethane	5	U	5	5	U	5	5	U	5	5	U	5	5	U	5
1,1-dichloroethane	5.02	U	5	5.02	U	5	5.02	U	5	5.02	U	5	5.02	U	5
1,1-dichloroethene (1,1-DCE)	1	U	5	1	U	5	1	U	5	1	U	5	1	U	5
1,2,4-trichlorobenzene	5	U	5	5	U	5	5	U	5	5	U	5	5	U	5
1,2,4-trimethylbenzene	14.5		5	11		5	9.9		5	5.01	U	5	5.01	U	5
1,2-dibromoethane (EDB)	5	U	5	5	U	5	5	U	5	5	U	5	5	U	5
1,2-dichlorobenzene	5	U	5	5	U	5	5	U	5	5	U	5	5	U	5
1,2-dichloroethane	5.02	U	5	5.02	U	5	5.02	U	5	5.02	U	5	5.02	U	5
1,2-dichloropropane	4.99	U	5	4.99	U	5	4.99	U	5	4.99	U	5	4.99	U	5
1,2-dichlorotetrafluoroethane	5	U	5	5	U	5	5	U	5	5	U	5	5	U	5
1,3,5-trimethylbenzene	5.31		5	5.01	U	5	5.01	U	5	5.01	U	5	5.01	U	5
1,3-butadiene	5	U	5	5	U	5	5	U	5	5	U	5	5	U	5
1,3-dichlorobenzene	5	U	5	5	U	5	5	U	5	5	U	5	5	U	5
1,4-dichlorobenzene	5	U	5	5	U	5	5	U	5	5	U	5	5	U	5
1,4-dioxane	5.01	U	5	5.01	U	5	5.01	U	5	5.01	U	5	5.01	U	5
2-butanone	133		5	124		5	200		5	510		5	902		15
2-hexanone (MBK)	11.6		5	9.5		5	16.1		5	48.3		5	99.5		5
4-ethyltoluene	15.4		5	13.7		5	12.6		5	5.01	U	5	5.01	U	5
4-isopropyltoluene	5	U	5	5	U	5	5	U	5	5	U	5	5	U	5
4-methyl-2-pentanone (MIBK)	4.99	U	5	4.99	U	5	4.99	U	5	4.99	U	5	13.6		5
acetone	124		5	133		5	146		5	186		5	264		5
acrylonitrile	5.01	U	5	5.01	U	5	5.01	U	5	5.01	U	5	5.01	U	5
benzene	15.5		5	14.8		5	8.94		5	5.01	U	5	7.09		5
benzyl chloride	5	U	5	5	U	5	5	U	5	5	U	5	5	U	5
bromodichloromethane	5	U	5	5	U	5	5	U	5	5	U	5	5	U	5
bromoform	5	U	5	5	U	5	5	U	5	5	U	5	5	U	5
bromomethane	5.01	U	5	5.01	U	5	5.01	U	5	5.01	U	5	5.01	U	5
carbon disulfide	5.01	U	5	5.01	U	5	5.01	U	5	5.01	U	5	5.01	U	5
carbon tetrachloride	1	U	5	1	U	5	1	U	5	1	U	5	1	U	5
chlorobenzene	5.01	U	5	5.01	U	5	5.01	U	5	5.01	U	5	5.01	U	5
chloroethane	5.01	U	5	5.01	U	5	5.01	U	5	5.01	U	5	5.01	U	5
chloroform	4.98	U	5	4.98	U	5	4.98	U	5	4.98	U	5	4.98	U	5
chloromethane	4.99	U	5	4.99	U	5	4.99	U	5	4.99	U	5	4.99	U	5
cis-1,2-dichloroethene (cis-DCE)	1	U	5	1	U	5	1	U	5	1	U	5	1	U	5
cis-1,3-dichloropropene	4.99	U	5	4.99	U	5	4.99	U	5	4.99	U	5	4.99	U	5
cyclohexane	4.99	U	5	4.99	U	5	4.99	U	5	4.99	U	5	4.99	U	5
dibromochloromethane	5	U	5	5	U	5	5	U	5	5	U	5	5	U	5
dichlorodifluoromethane	4.99	U	5	4.99	U	5	4.99	U	5	4.99	U	5	4.99	U	5
ethanol	7.93		5	5.01	U	5	5.01	U	5	48.2		5	60.1		5
ethyl acetate	5.01	U	5	5.01	U	5	5.01	U	5	5.01	U	5	5.01	U	5
ethylbenzene	15.7		5	16.1		5	15.4		5	4.99	U	5	4.99	U	5
heptane	5.2		5	5.61		5	5.49		5	5	U	5	17.9		5
hexachlorobutadiene	5	U	5	5	U	5	5	U	5	5	U	5	5	U	5
hexane	5	U	5	5	U	5	5	U	5	5	U	5	25.8		5
isooctane	9.6		5	10.6		5	10.5		5	4.99	U	5	4.99	U	5
isopropylalcohol	7.22		5	23.1		5	5.16		5	5.21		5	16.4		5
isopropylbenzene	5.01	U	5	5.01	U	5	5.01	U	5	5.01	U	5	5.01	U	5
m,p-xylene	62.9		5	64.2		5	61.6		5	4.99	U	5	12.3		5
methyl tert-butyl ether (MTBE)	5.01	U	5	5.01	U	5	5.01	U	5	5.01	U	5	5.01	U	5
methylene chloride	15	U	5	15	U	5	15	U	5	15	U	5	15	U	5
naphthalene	5.23	U	5	5.23	U	5	5.23	U	5	5.23	U	5	5.23	U	5
n-butylbenzene	5	U	5	5	U	5	5	U	5	5	U	5	5	U	5
o-xylene	22.1		5	22.7		5	21.2		5	4.99	U	5	5.34		5
propylene	6		5	5.8		5	10.1		5	43		5	77.6		5
sec-butylbenzene	5	U	5	5	U	5	5	U	5	5	U	5	5	U	5
styrene	4.98	U	5	4.98	U	5	4.98	U	5	4.98	U	5	4.98	U	5
tetrachloroethene (PCE)	449		5	467		5	422		5	1.25		5	1.25	U	5
tetrahydrofuran	5.01	U	5	5.01	U	5	5.01	U	5	5.01	U	5	5.01	U	5
toluene	67.8		5	71.2		5	67.4		5	6.52		5	27.6		5
trans-1,2-dichloroethene (trans-DCE)	4.99	U	5	4.99	U	5	4.99	U	5	4.99	U	5	4.99	U	5
trans-1,3-dichloropropene	4.99	U	5	4.99	U	5	4.99	U	5	4.99	U	5	4.99	U	5
trichloroethene (TCE)	0.99	U	5	0.99	U	5	0.99	U	5	0.99	U	5	0.99	U	5
trichlorofluoromethane	5	U	5	5	U	5	5	U	5	5	U	5	5	U	5
trichlorotrifluoroethane	5	U	5	5	U	5	5	U	5	5	U	5	5	U	5
vinyl chloride	1	U	5	1	U	5	1	U	5	1	U	5	1	U	5

Detected concentrations
Relatively elevated concentrations

Q = Laboratory Qualifier DL = Dilution NA = not available (addtional flags: B-in blank, D-diluted, E-estimated, J-approximate)

Table 13: VOCs in Soil Vapor

The Green, Newburgh, NY
BCP: C336099

GALLAGHER BASSETT | TECHNICAL SERVICES

All data in µg/m³	Sample	SV-12			SV-13			SV-14			SV-15		
U= Not Detected ≥ value	Date	2026-03-09			2026-03-09			2026-03-09			2026-03-09		
VOCs, TO-15		Result	Q	DL	Result	Q	DL	Result	Q	DL	Result	Q	DL
1,1,1,2-tetrachloroethane		5	U	5	5	U	5	5	U	5	5	U	5
1,1,1-trichloroethane (TCA)		5	U	5	5	U	5	5	U	5	5	U	5
1,1,2,2-tetrachloroethane		5	U	5	5	U	5	5	U	5	5	U	5
1,1,2-trichloroethane		5	U	5	5	U	5	5	U	5	5	U	5
1,1-dichloroethane		5.02	U	5	5.02	U	5	5.02	U	5	5.02	U	5
1,1-dichloroethene (1,1-DCE)		1	U	5	1	U	5	1	U	5	1	U	5
1,2,4-trichlorobenzene		5	U	5	5	U	5	5	U	5	5	U	5
1,2,4-trimethylbenzene		23.4		5	5.01	U	5	33.7		5	5.01	U	5
1,2-dibromoethane (EDB)		5	U	5	5	U	5	5	U	5	5	U	5
1,2-dichlorobenzene		5	U	5	5	U	5	5	U	5	5	U	5
1,2-dichloroethane		5.02	U	5	5.02	U	5	5.02	U	5	5.02	U	5
1,2-dichloropropane		4.99	U	5	4.99	U	5	4.99	U	5	4.99	U	5
1,2-dichlorotetrafluoroethane		5	U	5	5	U	5	5	U	5	5	U	5
1,3,5-trimethylbenzene		12.6		5	5.01	U	5	8.6		5	5.01	U	5
1,3-butadiene		7.69		5	5	U	5	5	U	5	5	U	5
1,3-dichlorobenzene		5	U	5	5	U	5	5	U	5	5	U	5
1,4-dichlorobenzene		5	U	5	5	U	5	5	U	5	5	U	5
1,4-dioxane		5.01	U	5	5.01	U	5	5.01	U	5	5.01	U	5
2-butanone		934		15	887		15	19.9		5	749		15
2-hexanone (MBK)		101		5	86.8		5	4.99	U	5	74.9		5
4-ethyltoluene		8.65		5	5.01	U	5	24.3		5	5.01	U	5
4-isopropyltoluene		5	U	5	5	U	5	5	U	5	5	U	5
4-methyl-2-pentanone (MIBK)		8.27		5	4.99	U	5	4.99	U	5	4.99	U	5
acetone		233		5	208		5	1,300	E	5	173		5
acrylonitrile		5.01	U	5	5.01	U	5	5.01	U	5	5.01	U	5
benzene		11.8		5	5.01	U	5	5.01	U	5	5.01	U	5
benzyl chloride		5	U	5	5	U	5	5	U	5	5	U	5
bromodichloromethane		5	U	5	5	U	5	5	U	5	5	U	5
bromoform		5	U	5	5	U	5	5	U	5	5	U	5
bromomethane		5.01	U	5	5.01	U	5	5.01	U	5	5.01	U	5
carbon disulfide		5.01	U	5	5.01	U	5	5.01	U	5	5.01	U	5
carbon tetrachloride		1	U	5	1	U	5	1	U	5	1	U	5
chlorobenzene		5.01	U	5	5.01	U	5	5.01	U	5	5.01	U	5
chloroethane		5.01	U	5	5.01	U	5	5.01	U	5	5.01	U	5
chloroform		4.98	U	5	4.98	U	5	4.98	U	5	4.98	U	5
chloromethane		4.99	U	5	4.99	U	5	4.99	U	5	4.99	U	5
cis-1,2-dichloroethene (cis-DCE)		1	U	5	1	U	5	1	U	5	1	U	5
cis-1,3-dichloropropene		4.99	U	5	4.99	U	5	4.99	U	5	4.99	U	5
cyclohexane		4.99	U	5	4.99	U	5	4.99	U	5	4.99	U	5
dibromochloromethane		5	U	5	5	U	5	5	U	5	5	U	5
dichlorodifluoromethane		4.99	U	5	4.99	U	5	4.99	U	5	4.99	U	5
ethanol		61.2		5	50.7		5	14.3		5	41.2		5
ethyl acetate		5.01	U	5	5.01	U	5	5.01	U	5	5.01	U	5
ethylbenzene		4.99	U	5	4.99	U	5	9.7		5	4.99	U	5
heptane		5	U	5	5	U	5	6.47		5	5	U	5
hexachlorobutadiene		5	U	5	5	U	5	5	U	5	5	U	5
hexane		5	U	5	5	U	5	5	U	5	5	U	5
isooctane		4.99	U	5	4.99	U	5	4.99	U	5	4.99	U	5
isopropylalcohol		18.3		5	5.01	U	5	5.45		5	5.01	U	5
isopropylbenzene		5.01	U	5	5.01	U	5	5.01	U	5	5.01	U	5
m,p-xylene		29.8		5	5.12		5	40.7		5	6.9		5
methyl tert-butyl ether (MTBE)		5.01	U	5	5.01	U	5	5.01	U	5	5.01	U	5
methylene chloride		15	U	5	15	U	5	15	U	5	15	U	5
naphthalene		5.23	U	5	5.23	U	5	5.23	U	5	5.23	U	5
n-butylbenzene		5	U	5	5	U	5	5	U	5	5	U	5
o-xylene		21.1		5	4.99	U	5	18.1		5	4.99	U	5
propylene		80.7		5	68.5		5	9.44		5	90.5		5
sec-butylbenzene		5	U	5	5	U	5	5	U	5	5	U	5
styrene		15		5	4.98	U	5	4.98	U	5	4.98	U	5
tetrachloroethene (PCE)		1.25	U	5	1.25	U	5	1.25	U	5	1.25	U	5
tetrahydrofuran		5.01	U	5	5.01	U	5	5.01	U	5	5.01	U	5
toluene		26.6		5	5.01	U	5	18.3		5	8.85		5
trans-1,2-dichloroethene (trans-DCE)		4.99	U	5	4.99	U	5	4.99	U	5	4.99	U	5
trans-1,3-dichloropropene		4.99	U	5	4.99	U	5	4.99	U	5	4.99	U	5
trichloroethene (TCE)		0.99	U	5	0.99	U	5	0.99	U	5	0.99	U	5
trichlorofluoromethane		5	U	5	5	U	5	5	U	5	5	U	5
trichlorotrifluoroethane		5	U	5	5	U	5	5	U	5	5	U	5
vinyl chloride		1	U	5	1	U	5	1	U	5	1	U	5

Detected concentrations
Relatively elevated concentrations

Q = Laboratory Qualifier DL = Dilution NA = not available (addtional flags: B-in blank, D-diluted, E-estimated, J-approximate)

Table 14: Soil SCOs

All values in parts per million (ppm), except PFAS in parts per billion (ppb)

VOCs	UU SCO	RRU SCO	RCU SCO	RIU SCO	POG SCO
1,1,1-trichloroethane (TCA)	0.68	100	500	1,000	0.68
1,1-dichloroethane	0.27	47	240	240	0.27
1,1-dichloroethylene	0.24	0.98	5.1	5.1	0.24
1,2,4-Trimethylbenzene	5.9	100	500	1,000	5.9
1,2-dichlorobenzene	1.1	100	500	1,000	1.1
1,2-dichloroethane	0.02	5.8	30	30	0.02
1,3,5-trimethylbenzene	3.1	100	500	1,000	3.1
1,3-dichlorobenzene	2.6	38	280	280	2.6
1,4-dichlorobenzene	1.8	24	130	130	1.8
1,4-dioxane	0.1	5.7	36	36	0.1
2-butanone (MEK)	0.1	100	500	1,000	0.1
acetone	0.03	100	500	1,000	0.03
benzene	0.06	3.7	20	20	0.06
carbon tetrachloride	0.76	7.1	41	41	0.76
chlorobenzene	4.5	100	500	1,000	4.5
chloroform	0.37	24	180	180	0.37
cis-1,2-dichloroethylene (DCE)	0.19	41	500	590	0.19
ethyl benzene	1	76	390	390	1
isopropylbenzene	2.3	100	NA	NA	2.3
methyl tert-butyl ether (MTBE)	0.1	100	500	890	0.1
methylene chloride	0.05	81	500	1,000	0.05
n-butylbenzene	18	100	500	1,000	18
n-propylbenzene	5	100	500	1,000	5
o-xylene	0.26	100	500	1,000	1.2
p- & m- xylenes	0.26	100	500	1,000	1.2
p-isopropyltoluene	10	NA	NA	NA	10
sec-butylbenzene	25	100	500	1,000	25
tert-butylbenzene	11	100	500	1,000	11
tetrachloroethylene (PCE)	1.3	18	81	81	1.3
toluene	0.7	100	500	1,000	0.7
trans-1,2-dichloroethylene (DCE)	0.19	100	500	1,000	0.19
trichloroethylene (TCE)	0.47	6.4	54	54	0.47
vinyl chloride (VC)	0.03	0.48	7.1	7.1	0.03
xylenes, total	0.26	100	500	1,000	1.2

SVOCs	UU SCO	RRU SCO	RCU SCO	RIU SCO	POG SCO
1,4-dioxane	0.1	5.7	36	36	0.1
2-Methylphenol (o-cresol)	0.33	100	500	1,000	0.33
3&4-Methylphenol (m&p-cresol)	0.33	100	500	1,000	0.33
acenaphthene	20	100	500	1,000	98
acenaphthylene	100	100	500	1,000	365
aniline	0.04	8.1	8.1	8.1	0.04
anthracene	100	100	500	1,000	1,000
benzo(a)anthracene	1	1.4	37	37	1
benzo(a)pyrene	1	1	3.7	3.7	22
benzo(b)fluoranthene	1	1.4	37	37	2.1
benzo(g,h,i)perylene	0.64	4.9	47	78	1,000
benzo(k)fluoranthene	0.8	4.9	47	78	2
chrysene	1	4.9	47	78	1
dibenzo(a,h)anthracene	0.33	0.33	3.7	3.7	1,000
dibenzofuran	2.1	18	180	290	110
fluoranthene	85	100	500	1,000	1,000
fluorene	30	100	500	1,000	386
hexachlorobenzene	0.33	0.33	1.8	2.9	3.2
indeno(1,2,3-cd)pyrene	0.5	1.4	37	37	6.6
naphthalene	12	100	500	1,000	12
nitrobenzene	0.08	1.8	8.9	9	0.08
pentachlorophenol	0.8	1.3	6.9	7	0.08
phenanthrene	1.1	4.9	47	78	1,000
phenol	0.33	100	500	1,000	0.33
pyrene	64	100	500	1,000	1,000

Table 14: Soil SCOs

All values in parts per million (ppm), except PFAS in parts per billion (ppb)

Metals and Cyanide	UU SCO	RRU SCO	RCU SCO	RIU SCO	POG SCO
Arsenic	13	16	16	16	16
Barium	410	410	410	10,000	820
Beryllium	4.4	43	670	750	47
Cadmium	2.5	2.5	3.7	4.4	7.5
Chromium (hexavalent)	1	1	11	11	19
Chromium (trivalent)	30	110	700	2,000	NA
Copper	50	280	280	10,000	1,720
Lead	63	400	1,000	3,900	450
Manganese	1,600	2,000	10,000	10,000	2,000
Mercury	0.18	0.3	1.1	1	0.73
Nickel	30	320	320	5,900	130
Selenium	3.9	110	1,700	2,000	4
Silver	2	110	1,700	2,000	8.3
Zinc	109	6,600	10,000	10,000	2,480
Cyanide (total)	2.3	13	28	240	40

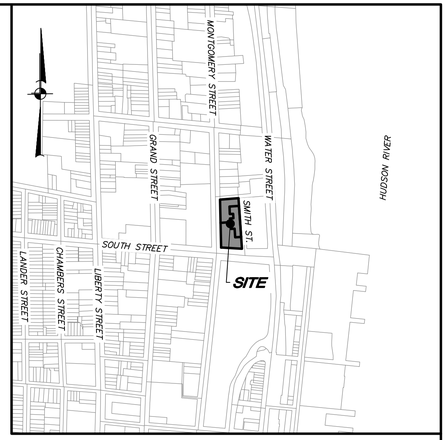
Pesticides	UU SCO	RRU SCO	RCU SCO	RIU SCO	POG SCO
4,4' -DDD	0.0033	5	33	33	14
4,4' -DDE	0.0033	3.4	22	22	9.3
4,4' -DDT	0.0033	3.8	27	27	135
a-BHC	0.0048	0.044	0.33	0.33	0.19
a-Chlordane	0.014	0.65	8.2	11	4.5
Aldrin	0.0048	0.044	0.33	0.33	0.19
b-BHC	0.021	0.18	1.8	2.9	0.09
d-BHC	0.04	100	500	1,000	0.1
Dieldrin	0.005	0.075	0.48	0.48	0.1
Endosulfan I	4.3	35	36	580	65
Endosulfan II	4.3	35	36	580	44
Endosulfan sulfate	4.3	35	36	580	47
Endrin	0.014	5.3	55	87	0.06
g-BHC	0.025	0.21	1	4	5
Heptachlor	0.013	0.53	5.1	5.1	0.38

PCBs	UU SCO	RRU SCO	RCU SCO	RIU SCO	POG SCO
Total PCBs	0.1	1	1	25	3.2

PFAS (1633)	UU Guidance	RRU Guidance
Perfluorooctanesulfonic Acid (PFOS)	0.88	44
Perfluorooctanoic acid (PFOA)	0.66	33

APPENDIX A – Proposed Development Plans





LOCATION MAP SCALE: 1" = 5,000'±

OWNER:

City of Newburgh
83 Broadway
Newburgh, New York 12550

SITE DATA:

Zone: DN – Downtown Neighborhood
Total Acreage: 0.92 AC.±
Tax Map No.: 46–3–8.2

APPLICANT:

Kearney Realty and Development Group
57 Route 6, Suite 207
Baldwin Place, NY 10505

GENERAL NOTES:

1. Property and topographic information shown hereon taken from map entitled "Topographic Survey of Property Prepared for Kearney Realty & Development LLC", prepared by Insite Engineering, Surveying & Landscape Architecture, P.C., last revised May 6, 2021.
2. Electrical and plumbing work must be performed by a City of Newburgh licensed electrician and plumber.
3. All asbestos and lead surveys and completed abatement reports must be completed by certified technicians and submitted prior to any demolition or construction.
4. Buildings that are three stories or more and of any residential use may be required to install sprinkler systems per NYS Building Code.
5. Retaining walls with a proposed height of four (4) feet or higher shall be designed by a New York State licensed Professional Engineer and provided for review and approval with the building permit application.
6. Upon review and approval the relocation of the existing hydrant shall be conducted by the City of Newburgh Water Department. The Applicant's NYS Land Surveyor shall field locate the new hydrant location with a stake and coordinate with the City's Water Superintendent regarding timing for the hydrant placement construction sequencing.
7. Repair of the curbs and sidewalks will require compliance with the City's Streetscape Standards. The City of Newburgh standard details shall take precedence over the layout depicted in the site plan.
8. Bike racks located outside the retail stores along South Street provide for four (4) bicycle spaces. Bike racks located within Building 1 provide for twenty–five (25) bicycle spaces and within Building 2 provides for fifty (50) bicycles spaces.

NO.	DATE	REVISION	BY
5	10–8–25	REVISED FOR PLANNING BOARD SUBMISSION	HMF
4	3–8–24	REVISED FOR PLANNING BOARD SUBMISSION	KJK
3	11–3–23	REVISED FOR PLANNING BOARD SUBMISSION	JLL
2	10–6–23	REVISED FOR PLANNING BOARD SUBMISSION	JLL
1	9–8–23	REVISED FOR PLANNING BOARD SUBMISSION	KJK

INSITE
ENGINEERING, SURVEYING & LANDSCAPE ARCHITECTURE, P.C.
3 Garrett Place
Carmel, NY 10512
(845) 225–9690
(845) 225–9717 fax
www.insite–eng.com

PROJECT:
THE GREEN
140 MONTGOMERY STREET, CITY OF NEWBURGH, ORANGE COUNTY, NEW YORK

DRAWING:
VICINITY MAP

STATE OF NEW YORK · STUART M. PLAFKER · 086647 · LICENSED PROFESSIONAL ENGINEER

PROJECT NUMBER	22230.100	PROJECT MANAGER	J.J.C.
DATE	6–9–23	DRAWN BY	S.M.R.
SCALE	1" = 20'	CHECKED BY	J.L.L.

DRAWING NO. VC–1 SHEET 1 / 11

Approved by resolution of the Planning Board of the City of Newburgh, New York, on the _____ day of _____, 20__, subject to all requirements and conditions of said resolution. Any change, erasure, modification or revision of this plat, as approved, shall void this approval.
Signed this _____ day of _____, 20__, by:

Lisa C. Daily, Planning Board Chairwoman

Signed this _____ day of _____, 20__, by:

Jason C. Morris, P.E., City Engineer

Owner/Applicant Consent Note:
The undersigned owner for the property shown herein certifies that she/he/it are familiar with this plan set, including its notes and its contents as stated hereon, and all conditions of approval. The Applicant and the Owner understand their obligation to the City to keep the premises as per plan approval until a new or revised plan for development or use of the site is approved by the Planning Board. Additionally, Owner and Applicant also acknowledge that further compliance with the City of Newburgh Zoning Ordinance is our responsibility. Planning Board approval is not the equivalent of a building permit or certificate of occupancy, both of which can only be secured through the City of Newburgh Building Deparment.

Owner, sign and date.

Applicant, sign and date if different from Owner.

GRAPHIC SCALE
0 10 40 80
(IN FEET)
1 inch = 20 ft.

ALTERATION OF THIS DOCUMENT, UNLESS UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, IS A VIOLATION OF SECTION 7209 OF ARTICLE 145 OF THE EDUCATION LAW.

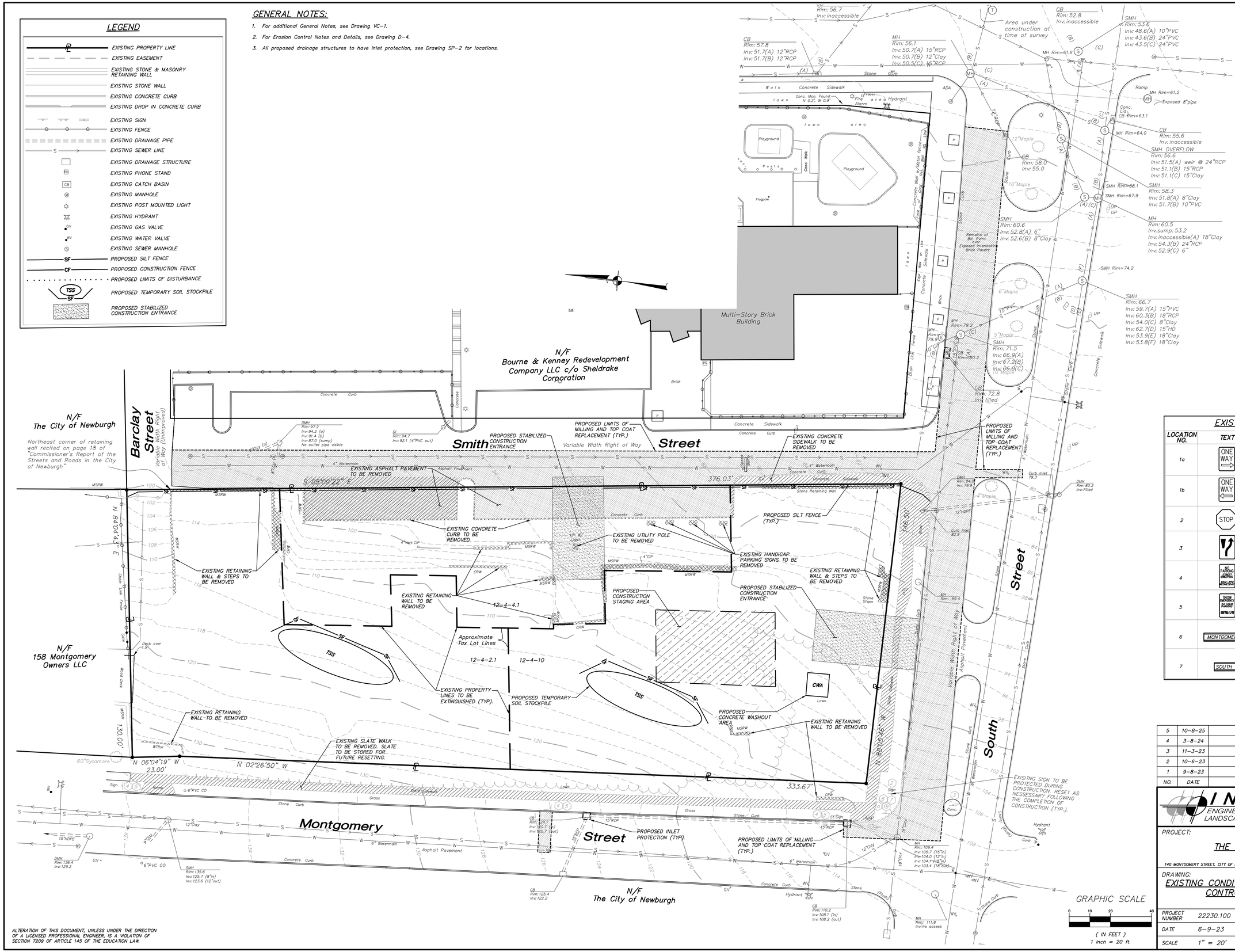
Z:\E\22230\000 Kearney, Montgomery St\00\VC1.dwg, 10/8/2025 3:07:12 PM, JoyceKo, 1:1

LEGEND

- EXISTING PROPERTY LINE
- EXISTING EASEMENT
- EXISTING STONE & MASONRY RETAINING WALL
- EXISTING STONE WALL
- EXISTING CONCRETE CURB
- EXISTING DROP IN CONCRETE CURB
- EXISTING SIGN
- EXISTING FENCE
- EXISTING DRAINAGE PIPE
- EXISTING SEWER LINE
- EXISTING DRAINAGE STRUCTURE
- EXISTING PHONE STAND
- EXISTING CATCH BASIN
- EXISTING MANHOLE
- EXISTING POST MOUNTED LIGHT
- EXISTING HYDRANT
- EXISTING GAS VALVE
- EXISTING WATER VALVE
- EXISTING SEWER MANHOLE
- PROPOSED SILT FENCE
- PROPOSED CONSTRUCTION FENCE
- PROPOSED LIMITS OF DISTURBANCE
- PROPOSED TEMPORARY SOIL STOCKPILE
- PROPOSED STABILIZED CONSTRUCTION ENTRANCE

GENERAL NOTES:

1. For additional General Notes, see Drawing VC–1.
2. For Erosion Control Notes and Details, see Drawing D–4.
3. All proposed drainage structures to have inlet protection, see Drawing SP–2 for locations.


N/F
The City of Newburgh
Northeast corner of retaining wall recited on page 18 of "Commissioner's Report of the Streets and Roads in the City of Newburgh"
Barclay Street
Variable Width Right of Way (Unimproved)
N/F
Bourne & Kenney Redevelopment Company LLC c/o Sheldrake Corporation
Multi–Story Brick Building
Smith Street
Variable Width Right of Way
PROPOSED STABILIZED CONSTRUCTION ENTRANCE
PROPOSED LIMITS OF MILLING AND TOP COAT REPLACEMENT (TYP.)
EXISTING CONCRETE SIDEWALK TO BE REMOVED
EXISTING ASPHALT PAVEMENT TO BE REMOVED
S 05°09'22" E
376.03'
PROPOSED SILT FENCE (TYP.)
EXISTING CONCRETE CURB TO BE REMOVED.
EXISTING UTILITY POLE TO BE REMOVED
EXISTING HANDICAP PARKING SIGNS TO BE REMOVED
EXISTING RETAINING WALL & STEPS TO BE REMOVED
EXISTING RETAINING WALL TO BE REMOVED
PROPOSED CONSTRUCTION STAGING AREA
PROPOSED STABILIZED CONSTRUCTION ENTRANCE
12–4–4.1
Approximate Tax Lot Lines
12–4–2.1
12–4–10
EXISTING PROPERTY LINES TO BE EXTINGUISHED (TYP).
PROPOSED TEMPORARY SOIL STOCKPILE
PROPOSED CONCRETE WASHOUT AREA
CWA
EXISTING RETAINING WALL TO BE REMOVED
N 84°04'43" E
130.00'
N/F
158 Montgomery Owners LLC
EXISTING RETAINING WALL TO BE REMOVED
EXISTING SLATE WALK TO BE REMOVED. SLATE TO BE STORED FOR FUTURE RESETTING.
N 06°04'19" W
23.00'
N 02°26'50" W
333.67'
N 88°33'46" W
140.50'
Montgomery Street
N/F
The City of Newburgh
PROPOSED INLET PROTECTION (TYP).
PROPOSED LIMITS OF MILLING AND TOP COAT REPLACEMENT (TYP.)
South Street
Variable Width Right of Way
Area under construction at time of survey
PROPOSED LIMITS OF MILLING AND TOP–COAT REPLACEMENT (TYP.)
EXISITNG SIGN TO BE PROTECTED DURING CONSTRUCTION. RESET AS NESSESSARY FOLLOWING THE COMPLETION OF CONSTRUCTION (TYP.).
CB Rim: 57.8 Inv: 51.7(A) 12"RCP Inv: 51.7(B) 12"RCP
MH Rim: 56.1 Inv: 50.7(A) 15"RCP Inv: 50.7(B) 12"Clay Inv: 50.5(C) 15"RCP
CB Rim: 52.8 Inv: Inaccessible
SMH Rim: 53.6 Inv: 48.6(A) 10"PVC Inv: 43.6(B) 24"PVC Inv: 43.5(C) 24"PVC
MH Rim=61.8
MH Rim=61.2 Exposed 8"pipe
Conc. Lid CB Rim=63.1
CB Rim: 64.0
CB Rim: 55.6 Inv: Inaccessible
SMH OVERFLOW Rim: 56.6 Inv: 51.5(A) weir @ 24"RCP Inv: 51.1(B) 15"RCP Inv: 51.1(C) 15"Clay
CB Rim: 58.0 Inv: 55.0
SMH Rim=68.1
SMH Rim=67.9
SMH Rim: 58.3 Inv: 51.8(A) 8"Clay Inv: 51.7(B) 10"PVC
SMH Rim: 60.6 Inv: 52.8(A) 6" Inv: 52.6(B) 8"Clay
MH Rim: 60.5 Inv.sump: 53.2 Inv: Inaccessible(A) 18"Clay Inv: 54.3(B) 24"RCP Inv: 52.9(C) 6"
SMH Rim=74.2
SMH Rim: 66.7 Inv: 59.7(A) 15"PVC Inv: 60.3(B) 18"RCP Inv: 54.0(C) 8"Clay Inv: 62.7(D) 15"HD Inv: 53.9(E) 18"Clay Inv: 53.8(F) 18"Clay
MH Rim=79.2
MH Rim=79.9
CB Rim=80.2
CB Rim: 72.8 Inv: filled
DMH Rim: 84.0 Inv: 79.9
DMH Rim: 80.2 Inv: Filled
Curb Inlet 79.3
Curb Inlet 82.6
MH Rim: 89.4
MH Rim: 109.4 Inv: 105.7 (15"in) Rim:104.0 (12"in) Inv: 104.7+48"(in) Inv: 103.4 (18"Out)
MH Rim: 111.8 Inv: no access
CB Rim: 110.2 Inv: 108.1 (in) Inv: 108.2 (out)
CB Rim: 125.4 Inv: 122.2
DMH Rim: 97.2 Inv: 94.2 (o) Inv: 91.4 (o) Inv: 87.0 (sump) No outlet pipe visible
DI Rim: 94.7 Inv: 92.1 (4"PVC out)
SMH Rim: 135.6 Inv: 125.7 (8"in) Inv: 123.6 (12"out)
DMH Rim: 136.4 Inv: 129.2
Deck over
Wood Decks
Crash Gas Posts
Gate
Playground
Flagpole
Fire Alarm
Hydrant
Ramp
Stone Steps
Concrete Curb
Sidewalk
Lawn
Brick
Asphalt Pavement
Stone Retaining Wall
Concrete Wall w/ Metal Fence on Top
Ramada of Bit. Pvmt. over Exposed Interlocking Brick Pavers
Conc. Pad
Posts
Sign
Utility Pole
Curb Inlet
Stone Curb
Concrete Curb
Asphalt Pavement
Grass
Lawn
Safety Concrete
Stone Curb
Concrete Curb
Asphalt Pavement
Stone Curb
Concrete Curb
Asphalt Pavement
Stone Curb
Concrete Curb
Asphalt Pavement

PLANT LIST

KEY	QTY.	BOTANICAL/COMMON NAME	SIZE	ROOT
		SHADE TREES		
GB	4	Ginkgo biloba / Ginkgo	3"–3 1/2" CAL.	B & B
GT	6	Gleditsia triacanthos / Honey Locust	3"–3 1/2" CAL.	B & B
LT	3	Liriodendron Tulipifera / Tulip Poplar	3"–3 1/2" CAL.	B & B
		FLOWERING/SPECIMEN TREES		
AC	4	Amelachier canadensis / Serviceberry	2"–2 1/2" CAL.	B & B
CC	4	Cercis canadensis / Eastern Redbud	2"–2 1/2" CAL.	B & B
CF	4	Cornus florida / White Flowering Dogwood	2"–2 1/2" CAL.	B & B
		SHRUBS		
HA	10	Hydrangea arborescens / Smooth Hydrangea	21"–24" HT.	#3 CONT.
IG	12	Ilex glabra / Inkberry Holly	15"–18" SPR.	#2 CONT.
RP	15	Rhododendron x "PJM" / PJM Rhododendron	18"–24" HT.	#3 CONT.
VT	5	Viburnum opulus var americana / American Cranberry	3'–4' HT.	#5 CONT.
		PERENNIALS/GROUNDCOVERS/GRASSES		
DC	65	Deschampsia cespitosa / Tufted Hair Grass	#1 CONT.	24" O.C.
GO	108	Galium odoratum / Sweet woodruff	4"–6" HT.	#1 CONT./18" O.C.
JE	67	Juncus effusus / Common Rush	15"–18" SPR.	#2 CONT./36" O.C.
JG	73	Juniperus virginiana 'Grey Owl' / Grey Owl Juniper	15"–18" SPR.	#2 CONT./36" O.C.
LM	141	Lamium maculatum / Dead Nettle	12"–15" HT	#1 CONT./18"O.C.
OC	88	Osmunda cinnamomea / Cinnamon Fern	12"–15" HT	#1 CONT./18"O.C.
RF	126	Rudbeckia fulgida 'Goldstrum' / Black–eyed Susan	#1 CONT.	24" O.C.
SH	126	Sarcococca hookeriana var. humilis / Sweetbox	12"–15" HT.	#1 CONT./24" O.C.

GENERAL NOTES:

1. For additional General Notes, see Drawing VC–1.
2. Refer to the Drawings D–1 through D–6 for additional detail information.

GENERAL PLANTING NOTES:

1. All proposed planting beds to receive a 12" min. depth of topsoil. Soil amendments and fertilizer application rates shall be determined based on specific testing of topsoil material.
2. Any new soils added will be amended as required by results of soil testing and placed using a method that will not cause compaction.
3. No fertilizer shall be added in stormwater basin plantings. Nutrient requirements to be met by incorporation of acceptable organic matter.
4. All plant material to be nursery grown.
5. Plants shall conform with ANSI Z60.1 American Standard for Nursery Stock in all ways including dimensions.
6. Plant material shall be taken from healthy nursery stock.
7. All plants shall be grown under climate conditions similar to those in the locality of the project.
8. Plants shall be planted in all locations designed on the plan or as staked in the field by the Landscape Architect.
9. The location and layout of landscape plants shown on the site plan shall take precedence in any discrepancies between the quantities of plants shown on the plans and the quantity of plants in the Plant List.
10. Provide a 3" layer of shredded pine bark mulch (or as specified) over entire watering saucer at all tree pits or over entire planting bed. Do not place mulch within 3" of tree or shrub trunks.
11. All landscape plantings shall be maintained in a healthy condition at all times. Any dead or diseased plants shall immediately be replaced "in kind" by the contractor (during warranty period) or project owner.

CITY OF NEWBURGH SEEDING SCHEDULE:

1. TEMPORARY SEEDING

1.1. SPRING OR EARLY FALL
APPLICATION RATE: ONE (1) LBS. PER 1,000 SQ.FT.

BOTANICAL NAME	COMMON NAME	MIX COMPOSITION
Lolium multiflorum	ANNUAL RYEGRASS	SEVENTY (70) PERCENT
Lolium perenne	PERENNIAL RYEGRASS	THIRTY (30) PERCENT

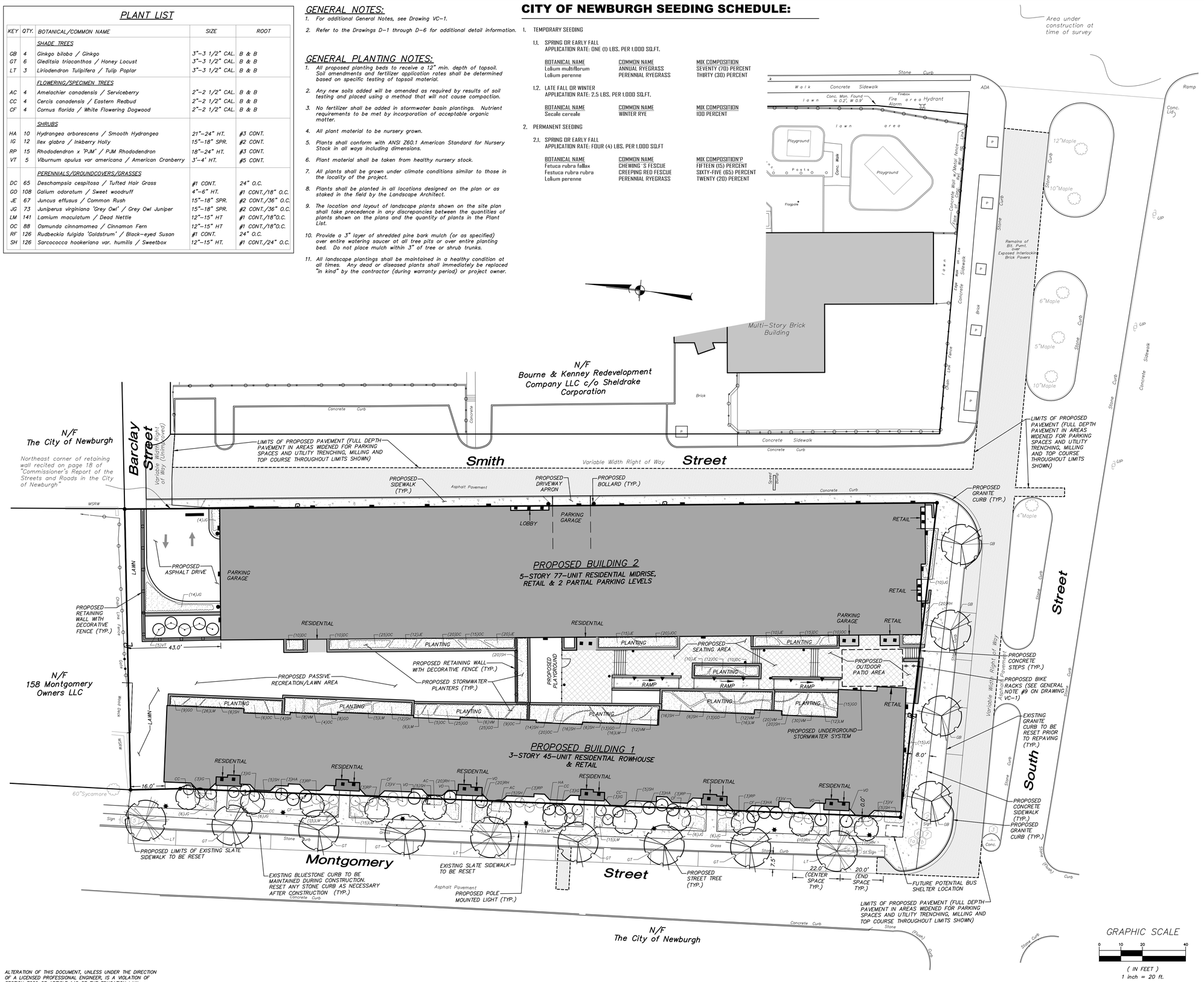
1.2. LATE FALL OR WINTER
APPLICATION RATE: 2.5 LBS. PER 1,000 SQ.FT.

BOTANICAL NAME	COMMON NAME	MIX COMPOSITION
Secale cereale	WINTER RYE	100 PERCENT

2. PERMANENT SEEDING

2.1. SPRING OR EARLY FALL
APPLICATION RATE: FOUR (4) LBS. PER 1,000 SQ.FT

BOTANICAL NAME	COMMON NAME	MIX COMPOSITION'P
Fetuca rubra fallax	CHEWING'S FESCUE	FIFTEEN (15) PERCENT
Festuca rubra rubra	CREEPING RED FESCUE	SIXTY-FIVE (65) PERCENT
Lolium perenne	PERENNIAL RYEGRASS	TWENTY (20) PERCENT



ZONE REQUIREMENTS FOR (WG) WATERFRONT GATEWAY DISTRICT

	REQUIRED / PERMITTED	PROPOSED
Minimum Lot Width:	20'	356'
Minimum Lot Depth:	75'	137'
Minimum/Maximum Front Yard:	0'/10'	0'
Minimum/Maximum Side Yard:	0'/12'	0'/16' ***
Minimum Rear Yard:	20'	N/A *
Minimum Building Height: **	30' or 3 Stories 50' or 5 Stories	37'± Building 1 70'± Building 2
Minimum Landscaped Area:	10%	16%
Frontage Occupancy:	80%	95% Building 1 82% Building 2

* Proposed Corner Lot with Front Yards at Montgomery Street and South Street.
** 30' min. height required for Rowhouse buildings and 50' min. height required for Midrise buildings per §300–138 of the City of Newburgh Zoning Code.
*** Variance Granted: Appeal No. 2023–20, February 27, 2024 granting a 45' sideyard setback variance and 74 off–street parking space variance.

LEGEND

- EXISTING PROPERTY LINE
- EXISTING EASEMENT
- EXISTING STONE & MASONRY RETAINING WALL
- EXISTING STONE WALL
- EXISTING CONCRETE CURB
- EXISTING DROP IN CONCRETE CURB
- EXISTING SIGN
- EXISTING FENCE
- PROPOSED CONCRETE CURB
- PROPOSED DROP CURB AND RAMP
- PROPOSED EDGE OF SIDEWALK
- PROPOSED RETAINING WALL
- PROPOSED STOP BAR
- PROPOSED PAINTED DIRECTIONAL ARROW
- PROPOSED ADA COMPLIANT RAMP
- PROPOSED DOOR LOCATION
- PROPOSED OVERHEAD DOOR LOCATION
- PROPOSED POLE MOUNTED LIGHT
- PROPOSED CEILING MOUNTED LIGHT
- PROPOSED WALL MOUNTED LIGHT
- PROPOSED BOLLARD LIGHT
- PROPOSED RECESSED WALL LIGHT

GRAPHIC SCALE
0 10 20 40
(IN FEET)
1 inch = 20 ft.

NO.	DATE	REVISION	BY
6	10–8–25	REVISED FOR PLANNING BOARD SUBMISSION	HMF
5	3–8–24	REVISED FOR PLANNING BOARD SUBMISSION	KJK
4	11–3–23	REVISED FOR PLANNING BOARD SUBMISSION	JLL
3	10–6–23	REVISED FOR PLANNING BOARD SUBMISSION	JLL
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1	6–9–23	REVISED FOR PLANNING BOARD SUBMISSION	MEU

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3 Garrett Place
Carmel, NY 10512
(845) 225–9690
(845) 225–9717 fax
www.insite–eng.com

PROJECT:
THE GREEN
140 MONTGOMERY STREET, CITY OF NEWBURGH, ORANGE COUNTY, NEW YORK

DRAWING:
LAYOUT & LANDSCAPE PLAN

STATE OF NEW YORK — ROBERT M. PEARL — 036417 — LICENSED PROFESSIONAL ENGINEER

PROJECT NUMBER	22230.100	PROJECT MANAGER	J.J.C.
DATE	4–6–23	DRAWN BY	S.M.R.
SCALE	1" = 20'	CHECKED BY	J.L.L.

DRAWING NO. SP–1
SHEET 3 / 11

ALTERATION OF THIS DOCUMENT, UNLESS UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, IS A VIOLATION OF SECTION 7209 OF ARTICLE 145 OF THE EDUCATION LAW.

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LEGEND

- EXISTING PROPERTY LINE
- EXISTING EASEMENT
- EXISTING STONE & MASONRY RETAINING WALL
- EXISTING STONE WALL
- EXISTING CONCRETE CURB
- EXISTING DROP IN CONCRETE CURB
- EXISTING SIGN
- EXISTING FENCE
- EXISTING DRAINAGE PIPE
- EXISTING SEWER LINE
- EXISTING DRAINAGE STRUCTURE
- EXISTING PHONE STAND
- EXISTING CATCH BASIN
- EXISTING MANHOLE
- EXISTING POST MOUNTED LIGHT
- EXISTING HYDRANT
- EXISTING GAS VALVE
- EXISTING WATER VALVE
- EXISTING SEWER MANHOLE
- PROPOSED 10' CONTOUR
- PROPOSED 2' CONTOUR
- PROPOSED SPOT ELEVATION
- PROPOSED TOP OF WALL & BOTTOM OF WALL ELEVATIONS
- PROPOSED SEWER SERVICE LINE WITH CLEANOUT
- PROPOSED SEPARATE DOMESTIC WATER SERVICE LINE WITH GATE VALVE
- PROPOSED SEPARATE FIRE SERVICE LINE WITH POST INDICATOR VALVE
- PROPOSED 6"ø COMBINED DOMESTIC + FIRE SERVICE
- PROPOSED SEWER MANHOLE
- PROPOSED DRAINAGE MANHOLE
- PROPOSED SITE HDPE DRAINAGE PIPE
- PROPOSED HDPE DRAINAGE PIPE CITY OF NEWBURGH
- PROPOSED YARD DRAIN
- PROPOSED END SECTION

GENERAL NOTES:

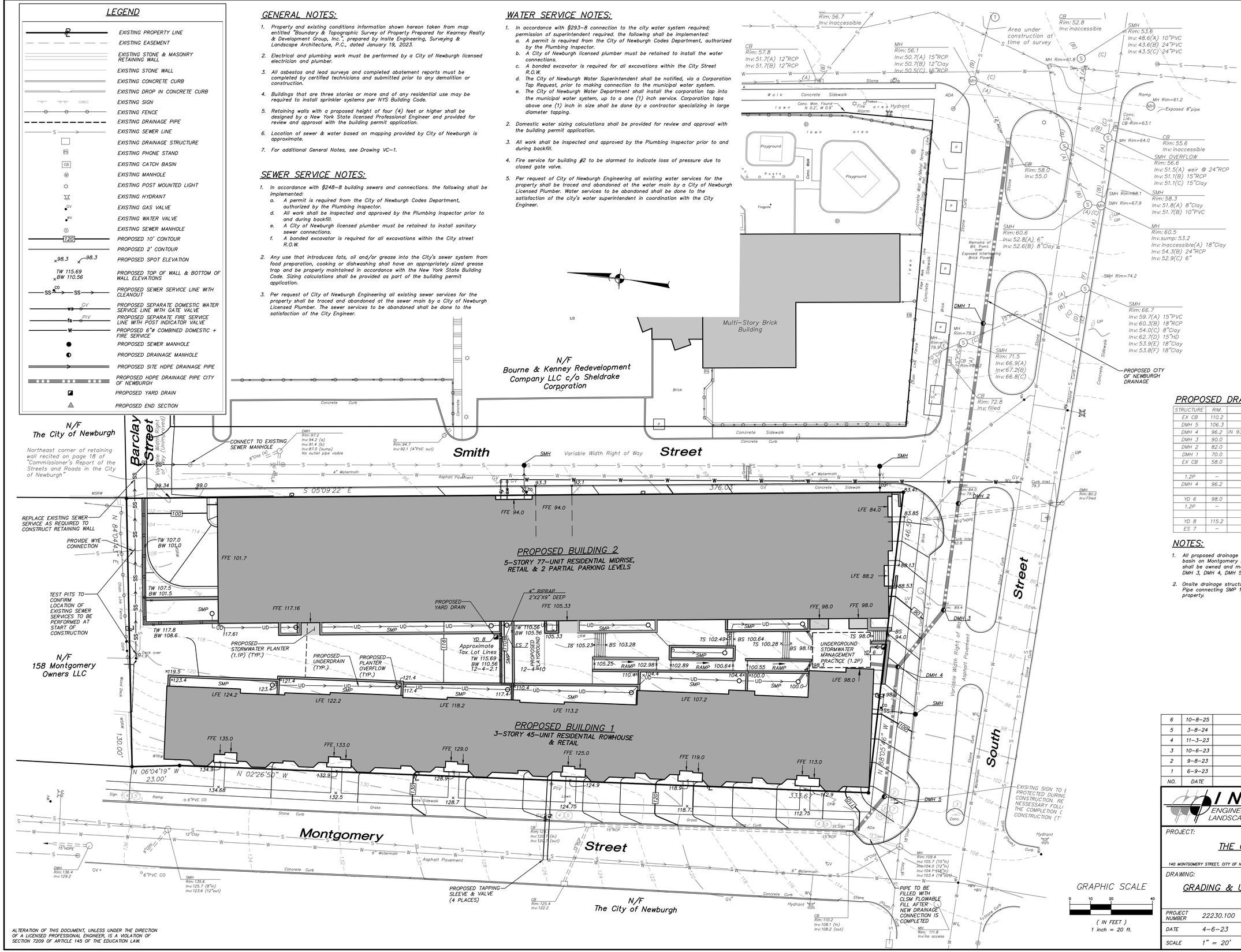
1. Property and existing conditions information shown hereon taken from map entitled "Boundary & Topographic Survey of Property Prepared for Kearney Realty & Development Group, Inc.", prepared by Insite Engineering, Surveying & Landscape Architecture, P.C., dated January 19, 2023.
2. Electrical and plumbing work must be performed by a City of Newburgh licensed electrician and plumber.
3. All asbestos and lead surveys and completed abatement reports must be completed by certified technicians and submitted prior to any demolition or construction.
4. Buildings that are three stories or more and of any residential use may be required to install sprinkler systems per NYS Building Code.
5. Retaining walls with a proposed height of four (4) feet or higher shall be designed by a New York State licensed Professional Engineer and provided for review and approval with the building permit application.
6. Location of sewer & water based on mapping provided by City of Newburgh is approximate.
7. For additional General Notes, see Drawing VC–1.

SEWER SERVICE NOTES:

1. In accordance with §248–8 building sewers and connections. the following shall be implemented:
   a. A permit is required from the City of Newburgh Codes Department, authorized by the Plumbing Inspector.
   d. All work shall be inspected and approved by the Plumbing Inspector prior to and during backfill.
   e. A City of Newburgh licensed plumber must be retained to install sanitary sewer connections.
   f. A bonded excavator is required for all excavations within the City street R.O.W.
2. Any use that introduces fats, oil and/or grease into the City's sewer system from food preparation, cooking or dishwashing shall have an appropriately sized grease trap and be properly maintained in accordance with the New York State Building Code. Sizing calculations shall be provided as part of the building permit application.
3. Per request of City of Newburgh Engineering all existing sewer services for the property shall be traced and abandoned at the sewer main by a City of Newburgh Licensed Plumber. The sewer services to be abandoned shall be done to the satisfaction of the City Engineer.

WATER SERVICE NOTES:

1. In accordance with §293–8 connection to the city water system required; permission of superintendent required. the following shall be implemented:
   a. A permit is required from the City of Newburgh Codes Department, authorized by the Plumbing Inspector.
   b. A City of Newburgh licensed plumber must be retained to install the water connections.
   c. A bonded excavator is required for all excavations within the City Street R.O.W.
   d. The City of Newburgh Water Superintendent shall be notified, via a Corporation Tap Request, prior to making connection to the municipal water system.
   e. The City of Newburgh Water Department shall install the corporation tap into the municipal water system, up to a one (1) inch service. Corporation taps above one (1) inch in size shall be done by a contractor specializing in large diameter tapping.
2. Domestic water sizing calculations shall be provided for review and approval with the building permit application.
3. All work shall be inspected and approved by the Plumbing Inspector prior to and during backfill.
4. Fire service for building #2 to be alarmed to indicate loss of pressure due to closed gate valve.
5. Per request of City of Newburgh Engineering all existing water services for the property shall be traced and abandoned at the water main by a City of Newburgh Licensed Plumber. Water services to be abandoned shall be done to the satisfaction of the city's water superintendent in coordination with the City Engineer.



PROPOSED DRAINAGE TABLE

STRUCTURE	RIM.	INV.	PIPE	LENGTH	SLOPE
EX CB	110.2	108.1	12" HDPE	24 L.F.	20.0%
DMH 5	106.3	103.3	12" HDPE	63 L.F.	16.0%
DMH 4	96.2	IN 93.2/OUT 85.5	12" HDPE	35 L.F.	6.8%
DMH 3	90.0	83.1	12" HDPE	52 L.F.	12.7%
DMH 2	82.0	76.5	12" HDPE	88 L.F.	14.7%
DMH 1	70.0	63.6	12" HDPE	88 L.F.	9.7%
EX CB	58.0	55.0			
1.2P	–	86.0	12" HDPE	14 L.F.	3.6%
DMH 4	96.2	85.5			
YD 6	98.0	95.5	8" HDPE	7 L.F.	7.1%
1.2P	–	95.0			
YD 8	115.2	110.5	8" HDPE	4 L.F.	12.5%
ES 7	–	110.0			

NOTES:

1. All proposed drainage structures and pipe connecting the existing catch basin on Montgomery Street to the existing catch basin on South Street shall be owned and maintained by the City of Newburgh (DMH 1, DMH 2, DMH 3, DMH 4, DMH 5).
2. Onsite drainage structures and pipes shall be maintained by the property. Pipe connecting SMP 1.2P to DMH 4 shall be owned and maintained by the property.

GRAPHIC SCALE
0 10 20 40
(IN FEET)
1 inch = 20 ft.

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PROJECT:
THE GREEN
140 MONTGOMERY STREET, CITY OF NEWBURGH, ORANGE COUNTY, NEW YORK

DRAWING:
GRADING & UTILITIES PLAN

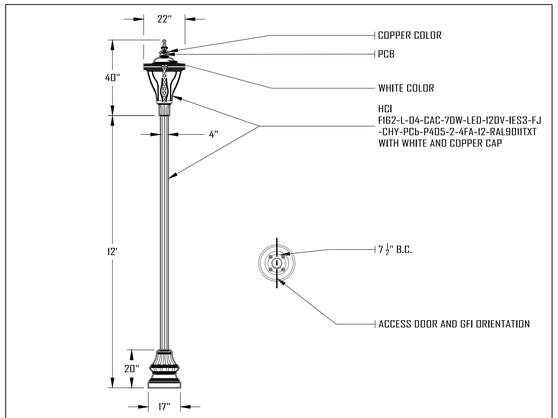
STATE OF NEW YORK — MARY M. PEARSALL — 086447 — LICENSED PROFESSIONAL ENGINEER

PROJECT NUMBER	22230.100	PROJECT MANAGER	J.J.C.
DATE	4–6–23	DRAWN BY	S.M.R.
SCALE	1" = 20'	CHECKED BY	J.L.L.

DRAWING NO. SP–2 | SHEET 4 / 11

ALTERATION OF THIS DOCUMENT, UNLESS UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, IS A VIOLATION OF SECTION 7209 OF ARTICLE 145 OF THE EDUCATION LAW.

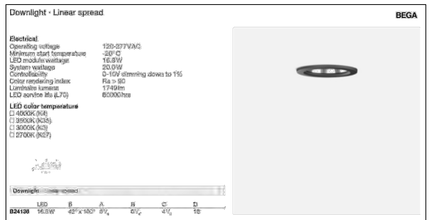
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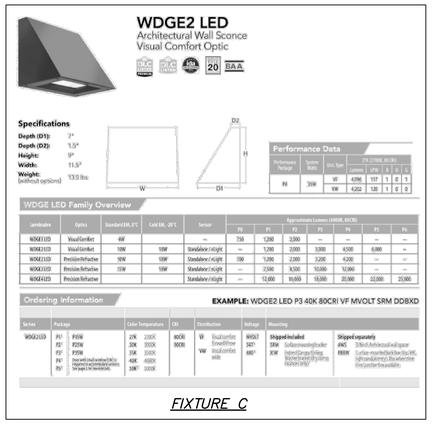
DETAIL NOTES:

1. PROPOSED LIGHTS SHALL MEET CITY OF NEWBURGH STANDARDS BY HERITAGE CASTING & IRONWORKS OR APPROVED EQUAL.
2. MATERIAL AND METHODS OF CONSTRUCTION SHALL BE IN CONFORMANCE WITH THE LATEST EDITION OF THE NEW YORK STATE DEPARTMENT OF TRANSPORTATION (NYSDOT) STANDARD SPECIFICATIONS FOR CONSTRUCTION AND MATERIALS.

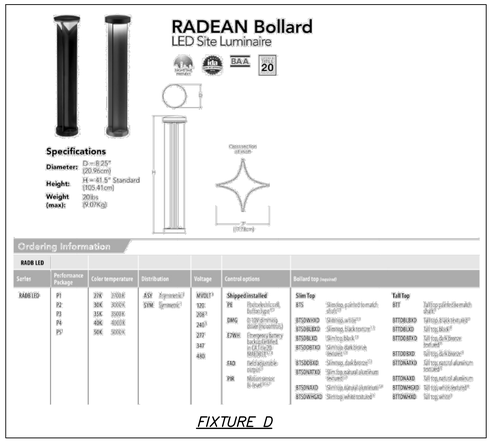
01 ORNAMENTAL STREET LIGHT – *FIXTURE A*
CITY OF NEWBURGH STANDARD DETAIL N.T.S.



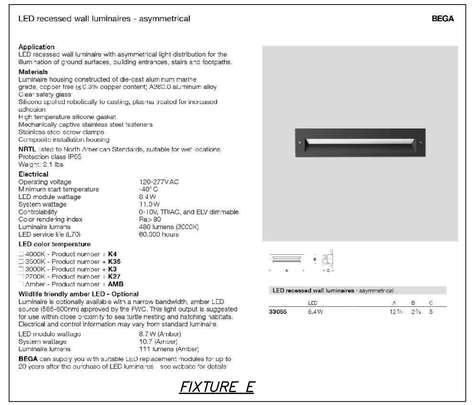
FIXTURE B



FIXTURE C



FIXTURE D



FIXTURE E

LEGEND

- EXISTING PROPERTY LINE
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- PROPOSED WALL MOUNTED LIGHT
- PROPOSED BOLLARD LIGHT
- PROPOSED RECESSED WALL LIGHT

LUMINAIRE SCHEDULE

Sym	Qty	Catalog Number	Description	Lamp	Mounting Height	Watts
A	7	HCI F162-L D4 CAC 70W LED 120V	F162 Series Luminaire with an Injection Molded UV Stabilized Diffuser, and an Internal Optical System	LED	13'	69.5
B	25	B24136 LED 16.8W K27 BLK	BEGA Canopy Downlight	LED	10'	10.1
C	21	WDGE2 LED P4 27K 70CRI T2M	WDGE2 LED Architectural Wall Sconce	LED	12'	46.7
D	8	RADB LED P2 27K ASY DBLXD	RADEAN Bollard – LED Site Luminaire	LED	3'	8.0
E	6	BEGA 33055K3 LED8 27K	BEGA LED Recessed Wall Luminaire	LED	2'	11.0

STATISTICS

DESCRIPTION	SYMBOL	AVG	MAX	MIN	AVG/MAX	AVG/MIN
Project Area	+	0.2 fc	12.0 fc	0.0 fc	N/A	N/A

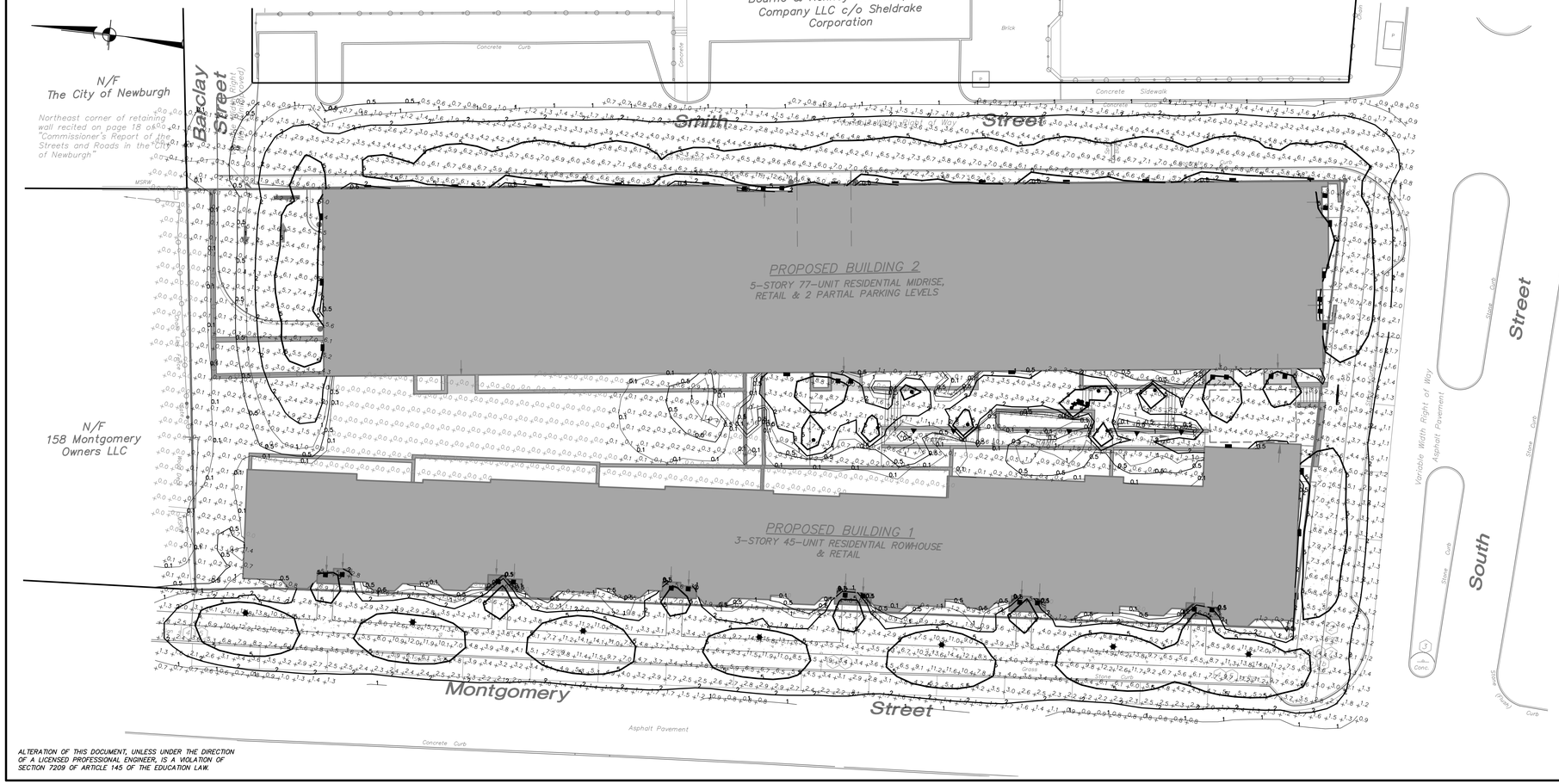
LIGHT CONTOUR LEGEND

- 0.1 — 0.10 Foot Candles
- 0.5 — 0.50 Foot Candles
- 1 — 1.00 Foot Candles
- 2 — 2.00 Foot Candles
- 5 — 5.00 Foot Candles

* Photometric calculations shown on plan are in foot candles.

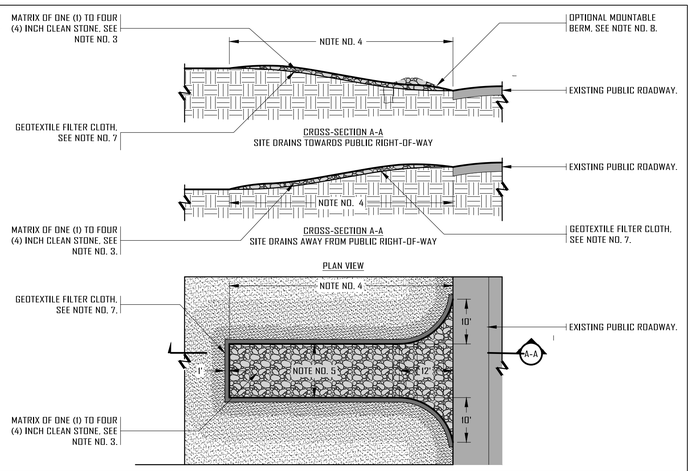
LIGHTING NOTES:

1. All lighting shall be as noted on the plan or approved equal.
2. Calculation values shown in this plan are taken on a horizontal plane at ground level using a 0.90 light loss factor for LEDs. Topographical information and landscaping have not been accounted for in these calculations.
3. All lighting on this plan shall be directed and/or shielded so as to preclude objectionable glare from being observable from adjoining streets and properties.
4. Photometric modeling based on specified fixtures shown hereon.
5. All exterior lighting fixtures shall be a color temperature of 2,700 Kelvin or less.

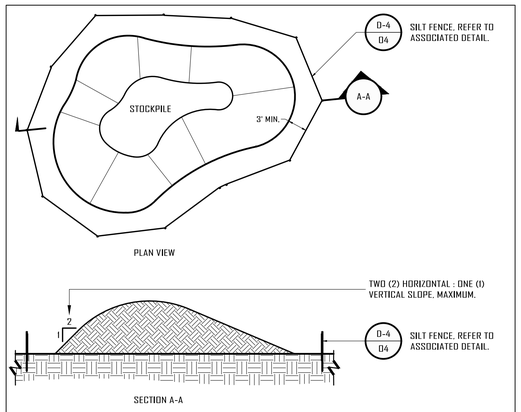

N/F
Bourne & Kenney Redevelopment
Company LLC c/o Sheldrake
Corporation
N/F
The City of Newburgh
Northeast corner of retaining wall recited on page 18 of "Commissioner's Report of the Streets and Roads in the City of Newburgh."
Baclay Street (Right Of Way Varies)
Smith Street
Street
PROPOSED BUILDING 2
5-STORY 77-UNIT RESIDENTIAL MIDRISE, RETAIL & 2 PARTIAL PARKING LEVELS
PROPOSED BUILDING 1
3-STORY 45-UNIT RESIDENTIAL ROWHOUSE & RETAIL
N/F
158 Montgomery
Owners LLC
Montgomery
Street
Variable Width Right of Way
Asphalt Pavement
South
Street
Concrete Curb
Asphalt Pavement
Brick
Concrete Sidewalk
Gross
Stone Curb
Stone Curb
Stone Curb
Stone Curb
Concrete Curb
Concrete Curb
Concrete

DETAIL NOTES:

1. REFER TO THE NYS STANDARDS AND SPECIFICATIONS FOR EROSION AND SEDIMENT CONTROL FOR ADDITIONAL INFORMATION.
2. REMOVE ALL VEGETATION, TOPSOIL, AND ANY OTHER UNSUITABLE MATERIAL FROM THE FOUNDATION AREA, GRADE, AND CROWN FOR POSITIVE DRAINAGE.
3. STONE SHALL BE A MATRIX OF ONE (1) TO FOUR (4) INCH CLEAN STONE.
4. THE LENGTH SHALL BE A MINIMUM OF FIFTY (50) FEET. A SHORTER LENGTH MAY BE USED UPON APPROVAL BY THE LOCAL STORMWATER MANAGEMENT OFFICER AND/OR THE NYSDEC.
5. THE WIDTH SHALL BE TWELVE (12) FEET MINIMUM. TWENTY-FOUR (24) FEET MINIMUM IF THERE IS ONLY ONE ACCESS TO THE SITE.
6. THE DEPTH OF STONE SHALL BE SIX (6) INCHES MINIMUM.
7. GEOTEXTILE FILTER CLOTH SHALL BE PLACED OVER THE ENTIRE AREA PRIOR TO PLACEMENT OF STONE. THE FILTER CLOTH SHALL BE INERT TO COMMONLY ENCOUNTERED CHEMICALS. HYDRO-CARBONS, MILDEW, AND ROT RESISTANT; TREVIRA SPUNBOND 1115, MIRAFI 100X, TYPAR 3401, OR EQUIVALENT IN LIGHT DUTY APPLICATION. TREVIRA SPUNBOND 1135, MIRAFI 600X, OR EQUIVALENT IN HEAVY DUTY APPLICATION.
8. ALL SURFACE WATER FLOWING AND/OR DIVERTED TOWARD THE STABILIZED CONSTRUCTION ACCESS SHALL BE PIPED BENEATH. IN THE EVENT PIPING IS IMPRACTICABLE, A MOUNTABLE BERM CONSISTING OF 5 HORIZONTAL TO 1 VERTICAL SIDE SLOPES AND A THREE (3) FOOT TABLE TOP SHALL BE PERMITTED.
9. PERIODIC INSPECTION AND NEEDED MAINTENANCE SHALL BE PROVIDED AFTER EACH RAIN EVENT. THE ACCESS SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE OR FULL DEPTH RESTORATION WITH CLEAN STONE. A STOCKPILE OF STONE SHALL BE MAINTAINED ONSITE FOR MAINTENANCE PURPOSES. ALL SEDIMENT SPILLED, DROPPED, OR WASHED ONTO PUBLIC RIGHTS-OF-WAY MUST BE REMOVED IMMEDIATELY AND RETURNED TO THE CONSTRUCTION SITE OR DISPOSED OF IN A MANNER APPROVED BY THE LOCAL STORMWATER MANAGEMENT OFFICER, THEIR INSPECTOR, AND/OR THE NYSDEC.



01 STABILIZED CONSTRUCTION ACCESS
CITY OF NEWBURGH STANDARD DETAIL — 1/16" = 1'-0" HORIZONTAL, 1/8" = 1'-0" VERTICAL



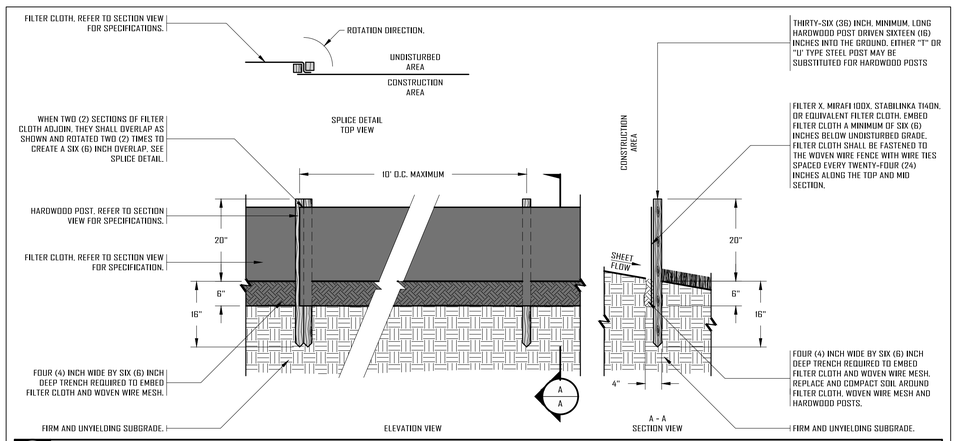
DETAIL NOTES:

1. SOIL STOCKPILES MUST BE PROTECTED BY THE USE OF ESTABLISHED VEGETATION, ANCHORED STRAW MULCH, ROLLED STABILIZATION MATTING, OR OTHER DURABLE COVERING.

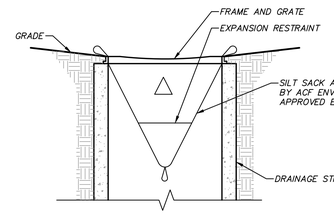
04 SOIL STOCKPILE
CITY OF NEWBURGH STANDARD DETAIL — 3/32" = 1'-0"

CITY OF NEWBURGH
EROSION AND SEDIMENT CONTROL NOTES:

1. NOTIFY BII AT LEAST FORTY-EIGHT (48) HOURS, EXCLUDING THE DAY OF THE NOTIFICATION, BEFORE ANY GROUND DISTURBANCE HAS COMMENCED AND HAVE THE UNDERGROUND UTILITIES MARKED OUT. WAIT FOR THE AFFECTED UTILITY OPERATORS TO RESPOND, AND THEN CONFIRM THE UTILITIES HAVE BEEN ACCURATELY LOCATED. RESPECT THE IDENTIFIED LOCATIONS AND DIG ACCORDINGLY, TAKING PRECAUTIONS, ESPECIALLY WITHIN THE KNOWN TOLERANCE ZONE. IN THE EVENT MARK OUTS CANNOT BE MAINTAINED AND/OR GROUND DISTURBANCE CONTINUES LONGER THAN TEN (10) DAYS, NOTIFY BII AND REQUEST A REMARK.
2. THE APPROVED EROSION AND SEDIMENT CONTROL PLAN AND/OR STORMWATER POLLUTION PREVENTION PLAN ("SWPPP"), IF APPLICABLE, SHALL NOT BE CONSTRUED TO PROHIBIT THE STATE OF NEW YORK FROM EXERCISING ANY AUTHORITY PURSUANT TO THE ENVIRONMENTAL CONSERVATION LAW, COMMON LAW, OR FEDERAL LAW. ADDITIONALLY, NEW YORK STATE SHALL NOT BE PROHIBITED FROM TAKING ANY MEASURES, WHETHER CIVIL OR CRIMINAL, TO PREVENT VIOLATIONS OF THE LAWS OF THE STATE OF NEW YORK, OR PROTECT THE PUBLIC HEALTH AND SAFETY AND/OR THE ENVIRONMENT.
3. AUTHORIZED REPRESENTATIVES FROM ANY REGULATORY AGENCIES HAVING JURISDICTION MAY ENTER AND INSPECT, AT REASONABLE TIMES, UPON PRESENTATION OF VALID CREDENTIALS TO ENSURE COMPLIANCE WITH SECTION 402 OF THE CLEAN WATER ACT AND ARTICLE 17 OF THE ENVIRONMENTAL CONSERVATION LAW.
4. EROSION AND SEDIMENT CONTROL PRACTICES AND POLLUTION PREVENTION MEASURES, COLLECTIVELY KNOWN AS BEST MANAGEMENT PRACTICES ("BMPS"), SHALL BE INSTALLED PRIOR TO ANY GROUND DISTURBANCE. INSTALLATION SHALL BE IN ACCORDANCE WITH THE APPROVED EROSION AND SEDIMENT CONTROL PLAN(S), SWPPP, IF APPLICABLE, AND THE LATEST EDITION OF THE NEW YORK STATE STANDARDS AND SPECIFICATIONS FOR EROSION AND SEDIMENT CONTROL.
5. ACTIVE DISTURBANCE SHALL BE LIMITED TO A FIVE (5) ACRE MAXIMUM AT ANY TIME, UNLESS AUTHORIZATION FOR A LARGER DISTURBANCE BY THE NYSDEC IS GRANTED.
6. CLEARING, GRUBBING, AND/OR STRIPPING OF TOPSOIL SHALL BE LIMITED TO THOSE AREAS DESCRIBED IN EACH STAGE OF THE CONSTRUCTION SEQUENCE. THE AFOREMENTIONED SCOPE OF WORK MAY NOT COMMENCE IN ANY STAGE OF THE CONSTRUCTION SEQUENCE UNTIL THE BMPS SPECIFIED HAVE BEEN INSTALLED AND ARE FUNCTIONING AS DESCRIBED IN THE APPROVED EROSION AND SEDIMENT CONTROL PLAN, STORMWATER POLLUTION PREVENTION PLAN ("SWPPP"), IF APPLICABLE, AND/OR THE LATEST EDITION OF THE NEW YORK STATE STANDARDS AND SPECIFICATIONS FOR EROSION AND SEDIMENT CONTROL.
7. ALL GROUND DISTURBANCE ACTIVITIES SHALL PROCEED IN ACCORDANCE WITH THE CONSTRUCTION SEQUENCE PROVIDED ON THE EROSION AND SEDIMENT CONTROL PLAN. DEVIATION FROM THAT CONSTRUCTION SEQUENCE MUST BE APPROVED IN WRITING FROM THE LOCAL STORMWATER MANAGEMENT OFFICER AND/OR THE NYSDEC PRIOR TO IMPLEMENTATION.
8. INSPECTION AND MAINTENANCE MUST BE PERFORMED AS NECESSARY TO ENSURE THE INTEGRITY AND EFFECTIVENESS OF INSTALLED BMPS. A TRAINED CONTRACTOR, AT A MINIMUM HAVING CURRENT CREDENTIALS FOR THE NYSDEC 4-HOUR EROSION AND SEDIMENT CONTROL TRAINING, SHALL INSPECT BMPS WITHIN THE ACTIVE WORK AREA DAILY AND AFTER EVERY STORMWATER EVENT, THAT GENERATES RUNOFF. A SIMILARLY QUALIFIED INSPECTOR SHALL INSPECT BMPS AT LEAST ONCE EVERY SEVEN (7) CALENDAR DAYS. IN THE EVENT DEFICIENCIES ARE IDENTIFIED, THE CONTRACTOR SHALL BEGIN IMPLEMENTING THE NECESSARY CORRECTIVE ACTIONS WITHIN ONE (1) BUSINESS DAY AND COMPLETE CORRECTIVE ACTIONS IN A REASONABLE TIMEFRAME.
9. DUST CONTROL SHALL BE IMPLEMENTED DURING PERIODS OF DRY WEATHER TO PREVENT AIRBORNE MIGRATION OF SOIL PARTICLES. APPROPRIATE DUST CONTROL MAY UTILIZE VEGETATIVE COVER, MULCH, OR SPRINKLING WITH WATER.
10. RE-STABILIZE DISTURBED AREAS AS SOON AS POSSIBLE AFTER CONSTRUCTION IS COMPLETED, INITIATED BY THE END OF THE NEXT BUSINESS DAY AND COMPLETED WITHIN FOURTEEN (14) DAYS. WAITING UNTIL ALL DISTURBED AREAS ARE READY FOR STABILIZATION IS UNACCEPTABLE.
11. TEMPORARY STABILIZATION VIA SEEDING SHALL OCCUR IN ACCORDANCE WITH THE TEMPORARY SEEDING SCHEDULE, GENERALLY SOWN IN SPRING, MARCH THROUGH MAY, AND/OR FALL, SEPTEMBER THROUGH OCTOBER. APPLICATION INTO NOVEMBER IS PERMISSIBLE SHOULD RYE BE UTILIZED, DURING SUMMER MONTHS, JUNE THROUGH AUGUST, AND WINTER MONTHS, DECEMBER THROUGH FEBRUARY, WHEN SEEDING IS FOUND TO BE IMPRACTICABLE, MULCHING ONLY SHALL BE IMPLEMENTED. MULCH THE AREA WITH HAY OR STRAW AT A RATE OF TWO (2) TONS PER ACRE, APPROXIMATELY NINETY (90) LBS. PER 1000 SQ. FT. OR TWO (2) BALES. MULCH ANCHORING WILL BE REQUIRED WHERE WIND OR AREAS OF CONCENTRATED WATER ARE OF CONCERN.
12. PRIOR TO TEMPORARY STABILIZATION, THE AREA SHALL BE ROUGH GRADED AND CONSTRUCTED SLOPES PHYSICALLY STABLE. LARGE DEBRIS AND ROCKS SHALL BE REMOVED.
13. PERMANENT STABILIZATION VIA SEEDING SHALL BE IN ACCORDANCE WITH THE PERMANENT SEEDING SCHEDULE, GENERALLY SOWN FROM MARCH THROUGH MAY OR SEPTEMBER THROUGH OCTOBER, NOVEMBER IF RYE IS UTILIZED, DURING SUMMER MONTHS, JUNE THROUGH AUGUST, AND WINTER MONTHS, DECEMBER THROUGH FEBRUARY, WHEN SEEDING IS FOUND TO BE IMPRACTICABLE, MULCHING ONLY SHALL BE IMPLEMENTED. PERMANENT STABILIZATION VIA SEEDING MAY BE UNDERTAKEN DURING THE SUMMER MONTHS IF PLANS PROVIDE FOR ADEQUATE WATERING. MULCH THE AREA WITH STRAW AT A RATE OF TWO (2) TONS PER ACRE, APPROXIMATELY NINETY (90) LBS. PER 1000 SQ. FT. OR TWO (2) BALES. MULCH ANCHORING WILL BE REQUIRED WHERE WIND OR AREAS OF CONCENTRATED WATER ARE OF CONCERN.
14. PRIOR TO PERMANENT STABILIZATION, ROUGH GRADE OF CONSTRUCTED SLOPES SHALL BE SCARIFIED AND LOOSENED TO A MINIMUM DEPTH OF FOUR (4) INCHES WITH MECHANICAL RAKES PRIOR TO PLACING TOPSOIL. TOPSOIL SHALL BE SPREAD TO A LOOSELY COMPACTED UNIFORM MINIMUM THICKNESS OF FOUR (4) INCHES. TOPSOIL SURFACE SHALL BE FINELY GRADED AND LOOSENED BY MECHANICAL RAKES, AS NEEDED, TO ENSURE SEED ACCEPTANCE AND SEED TO SOIL CONTACT. IT SHALL NOT BE PLACED WHEN IT IS PARTLY FROZEN, MUDDY, SATURATED, OR ON FROZEN SLOPES OR OVER ICE, SNOW, OR STANDING WATER PUDDLES.
15. THE INTEGRITY AND EFFECTIVENESS OF TEMPORARY BMPS SHALL BE MAINTAINED AND NOT REMOVED UNTIL ALL GROUND DISTURBANCE TRIBUTARY TO THEM ARE PERMANENTLY STABILIZED, E.G. EIGHTY (80) PERCENT UNIFORM DENSITY OF PERMANENT VEGETATION OR A PERMANENT APPLICATION OF AN ALTERNATIVE GROUNDCOVER IN ACCORDANCE WITH THE APPROVED SITE PLAN.
16. IMMEDIATELY UPON DISCOVERING UNFORESEEN CIRCUMSTANCES POSING THE POTENTIAL FOR ACCELERATED EROSION AND/OR SEDIMENT MIGRATION, THE LOCAL STORMWATER MANAGEMENT OFFICER, THEIR INSPECTOR, AND/OR THE NYSDEC SHALL BE NOTIFIED AND APPROPRIATE BMPS SHALL BE IDENTIFIED AND INSTALLED.
17. ADDITIONAL BMPS MAY BE REQUIRED BY THE LOCAL STORMWATER MANAGEMENT OFFICER, THEIR INSPECTOR, AND/OR THE NYSDEC DEPENDENT UPON FIELD CONDITIONS. ANY ADDITIONAL BMPS SHALL BE INSTALLED IN ACCORDANCE WITH THE LATEST EDITION OF THE NEW YORK STATE STANDARDS AND SPECIFICATIONS FOR EROSION AND SEDIMENT CONTROL.



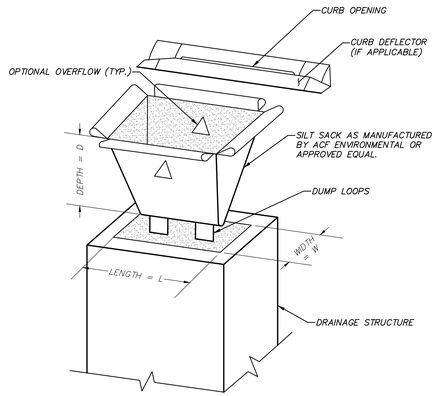
02 SILT FENCE
CITY OF NEWBURGH STANDARD DETAIL — 3/4" = 1'-0"



ELEVATION

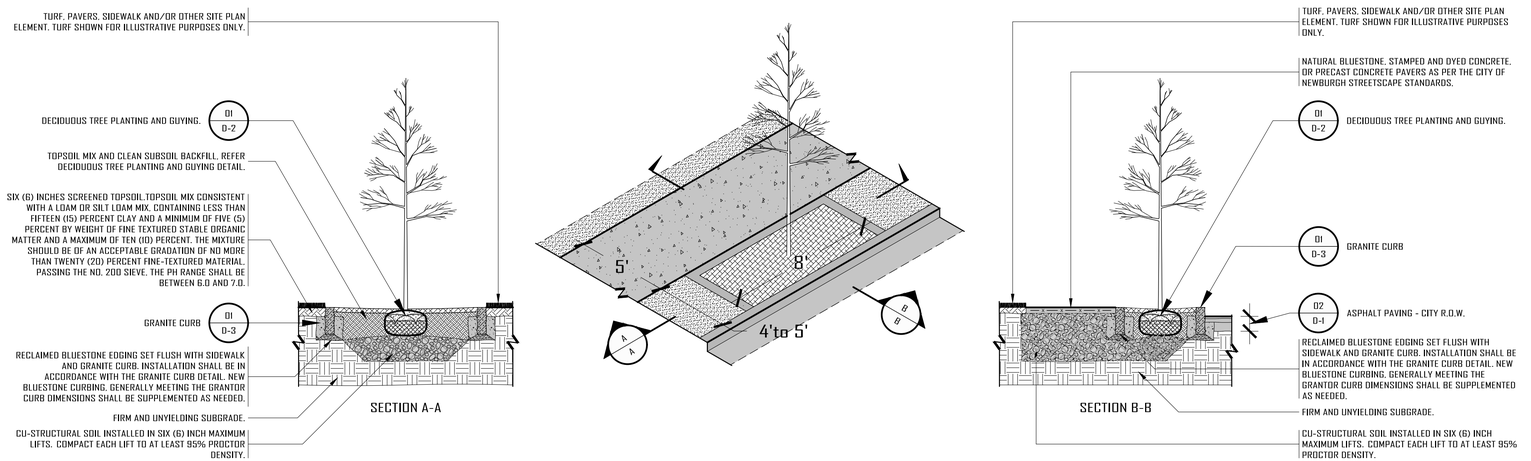
NOTE:
FABRIC FOR INSERT SHALL MEET THE FOLLOWING:

FABRIC PROPERTIES	MINIMUM ACCEPTABLE VALUE	TEST METHOD
Grab Tensile Strength (lbs)	110	ASTM D 4632
Mullen Burst Strength (PSI)	300	ASTM D 3786
Puncture Strength (lbs)	60	ASTM D 4833
Minimum Trapezoidal Tear Strength (lbs)	50	ASTM D 4533
Flow Through Rate (gal/min/sf)	25	ASTM D 4491
Equivalent Opening Size	40-80	US Std Sieve ASTM D 4751



EXPLODED ISOMETRIC

MANUFACTURED INSERT INLET PROTECTION DETAIL
(N.T.S.)



03 TREE PIT - HISTORIC DISTRICT
CITY OF NEWBURGH STANDARD DETAIL, APPROVED MARCH 30, 2022 — 1/4" = 1'-0"

NO.	DATE	REVISION	BY
5	10-8-25	REVISED FOR PLANNING BOARD SUBMISSION	HMF
4	3-8-24	REVISED FOR PLANNING BOARD SUBMISSION	KJK
3	11-3-23	REVISED FOR PLANNING BOARD SUBMISSION	JLL
2	10-6-23	REVISED FOR PLANNING BOARD SUBMISSION	JLL
1	9-8-23	REVISED FOR PLANNING BOARD SUBMISSION	KJK

INSITE ENGINEERING, SURVEYING & LANDSCAPE ARCHITECTURE, P.C.
3 Garrett Place
Carmel, NY 10512
(845) 225-9690
(845) 225-9717 fax
www.insite-eng.com

PROJECT:
THE GREEN
140 MONTGOMERY STREET, CITY OF NEWBURGH, ORANGE COUNTY, NEW YORK

DRAWING:
DETAILS

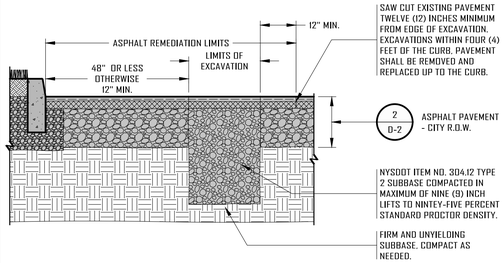
STATE OF NEW YORK — JEFFERY W. PEARSALL — 086647 — LICENSED PROFESSIONAL ENGINEER

PROJECT NUMBER	22230.100	PROJECT MANAGER	J.J.C.
DATE	6-9-23	DRAWN BY	S.M.R.
SCALE	AS SHOWN	CHECKED BY	J.L.L.

DRAWING NO. D-1 — SHEET 6 / 11

ALTERATION OF THIS DOCUMENT, UNLESS UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, IS A VIOLATION OF SECTION 7209 OF ARTICLE 145 OF THE EDUCATION LAW.

Z:\C\22230100 Kearney, Montgomery St\05 D-1-5.dwg, 10/1/2025 10:56:49 AM, nPortnuck, 1:1

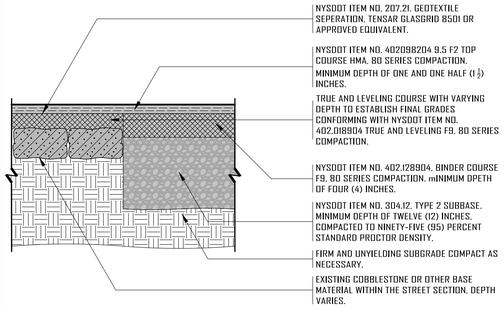


DETAIL NOTES:

1. WORK WITHIN THE R.O.W. LIMITS ALONG SOUTH STREET BETWEEN MARINE DRIVE / WATER STREET AND THE WESTERN CITY LINE AND/OR MARINE DRIVE BETWEEN THE SOUTHERN CITY LINE AND ROBINSON AVENUE (9W) REQUIRES A PERMIT FROM THE NYSDOT, THIS PERMIT WOULD BE IN ADDITION TO ANY REQUIRED CITY OF NEWBURGH PERMITS.
2. EXCAVATION SHALL NOT BE BACKFILLED WITHOUT THE CITY'S PLUMBING INSPECTOR OR DESIGNATED REPRESENTATIVE PRESENT. INSPECTION / WITNESS MAY BE SCHEDULED THROUGH THE CITY OF NEWBURGH'S DEPARTMENT OF CODE COMPLIANCE BY CALLING (845) 569-7400.
3. NO EXCAVATED MATERIAL OR PAVEMENT, FROZEN, WET OR SPONGY MATERIAL, OR CLAY SHALL BE USED AS BACKFILL.
4. ALL JOINTS TO BE SEALED WITH ASPHALT EMULSION (AS-20).
5. IF EXISTING PAVEMENT THICKNESS EXCEEDS 6", INCREASE THICKNESS OF BINDER COURSE TO MATCH EXISTING TOTAL THICKNESS.
6. ALL PAVEMENT MARKINGS DISTURBED SHALL BE RESTORED TO THE SATISFACTION OF THE CITY.

01 ASPHALT REMEDIATION - CITY R.O.W.

CITY OF NEWBURGH STANDARD DETAIL, APPROVED MARCH 30, 2022 — 1/2" = 1'-0"

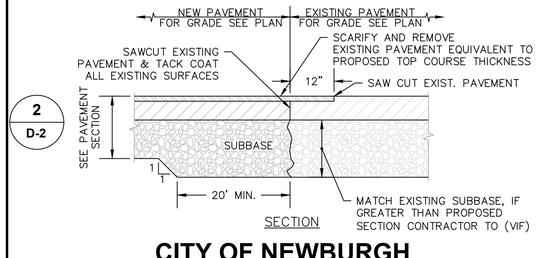


DETAIL NOTES:

1. MATERIAL AND METHODS OF CONSTRUCTION SHALL BE IN CONFORMANCE WITH THE LATEST EDITION OF THE NEW YORK STATE DEPARTMENT OF TRANSPORTATION (NYSDOT) STANDARD SPECIFICATIONS FOR CONSTRUCTION AND MATERIALS..
2. HOT MIX ASPHALT (HMA) PAVEMENT SHALL CONFORM WITH SECTION 400 *HOT MIX ASPHALT* OF THE ABOVE REFERENCED NYSDOT STANDARD SPECIFICATIONS AND THE TYPE CALLED OUT IN THESE DRAWINGS. ALTHOUGH SECTION 400 IN ITS ENTIRETY IS REFERENCED, THE HOT MIX ASPHALT (HMA) PAVEMENT(S) SPECIFIED FOR THIS CONTRACT SHALL BE AS SPECIFIED UNDER SECTION 402 *HOT MIX ASPHALT (HMA) PAVEMENTS.*
3. TACK COAT MATERIAL AND APPLICATION RATE WHEN SPECIFIED OR CALLED OUT IN THESE DRAWINGS OR REQUIRED BY THE REFERENCED SPECIFICATIONS SHALL CONFORM WITH SECTION 407 *TACK COAT* OF THE NYSDOT STANDARD SPECIFICATIONS. REFER TO NOTE NO. 1 ABOVE.

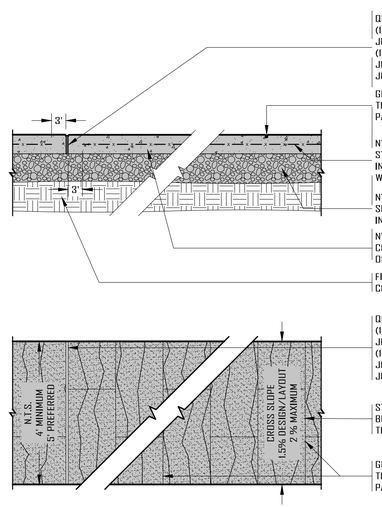
02 ASPHALT PAVEMENT - CITY R.O.W.

CITY OF NEWBURGH STANDARD DETAIL, APPROVED MARCH 30, 2022 — 1" = 1'-0"



CITY OF NEWBURGH PAVEMENT TRANSITION

3 / D-2 — SCALE: NOT TO SCALE

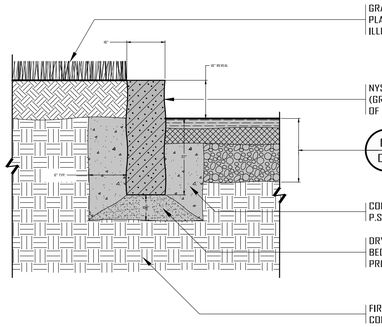


DETAIL NOTES:

1. MATERIAL AND METHODS OF CONSTRUCTION SHALL BE IN CONFORMANCE WITH THE LATEST EDITION OF THE NEW YORK STATE DEPARTMENT OF TRANSPORTATION (NYSDOT) STANDARD SPECIFICATIONS FOR CONSTRUCTION AND MATERIALS.
2. ALL WORK SHALL CONFORM WITH SECTION 608 *SIDEWALKS, DRIVEWAYS, BICYCLE PATHS, AND VEGETATION CONTROL STRIPS* OF THE NYSDOT STANDARD SPECIFICATIONS. REFER TO NOTE NO. 1 ABOVE.
3. ALL PEDESTRIAN FACILITIES SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE REQUIREMENTS OF THE *PROPOSED ACCESSIBILITY GUIDELINES FOR PEDESTRIAN FACILITIES IN THE PUBLIC RIGHT OF WAY* (PROWAG). FACILITIES THAT CANNOT MEET THE CURRENT PROWAG DESIGN STANDARDS, CONSTRUCT FACILITIES TO MEET THE STANDARDS TO THE GREATEST EXTENT PRACTICABLE. FEATURES THAT DO NOT MEET PROWAG REQUIREMENTS MUST BE APPROVED BY THE CITY ENGINEER DOCUMENTED AS NON-STANDARD FEATURES.
4. ALL CONCRETE MATERIALS, PLACEMENT AND CONSTRUCTION SHALL CONFORM WITH SECTION 500 *PORTLAND CEMENT CONCRETE* OF THE NYSDOT STANDARD SPECIFICATIONS. REFER TO NOTE NO. 1 ABOVE.
5. REINFORCING STEEL FOR CONCRETE SHALL CONFORM WITH SECTION 556 *REINFORCING STEEL FOR CONCRETE STRUCTURES* OF THE NYSDOT STANDARD SPECIFICATIONS. REFER TO NOTE NO. 1 ABOVE. AND AS SPECIFICALLY CALLED OUT IN THE DRAWINGS.
6. SUBBASE MATERIAL SHALL CONFORM WITH SECTION 304 *SUBBASE COURSE* OF THE NYSDOT STANDARD SPECIFICATIONS. REFER TO NOTE NO. 1 ABOVE
7. CONCRETE SIDEWALK IN THE EAST END HISTORIC DISTRICT SHALL BE DYED WITH BUTTERFIELD UNI-MIX® U28 CHARCOAL OR APPROVED EQUIVALENT AND STAMPED WITH EIGHTEEN (18) INCH BY THIRTY-SIX (36) INCH BLUESTONE BY BUTTERFIELD COLOR, PRODUCT NUMBER BST4210 OR APPROVED EQUIVALENT. A SET OF STAMPS ARE AVAILABLE FROM THE CITY OF NEWBURGH CODE COMPLIANCE OFFICE. THE FINISHED SIDEWALKS SHALL BE SEALED WITH BUTTERFIELD COLOR® CLEAR-GUARD™ PRO 350 CURE AND SEAL MIXED WITH CLEAR GUARD SLIP-RESISTANT ADDITIVE FOR INCREASED SLIP-RESISTANCE OR APPROVED EQUIVALENT.
8. EXPANSION JOINTS, CONSISTING OF A PREMOLDED RESILIENT JOINT FILLER, SHALL BE INSTALLED AT ALL EXISTING IMMOVABLE OBJECTS, AT CONSTRUCTION COLD JOINTS, OR SPECIFICALLY CALLED OUT IN THE DRAWINGS. EXPANSION JOINT GAPS SHALL BE FILLED WITH A JOINT FILLER SEALER.
9. CONTROL JOINTS SHALL BE AESTHETICALLY SAW CUT CONSISTENT WITH THE STAMPED PATTERN, SEE NOTE 7. SAW CUTS SHALL BE ONE (1) INCH IN DEPTH AND EVERY THIRD STAMP, APPROXIMATELY EVERY 4.5 FEET PERPENDICULAR TO THE SIDEWALK/PATH OF TRAVEL OR AS DEEMED NECESSARY TO PREVENT RANDOM CRACKING.
10. WHERE IT IS NECESSARY TO PLACE FILL FOR THE PURPOSE OF BRINGING THE SUBGRADE ELEVATION UP TO A SPECIFIED GRADE, THE FILL MATERIAL PLACED SHALL BE IN CONFORMANCE WITH SECTION 203 *EXCAVATION AND EMBANKMENT* OF THE NYSDOT STANDARD SPECIFICATIONS. REFER TO NOTE NO. 1 ABOVE.

04 CONCRETE SIDEWALK - DECORATIVE

CITY OF NEWBURGH STANDARD DETAIL, APPROVED JUNE 19, 2025 — 3/4" = 1'-0"

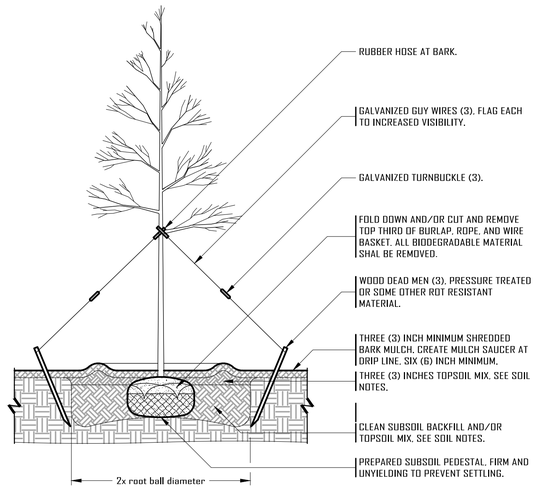


DETAIL NOTES:

1. GRANITE CURB SHALL BE RANDOM LENGTHS NOT LESS THAN THIRTY-SIX (36) INCHES AND COMPLY WITH ASTM C615.
2. JOINTS SHALL BE 1/4 INCH, FULLY MORTARED ,FINISHED FLUSH WITH THE EXPOSED CURB SURFACES. ALL SURFACES SHALL BE CLEANED OF EXCESS MORTAR.
3. A SIX (6) INCH CURB REVEAL SHALL BE MAINTAINED. WHERE NEW AND/OR RESET GRANITE CURB MEETS EXISTING CURB, A 1:10 SLOPE SHALL BE MAINTAINED TO TRANSITION THE SIX (6) INCH CURB REVEAL TO MEET THE EXISTING CURB REVEAL.

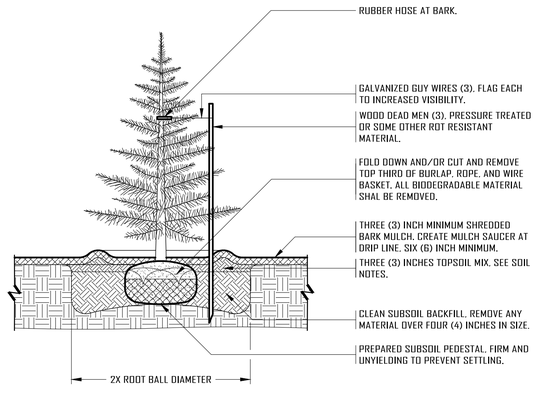
05 GRANITE CURB

CITY OF NEWBURGH STANDARD DETAIL, APPROVED MARCH 30, 2022 — 1" = 1'-0"



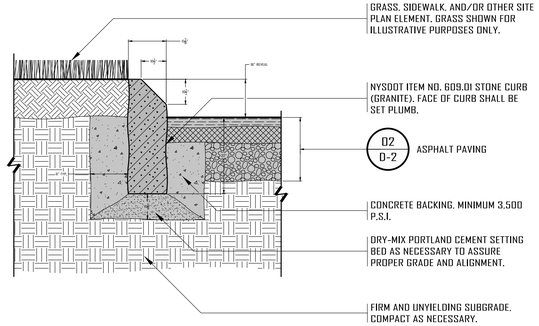
06 DECIDUOUS TREE PLANTING AND GUYING

CITY OF NEWBURGH STANDARD DETAIL — 3/8" = 1'-0"



07 EVERGREEN TREE PLANTING AND GUYING

CITY OF NEWBURGH STANDARD DETAIL — 3/8" = 1'-0"



DETAIL NOTES:

1. GRANITE CURB SHALL BE RANDOM LENGTHS NOT LESS THAN THIRTY-SIX (36) INCHES AND COMPLY WITH ASTM C615.
2. JOINTS SHALL BE 1/4 INCH, FULLY MORTARED ,FINISHED FLUSH WITH THE EXPOSED CURB SURFACES. ALL SURFACES SHALL BE CLEANED OF EXCESS MORTAR.
3. A SIX (6) INCH CURB REVEAL SHALL BE MAINTAINED. WHERE NEW AND/OR RESET GRANITE CURB MEETS EXISTING CURB, A 1:10 SLOPE SHALL BE MAINTAINED TO TRANSITION THE SIX (6) INCH CURB REVEAL TO MEET THE EXISTING CURB REVEAL.

08 GRANITE CURB - MOUNTABLE

CITY OF NEWBURGH STANDARD DETAIL, MARCH 30, 2022 — 1" = 1'-0"

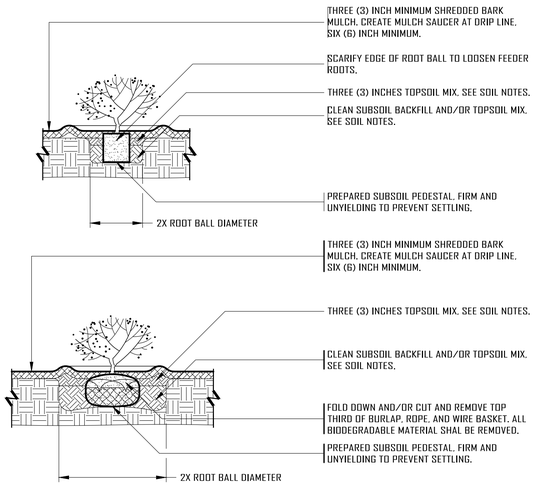
CITY OF NEWBURGH PLANTING NOTES:

1. NOTIFY BII AT LEAST FORTY-EIGHT (48) HOURS, EXCLUDING THE DAY OF THE NOTIFICATION, BEFORE ANY GROUND DISTURBANCE HAS COMMENCED AND HAVE THE UNDERGROUND UTILITIES MARKED OUT. WAIT FOR THE AFFECTED UTILITY OPERATORS TO RESPOND, AND THEN CONFIRM THE UTILITIES HAVE BEEN ACCURATELY LOCATED. RESPECT THE IDENTIFIED LOCATIONS AND DIG ACCORDINGLY, TAKING PRECAUTIONS, ESPECIALLY WITHIN THE KNOWN TOLERANCE ZONE. IN THE EVENT MARK OUTS CANNOT BE MAINTAINED AND/OR GROUND DISTURBANCE CONTINUES LONGER THAN TEN (10) DAYS, NOTIFY BII AND REQUEST A REMARK.
2. ALL PLANT MATERIAL FURNISHED IN ACCORDANCE WITH THIS PLAN SET SHALL MEET OR EXCEED THE MINIMUM STANDAROS WITHIN THE LATEST EDITION OF THE AMERICAN STANDARD FOR NURSERY STOCK. PLANT MATERIAL NOT IN COMPLIANCE WITH THE LATEST EDITION OF THE AMERICAN STANDARDS FOR NURSERY STOCK WILL NOT AND SHALL NOT BE ACCEPTED BY THE PROJECT OWNER AND/OR MUNICIPAL OFFICIAL.
3. ALL PLANT MATERIAL SHALL BE GUARANTEED UNDER A WARRANTY PERIOD FOR A MINIMUM OF TWO (2) YEARS FROM THE DATE OF FINAL ACCEPTANCE. ALL PLANT MATERIAL DEEMED UNSATISFACTORY MUST BE REPLACED IN THE SAME PLANTING SEASON DEEMED UNACCEPTABLE. PLANT MATERIAL SHALL BE REPLACED WITH NEW PLANTS, OF APPROXIMATE EQUAL SIZE AND NO SMALLER THAN ORIGINALLY SPECIFIED ON THE APPROVED PLAN SETS, AT THE NEXT APPROPRIATE PLANTING PERIOD.
4. CERTAIN SPECIES OF TREES HAVE A HIGH RISK OF FAILURE WHEN FIELD DUG AND PLANTED DURING THE FALL PLANTING SEASON, THE FOLLOWING SPECIES ARE KNOWN AS FALL PLANTING/DIG HAZARD:

ACER RUBRUM	*BETULA SP.*	*CARPJINUS SP.*
CELTIS SP.	*CERCIS SP.*	*CERCIDUPHYLLUM*
CORNUS SP.	*FAGUS SP.*	*HALESIA SP.*
LIQUIDAMBER STYRACIFLUA	*LIRIODENDRON TULIPIFERA*	*MALUS SP.*
MYSSA SYLVATCA	*OSTRYA VIRGINIANA*	*PLATANUS SP.*
PYRUS SP.	*PYRUS SP.*	*QUERCUS SP.*
TAXODIUM DISTICHUM	*TILIA TOMENTOSA*	*ZELKOVA SERRATA*

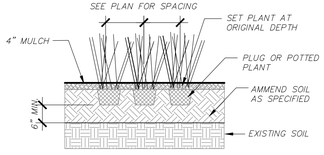
THE NURSERY STOCK FOR THE AFOREMENTIONED SPECIES, IF INCLUDED AS PART OF THE APPROVED PLAN SET, SHALL BE SUPPLIED FROM THOSE DUG DURING THE PREVIOUS SPRING PLANTING SEASON AND HELD OVER THE SUMMER SEASON.

5. THE CONTRACTOR SHALL FIELD ADJUST THE LOCATIONS OF PLANT MATERIAL AS NECESSARY TO AVOID DAMAGE TO ALL EXISTING UNDERGROUND UTILITIES AND/OR EXISTING ABOVE GROUND ELEMENTS. ALL CHANGES REQUIRED SHALL BE COMPLETED AT THE CONTRACTOR'S EXPENSE AND SHALL BE COORDINATED WITH THE OWNER AND/OR MUNICIPAL OFFICIAL.
6. SPRING PLANTING SHOULD TAKE PLACE BETWEEN MARCH 15TH AND JUNE 15TH. FALL PLANTING SHOULD TAKE PLACE BETWEEN SEPTEMBER 1ST AND OCTOBER 30TH. AVOID PLANTING OUTSIDE THE AFOREMENTIONED DATES, ESPECIALLY IN THE HEAT OF SUMMER, UNLESS PROPER IRRIGATION AND MONITORING IS IMPLEMENTED TO ENSURE HEALTH AND VIGOR OF PLANT MATERIAL.
7. THE CROWN OF ROOT BALL SHALL BEAR A SIMILAR RELATIONSHIP, OR SLIGHTLY ABOVE, FINISHED GRADE AS IT BORE TO PREVIOUS GRADE, PLACE ON SUBSOIL PEDESTAL IN ACCORDANCE WITH THE PLANTING DETAILS.
8. REMOVED ANY DEAD OR BROKEN BRANCHES AND THIN AS NEEDED UP TO ONE-THIRD (1/3) OF EXISTING PLANT STRUCTURE, RETAINING ORIGINAL SHAPE.
9. NATURAL OR DYED BROWN SHREDDED BARK MULCH SHOULD BE APPLIED TO ALL PLANTING BEDS TO AN APPROXIMATE DEPTH OF THREE (3) INCHES. INDIVIDUAL TREES WITHIN LAWN AREAS SHOULD, ALTHOUGH NOT ALWAYS DEPICTED IN THE PLANS, HAVE A MINIMUM THREE (3) FOOT DIAMETER, PREFERABLE FIVE (5) FOOT DIAMETER MULCH RING CONSISTENT WITH A SPADE-CUT EDGE.
10. IRRIGATE PLANT MATERIALS DAILY FOR TWO (2) WEEKS WITH TWO (2) TO THREE (3) GALLONS OF WATER PER ONE (1) INCH OF TRUNK SIZE OR ONE (1) GALLON PER SHRUB/PERENNIAL. THEN IRRIGATE MINIMUM TWO (2) TIMES A WEEK UNTIL WELL ESTABLISHED. USE APPROPRIATE JUDGMENT DEPENDENT UPON PRECIPITATION RATES.
11. EACH PLANT SHALL BE FERTILIZED WITH A PREMIUM GENERAL-PURPOSE PHOSPHORUS FREE ORGANIC FERTILIZER. APPLICATION RATE SHALL BE IN ACCORDANCE WITH MANUFACTURES RECOMMENDATIONS AND SHOULD BE APPLIED IN THE FOLLOWING SPRING PLANTING SEASON. PLANTS SHOULD NOT BE FERTILIZED IN THE SAME YEAR THEY ARE PLANTED IN ORDER TO ALLOW NEW ROOT GROWTH. AS OF JANUARY 1, 2012 THE NYSDEC RESTRICTS THE USE OF PHOSPHORUS FERTILIZER ON LAWNS OR NON-AGRICULTURAL TURF. IT IS RECOMMENDED THAT A SOIL TEST BE CONDUCTED IN ORDER TO ENSURE THE USE OF AN APPROPRIATE FERTILIZER, ADDITIONALLY, NO FERTILIZER SHOULD BE APPLIED WITHIN TWENTY (20) FEET OF A WATER BODY OR ON PAVED SURFACES.
12. ALL PLANTINGS SHOWN ON THE APPROVED PLAN SET SHALL BE MAINTAINED IN A VIGOROUS GROWING CONDITION THROUGHOUT THE DURATION OF USE AND PLANTS NOT SO MAINTAINED ARE TO BE REPLACED WITH NEW PLANTS, OF APPROXIMATE EQUAL SIZE AND NO SMALLER THAN ORIGINALLY SPECIFIED ON THE APPROVED PLAN SETS, AT THE NEXT APPROPRIATE PLANTING PERIOD.

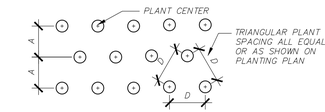


09 CONTAINER AND B&B SHRUB PLANTING

CITY OF NEWBURGH STANDARD DETAIL, APPROVED MARCH 14, 2024 — 3/8" = 1'-0"



NOTES:
1. PLANT QUANTITIES WERE DETERMINED BY MULTIPLYING AREA (SQ. FT.) BY NUMBER OF PLANTS PER SQ. FT. FOR REQUIRED SPACING
2. QUANTITY OF PLANTS AND SPACING AS NOTED IN PLANTING SCHEDULE



GRASS PLANT SPACING PLAN

SPACING "D"	ROW "A"	PLANTS PER SQ. FT.
36" O.C.	31.2"	0.10
24" O.C.	20.8"	0.29
18" O.C.	15.6"	0.50

PERENNIAL / ORNAMENTAL GRASS PLANTING DETAIL (N.T.S.)

NO.	DATE	REVISION	BY
5	10-8-25	REVISED FOR PLANNING BOARD SUBMISSION	HMF
4	3-8-24	REVISED FOR PLANNING BOARD SUBMISSION	KJK
3	11-3-23	REVISED FOR PLANNING BOARD SUBMISSION	JLL
2	10-6-23	REVISED FOR PLANNING BOARD SUBMISSION	JLL
1	9-8-23	REVISED FOR PLANNING BOARD SUBMISSION	KJK

INSITE ENGINEERING, SURVEYING & LANDSCAPE ARCHITECTURE, P.C.
3 Garrett Place
Carmel, NY 10512
(845) 225-9690
(845) 225-9717 fax
www.insite-eng.com

PROJECT: THE GREEN
140 MONTGOMERY STREET, CITY OF NEWBURGH, ORANGE COUNTY, NEW YORK

DRAWING: DETAILS

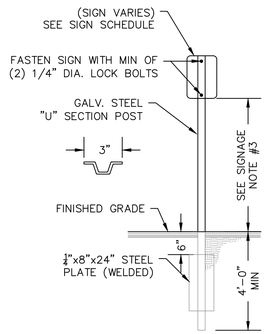
STATE OF NEW YORK — HENRY M. PEARCE — 036647 — LICENSED PROFESSIONAL ENGINEER

PROJECT NUMBER	22230.100	PROJECT MANAGER	J.J.C.
DATE	6-9-23	DRAWN BY	S.M.R.
SCALE	AS SHOWN	CHECKED BY	J.L.L.

DRAWING NO. D-2 — SHEET 7 / 11

ALTERATION OF THIS DOCUMENT, UNLESS UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, IS A VIOLATION OF SECTION 7209 OF ARTICLE 145 OF THE EDUCATION LAW.

Z:\C\22230\100 Kearney, Montgomery St\105 D-1-5.dwg, 10/7/2025 10:51:28 AM, HP officejet 6, 1:1



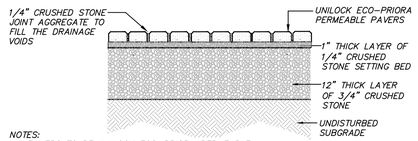
SINGLE POST SIGN MOUNTING DETAIL

1 / D-3

SCALE: NOT TO SCALE

SIGN DATA TABLE

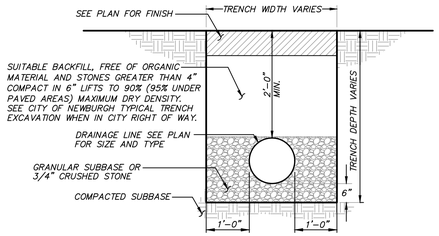
LOCATION NO.	TEXT	M.U.T.C.D. NUMBER	SIZE OF SIGN (s.f.)	DESCRIPTION
1	NO PARKING ANY TIME	R7-1	12" x 18"	Red on White
2	RESERVED PARKING	R7-8	12" x 18"	Blue on White



NOTES:
1. PAVERS TO BE UNILOCK ECO-PRIORA PERMEABLE PAVERS 5"X10"X3 1/8" SET IN HERRINGBONE PATTERN.
2. PAVER FINISH TO BE IL CAMPO. PAVER COLOR TO BE AS APPROVED BY OWNER.
3. JOINT AGGREGATE COLOR TO BE COORDINATED WITH PAVER COLOR.

SITE PERMEABLE PAVERS DETAIL

(N.T.S.)



NOTE: OUTSIDE OF CITY RIGHT OF WAY

DRAINAGE LINE TRENCH DETAIL

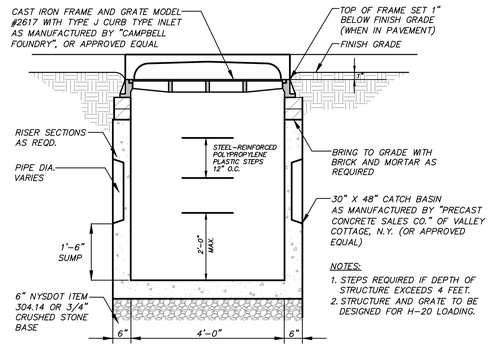
(N.T.S.)

DETAIL NOTES:

1. INSTALLATION SHALL BE IN ACCORDANCE WITH ASTM D2321, " STANDARD PRACTICE FOR UNDERGROUND INSTALLATION OF THERMOPLASTIC PIPE FOR SEWERS AND OTHER GRAVITY FLOW APPLICATIONS", LATEST EDITION.
2. ALL WORK SHALL BE IN ACCORDANCE WITH OSHA REGULATIONS, INCLUDING, BUT NOT LIMITED TO CFR 1926 SUBPART P EXCAVATIONS. EXCAVATIONS SHALL BE PROTECTED FROM CAVE-INS BY AN ADEQUATE PROTECTIVE SYSTEM.
3. MEASURES SHALL BE TAKEN TO PREVENT MIGRATION OF NATIVE FINE MATERIAL INTO BACKFILL MATERIAL WHERE REQUIRED.
4. MATERIAL THAT IS FROZEN SHALL NOT BE PLACED, AND/OR FILL MATERIAL SHALL NOT BE PLACED ON GROUND THAT IS FROZEN TO ANY DEPTH REGARDLESS OF THE DATE.
5. IN LOCATIONS THE BOTTOM IS UNSTABLE, EXCAVATION DEPTH MAY INCREASE TO MAINTAIN A FIRM AND UNYIELDING SUBGRADE. AS AN ALTERNATIVE, THE TRENCH BOTTOM MAY BE STABILIZED USING GEOTEXTILE MATERIAL.

02 PIPE BACKFILL 12" OR LESS

CITY OF NEWBURGH STANDARD DETAIL, APPROVED MARCH 30, 2022 — 3/4" = 1'-0"

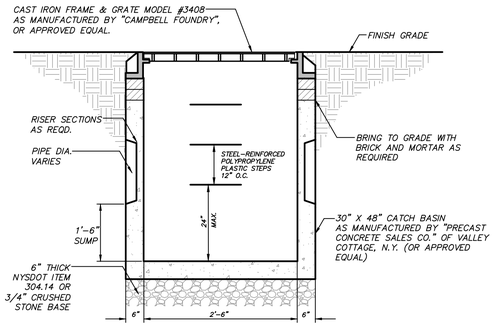


NOTES:
1. STEPS REQUIRED IF DEPTH OF STRUCTURE EXCEEDS 4 FEET.
2. STRUCTURE AND GRATE TO BE DESIGNED FOR H-20 LOADING.

NOTE: CONTRACTOR TO SUBMIT SHOP DRAWINGS FOR CONCRETE STRUCTURES FOR DESIGN ENGINEER'S APPROVAL PRIOR TO CONSTRUCTION OF STRUCTURE.

CATCH BASIN (CB) DETAIL

(N.T.S.)

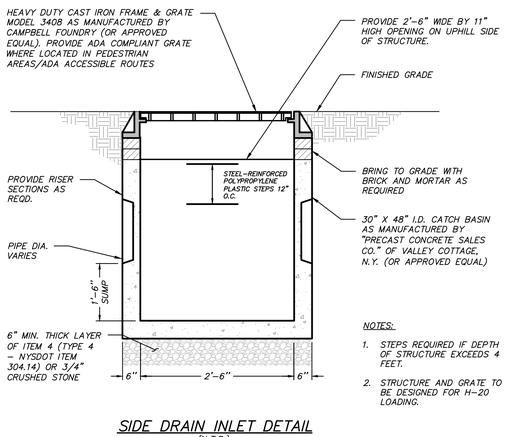


NOTE: CONTRACTOR TO SUBMIT SHOP DRAWINGS FOR CONCRETE STRUCTURES FOR DESIGN ENGINEER'S APPROVAL PRIOR TO CONSTRUCTION OF STRUCTURE.

DRAIN INLET (DI) DETAIL

(N.T.S.)

(STRUCTURE AND GRATE TO BE DESIGNED FOR H-20 LOADING)



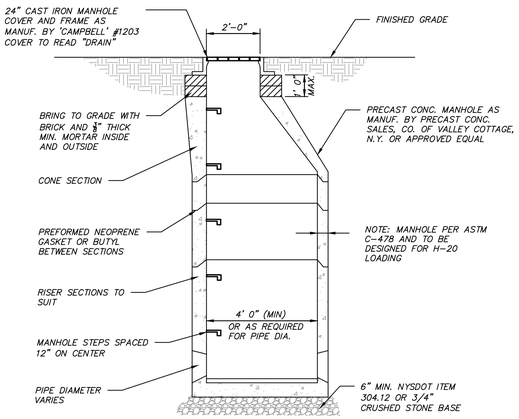
NOTES:
1. STEPS REQUIRED IF DEPTH OF STRUCTURE EXCEEDS 4 FEET.
2. STRUCTURE AND GRATE TO BE DESIGNED FOR H-20 LOADING.

SIDE DRAIN INLET DETAIL

(N.T.S.)

LIST OF DRAINAGE STRUCTURE ACRONYMS

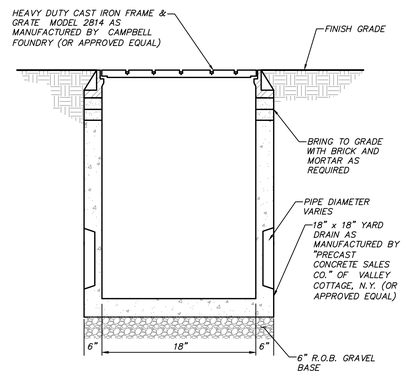
ACRONYM	DEFINITION
CB	CATCH BASIN
DI	DRAIN INLET
DMH	DRAINAGE MANHOLE
OS	OUTLET STRUCTURE
YD	YARD DRAIN



NOTE: CONTRACTOR TO SUBMIT SHOP DRAWINGS FOR CONCRETE STRUCTURES FOR DESIGN ENGINEER'S APPROVAL PRIOR TO CONSTRUCTION OF STRUCTURE.

DRAINAGE MANHOLE (DMH) DETAIL

(N.T.S.)



18" X 18" YARD DRAIN (YD) DETAIL

(N.T.S.)

NO.	DATE	REVISION	BY
5	10-8-25	REVISED FOR PLANNING BOARD SUBMISSION	HMF
4	3-8-24	REVISED FOR PLANNING BOARD SUBMISSION	KJK
3	11-3-23	REVISED FOR PLANNING BOARD SUBMISSION	JLL
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www.insite-eng.com

PROJECT:

THE GREEN

140 MONTGOMERY STREET, CITY OF NEWBURGH, ORANGE COUNTY, NEW YORK

DRAWING:

DETAILS

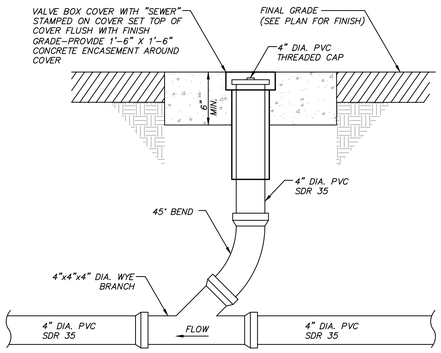
STATE OF NEW YORK — ROBERT W. PEARL — 086847 — LICENSED PROFESSIONAL ENGINEER

PROJECT NUMBER	22230.100	PROJECT MANAGER	J.J.C.
DATE	6-9-23	DRAWN BY	S.M.R.
SCALE	AS SHOWN	CHECKED BY	J.L.L.

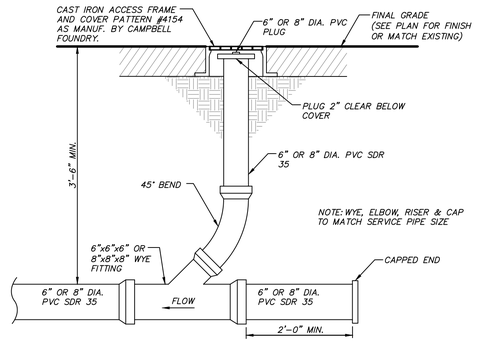
DRAWING NO. D-3 — SHEET 8 / 11

ALTERATION OF THIS DOCUMENT, UNLESS UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, IS A VIOLATION OF SECTION 7209 OF ARTICLE 145 OF THE EDUCATION LAW.

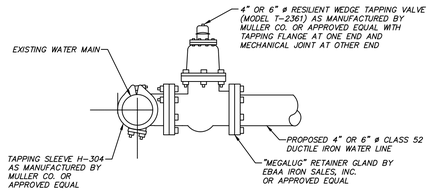
Z:\C\22230\00 Kearney, Montgomery, 2\1\05 D-1-5.dwg, 10/1/2025 10:15:09 AM, HPortmann, 1:1



4" SEWER SERVICE LINE CLEANOUT DETAIL
(N.T.S.)



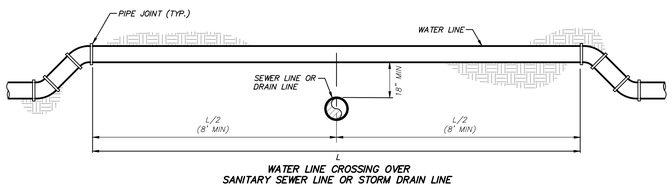
6" OR 8" SEWER SERVICE CLEANOUT DETAIL
(N.T.S.)



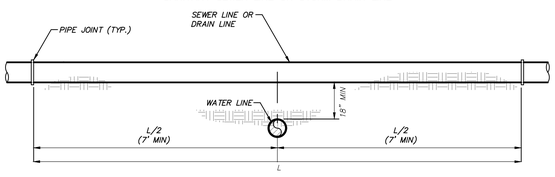
NOTE: A TEST PIT SHALL BE EXCAVATED PRIOR TO ORDERING TAPPING SLEEVE. THE TEST PIT SHALL BE OF ADEQUATE LENGTH TO ENSURE THAT THE TAP WILL BE PERFORMED IN A LOCATION WITH A MINIMUM OF 3' OF CLEAR PIPE (NO JOINTS, TAPS, FITTINGS ETC.) ON EACH SIDE OF TAP. THE PIPE SHALL ALSO BE MEASURED AT THIS TIME TO ENSURE PROPER TAPPING SLEEVE IS ORDERED.

TAPPING SLEEVE & VALVE DETAIL
(N.T.S.)

PROPOSED SEWER CONNECTION TO EXISTING SEWER MANHOLE DETAIL
(N.T.S)



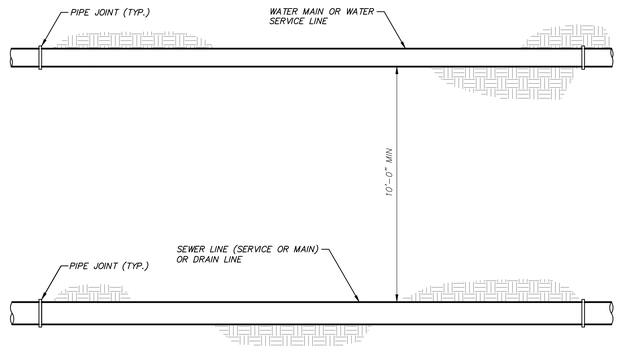
WATER LINE CROSSING OVER SANITARY SEWER LINE OR STORM DRAIN LINE



WATER LINE CROSSING UNDER SANITARY SEWER LINE OR STORM DRAIN LINE

NOTES:
1. 18" SEPARATION SHALL BE MEASURED OUTSIDE OF PIPE TO OUTSIDE OF PIPE.
2. IF 18" SEPARATION CANNOT BE MAINTAINED, AND WITH PRIOR APPROVAL BY DESIGN ENGINEER, DEPARTMENT OF HEALTH AND THE CITY OF NEWBURGH WATER DEPARTMENT, THE WATER LINE SHALL BE CONCRETE ENCASED.
3. PROVIDE RESTRAINED JOINTS AS REQUIRED.
4. THE 18" SEPARATION APPLIES BETWEEN WATER MAINS AND WATER SERVICE LINES TO SEWER MAIN & SERVICE PIPE, SEWER FORCEMAIN PIPE, AND DRAINAGE PIPE.

WATER LINE CROSSING DETAIL
(N.T.S.)



NOTES:
1. WHEN THE 10' SEPARATION CANNOT BE MAINTAINED, THE WATER LINE SHALL BE ENCASED IN CONCRETE (SEE DETAIL) ONLY WITH PRIOR APPROVAL OF THE DESIGN ENGINEER, TOWN OF POUGHKEEPSIE WATER DEPARTMENT AND DEPARTMENT OF HEALTH.
2. THE 10' SEPARATION APPLIES TO WATER MAINS AND WATER SERVICE CONNECTIONS.

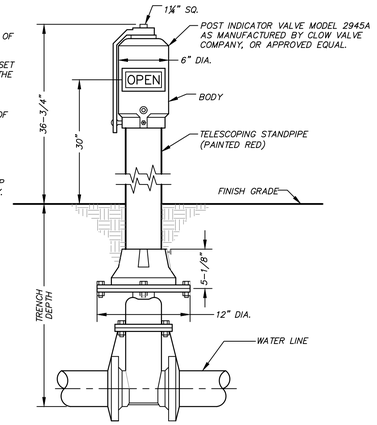
WATER LINE HORIZONTAL SEPARATION DETAIL
(N.T.S.)

ADDITIONAL SEWER NOTES

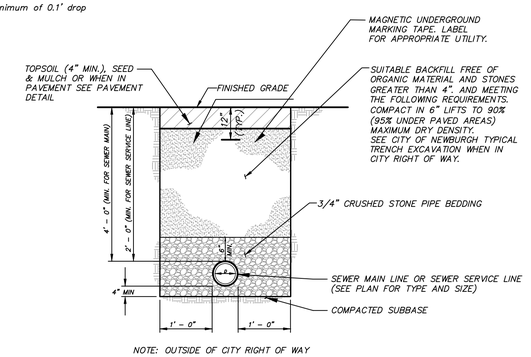
1. All gravity sewer lines shown on these plans shall be polyvinyl chloride (PVC) SDR 35. All gravity sewer lines shall to meet ASTM D3034 with gaskets meeting ASTM F477.
2. The Design Engineer and City of Newburgh Plumbing Inspector shall be notified forty eight (48) hours before construction is started.
3. The sanitary sewer lines shall not be placed into service until authorized by the Design Engineer and City of Newburgh Plumbing Inspector.
4. The Design Engineer and the City of Newburgh Plumbing Inspector must be notified forty eight (48) hours prior to pressure testing the sewer main improvements.
5. Openings in manholes for pipes shall be precast or machine cored. Gaskets or collars for pipe connections to manholes shall be resilient and watertight and compatible with the type of pipe being used.
6. Gaskets or collars for pipe connections to manhole shall provide a minimum of 0.1' drop across the manhole.

FIELD ADJUSTMENT INSTRUCTIONS

1. REMOVE THE BODY FROM THE TOP OF THE INDICATOR POST ASSEMBLY.
2. LOOSE THE TELESCOPING BARREL SET SCREWS AND ADJUST BARREL TO THE GROUND LINE.
3. CUT THE 1" SQ. EXTENSION AT A DISTANCE OF 9" ABOVE THE TOP OF THE BARREL END.
4. SET THE "OPEN" AND "SHUT" TARGETS FOR THE APPROPRIATE VALVE SIZE.
5. RE-ATTACH THE BODY TO THE TOP OF THE INDICATOR POST ASSEMBLY.

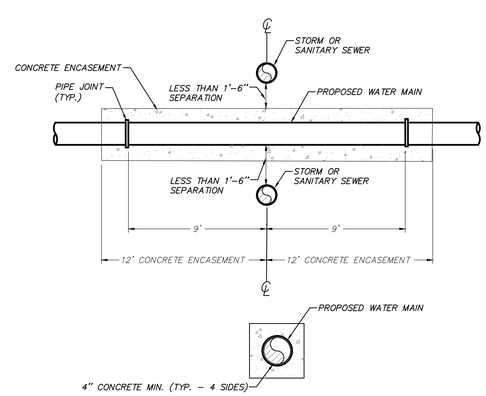


POST INDICATOR VALVE DETAIL
(N.T.S.)



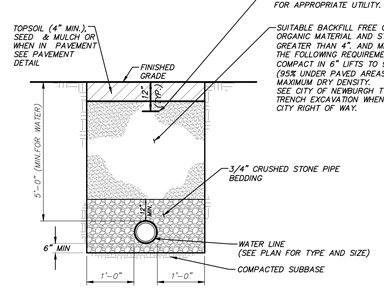
NOTE: OUTSIDE OF CITY RIGHT OF WAY

SEWER MAIN/SEWER SERVICE LINE TRENCH DETAIL
(N.T.S.)



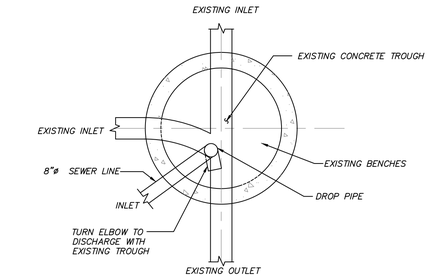
WATER MAIN CONCRETE ENCASEMENT DETAIL
(N.T.S)

NOTE: CONCRETE ENCASEMENT IS ONLY TO BE USED WHEN 18" MINIMUM SEPARATION IS NOT POSSIBLE. CONCRETE ENCASEMENT REQUIRES PRIOR APPROVAL BY THE DESIGN ENGINEER & THE DEPARTMENT OF HEALTH.

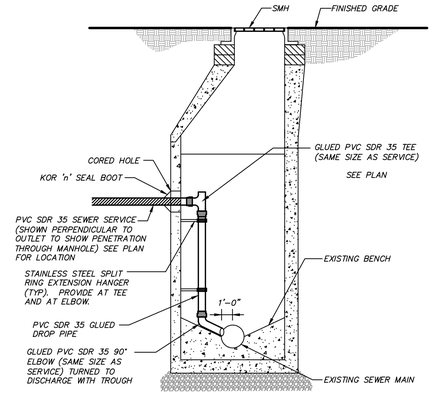


NOTE: OUTSIDE OF CITY RIGHT OF WAY

WATER MAIN AND WATER SERVICE (GREATER THAN 2") TRENCH DETAIL
(N.T.S.)



PLAN



SECTION

INTERNAL DROP MANHOLE DETAIL
(N.T.S.)

NO.	DATE	REVISION	BY
5	10–8–25	REVISED FOR PLANNING BOARD SUBMISSION	HMF
4	3–8–24	REVISED FOR PLANNING BOARD SUBMISSION	KJK
3	11–3–23	REVISED FOR PLANNING BOARD SUBMISSION	JLL
2	10–6–23	REVISED FOR PLANNING BOARD SUBMISSION	JLL
1	9–8–23	REVISED FOR PLANNING BOARD SUBMISSION	KJK

INSITE ENGINEERING, SURVEYING & LANDSCAPE ARCHITECTURE, P.C.
3 Garrett Place
Carmel, NY 10512
(845) 225–9690
(845) 225–9717 fax
www.insite-eng.com

PROJECT:
THE GREEN
140 MONTGOMERY STREET, CITY OF NEWBURGH, ORANGE COUNTY, NEW YORK

DRAWING:
WATER AND SEWER DETAILS

STATE OF NEW YORK · GARY M. PEARLA · 086647 · LICENSED PROFESSIONAL ENGINEER

PROJECT NUMBER	22230.100	PROJECT MANAGER	J.J.C.
DATE	6–9–23	DRAWN BY	S.M.R.
SCALE	AS SHOWN	CHECKED BY	J.L.L.

DRAWING NO. D–4
SHEET 9 / 11

ALTERATION OF THIS DOCUMENT, UNLESS UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, IS A VIOLATION OF SECTION 7209 OF ARTICLE 145 OF THE EDUCATION LAW.

Z:\C\22230\000 Kearney, Montgomery St\05 D-S-Dwg, 10/1/2025 10:50:47 AM, HPortmann, 1:1

CITY OF NEWBURGH
ADA NOTES:

GENERAL NOTES:

1. THESE SHEETS ARE IN ACCORDANCE WITH THE AMERICANS WITH DISABILITIES ACT (ADA), AND THE REQUIREMENTS OF THE 2011 PROPOSED ACCESSIBILITY GUIDELINES FOR PEDESTRIAN FACILITIES IN THE PUBLIC RIGHT OF WAY (PROWAG).

2. THE DIMENSIONS SHOWN IN THE DETAILS AS MINIMUMS AND MAXIMUMS ARE THE LIMITS FOR DESIGN AND FIELD LAYOUT. FOR WORK ACCEPTANCE VALUES THE TABLE "CRITICAL ELEMENTS FOR THE DESIGN, LAYOUT, AND ACCEPTANCE OF PEDESTRIAN FACILITIES".
   a. THE CONTRACTOR SHALL BE RESPONSIBLE FOR FIELD VERIFYING ALL ELEVATIONS AND DIMENSIONS TO ENSURE THAT THE FINAL LAYOUT OF PEDESTRIAN FACILITIES MEETS ADA REQUIREMENTS. ANY SURVEY WORK NECESSARY TO MEET THESE REQUIREMENTS SHALL BE PAID FOR BY THE CONTRACTOR.

3. FACILITIES THAT CANNOT BE CONSTRUCTED TO MEET THE DESIGN STANDARDS, DUE TO DESIGN CONSTRAINTS, SHALL BE CONSTRUCTED TO MEET THE STANDARDS TO THE GREATEST EXTENT PRACTICABLE. FEATURES THAT CANNOT MEET THE VALUES FOR WORK ACCEPTANCE SHALL BE JUSTIFIED AS NONSTANDARD.

4. TO CHECK FIELD LAYOUT AND TO VERIFY WORK ACCEPTANCE, ALL MEASUREMENTS SHALL BE MADE IN ACCORDANCE WITH THE "ADA INSPECTION METHODS NOTES".

5. JOINTS BETWEEN SIDEWALKS, CURB RAMPS, TURNING SPACES, AND ROADWAYS SHALL BE FLUSH AND FREE FROM ABRUPT VERTICAL CHANGES GREATER THAN ONE-QUARTER (1/4) OF AN INCH. VERTICAL SURFACE DISCONTINUITIES BETWEEN ONE-QUARTER (1/4) OF AN INCH AND ONE-HALF (1/2) OF AN INCH SHALL BE BEVELED WITH A SLOPE NOT STEEPER THAN 2 HORIZONTAL TO 1 VERTICAL. THE BEVEL SHALL BE APPLIED ACROSS THE ENTIRE JOINT.

6. SIDEWALKS ARE CONNECTED TO ROADWAYS BY BLENDED TRANSITIONS OR CURB RAMPS. BLENDED TRANSITIONS ARE CONNECTIONS BETWEEN THE SIDEWALK LEVEL AND THE ROADWAY LEVEL THAT HAVE A MAXIMUM GRADE, RUNNING SLOPE, OF FIVE (5) PERCENT. CONNECTIONS WITH A MAXIMUM GRADE, RUNNING SLOPE, GREATER THAN FIVE (5) PERCENT ARE CONSIDERED CURB RAMPS.

7. CURB RAMPS AND BLENDED TRANSITIONS REQUIRE THE INSTALLATION OF DETECTABLE WARNINGS, EXCEPT FOR WHEN THE SIDEWALK CROSSES A DRIVEWAY.

8. GRADE BREAKS WITHIN THE PEDESTRIAN ACCESS ROUTE SHOULD BE PERPENDICULAR TO THE DIRECTION OF TRAVEL AND SHALL NOT BE ROUNDED. VERTICAL ALIGNMENT SHALL BE GENERALLY PLANAR.

9. SIDEWALK GRADE, RUNNING SLOPE, SHALL NOT EXCEED 4.5 PERCENT FOR DESIGN AND LAYOUT OR FIVE (5) PERCENT FOR WORK ACCEPTANCE, EXCEPT WHEN MATCHING INTO EXISTING SIDEWALK OR WHEN THE ADJACENT HIGHWAY GRADE IS STEEPER THAN FIVE (5) PERCENT. WHEN THE ADJACENT HIGHWAY GRADE IS GREATER THAN FIVE (5) PERCENT, THE SIDEWALK GRADE SHALL NOT EXCEED THE HIGHWAY GRADE.

10. THE CROSS SLOPE OF PEDESTRIAN ACCESS ROUTES SHALL BE 1.5 PERCENT MAXIMUM FOR DESIGN AND LAYOUT, AND TWO (2) PERCENT MAXIMUM FOR WORK ACCEPTANCE. THE FOLLOWING EXCEPTIONS ARE ALLOWED:
    a. WHERE PEDESTRIAN STREET CROSSINGS ARE PROVIDED AT INTERSECTIONS WITHOUT YIELD OR STOP-CONTROL, OR WHERE THERE IS ANY TRAFFIC SIGNAL WITHOUT A FLASHING RED, THE CROSS SLOPE OF A PEDESTRIAN ACCESS ROUTE CONTAINED WITHIN A STREET CROSSING SHALL BE 4.5 PERCENT MAXIMUM FOR DESIGN AND LAYOUT, AND FIVE (5) PERCENT MAXIMUM FOR WORK ACCEPTANCE.
    b. WHERE MIDBLOCK PEDESTRIAN STREET CROSSINGS ARE PROVIDED, THE CROSS SLOPE OF A PEDESTRIAN ACCESS ROUTE CONTAINED WITHIN A MIDBLOCK STREET CROSSING SHALL BE PERMITTED TO EQUAL THE STREET OR HIGHWAY GRADE.

11. THE MINIMUM CLEAR WIDTH FOR PEDESTRIAN ACCESS ROUTES IS FOUR (4) FEET, EXCLUSIVE OF THE CURB. THE CITY'S PREFERRED CLEAR WIDTH IS FIVE (5) FEET. WHEN WALKWAY WIDTHS ARE LESS THAN FIVE (5) FEET, FIVE (5) FOOT BY FIVE (5) FOOT PASSING SPACES OR A FEATURE OF EQUAL OR GREATER DIMENSIONS THAT MEETS THE SLOPE AND SURFACE CRITERIA SHALL BE PROVIDED AT A MAXIMUM INTERVAL OF 200 FEET. EXISTING DRIVEWAYS AND STREET CROSSINGS MAY SERVE AS PASSING SPACES, PROVIDED THEY MEET SLOPE AND SURFACE REQUIREMENTS FOR A PEDESTRIAN ACCESS ROUTE.

12. THE MAXIMUM RECOMMENDED CROSS SLOPE OF A TURF BUFFER ZONE OR SLOPE TRANSITION BEHIND SIDEWALK IS TWENTY-FIVE (25) PERCENT. BUFFER ZONES WITH A CROSS SLOPE GREATER THAN TWENTY-FIVE (25) PERCENT SHOULD BE PAVED, PLANTED OR CONSTRUCTED WITH HARDSCAPE MATERIALS.

13. WHEN CROSSING DRIVEWAYS, THE WORK SHALL BE IN CONFORMANCE WITH THE CITY OF NEWBURGH'S STANDARD DETAIL "DRIVEWAY APRON".

14. WHERE EXISTING ROADWAYS ARE SAW CUT TO INSTALL CURBING AND/OR SIDEWALK, THE ROADWAY SHALL BE SAW CUT AT LEAST TWO (2) FEET FROM THE PROPOSED CURB LINE AND / OR OTHER FEATURES TO ALLOW FOR ADEQUATE COMPACTION OF ASPHALT. IN THE EVENT THE BLENDED TRANSITION IS GREATER THAN FIVE (5) PERCENT WITHIN THE TWO (2) FOOT AREA, ADDITIONAL ASPHALT SHALL BE REMOVED AS NECESSARY TO ESTABLISH A BLENDED TRANSITION OF FIVE (5) PERCENT OR LESS.

15. IN THE EVENT THE EXISTING SIDEWALK OR OTHER PEDESTRIAN PATH IS WIDER THAN FOUR (4) FEET, ONLY THE MINIMUM CONTINUOUS ACCESSIBLE CLEAR WIDTH OF FOUR (4) FEET, WITH PASSING SPACES AS NEEDED, IS REQUIRED TO MEET THE SURFACE AND SLOPE REQUIREMENTS SHOWN IN THE TABLE "CRITICAL ELEMENTS FOR THE DESIGN, LAYOUT, AND ACCEPTANCE OF PEDESTRIAN FACILITIES"

CURB RAMP NOTES:

16. THE MINIMUM CLEAR WIDTH OF A CURB RAMP SHALL BE FOUR (4) FEET THE CITY'S PREFERRED CLEAR WIDTH IS FIVE (5) FEET.

17. THE MAXIMUM GRADE, RUNNING SLOPE, FOR DESIGN AND LAYOUT OF A CURB RAMP SHALL BE 7.5 PERCENT. THE GRADE FOR WORK ACCEPTANCE SHALL BE A MAXIMUM OF 8.3 PERCENT.

18. WHERE THE TERRAIN DOES NOT ALLOW CONSTRUCTION OF A CURB RAMP WITH A GRADE, RUNNING SLOPE, OF 8.3 PERCENT. OR LESS WITHIN FIFTEEN (15) FEET, THE RAMP LENGTH SHALL NOT BE REQUIRED TO EXCEED FIFTEEN (15) FEET FOR DESIGN AND LAYOUT, OR WORK ACCEPTANCE.

19. THE CROSS SLOPE OF THE CURB RAMP SHALL BE AS FLAT AS POSSIBLE AND STILL PROVIDE POSITIVE DRAINAGE. THE CROSS SLOPE OF A CURB RAMP SHALL BE 1.5 PERCENT MAXIMUM FOR DESIGN AND LAYOUT, AND TWO (2) PERCENT MAXIMUM FOR WORK ACCEPTANCE.

20. WHERE THE EXISTING ROADWAY GRADE EXCEEDS THE MAXIMUM ALLOWABLE CROSS SLOPE FOR A CURB RAMP, AND CANNOT BE CORRECTED WITHIN THE SCOPE OF THE PROJECT, THE RAMP SHALL BE DESIGN AND CONSTRUCTED TO MEET ADA COMPLIANCE TO THE GREATEST EXTENT PRACTICABLE. THE RAMP MAY NEED TO BE JUSTIFIED AS A NONSTANDARD FEATURE. DETERMINATION OF A NONSTANDARD FEATURE SHALL BE THE DISCRETION OF THE CITY'S ENGINEER.

21. WHERE A PEDESTRIAN CIRCULATION PATH CROSSES THE CURB RAMP, FLARED SIDES SHALL BE INSTALLED WITH A MAXIMUM SLOPE OF 9.5 PERCENT FOR DESIGN AND LAYOUT, AND TEN (10) PERCENT MAXIMUM FOR WORK ACCEPTANCE. A PEDESTRIAN CIRCULATION PATH IS ASSUMED TO CROSS THE CURB RAMP WHEN AREA ADJACENT TO THE RAMP IS PAVED AND FREE OF VERTICAL OBSTRUCTIONS THAT WOULD PREVENT PEDESTRIAN PASSAGE. THERE IS NO MAXIMUM FLARE SLOPE FOR A RAMP THAT IS NOT CROSSED BY A PEDESTRIAN CIRCULATION PATH.

22. THE BACK SIDE OF A PARALLEL RAMP SHOULD BE GRADED TO A MAXIMUM SLOPE OF TWENTY-FIVE (25) PERCENT TO MATCH EXISTING TERRAIN, UNLESS OTHERWISE SHOWN IN THE CONTRACT DOCUMENTS. WHERE GRADING IS NOT FEASIBLE DUE TO LIMITED ROW OR PHYSICAL CONSTRAINTS, A BACK CURB MAY BE INSTALLED.

23. THE CITY'S PREFERRED CURB RAMP DESIGN AND LAYOUT ARE DEPICTED IN THE CITY OF NEWBURGH'S STANDARD DETAIL "ADA CURB RAMP DESIGN AND LAYOUT - PREFERRED", ANY DEVIATION FROM THE PREFERENCE IDENTIFIED SHALL BE REVIEWED AND APPROVED BY THE CITY'S ENGINEER.

TURNING SPACE AND CLEAR SPACE NOTES:

24. WHERE A CHANGE IN DIRECTION IS REQUIRED TO UTILIZE A CURB RAMP, A TURNING SPACE SHALL BE PROVIDED AT THE BASE OR THE TOP OF CURB RAMP, AS APPLICABLE. TURNING SPACES SHALL BE PERMITTED TO OVERLAP CLEAR SPACES.

25. WHERE THERE ARE NO VERTICAL CONSTRAINTS AT THE BACK OF SIDEWALK, E.G., VERTICAL CURBS, BUILDINGS, FENCES, THE TURNING SPACE DIMENSIONS SHALL BE FOUR (4) FEET BY FOUR (4) FEET MINIMUM. WHERE THE TURNING SPACE IS CONSTRAINED AT THE BACK OF SIDEWALK, THE TURNING SPACE SHALL BE FOUR (4) FEET BY FIVE (5) FEET MINIMUM. THE FIVE (5) FOOT DIMENSION SHALL BE IN THE DIRECTION OF THE RAMP RUN.

26. TURNING SPACES SHALL NOT BE DESIGNED WITH A SLOPE GREATER THAN 1.5 PERCENT IN ANY DIRECTION, WHILE PROVIDING POSITIVE DRAINAGE. THE MAXIMUM SLOPE FOR WORK ACCEPTANCE IS TWO (2) PERCENT.

27. BELOW THE BOTTOM GRADE BREAK OF A CURB RAMP, A CLEAR SPACE OF FOUR (4) FEET BY FOUR (4) FEET MINIMUM SHALL BE PROVIDED WITHIN THE WIDTH OF THE PEDESTRIAN CROSSWALK, AND OUTSIDE THE PARALLEL VEHICLE TRAVEL LANE. THE CLEAR SPACE MAY OVERLAP TURNING SPACES, DETECTABLE WARNING SURFACES, AND DROP CURBS.

ALTERATION OF THIS DOCUMENT, UNLESS UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, IS A VIOLATION OF SECTION 7209 OF ARTICLE 145 OF THE EDUCATION LAW.

DETECTABLE WARNING NOTES:

28. DETECTABLE WARNING SURFACES SHALL BE PROVIDED AT THE FOLLOWING LOCATIONS ON PEDESTRIAN ACCESS ROUTES:
    a. CURB RAMPS AND BLENDED TRANSITIONS AT PEDESTRIAN STREET CROSSINGS.
    b. PEDESTRIAN REFUGE ISLANDS WHERE THE LENGTH OF THE PEDESTRIAN ACCESS ROUTE ACROSS THE REFUGE ISLAND IS GREATER THAN OR EQUAL TO SIX (6) FEET.
    c. PEDESTRIAN AT-GRADE RAIL CROSSINGS NOT LOCATED WITHIN A STREET OR HIGHWAY.

29. DETECTABLE WARNING SURFACES SHALL BE PROVIDED WHERE THE PEDESTRIAN ACCESS ROUTE CROSSES DRIVEWAYS WITH SIGNAL, YIELD OR STOP CONTROL. DETECTABLE WARNING SURFACES SHALL NOT BE PROVIDED AT CROSSINGS OF UNCONTROLLED DRIVEWAYS.

30. WITH THE EXCEPTION OF THE DETECTABLE WARNING SURFACE TRUNCATED DOME DETAILS, DETECTABLE WARNING DOMES ARE NOT DEPICTED TO SCALE ON THESE SHEETS.

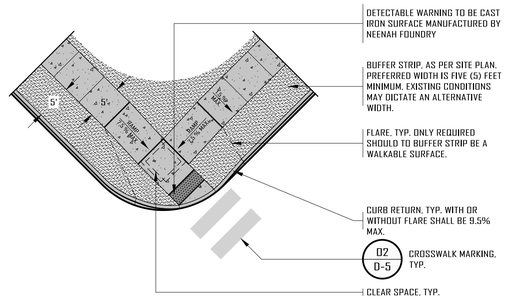
31. DETECTABLE WARNING FIELDS SHALL EXTEND TWO (2) FEET MINIMUM IN THE DIRECTION OF PEDESTRIAN TRAVEL ACROSS THE FULL WIDTH OF THE CURB RAMP OR FLUSH SURFACE, EXCLUDING ANY FLARED SIDES.

32. SOME DETECTABLE WARNING PRODUCTS REQUIRE A CONCRETE BORDER FOR PROPER INSTALLATION. IF REQUIRED, THE BORDER SHALL NOT EXCEED TWO (2) INCHES. WHERE THE BACK OF THE CURB EDGE IS TOOLED TO PROVIDE A RADIUS, THE BORDER DIMENSION SHALL BE MEASURED FROM THE INSIDE EDGE OF THE CURB RADIUS. BORDERS CANNOT BE INCLUDED AS PART OF THE TWO (2) FOOT MINIMUM DIMENSION DESCRIBE IN NOTE 31.

33. WHERE CURB IS NOT USED, THE EDGE OF PAVEMENT SHALL BE SUBSTITUTED FOR THE BACK OF CURB FOR PLACEMENT OF DETECTABLE WARNINGS.

34. ON SLOPES OF FIVE (5) PERCENT OR GREATER, THE ROWS OF DOMES SHALL BE ALIGNED TO BE PERPENDICULAR OR RADIAL TO THE LOWER GRADE BREAK ON THE RAMP RUN. WHERE DOMES ARE ARRAYED RADIALLY, THEY MAY DIFFER IN DIAMETER AND CENTER-TO-CENTER SPACING. DOME ALIGNMENT THAT IS PERPENDICULAR OR RADIAL TO THE LOWER GRADE BREAK IS NOT REQUIRED ON SLOPES OF LESS THAN FIVE (5) PERCENT.

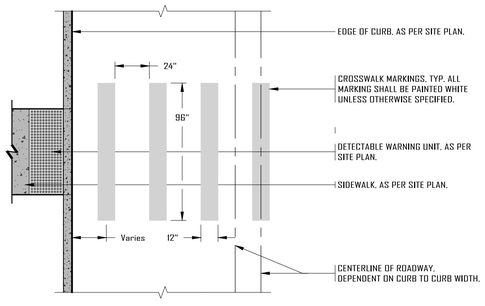
35. THE DETECTABLE WARNING FIELD SHALL BE THE COLOR SPECIFIED IN THE CONTRACT DOCUMENTS OR MEET THE REQUIREMENTS OF THE STANDARD SPECIFICATIONS. DETECTABLE WARNING SURFACES SHALL CONTRAST VISUALLY WITH ADJACENT GUTTER, STREET OR HIGHWAY, OR PEDESTRIAN ACCESS ROUTE SURFACE, EITHER LIGHT-ON-DARK OR DARK-ON-LIGHT.



CURB RAMP CONFIGURATION "C": DOUBLE SIDEWALK, SINGLE CROSSING WITH BUFFER STRIP

01 ADA CURB RAMP DESIGN AND LAYOUT - PREFERRED

CITY OF NEWBURGH STANDARD DETAIL, APPROVED MARCH 30, 2022 — 1" = 10'



DETAIL NOTES:

1. MATERIAL AND METHODS OF CONSTRUCTION SHALL BE IN CONFORMANCE WITH THE LATESTE EDITION OF THE NEW YORK STATE DEPARTMENT OF TRANSPORTATION (NYSDOT) STANDARD SPECIFICATIONS FOR CONSTRUCTION AND MATERIALS..
2. ALL PAVEMENT MARKINGS SHALL CONFROM TO THE REQUIREMENT OF SECTION 640, *REFLECTORIZED PAVEMENT MARKING PAINTS*, OF THE NYSDOT STANDARD SPECIFICATIONS. REFER TO NOTE NO. 1 ABOVE. THE LATEST EDITION OF THE *MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES* AND THE *NYS SUPPLEMENT*.
3. EXISTING ASPHALT SHALL BE CLEANED AND POWER BRUSHED PRIOR TO APPLYING PAVEMENT MARKING PAINT.

02 CROSSWALK MARKING

CITY OF NEWBURGH STANDARD DETAIL — 1/4" = 1'-0"

CITY OF NEWBURGH
ADA CRITICAL ELEMENTS STANDARD:

ELEMENT	LIMITS FOR DESIGN AND LAYOUT	LIMITS OF WORK ACCEPTANCE	INSPECTION METHODS, NOTE NO.
CURB RAMPS / BLENDED TRANSITIONS			
CLEAR WIDTH	FOUR (4) FEET	FOUR (4) FEET	4
SLOPE OF FLARED SIDES, WITHIN PEDESTRIAN CIRCULATION PATH	9.5 PERCENT MAX.	10 PERCENT MAX.	2
SLOPE OF FLARED SIDES, OUTSIDE PEDESTRIAN CIRCULATION PATH			2
GRADE, RUNNING SLOPE, FOR CURB RAMP	7.5 PERCENT MAX.	8.3 PERCENT MAX.	1
GRADE, RUNNING SLOPE, FRO BLENDED TRANSITIONS	4.5 PERCENT MAX.	FIVE (5) PERCENT MAX.	1
CROSS SLOPE, AT CROSSING WITH YIELD OR STOP CONTROL	1.5 PERCENT MAX.	TWO (2) PERCENT MAX.	2
CROSS SLOPE, AT CROSSING WITHOUT YIELD OR STOP CONTROL, INCLUDING ANY SIGNAL BUT FLASHING RED	HIGHWAY GRADE IS MAX.	HIGHWAY GRADE IS MAX.	2
LENGTH OF CURB RAMP, IF MAXIMUM ALLOWABLE SLOPE WILL NOT "CATCH UP" TO GRADE	DOES NOT NEED TO EXCEED FIFTEEN (15) FEET, ONE (1) INCH	DOES NOT NEED TO EXCEED FIFTEEN (15) FEET	5
TURNING SPACE, WITH NO CONSTRAINTS	FOUR (4) FEET BY FOUR (4) FEET MIN.	FOUR (4) FEET BY FOUR (4) FEET MIN.	4 AND 5
TURNING SPACE, WITH CONSTRAINTS AT BACK OF SIDEWALK	FOUR (4) FEET BY FIVE (5) FEET MIN.	FOUR (4) FEET BY FIVE (5) FEET MIN.	4 AND 5
TURNING SPACE, WITH CONSTRAINTS ON TWO (2) SIDES	FIVE (5) FEET BY FIVE (5) FEET MIN.	FIVE (5) FEET BY FIVE (5) FEET MIN.	4 AND 5
SLOPE OF TURNING SPACE, IN ANY DIRECTION	1.5 PERCENT MAX.	TWO (2) PERCENT MAX.	3
COUNTER SLOPE AT BOTTOM OF RAMP	4.5 PERCENT MAX.	FIVE (5) PERCENT MAX.	1
CLEAR SPACE, BEYOND BOTTOM GRADE BREAK, OUTSIDE OF PARALLEL VEHICLE PATH	FOUR (4) FEET BY FOUR (4) FEET MIN.	FOUR (4) FEET BY FOUR (4) FEET MIN.	4 AND 5
DETECTABLE WARNING			
DOME DIMENSIONS AND SPACING	AS PER NYSDOT SPECIFICATIONS	AS PER NYSDOT SPECIFICATIONS	-
CONTRAST OF WARNING DEVICE	LIGHT ON DARK OR DARK ON LIGHT	LIGHT ON DARK OR DARK ON LIGHT	-
ALIGNMENT OF SLOPES GREATER THAN FIVE (5) PERCENT	PERPENDICULAR TO GRADE BREAK BETWEEN RAMP RUN AND STREET	PERPENDICULAR TO GRADE BREAK BETWEEN RAMP RUN AND STREET	-
WIDTH	FULL WIDTH OF RAMP, TWO (2) INCH BORDER ALLOWED	FULL WIDTH OF RAMP, TWO (2) INCH BORDER ALLOWED	4
LENGTH	TWO (2) FEET MIN. IN DIRECTION OF PEDESTRIAN TRAVEL ACROSS FULL WIDTH OF RAMP	TWO (2) FEET MIN. IN DIRECTION OF PEDESTRIAN TRAVEL ACROSS FULL WIDTH OF RAMP	5
SIDEWALK			
CLEAR WIDTH OF PEDESTRIAN ACCESS ROUTE, EXCLUDING CURB	FOUR (4) FEET BY FOUR (4) FEET MIN.	FOUR (4) FEET BY FOUR (4) FEET MIN.	4
GRADE, RUNNING SLOPE, WHERE HIGHWAY GRADE IS FIVE (5) PERCENT OR LESS	4.5 PERCENT MAX.	FIVE (5) PERCENT MAX.	1
GRADE, RUNNING SLOPE WHERE HIGHWAY GRADE IS GREATER THAN FIVE (5) PERCENT	HIGHWAY EDGE OF PAVEMENT GRADE IS MAX.	HIGHWAY EDGE OF PAVEMENT GRADE IS MAX.	1
CROSS SLOPE	1.5 PERCENT MAX.	TWO (2) PERCENT MAX.	2
PASSING SPACE INTERVAL IF PEDESTRIAN ACCESS ROUTE IS LESS THAN FIVE (5) FEET	200 FEET MAX.	200 FEET MAX.	5
PASSING SPACE DIMENSIONS	FIVE (5) FEET BY FIVE (5) FEET MIN.	FIVE (5) FEET BY FIVE (5) FEET MIN.	4 AND 5
SURFACES			
MATERIAL	FRI. STABLE , AND SLIP RESISTANT	FIRM, STABLE , AND SLIP RESISTANT	-
HORIZONTAL OPENINGS, SUCH AS GRATINGS AND JOINTS	0.5 INCH MAX.	0.5 INCH MAX.	5 AND 7
VERTICAL DISCONTINUITIES	0.25 INCH MAX		6
CROSSWALKS			
WIDTH	EIGHT (8) FEET MAX.	FOUR (4) FEET MIN.	4
CROSS SLOPE AT INTERSECTION WITH YIELD OR STOP CONTROL	1.5 PERCENT MAX.	TWO (2) PERCENT MAX.	2
CROSS SLOPE AT INTERSECTION WITHOUT YIELD OR STOP CONTROL, INCLUDING ANY SIGNAL BUT FLASHING RED	4.5 PERCENT MAX.	FIVE (5) PERCENT MAX.	2
CROSS SLOP, MIDBLOCK	HIGHWAY GRADE IS MAX.	HIGHWAY GRADE IS MAX.	-
GRADE, RUNNING SLOPE	4.5 PERCENT MAX.	FIVE (5) PERCENT MAX.	1
MARKINGS	CONTINENTAL, PER DETAIL	CONTINENTAL, PER DETAIL	-
CLEAR WITH WITHIN MEDIAN OR PEDESTRIAN REFUGE ISLAND	FIVE (5) FEET MIN.	FIVE (5) FEET MIN.	4

ADA INSPECTION METHODS NOTES:

1. GRADE, RUNNING SLOPE, SHALL BE MEASURES AS AN AVERAGE OF AT LEAST THREE (3) DIGITAL MEASUREMENTS USING A FOUR (4) FOOT SMART LEVEL, ALONG THE CENTERLINE AND OFFSET AT LEAST EIGHTEEN (18) INCHES TO EACH SIDE OF THE CENTERLINE OF THE RAMP, ROADWAY, CURB RAMP, ETC. ACCEPTANCE IS BASED ON GRADES LESS THAN OR EQUAL TO THE LIMIT SHOWN IN THE "ADA CRITICAL ELEMENTS STANDARDS" TABLE.
2. CROSS SLOPES SHALL BE MEASURED AS AN AVERAGE OF AT LEAST TWO (2) DIGITAL MEASUREMENTS USING A FOUR (4) FOOT SMART LEVEL, MADE PERPENDICULAR TO THE CENTERLINE, ALONG THE DIRECTION OF TRAVEL, OF THE SIDEWALK. FLARES SHALL BE MEASURED AS AN AVERAGE OF AT LEAST TWO (2) DIGITAL MEASUREMENTS USING A FOUR (4) FOOT SMART LEVEL, TAKEN WITHIN THE PEDESTRIAN CIRCULATION PATH AND PARALLEL TO THE CURB LINE. ACCEPTANCE IS BASED ON GRADES LESS THAN OR EQUAL TO THE LIMIT SHOWN IN THE "ADA CRITICAL ELEMENTS STANDARDS" TABLE.
3. AREA SLOPE SHALL BE MEASURED BY TAKING GRADE AND CROSS SLOPE MEASUREMENTS DESCRIBED NOT NOTE NO. 1 AND NOTE NO. 2 ABOVE. ACCEPTANCE IS BASED ON GRADES LESS THAN OR EQUAL TO THE LIMIT SHOWN IN THE "ADA CRITICAL ELEMENTS STANDARDS" TABLE.
4. WIDTH AND OFFSETS ARE TO BE MEASURED AS AN AVERAGE OF AT LEAST TWO (2) TAPE MEASUREMENTS TAKEN PERPENDICULAR TO THE CENTERLINE, DIRECTION OF TRAVEL, OF THE PEDESTRIAN ROUTE, AT EITHER THE RESTRICTION POINT OR AT TEN (10) INTERVALS WHEN LENGTH ALLOWS. ACCEPTANCE IS BASED ON GRADES LESS THAN OR EQUAL TO THE LIMIT SHOWN IN THE "ADA CRITICAL ELEMENTS STANDARDS" TABLE.
5. LENGTH SHALL BE MEASURED AS AN AVERAGE OF AT LEAST TWO (2) TAPE MEASURE OR WHEEL MEASUREMENTS TAKEN WITHIN ONE (1) FOOT OF THE CENTERLINE, DIRECTION OF TRAVEL. ACCEPTANCE IS BASED ON GRADES LESS THAN OR EQUAL TO THE LIMIT SHOWN IN THE "ADA CRITICAL ELEMENTS STANDARDS" TABLE.
6. RISE OR VERTICAL DISTANCE SHALL BE MEASURED AS AN AVERAGE OF AT LEAST TWO (2) VERTICAL MEASUREMENTS, FOR LANDING AND STEP RISERS, AT LEAST ONE (1) FOOT APART, FOR LANDINGS, AVERAGE AT LEAST TWO (2) MEASUREMENTS USING A SURVEY ROD AND LEVEL AT THE NOSE / EDGE OF THE LANDING AND AT THE BASE OF THE RAMP OR STAIRS, ACCEPTANCE IS BASED ON GRADES LESS THAN OR EQUAL TO THE LIMIT SHOWN IN THE "ADA CRITICAL ELEMENTS STANDARDS" TABLE.
7. OPENING LIMITATIONS ARE ACCEPTABLE IF THE OPENING CANNOT PASS A SPHERE OF THE GIVEN DIAMETER.

NO.	DATE	REVISION	BY
5	10-8-25	REVISED FOR PLANNING BOARD SUBMISSION	HMF
4	3-8-24	REVISED FOR PLANNING BOARD SUBMISSION	KJK
3	11-3-23	REVISED FOR PLANNING BOARD SUBMISSION	JLL
2	10-6-23	REVISED FOR PLANNING BOARD SUBMISSION	JLL
1	9-8-23	REVISED FOR PLANNING BOARD SUBMISSION	KJK

INSITE ENGINEERING, SURVEYING & LANDSCAPE ARCHITECTURE, P.C.
3 Garrett Place
Carmel, NY 10512
(845) 225-9690
(845) 225-9717 fax
www.insite-eng.com

PROJECT: THE GREEN
140 MONTGOMERY STREET, CITY OF NEWBURGH, ORANGE COUNTY, NEW YORK

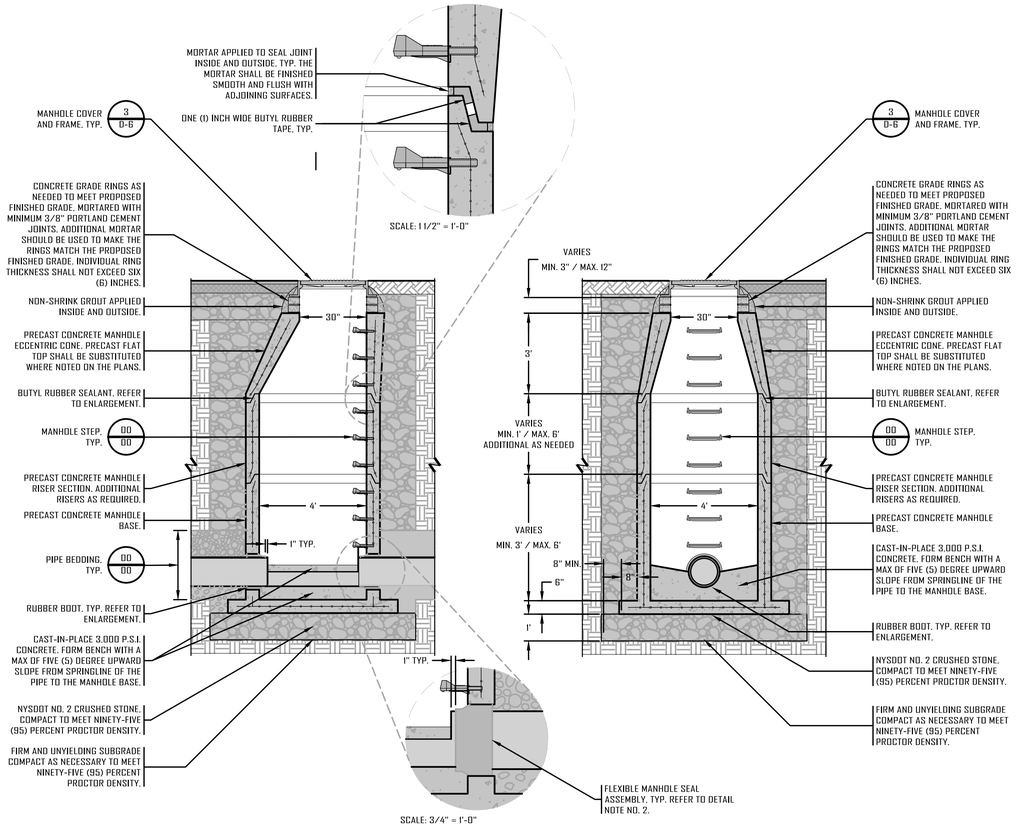
DRAWING: DETAILS

STATE OF NEW YORK — MARY M. PEARSALL — 046471 — LICENSED PROFESSIONAL ENGINEER

PROJECT NUMBER	22230.100	PROJECT MANAGER	J.J.C.
DATE	6-9-23	DRAWN BY	S.M.R.
SCALE	AS SHOWN	CHECKED BY	J.L.L.

DRAWING NO. D-5 — SHEET 10 / 11

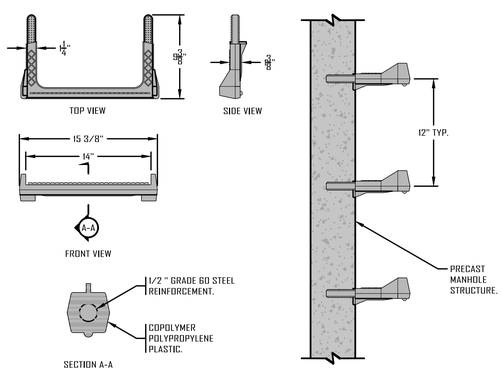
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DETAIL NOTES:

1. THIS DETAIL REPRESENTS A MANHOLE INSTALLED IN CONJUNCTION WITH A NEW SEWER MAIN CONSISTENT WITH A PIPE DIAMETER OF TWENTY-FOUR (24) INCHES OR LESS. NEW SEWER MAIN CONSISTENT WITH A PIPE DIAMETER IN EXCESS OF TWENTY-FOUR (24) INCHES, THE PRECAST MANHOLE BASE, RISER ,AND ECCENTRIC CONE SHALL INCREASE TO FIVE (5) FEET IN DIAMETER.
2. ALL PRECAST CONCRETE SHALL BE WET-SET, DRY-SET CONCRETE SHALL NOT BE AUTHORIZED, USED, OR ACCEPTED.
3. FLEXIBLE MANHOLE SEAL ASSEMBLIES SHALL CONFORM TO ASTM C923 AND PERMIT AT LEAST AN EIGHT (8) DEGREE DEFLECTION IN ANY DIRECTION WHILE REMAINING WATER TIGHT.
4. THE CENTERLINE OF THE MANHOLE AND COVER SHALL BE LOCATED OVER THE CENTERLINE OF THE SEWER MAIN TO ALLOW FOR ADEQUATE ACCESS FOR FUTURE CLEANING AND CCTV INSPECTION. DEVIATION FROM THIS SHALL BE DISCUSSED WITH THE CITY ENGINEER PRIOR TO A CHANGE MADE.
5. INSERTS FOR LIFTING MANHOLE RISER AND PRECAST ECCENTRIC CONE SHALL BE THOROUGHLY PLUGGED AND PARGED WITH MORTAR. THE MORTAR SHALL BE FINISHED SMOOTH AND FLUSH WITH ADJOINING SURFACES.

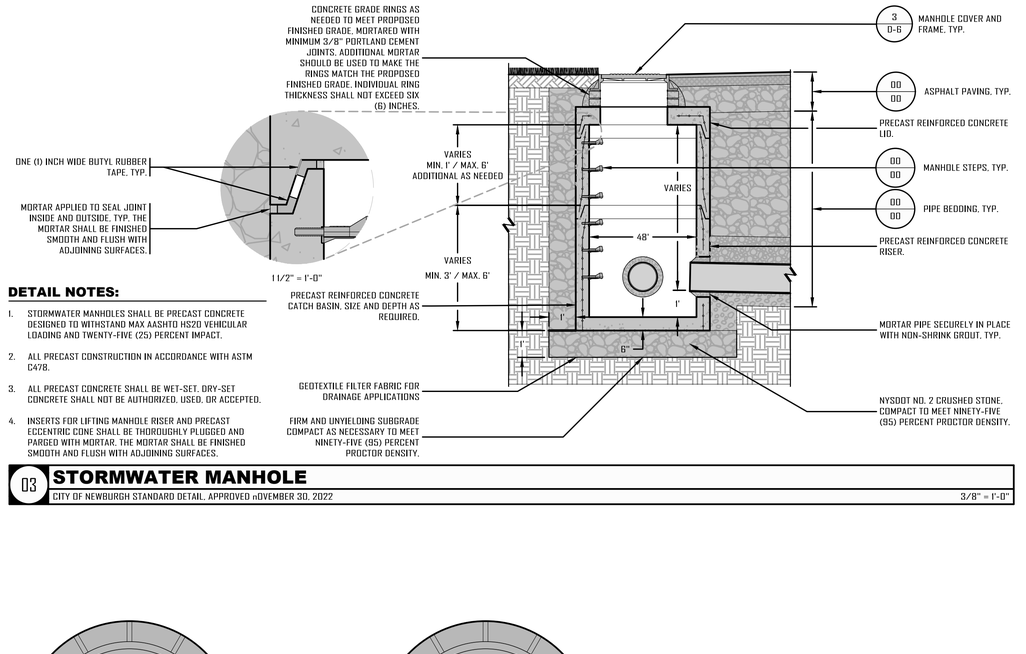
01 PRECAST MANHOLE
CITY OF NEWBURGH STANDARD DETAIL — 3/8" = 1'-0"



DETAIL NOTES:

1. MANHOLE STEPS SHALL CONFORM TO THE PROVISIONS OF ASTM C-478.
2. MANHOLE STEPS SHALL BE TIGHT AND FIRMLY EMBEDDED INTO PRECAST CONCRETE. MANHOLE STEPS SHALL NOT BE DRILLED AND EPOXIED INTO CONCRETE.

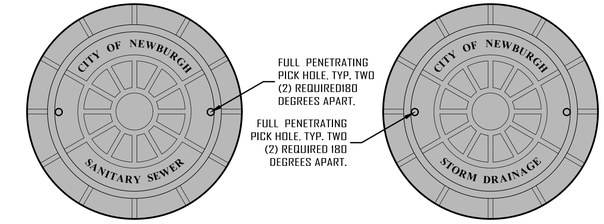
02 MANHOLE STEP
CITY OF NEWBURGH STANDARD DETAIL — 1 1/2" = 1'-0"



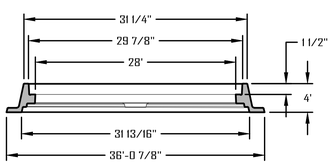
DETAIL NOTES:

1. STORMWATER MANHOLES SHALL BE PRECAST CONCRETE DESIGNED TO WITHSTAND MAX AASHTO HS20 VEHICULAR LOADING AND TWENTY-FIVE (25) PERCENT IMPACT.
2. ALL PRECAST CONSTRUCTION IN ACCORDANCE WITH ASTM C478.
3. ALL PRECAST CONCRETE SHALL BE WET-SET, DRY-SET CONCRETE SHALL NOT BE AUTHORIZED, USED, OR ACCEPTED.
4. INSERTS FOR LIFTING MANHOLE RISER AND PRECAST ECCENTRIC CONE SHALL BE THOROUGHLY PLUGGED AND PARGED WITH MORTAR. THE MORTAR SHALL BE FINISHED SMOOTH AND FLUSH WITH ADJOINING SURFACES.

03 STORMWATER MANHOLE
CITY OF NEWBURGH STANDARD DETAIL, APPROVED nOVEMBER 30, 2022 — 3/8" = 1'-0"



SANITARY SEWER — STORM SEWER



DETAIL NOTES:

1. STANDARD MANHOLE SHALL BE CONSISTENT WITH MANHOLE 10110 MANUFACTURE BY EJ GROUP, INC. OR APPROVED EQUAL.
2. FRAME AND COVER SHALL WITHSTAND H20 LOADING.
3. MATERIAL SHALL BE NON-SKID CIRCULAR RAUISED RIB PATTERN AS DEPICTED.
4. LETTERING SHALL BE ONE (1) INCH IN HEIGHT, RAISED 1/4 INCH LOCATED 180 DEGREES APART, GENERALLY AS DEPICTED.

04 MANHOLE COVER AND FRAME
CITY OF NEWBURGH STANDARD DETAIL — 1" = 1'-0"

ALTERATION OF THIS DOCUMENT, UNLESS UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, IS A VIOLATION OF SECTION 7209 OF ARTICLE 145 OF THE EDUCATION LAW.

NO.	DATE	REVISION	BY
5	10-8-25	REVISED FOR PLANNING BOARD SUBMISSION	HMF
4	3-8-24	REVISED FOR PLANNING BOARD SUBMISSION	KJK
3	11-3-23	REVISED FOR PLANNING BOARD SUBMISSION	JLL
2	10-6-23	REVISED FOR PLANNING BOARD SUBMISSION	JLL
1	9-8-23	REVISED FOR PLANNING BOARD SUBMISSION	KJK

INSITE ENGINEERING, SURVEYING & LANDSCAPE ARCHITECTURE, P.C.
3 Garrett Place
Carmel, NY 10512
(845) 225-9690
(845) 225-9717 fax
www.insite-eng.com

PROJECT:
THE GREEN
140 MONTGOMERY STREET, CITY OF NEWBURGH, ORANGE COUNTY, NEW YORK

DRAWING:
DETAILS

STATE OF NEW YORK — STUART M. PLAFKER — 086477 — LICENSED PROFESSIONAL ENGINEER

PROJECT NUMBER	22230.100	PROJECT MANAGER	J.J.C.
DATE	6-9-23	DRAWN BY	S.M.R.
SCALE	AS SHOWN	CHECKED BY	J.L.L.

DRAWING NO. D-6
SHEET 11 / 11

Z:\EC\22230.000 Kearney, Montgomery St\VDS\D-1.5.dwg, 9/30/2025 10:38:29 AM, HFernandis, 1:1

APPENDIX B – Cost Estimates

The Green - C336099 - Remedial Cost Estimates

Track 2 Cleanup with SSDS.

Description	Cost
Waste Characterization	$25,000
Soil Disposal	$328,000
SOE to allow remedial excavation	$32,000
Field Oversight Services Reporting/During Site Remediation	$300,000
Groundwater Remedy	$150,000
SSDS	
Allowance	$40,000
SSDS Design	$15,000
Final Engineering Report Prep	$30,000
DUSR	$40,000
End Point Sample Analysis	$50,000

$1,010,000

SSDS Operating Costs 1,500 kWh annually for 30 Years	$6,600
Annual PRR (30 years)	$120,000

Track 1 Cleanup with SSDS.

Description	Cost
Waste Characterization	$35,000
Soil Disposal	$776,000
SOE to allow remedial excavation	$65,000
Clean Fill	$190,000
Field Oversight Services During Site Remediation	$450,000
Groundwater Remedy	$150,000
SSDS	
Allowance	$40,000
SSDS Design	$15,000
Site Management Plan Prep	$20,000
Final Engineering Report Prep	$30,000
DUSR	$20,000
End Point Sample Analysis	$50,000

$1,841,000

Annual Operating Costs (5 Years)	$1,100
Annual PRR (5 years)	$20,000

APPENDIX C – Public Participation Plan

NEW YORK STATE OF OPPORTUNITY. Department of Environmental Conservation

Brownfield Cleanup Program

Public Participation Plan

for

The Green

NYSDEC BCP Site: C336099

November 2024

NYSDEC BCP Site: C336099

The Green

City of Newburgh, Orange County, New York

Contents

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4. **Site Information 8**
5. **Investigation and Cleanup Process 8**

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* * * * *

Note: The information presented in this Public Participation Plan was current as of the date of its approval by the New York State Department of Environmental Conservation.Portions of this Public Participation Plan may be revised during the site's investigationand cleanup process.

Applicant: **The Kearney Realty & Development Group Inc. ("Applicant")**
Site Name: **The Green ("Site")**
Site Address: **137 Smith St., and 140 & 146 Montgomery St., City of Newburgh**
Site County: **Orange**
Site Number: **C336099**

1. What is New York's Brownfield Cleanup Program?

New York's Brownfield Cleanup Program (BCP) works with private developers to encourage the voluntary cleanup of contaminated properties known as "brownfields" so that can be reused and developed. These uses include recreation, housing, and business.

A *brownfield* is any real property that is difficult to reuse or redevelop because of the presence or potential presence of contamination. A brownfield typically is a former industrial or commercial property where operations may have resulted in environmental contamination. A brownfield can pose environmental, legal, and financial burdens on a community. If a brownfield is not addressed, it can reduce property values in the area and affect economic development of nearby properties.

The BCP is administered by the New York State Department of Environmental Conservation (NYSDEC) which oversees Applicants who conduct brownfield site investigation and cleanup activities. An Applicant is a person who has requested to participate in the BCP and has been accepted by NYSDEC. The BCP contains investigation and cleanup requirements, ensuring that cleanups protect public health and the environment. When NYSDEC certifies that these requirements have been met,the property can be reused or redeveloped for the intended use.

For more information about the BCP, go online at:
http://www.dec.ny.gov/chemical/8450.html

2. Public Participation Activities

Why NYSDEC Involves the Public and Why It Is Important

NYSDEC involves the public to improve the process of investigating and cleaning up contaminated sites, and to enable citizens to participate more fully in decisions that affect their health, environment, and social well-being. NYSDEC provides opportunities for citizen involvement and encourages early two-way communication with citizens before decision-makers form or adopt final positions.

Involving citizens affected and interested in site investigation and cleanup programs is important for many reasons. These include:

Promoting the development of timely, effective site investigation and cleanup programs that protect public health and the environment;

Improving public access to, and understanding of, issues and information related toa particular site and that site's investigation and cleanup process;

Providing citizens with early and continuing opportunities to participate in NYSDEC'ssite investigation and cleanup process;

Ensuring that NYSDEC makes site investigation and cleanup decisions that benefitfrom input that reflects the interests and perspectives found within the affected community; and

Encouraging dialogue to promote the exchange of information among the affected/interested public, State agencies, and other interested parties that strengthens trust among the parties, increases understanding of site and communityissues and concerns, and improves decision-making.

This Public Participation (PP) Plan provides information about how NYSDEC will inform and involve the public during the investigation and cleanup of the site identified above. The public information and involvement program will be carried out with assistance, as appropriate, from the Applicant.

Project Contacts

Appendix A identifies NYSDEC project contact(s) to whom the public should address questions or request information about the site's investigation and cleanup program. The public's suggestions about this PP Plan and the PP program for the site are always welcome. Interested people are encouraged to share their ideas and suggestions with the project contacts at any time.

Locations of Reports and Information

The locations of the reports and information related to the site's investigation and cleanup program also are identified in Appendix A. These locations provide convenient access to important project documents for public review and comment. Some documents may be placed on the NYSDEC web-site. If this occurs, NYSDEC will inform the public in fact sheets distributed about the site and by other means, as appropriate.

Site Contact List

Appendix B contains the site contact list. This list has been developed to keep the community informed about, and involved in, the site's investigation and cleanup process. The site contact list will be used periodically to distribute fact sheets that provide updates about the status of the project. These will include notifications of upcoming activities at the site (such as fieldwork), as well as availability of project documents and announcements about public comment periods.

The site contact list includes, at a minimum:

- Chief executive officer and planning board chairperson of each county, city, town and village in which the site is located;
- Residents, owners, and occupants of the site and properties adjacent to the site;
- The public water supplier which services the area in which the site is located;
- Any person who has requested to be placed on the site contact list;
- The administrator of any school or day care facility located on or near the site for purposes of posting and/or dissemination of information at the facility; and,
- Location(s) of reports and information.

The site contact list will be reviewed periodically and updated as appropriate. Individuals and organizations will be added to the site contact list upon request. Such requests should be submitted to the NYSDEC project contact(s) identified in Appendix A. Other additions to the site contact list may be made at the discretion of the NYSDEC project manager, in consultation with other NYSDEC staff as appropriate.

Note: The first site fact sheet (usually related to the draft Remedial Investigation Work Plan) is distributed both by paper mailing through the postal service and through DEC Delivers, its email listserv service. The fact sheet includes instructions for signing up with the appropriate county listserv to receive future notifications about the site.

See http://www.dec.ny.gov/chemical/61092.html.

Subsequent fact sheets about the site will be distributed exclusively through the listserv, except for households without internet access that have indicated the need to continue to receive site information in paper form. Please advise the NYSDEC site project manager identified in Appendix A if that is the case. Paper mailings may continue duringthe investigation and cleanup process for some sites, based on public interest and need.

PP Activities

The table at the end of this section identifies the PP activities, at a minimum, that have been and will be conducted during the site's investigation and cleanup program. The flowchart in Appendix D shows how these PP activities integrate with the site investigation and cleanup process. The public is informed about these PP activities through fact sheets and notices distributed at significant points during the program.

Elements of the investigation and cleanup process that match up with the PP activities are explained briefly in Section 5.

Notices and fact sheets help the interested and affected public to understand contamination issues related to a site, and the nature and progress of efforts toinvestigate and clean up a site.

Public forums, comment periods and contact with project managers provide opportunities for the public to contribute information, opinions, and perspectives that have potential to influence decisions about a site's investigation and cleanup.

The public is encouraged to contact project staff at any time during the site's investigation and cleanup process with questions, comments, or requests for information.

This PP Plan may be revised due to changes in major issues of public concern identified in Section 3 or in the nature and scope of investigation and cleanup activities. Modifications may include additions to the site contact list and changes in planned public participation activities.

Technical Assistance Grant

NYSDEC must determine if the site poses a significant threat to public health or the environment. This determination generally is made using information developed during the investigation of the site, as described in Section 5.

If the site is determined to be a significant threat, a qualifying community group may apply for a Technical Assistance Grant (TAG). The purpose of a TAG is to provide funds to the qualifying group to obtain independent technical assistance. This assistance helps the TAG recipient to interpret and understand existing environmental information about the nature and extent of contamination related to the site and the development and implementation of a remedy.

An eligible community group must certify that its membership represents the interests of the community affected by the site, and that its members' health, economic well-being or enjoyment of the environment may be affected by a release or threatened release of contamination at the site.

As of the date the declaration (page 2) was signed by the NYSDEC project manager, the significant threat determination for the site had not yet been made. To verify the significant threat status of the site, the interested public may contact the NYSDEC project manager identified in Appendix A.

For more information about TAGs, go online at

http://www.dec.ny.gov/regulations/2590.html

Note: The table identifying the public participation activities related to the site's investigation and cleanup program follows on the next page.

Public Participation Activities	Timing of Public Participation Activity(ies)
Application Process:	
• Prepare site contact list • Establish document repository(ies)	At time of preparation of application to participate in theBCP.
• Publish notice in Environmental Notice Bulletin (ENB) announcing receipt of application and 30-day public comment period • Publish above ENB content in local newspaper • Mail above ENB content to site contact list • Conduct 30-day public comment period	When NYSDEC determines that BCP application is complete. The 30-day public comment period begins on date of publication of notice in ENB. End date of public comment period is as stated in ENB notice. Therefore, ENB notice, newspaper notice, and notice to the contact list should be provided to the public at the same time.
After Execution of Brownfield Site Cleanup Agreement (BCA):	
• Prepare Public Participation (PP) Plan	Before start of Remedial Investigation **Note:** Applicant must submit PP Plan to NYSDEC for review and approval within 20 days of the effective dateof the BCA.
Before NYSDEC Approves Remedial Investigation (RI) Work Plan:	
• Distribute fact sheet to site contact list about proposed RI activities and announcing 30-day public comment period about draft RI Work Plan • Conduct 30-day public comment period	Before NYSDEC approves RI Work Plan. If RI Work Plan is submitted with application, public comment periods will be combined and public notice will include fact sheet. 30-day public comment period begins/ends as per dates identified in fact sheet.
After Applicant Completes Remedial Investigation:	
• Distribute fact sheet to site contact list that describesRI results	Before NYSDEC approves RI Report
Before NYSDEC Approves Remedial Work Plan (RWP):	
• Distribute fact sheet to site contact list about draft RWP and announcing 45-day public comment period • Public meeting by NYSDEC about proposed RWP (if requested by affected community or at discretion of NYSDEC project manager) • Conduct 45-day public comment period	Before NYSDEC approves RWP. 45-day public comment period begins/ends as per dates identified in fact sheet. Public meeting would be held within the 45- day public comment period.
Before Applicant Starts Cleanup Action:	
• Distribute fact sheet to site contact list that describes upcoming cleanup action	Before the start of cleanup action.
After Applicant Completes Cleanup Action:	
• Distribute fact sheet to site contact list that announces that cleanup action has been completed and that NYSDEC is reviewing the Final EngineeringReport • Distribute fact sheet to site contact list announcing NYSDEC approval of Final Engineering Report and issuance of Certificate of Completion (COC)	At the time the cleanup action has been completed. **Note:** The two fact sheets are combined when possibleif there is not a delay in issuing the COC.

3. Major Issues of Public Concern

This section of the PP Plan identifies major issues of public concern that relate to the site. Additional major issues of public concern may be identified during the course of the site's investigation and cleanup process.

The primary contaminants of concern at the Site are elevated levels of metals in soil. Public health concerns are currently unknown. Site contamination is not affecting community activities and there are no known on-site uses of groundwater at or near the Site (the surrounding area utilizes public water). During the cleanup of the Site, there may be issues such as odor, noise, or truck-related traffic.

4. Site Information

Appendix C contains a map identifying the location of the site.

Site Description

The Site consists of a 1.16-acre parcel located at 137 Smith Street, and 140 and 146 Montgomery Street. The property is vacant land. Development plans include construction of two new mixed-use and mixed-income buildings with associated infrastructure and landscaping. Both structures will have retail uses along South Street. New construction will require soil excavation. The Site is located in an urban setting comprised primarily of residential, commercial, and institutional uses. Adjoining properties contain a public school (to the west) and residential buildings.

History of Site Use, Investigation, and Cleanup

Development occurred at the property as early as the 1800s, and the Site formerly contained multiple structures (likely used for residential purposes), the last of which were demolished sometime between 1971 and 1992.

Previous subsurface investigations documented poor-quality fill materials contaminated by metals, including arsenic, cadmium, lead, and mercury, at concentrations above NYSDEC Soil Clean-up Objectives for Restricted-Residential Use.

Site cleanup actions will likely involve removal of soils containing metals above Unrestricted Use criteria, resulting in a final remediation that is protective of human health and the environment.

5. Investigation and Cleanup Process

Application

The Applicant has applied for and been accepted into New York's Brownfield Cleanup Program **as Volunteer**. This means that the Applicant was not responsible for the disposal or discharge of the contaminants or whose ownership or operation of the site took place after the discharge or disposal of contaminants. The Volunteer must fully characterize the nature and extent of contamination onsite, and must conduct a "qualitative exposure assessment," a process that characterizes the actual or potential

exposures of people, fish, and wildlife to contaminants on the site and to contamination that has migrated from the site.

The Applicant in its Application proposes that the site will be used for residential purposes, and will meet (at a minimum) the criteria for a Restricted-Residential Use cleanup (dependent on the final remediation plan, an Unrestricted Use cleanup may be pursued). To achieve this goal, the Applicant will conduct investigation and cleanupactivities at the site with oversight provided by NYSDEC. The Brownfield Cleanup Agreement executed by NYSDEC and the Applicant sets forth the responsibilities ofeach party in conducting these activities at the site.

Investigation

The Applicant will conduct an investigation of the site officially called a “remedial investigation” (RI). This investigation will be performed with NYSDEC oversight. The Applicant must develop a remedial investigation work plan, which is subject to public comment. The site investigation has several goals:

1) Define the nature and extent of contamination in soil, surface water, groundwater and any other parts of the environment that may be affected;
2) Identify the source(s) of the contamination;
3) Assess the impact of the contamination on public health and the environment; and
4) Provide information to support the development of a proposed remedy to address the contamination or the determination that cleanup is not necessary.

The Applicant submits a draft “Remedial Investigation Work Plan” to NYSDEC for review and approval. NYSDEC makes the draft plan available to the public review during a 30-day public comment period.

When the investigation is complete, the Applicant will prepare and submit a report that summarizes the results. This report also will recommend whether cleanup action is needed to address site-related contamination. The investigation report is subject to review and approval by NYSDEC.

NYSDEC will use the information in the investigation report to determine if the site poses a significant threat to public health or the environment. If the site is a “significant threat,” it must be cleaned up using a remedy selected by NYSDEC from an analysis of alternatives prepared by the Applicant and approved by NYSDEC. If the site does not pose a significant threat, the Applicant may select the remedy from the approved analysis of alternatives.

Interim Remedial Measures

An Interim Remedial Measure (IRM) is an action that can be undertaken at a site when a source of contamination or exposure pathway can be effectively addressed before the site investigation and analysis of alternatives are completed. If an IRM is likely to represent all or a significant part of the final remedy, NYSDEC will require a 30-day public comment period.

Remedy Selection

When the investigation of the site has been determined to be complete, the project likely would proceed in one of two directions:

1) The Applicant may recommend in its investigation report that no action is necessaryat the site. In this case, NYSDEC would make the investigation report available for public comment for 45 days. NYSDEC then would complete its review, make any necessary revisions, and, if appropriate, approve the investigation report. NYSDEC would then issue a "Certificate of Completion" (described below) to the Applicant.

or

2) The Applicant may recommend in its investigation report that action needs to be taken to address site contamination. After NYSDEC approves the investigation report, the Applicant may then develop a cleanup plan, officially called a "Remedial Work Plan". The Remedial Work Plan describes the Applicant's proposed remedy for addressing contamination related to the site. When the Applicant submits a draft Remedial Work Plan for approval, NYSDEC would announce the availability of the draft plan for public review during a 45-day public comment period.

Cleanup Action

NYSDEC will consider public comments, and revise the draft cleanup plan if necessary, before approving the proposed remedy. The New York State Department of Health (NYSDOH) must concur with the proposed remedy. After approval, the proposed remedy becomes the selected remedy. The selected remedy is formalized in the site Decision Document.

The Applicant may then design and perform the cleanup action to address the site contamination. NYSDEC and NYSDOH oversee the activities. When the Applicant completes cleanup activities, it will prepare a Final Engineering Report (FER) that certifies that cleanup requirements have been achieved or will be achieved within aspecific time frame. NYSDEC will review the report to be certain that the cleanup isprotective of public health and the environment for the intended use of the site.

Certificate of Completion

When NYSDEC is satisfied that cleanup requirements have been achieved or will be achieved for the site, it will approve the FER. NYSDEC then will issue a Certificate of Completion (COC) to the Applicant.

The COC states that cleanup goals have been achieved, and relieves the Applicant from future liability for site-related contamination, subject to certain conditions. The Applicant would be eligible to redevelop the site after it receives a COC.

Site Management

The purpose of site management is to ensure the safe reuse of the property if contamination will remain in place. Site management is the last phase of the site cleanup program. This phase begins when the COC is issued. Site management incorporates any institutional and engineering controls required to ensure that the remedy implemented for the site remains protective of public health and the environment. All significant activities are detailed in a Site Management Plan.

An institutional control is a non-physical restriction on use of the site, such as a deed restriction that would prevent or restrict certain uses of the property. An institutional control may be used when the cleanup action leaves some contamination that makes the site suitable for some, but not all uses.

An engineering control is a physical barrier or method to manage contamination. Examples include: caps, covers, barriers, fences, and treatment of water supplies.

Site management also may include the operation and maintenance of a component of the remedy, such as a system that pumps and treats groundwater. Site management continues until NYSDEC determines that it is no longer needed.

Appendix A – Project Contacts and Locations of Reports and Information

Project Contacts

For information about the site's investigation and cleanup program, the public may contact any of the following project staff:

New York State Department of Environmental Conservation (NYSDEC):

Caroline Jalanti
Project Manager, NYSDEC
625 Broadway
Albany, NY 12233
caroline.jalanti@dec.ny.gov
(518) 402-9650

Stephanie Mossey
Citizen Participation Specialist
NYSDEC – Region 3
21 South Putt Corners Road
New Paltz, NY 12561
Stephanie.Mossey@dec.ny.gov

New York State Department of Health (NYSDOH):

Michael Izdebski
Project Manager, NYSDOH
Empire State Plaza – Corning Tower, Rm 1787
Albany, NY 12237
beei@health.ny.gov

Locations of Reports and Information

The facilities identified below are being used to provide the public with convenient access to important project documents:

Newburgh Free Library
Karen Cissel, Librarian, Head of User Services
124 Grand Street, Newburgh, NY 12550
Phone: 845-563-3600
Email: kcissel@rcls.org

NYSDEC – Region 3
21 South Putt Corners Road
New Paltz, NY 12561
(845) 256-3146

Appendix B – Site Contact List

Public Officials:

City of Newburgh Mayor
Torrance Harvey
83 Broadway, Newburgh, NY 12550
Phone: 845-569-7305

City of Newburgh Clerk
Lorene Vitek
83 Broadway, Newburgh, NY 12550
Phone: 845-569-7311

City of Newburgh City Manager
Todd Venning
83 Broadway, Newburgh, NY 12550
Phone: 845-569-7301

City of Newburgh Building Department
Charlotte Mountain
1841 Courthouse/123 Grand Street
Newburgh, NY 12550
Phone: 845-569-7400

Orange County Executive
Steven M. Neuhaus
255 Main Street, Goshen, NY 10924
Phone: 845-291-2700

NYS Assembly District 104
Jonathan G. Jacobson
436 Robinson Avenue, Suite B
Newburgh, NY 12550
845-562-0888

NYS Senate District 39
Rob Rolison
3 Neptune Road, Suite N22
Poughkeepsie, NY 12601
Phone: 845-229-0106

Local Schools and Daycare Centers

Horizons-on-the-Hudson Magnet School
137 Montgomery Street
Newburgh, NY 12550
Phone: 845-563-3725

Media

Local	**Hudson Valley Press** 343 Broadway Newburgh, NY 12550 Phone: 845-562-1313	**Mid-Hudson Times** 500 Stony Brook Ct, Suite 2, Newburgh, NY 12550 Phone: 845-561-0170
General Circulation	**Times Herald-Record** 90 Crystal Run Rd., Suite 310, Middletown, NY 10941 Phone: 888-620-1700	

Public Water Supplier

Newburgh Water Department
493 Little Britain Road,
Newburgh, NY 12550
Phone: 845-565-3356

Community, Civic, Religious and Other Environmental Organizations

Riverkeeper
20 Secor Road, Ossining, NY 10562
phone: 800-217-4837
email: info@riverkeeper.org

Scenic Hudson
85 Civic Center Plaza, Suite 300
Poughkeepsie, NY 12601
phone: 845-473-4440
email: info@scenichudson.org

Hudson River Sloop Clearwater
724 Wolcott Avenue, Beacon, NY 12508
phone: 845-265 8080
email: office@clearwater.org

Orange County Land Trust
PO Box 269, Mountainville, NY 10953
phone: 845-534-3690
email: info@OCLT.org

Adjacent Properties

Address and Tax ID (section – block – lot)	**Current Use**
150 Smith Street (12-5-1)	apartment building
207 Water Street (12-3-2.1 and -4)	multi-family residential
158 Montgomery Street (12-3-4)	multi-family residential
137 Montgomery Street (12-2-5)	public school
131 Montgomery Street (19-1-6)	multi-family residential
69 South Street (19-2-1)	multi-family residential

Appendix C – Site Map

GALLAGHER BASSETT | TECHNICAL SERVICES

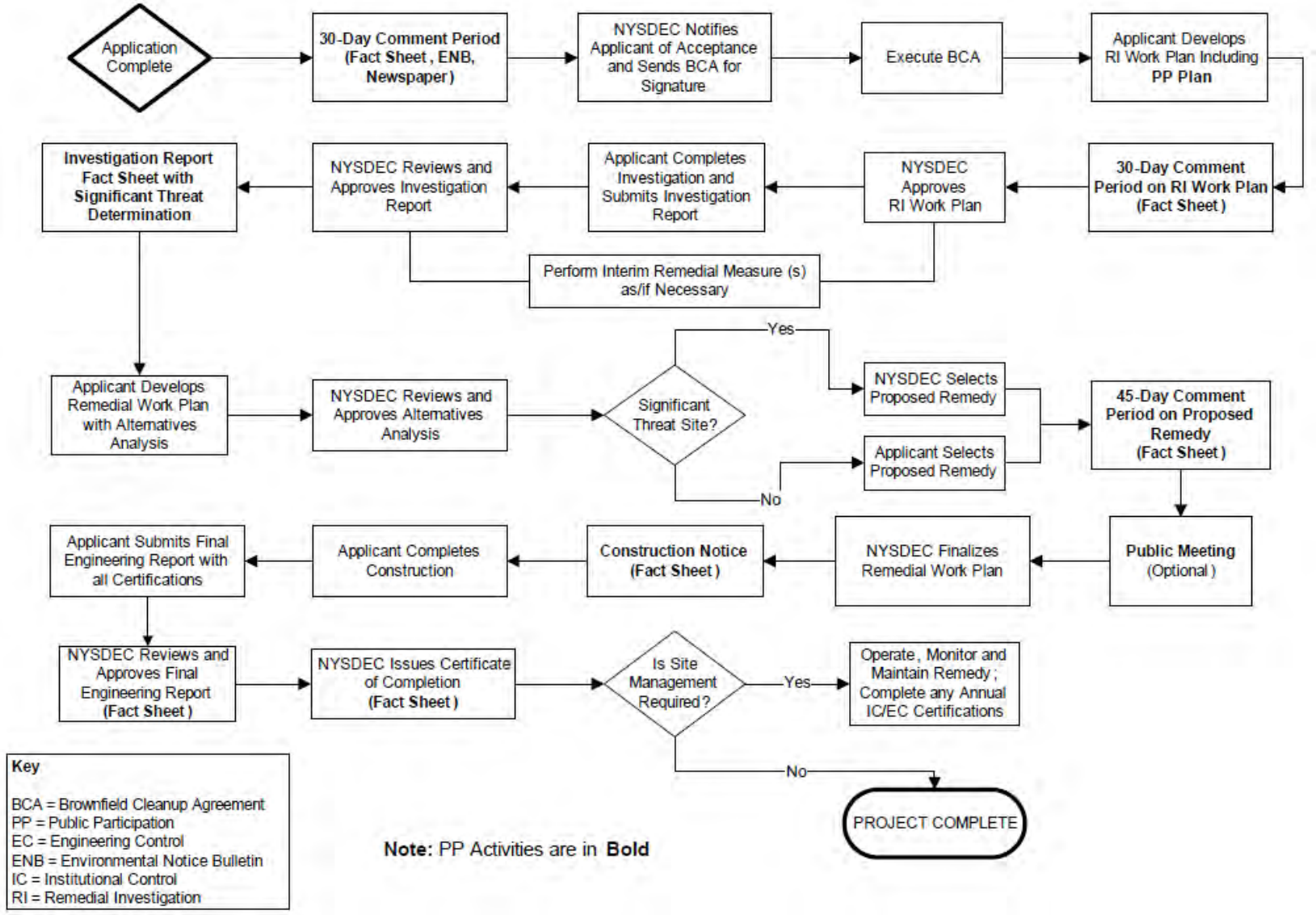


Site Location Map
137 Smith Street
140 and 146 Montgomery Street
City of Newburgh
Orange County, New York

Legend:
BCP Site Boundary
tax lot lines

BCP ID: C336099

Appendix D – Brownfield Cleanup Program Process



APPENDIX D – Health and Safety Plan

GALLAGHER BASSETT | TECHNICAL SERVICES

HEALTH AND SAFETY PLAN
FOR SITE REMEDIATION

The Green

City of Newburgh, Orange County, New York

NYSDEC BCP Site: C336099

June 2026

GBTS Project: 22003-0092

Gallagher Bassett Technical Services

22 IBM Road, Suite 101., Poughkeepsie, NY 12601 T: 845-452-1658 F: 845-485-7083

www.gallagherbassett.com

HEALTH AND SAFETY PLAN
FOR SITE REMEDIATION

June 2026

GBTS Project: 22003-0092

Prepared By:

Gallagher Bassett Technical Services
22 IBM Road, Suite 101
Poughkeepsie, New York 12601

Prepared For:

Kearney Realty & Development Group Inc.
57 Route 6, Suite 207
Baldwin Place, New York 10505

The undersigned have reviewed this Health and Safety Plan for Site Remediation and certify to Kearney Realty & Development Group Inc. and to the New York State Department of Environmental Conservation that the information provided in this document is accurate as of the date of issuance by this office.



_____

Scott Spitzer
Gallagher Bassett Technical Services
Technical Director – Environmental Consulting



_____

Richard Hooker
Gallagher Bassett Technical Services
Manager – Environmental Consulting

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Attachments

Site Map

NYSDOH Generic CAMP

1.0 INTRODUCTION

1.1 Purpose

This Health and Safety Plan for Site Remediation (HASP) has been developed to provide the requirements and general procedures to be followed by Gallagher Bassett Technical Services (GBTS) and on-site subcontractors while performing site remediation services at The Green BCP Site (ID: C336099) in the City of Newburgh, New York.

This HASP incorporates policies, guidelines and procedures intended to protect the public health of the community during fieldwork activities and therefore serves as a Community Health and Safety Plan. The objectives of the HASP are met by establishing guidelines to minimize potential exposures during fieldwork, and by planning for and responding to emergencies affecting the public adjacent to the site.

This HASP describes the responsibilities, training requirements, protective equipment and standard operating procedures to be utilized by all personnel while on the site. All on-site personnel and visitors shall follow the guidelines, rules, and procedures contained in this HASP. The Project Manager or Site Health and Safety Officer (SHSO) may impose any other procedures or prohibitions necessary for safe operations. This HASP incorporates by reference applicable Occupational Safety and Health Administration (OSHA) requirements in 29 CFR 1910 and 1926.

The requirements and guidelines in this HASP are based on a review of available information and evaluation of potential on-site hazards. This HASP will be discussed with site personnel and will be available on-site for review while work is underway. On-site personnel will report to the SHSO in matters of health and safety. The on-site project supervisor(s) are responsible for the enforcement and implementation of this HASP, which is applicable to all on-site field personnel, including contractors and subcontractors.

This HASP is specifically intended for the conduct of activities within the defined scope of work in specified areas of the site. Changes in conditions or future actions that may be conducted at the site may necessitate the modification of the requirements of the HASP. Although this HASP can be made available to interested persons for informational purposes, GBTS cannot be held accountable for the interpretations or activities of any other persons or entities other than the employees of GBTS or its subcontractors.

1.2 Site Location and Description

The site is located at 137 Smith Street, and 140 and 146 Montgomery Street, City of Newburgh, Orange County, New York. A Site Map illustrating the site configuration is included as an Attachment to this HASP.

1.3 Work Activities

Fieldwork activities to be conducted at the site are detailed in the NYSDEC-approved Remedial Action Work Plan (RAWP) dated April 2026, which specifies the remedy for the required environmental remediation of the site.

2.0 HEALTH AND SAFETY HAZARDS

2.1 Hazard Overview for On-Site Personnel

Urban fill materials at the site have elevated concentrations of metals and polycyclic aromatic hydrocarbons (PAHs), elevated metals and per- and polyfluoroalkyl substances (PFAS) are in site groundwater, and volatile organic compounds (VOCs) have been documented in soil vapor. The possibility exists for on-site personnel to have contact with contaminated soils, groundwater and/or vapor during remediation activities. Contact with contaminated substances may present a skin contact, inhalation and/or ingestion hazard. These potential hazards are addressed in Sections 3.0 through 11.0, below.

2.2 Potential Hazards to the Public from Fieldwork Activities

The potential exists for the public to be exposed to contaminated media (soils, groundwater and/or vapor), which may present a skin contact, inhalation and/or ingestion hazard. Additional potential hazards associated with fieldwork activities include mechanical and physical hazards, traffic hazards from fieldwork vehicles, and noise impacts from operation of equipment.

Impacts to public health and safety are expected to be limited to hazards that could directly affect on-site visitors and/or trespassers. These effects will be mitigated through site access and control measures (see Section 6.0, below). Specific actions taken to protect the public health (presented in Sections 3.0 through 11, below) are anticipated to minimize any potential off-site impacts from contaminant migration, noise and traffic hazards.

3.0 PERSONAL PROTECTIVE EQUIPMENT

The levels of protection identified for the services specified in the RAWP represent a best estimate of exposure potential and protective equipment needed for that exposure. Determination of levels was based on data provided by previous studies of the site and information reviewed on current and past site usage.

The SHSO may recommend revisions to these levels based on an assessment of actual exposures and may at any time require site workers, supervisors and/or visitors to use specific safety equipment.

The level of protective clothing and equipment selected for this project is Level D. Level D PPE provides minimal skin protection and no respiratory protection and is used when the atmosphere contains no known hazard, oxygen concentrations are not less than 19.5%, and work activities exclude splashes, immersion or the potential for unexpected inhalation or contact with hazardous levels of chemicals. Workers will wear Level D protective clothing including, but not limited to, a hard hat, steel-toed boots, nitrile gloves (when handling soils and/or groundwater), hearing protection (foam ear plugs or earmuffs, as required), and safety goggles (in areas of exposed groundwater and when decontaminating equipment). Personal protective equipment (PPE) will be worn at all times, as designated by this HASP.

Disposable gloves will be changed immediately following the handling of contaminated soils, water, or equipment. Tyvek suits will be worn during activities likely to excessively expose work clothing to contaminated dust or soil (chemically-resistant over garments will be required in situations where exposures could lead to penetration of clothing and direct dermal contact by contaminants).

The requirement for the use of PPE by official on-site visitors shall be determined by the SHSO, based on the most restrictive PPE requirement for a particular Work Zones (see Section 6 for Work Zone definitions). All on-site visitors shall, at a minimum, be required to wear an approved hardhat and be provided with appropriate hearing protection as necessary.

The need for an upgrade in PPE will be determined based upon encountered site conditions, including measurements taken in the breathing zone of the work area using a photo-ionization detector (PID). An upgrade to a higher level of protection (Level C) will begin when specific action levels are reached (see Section 5.0, below), or as otherwise required by the SHSO. Level C PPE includes a full-face or half-mask air-purifying respirator (NIOSH approved for compound[s] of concern), hooded chemical-resistant clothing, outer and inner chemical-resistant gloves, and (as needed) coveralls, outer boots/boot covers, escape mask, and face shield. Level C PPE may be used only when: oxygen concentrations are not less than 19.5%; contaminant contact will not adversely affect exposed skin; types of air contaminants have been identified, concentrations measured, and a cartridge/canister is available that can remove the contaminant; atmospheric contaminant concentrations do not exceed immediately dangerous to life or health (IDLH) levels; and job functions do not require self-contained breathing apparatus (SCBAs). The need for Level B or Level A PPE is not anticipated for the planned remedial activities at this site.

If any equipment fails and/or any employee experiences a failure or other alteration of their protective equipment that may affect its protective ability, that person will immediately leave the work area. The Project Manager and the SHSO will be notified and, after reviewing the situation, determine the effect of the failure on the continuation of on-going operations. If the failure affects the safety of personnel, the work site, or the surrounding environment, personnel will be evacuated until appropriate corrective actions have been taken.

4.0 CONTAMINANT CONTROL

Precautions will be taken during dry weather (e.g., wetting or covering exposed soils) to avoid generating and breathing dust-generated from soils. A PID (or equivalent equipment) will be used to monitor potential contaminant levels. Response to the monitoring will be in accordance with the action levels provided in Section 5.0.

5.0 MONITORING AND ACTION LEVELS

Concentrations of petroleum compounds in the air are expected to be below the OSHA Permissible Exposure Limits (PELs). Air monitoring will be conducted for VOCs and dust according to the NYSDOH Generic Community Air Monitoring Plan (provided as an Attachment), and in accordance with the special requirements presented below. Monitoring will be conducted at all times that fieldwork activities which are likely to generate emissions are occurring. PID and dust readings consistently in excess of CAMP limits will be used as an indication of the need to initiate personnel monitoring, increase worker protective measures, and/or modify or cease on-site operations in order to mitigate off-site community exposure.

PID readings that consistently exceed background in the breathing zone (during any proposed tasks) will necessitate moving away from the source or implementing a higher PPE level.

Special Requirements for Work within 20 Feet of Potentially Exposed Individuals or Structures

When work areas are within 20 feet of potentially exposed populations or occupied structures, the continuous monitoring locations for VOCs and particulates must reflect the nearest potentially exposed individuals and the location of ventilation system intakes for nearby structures. The use of engineering controls such as vapor/dust barriers, temporary negative pressure enclosures, or special ventilation devices should be considered to prevent exposures related to the work activities and to control dust and odors. Consideration should be given to implementing the planned activities when potentially exposed populations are at a minimum, such as during weekends or evening hours in non-residential settings.

If total VOC concentrations opposite the walls of occupied structures or next to intake vents exceed 1 ppm, monitoring should occur within the occupied structure(s). Depending upon the nature of contamination, chemical-specific colorimetric tubes of sufficient sensitivity may be necessary for comparing the exposure point concentrations with appropriate pre-determined response levels (response actions should also be predetermined). Background readings in the occupied spaces must be taken and discussed with NYSDOH prior to commencement of the work.

If total particulate concentrations opposite the walls of occupied structures or next to intake vents exceed 150 mcg/m^3, work activities should be suspended until controls are implemented and are successful in reducing the total particulate concentration to 150 mcg/m^3 or less at the monitoring point.

Depending upon the nature of contamination and remedial activities, other parameters (e.g., explosivity, oxygen, hydrogen sulfide, and carbon monoxide) may also need to be monitored. Response levels and actions should be pre-determined, as necessary, for each site.

Special Requirements for Indoor Work with Co-Located Residences or Facilities:

Unless a self-contained, negative-pressure enclosure with proper emission controls will encompass the work area, all individuals not directly involved with the planned work must be absent from the room in which the work will occur. Monitoring requirements shall be as stated above under "Special Requirements for Work within 20 Feet of Potentially Exposed Individuals or Structures" except that in this instance "nearby/occupied structures" would be adjacent occupied rooms. Additionally, the location of all exhaust vents in the room and their discharge points, as well as potential vapor pathways (openings, conduits, etc.) relative to adjoining rooms, should be understood and the monitoring locations established accordingly. In these situations, it is strongly recommended that exhaust fans or other engineering controls be used to create negative air pressure within the work area during remedial activities. Additionally, it is strongly recommended that the planned work be implemented during hours (e.g., weekends or evenings) when building occupancy is at a minimum.

6.0 SITE CONTROL/WORK ZONES

Site control procedures will be established to reduce the possibility of worker/visitor contact with environmental contaminants, to protect the public in the area surrounding the site and to limit access to the site to only those persons required to be in the work zone. Notices placed near the site will warn the public not to enter fieldwork areas and direct visitors to report to the Project Manager or SHSO. Measures will be taken to limit the entry of unauthorized personnel into the specific areas of field activity and to safely direct and control all vehicular traffic in and near the site (e.g., placement of traffic cones and warning tape).

Work Areas are defined as follows:

Exclusion Zone - The exclusion zone will be that area immediately surrounding the work being performed to accomplish fieldwork activities involving the handling or potential exposures to contaminated media. Only individuals with appropriate PPE and training are allowed into this zone. It is the responsibility of the SHSO to prevent unauthorized personnel from entering the exclusion zone. When necessary (e.g., high traffic areas) the exclusion zone will be delineated with barricade tape, cones and/or barricades.

Dedicated Decontamination Area - A dedicated decontamination area for personnel and equipment (including contamination reduction and support zones) is not anticipated to be required during completion of fieldwork activities, but will be established and utilized, as warranted, based on changes in site conditions. Care will be taken at all times to remove gloves, excess soil from boots, and soiled clothing (if necessary) before entering the Intermediate Zone.

Intermediate Zone - The intermediate zone, also known as the decontamination zone, is where patient decontamination should take place, if necessary. A degree of contamination still is found in this zone and some PPE is required, although it is usually of a lesser degree than that required for the exclusion zone.

Command Zone - The command zone is located outside the decontamination zone. All exposed individuals and equipment from the exclusion zone and the decontamination zone should be decontaminated before entering the command zone. Access to all zones must be controlled. Keeping onlookers, media, and others well away from the site is critical and will be the responsibility of both the SHSO and the Project Manager, and other site personnel as appropriate.

7.0 NOISE CONTROL

All fieldwork activities will be conducted in a manner designed to reduce unnecessary noise generation, and to minimize the potential for both on-site and off-site harmful noise levels. The Project Manager and SHSO will establish noise reduction procedures (as appropriate to the site and the work) to meet these requirements.

8.0 PERSONNEL TRAINING

Work zones that will accomplish the general objective stated above will be established by the Project Manager and the SHSO. Site access will be monitored by the SHSO, who will maintain a log-in sheet for personnel that will include, at the minimum, personnel on the site, their arrival and departure times and their destination on the site. All workers will be properly trained in accordance with OSHA requirements (29 CFR 1910). Personnel exiting the work zone(s) will be decontaminated prior to exiting the site.

Site-specific training will be provided to each employee. Personnel will be briefed by the SHSO as to the potential hazards to be encountered. Topics will include:

- Availability of this HASP;
- General site hazards and specific hazards in the work areas, including those attributable to known of suspect on-site contaminants;
- Selection, use, testing, and care of the body, eye, hand, and foot protection being worn, with the limitations of each;
- Decontamination procedures for personnel, their personal protective equipment, and other equipment used on the site;
- Emergency response procedures and requirements;
- Emergency alarm systems and other forms of notification, and evacuation routes to be followed; and,
- Methods to obtain emergency assistance and medical attention.

9.0 DECONTAMINATION

The SHSO will establish a decontamination system and decontamination procedures (appropriate to the site and the work) that will prevent potentially hazardous materials from leaving the site. Vehicles will be brushed to remove materials adhering to surfaces. Sampling equipment will be segregated and, after decontamination, stored separately from PPE. All decontaminated or clean sampling equipment not in use will be protected and stored in a designated, controlled storage area.

10.0 EMERGENCY RESPONSE

10.1 Notification of Site Emergencies

In the event of an emergency, the SHSO will be immediately notified of the nature and extent of the emergency (the names and contact information for key site safety and management personnel, as well as other site safety contact telephone numbers, shall be posted at the site).

Table 1 in this HASP contains Emergency Response Telephone Numbers, and immediately following is a map detailing the directions to the nearest hospital emergency room. This information will be maintained at the work site by the SHSO. The location of the nearest telephone will be determined prior to the initiation of on-site activities. In addition to any permanent phone lines, a cellular phone will be in the possession of the SHSO, or an authorized designee, at all times.

10.2 Responsibilities

Prior to the initiation of on-site work activities, the SHSO will:

- Notify individuals, authorities and/or health care facilities of the potentially hazardous activities and potential wastes that may develop as a result of the remedial activities;
- Confirm that first aid supplies and a fire extinguisher are available on-site;
- Have a working knowledge of safety equipment available; and,
- Confirm that a map detailing the most direct route to the hospital is prominently posted with the emergency telephone numbers.

The SHSO will be responsible for directing notification, response and follow-up actions and for contacting outside response personnel (ambulance, fire department, or others). In the case of an evacuation, the SHSO will account for personnel. A log of individuals entering and leaving the site will be kept so that everyone can be accounted for in an emergency.

Upon notification of an exposure incident, the SHSO will contact the appropriate emergency response personnel for recommended medical diagnosis and, if necessary, treatment. The SHSO will determine whether and at what levels exposure actually occurred, the cause of such exposure, and the means to prevent similar incidents from occurring.

10.3 Accidents and Injuries

In the event of an accident or injury, measures will be taken to assist those who have been injured or exposed and to protect others from hazards. If an individual is transported to a hospital or doctor, a copy of the HASP will accompany the individual.

The SHSO will be notified and respond according to the severity of the incident. The SHSO will investigate the incident and prepare a signed and dated report documenting the investigation. An exposure-incident report will also be completed by the SHSO and the exposed individual. The form will be filed with the employee's medical and safety records to serve as documentation of the incident and the actions taken.

10.4 Communication

No special hand signals will be utilized within the work zone. Field personnel will utilize standard hand signals during the operation of heavy equipment.

10.5 Safe Refuge

Vehicles and on-site structures will serve as the immediate place of refuge in the event of an emergency. If evacuation from the area is necessary, project vehicles will be used to transport on-site personnel to safety.

10.6 Site Security and Control

Site security and control during emergencies, accidents and incidents will be monitored by the SHSO. The SHSO is responsible for limiting access to the site to authorized personnel and for oversight of reaction activities.

10.7 Emergency Evacuation

In case of an emergency, personnel will evacuate to the safe refuge identified by the SHSO, both for their personal safety and to prevent the hampering of response/rescue efforts.

10.8 Resuming Work

A determination that it is safe to return to work will be made by the SHSO and/or any personnel assisting in the emergency, e.g., fire department, police department, utility company, etc. No personnel will be allowed to return to the work areas until a full determination has been made by the above-identified personnel that all field activities can continue unobstructed. Such a determination will depend upon the nature of the emergency (e.g., downed power lines -- removal of all lines from the property; fire -- extinguished fire; injury -- safe transport of the injured party to a medical facility with either assurance of acceptable medical care present or completion of medical care; etc.). Before on-site work is resumed following an emergency, necessary emergency equipment will be recharged, refilled or replaced. Government agencies will be notified as appropriate. An Incident Report Form will be filed.

10.9 Fire Fighting Procedures

A fire extinguisher will be available in the work zone during on-site activities. This extinguisher is intended for small fires. When a fire cannot be controlled with the extinguisher, the area will be evacuated immediately. The SHSO will be responsible for directing notification, response and follow-up actions and for contacting ambulance and fire department personnel.

10.10 Emergency Decontamination Procedure

The extent of emergency decontamination depends on the severity of the injury or illness and the nature of the contamination. Whenever possible, minimum decontamination will consist of washing, rinsing and/or removal of contaminated outer clothing and equipment. If time does not permit decontamination, the person will be given first aid treatment and then wrapped in plastic or a blanket prior to transport.

10.11 Emergency Equipment

The SHSO will maintain a dedicated vehicle containing the following on-site equipment for safety and emergency response: fire extinguisher; first-aid kit; and extra copy of this HASP.

11.0 SPECIAL PRECAUTIONS AND PROCEDURES

The activities associated with this remediation may involve potential risks of exposure to both chemical and physical hazards. The potential for chemical exposure to hazardous or regulated substances will be significantly reduced through the use of monitoring, personal protective clothing, engineering controls, and implementation of safe work practices.

11.1 Heat/Cold Stress

Training in prevention of heat/cold stress will be provided as part of the site-specific training. The timing of this project is such that heat/cold stress may pose a threat to the health and safety of personnel. Work/rest regimens will be employed, as necessary, so that personnel do not suffer adverse effects from heat/cold stress. Special clothing and appropriate diet and fluid intake regimens will be recommended to personnel to further reduce this temperature-related hazard. Rest periods will be recommended in the event of high/low temperatures and/or humidity to counter the negative effects of heat/cold stress.

11.2 Heavy Equipment

Working in the vicinity of heavy equipment is the primary safety hazard at the site. Physical hazards in working near heavy construction equipment include the following: overhead hazards, slips/trip/falls, hand and foot injuries, moving part hazards, improper lifting/back injuries and noise. All workers will be properly trained in accordance with OSHA requirements (29 CFR 1910).

No workers will be permitted within any excavated areas without proper personal protective equipment (PPE), including, as warranted, any necessary Level C equipment (e.g., respirators and protective suits). Air monitoring in excavation areas will be conducted for VOCs in accordance with Section 5.0.

11.3 Additional Safety Practices

The following are important safety precautions which will be enforced during the remedial activities.

- Medicine and alcohol can aggravate the effect of exposure to certain compounds. Controlled substances and alcoholic beverages will not be consumed during remedial activities. Consumption of prescribed drugs will only be at the discretion of a physician familiar with the person's work.
- Eating, drinking, chewing gum or tobacco, smoking, or other practices that increase the probability of hand-to-mouth transfer and ingestion of material is prohibited except in areas designated by the SHSO.
- Contact with potentially contaminated surfaces will be avoided whenever possible. Workers will not unnecessarily walk through puddles, mud or other discolored surfaces; kneel on the ground; or lean, sit, or place equipment on drums, containers, vehicles, or the ground.
- Personnel and equipment in the work areas will be minimized, consistent with effective site operations.
- Unsafe, unattended equipment will be identified by a "DANGER, DO NOT OPERATE" tag.
- Work areas for various operational activities will be established.

11.4 Daily Log Contents

The SHSO will establish a system appropriate to the site, the work and the work zones that will record, at a minimum, the following information:

- Personnel on the site (arrival and departure times) and their destination on the site;
- Incidents and unusual activities site such as (but not limited to) accidents, spills, breaches of security, injuries, equipment failures and weather-related problems;
- Changes to the HASP; and,
- Daily information, such as: changes to work and health and safety plans, work accomplished and the current site status, and monitoring results.

12.0 EMERGENCY INFORMATION

12.1 Emergency Contact Information

The following table presents emergency contact information. This table should be copied and freely distributed and/or posted at the site to ensure ready access.

Emergency Contact Information

Emergency Agencies	Phone Numbers
EMERGENCY	**911**
HOSPITAL Montefiore St. Luke's Cornwall 70 Dubois Street, Newburgh, NY 12550	**(845) 561-4400 or 911**
POLICE City of Newburgh - Police Department 55 Broadway, Newburgh, NY 12550	**(845) 561-3131 or 911**
FIRE City of Newburgh - Fire Department 22 Grand Street, Newburgh, NY 12550	**911** (office 845-562-1212)
City of Newburgh – City Hall	(845) 569-7300
City of Newburgh - Department of Public Works	(845) 565-3297
Site Health and Safety Officer, Richard Hooker, GBTS	(845) 452-1658 (845) 867-4715

12.2 Directions to Hospital

Approximately 4 minutes travel time – 0.7 mile

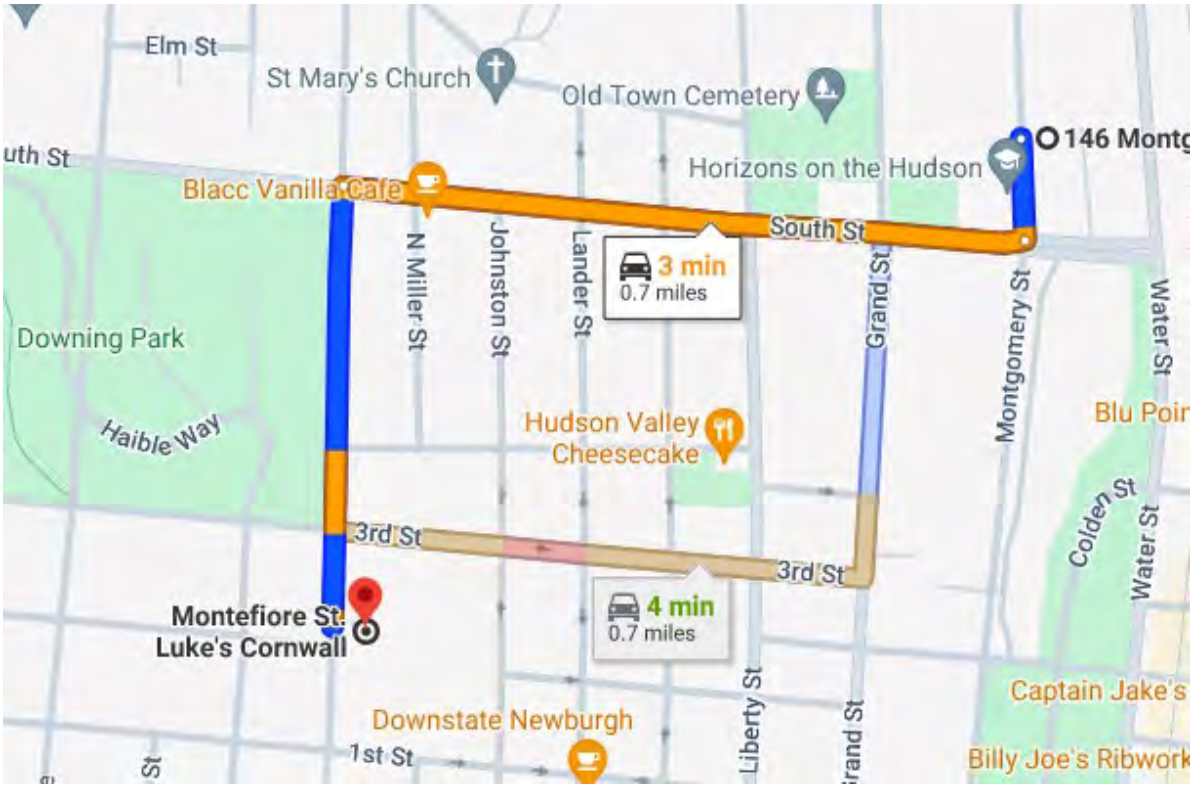
As needed, **South** on either Montgomery Street OR Smith Street

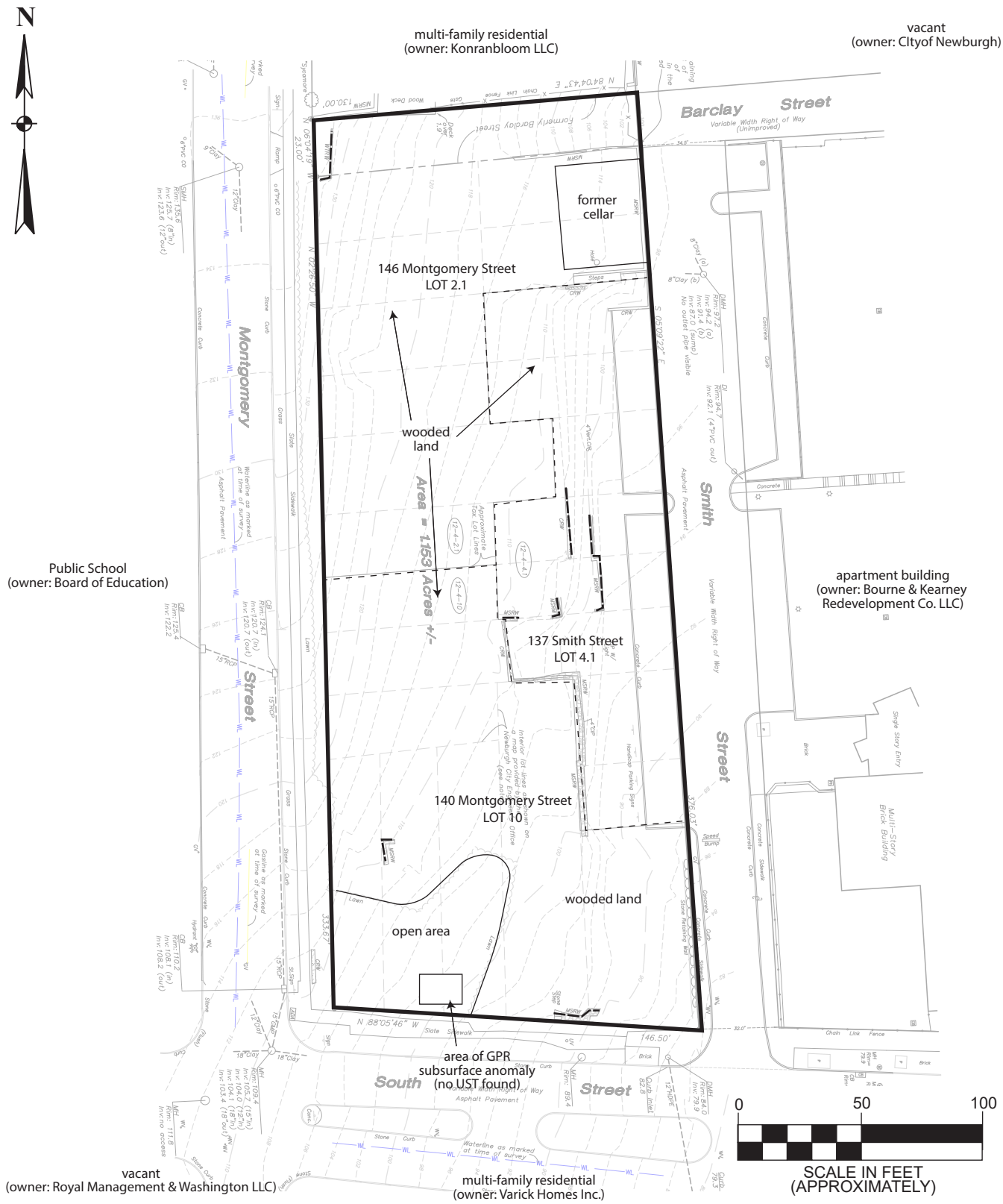
West on South Street Broadway (0.4 mile)

South on Dubois Street (0.2 mil)

Follow signs on Left for Montefiore St Luke's Cornwall Emergency Room

12.3 Map to Hospital





Base Map provided by INSITE Engineering, Surveying & Landscape Architecture P.C. Boundary & Topographic Survey dated 1/19/23.

Figure: Site Map

The Green - BCP Site No. C336099
City of Newburgh
Orange County, New York

Legend:
- subject property border
- lot lines
- foundation remains

File: 22003-0092

June 2026

Scale as shown

Figures

Appendix 1A
New York State Department of Health
Generic Community Air Monitoring Plan

Overview

A Community Air Monitoring Plan (CAMP) requires real-time monitoring for volatile organic compounds (VOCs) and particulates (i.e., dust) at the downwind perimeter of each designated work area when certain activities are in progress at contaminated sites. The CAMP is not intended for use in establishing action levels for worker respiratory protection. Rather, its intent is to provide a measure of protection for the downwind community (i.e., off-site receptors including residences and businesses and on-site workers not directly involved with the subject work activities) from potential airborne contaminant releases as a direct result of investigative and remedial work activities. The action levels specified herein require increased monitoring, corrective actions to abate emissions, and/or work shutdown. Additionally, the CAMP helps to confirm that work activities did not spread contamination off-site through the air.

The generic CAMP presented below will be sufficient to cover many, if not most, sites. Specific requirements should be reviewed for each situation in consultation with NYSDOH to ensure proper applicability. In some cases, a separate site-specific CAMP or supplement may be required. Depending upon the nature of contamination, chemical- specific monitoring with appropriately-sensitive methods may be required. Depending upon the proximity of potentially exposed individuals, more stringent monitoring or response levels than those presented below may be required. Special requirements will be necessary for work within 20 feet of potentially exposed individuals or structures and for indoor work with co-located residences or facilities. These requirements should be determined in consultation with NYSDOH.

Reliance on the CAMP should not preclude simple, common-sense measures to keep VOCs, dust, and odors at a minimum around the work areas.

Community Air Monitoring Plan

Depending upon the nature of known or potential contaminants at each site, real-time air monitoring for VOCs and/or particulate levels at the perimeter of the exclusion zone or work area will be necessary. Most sites will involve VOC and particulate monitoring; sites known to be contaminated with heavy metals alone may only require particulate monitoring. If radiological contamination is a concern, additional monitoring requirements may be necessary per consultation with appropriate DEC/NYSDOH staff.

Continuous monitoring will be required for all ground intrusive activities and during the demolition of contaminated or potentially contaminated structures. Ground intrusive activities include, but are not limited to, soil/waste excavation and handling, test pitting or trenching, and the installation of soil borings or monitoring wells.

Periodic monitoring for VOCs will be required during non-intrusive activities such as the collection of soil and sediment samples or the collection of groundwater samples from existing monitoring wells. “Periodic” monitoring during sample collection might reasonably consist of taking a reading upon arrival at a sample location, monitoring while opening a well cap or

overturning soil, monitoring during well baling/purging, and taking a reading prior to leaving a sample location. In some instances, depending upon the proximity of potentially exposed individuals, continuous monitoring may be required during sampling activities. Examples of such situations include groundwater sampling at wells on the curb of a busy urban street, in the midst of a public park, or adjacent to a school or residence.

VOC Monitoring, Response Levels, and Actions

Volatile organic compounds (VOCs) must be monitored at the downwind perimeter of the immediate work area (i.e., the exclusion zone) on a continuous basis or as otherwise specified. Upwind concentrations should be measured at the start of each workday and periodically thereafter to establish background conditions, particularly if wind direction changes. The monitoring work should be performed using equipment appropriate to measure the types of contaminants known or suspected to be present. The equipment should be calibrated at least daily for the contaminant(s) of concern or for an appropriate surrogate. The equipment should be capable of calculating 15-minute running average concentrations, which will be compared to the levels specified below.

1. If the ambient air concentration of total organic vapors at the downwind perimeter of the work area or exclusion zone exceeds 5 parts per million (ppm) above background for the 15-minute average, work activities must be temporarily halted and monitoring continued. If the total organic vapor level readily decreases (per instantaneous readings) below 5 ppm over background, work activities can resume with continued monitoring.

2. If total organic vapor levels at the downwind perimeter of the work area or exclusion zone persist at levels in excess of 5 ppm over background but less than 25 ppm, work activities must be halted, the source of vapors identified, corrective actions taken to abate emissions, and monitoring continued. After these steps, work activities can resume provided that the total organic vapor level 200 feet downwind of the exclusion zone or half the distance to the nearest potential receptor or residential/commercial structure, whichever is less - but in no case less than 20 feet, is below 5 ppm over background for the 15-minute average.

3. If the organic vapor level is above 25 ppm at the perimeter of the work area, activities must be shutdown.

4. All 15-minute readings must be recorded and be available for State (DEC and NYSDOH) personnel to review. Instantaneous readings, if any, used for decision purposes should also be recorded.

Particulate Monitoring, Response Levels, and Actions

Particulate concentrations should be monitored continuously at the upwind and downwind perimeters of the exclusion zone at temporary particulate monitoring stations. The particulate monitoring should be performed using real-time monitoring equipment capable of measuring particulate matter less than 10 micrometers in size (PM-10) and capable of integrating over a period of 15 minutes (or less) for comparison to the airborne particulate action level. The equipment must be equipped with an audible alarm to indicate exceedance of the action level. In addition, fugitive dust migration should be visually assessed during all work activities.

1. If the downwind PM-10 particulate level is 100 micrograms per cubic meter (mcg/m^3) greater than background (upwind perimeter) for the 15-minute period or if airborne dust is observed leaving the work area, then dust suppression techniques must be employed. Work may continue with dust suppression techniques provided that downwind PM-10 particulate levels do not exceed 150 mcg/m^3 above the upwind level and provided that no visible dust is migrating from the work area.

2. If, after implementation of dust suppression techniques, downwind PM-10 particulate levels are greater than 150 mcg/m^3 above the upwind level, work must be stopped and a re-evaluation of activities initiated. Work can resume provided that dust suppression measures and other controls are successful in reducing the downwind PM-10 particulate concentration to within 150 mcg/m^3 of the upwind level and in preventing visible dust migration.

3. All readings must be recorded and be available for State (DEC and NYSDOH) and County Health personnel to review.

December 2009

APPENDIX E – Community Air Monitoring Plan

GALLAGHER BASSETT | TECHNICAL SERVICES

COMMUNITY AIR MONITORING PLAN

The Green

City of Newburgh, Orange County, New York

NYSDEC BCP Site: C336099

June 2026

GBTS Project: 22003-0092

Technical Services Division

22 IBM Road, Suite 101., Poughkeepsie, NY 12601 T: 845-452-1658 F: 845-485-7083

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COMMUNITY AIR MONITORING PLAN

June 2026

GBTS Project: 22003-0092

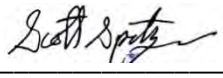
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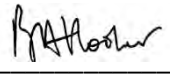
Prepared For:

Kearney Realty & Development Group Inc.
57 Route 6, Suite 207
Baldwin Place, New York 10505

The undersigned have reviewed this Community Air Monitoring Plan and certify to Kearney Realty & Development Group Inc. and to the New York State Department of Environmental Conservation that the information provided in this document is accurate as of the date of issuance by this office.



Scott Spitzer
Gallagher Bassett Technical Services
Technical Director – Environmental Consulting



Richard Hooker
Gallagher Bassett Technical Services
Manager – Environmental Consulting

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Site Map

NYSDOH Generic CAMP

1.0 INTRODUCTION

1.1 Purpose

This Community Air Monitoring Plan (CAMP) has been developed to provide the requirements and general procedures to be followed by Gallagher Bassett Technical Services (GBTS) and on-site subcontractors while performing remediation services at The Green BCP Site (ID: C336099) in the City of Newburgh, New York ("site").

This CAMP requires real-time monitoring for volatile organic compounds (VOCs) and particulates (i.e., dust) at the downwind perimeter of each designated work area and is intended to provide protection for the downwind receptors, including off-site properties and on-site workers not directly involved in the handling of contaminated materials. Implementation of the CAMP helps to confirm that work activities did not spread contamination off-site through the air.

The Project Manager or Site Health and Safety Officer (SHSO) may impose other requirements necessary for safe site operations and protection of potential receptors.

1.2 Site Location and Description

The site is defined as the property located at 137 Smith Street, and 140 and 146 Montgomery Street, City of Newburgh, Orange County, New York. A site map is included as an attachment to this CAMP.

1.3 Work Activities

Environmental management activities are detailed in the NYSDEC-approved Remedial Action Work Plan (RAWP) dated April 2026. The specific tasks detailed in the RAWP are wholly incorporated by reference into this CAMP. The RAWP describes the tasks required to remediate environmental contamination at the site.

1.4 Health and Safety Hazards

Urban fill materials at the site have elevated concentrations of metals and polycyclic aromatic hydrocarbons (PAHs), elevated metals and per- and polyfluoroalkyl substances (PFAS) are in site groundwater, and volatile organic compounds (VOCs) have been documented in soil vapor.

The possibility exists for on-site personnel to have contact with contaminated soils, vapor and groundwater (only anticipated at the eastern margins) during site remediation work. Contact with contaminated substances may present a skin contact, inhalation and/or ingestion hazard.

2.0 AIR MONITORING

2.1 General Requirements

The implementation of the CAMP will document the presence or absence of VOCs and dust in the air surrounding the work zone, which may migrate off-site due to fieldwork activities. Monitoring will be conducted at all times that fieldwork activities which are likely to generate emissions are occurring. This plan provides guidance on the need for implementing more stringent dust and emission controls based on air quality data.

2.1.1 Continuous Monitoring

Real-time air monitoring for VOCs and particulate levels at the perimeter of the exclusion zone or work area will be performed according to the NYSDOH Generic Community Air Monitoring Plan (provided as an Attachment), and in accordance with the special requirements presented below, during all ground intrusive activities and any other fieldwork that is reasonably likely to generate significant dust or vapors from known or suspected contaminated soils. Ground intrusive activities include, but are not limited to, soil/waste excavation and handling, test pit excavation or trenching, and the installation of soil borings or monitoring wells.

2.1.2 Periodic Monitoring

Periodic monitoring for VOCs will be performed during non-intrusive activities such as the collection of soil and sediment samples or the collection of groundwater samples from existing monitoring wells. Periodic monitoring during sample collection, for instance, will consist of taking a reading upon arrival at a sample location, monitoring while opening a well cap or overturning soil, monitoring during well baling/purging, and taking a reading prior to leaving a sample location. Depending upon the proximity of potentially exposed individuals, continuous monitoring may be performed during sampling activities. Examples of such situations include groundwater sampling at wells on the curb of a busy urban street, in the midst of a public park, or adjacent to a school or residence.

2.1.3 Health and Safety

Photoionization detector (PID) and dust readings consistently in excess of CAMP limits will be used as an indication of the need to initiate personnel monitoring, increase worker protective measures, and/or modify or cease on-site operations in order to mitigate off-site community exposure. PID readings that consistently exceed background in the breathing zone (during any proposed tasks) will necessitate moving away from the source or implementing a higher level of personal protective equipment (concentrations of VOCs in the air are expected to be below the OSHA Permissible Exposure Limits [PELs]).

2.1.4 VOC Monitoring, Response Levels, and Actions

VOCs will be monitored at the upwind and downwind perimeters of the immediate work area (i.e., the exclusion zone) on a continuous basis during invasive work. Upwind concentrations will be measured at the start of each workday and continually thereafter to establish background conditions. Monitoring work will be performed using equipment appropriate to measure the types of contaminants known or suspected to be present.

The equipment will be calibrated at least daily for the contaminant(s) of concern or for an appropriate surrogate. The equipment will be capable of calculating 15-minute running average concentrations, which will be compared to the levels specified below.

If the ambient air concentration of total organic vapors at the downwind perimeter of the work area or exclusion zone exceeds 5 parts per million (ppm) above background for the 15-minute average, work activities will be temporarily halted and monitoring continued. If the total organic vapor level readily decreases (per instantaneous readings) below 5 ppm over background, work activities will resume with continued monitoring.

If total organic vapor levels at the downwind perimeter of the work area or exclusion zone persist at levels in excess of 5 ppm over background but less than 25 ppm, work activities will be halted, the source of vapors identified, corrective actions taken to abate emissions, and monitoring continued. After these steps, work activities will resume provided that the total organic vapor level 200 feet downwind of the exclusion zone or half the distance to the nearest potential receptor or occupied structure, whichever is less - but in no case less than 20 feet, is below 5 ppm over background for the 15-minute average.

If the organic vapor level is above 25 ppm at the perimeter of the work area, activities will be shut down.

All 15-minute readings must be recorded and be available for NYSDEC personnel to review. Instantaneous readings, if any, used for decision purposes will also be recorded.

2.1.4 Particulate Monitoring, Response Levels, and Actions

Particulate concentrations will be monitored continuously at the upwind and downwind perimeters of the exclusion zone at temporary particulate monitoring stations. The particulate monitoring will be performed using real-time monitoring equipment capable of measuring particulate matter less than 10 micrometers in size (PM-10) and capable of integrating over a period of 15 minutes (or less) for comparison to the airborne particulate action level.

The equipment will be equipped with an audible alarm to indicate exceedance of the action level. In addition, fugitive dust migration should be visually assessed during all work activities.

If the downwind PM-10 particulate level is 100 micrograms per cubic meter (µg/m^3) greater than background (upwind perimeter) for the 15-minute period or if airborne dust is observed leaving the work area, then dust suppression techniques will be employed and work will continue provided that downwind PM-10 particulate levels do not exceed 150 µg/m^3 above the upwind level and provided that no visible dust is migrating from the work area.

If, after implementation of dust suppression techniques, downwind PM-10 particulate levels are greater than 150 µg/m^3 above the upwind level, work will be stopped and a re-evaluation of activities initiated. Work will resume provided that dust suppression measures and other controls are successful in reducing the downwind PM-10 particulate concentration to within 150 µg/m^3 of the upwind level and in preventing visible dust migration.

All readings will be recorded and will be available for NYSDEC personnel to review.

2.2 Special Requirements

2.2.1 Work within 20 Feet of Potential Receptors

When work areas are within 20 feet of potentially exposed populations or occupied structures, the continuous monitoring locations for VOCs and particulates must reflect the nearest potentially exposed individuals and the location of ventilation system intakes for nearby structures. The use of engineering controls such as vapor/dust barriers, temporary negative pressure enclosures, or special ventilation devices should be considered to prevent exposures related to the work activities and to control dust and odors. Consideration should be given to implementing the planned activities when potentially exposed populations are at a minimum, such as during weekends or evening hours in non-residential settings.

If total VOC concentrations opposite the walls of occupied structures or next to intake vents exceed 1 ppm, monitoring should occur within the occupied structure(s). Depending upon the nature of contamination, chemical-specific colorimetric tubes of sufficient sensitivity may be necessary for comparing the exposure point concentrations with appropriate pre-determined response levels (response actions should also be predetermined). Background readings in the occupied spaces must be taken and discussed with NYSDOH prior to commencement of the work.

If total particulate concentrations opposite the walls of occupied structures or next to intake vents exceed 150 mcg/m^3, work activities should be suspended until controls are implemented and are successful in reducing the total particulate concentration to 150 mcg/m^3 or less at the monitoring point.

Depending upon the nature of contamination and remedial activities, other parameters (e.g., explosivity, oxygen, hydrogen sulfide, and carbon monoxide) may also need to be monitored. Response levels and actions should be pre-determined, as necessary, for each site.

2.2.2 Special Requirements for Indoor Work

Unless a self-contained, negative-pressure enclosure with proper emission controls will encompass the work area, all individuals not directly involved with the planned work must be absent from the room in which the work will occur. Monitoring requirements shall be as stated above under Section 2.2.1, except that in this instance "nearby/occupied structures" would be adjacent occupied rooms. Additionally, the location of all exhaust vents in the room and their discharge points, as well as potential vapor pathways (openings, conduits, etc.) relative to adjoining rooms, should be understood and the monitoring locations established accordingly. In these situations, it is strongly recommended that exhaust fans or other engineering controls be used to create negative air pressure within the work area during remedial activities. Additionally, it is strongly recommended that the planned work be implemented during hours (e.g., weekends or evenings) when building occupancy is at a minimum.

2.3 Contaminant Control

Mitigation measures may be required to control the generation of vapors and/or dust.

2.3.1 Dust Control

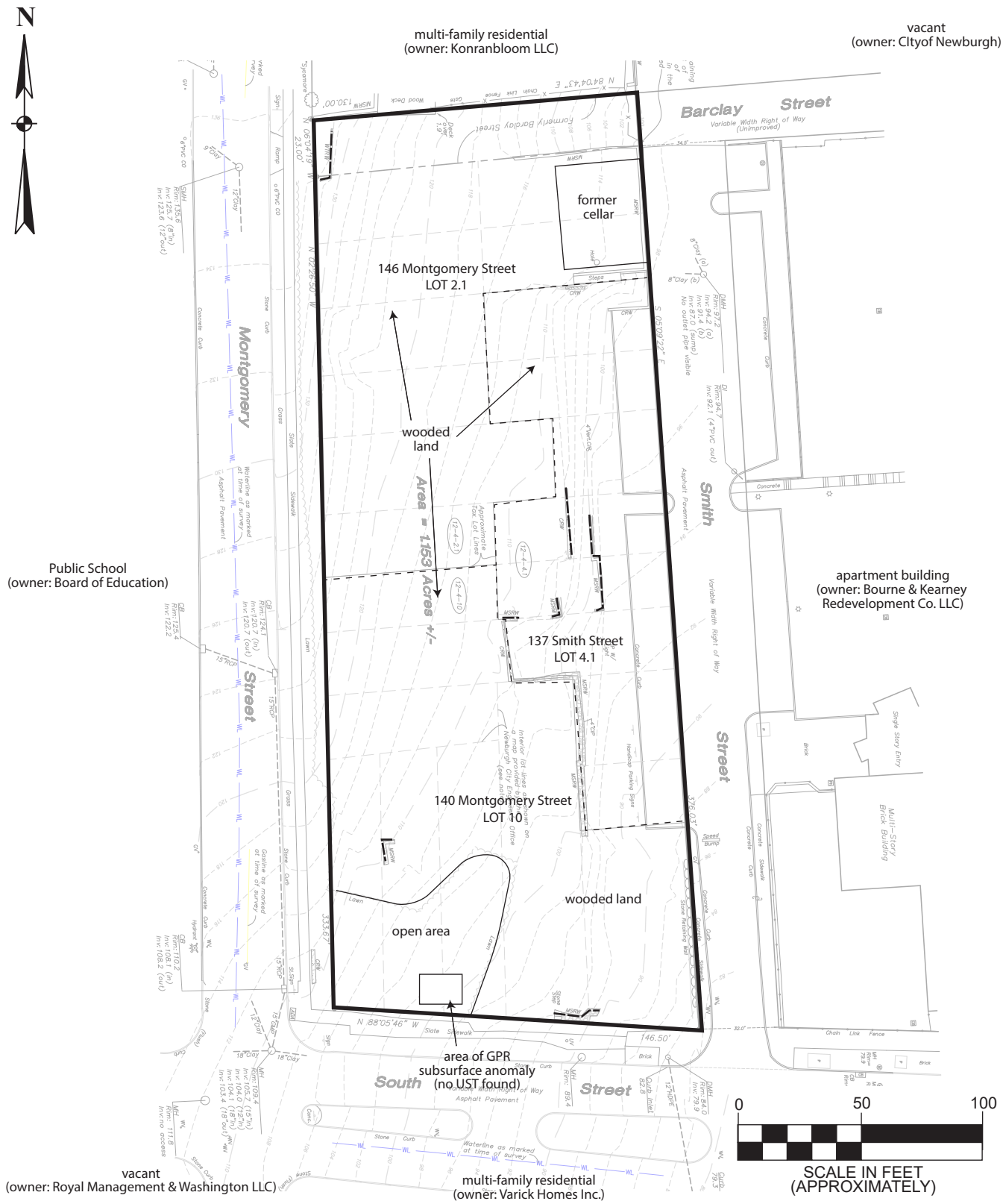
Mitigation measures may include reducing the surface area of contaminated soil being disturbed at one time, wetting heavy equipment and exposed soils to reduce fugitive dust, using covered stockpiles/trucks, or stopping excavation and/or other soil disturbing activities. Dust suppression will be conducted during construction activities that will disturb on-site soils and may include misting, reduction in soil movement, reducing vehicle speeds, or cessation of excavation.

2.3.2 Vapor Control

Mitigation measures include all controls used for dust suppression, as well as specific techniques for reducing releases of vapors, such as spraying commercial odor control products (e.g., BioSolve) or limiting work to cooler or less windy times of day.

3.0 QUALITY ASSURANCE

All instruments will be properly calibrated before the start of fieldwork, with periodic calibration checks as necessary. All equipment will be operated in accordance with the manufacturer's recommendations and the operator's manual. The fieldwork manager will review all data and take appropriate actions based on the requirements in Section 2 of this CAMP. A record of all calibration events, and any unusual occurrence that affect CAMP data, will be recorded in the project field logbook. Instrument calibration shall be documented in the designated field logbook. Exceedances of action levels observed during performance of the CAMP will be reported to the NYSDEC Project Manager and included in the Daily Report.



Base Map provided by INSITE Engineering, Surveying & Landscape Architecture P.C. Boundary & Topographic Survey dated 1/19/23.

Figure: Site Map

The Green - BCP Site No. C336099
City of Newburgh
Orange County, New York

Legend:
- subject property border
- lot lines
- foundation remains

File: 22003-0092

June 2026

Scale as shown

Figures

Appendix 1A
New York State Department of Health
Generic Community Air Monitoring Plan

Overview

A Community Air Monitoring Plan (CAMP) requires real-time monitoring for volatile organic compounds (VOCs) and particulates (i.e., dust) at the downwind perimeter of each designated work area when certain activities are in progress at contaminated sites. The CAMP is not intended for use in establishing action levels for worker respiratory protection. Rather, its intent is to provide a measure of protection for the downwind community (i.e., off-site receptors including residences and businesses and on-site workers not directly involved with the subject work activities) from potential airborne contaminant releases as a direct result of investigative and remedial work activities. The action levels specified herein require increased monitoring, corrective actions to abate emissions, and/or work shutdown. Additionally, the CAMP helps to confirm that work activities did not spread contamination off-site through the air.

The generic CAMP presented below will be sufficient to cover many, if not most, sites. Specific requirements should be reviewed for each situation in consultation with NYSDOH to ensure proper applicability. In some cases, a separate site-specific CAMP or supplement may be required. Depending upon the nature of contamination, chemical- specific monitoring with appropriately-sensitive methods may be required. Depending upon the proximity of potentially exposed individuals, more stringent monitoring or response levels than those presented below may be required. Special requirements will be necessary for work within 20 feet of potentially exposed individuals or structures and for indoor work with co-located residences or facilities. These requirements should be determined in consultation with NYSDOH.

Reliance on the CAMP should not preclude simple, common-sense measures to keep VOCs, dust, and odors at a minimum around the work areas.

Community Air Monitoring Plan

Depending upon the nature of known or potential contaminants at each site, real-time air monitoring for VOCs and/or particulate levels at the perimeter of the exclusion zone or work area will be necessary. Most sites will involve VOC and particulate monitoring; sites known to be contaminated with heavy metals alone may only require particulate monitoring. If radiological contamination is a concern, additional monitoring requirements may be necessary per consultation with appropriate DEC/NYSDOH staff.

Continuous monitoring will be required for all ground intrusive activities and during the demolition of contaminated or potentially contaminated structures. Ground intrusive activities include, but are not limited to, soil/waste excavation and handling, test pitting or trenching, and the installation of soil borings or monitoring wells.

Periodic monitoring for VOCs will be required during non-intrusive activities such as the collection of soil and sediment samples or the collection of groundwater samples from existing monitoring wells. “Periodic” monitoring during sample collection might reasonably consist of taking a reading upon arrival at a sample location, monitoring while opening a well cap or

overturning soil, monitoring during well baling/purging, and taking a reading prior to leaving a sample location. In some instances, depending upon the proximity of potentially exposed individuals, continuous monitoring may be required during sampling activities. Examples of such situations include groundwater sampling at wells on the curb of a busy urban street, in the midst of a public park, or adjacent to a school or residence.

VOC Monitoring, Response Levels, and Actions

Volatile organic compounds (VOCs) must be monitored at the downwind perimeter of the immediate work area (i.e., the exclusion zone) on a continuous basis or as otherwise specified. Upwind concentrations should be measured at the start of each workday and periodically thereafter to establish background conditions, particularly if wind direction changes. The monitoring work should be performed using equipment appropriate to measure the types of contaminants known or suspected to be present. The equipment should be calibrated at least daily for the contaminant(s) of concern or for an appropriate surrogate. The equipment should be capable of calculating 15-minute running average concentrations, which will be compared to the levels specified below.

1. If the ambient air concentration of total organic vapors at the downwind perimeter of the work area or exclusion zone exceeds 5 parts per million (ppm) above background for the 15-minute average, work activities must be temporarily halted and monitoring continued. If the total organic vapor level readily decreases (per instantaneous readings) below 5 ppm over background, work activities can resume with continued monitoring.

2. If total organic vapor levels at the downwind perimeter of the work area or exclusion zone persist at levels in excess of 5 ppm over background but less than 25 ppm, work activities must be halted, the source of vapors identified, corrective actions taken to abate emissions, and monitoring continued. After these steps, work activities can resume provided that the total organic vapor level 200 feet downwind of the exclusion zone or half the distance to the nearest potential receptor or residential/commercial structure, whichever is less - but in no case less than 20 feet, is below 5 ppm over background for the 15-minute average.

3. If the organic vapor level is above 25 ppm at the perimeter of the work area, activities must be shutdown.

4. All 15-minute readings must be recorded and be available for State (DEC and NYSDOH) personnel to review. Instantaneous readings, if any, used for decision purposes should also be recorded.

Particulate Monitoring, Response Levels, and Actions

Particulate concentrations should be monitored continuously at the upwind and downwind perimeters of the exclusion zone at temporary particulate monitoring stations. The particulate monitoring should be performed using real-time monitoring equipment capable of measuring particulate matter less than 10 micrometers in size (PM-10) and capable of integrating over a period of 15 minutes (or less) for comparison to the airborne particulate action level. The equipment must be equipped with an audible alarm to indicate exceedance of the action level. In addition, fugitive dust migration should be visually assessed during all work activities.

1. If the downwind PM-10 particulate level is 100 micrograms per cubic meter (mcg/m^3) greater than background (upwind perimeter) for the 15-minute period or if airborne dust is observed leaving the work area, then dust suppression techniques must be employed. Work may continue with dust suppression techniques provided that downwind PM-10 particulate levels do not exceed 150 mcg/m^3 above the upwind level and provided that no visible dust is migrating from the work area.

2. If, after implementation of dust suppression techniques, downwind PM-10 particulate levels are greater than 150 mcg/m^3 above the upwind level, work must be stopped and a re-evaluation of activities initiated. Work can resume provided that dust suppression measures and other controls are successful in reducing the downwind PM-10 particulate concentration to within 150 mcg/m^3 of the upwind level and in preventing visible dust migration.

3. All readings must be recorded and be available for State (DEC and NYSDOH) and County Health personnel to review.

December 2009

APPENDIX F – Quality Assurance Project Plan

GALLAGHER BASSETT | TECHNICAL SERVICES

SITE REMEDIATION
QUALITY ASSURANCE PROJECT PLAN

The Green

City of Newburgh, Orange County, New York

NYSDEC BCP Site: C336099

June 2026

GBTS Project: 22003-0092

Technical Services Division

24 Davis Ave., Poughkeepsie, NY 12603 T: 845-452-1658 F: 845-485-7083

www.gallagherbassett.com/risk-control/environmental-health-safety www.wcdgroup.com

GALLAGHER BASSETT | TECHNICAL SERVICES

SITE REMEDIATION
QUALITY ASSURANCE PROJECT PLAN

June 2026

GBTS Project: 22003-0092

Prepared By:

Gallagher Bassett Technical Services
22 IBM Road, Suite 101
Poughkeepsie, New York 12601

Prepared For:

Kearney Realty & Development Group Inc.
57 Route 6, Suite 207
Baldwin Place, New York 10505

The undersigned have reviewed this Site Remediation Quality Assurance Project Plan and certify to Kearney Realty & Development Group Inc. and to the New York State Department of Environmental Conservation that the information provided in this document is accurate as of the date of issuance by this office.

Scott Spitzer
Gallagher Bassett Technical Services
Technical Director – Environmental Consulting

Richard Hooker
Gallagher Bassett Technical Services
Manager – Environmental Consulting

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1.0 PROJECT MANAGEMENT

1.1 Project/Task Organization

Major participants in the project are shown below along with their specific responsibilities and authorities. Resumes for Gallagher Bassett Technical Services (GBTS) personnel and the Data Validator are provided in Attachment D this Quality Assurance Project Plan (QAPP).

Mark Domaracki, P.G. New York State Department of Environmental Conservation (NYSDEC)

Mark Domaracki, P.G. is the project manager for the NYSDEC, responsible for review and approval of all project submittals.

Daniel Bellucci, PE Bellucci Engineering, PLLC

Daniel Bellucci, PE is the Remedial Engineer (RE) for the project, responsible for overview of all project activities. Mr. Bellucci has authority over all GBTS personnel and subcontractors and will be responsible for final review and approval of all project submittals prior to submission to the NYSDEC.

Scott Spitzer Technical Director, Environmental Consulting, GBTS

Scott Spitzer will be the Project Manager, responsible for directing and coordinating all project activities, reviewing all project documents, and ensuring that project plans are followed. Mr. Spitzer has authority to direct the activities of the field team (OSC and subcontractors).

Richard Hooker Quality Assurance Officer (QAO), GBTS

Richard Hooker, PhD will be responsible for reviewing all sampling procedures and certifying that the data was collected and analyzed using the appropriate procedures and will assist in the development of the sampling and analytical portion of a site-specific quality assurance project plan (QAPP).

Erick Salazar, CHMM Qualified Environmental Professional / On-Site Coordinator, GBTS

Erick Salazar, CHMM is the Qualified Environmental Professional (QEP) and On-Site Coordinator (OSC), responsible for the completion of all on-site fieldwork, collection of all samples, completion of the field log, and chains of custody. The OSC will have authority over all on-site subcontractors.

Laboratory York Analytical Laboratories

York Analytical Laboratories, will be responsible for analysis of samples, and is New York State Department of Health (NYSDOH) Environmental Laboratory Approved Program (ELAP) certified in the appropriate categories, including PFOA and PFOS in drinking water by EPA Method 537.1 or ISO 25101.

Subcontractors *To be determined*

Subcontractors will be responsible for the operation of special equipment and providing technical assistance as needed.

1.2 Principal Data Users

The principal users of the generated data in this project are listed below.

1. Residents of the City of Newburgh, especially those residing in the vicinity of the site
2. Kearney Realty & Development Group Inc. (the Volunteer)
3. NYSDEC

1.3 Problem Definition/Background

The Site (see Site Map in Attachment A) is being remediated under the NYSDEC Brownfields Cleanup Program (BCP ID: C336099) to address documented contamination in site media. The Remedial Investigation Report for the site documented the presence of fill soils containing elevated levels of metals and polycyclic aromatic hydrocarbons (PAHs), groundwater impacted by metals and per- and polyfluoroalkyl substances (PFAS), and volatile organic compounds (VOCs) in soil vapor.

1.4 Project/Task Description

The project will meet its objective through compliance with applicable requirements in NYSDEC DER-10 Technical Guidance for Site Investigation and Remediation, and with this QAPP. Proposed remedial actions include collection of confirmatory endpoint soil samples from excavations, and potentially documentation groundwater and/or soil vapor samples.

1.5 Quality Objectives and Criteria

The data collected in this project will be used for the following purposes:

- To document post-remediation site environmental conditions.

In order to meet data quality objectives of precision, accuracy, representation, comparability, and completeness the following actions will be implemented:

- All media sampling will be conducted in accordance with the NYSDEC-approved Remedial Action Work Plan (RAWP) and QAPP Sections 2 and 3.
- Final data generated during the remedial action will be submitted for review by a third, independent party (see Section 3.2.1, below).

Prior to field activities, the QEP, Project Manager, and the OSC will review the RAWP to ensure that the data quality objectives of precision, accuracy, representation, comparability, and completeness will be met during the field activities.

At the completion of field activities, the Project Manager will review field logs and chains of custody to ensure that field activities met the intent of the RIWP. If a problem is identified, the Project Manager and the QAO will meet to determine any necessary corrective measures to meet the data quality objectives.

1.6 Documents and Records

Electronic and paper copies of all fieldwork observations and measurements will be retained by GBTS, which will be provided in the final RIR.

2.0 SAMPLING AND ANALYSIS PLAN

Sample collection, handling, and laboratory analysis is summarized below. Maps showing proposed excavation areas and sampling locations are provided in Attachment A.

2.1 Sampling Overview

Confirmatory endpoint soil samples will be collected following excavation of contaminated soil. Contingency media samples (soil, groundwater and/or soil vapor) may be collected based on the conditions encountered during remedial construction.

2.2 Fieldwork and Sampling Methodology

All fieldwork activities, including collection and handling of media samples, will be in accordance with the Standard Operating Procedures (SOPs) provided in Attachment B, including specific guidelines for PFAS, which will be strictly followed by all field and laboratory personnel. Basic SOP components are summarized below.

2.2.1 General Fieldwork

The OSC will be responsible for compliance with the SOPs, including:

- Documentation of all fieldwork activities in logbooks for inclusion in final reports;
- Assessment of media characteristics (soil type, presence or absence of foreign materials, field indications of contamination), and instrument readings using properly calibrated and operated precision instruments;
- Identification of materials requiring special handling (media that may contain elevated concentrations of contaminants or is grossly contaminated, hazardous materials, etc.) and ensuring proper secure on-site storage, pending characterization and disposition;
- Ensuring that unforeseen environmental conditions are managed in accordance with applicable federal and state regulations;
- Sample collection, including procedures to minimize potential cross-contamination; and,
- Implementation of decontamination procedures.

Sample collection and laboratory analysis for PFAS will comply with current NYSDEC guidance (*Sampling, Analysis, and Assessment of Per-and Polyfluoroalkyl Substances [PFAS] Under NYSDEC's Part 375 Remedial Programs*, April 2023), provided in Attachment B (SOPs), which includes a target list of PFAS compounds (see also Section 2.4, Analytical Methods).

Guidelines for sampling of soil and/or groundwater for PFAS include the following (detailed protocols, including lists of prohibited behaviors and materials, are provided in the SOP):

- Sampling for PFAS will be conducted prior to sampling for other analytes, as practicable, to minimize cross contamination from sample containers utilized for other methods;
- Sampling personnel will comply with specific prohibitions in regard to field equipment, PPE, rain gear, personal clothing and body-care, food, etc.;
- Sample coolers will be held at low temperature using only water ice (plastic freezer packs are prohibited);
- Decontamination protocols specific to PFAS will be followed, including use of "PFAS free" water and approved cleaning agents (Liquinox is prohibited); and,
- Compliance with laboratory requirements for sampling containers, field blanks, etc. (laboratory fieldwork SOPs for PFAS are included in Attachment B).

2.2.2 Soil Sampling

It is anticipated that approximately 57 confirmatory samples will be collected from excavation floors and 56 confirmatory samples will be collected from excavation walls (the final number will be determined in consultation with NYSDEC). Samples will be collected from remaining soil at excavation areas using hand-held equipment or may be manually collected directly from exposed soil or the sampling instrument using dedicated disposable latex gloves. Soil sampling for VOCs will follow USEPA Method 5035 protocols, using disposable 5-gram plastic syringes to place material into laboratory-supplied glass vials (prepared with stirs bars and appropriate preservatives).

2.2.3 Soil Vapor Sampling

Soil vapor sampling, if required, will be in accordance with applicable NYSDOH guidance, including use of a tracer gas to confirm adequate surface seals. Purge rates will not exceed 0.2 liters per minute. For this project, soil vapor samples will be collected over a two-hour period (rate not exceeding 0.2 liters per minute) into individual laboratory-certified clean Summa canisters equipped with two-hour flow regulators.

2.2.4 Other Materials

Any non-soil solid materials requiring laboratory analysis will be placed into laboratory supplied glassware when possible or alternatively be placed into double locking plastic bags and then

boxed in order to prevent a tear or other breach in the bags. Liquid samples from excavations, collection pits, or drums/tanks, etc., will be sampled using a dedicated disposal sampling device.

Any required sampling for other media will be in compliance with fieldwork protocols specified in the RAWP.

2.3 Sample Handling and Custody

2.3.1 Sample Containers

The following laboratory-supplied containers will be used for sample collection (as applicable):

Media	Analyte Class	Collection Container (subject to laboratory requirements)	Preservation
Soil	PFAS	1, 250-ml HDPE plastic (fill halfway)	6° C
Soil	VOCs	Laboratory prepared 5035 VOA kit, (4, 40-ml glass vials)	Method 5035
Soil	SVOCs, metals, pesticides, herbicides, PCBs, cyanide	1, 8-oz. glass jar	4° C
Soil	PFAS MS/MSD	1, 250-ml HDPE plastic (fill halfway), (may use soil from a sample container)	6° C
Soil	All other MS/MSD	additional 8-oz. glass jar	4° C
Water	PFAS	2, 250-ml HDPE plastic (fill to neck)	6° C
Water	VOCs	4, 40-ml prepared glass vials	4° C, HCl
Water	SVOCs, pesticides, herbicides, PCBs	1-liter amber glass (jar quantity per laboratory requirements)	4° C
Water	Metals - total	1, 500-ml HDPE plastic	4° C
Water	Metals - dissolved	1, 500-ml HDPE plastic	4° C, HNO_3
Water	Cyanide	1, 500-ml HDPE plastic	4° C, NaOH
Water	Field blank (PFAS)	1, 250-ml HDPE plastic (fill to neck)	4° C
Water	Trip blank (VOCs)	3, 40-ml prepared glass vials	4° C, HCl
Water	Field blank (other analytes)	As per sample collection requirements	See above
Vapor	VOCs	1, 6-liter Summa canister (or equivalent)	none

2.3.2 Sampling Frequency

Soil samples will be analyzed for NYSDEC Part 375-6.8 parameters, including USEPA Target Compound List (TCL) VOCs and semi-volatile organic compounds (SVOCs) plus 30 tentatively identified compounds (TICs), USEPA Target Analyte List (TAL) metals, Cr^{+6}, polychlorinated biphenyls (PCBs), pesticides, herbicides and cyanide, as well as 1,4-dioxane and PFAS in

accordance with the most current NYSDEC guidance. Sample analysis may be modified in consultation with the NYSDEC Project Manager based on previous sampling results.

Additional soil analysis may be performed based repository requirements for waste characterization prior to off-site disposal.

Sampling requirements and USEPA Methods are outlined below.

Media /QC Parameter	Number of Samples [a]	Analytes (USEPA Method) [b, c]
Soil, full parameters as required	*104 (final number TBD)*	PFAS: NYSDEC target list (1633) TCL: VOCs +10 and SVOCs +20 (8260C/8270D) TAL: total metals (6010D and 7473); chromium^{+6} (7196A); cyanide (9010C) Other: pesticides (8081); herbicides (8151A); PCBs (8082)
Groundwater; Soil Vapor	*Contingency, only*	Groundwater as per soil; Vapor (VOCs TO-15)
Trip Blank (VOCs)	1 per sample cooler (each day of sampling)	TCL VOCs +10 (8260)
Field Blank (PFAS)	1 per sample day (serves as trip blank)	PFAS NYSDEC target list (1633)
Equipment Blank (PFAS)	1 per sampling day (non-dedicated)	PFAS NYSDEC target list (1633)
Field Blank (other)	1 for every 20 samples (non-dedicated)	As per sample collection requirements
Duplicates, MS/MSD	1 for every 20 samples (minimum 1/week)	As per sample collection requirements; PFAS soil MS/MSD may be from same container as sample

Notes

a Equipment blanks (when required) to be collected at a minimum of one per day for each matrix.

b PFAS will be analyzed using methodologies based on EPA Method 1633; additional laboratory methods may include Synthetic Precipitation Leaching Procedure (SPLP, by 1312, and/or Total Oxidizable Precursor Assay (TOP Assay); 1,4-dioxane by 8270 SIM

2.3.3 Sample Custody

Samples will be handled by the OSC and kept at cold temperatures (per Table 2.3.1) as warranted. Upon the completion of each day of sample collection activities, all samples will be shipped via either courier or overnight delivery (per laboratory requirements) to a NYSDOH ELAP certified laboratory under proper chain of custody.

Laboratory personnel will record cooler temperature upon receipt and analyze the samples prior to the expiration of the hold times as specified in the NYSDEC Analytical Services Protocols (ASP).

2.4 Analytical Methods

Media samples will be analyzed as indicated in Section 2.3.2. Analytical methods for the samples will be implemented as follows:

Matrix	Sample Analysis (Holding Time)	USEPA Analytical Method
Soil	PFAS (28 days)	1633 (reporting limit 0.5 µg/kg)
Soil	TCL VOCs+10 (14 days)	8260C; 8270 for 1,4-dioxane (1,4-dioxane reporting limit 0.1 mg/kg) [a]
Soil	TCL SVOCs+20 (14 days)	8270B
Soil	TAL metals (180 days; mercury 28 days)	6010C/7471B
Soil	Cyanide (14 days)	9010C
Soil	Pesticides/PCBs/herbicides (14 days [b])	8081A/8082/8151A
Water	PFAS (28 days)	1633 (reporting limit 2 ng/L)
Water	TCL VOCs+10 (14 days)	8260C; 8270 SIM for 1,4-dioxane (1,4-dioxane reporting limit 0.35 µg/L) [a]
Water	TCL SVOCs+20 (7 days [b])	8270B
Water	TAL metals (180 days; mercury 28 days)	6010C/7471B
Water	Cyanide (14 days)	9010C
Water	Pesticides/PCBs/herbicides (7 days [b])	8081A/8082/8151A
Vapor	VOCs (30 days)	TO-15
a Laboratory will meet required reporting limits running standard USEPA Method 8270 b Days for extraction, 40 days after extraction for laboratory analysis		

NYSDEC PFAS target compounds are shown below. Laboratory reporting limits for PFOA and PFOS should not exceed 0.50 µg/kg for soil and 2.00 ng/l for water (reporting limits for all other PFAS in soil and water should be as close to these limits as possible). The NYSDEC PFAS target list is shown below, and laboratory SOPs for collection analysis of PFAS are provided in Attachment E.

Group	Chemical Name	Abbreviation	CAS Number
perfluoroalkyl sulfonic acids	perfluorobutanesulfonic acid	PFBS	375-73-5
	perfluoropentanesulfonic acid	PFPeS	2706-91-4
	perfluorohexanesulfonic acid	PFHxS	355-46-4
	perfluoroheptanesulfonic acid	PFHpS	375-92-8
	perfluorooctanesulfonic acid	PFOS	1763-23-1
	perfluorononanesulfonic acid	PFNS	68259-12-1
	perfluorodecanesulfonic acid	PFDS	335-77-3
	perfluorododecanesulfonic acid	PFDoS	79780-39-5
perfluoroalkyl carboxylic acids	perfluorobutanoic acid	PFBA	375-22-4
	perfluoropentanoic acid	PFPeA	2706-90-3
	perfluorohexanoic acid	PFHxA	307-24-4
	perfluoroheptanoic acid	PFHpA	375-85-9

Group	Chemical Name	Abbreviation	CAS Number
perfluoroalkyl carboxylic acids	perfluorooctanoic acid	PFOA	335-67-1
	perfluorononanoic acid	PFNA	375-95-1
	perfluorodecanoic acid	PFDA	335-76-2
	perfluoroundecanoic acid	PFUnA	2058-94-8
	perfluorododecanoic acid	PFDoA	307-55-1
	perfluorotridecanoic acid	PFTrDA	72629-94-8
	perfluorotetradecanoic acid	PFTeDA	376-06-7
per-and polyfluoroether carboxylic acids	hexafluoropropylene oxide dimer acid	HFPO-DA	13252-13-6
	4,8-dioxa-3h-perfluorononanoic acid	ADONA	919005-14-4
	perfluoro-3-methoxypropanoic acid	PFMPA	377-73-1
	perfluoro-4-methoxybutanoic acid	PFMBA	863090-89-5
	nonafluoro-3,6-dioxaheptanoic acid	NFDHA	151772-58-6
fluorotelomer sulfonic acids	4:2 fluorotelomer sulfonic acid	4:2-FTS	757124-72-4
	6:2 fluorotelomer sulfonic acid	6:2-FTS	27619-97-2
	8:2 fluorotelomer sulfonic acid	8:2-FTS	39108-34-4
fluorotelomer carboxylic acids	3:3 fluorotelomer carboxylic acid	3:3 FTCA	356-02-5
	5:3 fluorotelomer carboxylic acid	5:3 FTCA	914637-49-3
	7:3 fluorotelomer carboxylic acid	7:3 FTCA	812-70-4
perfluorooctane sulfonamides	perfluorooctane sulfonamide	PFOSA	754-91-6
	n-methylperfluorooctane sulfonamide	NMeFOSA	31506-32-8
	n-ethylperfluorooctane sulfonamide	NEtFOSA	4151-50-2
perfluorooctane sulfonamidoacetic acids	n-methylperfluorooctane sulfonamidoacetic acid	N-MeFOSAA	2355-31-9
	n-ethylperfluorooctane sulfonamidoacetic acid	N-EtFOSAA	2991-50-6
perfluorooctane sulfonamide ethanols	n-methylperfluorooctane sulfonamidoethanol	MeFOSE	24448-09-7
	n-ethylperfluorooctane sulfonamidoethanol	EtFOSE	1691-99-2
ether sulfonic acids	9-chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	9Cl-PF3ONS	756426-58-1
	11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	11Cl-PF3OUdS	763051-92-9
	perfluoro(2-ethoxyethane) sulfonic acid	PFEESA	113507-82-7

2.5 Quality Control

Accuracy and precision will be determined by repeated analysis of laboratory standards, and matrix effects and recovery will be determined through use of spiked samples. The laboratory will run standards, blanks, and spiked samples during sample analysis. Duplicate sampling (for all parameters), and matrix spike (MS)/matrix spike duplicate (MSD) analyses, will be performed in accordance with Section 2.3.2. For each day of sampling, a trip blank will be included with each sample cooler and be analyzed for PFAS or VOCs, as applicable. Samples will be identified using a unique ID number. This ID will be recorded on the sampling log and/or field record and the sampling container (samples for each day of fieldwork will be assigned to a Sample Delivery Group [SDG] by the laboratory). Permanent marker will not be utilized to label PFAS samples.

Samples for each day of fieldwork will be shipped via courier to the laboratory under proper chain of custody procedures.

2.6 Quality Assurance

2.6.1 Instrument/Equipment, Testing, Inspection, and Maintenance

Field measurements will be conducted using monitoring equipment specialized for each task, including use of a PID during fieldwork to screen for volatile organic vapors. All equipment will be properly stored (within buildings or construction trailers when not in use) and calibrated (as warranted) in accordance with the manufacturer's instructions (instrument malfunction is normally apparent during calibration). In the event of malfunction, equipment will be cleaned and tested. Equipment testing, inspection, and maintenance will be the responsibility of the Project Manager and OSC. Any other equipment selected for field measurements will be similarly managed.

2.6.2 Inspection/Acceptance of Supplies and Consumables

All supplies and consumables will be inspected and tested (if necessary) by either the Project Manager or the OSC upon receipt.

The following supplies and consumables will be used for each sample:

- Laboratory-supplied sampling containers, as specified in Section 2.3.1
- Laboratory-supplied materials for PFAS sampling, including trip blanks and PFAS-free cooler
- Plastic tubing for groundwater and soil vapor sampling
- PFAS-free water for decontamination
- Disposable gloves (nitrile or equivalent)

2.6.3 Data Management

For the purpose of data management, the data can be divided into field and laboratory data.

Field data will be recorded at the time of measurement on written field logs. Laboratory data will be reviewed upon receipt and summarized in data summary tables. The NYSDEC electronic data deliverable format for the analytical data will be requested from the testing laboratory.

NYSDEC ASP Category B Data Deliverables will be requested from the testing laboratory and forwarded to an independent third-party data validator for the development of Data Usability Summary Report (DUSR).

3.0 DATA REVIEW, VALIDATION AND USABILITY

3.1 Field Measurements

If field instruments are determined to be functioning correctly through calibration and measurements of standards, and if there are no inconsistencies between written records and data recorded in the meters, the data will be assumed to be valid and will be accepted as an indication of field conditions.

If instruments malfunction prior to field measurement, they will be restored to proper function prior to re-use. If they malfunction immediately after field measurements are taken, the measurements will be retaken as soon as possible. Inconsistencies between written records and recorded meter data will be resolved by re-testing the material, if possible. If re-testing is not possible, (i.e. the sample has been shipped to the laboratory), the inconsistency will be described in appropriate subsequent reporting and the laboratory analysis will be utilized to classify the material.

All field data will be reviewed by the Project Manager for consistency and plausibility.

3.2 Laboratory Analysis

A NYSDOH ELAP-certified laboratory will provide a NYSDEC ASP Category B data package and NYSDEC Electronic Data Deliverable format for the determinative sample analyses.

3.3 Standards, Criteria and Guidance

The following Standards, Criteria, and Guidance (SCGs) are applicable for this Site:

SOIL

Soil results are compared to Soil Cleanup Objectives (SCOs) provided in 6 NYCRR Subpart 375, Table 375-6.8(a) Unrestricted Use SCOs and 6.8(b) Restricted-Residential Use SCOs, and (as needed) Supplemental SCOs and/or Soil Cleanup Levels in NYSDEC CP-51 Soil Cleanup Guidance, Tables 1 to 3. SCOs are provided as Attachment C.

WATER

Water results are compared to NYSDEC Division of Water Ambient Water Quality Standards and Guidance Values (AWQS), provided in Technical and Operational Guidance Series 1.1.1.

VAPOR

The State of New York does not have any SCG for volatile chemicals in subsurface or sub-slab vapors. Laboratory results will be reviewed and evaluated in comparison to Site data as a whole, inclusive of an analysis of potential vapor intrusion concerns, as warranted, in accordance with applicable current NYSDOH guidance.

3.4 Verification and Validation Methods

3.4.1 Verification Method

Laboratory data will go to the Project Manager for review and verification (determination of proper sampling and collection, and completeness of all field and laboratory logs). A DUSR will be prepared by a third, independent party. A current resume of the individual preparing the DUSR (indicating education and relevant experience) is provided in Attachment D.

3.4.2 Authority for Verification

Authority for verification, validation, and resolution of data issues will be distributed among the investigators. Authority to resolve issues regarding verification of field measurements will rest with the Project Manager and the QAO.

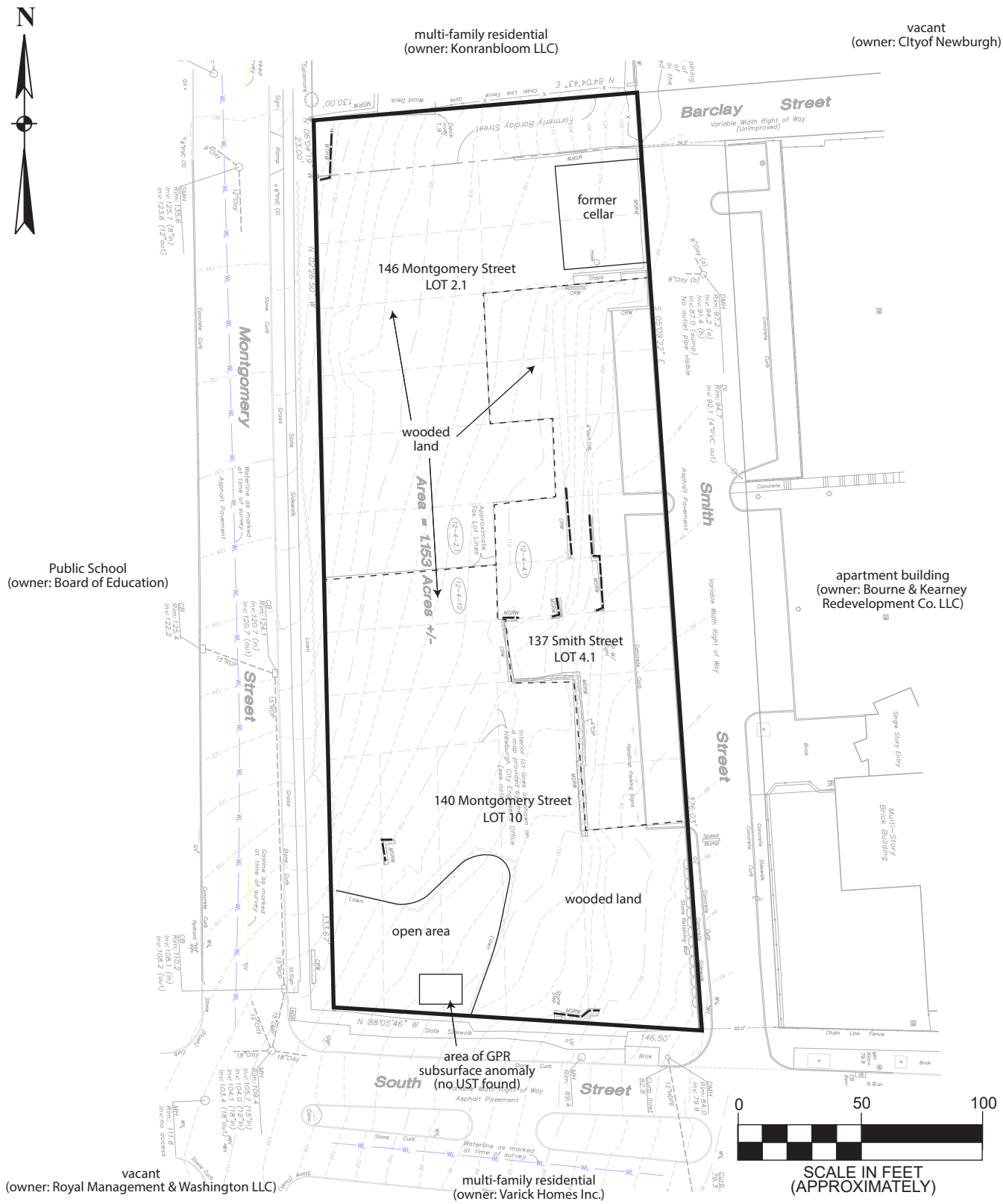
4.0 REPORTING REQUIREMENTS

Following review, validation, and verification, all data will be conveyed to users via a Final Engineering Report (FER) in accordance with the requirements of NYSDEC DER-10 Section 3.1.4.

The FER will summarize all data collected during implementation of the RAWP (and any additional work), and will include, at a minimum:

- Descriptions of fieldwork activities and observations;
- Summaries of laboratory analytical results from sampling events, described in the report text and provided in data summary tables, as well as DUSRs for all data;
- Characterization of contamination sources (including environmental fate and transport);
- A qualitative human exposure assessment;
- Accounts of any deviations from RIWP procedural requirements;
- Conclusions drawn from applicable, available data; and,
- A summary of required Green and Sustainable Remediation (GSR) metrics.

Attachment A: Figures



Base Map provided by INSITE Engineering, Surveying & Landscape Architecture P.C. Boundary & Topographic Survey dated 1/19/23.

Figure: Site Map

The Green - BCP Site No. C336099
City of Newburgh
Orange County, New York

Legend:
- subject property border
- lot lines
- foundation remains

File: 22003-0092

June 2026

Scale as shown

Figures



Base Map provided by INSITE Engineering, Surveying & Landscape Architecture P.C. Boundary & Topographic Survey dated 1/19/23.

Figure: Proposed Construction Excavation Map

The Green - BCP Site No. C336099
City of Newburgh
Orange County, New York

Legend:
- subject property border
- foundation remains
- excavate to 1-1.5 feet for hardscaping
- excavate to 2.5-3 feet for planters
- excavate to 15-20 feet for stormwater management system
- Building Footprints: excavate from 4 feet bsg to up to 15 feet bsg (excavation depths vary)

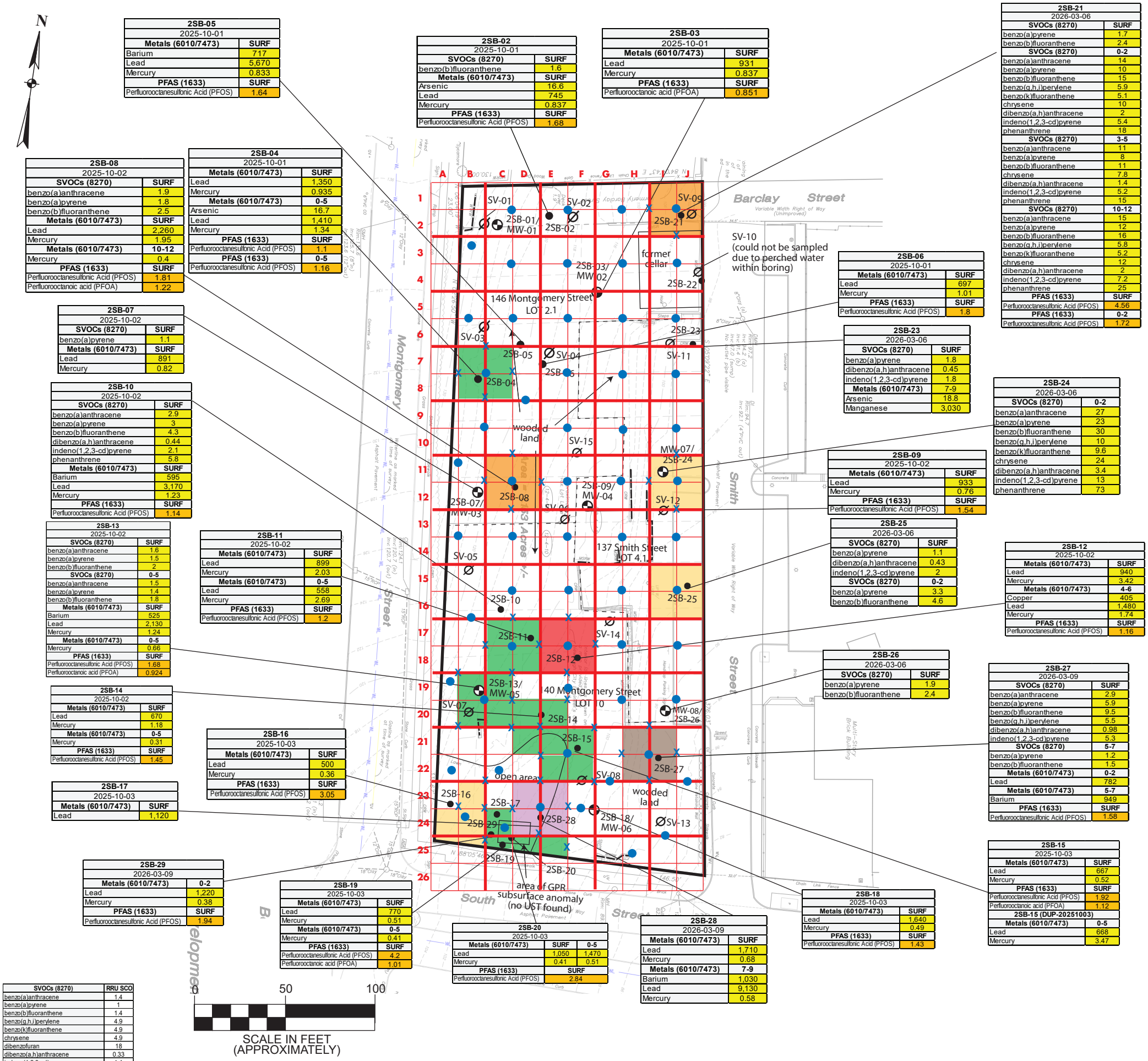
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June 2026

Scale as shown

Figures

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2SB-05	
2025-10-01	
Metals (6010/7473)	**SURF**
Barium	717
Lead	5,670
Mercury	0.833
PFAS (1633)	**SURF**
Perfluorooctanesulfonic Acid (PFOS)	1.64

2SB-02	
2025-10-01	
SVOCs (8270)	**SURF**
benzo(b)fluoranthene	1.6
Metals (6010/7473)	**SURF**
Arsenic	16.6
Lead	745
Mercury	0.837
PFAS (1633)	**SURF**
Perfluorooctanesulfonic Acid (PFOS)	1.68

2SB-03	
2025-10-01	
Metals (6010/7473)	**SURF**
Lead	931
Mercury	0.837
PFAS (1633)	**SURF**
Perfluorooctanoic acid (PFOA)	0.851

2SB-21	
2026-03-06	
SVOCs (8270)	**SURF**
benzo(a)pyrene	1.7
benzo(b)fluoranthene	2.4
SVOCs (8270)	**0-2**
benzo(a)anthracene	14
benzo(a)pyrene	10
benzo(b)fluoranthene	15
benzo(g,h,i)perylene	5.9
benzo(k)fluoranthene	5.1
chrysene	10
dibenzo(a,h)anthracene	2
indeno(1,2,3-cd)pyrene	5.4
phenanthrene	18
SVOCs (8270)	**3-5**
benzo(a)anthracene	11
benzo(a)pyrene	8
benzo(b)fluoranthene	11
chrysene	7.8
dibenzo(a,h)anthracene	1.4
indeno(1,2,3-cd)pyrene	5.2
phenanthrene	15
SVOCs (8270)	**10-12**
benzo(a)anthracene	15
benzo(a)pyrene	12
benzo(b)fluoranthene	16
benzo(g,h,i)perylene	5.8
benzo(k)fluoranthene	5.2
chrysene	12
dibenzo(a,h)anthracene	2
indeno(1,2,3-cd)pyrene	7.2
phenanthrene	25
PFAS (1633)	**SURF**
Perfluorooctanesulfonic Acid (PFOS)	4.56
PFAS (1633)	**0-2**
Perfluorooctanesulfonic Acid (PFOS)	1.72

2SB-08	
2025-10-02	
SVOCs (8270)	**SURF**
benzo(a)anthracene	1.9
benzo(a)pyrene	1.8
benzo(b)fluoranthene	2.5
Metals (6010/7473)	**SURF**
Lead	2,260
Mercury	1.95
Metals (6010/7473)	**10-12**
Mercury	0.4
PFAS (1633)	**SURF**
Perfluorooctanesulfonic Acid (PFOS)	1.81
Perfluorooctanoic acid (PFOA)	1.22

2SB-04	
2025-10-01	
Metals (6010/7473)	**SURF**
Lead	1,350
Mercury	0.935
Metals (6010/7473)	**0-5**
Arsenic	16.7
Lead	1,410
Mercury	1.34
PFAS (1633)	**SURF**
Perfluorooctanesulfonic Acid (PFOS)	1.1
PFAS (1633)	**0-5**
Perfluorooctanesulfonic Acid (PFOS)	1.16

2SB-06	
2025-10-01	
Metals (6010/7473)	**SURF**
Lead	697
Mercury	1.01
PFAS (1633)	**SURF**
Perfluorooctanesulfonic Acid (PFOS)	1.8

2SB-07	
2025-10-02	
SVOCs (8270)	**SURF**
benzo(a)pyrene	1.1
Metals (6010/7473)	**SURF**
Lead	891
Mercury	0.82

2SB-23	
2026-03-06	
SVOCs (8270)	**SURF**
benzo(a)pyrene	1.8
dibenzo(a,h)anthracene	0.45
indeno(1,2,3-cd)pyrene	1.8
Metals (6010/7473)	**7-9**
Arsenic	18.8
Manganese	3,030

2SB-24	
2026-03-06	
SVOCs (8270)	**0-2**
benzo(a)anthracene	27
benzo(a)pyrene	23
benzo(b)fluoranthene	30
benzo(g,h,i)perylene	10
benzo(k)fluoranthene	9.6
chrysene	24
dibenzo(a,h)anthracene	3.4
indeno(1,2,3-cd)pyrene	13
phenanthrene	73

2SB-10	
2025-10-02	
SVOCs (8270)	**SURF**
benzo(a)anthracene	2.9
benzo(a)pyrene	3
benzo(b)fluoranthene	4.3
dibenzo(a,h)anthracene	0.44
indeno(1,2,3-cd)pyrene	2.1
phenanthrene	5.8
Metals (6010/7473)	**SURF**
Barium	595
Lead	3,170
Mercury	1.23
PFAS (1633)	**SURF**
Perfluorooctanesulfonic Acid (PFOS)	1.14

2SB-09	
2025-10-02	
Metals (6010/7473)	**SURF**
Lead	933
Mercury	0.76
PFAS (1633)	**SURF**
Perfluorooctanesulfonic Acid (PFOS)	1.54

2SB-13	
2025-10-02	
SVOCs (8270)	**SURF**
benzo(a)anthracene	1.6
benzo(a)pyrene	1.5
benzo(b)fluoranthene	2
SVOCs (8270)	**0-5**
benzo(a)anthracene	1.5
benzo(a)pyrene	1.4
benzo(b)fluoranthene	1.8
Metals (6010/7473)	**SURF**
Barium	525
Lead	2,130
Mercury	1.24
Metals (6010/7473)	**0-5**
Mercury	0.66
PFAS (1633)	**SURF**
Perfluorooctanesulfonic Acid (PFOS)	1.68
Perfluorooctanoic acid (PFOA)	0.924

2SB-11	
2025-10-02	
Metals (6010/7473)	**SURF**
Lead	899
Mercury	2.03
Metals (6010/7473)	**0-5**
Lead	558
Mercury	2.69
PFAS (1633)	**SURF**
Perfluorooctanesulfonic Acid (PFOS)	1.2

2SB-25	
2026-03-06	
SVOCs (8270)	**SURF**
benzo(a)pyrene	1.1
dibenzo(a,h)anthracene	0.43
indeno(1,2,3-cd)pyrene	2
SVOCs (8270)	**0-2**
benzo(a)pyrene	3.3
benzo(b)fluoranthene	4.6

2SB-12	
2025-10-02	
Metals (6010/7473)	**SURF**
Lead	940
Mercury	3.42
Metals (6010/7473)	**4-6**
Copper	405
Lead	1,480
Mercury	1.74
PFAS (1633)	**SURF**
Perfluorooctanesulfonic Acid (PFOS)	1.16

2SB-14	
2025-10-02	
Metals (6010/7473)	**SURF**
Lead	670
Mercury	1.18
Metals (6010/7473)	**0-5**
Mercury	0.31
PFAS (1633)	**SURF**
Perfluorooctanesulfonic Acid (PFOS)	1.45

2SB-16	
2025-10-03	
Metals (6010/7473)	**SURF**
Lead	500
Mercury	0.36
PFAS (1633)	**SURF**
Perfluorooctanesulfonic Acid (PFOS)	3.05

2SB-26	
2026-03-06	
SVOCs (8270)	**SURF**
benzo(a)pyrene	1.9
benzo(b)fluoranthene	2.4

2SB-27	
2026-03-09	
SVOCs (8270)	**SURF**
benzo(a)anthracene	2.9
benzo(a)pyrene	5.9
benzo(b)fluoranthene	9.5
benzo(g,h,i)perylene	5.5
dibenzo(a,h)anthracene	0.98
indeno(1,2,3-cd)pyrene	5.3
SVOCs (8270)	**5-7**
benzo(a)pyrene	1.2
benzo(b)fluoranthene	1.5
Metals (6010/7473)	**0-2**
Lead	782
Metals (6010/7473)	**5-7**
Barium	949
PFAS (1633)	**SURF**
Perfluorooctanesulfonic Acid (PFOS)	1.58

2SB-17	
2025-10-03	
Metals (6010/7473)	**SURF**
Lead	1,120

2SB-29	
2026-03-09	
Metals (6010/7473)	**0-2**
Lead	1,220
Mercury	0.38
PFAS (1633)	**SURF**
Perfluorooctanesulfonic Acid (PFOS)	1.94

2SB-19	
2025-10-03	
Metals (6010/7473)	**SURF**
Lead	770
Mercury	0.51
Metals (6010/7473)	**0-5**
Mercury	0.41
PFAS (1633)	**SURF**
Perfluorooctanesulfonic Acid (PFOS)	4.2
Perfluorooctanoic acid (PFOA)	1.01

2SB-20		
2025-10-03		
Metals (6010/7473)	**SURF**	**0-5**
Lead	1,050	1,470
Mercury	0.41	0.51
PFAS (1633)	**SURF**	
Perfluorooctanesulfonic Acid (PFOS)	2.84	

2SB-28	
2026-03-09	
Metals (6010/7473)	**SURF**
Lead	1,710
Mercury	0.68
Metals (6010/7473)	**7-9**
Barium	1,030
Lead	9,130
Mercury	0.58

2SB-18	
2025-10-03	
Metals (6010/7473)	**SURF**
Lead	1,640
Mercury	0.49
PFAS (1633)	**SURF**
Perfluorooctanesulfonic Acid (PFOS)	1.43

2SB-15	
2025-10-03	
Metals (6010/7473)	**SURF**
Lead	667
Mercury	0.52
PFAS (1633)	**SURF**
Perfluorooctanesulfonic Acid (PFOS)	1.92
Perfluorooctanoic acid (PFOA)	1.12
2SB-15 (DUP-20251003)	
Metals (6010/7473)	**0-5**
Lead	668
Mercury	3.47

SVOCs (8270)	RRU SCO
benzo(a)anthracene	1.4
benzo(a)pyrene	1
benzo(b)fluoranthene	1.4
benzo(g,h,i)perylene	4.9
benzo(k)fluoranthene	4.9
chrysene	4.9
dibenzofuran	18
dibenzo(a,h)anthracene	0.33
indeno(1,2,3-cd)pyrene	1.4
phenanthrene	4.9
Metals (6010/7473)	**RRU SCO**
Arsenic	16
Barium	410
Copper	280
Lead	400
Manganese	2,000
Mercury	0.3
Nickel	320
Zinc	6600
PFAS (1633)	**POG GVs**
Perfluorooctanesulfonic acid (PFOS)	1
Perfluorooctanoic acid (PFOA)	0.8

Base Map provided by INSITE Engineering, Surveying & Landscape Architecture P.C. Boundary & Topographic Survey dated 1/19/23.

Figure: Proposed Track 2 Remedial Excavations and Confirmatory Endpoint Sample Locations

The Green - BCP Site No. C336099
City of Newburgh
Orange County, New York

Legend:
- subject property border
- lot lines
- foundation remains
- soil sample location
- soil vapor location
- soil sample and monitoring well location

All data in mg/Kg (ppm) VOCs/SVOCs
value > RRU SCO
All data in ng/L (ppt) PFAS
value >POG GV

- proposed Base EP samples
- proposed wall EP samples

- to 13' (2 Base, 6 Wall)
- to 10' (1 Base, 4 Wall)
- to 6' (6 Base, 18 Wall)
- to 8' (1 Base, 4 Wall)
- to 7' (1 Base, 4 Wall)
- to 3' (3 Base, 8 Wall)

File: 22003-0092
June 2026
Scale as shown
Figures

Attachment B: Fieldwork SOPs

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STANDARD OPERATING PROCEDURES

Fieldwork Sampling
and
Decontamination

Updated May 2026

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TABLE OF CONTENTS

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I. INTRODUCTION

This document provides Standard Operating Procedures (SOPs) for use by Gallagher Bassett Technical Services (GBTS) personnel during fieldwork events that require the collection of soil, groundwater, soil vapor and/or air samples. General procedures are presented below; detailed protocols, as available, are provided in the supplemental documentation. Equipment checklists, forms, and calibration documents are maintained at GBTS offices. All SOPs and supporting documentation are periodically updated.

SOPs are intended to supplement other project-specific documentation, including work plans, sampling and analysis plans, health and safety plans, quality assurance project plans, and additional SOPs found in related documents.

II. RECORD KEEPING AND LOGBOOKS

A. Purpose and Scope

All activities related to fieldwork must be properly documented in accordance with the applicable Work Plan and QAPP. Documentation must be legible, organized, comprehensive, and complete. The primary record keeping methods are use of: field logbook; fieldwork forms (sign-in sheets, calibration logs, sampling records, chain-of-custody, etc); and photographic logs.

Field documentation generally must include project identification, date/times of fieldwork activities, the identification of the person/entity performing the work, and a description of the work being performed.

B. Field Logbook

The field logbook will act as the primary source of documentation for field activities. Only one logbook should be maintained for the fieldwork project (multiple supporting fieldwork data sheets, activity logs, etc., may be used to supplement recorded information, and may be referenced in the logbook).

It is the responsibility of the project manager and the field team leader to ensure that field logbook entries provide sufficient information for the completion of a detailed and accurate description of all field operations. Logbooks should be bound and entries made with indelible ink. All entries must be in English, written in non-cursive lettering, and be legible. The logbook should be stored in a Ziploc bag, as warranted by weather and/or fieldwork conditions, to prevent pages from getting wet or otherwise damaged. The logbook should be checked for completeness/quality control at the end of each day.

Field logbook entries shall be made in the field at the site, as close as possible to the actual observation, not at a later time or different location. Supplemental entries are allowable if properly identified. Logbook pages should be photographed or scanned daily

Record the following on the outside front cover:

- Project name/ID and Fieldwork Activity
- Date of first and last entries in the logbook (e.g. July 17–August 4, 2022)

- Sequential numbering if multiple logbooks are used (e.g., Vol. 1 of 2)
- Name and phone number of person responsible for the logbook
- Reserve and utilize the first page for a table of contents, and several pages at the end of the logbook for important notes not directly related to daily activities, such as contact information.

Daily entries should include:

- Appropriate header information on the first page of notes, including sequential page numbering, date information (yyyy-mm-dd), and fieldwork location/activity
- Weather summary (temperature, wind direction and speed, cloud cover, precipitation conditions)
- Site fieldwork personnel (including all contractors) and visitors, with and arrival/departure times
- Summary of relevant project communications with the client, regulators, or other site visitors
- Documentation of safety meeting, with general topics and attendees
- References to data collection forms
- Description of the fieldwork activities (generally chronological), including sampling methodology and start/stop times, with military time notation (e.g., 2:30 p.m. as 1430 hr)
- Map sketches with approximate scale and orientation (e.g., north arrow, building outline), with relevant notes regarding encountered field conditions
- Description of equipment used and any relevant calibration and/or maintenance information
- Changes/deviations from scope of work and/or fieldwork protocols and reason for the changes
- Problems, downtime, delays, unusual events and the proximate causes
- Applicable HASP and CAMP information, including upgrade or downgrade of PPE

A single line should be drawn through incorrect entries and the corrected entry written next to the original strikeout. Strikeouts are to be initialed and dated by the originator. A diagonal line should be drawn through unused space at the end of a page.

C. Fieldwork Forms

Pre-printed fieldwork forms should be utilized when practical, including any model forms provided in Work Plans, Site Management Plans, Quality Assurance Project Plans, and similar project documents.

D. Photographic Logs

Fieldwork should be documented through representative digital (JPEG or equivalent) photographs, in a quality and resolution that makes all relevant details readily apparent. The photographic log should fully document the site as a whole and all fieldwork elements including each contaminant source area.

III. FIELDWORK SAMPLING

Fieldwork sampling procedures are described below (model field logs are provided in Supplement A). Selection of field equipment will be based on anticipated site conditions (updated check-lists of equipment and supplies required for sampling activities are maintained at the local field office). All equipment operations will be in accordance with applicable operating manuals and specifications, and will be conducted (as needed) by an experienced subcontractor holding applicable permits/licenses. Decontamination procedures will be implemented as warranted during all fieldwork activities. Special requirements for PFAS sampling are noted in Section III.

A. Procedures to be Conducted Prior to Fieldwork

Prior to the initiation of any ground-intrusive fieldwork, a request for a complete utility markout of the fieldwork site will be submitted to an appropriate service, as required by state regulations. Confirmation of underground utility locations will be secured and a field check of the utility markout will be conducted prior to the extension of soil borings[1].

A Fieldwork Map and Work Plan, indicating sampling locations and objectives, will be prepared prior to fieldwork activities, and sampling locations will be confirmed and located prior to starting work.

B. General Fieldwork Methodology

At the start of the work day, all on-site personnel, including environmental subcontractors and observers, will be briefed on planned activities and the contents of the site-specific Health and Safety Plan (HASP). Independent field logs will be utilized to document relevant information, including arrival and departure times of on-site personnel, safety meetings, basic weather conditions, and detailed notes and drawings documenting all fieldwork activities and/or any other relevant events and conditions.

On-site personnel will be properly dressed for the intended activities[2] and the anticipated weather conditions, including use of personnel protective equipment in accordance with the HASP.

Sampling locations will be determined in the field, measured to the nearest 0.5-foot relative to a fixed on-site marker, and will be recorded in logbooks for inclusion in all final maps.

Media will be collected in accordance with the Quality Assurance Project Plan (QAPP) and in a manner consistent with NYSDEC and/or NYSDOH requirements, including protocols for handling and custody. New, dedicated disposable nitrile gloves will be worn at each sampling location, and will be changed frequently based on field conditions. Fieldwork personnel will assess media characteristics (e.g., soil type, presence of debris, indications of contamination, etc.) and record all observations in logbooks.

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[1] Markout requirements apply to any ground intrusive methodologies, including the extension of test pits.

[2] Special care is required when for sampling of PFAS; see Section V

On-site senior personnel will be responsible for: a) identifying any materials that require special handling, such as media that may contain high levels of contaminants or is grossly contaminated or likely to be hazardous; b) ensuring that identified materials are properly securely stored on-site (stockpiled on plastic and covered, or placed in approved containers), pending characterization and proper disposition; and, c) ensuring that unforeseen environmental conditions are managed in accordance with applicable federal and state regulations.

Sample collection from recovered media will be performed without unnecessary delay. Samples will be placed into labeled containers provided by the laboratory, stored in dedicated coolers kept at 4 (+/-2) °C and handled under proper chain of custody. All samples will be shipped to a NYSDOH ELAP certified laboratory via laboratory courier (either upon completion of each day of sample collection activities, or the following day after overnight storage in a dedicated sample refrigerator).

C. Extension of Soil Borings

Soil borings will be extended using either hand-held or mechanized equipment, based on site conditions and Work Plan requirements. Mechanized equipment includes using either direct push technology (DPT) or rotary methods, including hollow stem auger (HSA) and sonic drilling. The small size of DPT rigs allows for sampling in tight spaces and areas that are sensitive to the use of heavy equipment. DPT can be used in overburden soils where the soil texture allows for direct push of sampling equipment. A HSA or sonic rig will be utilized if significant subsurface obstructions (e.g., large cobbles, boulders, concrete, etc) are (or are expected to be) encountered.

Hand borings will be extended (as warranted) using manual DPT equipment (e.g., Geoprobe), which includes a collection barrel lined with disposable acetate sleeves, extension rods and a slide hammer. The barrel will collect samples from discreet intervals of 2 feet. Hand boring methods are generally restricted to shallow soil sampling (0 to 6’ below grade) and may be employed/attempted if access by mechanized equipment is not practical.

DPT will typically be utilized during the extension of borings in overburden soils. The DPT rig will be equipped with a macro-core sampling barrel (minimum diameter 4”) lined with disposable acetate sleeves. The barrel will collect samples from discreet intervals of either 4 or 5 feet. HSA rigs will use a continuous hollow stem auger with a split-spoon (collection interval of 2 feet) or other collection device. This system drives drill cuttings to the surface as drilling progresses, which will require management. Sonic drill rigs will utilize coring barrels of various lengths lined with plastic tubing.

Bore hole openings will be periodically screened with a photoionization detector (PID).

D. Installation and Development of Monitoring wells

Groundwater monitoring wells will be installed by the drilling subcontractor. Unless otherwise specified, monitoring wells will be constructed of two-inch PVC casing with a ten-foot length of 0.01-inch slotted PVC well screening across the water table. No glue will be used to thread the casing lengths. A minimum of 2 feet of screening will extend above the water table, with approximately 8 feet below the water level (depth to water will be inferred based on saturated soils encountered during installation, or from data from existing groundwater monitoring wells).

The annular space between the well screen and the borehole will be backfilled with clean silica sand to approximately two feet above the screen. A seal consisting of at least 12 inches of hydrated bentonite clay will be placed above the sand pack and the remaining annular space will be grouted with cement.

A locked cap with vent will be installed at the top of the PVC riser (well protection will be in accordance with the Work Plan, including use of secure "drive-over" metal cover or stick-up metal outer casing). A surveyor's transit level will be used to determine the elevation of the top of the PVC well riser, relative to a permanent on-site marker, for use in determining relative groundwater elevations. Well locations and relative elevations will be recorded in field logs and indicated on all fieldwork maps.

The wells will be developed one week following installation. The wells will be developed with a properly decontaminated mechanical pump and dedicated polyethylene tubing in order to clear fine-grained material that may have settled around the well screen and to enhance the natural hydraulic connection between the well screen and the surrounding soils. Well development will begin at the top of the screened interval to prevent clogging of the pump within the well casing. Well development will be discontinued when the discharge water is free of obvious sediment, turbidity is below 50 NTUs, and indicator parameters (e.g., dissolved oxygen, temperature, etc.) have stabilized. Upon completion, the pump assembly will be removed from the well while the pump is still running to avoid discharge of purged water back into the well. Development water will be securely stored on-site pending laboratory analysis.

E. Soil Sampling

General Methodology

Recovered sampling equipment will be placed on a clean surface (folding table, plastic sheeting, etc.) and opened (liners will be sliced with a clean razor knife). Recovered soils will be observed for potential contamination through observation and use of properly calibrated field instruments, e.g., PID. Samples will be collected directly from the sampling device. The volume of material collected will be sufficient for the required analyses and for reasonably anticipated potential additional analyses. Soil to be analyzed for volatile organic compounds (VOCs) will be collected following USEPA Method 5035 protocols, using laboratory sampling kits. Samples to be analyzed for parameters other than VOCs will be collected as either grab or composite samples, using disposable plastic trowels or properly decontaminated stainless steel instruments, or directly by the fieldwork technician using dedicated, fresh disposable nitrile gloves.

Sampling in Conformance with NYSDEC DER-10

Soil sampling will be conducted in accordance with the requirements of DER-10 (excerpted in Supplement B), including Sections 3.5 (Soil) and 3.9 (Area Specific Requirements). The number and location of typical required soil samples, consistent with DER-10 requirements, are provided in the table below (see DER-10 for situations not addressed in the table, e.g., tank piping, ecological resources, establishing background concentrations):

Soil Sample Type	Depth Interval	Notes
Surface	0 to 2 inches	Below vegetative cover; if only VOCs being analyzed or if vegetable/fruit garden, use 0 to 6 inches
Subsurface	In accordance with Work Plan	Samples should be collected continuously in discrete increments as grab samples prior to any consolidation of the sample; collect deeper samples when evidence of contamination
Aboveground storage tanks (ASTs)	Minimum of two surface soil samples	Collect from areas of suspect contamination; larger tanks at least one sample per 100 linear feet of tank perimeter, depth of at least 6 inches if VOCs were stored)
Underground storage tanks (USTs) and distribution systems	0 to 2 feet below tank bottom (see DER-10 for saturated soils)	Sampling frequency per Table 3.9 (at least four soil samples from around each tank/group), within two feet of the tank with one at each end, and additional locations along the length of the entire tank, sample from base of excavation is recomended

F. Groundwater Sampling

Groundwater sampling will be conducted using USEPA "Low-Stress" protocols (detailed in Supplement C). Sampling will be conducted using the following general procedures:

1. Groundwater sampling will begin at the potentially least contaminated well (as determined from well location and/or previous data) and proceed to the potentially most contaminated well. The field technician will check and record the condition of all monitoring wells for damage or evidence of tampering before initiating sampling. Plastic will be placed around wells to minimize potential contamination of sampling equipment from the ground surface, and all monitoring, purging, and sampling equipment will be placed on the sheeting.
2. The protective casing on the well will be unlocked, the air in the well head will be screened with a PID, and static water level (from the top of the casing) will be measured with a decontaminated water-level meter. A peristaltic pump with plastic tubing, or a submersible pump attached to tubing (if required by Site conditions, e.g., well depth) will be used for sampling. The tubing (or pump attached to tubing) will be slowly lowered until reaching two to three feet off of the well bottom to prevent disturbance and re-suspension of any remaining sediment.
3. Depth to water will be measured to nearest 0.01 feet, relative to a reference measuring point on the well casing (if no pre-existing reference point is found, a reference point will be marked on the inner casing and noted in the field logbook). The water level will be measured before the pump is started and at intervals of every three to five minutes. Pumping rates will be reduced (as needed) to the minimum capabilities of the pump to ensure stabilization of the water level (drawdown of 0.3 feet or less).

4. During pumping, field indicator parameters (turbidity, temperature, specific conductance, pH, redox potential, and dissolved oxygen) will be monitored and recorded approximately every five minutes. The well will be considered stabilized when the indicator parameters have stabilized for three consecutive readings (the minimum purge interval will be at least 15 minutes).
5. All groundwater samples will be collected in a manner consistent with the QAPP.
6. The protective cap on the well will be replaced and locked following sampling, and the field sampling crew will move to the next most contaminated well and the process will be repeated.

G. Soil Vapor Sampling

Soil vapor sampling will be conducted consistent with applicable NYSDOH guidance and fieldwork protocols (detailed in Supplement D). Sampling will be conducted using the following general procedures:

Soil vapor samples may be collected from beneath building foundations or paved areas, or from exterior areas not otherwise covered by material that trap soil vapor at the surface. Concrete slabs and exterior pavement will generally be breached with rotary equipment, which produce a small-diameter hole. The hole will be extended into underlying soil/sub-base to a depth required by the sampling technology (typically 6 to 12 inches below the base of the overlying materials for temporary installations). Sampling at exterior areas will require extension of a borehole to at least 3 to 4 feet below the surface (greater depths may be specified by the Work Plan).

Construction details for soil vapor implants are provided in the Supplement D. All soil vapor probes will be installed with a properly sealed surface opening to prevent ambient air from entering the system.

A tracer gas (e.g., helium) will be used at soil vapor sampling locations to verify that adequate sampling techniques are being implemented (i.e. to verify the absence of significant infiltration of outside air), in accordance with applicable NYSDOH guidance. The space around the sampling point will be enclosed and sealed (with a metal hemisphere and clay) in order to introduce a tracer gas (helium) into the area surrounding the probe point. Real-time sampling equipment (Radiodetection Multi-vapor Leak Locator, model MDG 2002, or equivalent) will be utilized to determine when the interior atmosphere in the enclosure reaches a concentration of 80%, and the tubing for the vapor implant will then be sampled for the tracer gas. If helium is detected in vapor at a concentration greater than 10%, the annular seal will be repaired and gas tracing performed again until less than 10% helium is detected.

Vapor in the sampling tubing will be screened with a PID for VOCs prior to purging. For all sampling locations, the exact purge volume will be dependent on the boring depth and subsequent length of tubing. Three borehole and tubing volumes will be purged prior to collection. The purge rate will not exceed 0.2 liters per minute. Following purging of ambient air from the collection device, soil vapor samples will be (at a rate not exceeding 0.2 liters per minute) into individual laboratory-certified clean Summa canisters equipped with flow regulators (sampling period as specified in the Work Plan).

IV. GENERAL DECONTAMINATION PROTOCOL

Consistent decontamination methods will be used to reduce or eliminate contamination and cross-contamination of samples by field equipment, other samples, or personnel, and to minimize potential exposures caused by the spread of contaminants. Decontamination will occur any time a sampling tool or instrument used in field investigations contacts sampled media or personnel using the equipment. These procedures will be used in conjunction with all non-dedicated (i.e. reusable) equipment used during the handling, sampling or measuring of environmental media, and will be implemented primarily on-site at the point of use or at a designated equipment decontamination station at the project site.

Types of equipment usually requiring decontamination include pumps, gauges, augers, and sampling barrels. Drilling equipment, water level meters, submersible pumping equipment, and any other non-dedicated monitoring and sampling equipment will be decontaminated prior to the start of fieldwork, after the collection of each media sample, and between boring intervals and/or sampling locations. Water quality parameter sensors and flow-through cell will be cleaned between sampling locations in accordance with the manufacturer's recommendations.

Materials and methods for decontamination are provided in Supplement E.

V. PFAS SAMPLING - SPECIAL REQUIREMENTS

Special requirements apply to all fieldwork procedures during sampling for per- and polyfluoroalkyl substances (PFAS). Because of the potential presence of PFAS in common consumer products and in equipment typically used to collect media and the need for very low reporting limits, special handling and care must be taken when collecting samples for PFAS analysis to avoid sample contamination. There is only limited research regarding how the use of various procedures and materials affect sample results, and this SOP therefore represent a conservative approach. Field personnel should take precautions to avoid items that are likely to contain PFAS at the sampling site as well as avoid specific items during the sampling event, and must frequently check for updates to this SOP. The most recent NYSDEC guidance document, as well as a *PFAS Sampling Quick Reference Field Guide* (provided by Michigan Department of Environment, Great Lakes, and Energy), are provided in Supplement F.

A. EQUIPMENT AND SUPPLIES

Avoid personal protective equipment (PPE, including clothing chemically treated for UV protection) and field supplies that may include PFAS and which could cross-contaminate field samples. Personal body products such as shampoos, moisturizers, and cosmetics may contain PFAS and should be used with care the day of sampling.

Sunblock and insect repellent ingredients need to be verified to ensure that they do not contain PFAS before use in the field.

Food and food packaging should not enter the sampling zone.

Water resistant, waterproof, stain-treated, clothing recently washed with fabric softeners, and new clothing should be avoided. If sampling in inclement weather a canopy tent may be a good option (note, however, that water resistant/waterproof material likely contains PFAS and disposable gloves should be worn when putting up and/or moving the tent.

Waterproof field books may contain PFAS and should not be used. Documentation of field activities should be on loose paper on an aluminum clipboard or in a waterproof field book that does not use PFAS. Field notes should be taken with a ball point pen (avoid large felt tip markers; fine and ultra-fine point Sharpie® markers are acceptable). Sticky notes, etc., may contain PFAS and should be avoided (pre-printed labels should be verified PFAS-free.

Disposable, powderless, nitrile gloves must be worn during PFAS sampling and handling activities and should be changed frequently during and between sampling activities.

Sealed laboratory-supplied sampling containers may be placed into LDPE re-sealable storage bags (e.g., Ziploc®) that will not contact the sample media.

Chemical ice packs should not be used unless it is verified that they are PFAS-free. Samples for PFAS analysis should be placed on water ice immediately and should ideally be received by the laboratory at a temperature less than 6º Celsius.

B. GENERAL SAMPLING PROCEDURES

Sampling must be conducted in accordance with the project-specific QAPP, including use of laboratory-supplied sample containers.

If non-dedicated non-disposable equipment is used for sampling, proper decontamination is necessary. Decontamination reagents should be checked to ensure that they do not contain PFAS before use. Similarly, water used for decontamination should be checked (i.e. field equipment blanks) to verify that it does not contain PFAS. It may be necessary to collect samples of decontamination water prior to use to ensure that water being used for decontamination does not contain PFAS.

Soil samples should be collected using stainless steel, acetate, or polypropylene constructed equipment. Liners for soil sampling should not contain PFAS.

If a monitoring well has dedicated tubing that may contain PFAS, the dedicated tubing should be removed, and silicone or HDPE tubing should be used to sample for PFAS following at least one well volume purge prior to sampling for PFAS. The recommended length of time that dedicated tubing should be removed, and the recommended amount of purging conducted prior to sampling where dedicated tubing has been present is variable. If it is anticipated that dedicated tubing may be a source of PFAS cross contamination extra precaution, such as removal of the tubing 14 days prior to sampling or purging of three well volumes, should be considered.

Care should be taken to not cross contaminate PFAS samples if samples for non-PFAS analyses are being collected. For example, if VOCs and PFAS water samples are being collected, the VOCs would be collected using a peristaltic pump with HDPE and silicone tubing, and then a second set of samples would be collected for PFAS after changing gloves and switching sample container sets.

If transfer bottles are necessary for surface water sample collection, they should be PFAS-free and made of the same material as the laboratory provided sample containers.

If a water supply is to be sampled, both a pre- and post-treatment sample may be necessary. Carbon filtration, reverse osmosis, and other filter media may bias laboratory results for PFAS. Water should be allowed to run freely until water quality parameter stabilization has occurred, typically between 3 and 5 minutes. Water flow rate should be reduced for minimal aeration.

Do not filter samples for PFAS analysis.

C. DECONTAMINATION OF PFAS SAMPLING EQUIPMENT

Special requirements apply to decontaminating non-dedicated equipment used for PFAS sampling. Laboratory supplied PFAS-free deionized water is preferred for decontamination (commercially available deionized water in an HDPE container, and municipal drinking water, may be used for decontamination if verified to be PFAS-free. Sampling equipment can be scrubbed using a polyethylene or polyvinyl chloride (PVC) brush to remove particulates. Decontamination procedures should include triple rinsing with PFAS-free water. Note that a QAPP prepared for NYSDEC program sites prohibits use of Liquinox®.

VI. INVESTIGATION DERIVED WASTES

Disposal of any waste materials will be in accordance with provisions of the applicable site-specific Work Plan. If not otherwise specified: 1) discarded personal protective equipment and other fieldwork supplies not significantly impacted by free petroleum or other gross contaminants will be disposed as municipal solid waste; and, 2) well development purge water, spent absorbents or other significantly contaminated materials, and/or any recovered free-petroleum, will be properly stored on-site, in properly labeled and secured containers, pending final off-site disposal at a permitted facility.

Supplement A – Model Fieldwork Logs

Soil Boring Log

GALLAGHER BASSETT | TECHNICAL SERVICES

Boring ID	**Site ID:**	**GBTS Project**
Page____of____	Date: Driller (Rig) GBTS Staff: Weather:	

Boring Interval (recovery)	Surface Material: **Soil / Material Description**	Moisture	PID (ppm)	Odors	Staining	NAPL	Samples Collected
___–___ (___%)							
___–___ (___%)							
___–___ (___%)							
___–___ (___%)							
___–___ (___%)							
___–___ (___%)							

Notes Fill, water conditions, field evidence of contamination, well installation details, etc

ND (non-detect) **PID** (photoionization detector) **ppm** (parts per million) **NAPL** (non-aqueous phase liquid)
F (fine) **M** (medium) **C** (coarse) **P** (plastic) **LP** (low plastic) **NP** (non-plastic)

GROUNDWATER MONITORING WELL PURGE DATA SHEET

GALLAGHER BASSETT | TECHNICAL SERVICES

Project Name: _____ **Well ID:** _____
GBTS PROJECT #: _____ **PID Reading:** _____
Date: _____ **Depth of well:** _____
Field Personnel: _____ **Depth to water:** _____
Weather: _____ **Pump type:** _____

Time	Temp (°C)	pH	ORP (mv)	Specific Conductivity (ms/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Depth to Water (ft)	Purge Rate (mL/m)	Comments (e.g. color/clarity)

***** STABILIZATION CRITERIA*****

Temp +/- 3% **pH** +/- 0.1 **ORP** +/- 10 **Spec Cond** +/- 3% **Turb** +/- 10% **DO** +/- 10%

NOTES:

*****PURGED WATER DETAILS*****

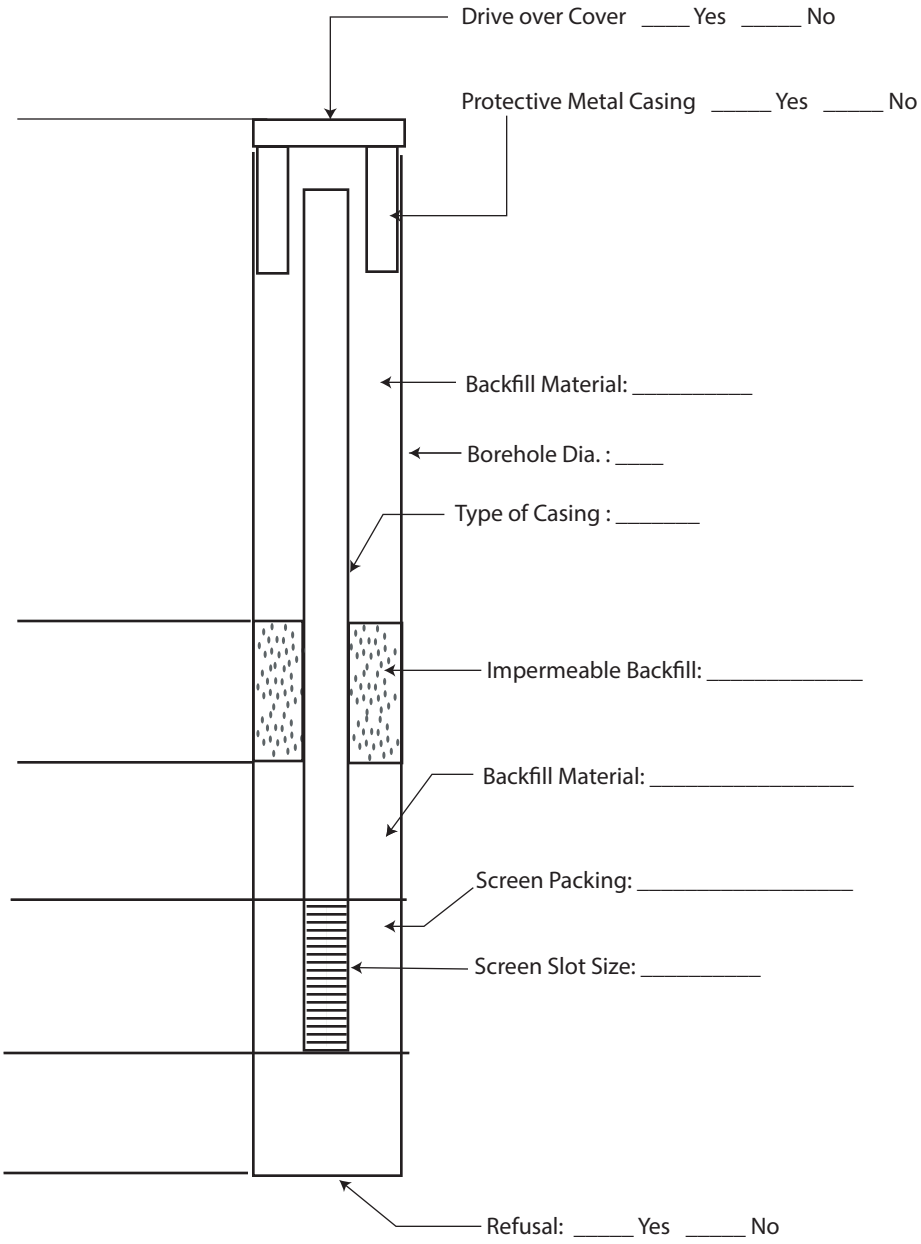
Start/End time: _____
Total purge time: _____
Total volume: _____
Purge rate: _____

CHARACTERISTICS:

Odor: none | slight | moderate | strong

Sheen: none | slight | moderate | strong

L/DNAPL: Yes | No **L/DNAPL thickness (in.)**:_____



Materials Used:

- Screen (PVC)
- Riser (PVC)
- Plug (PVC)
- Silica Sand
- Bentonite clay

Monitor Well Construction Log - Well ID:

Site:

Project:	
Date:	
Appendix:	

Supplement B – DER-10 Soil Sampling Requirements

3.5 Soil

3.5.1 Site Characterization

(a) SC soil investigations should satisfy the applicable elements of this subsection.

1. Initial site survey. The presence of potential source areas to be considered by the initial site survey are those AOCs identified in subdivision 1.8(c). Where the potential for buried drums, tanks, deposits of waste or other discrete and identifiable AOCs may exist the use test pits, ground penetrating radar, magnetometry, electromagnetic, or other techniques capable of detecting metal containers and other waste to an average depth of 20 feet or deeper should be considered.

2. Based on the findings of this survey and/or other AOCs identified by the records search to be undertaken in accordance with Appendix 3A and reported as set forth in section 3.12, soil sampling to characterize contaminant levels in surface or subsurface soil should be planned where:

i. there have been any indications of buried drums, tanks or waste;

ii. groundwater contamination is detected and no source has been identified;

iii. aerial photographic history of the site indicates the presence of drums, tanks or waste in or adjacent to regraded and/or filled areas;

iv. historic fire insurance maps, or other documentation, has identified the past presence of structures or operations (e.g., former manufactured gas plants) which are likely sources of contamination;

v. there are areas of soil staining;

vi. distressed vegetation exists; or

vii. bare soil is present.

(b) Surface soil sampling. Samples, except those being analyzed for VOCs as noted below, should be collected based upon the type of exposure or disposal to be assessed by the sample.

1. Assessing human exposures to soil. When assessing the human exposure resulting from soil contamination related to:

i. incidental soil ingestion, inhalation of soil or dermal contact with soil; soil samples should be collected from a depth of 0 to 2 inches below the vegetative cover, unless VOCs are the only contaminants of concern in which case the sampling should be from 0 to 6 inches; and/or

ii. vegetable/fruit gardens, soil samples should be collected from a depth of 0 to 6 inches below the vegetative cover.

2. Assessing ecological resource exposure to soil. When assessing the impact of soil

contamination on ecological resources samples should be collected from:

i. surface soil at a depth of 0 to 6 inches below the vegetative cover; and

ii. a deeper soil horizon, typically from 12 to 24 inches below ground surface.

3. Where both human and ecological resource exposures are being evaluated, samples at each depth may be required.

(c) Subsurface soil sampling. Samples should be collected via soil borings and/or test pitting for chemical analysis and to provide a profile of subsurface conditions in identified or suspected AOCs and in other areas as needed to characterize the site.

1. Boring logs should be prepared by a qualified individual, reporting to the site QEP, for all soil samples to document subsurface conditions including, without limitation:

i. soil types and description of non-soil materials;

ii. field instrument measurements;

iii. depth to groundwater, if groundwater is encountered; and

iv. to document physical evidence, if present, including but not limited to:

(1) soil mottling;
(2) presence of odor or vapors;
(3) soil discoloration or staining; and
(4) NAPL, free and/or residual product;

2. Soil should be described using the:

i. New York State Department of Transportation *Soil Description Procedure* (NYSDOT Soil Mechanics Bureau STP-2 dated May 1, 1975, as amended); or

ii. unified soil classification system (USCS) which is set forth in ASTM 2488.

3. Known hazardous waste, concentrated solid or semi-solid substances, soils with free product or NAPL and/or grossly contaminated media will not be returned to the subsurface and must be disposed of in accordance with applicable guidance and regulations. If contaminated materials are returned to the ground, in accordance with subdivision 3.3(e), the remedial party must address the presence of this contamination as part of any remedial action.

4. Soil sample locations should be documented by the use of GPS. They may also be photo-documented.

5. Samples should be collected continuously in discrete increments as grab samples prior to any consolidation of the sample. If less than full recovery is obtained by the sampling technique, an explanation should be provided in the soil log.

6. Additional sampling of soil from boring-depth increments below those specified in a work plan to investigate AOCs or based on observations as set forth in paragraph 3.5.1(a) 2 should be completed in cases where:

i. the surface has been regraded;

ii. evidence is identified in a boring of:

(A) the conditions identified in subparagraph 1.iv above;
(B) LNAPL, from the water table; or
(C) DNAPL, form the top of a confining unit; or

iii. other evidence is found which indicates the possible presence of contamination.

7. If the designated subsurface soil sampling point is within the saturated zone, when sample recovery is possible, a sample of the saturated soil should be collected and analyzed.

(d) The use of expedited site investigation approaches, such as the USEPA Triad, are encouraged.

1. Expedited site investigation involves systematic project planning, use of dynamic work strategies and field screening techniques.

2. Sampling methodologies using field-screening techniques:

i. have similar analytical limitations to laboratory methods, which are addressed in subdivision 2.1(c); and

ii. should be detailed in a work plan and approved by DER before use.

3. Field testing sampling plans should be prepared in accordance with Appendix 2A.

3.5.2 Remedial Investigation

(a) The RI should include provisions to identify all soil which may contain contaminants above the unrestricted use soil SCGs.

1. Soil sampling during the RI is intended to determine the areal and vertical extent of those areas found to be contaminated. Sampling locations should be biased toward locations expected to be contaminated or source areas, but must also provide sufficient coverage of the entire site to allow decisions relative to land use restrictions.

2. In addition, soil data is used in the exposure assessment to identify any actual, or potential for, exposure.

3. The use of the field-screening techniques/investigations (e.g., Triad) as described in subdivision 3.5.1(d) and Appendix 2B are encouraged to focus the location of surface or subsurface soil sampling to the most likely source areas, to minimize multiple mobilizations and obtain more complete data set and to indicate a potential for vapor intrusion into buildings.

4. Geophysical surveys. Geophysical surveys may be used as described in paragraph 3.5.1(a)1 and should also be considered during the RI to:

i. identify subsurface utilities as sources of discharge or preferential pathways;

ii. obtain geologic characterization of bedrock, clay layers, etc.; or

iii. focus test pit and/or soil boring locations to areas of subsurface anomalies.

5. Soil gas surveys may be used to identify areas of soil contamination which are a source of soil vapor, in accordance with section 3.6.

(b) Surface soil investigations.

1. Follow the sampling procedures identified in subdivision 3.5.1(b).

2. For suspected surface discharges. Soil samples to be analyzed/screened for VOCs should be collected to minimize contaminant loss during sampling. Each sample should be field screened with a properly calibrated photoionization detector or flame ionization detector (PID/FID) or other suitable instrument. When field screening is used the following should apply:

i. at a minimum, the initial 24 inches of soil rather than the surface soil sampling depths identified in subdivision 3.5.1(b) should be field screened for the presence of VOCs; and

ii. if field measurement readings are detected above background, the sampling should be extended until background readings are achieved, or groundwater or bedrock is encountered; or

iii. a sample from the interval registering the highest field-measurement reading should be collected and analyzed for VOCs.

(c) Subsurface soil investigations.

1. Subsurface soil sampling from soil borings, geoprobes and/or test pits/trenches, in addition to the areas described in paragraphs 3.5.1(a)2 and (c)6, is required in any area:

i. where it is likely that contaminants have migrated downward from the surface or were released below ground surface; for example, from dry wells, leach fields, injection wells or underground storage tanks;

ii. where the investigation of a geophysical or soil vapor anomaly suggests a possible contaminant source;

iii. where waste was or was reported to have been disposed. Such sampling should delineate the boundaries of the area impacted by the disposal; and

iv. when surficial contamination is known or suspected. Such sampling should determine the vertical extent of that contamination.

2. If VOCs are confirmed in the subsurface, the investigation should evaluate any

subsurface utilities, structures (with both basement and slab on grade) and/or other preferential pathways to identify additional sampling that may be warranted to determine whether actions are needed to address exposures associated with soil vapor intrusion, as a result of the soil contamination.

3. When any soil boring, geoprobe or test pit/trench is installed, written logs of the findings are to be prepared and maintained which include, but are not limited to:

i. the data identified in paragraphs 3.5.1(c)1 and 2;

ii. documentation and/or observations regarding the interface between waste and native soils (if appropriate);

iii. identification of the groundwater table and related observations, such as floating product or LNAPL;

iv. identification of the mobility of any contaminants, NAPL or free product identified; and

v. a photographic record of such excavation areas is also recommended to document subsurface features and observations.

(d) The investigation should gather sufficient data on contamination present in soil to evaluate the need for remediation or mitigation at the site.

3.5.3 Soil Background Evaluation

(a) This guidance is intended for soil background evaluations conducted as a component of a SC, RI or, where appropriate, at another element of the remedial program. Site background evaluations are not considered for use on-site at BCP sites.

1. If a suspected contaminant is identified in soil in excess of the unrestricted soil SCGs, the guidance in this subsection may be followed to demonstrate to DER that the concentration of the element, chemical or contaminant in the soils may be due to background conditions.

2. Area-wide soil background studies, intended to be applied to more than one site, may require an expanded level of effort to be determined after consultation with DEC.

3. Background evaluations typically focus on surface soils, although the same approach is applicable to deeper soil horizons.

(b) The remedial party may evaluate soil background conditions at a site using the approaches discussed in this subdivision. The evaluation of background conditions consists of a two-step process. The first step is gaining an understanding of soil conditions on-site and the second step is understanding the soil conditions off-site.

1. On-site soil conditions. Understanding conditions on-site includes an evaluation of whether:

i. the contaminant(s) of concern was(were) never used, stored, or disposed on or near

the site);

ii. (an) element(s) or chemical concentration detected in the soil at the site are within the ranges reported in appropriate references for naturally or regionally occurring background levels for New York. In doing so, the remedial party needs to consider the applicability of the rural background study (see subparagraph 2.ii, below) to the study area;

iii. the distribution of the element, chemical or contaminant in the soil does not follow a concentration gradient indicative of disposal or a discharge; and

iv. the presence of historic fill material.

2. Off-site soil conditions. The remedial party may employ one of the following three approaches to gain an understanding of off-site soil conditions:

i. use an existing DEC-approved background evaluation which was conducted generally in accordance with subdivision (c) below, for soils near the site to establish the background soil conditions;

ii. use the rural background study conducted by DEC, in collaboration with the New York State Department of Health, as part of the development of the soil cleanup objectives set forth at 6 NYCRR Part 375 as background soil conditions and available in the technical support document [see 6 NYCRR 375-6.2(b)]; or

iii. undertake a site-specific background evaluation, to demonstrate background conditions of the soil in the vicinity of the site, in accordance with subdivision (c) below.

(c) Site-specific background evaluation. A site-specific background evaluation will consider soil samples collected and analyzed from no less than five background sample locations in the vicinity of the site as detailed in this subdivision to assist in the characterization of site-related contamination. An evaluation intended to develop site-specific cleanup objectives is addressed in subdivision (d) below.

1. The background grab samples should be collected from:

i. a depth which conforms to the same depths of the surface soils sampled during the surface soil investigation;

ii. the 0 to 2 foot soil horizon if no surface soil samples were collected at an AOC or from the site.; or

iii. deeper horizons if appropriate based where the contamination is present

2. Background samples should be collected at locations which are:

i. unaffected by current and historic site operations, as documented by the records search;

ii. wherever possible, from locations which are topographically upgradient and upwind of contaminant sources; and

iii. off the site being investigated, unless the site being investigated encompasses a large area which includes separable areas having no identified AOCs.

3. Background samples should not be collected from potentially contaminated areas, including any of the following:

i. areas where materials or wastes were loaded, handled or stored;

ii. identified waste-disposal areas;

iii. areas which receive runoff from areas identified in subparagraphs i or ii above or adjacent contaminated sites;

iv. storm drain outfall discharges or ditches receiving runoff from the site or adjacent contaminated sites; or

v. any other area of concern, as defined by section 1.8;

4. Background samples generally should not be collected from the following areas unless it can be demonstrated that the contamination in the area is due to generally occurring pollution related to the urban or industrial nature (anthropogenic) of the surrounding area and the results will be compared to samples taken from similar areas on the site:

i. parking lots, roads or roadside areas;

ii. areas near railroad tracks;

iii. areas of historic fill material;

iv. storm drains or ditches receiving runoff not impacted by the site or adjacent contaminated sites; or

v. depositional areas outside the influence of known sources.

5. Background studies should use the same sampling and analytical methods as were used for other site samples.

6. Samples collected from a site or an area of concern cannot be averaged for background comparisons, rather the individual samples should be evaluated, in consultation with DEC and the NYSDOH to determine a background level for the site. Except for on-site at a BCP site, if contaminant concentrations are found at any sampling location on the site exceeding the background level developed from the background samples, the RI may delineate the extent of the contamination based on the background level, rather than the applicable unrestricted soil SCG.

7. The background evaluation should be presented in a work plan developed in accordance with section 3.3, if not included in the RI work plan.

(d) Site-specific remediation levels based on background concentrations. If a site-specific

background soil level identified by subdivision (c) above is to be proposed as a remediation level at the site, a more extensive sampling program to allow a statistical analysis of background levels may be required.

1. The remedial party should, after consulting with DER, submit a work plan outlining the proposed methods for the additional sampling and any proposed statistical evaluation of samples.

2. Where a grid or predetermined sample spacing is to be used in a site-specific evaluation , the limitations on the location of samples identified by paragraph (c)3 above are not applicable, because the investigation is intended to assess the impacts from other potential sources of contaminants in the vicinity of the site to the site-specific background.

3. Any statistical analysis should be in designed consistent with the rural background study data analysis methods provided in Appendix D, Section B of the *New York State Brownfield Cleanup Program Development of Soil Cleanup Objectives Technical Support Document (TSD) September 2006* or any subsequently approved applicable document, which is available on DEC's website identified in the table of contents.



3.9 Area Specific Requirements for Tanks, Storage Facilities, Water Treatment, Drainage Structures and Other Systems

(a) Storage tanks and appurtenances. The investigation of bulk storage tanks and appurtenances; should include, without limitation, all in use and out-of-service storage and associated piping, dispensers and fill ports.

1. Aboveground tanks over unpaved soil or broken pavement in contact with the soil. Sampling around tanks with shell or bottom in direct contact with soil now or in the past should meet all the following criteria:

i. a minimum of two surface soil samples should be collected to detect surface contamination around the base of each tank, in accordance with subdivision 3.5.1(b), as follows:

(1) from areas of contamination, based on soil discoloration/odors, history of repairs/replacement, soil beneath valves or low areas where spills or leaks from valves may accumulate;

(2) additional samples should be taken around larger tanks to ensure that there is at least one sample per 100 linear feet (from a depth of at least 6 inches if VOCs were stored) of tank perimeter; and

(3) unless the tank was installed and maintained in compliance with 6 NYCRR Parts 614 or 599:

(A) at least one boring should be located adjacent to or within two feet of the most down gradient tank with continuous two-foot split spoon sampling, or another DER approved comparable sampling technique, performed to four feet below the current water table, or deeper where appropriate; and

(B) the sample in each boring evidencing the highest apparent contamination based on soil discoloration, odor, field-screening result or other field indicator should be analyzed at a laboratory;

ii. if there is no evidence of soil contamination, a groundwater sample should be collected from the zero to one-foot interval below the current water table elevation. The sample should be collected within five feet of the tank on the expected downgradient side. It should then be analyzed following an appropriate laboratory method; and

iii. if there is evidence of groundwater contamination, the groundwater sample must be collected at this location.

2. Aboveground tanks elevated over unpaved soil or broken pavement. Elevated tanks where the shell or bottom is not in contact with ground:

i. require soil sampling when:

(1) there is any physical or documentary evidence of discharges;
(2) soil discoloration is observed; or
(3) field monitoring or other evidence indicates that a discharge has occurred; and

ii. at least one soil sample should be taken below tanks which store, or may have stored, contaminants that do not cause obvious soil discoloration such as VOCs:

(1) the samples should be collected in the area most likely to be contaminated, including without limitation, valve or former leak or rupture areas; or
(2) if samples cannot be obtained from below the tank because soils are not accessible to sampling equipment, the sample may be located within two feet of the tank.

3. Aboveground tanks over unbroken paved surfaces. Soil around aboveground tanks:

i. on paved surfaces or pads should be sampled pursuant to paragraph (b)1 below, if there:

(1) are stained soils adjacent to the paving or pad; or
(2) if the potential contaminant would not cause discoloration such as VOCs, if there is a history of spillage or other evidence that a discharge has occurred;

ii. within a paved containment area should be sampled at the drainage discharge point, if one exists, pursuant to subdivision (d) below (Drainage Areas);

iii. soil sampling below the pavement should be conducted when the pavement has deteriorated so as to allow potential contaminant contact with the soil, or if there is reason to believe that pavement was not present over the life of the tank or former tanks; and

iv. instead of sampling soil beneath pavement, samples around the pad may be taken pursuant to (b)1 below, subject to DER's review of documentation pursuant to subdivision 1.6(c) specifying why boring through pavement was not considered practical (for example, concrete slabs with berms, synthetic liners).

4. Underground storage tanks (USTs). USTs and distribution systems containing potential contaminants should be evaluated to identify any past or present discharges. All USTs must be in

compliance with applicable regulations, upgraded as necessary or closed in accordance with the requirements of section 5.5. All USTs not being closed should be evaluated as follows:

i. at least four soil samples should be collected from around each tank or group of tanks as noted in clause (a)3.i.(2) above. The soil samples should be collected within two feet of the tank with one sampling location located at each end, and additional sampling locations along the length of the entire tank:

(1) if sampling within two feet of the tank is not possible due to the presence of bedding gravel or there are safety considerations (e.g., danger of tank puncture) which have been identified through field investigations or review of as built plans:

(A) soil samples should be taken as close as possible to the tank, with no samples collected further than five feet from the tank or group of tanks; and

(B) a groundwater sample should be collected within five feet and down gradient of the tank or group of tanks; or

(2) when, due to safety considerations, the distance between adjacent tanks precludes locating soil samples between the tanks, a groundwater sample may be collected within five feet and down gradient of the tanks, at the appropriate depth in lieu of the required soil samples between the tanks. Where available, tank field wells may be sampled in lieu of a new well;

ii. the total number of sampling locations required per tank, or group of adjacent tanks, located within the length identified in Table 3.9 for the total tank capacity;

iii. soil samples collected for analysis should be taken at zero to two feet below the tank bottom unless the tank is within the saturated zone (see subparagraph iv below); and

iv. for underground storage tanks (USTs) within the saturated zone based on site-specific water levels:

(1) if the contents of the UST being evaluated have ever had a density less than water, a soil sample should be collected from one foot above to one foot below the current water table surface. A groundwater sample should also be collected at the appropriate depth pursuant to section 3.7. To verify tank contents for out-of-service tanks, one sample should be taken of any product or residue remaining in the tank and analyzed using an appropriate fingerprinting or other analytical method; or

(2) if the contents of the UST being evaluated have ever had a density greater than water, a soil sample should be collected from zero to two feet below the bottom of the tank. A groundwater sample should also be collected at the appropriate depth pursuant to section 3.7. To verify tank contents for out-of-service tanks, one sample should be taken of any product or residue remaining in the tank and analyzed using an appropriate fingerprinting or other analytical method; and

v. if a tank is located on bedrock, a bedrock monitoring well may be necessary.

Table 3.9 Sampling Frequency Based on Tank Capacity and/or Length [from Subparagraph 3.9(a)4.ii]		
Total Tank Capacity (Gallons)	**Approximate Tank Length (Feet)**	**Minimum Number of Samples**
56-2000	Up to 10	4
2001-10,000	Up to 30	6
10001 - 25,000	Up to 40	8
25,000+	Greater than 40	10

5. Above-grade piping. Sampling of soil beneath above-grade piping is necessary if there is evidence of a discharge (for example, discolored soil, etc.) or reports of past discharges. Any sampling conducted should be pursuant to subdivision (e) below (Discharge/Disposal Areas).

6. Below-grade piping. Below-grade piping should be evaluated to identify any past or present discharges using soil samples located zero to six inches below the piping and within two feet of the piping. Additional samples should be collected as follows, for:

i. a total piping length of 1to 15 feet, a minimum of one soil sample should be collected:

(1) an additional soil sample should be collected for each additional 20 linear feet of piping or portion thereof from 16 to 50 feet of piping length; and
(2) sample locations should be biased to include joints, dispensers and other potential discharge areas;

ii. pipe runs within two feet of another pipe run may be considered a single pipe run. Soil samples for multiple pipe lines should be collected midway between/among the lines or biased toward any pipe for which evidence of a discharge exists. For pipes that are separated by a distance greater than two feet vertically, soil samples should be collected below each pipe; or

iii. total piping lengths in excess of 50 feet, sampling frequency may be reduced subject to DER's approval of documentation pursuant to section 1.6 specifying why the reduced number was considered adequate.

7. Loading and unloading areas. For loading or unloading areas located:

i. over exposed soils which are associated with tanks, should be sampled at a minimum rate of one sample per fill connection or valved discharge point; or

ii. over impervious cover, sampling should be conducted pursuant to paragraph (b)1 below.

(b) Storage and staging areas. The investigation for all storage and staging areas, dumpsters and transformers, whether temporary or permanent, including exposed soil areas adjacent to aboveground vessels on pads; tank loading/unloading areas on pads; dumpster staging areas; electrical transformers,

heat exchanger and other outdoor equipment and drum storage pads, should also satisfy the requirements of this subdivision.

1. Pads. The investigation of a pad should:

i. have a minimum of one sampling location per side adjacent to exposed soil for sides:

(1) up to 30 feet long; or
(2) for sides greater than 30 feet long, one additional sample location is required for each additional 30 feet of length;

ii. locate each sampling point immediately adjacent to the pad and biased toward the suspected location of greatest contamination (e.g. joints);

iii. include soil samples beneath the pad, collected pursuant to subparagraph (b)2.ii below, if:

(1) the pad shows evidence of deterioration that may allow contaminant contact with the soil;
(2) the pad or its surface has been modified or repaved; or
(3) aerial photographs or site history indicate potential for previous discharges to the soil beneath the pad; and

iv. sample bermed pads and pads surrounded by impermeable cover at any drainage discharge point pursuant to subdivision (d) below (Drainage Systems).

2. Storage and staging areas over a permeable cover. Storage and staging areas with evidence of discharges which are or were used for storage of contaminants:

i. should be sampled pursuant to subdivision (e) below (Discharge and waste disposal systems);

ii. should be sampled at locations biased toward the suspected location of greatest contamination based on low points, drainage patterns, discoloration, stressed vegetation, field instrument measurements or other field indicators; and

iii. the sample frequency for these areas should be:

(1) at least one surface sample, in accordance with subdivision 3.5.1(b), per 900 square feet of surface area to characterize soils below a storage or staging area up to 300 feet in perimeter; and
(2) sample frequency may be reduced for larger areas subject to DER approval of documentation pursuant to subdivision 1.6(c) specifying why the proposed sample frequency is adequate.

(c) Surface impoundments. The investigation for all surface impoundments, including without limitation, lagoons, fire ponds, waste ponds or waste pits, storm water detention basins, excavations, natural depressions or diked areas, which are designed to hold an accumulation of liquid substances or

substances containing free liquids, should satisfy the requirements of this subdivision.

1. Sediments within any surface impoundments should be sampled if the impoundment receives runoff from areas of potential contaminant sources.

2. Sediment sample locations should be biased towards inflow/outflow areas, and areas where sediments may be expected to accumulate.

3. Core samples should be taken for contaminant analysis and to fully characterize sediment type, thickness of sediment layers and vertical extent of sediment.

4. Distinct layers of sediments thicker than six inches, as evidenced by color, particle size, or other physical characteristics, should be sampled individually.

5. Sediment quantity within the surface impoundment should be estimated.

6. Active surface impoundments with impermeable liners, which may be damaged as a result of sample collection, should have liner integrity verified by physical inspection and/or evaluation of monitoring well water quality data associated with the surface impoundment, if available.

(d) Drainage systems. The SC or RI for all drainage systems should satisfy the sampling requirements of this subdivision.

1. Floor drains and collection systems. If there is reason to believe contaminants were or may have been discharged into the floor drain or collection system:

i the point of discharge for any floor drain or collection system should be sampled if the system discharges were, or may have been, discharged to soil, groundwater or surface water;

ii. if the point of discharge is unknown, tracer tests (for example, dye or smoke) should be conducted to determine the discharge point(s);

iii. collection system integrity should be documented by representative soil sampling at potential leak areas, video inspection, hydrostatic test or pressure test. Other methods may be acceptable, subject to DER approval of documentation pursuant to subdivision 1.6 (c) specifying why the methods are effective; and

iv. sampling soil below floor drains or collection system laterals should be conducted when corrosives (if plastic piping is or was used, organic solvents are considered corrosive) are or were discharged to floor drains or the collection system or there has been a history of collection system discharges, rupture or repairs. In such cases, representative soil sampling at known or suspected leak areas is required for potential contaminants.

2. Roof leader discharge. Soil at each roof leader discharge point should be sampled if storage units or process operations using contaminants of concern vent, or may have vented, to the roof.

3. Swales and culverts. Sampling should be conducted when the swale or culvert receives or received runoff from other contaminated areas of concern:

i. sediment and soil sampling should be conducted at the points where contamination from runoff/spills enter or have entered the drainage system; and

ii. if flow could have scoured sediments from the receiving structure, sampling should be conducted at on-site down gradient structures laden with sediments.

4. Storm sewer and spill containment collection systems. Sampling should be conducted when the collection system is or was the runoff/spill discharge point from other contaminated areas of concern:

i. sediment sampling should be conducted at the manhole, catch basin, sump, or other structure where contaminated runoff or discharges enter the drainage system;

ii. sampling should be conducted in the soils around catch basins, manholes, sumps or other structures which contain or may have contained contaminants, and are not hydraulically sound (that is, water percolates through the floor and walls), through the use of adjacent soil borings:

(1) a single boring located within two feet of the downstream side of the structure should be sampled at a depth corresponding to the bottom of the structure; and

(2) if highly permeable soils are encountered and VOC sampling is required, sample at the next lower permeability soil horizon or zero to six inches above the saturated zone, or at 9.5 to 10 feet, whichever is encountered first; and

iii. groundwater discharging from storm sewer systems which contain dry weather flow (that is, five days following the most recent rainfall) should be sampled at the discharge point and analyzed for potential contaminants discharged or potentially discharged into the system.

5. Boiler and compressor discharges. For all boiler and compressor discharges if there is reason to believe that a potential contaminant discharge has occurred, sampling should be conducted pursuant to subdivision (e) below.

(e) Discharge and waste disposal systems. The SC or RI for all discharge and waste disposal systems and areas should satisfy the sampling requirements of this subdivision.

1. Discharge areas and areas of discolored soil or stressed vegetation. Where specific requirements are not otherwise provided in this section each distinct area should be evaluated independently as an area of concern:

i. initial surface soil samples, in accordance with subdivision 3.5.1(b), should be biased based on field indicators such as soil discoloration, stressed vegetation or field instrument measurements toward those areas of greatest suspected contamination;

ii. sample frequency should be at least 1 sample for every 900 square feet for areas up to 300 feet in perimeter; and

iii. sample frequency may be reduced for larger areas, subject to DER's review of documentation pursuant to subdivision 1.6 (c) specifying why the reduced sample frequency was considered adequate.

2. Aboveground treatment systems. Above ground treatment systems should be sampled pursuant to the requirements for the functional portions of the system pursuant to subdivision (a) above. For example, any aboveground waste treatment tanks over unpaved soil should be sampled pursuant to paragraph (a)1 above.

3. Below-grade wastewater treatment systems:

i. tanks, septic tanks, separators and neutralization pits:

(1) two samples, one aqueous and one sludge sample, should be collected from within the tank etc, for analysis unless documentation acceptable to DER pursuant to subdivision 1.6(c) is provided in the SCR (section 3.13) specifying why such sampling was not considered necessary to confirm that only sanitary waste was discharged to the system during the entire life of the system; and

(2) documentation, based upon diligent inquiry, should be provided to support that only sanitary waste was ever discharged to the system and that no present or former floor drains, sinks or other units in process areas were ever connected to the system;

ii. septic disposal fields:

(1) soil borings and/or test pitting should be completed as specified below for on-site disposal fields unless documentation acceptable to DER is provided as to why soil borings were not considered necessary to confirm that only sanitary waste was discharged to the system pursuant to subparagraph (e)3.i above;

(2) at least one boring or test pit per 500 square feet of field area should be completed, with a minimum of four borings per field;

(3) borings should be located within two feet of the edge of the bed area in active fields but should be angled so that samples are taken below the infiltrative surface and directly below laterals within abandoned fields;

(4) borings should be located to include the first five feet of the infiltrative surface and should be spaced so that samples are representative of the entire disposal field; and

(5) soil samples should be taken at a depth corresponding to zero to six inches below the bottom of the infiltrative surface.

iii. cesspools, seepage pits and dry wells:

(1) sampling should be conducted in accordance with clauses (2) through (5) below, unless documentation acceptable to DER, pursuant to subdivision 1.6(c), is provided in the SCR specifying why sampling was not considered necessary (e.g., to confirm that only sanitary waste or storm water was discharged to the system pursuant to subparagraph (e)3.i above);

(2) one representative sample of sludge/sediment in each pit should be obtained for laboratory analysis;

(3) a soil boring should be placed within the well, pit or pool:

(A) the soil should be cored and inspected for evidence of discharge and samples collected in accordance with paragraphs 3.2.1(c)1 and 2; or

(B) if not possible to core within the suspected structure, the boring should be placed within two feet of the downgradient side of the pit and should extend to a minimum of two feet below the pit bottom;

(4) for structures with perforated sidewalls, perforated rings, brick, block or stone construction, a boring should be placed immediately adjacent to the outside of the structure. If no other

field indicators (e.g., staining) identify a vertical zone to sample, a sample should be collected at the level of any sediment observed inside the structure;

(5) samples obtained for VOC analysis should be collected as follows:

(A) each core should be field screened with a properly calibrated photoionization detector or flame ionization detector (PID/FID) or other suitable instrument;

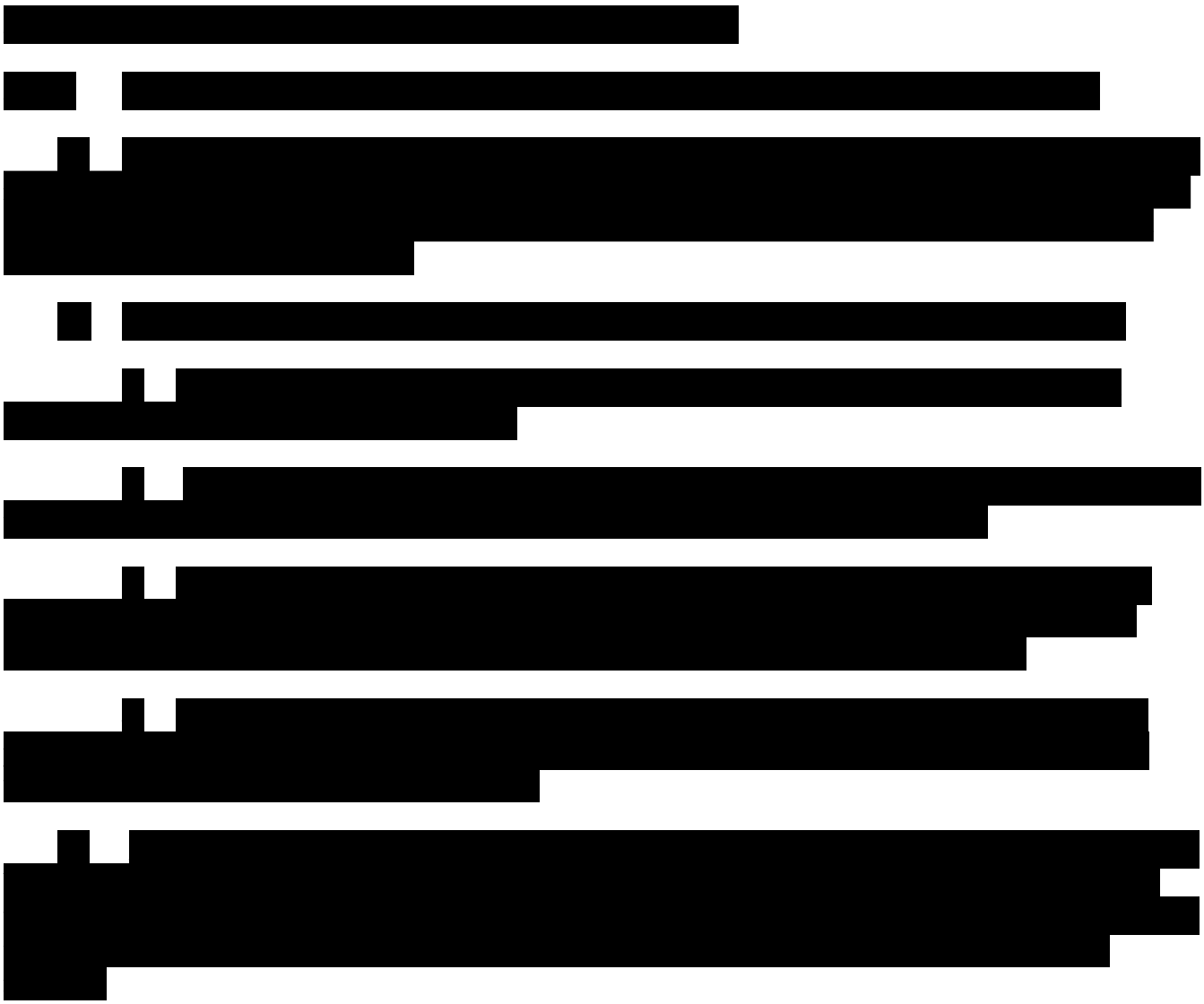
(B) if field measurement readings are detected above background, coring should be extended until background readings are achieved or groundwater or bedrock is encountered; and

(C) an undisturbed sample from the two-foot interval registering the highest field measurement reading should be collected and analyzed for VOCs;

(6) if the pit bottom is within two feet of the saturated zone or bedrock, a groundwater sample will be obtained within the pit or, if not possible, within two feet of the suspected downgradient side of the pit; and

(7) at a minimum, the laboratory analysis should target the contaminants suspected to have been discharged to the seepage pit.

iv. collection lines, should be sampled pursuant to paragraph (d)1 above.



Supplement C – USEPA Groundwater Sampling

U.S. ENVIRONMENTAL PROTECTION AGENCY
REGION I

LOW STRESS (low flow) PURGING AND SAMPLING PROCEDURE FOR THE COLLECTION OF GROUNDWATER SAMPLES FROM MONITORING WELLS

Quality Assurance Unit
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WELL PURGING-FIELD WATER QUALITY MEASUREMENTS FORM 30

1.0 USE OF TERMS

Equipment blank: The equipment blank shall include the pump and the pump's tubing. If tubing is dedicated to the well, the equipment blank needs only to include the pump in subsequent sampling rounds. If the pump and tubing are dedicated to the well, the equipment blank is collected prior to its placement in the well. If the pump and tubing will be used to sample multiple wells, the equipment blank is normally collected after sampling from contaminated wells and not after background wells.

Field duplicates: Field duplicates are collected to determine precision of the sampling procedure. For this procedure, collect duplicate for each analyte group in consecutive order (VOC original, VOC duplicate, SVOC original, SVOC duplicate, etc.).

Indicator field parameters: This SOP uses field measurements of turbidity, dissolved oxygen, specific conductance, temperature, pH, and oxidation/reduction potential (ORP) as indicators of when purging operations are sufficient and sample collection may begin.

Matrix Spike/Matrix Spike Duplicates: Used by the laboratory in its quality assurance program. Consult the laboratory for the sample volume to be collected.

Potentiometric Surface: The level to which water rises in a tightly cased well constructed in a confined aquifer. In an unconfined aquifer, the potentiometric surface is the water table.

QAPP: Quality Assurance Project Plan

SAP: Sampling and Analysis Plan

SOP: Standard operating procedure

Stabilization: A condition that is achieved when all indicator field parameter measurements are sufficiently stable (as described in the "Monitoring Indicator Field Parameters" section) to allow sample collection to begin.

Temperature blank: A temperature blank is added to each sample cooler. The blank is measured upon receipt at the laboratory to assess whether the samples were properly cooled during transit.

Trip blank (VOCs): Trip blank is a sample of analyte-free water taken to the sampling site and returned to the laboratory. The trip blanks (one pair) are added to each sample cooler that contains VOC samples.

2.0 SCOPE & APPLICATION

The goal of this groundwater sampling procedure is to collect water samples that reflect the total mobile organic and inorganic loads (dissolved and colloidal sized fractions) transported through the subsurface under ambient flow conditions, with minimal physical and chemical alterations from sampling operations. This standard operating procedure (SOP) for collecting groundwater samples will help ensure that the project's data quality objectives (DQOs) are met under certain low-flow conditions.

The SOP emphasizes the need to minimize hydraulic stress at the well-aquifer interface by maintaining low water-level drawdowns, and by using low pumping rates during purging and sampling operations. Indicator field parameters (e.g., dissolved oxygen, pH, etc.) are monitored during purging in order to determine when sample collection may begin. Samples properly collected using this SOP are suitable for analysis of groundwater contaminants (volatile and semi-volatile organic analytes, dissolved gases, pesticides, PCBs, metals and other inorganics), or naturally occurring analytes. This SOP is based on Puls, and Barcelona (1996).

This procedure is designed for monitoring wells with an inside diameter (1.5-inches or greater) that can accommodate a positive lift pump with a screen length or open interval ten feet or less and with a water level above the top of the screen or open interval (Hereafter, the "screen or open interval" will be referred to only as "screen interval"). This SOP is not applicable to other well-sampling conditions.

While the use of dedicated sampling equipment is not mandatory, dedicated pumps and tubing can reduce sampling costs significantly by streamlining sampling activities and thereby reducing the overall field costs.

The goal of this procedure is to emphasize the need for consistency in deploying and operating equipment while purging and sampling monitoring wells during each sampling event. This will help to minimize sampling variability.

This procedure describes a general framework for groundwater sampling. Other site specific information (hydrogeological context, conceptual site model (CSM), DQOs, etc.) coupled with systematic planning must be added to the procedure in order to develop an appropriate site specific SAP/QAPP. In addition, the site specific SAP/QAPP must identify the specific equipment that will be used to collect the groundwater samples.

This procedure does not address the collection of water or free product samples from wells containing free phase LNAPLs and/or DNAPLs (light or dense non-aqueous phase

liquids). For this type of situation, the reader may wish to check: Cohen, and Mercer (1993) or other pertinent documents.

This SOP is to be used when collecting groundwater samples from monitoring wells at all Superfund, Federal Facility and RCRA sites in Region 1 under the conditions described herein. Request for modification of this SOP, in order to better address specific situations at individual wells, must include adequate technical justification for proposed changes. All changes and modifications must be approved and included in a revised SAP/QAPP before implementation in field.

3.0 BACKGROUND FOR IMPLEMENTATION

It is expected that the monitoring well screen has been properly located (both laterally and vertically) to intercept existing contaminant plume(s) or along flow paths of potential contaminant migration. Problems with inappropriate monitoring well placement or faulty/improper well installation cannot be overcome by even the best water sampling procedures. This SOP presumes that the analytes of interest are moving (or will potentially move) primarily through the more permeable zones intercepted by the screen interval.

Proper well construction, development, and operation and maintenance cannot be overemphasized. The use of installation techniques that are appropriate to the hydrogeologic setting of the site often prevent "problem well" situations from occurring. During well development, or redevelopment, tests should be conducted to determine the hydraulic characteristics of the monitoring well. The data can then be used to set the purging/sampling rate, and provide a baseline for evaluating changes in well performance and the potential need for well rehabilitation. Note: if this installation data or well history (construction and sampling) is not available or discoverable, for all wells to be sampled, efforts to build a sampling history should commence with the next sampling event.

The pump intake should be located within the screen interval and at a depth that will remain under water at all times. It is recommended that the intake depth and pumping rate remain the same for all sampling events. The mid-point or the lowest historical midpoint of the saturated screen length is often used as the location of the pump intake. For new wells, or for wells without pump intake depth information, the site's SAP/QAPP must provide clear reasons and instructions on how the pump intake depth(s) will be selected, and reason(s) for the depth(s) selected. If the depths to top and bottom of the well screen are not known, the SAP/QAPP will need to describe how the sampling depth will be determined and how the data can be used.

Stabilization of indicator field parameters is used to indicate that conditions are suitable for sampling to begin. Achievement of turbidity levels of less than 5 NTU, and stable drawdowns of less than 0.3 feet, while desirable, are not mandatory. Sample collection

may still take place provided the indicator field parameter criteria in this procedure are met. If after 2 hours of purging indicator field parameters have not stabilized, one of three optional courses of action may be taken: a) continue purging until stabilization is achieved, b) discontinue purging, do not collect any samples, and record in log book that stabilization could not be achieved (documentation must describe attempts to achieve stabilization), c) discontinue purging, collect samples and provide full explanation of attempts to achieve stabilization (note: there is a risk that the analytical data obtained, especially metals and strongly hydrophobic organic analytes, may reflect a sampling bias and therefore, the data may not meet the data quality objectives of the sampling event).

It is recommended that low-flow sampling be conducted when the air temperature is above 32°F (0°C). If the procedure is used below 32°F, special precautions will need to be taken to prevent the groundwater from freezing in the equipment. Because sampling during freezing temperatures may adversely impact the data quality objectives, the need for water sample collection during months when these conditions are likely to occur should be evaluated during site planning and special sampling measures may need to be developed. Ice formation in the flow-through-cell will cause the monitoring probes to act erratically. A transparent flow-through-cell needs to be used to observe if ice is forming in the cell. If ice starts to form on the other pieces of the sampling equipment, additional problems may occur.

4.0 HEALTH & SAFETY

When working on-site, comply with all applicable OSHA requirements and the site's health/safety procedures. All proper personal protection clothing and equipment are to be worn. Some samples may contain biological and chemical hazards. These samples should be handled with suitable protection to skin, eyes, etc.

5.0 CAUTIONS

The following cautions need to be considered when planning to collect groundwater samples when the below conditions occur.

If the groundwater degasses during purging of the monitoring well, dissolved gases and VOCs will be lost. When this happens, the groundwater data for dissolved gases (e.g., methane, ethene, ethane, dissolved oxygen, etc.) and VOCs will need to be qualified. Some conditions that can promote degassing are the use of a vacuum pump (e.g., peristaltic pumps), changes in aperture along the sampling tubing, and squeezing/pinching the pump's tubing which results in a pressure change.

When collecting the samples for dissolved gases and VOCs analyses, avoid aerating the groundwater in the pump's tubing. This can cause loss of the dissolved gases and VOCs in

the groundwater. Having the pump's tubing completely filled prior to sampling will avoid this problem when using a centrifugal pump or peristaltic pump.

Direct sun light and hot ambient air temperatures may cause the groundwater in the tubing and flow-through-cell to heat up. This may cause the groundwater to degas which will result in loss of VOCs and dissolved gases. When sampling under these conditions, the sampler will need to shade the equipment from the sunlight (e.g., umbrella, tent, etc.). If possible, sampling on hot days, or during the hottest time of the day, should be avoided. The tubing exiting the monitoring well should be kept as short as possible to avoid the sun light or ambient air from heating up the groundwater.

Thermal currents in the monitoring well may cause vertical mixing of water in the well bore. When the air temperature is colder than the groundwater temperature, it can cool the top of the water column. Colder water which is denser than warm water sinks to the bottom of the well and the warmer water at the bottom of the well rises, setting up a convection cell. "During low-flow sampling, the pumped water may be a mixture of convecting water from within the well casing and aquifer water moving inward through the screen. This mixing of water during low-flow sampling can substantially increase equilibration times, can cause false stabilization of indicator parameters, can give false indication of redox state, and can provide biological data that are not representative of the aquifer conditions" (Vroblesky 2007).

Failure to calibrate or perform proper maintenance on the sampling equipment and measurement instruments (e.g., dissolved oxygen meter, etc.) can result in faulty data being collected.

Interferences may result from using contaminated equipment, cleaning materials, sample containers, or uncontrolled ambient/surrounding air conditions (e.g., truck/vehicle exhaust nearby).

Cross contamination problems can be eliminated or minimized through the use of dedicated sampling equipment and/or proper planning to avoid ambient air interferences. Note that the use of dedicated sampling equipment can also significantly reduce the time needed to complete each sampling event, will promote consistency in the sampling, and may reduce sampling bias by having the pump's intake at a constant depth.

Clean and decontaminate all sampling equipment prior to use. All sampling equipment needs to be routinely checked to be free from contaminants and equipment blanks collected to ensure that the equipment is free of contaminants. Check the previous equipment blank data for the site (if they exist) to determine if the previous cleaning procedure removed the contaminants. If contaminants were detected and they are a concern, then a more vigorous cleaning procedure will be needed.

6.0 PERSONNEL QUALIFICATIONS

All field samplers working at sites containing hazardous waste must meet the requirements of the OSHA regulations. OSHA regulations may require the sampler to take the 40 hour OSHA health and safety training course and a refresher course prior to engaging in any field activities, depending upon the site and field conditions.

The field samplers must be trained prior to the use of the sampling equipment, field instruments, and procedures. Training is to be conducted by an experienced sampler before initiating any sampling procedure.

The entire sampling team needs to read, and be familiar with, the site Health and Safety Plan, all relevant SOPs, and SAP/QAPP (and the most recent amendments) before going onsite for the sampling event. It is recommended that the field sampling leader attest to the understanding of these site documents and that it is recorded.

7.0 EQUIPMENT AND SUPPLIES

A. Informational materials for sampling event

A copy of the current Health and Safety Plan, SAP/QAPP, monitoring well construction data, location map(s), field data from last sampling event, manuals for sampling, and the monitoring instruments' operation, maintenance, and calibration manuals should be brought to the site.

B. Well keys.

C. Extraction device

Adjustable rate, submersible pumps (e.g., centrifugal, bladder, etc.) which are constructed of stainless steel or polytetrafluoroethylene (PTFE, i.e. Teflon®) are preferred. PTFE, however, should not be used when sampling for per- and polyfluoroalkyl substances (PFAS) as it is likely to contain these substances.

Note: If extraction devices constructed of other materials are to be used, adequate information must be provided to show that the substituted materials do not leach contaminants nor cause interferences to the analytical procedures to be used. Acceptance of these materials must be obtained before the sampling event.

If bladder pumps are selected for the collection of VOCs and dissolved gases, the pump setting should be set so that one pulse will deliver a water volume that is sufficient to fill a 40 mL VOC vial. This is not mandatory, but is considered a "best practice". For the proper operation, the bladder pump will need a minimum amount of water above the pump; consult the manufacturer for the recommended submergence. The pump's recommended submergence value should be determined during the planning stage, since it may influence well construction and placement of dedicated pumps where water-level fluctuations are significant.

Adjustable rate, peristaltic pumps (suction) are to be used with caution when collecting samples for VOCs and dissolved gases (e.g., methane, carbon dioxide, etc.) analyses. Additional information on the use of peristaltic pumps can be found in Appendix A. If peristaltic pumps are used, the inside diameter of the rotor head tubing needs to match the inside diameter of the tubing installed in the monitoring well.

Inertial pumping devices (motor driven or manual) are not recommended. These devices frequently cause greater disturbance during purging and sampling, and are less easily controlled than submersible pumps (potentially increasing turbidity and sampling variability, etc.). This can lead to sampling results that are adversely affected by purging and sampling operations, and a higher degree of data variability.

D. Tubing

PTFE (Teflon®) or PTFE-lined polyethylene tubing are preferred when sampling is to include VOCs, SVOCs, pesticides, PCBs and inorganics. As discussed in the previous section, PTFE tubing should not be used when sampling for PFAS. In this case, a suitable alternative such as high-density polyethylene tubing should be used.

PVC, polypropylene or polyethylene tubing may be used when collecting samples for metal and other inorganics analyses.

Note: If tubing constructed of other materials is to be used, adequate information must be provided to show that the substituted materials do not leach contaminants nor cause interferences to the analytical procedures to be used. Acceptance of these materials must be obtained before the sampling event.

The use of 1/4 inch or 3/8 inch (inside diameter) tubing is recommended. This will help ensure that the tubing remains liquid filled when operating at very low pumping rates when using centrifugal and peristaltic pumps.

Silastic tubing should be used for the section around the rotor head of a peristaltic pump. It should be less than a foot in length. The inside diameter of the tubing used at the pump rotor head must be the same as the inside diameter of tubing placed in the well. A tubing connector is used to connect the pump rotor head tubing to the well tubing. Alternatively, the two pieces of tubing can be connected to each other by placing the one end of the tubing inside the end of the other tubing. The tubing must not be reused.

E. The water level measuring device

Electronic ”tape”, pressure transducer, water level sounder/level indicator, etc. should be capable of measuring to 0.01 foot accuracy. Recording pressure transducers, mounted above the pump, are especially helpful in tracking water levels during pumping operations, but their use must include check measurements with a water level “tape” at the start and end of each sampling event.

F. Flow measurement supplies

Graduated cylinder (size according to flow rate) and stopwatch usually will suffice.

Large graduated bucket used to record total water purged from the well.

G. Interface probe

To be used to check on the presence of free phase liquids (LNAPL, or DNAPL) before purging begins (as needed).

H. Power source (generator, nitrogen tank, battery, etc.)

When a gasoline generator is used, locate it downwind and at least 30 feet from the well so that the exhaust fumes do not contaminate samples.

I. Indicator field parameter monitoring instruments

Use of a multi-parameter instrument capable of measuring pH, oxidation/reduction potential (ORP), dissolved oxygen (DO), specific conductance, temperature, and coupled with a flow-through-cell is required when measuring all indicator field parameters, except turbidity. Turbidity is collected using a separate instrument. Record equipment/instrument identification (manufacturer, and model number).

Transparent, small volume flow-through-cells (e.g., 250 mLs or less) are preferred. This allows observation of air bubbles and sediment buildup in the cell, which can interfere with the operation of the monitoring instrument probes, to be easily detected. A small volume

cell facilitates rapid turnover of water in the cell between measurements of the indicator field parameters.

It is recommended to use a flow-through-cell and monitoring probes from the same manufacturer and model to avoid incompatibility between the probes and flow-through-cell.

Turbidity samples are collected before the flow-through-cell. A "T" connector coupled with a valve is connected between the pump's tubing and flow-through-cell. When a turbidity measurement is required, the valve is opened to allow the groundwater to flow into a container. The valve is closed and the container sample is then placed in the turbidimeter.

Standards are necessary to perform field calibration of instruments. A minimum of two standards are needed to bracket the instrument measurement range for all parameters except ORP which use a Zobell solution as a standard. For dissolved oxygen, a wet sponge used for the 100% saturation and a zero dissolved oxygen solution are used for the calibration.

Barometer (used in the calibration of the Dissolved Oxygen probe) and the conversion formula to convert the barometric pressure into the units of measure used by the Dissolved Oxygen meter are needed.

J. Decontamination supplies

Includes (for example) non-phosphate detergent, distilled/deionized water, isopropyl alcohol, etc.

K. Record keeping supplies

Logbook(s), well purging forms, chain-of-custody forms, field instrument calibration forms, etc.

L. Sample bottles

M. Sample preservation supplies (as required by the analytical methods)

N. Sample tags or labels

O. PID or FID instrument

If appropriate, to detect VOCs for health and safety purposes, and provide qualitative field evaluations.

P. Miscellaneous Equipment

Equipment to keep the sampling apparatus shaded in the summer (e.g., umbrella) and from freezing in the winter. If the pump's tubing is allowed to heat up in the warm weather, the cold groundwater may degas as it is warmed in the tubing.

8.0 EQUIPMENT/INSTRUMENT CALIBRATION

Prior to the sampling event, perform maintenance checks on the equipment and instruments according to the manufacturer's manual and/or applicable SOP. This will ensure that the equipment/instruments are working properly before they are used in the field.

Prior to sampling, the monitoring instruments must be calibrated and the calibration documented. The instruments are calibrated using U.S Environmental Protection Agency Region 1 *Calibration of Field Instruments (temperature, pH, dissolved oxygen, conductivity/specific conductance, oxidation/reduction [ORP], and turbidity),* March 23, 2017, or latest version or from one of the methods listed in 40CFR136, 40CFR141 and SW-846.

The instruments shall be calibrated at the beginning of each day. If the field measurement falls outside the calibration range, the instrument must be re-calibrated so that all measurements fall within the calibration range. At the end of each day, a calibration check is performed to verify that instruments remained in calibration throughout the day. This check is performed while the instrument is in measurement mode, not calibration mode. If the field instruments are being used to monitor the natural attenuation parameters, then a calibration check at mid-day is highly recommended to ensure that the instruments did not drift out of calibration. Note: during the day if the instrument reads zero or a negative number for dissolved oxygen, pH, specific conductance, or turbidity (negative value only), this indicates that the instrument drifted out of calibration or the instrument is malfunctioning. If this situation occurs the data from this instrument will need to be qualified or rejected.

9.0 PRELIMINARY SITE ACTIVITIES (as applicable)

Check the well for security (damage, evidence of tampering, missing lock, etc.) and record pertinent observations (include photograph as warranted).

If needed, lay out a sheet of clean polyethylene for monitoring and sampling equipment, unless equipment is elevated above the ground (e.g., on a table, etc.).

Remove well cap and if appropriate measure VOCs at the rim of the well with a PID or FID instrument and record reading in field logbook or on the well purge form.

If the well casing does not have an established reference point (usually a V-cut or indelible mark in the well casing), make one. Describe its location and record the date of the mark in the logbook (consider a photographic record as well). All water level measurements must be recorded relative to this reference point (and the altitude of this point should be determined using techniques that are appropriate to site's DQOs.

If water-table or potentiometric surface map(s) are to be constructed for the sampling event, perform synoptic water level measurement round (in the shortest possible time) before any purging and sampling activities begin. If possible, measure water level depth (to 0.01 ft.) and total well depth (to 0.1 ft.) the day before sampling begins, in order to allow for re-settlement of any particulates in the water column. This is especially important for those wells that have not been recently sampled because sediment buildup in the well may require the well to be redeveloped. If measurement of total well depth is not made the day before, it should be measured after sampling of the well is complete. All measurements must be taken from the established referenced point. Care should be taken to minimize water column disturbance.

Check newly constructed wells for the presence of LNAPLs or DNAPLs before the initial sampling round. If none are encountered, subsequent check measurements with an interface probe may not be necessary unless analytical data or field analysis signal a worsening situation. This SOP cannot be used in the presence of LNAPLs or DNAPLs. If NAPLs are present, the project team must decide upon an alternate sampling method. All project modifications must be approved and documented prior to implementation.

If available check intake depth and drawdown information from previous sampling event(s) for each well. Duplicate, to the extent practicable, the intake depth and extraction rate (use final pump dial setting information) from previous event(s). If changes are made in the intake depth or extraction rate(s) used during previous sampling event(s), for either portable or dedicated extraction devices, record new values, and explain reasons for the changes in the field logbook.

10.0 PURGING AND SAMPLING PROCEDURE

Purging and sampling wells in order of increasing chemical concentrations (known or anticipated) are preferred.

The use of dedicated pumps is recommended to minimize artificial mobilization and entrainment of particulates each time the well is sampled. Note that the use of dedicated sampling equipment can also significantly reduce the time needed to complete each sampling event, will promote consistency in the sampling, and may reduce sampling bias by having the pump's intake at a constant depth.

A. Initial Water Level

Measure the water level in the well before installing the pump if a non-dedicated pump is being used. The initial water level is recorded on the purge form or in the field logbook.

B. Install Pump

Lower pump, safety cable, tubing and electrical lines slowly (to minimize disturbance) into the well to the appropriate depth (may not be the mid-point of the screen/open interval). The Sampling and Analysis Plan/Quality Assurance Project Plan should specify the sampling depth (used previously), or provide criteria for selection of intake depth for each new well. If possible keep the pump intake at least two feet above the bottom of the well, to minimize mobilization of particulates present in the bottom of the well.

Pump tubing lengths, above the top of well casing should be kept as short as possible to minimize heating the groundwater in the tubing by exposure to sun light and ambient air temperatures. Heating may cause the groundwater to degas, which is unacceptable for the collection of samples for VOC and dissolved gases analyses.

C. Measure Water Level

Before starting pump, measure water level. Install recording pressure transducer, if used to track drawdowns, to initialize starting condition.

D. Purge Well

From the time the pump starts purging and until the time the samples are collected, the purged water is discharged into a graduated bucket to determine the total volume of groundwater purged. This information is recorded on the purge form or in the field logbook.

Start the pump at low speed and slowly increase the speed until discharge occurs. Check water level. Check equipment for water leaks and if present fix or replace the affected equipment. Try to match pumping rate used during previous sampling event(s). Otherwise, adjust pump speed until there is little or no water level drawdown. If the

minimal drawdown that can be achieved exceeds 0.3 feet, but remains stable, continue purging.

Monitor and record the water level and pumping rate every five minutes (or as appropriate) during purging. Record any pumping rate adjustments (both time and flow rate). Pumping rates should, as needed, be reduced to the minimum capabilities of the pump to ensure stabilization of the water level. Adjustments are best made in the first fifteen minutes of pumping in order to help minimize purging time. During pump start-up, drawdown may exceed the 0.3 feet target and then "recover" somewhat as pump flow adjustments are made. Purge volume calculations should utilize stabilized drawdown value, not the initial drawdown. If the initial water level is above the top of the screen do not allow the water level to fall into the well screen. The final purge volume must be greater than the stabilized drawdown volume plus the pump's tubing volume. If the drawdown has exceeded 0.3 feet and stabilizes, calculate the volume of water between the initial water level and the stabilized water level. Add the volume of the water which occupies the pump's tubing to this calculation. This combined volume of water needs to be purged from the well after the water level has stabilized before samples are collected.

Avoid the use of constriction devices on the tubing to decrease the flow rate because the constrictor will cause a pressure difference in the water column. This will cause the groundwater to degas and result in a loss of VOCs and dissolved gasses in the groundwater samples.

Note: the flow rate used to achieve a stable pumping level should remain constant while monitoring the indicator parameters for stabilization and while collecting the samples.

Wells with low recharge rates may require the use of special pumps capable of attaining very low pumping rates (e.g., bladder, peristaltic), and/or the use of dedicated equipment. For new monitoring wells, or wells where the following situation has not occurred before, if the recovery rate to the well is less than 50 mL/min., or the well is being essentially dewatered during purging, the well should be sampled as soon as the water level has recovered sufficiently to collect the volume needed for all anticipated samples. The project manager or field team leader will need to make the decision when samples should be collected, how the sample is to be collected, and the reasons recorded on the purge form or in the field logbook. A water level measurement needs to be performed and recorded before samples are collected. If the project manager decides to collect the samples using the pump, it is best during this recovery period that the pump intake tubing not be removed, since this will aggravate any turbidity problems. Samples in this specific situation may be collected without stabilization of indicator field parameters. Note that field conditions and efforts to overcome problematic situations must be recorded in order to support field decisions to deviate from normal procedures described in this SOP. If this type of problematic situation persists in a well, then water sample collection should be

changed to a passive or no-purge method, if consistent with the site's DQOs, or have a new well installed.

E. Monitor Indicator Field Parameters

After the water level has stabilized, connect the "T" connector with a valve and the flow-through-cell to monitor the indicator field parameters. If excessive turbidity is anticipated or encountered with the pump startup, the well may be purged for a while without connecting up the flow-through-cell, in order to minimize particulate buildup in the cell (This is a judgment call made by the sampler). Water level drawdown measurements should be made as usual. If possible, the pump may be installed the day before purging to allow particulates that were disturbed during pump insertion to settle.

During well purging, monitor indicator field parameters (turbidity, temperature, specific conductance, pH, ORP, DO) at a frequency of five minute intervals or greater. The pump's flow rate must be able to "turn over" at least one flow-through-cell volume between measurements (for a 250 mL flow-through-cell with a flow rate of 50 mLs/min., the monitoring frequency would be every five minutes; for a 500 mL flow-through-cell it would be every ten minutes). If the cell volume cannot be replaced in the five minute interval, then the time between measurements must be increased accordingly. Note: during the early phase of purging, emphasis should be put on minimizing and stabilizing pumping stress, and recording those adjustments followed by stabilization of indicator parameters. Purging is considered complete and sampling may begin when all the above indicator field parameters have stabilized. Stabilization is considered to be achieved when three consecutive readings are within the following limits:

Turbidity (10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized),
Dissolved Oxygen (10% for values greater than 0.5 mg/L, if three Dissolved Oxygen values are less than 0.5 mg/L, consider the values as stabilized),
Specific Conductance (3%),
Temperature (3%),
pH (± 0.1 unit),
Oxidation/Reduction Potential (±10 millivolts).

All measurements, except turbidity, must be obtained using a flow-through-cell. Samples for turbidity measurements are obtained before water enters the flow-through-cell. Transparent flow-through-cells are preferred, because they allow field personnel to watch for particulate build-up within the cell. This build-up may affect indicator field parameter values measured within the cell. If the cell needs to be cleaned during purging operations, continue pumping and disconnect cell for cleaning, then reconnect after cleaning and

continue monitoring activities. Record start and stop times and give a brief description of cleaning activities.

The flow-through-cell must be designed in a way that prevents gas bubble entrapment in the cell. Placing the flow-through-cell at a 45 degree angle with the port facing upward can help remove bubbles from the flow-through-cell (see Appendix B Low-Flow Setup Diagram). Throughout the measurement process, the flow-through-cell must remain free of any gas bubbles. Otherwise, the monitoring probes may act erratically. When the pump is turned off or cycling on/off (when using a bladder pump), water in the cell must not drain out. Monitoring probes must remain submerged in water at all times.

F. Collect Water Samples

When samples are collected for laboratory analyses, the pump's tubing is disconnected from the "T" connector with a valve and the flow-through-cell. The samples are collected directly from the pump's tubing. Samples must not be collected from the flow-through-cell or from the "T" connector with a valve.

VOC samples are normally collected first and directly into pre-preserved sample containers. However, this may not be the case for all sampling locations; the SAP/QAPP should list the order in which the samples are to be collected based on the project's objective(s). Fill all sample containers by allowing the pump discharge to flow gently down the inside of the container with minimal turbulence.

If the pump's flow rate is too high to collect the VOC/dissolved gases samples, collect the other samples first. Lower the pump's flow rate to a reasonable rate and collect the VOC/dissolved gases samples and record the new flow rate.

During purging and sampling, the centrifugal/peristaltic pump tubing must remain filled with water to avoid aeration of the groundwater. It is recommended that 1/4 inch or 3/8 inch (inside diameter) tubing be used to help ensure that the sample tubing remains water filled. If the pump tubing is not completely filled to the sampling point, use the following procedure to collect samples: collect non-VOC/dissolved gases samples first, then increase flow rate slightly until the water completely fills the tubing, collect the VOC/dissolved gases samples, and record new drawdown depth and flow rate.

For bladder pumps that will be used to collect VOC or dissolved gas samples, it is recommended that the pump be set to deliver long pulses of water so that one pulse will fill a 40 mL VOC vial.

Use pre-preserved sample containers or add preservative, as required by analytical methods, to the samples immediately after they are collected. Check the analytical methods

(e.g. EPA SW-846, 40 CFR 136, water supply, etc.) for additional information on preservation.

If determination of filtered metal concentrations is a sampling objective, collect filtered water samples using the same low flow procedures. The use of an in-line filter (transparent housing preferred) is required, and the filter size (0.45 μm is commonly used) should be based on the sampling objective. Pre-rinse the filter with groundwater prior to sample collection. Make sure the filter is free of air bubbles before samples are collected. Preserve the filtered water sample immediately. Note: filtered water samples are not an acceptable substitute for unfiltered samples when the monitoring objective is to obtain chemical concentrations of total mobile contaminants in groundwater for human health or ecological risk calculations.

Label each sample as collected. Samples requiring cooling will be placed into a cooler with ice or refrigerant for delivery to the laboratory. Metal samples after acidification to a pH less than 2 do not need to be cooled.

G. Post Sampling Activities

If a recording pressure transducer is used to track drawdown, re-measure water level with tape.

After collection of samples, the pump tubing may be dedicated to the well for re-sampling (by hanging the tubing inside the well), decontaminated, or properly discarded.

Before securing the well, measure and record the well depth (to 0.1 ft.), if not measured the day before purging began. Note: measurement of total well depth annually is usually sufficient after the initial low stress sampling event. However, a greater frequency may be needed if the well has a “silting” problem or if confirmation of well identity is needed.

Secure the well.

11.0 DECONTAMINATION

Decontaminate sampling equipment prior to use in the first well, and then following sampling of each subsequent well. Pumps should not be removed between purging and sampling operations. The pump, tubing, support cable and electrical wires which were in contact with the well should be decontaminated by one of the procedures listed below.

The use of dedicated pumps and tubing will reduce the amount of time spent on decontamination of the equipment. If dedicated pumps and tubing are used, only the initial sampling event will require decontamination of the pump and tubing.

Note if the previous equipment blank data showed that contaminant(s) were present after using the below procedure or the one described in the SAP/QAPP, a more vigorous procedure may be needed.

Procedure 1

Decontaminating solutions can be pumped from either buckets or short PVC casing sections through the pump and tubing. The pump may be disassembled and flushed with the decontaminating solutions. It is recommended that detergent and alcohol be used sparingly in the decontamination process and water flushing steps be extended to ensure that any sediment trapped in the pump is removed. The pump exterior and electrical wires must be rinsed with the decontaminating solutions, as well. The procedure is as follows:

Flush the equipment/pump with potable water.

Flush with non-phosphate detergent solution. If the solution is recycled, the solution must be changed periodically.

Flush with potable or distilled/deionized water to remove all of the detergent solution. If the water is recycled, the water must be changed periodically.

Optional - flush with isopropyl alcohol (pesticide grade; must be free of ketones {e.g., acetone}) or with methanol. This step may be required if the well is highly contaminated or if the equipment blank data from the previous sampling event show that the level of contaminants is significant.

Flush with distilled/deionized water. This step must remove all traces of alcohol (if used) from the equipment. The final water rinse must not be recycled.

Procedure 2

Steam clean the outside of the submersible pump.

Pump hot potable water from the steam cleaner through the inside of the pump. This can be accomplished by placing the pump inside a three or four inch diameter PVC pipe with end cap. Hot water from the steam cleaner jet will be directed inside the PVC pipe and the pump exterior will be cleaned. The hot water from the steam cleaner will then be pumped from the PVC pipe through the pump and collected into another container. Note: additives or solutions should not be added to the steam cleaner.

Pump non-phosphate detergent solution through the inside of the pump. If the solution is recycled, the solution must be changed periodically.

Pump potable water through the inside of the pump to remove all of the detergent solution. If the solution is recycled, the solution must be changed periodically.

Pump distilled/deionized water through the pump. The final water rinse must not be recycled.

12.0 FIELD QUALITY CONTROL

Quality control samples are required to verify that the sample collection and handling process has not compromised the quality of the groundwater samples. All field quality control samples must be prepared the same as regular investigation samples with regard to sample volume, containers, and preservation. Quality control samples include field duplicates, equipment blanks, matrix spike/matrix spike duplicates, trip blanks (VOCs), and temperature blanks.

13.0 FIELD LOGBOOK

A field log shall be kept to document all groundwater field monitoring activities (see Appendix C, example table), and record the following for each well:

Site name, municipality, state.

Well identifier, latitude-longitude or state grid coordinates.

Measuring point description (e.g., north side of PVC pipe).

Well depth, and measurement technique.

Well screen length.

Pump depth.

Static water level depth, date, time and measurement technique.

Presence and thickness of immiscible liquid (NAPL) layers and detection method.

Pumping rate, drawdown, indicator parameters values, calculated or measured total volume pumped, and clock time of each set of measurements.

Type of tubing used and its length.

Type of pump used.

Clock time of start and end of purging and sampling activity.

Types of sample bottles used and sample identification numbers.

Preservatives used.

Parameters requested for analyses.

Field observations during sampling event.

Name of sample collector(s).

Weather conditions, including approximate ambient air temperature.

QA/QC data for field instruments.

Any problems encountered should be highlighted.

Description of all sampling/monitoring equipment used, including trade names, model number, instrument identification number, diameters, material composition, etc.

14.0 DATA REPORT

Data reports are to include laboratory analytical results, QA/QC information, field indicator parameters measured during purging, field instrument calibration information, and whatever other field logbook information is needed to allow for a full evaluation of data usability.

Note: the use of trade, product, or firm names in this sampling procedure is for descriptive purposes only and does not constitute endorsement by the U.S. EPA.

15.0 REFERENCES

Cohen, R.M. and J.W. Mercer, 1993, *DNAPL Site Evaluation*; C.K. Smoley (CRC Press), Boca Raton, Florida.

Robert W. Puls and Michael J. Barcelona, *Low-Flow (Minimal Drawdown) Ground-Water Sampling Procedures*, April 1996 (EPA/540/S-95/504).

U.S. Environmental Protection Agency, 1992, *RCRA Ground-Water Monitoring: Draft Technical Guidance*; Washington, DC (EPA/530-R-93-001).

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U.S Environmental Protection Agency, Region 1, *Calibration of Field Instruments (temperature, pH, dissolved oxygen, conductivity/specific conductance, oxidation/reduction [ORP], and turbidity),* March 23, 2017 or latest version.

U.S Environmental Protection Agency, EPA SW-846.

U.S Environmental Protection Agency, 40 CFR 136.

U.S Environmental Protection Agency, 40 CFR 141.

Vroblesky, Don A., Clifton C. Casey, and Mark A. Lowery, Summer 2007, Influence of Dissolved Oxygen Convection on Well Sampling, *Ground Water Monitoring & Remediation* 27, no. 3: 49-58.

APPENDIX A

PERISTALTIC PUMPS

Before selecting a peristaltic pump to collect groundwater samples for VOCs and/or dissolved gases, (e.g., methane, carbon dioxide, etc.) consideration should be given to the following:

- The decision of whether or not to use a peristaltic pump is dependent on the intended use of the data.
- If the additional sampling error that may be introduced by this device is NOT of concern for the VOC/dissolved gases data's intended use, then this device may be acceptable.
- If minor differences in the groundwater concentrations could affect the decision, such as to continue or terminate groundwater cleanup or whether the cleanup goals have been reached, then this device should NOT be used for VOC/dissolved gases sampling. In these cases, centrifugal or bladder pumps are a better choice for more accurate results.

EPA and USGS have documented their concerns with the use of the peristaltic pumps to collect water sample in the below documents.

- "Suction Pumps are not recommended because they may cause degassing, pH modification, and loss of volatile compounds" *A Compendium of Superfund Field Operations Methods*, EPA/540/P-87/001, December 1987.
- "The agency does not recommend the use of peristaltic pumps to sample ground water particularly for volatile organic analytes" *RCRA Ground-Water Monitoring Draft Technical Guidance*, EPA Office of Solid Waste, November 1992.
- "The peristaltic pump is limited to shallow applications and can cause degassing resulting in alteration of pH, alkalinity, and volatiles loss", *Low-flow (Minimal drawdown) Ground-Water Sampling Procedures*, by Robert Puls & Michael Barcelona, April 1996, EPA/540/S-95/504.
- "Suction-lift pumps, such as peristaltic pumps, can operate at a very low pumping rate; however, using negative pressure to lift the sample can result in the loss of volatile analytes", USGS Book 9 Techniques of Water-Resources Investigation, Chapter A4. (Version 2.0, 9/2006).

APPENDIX B

SUMMARY OF SAMPLING INSTRUCTIONS

These instructions are for using an adjustable rate, submersible pump or a peristaltic pump with the pump's intake placed at the midpoint of a 10 foot or less well screen or an open interval. The water level in the monitoring well is above the top of the well screen or open interval, the ambient temperature is above 32°F, and the equipment is not dedicated. Field instruments are already calibrated. The equipment is setup according to the diagram at the end of these instructions.

1. Review well installation information. Record well depth, length of screen or open interval, and depth to top of the well screen. Determine the pump's intake depth (e.g., mid-point of screen/open interval).

2. On the day of sampling, check security of the well casing, perform any safety checks needed for the site, lay out a sheet of polyethylene around the well (if necessary), and setup the equipment. If necessary a canopy or an equivalent item can be setup to shade the pump's tubing and flow-through-cell from the sun light to prevent the sun light from heating the groundwater.

3. Check well casing for a reference mark. If missing, make a reference mark. Measure the water level (initial) to 0.01 ft. and record this information.

4. Install the pump's intake to the appropriate depth (e.g., midpoint) of the well screen or open interval. Do not turn-on the pump at this time.

5. Measure water level and record this information.

6. Turn-on the pump and discharge the groundwater into a graduated waste bucket. Slowly increase the flow rate until the water level starts to drop. Reduce the flow rate slightly so the water level stabilizes. Record the pump's settings. Calculate the flow rate using a graduated container and a stop watch. Record the flow rate. Do not let the water level drop below the top of the well screen.

If the groundwater is highly turbid or discolored, continue to discharge the water into the bucket until the water clears (visual observation); this usually takes a few minutes. The turbid or discolored water is usually from the well-being disturbed during the pump installation. If the water does not clear, then you need to make a choice whether to continue purging the well (hoping that it will clear after a reasonable time) or continue to

the next step. Note, it is sometimes helpful to install the pump the day before the sampling event so that the disturbed materials in the well can settle out.

If the water level drops to the top of the well screen during the purging of the well, stop purging the well, and do the following:

> Wait for the well to recharge to a sufficient volume so samples can be collected. This may take a while (pump may be removed from well, if turbidity is not a problem). The project manager will need to make the decision when samples should be collected and the reasons recorded in the site's log book. A water level measurement needs to be performed and recorded before samples are collected. When samples are being collected, the water level must not drop below the top of the screen or open interval. Collect the samples from the pump's tubing. Always collect the VOCs and dissolved gases samples first. Normally, the samples requiring a small volume are collected before the large volume samples are collected just in case there is not sufficient water in the well to fill all the sample containers. All samples must be collected, preserved, and stored according to the analytical method. Remove the pump from the well and decontaminate the sampling equipment.

If the water level has dropped 0.3 feet or less from the initial water level (water level measure before the pump was installed); proceed to Step 7. If the water level has dropped more than 0.3 feet, calculate the volume of water between the initial water level and the stabilized water level. Add the volume of the water which occupies the pump's tubing to this calculation. This combined volume of water needs to be purged from the well after the water level has stabilized before samples are be collected.

7. Attach the pump's tubing to the "T" connector with a valve (or a three-way stop cock). The pump's tubing from the well casing to the "T" connector must be as short as possible to prevent the groundwater in the tubing from heating up from the sun light or from the ambient air. Attach a short piece of tubing to the other end of the end of the "T" connector to serve as a sampling port for the turbidity samples. Attach the remaining end of the "T" connector to a short piece of tubing and connect the tubing to the flow-through-cell bottom port. To the top port, attach a small piece of tubing to direct the water into a calibrated waste bucket. Fill the cell with the groundwater and remove all gas bubbles from the cell. Position the flow-through-cell in such a way that if gas bubbles enter the cell they can easily exit the cell. If the ports are on the same side of the cell and the cell is cylindrical shape, the cell can be placed at a 45-degree angle with the ports facing upwards; this position should keep any gas bubbles entering the cell away from the monitoring probes and allow the gas bubbles to exit the cell easily (see Low-Flow Setup Diagram). Note:

make sure there are no gas bubbles caught in the probes' protective guard; you may need to shake the cell to remove these bubbles.

8. Turn-on the monitoring probes and turbidity meter.

9. Record the temperature, pH, dissolved oxygen, specific conductance, and oxidation/reduction potential measurements. Open the valve on the "T" connector to collect a sample for the turbidity measurement, close the valve, do the measurement, and record this measurement. Calculate the pump's flow rate from the water exiting the flow-through-cell using a graduated container and a stop watch, and record the measurement. Measure and record the water level. Check flow-through-cell for gas bubbles and sediment; if present, remove them.

10. Repeat Step 9 every 5 minutes or as appropriate until monitoring parameters stabilized. Note: at least one flow-through-cell volume must be exchanged between readings. If not, the time interval between readings will need to be increased. Stabilization is achieved when three consecutive measurements are within the following limits:

Turbidity (10% for values greater than 5 NTUs; if three Turbidity values are less than 5 NTUs, consider the values as stabilized),
Dissolved Oxygen (10% for values greater than 0.5 mg/L, if three Dissolved Oxygen values are less than 0.5 mg/L, consider the values as stabilized),
Specific Conductance (3%),
Temperature (3%),
pH (± 0.1 unit),
Oxidation/Reduction Potential (±10 millivolts).

If these stabilization requirements do not stabilize in a reasonable time, the probes may have been coated from the materials in the groundwater, from a buildup of sediment in the flow-through-cell, or a gas bubble is lodged in the probe. The cell and the probes will need to be cleaned. Turn-off the probes (not the pump), disconnect the cell from the "T" connector and continue to purge the well. Disassemble the cell, remove the sediment, and clean the probes according to the manufacturer's instructions. Reassemble the cell and connect the cell to the "T" connector. Remove all gas bubbles from the cell, turn-on the probes, and continue the measurements. Record the time the cell was cleaned.

11. When it is time to collect the groundwater samples, turn-off the monitoring probes, and disconnect the pump's tubing from the "T" connector. If you are using a centrifugal or peristaltic pump check the pump's tubing to determine if the tubing is completely filled with water (no air space).

All samples must be collected and preserved according to the analytical method. VOCs and dissolved gases samples are normally collected first and directly into pre-preserved sample containers. However, this may not be the case for all sampling locations; the SAP/QAPP should list the order in which the samples are to be collected based on the project's objective(s). Fill all sample containers by allowing the pump discharge to flow gently down the inside of the container with minimal turbulence.

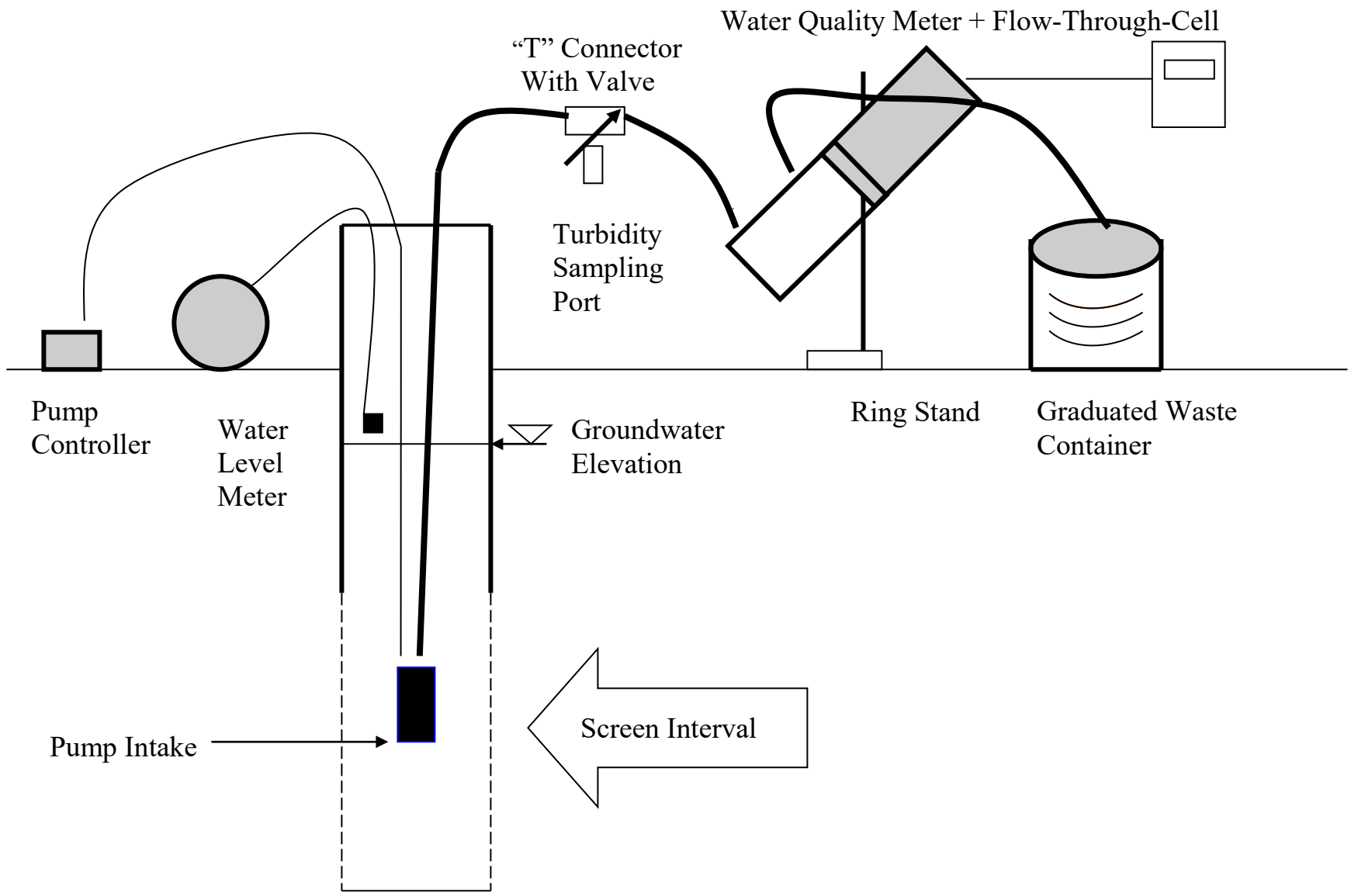
If the pump's tubing is not completely filled with water and the samples are being collected for VOCs and/or dissolved gases analyses using a centrifugal or peristaltic pump, do the following:

> All samples must be collected and preserved according to the analytical method. The VOCs and the dissolved gases (e.g., methane, ethane, ethene, and carbon dioxide) samples are collected last. When it becomes time to collect these samples increase the pump's flow rate until the tubing is completely filled. Collect the samples and record the new flow rate.

12. Store the samples according to the analytical method.

13. Record the total purged volume (graduated waste bucket). Remove the pump from the well and decontaminate the sampling equipment.

Low-Flow Setup Diagram



APPENDIX C

EXAMPLE (Minimum Requirements)

WELL PURGING-FIELD WATER QUALITY MEASUREMENTS FORM

Location (Site/Facility Name)_____ Depth to _____/_____ of screen
Well Number_____ Date_____ (below MP) top bottom
Field Personnel_____ Pump Intake at (ft. below MP)_____
Sampling Organization_____ Purging Device; (pump type)_____
Identify MP_____ Total Volume Purged _____

Clock Time 24 HR	Water Depth below MP ft	Pump Dial[1]	Purge Rate ml/min	Cum. Volume Purged liters	Temp. "C	Spec. Cond.[2] µS/cm	pH	ORP[3] mv	DO mg/L	Tur-bidity NTU	Comments
Stabilization Criteria					3%	3%	±0.1	±10 mv	10%	10%	

1. Pump dial setting (for example: hertz, cycles/min, etc).
2. µSiemens per cm(same as µmhos/cm)at 25°C.
3. Oxidation reduction potential (ORP)

Supplement D – NYSDOH Vapor and Air Sampling

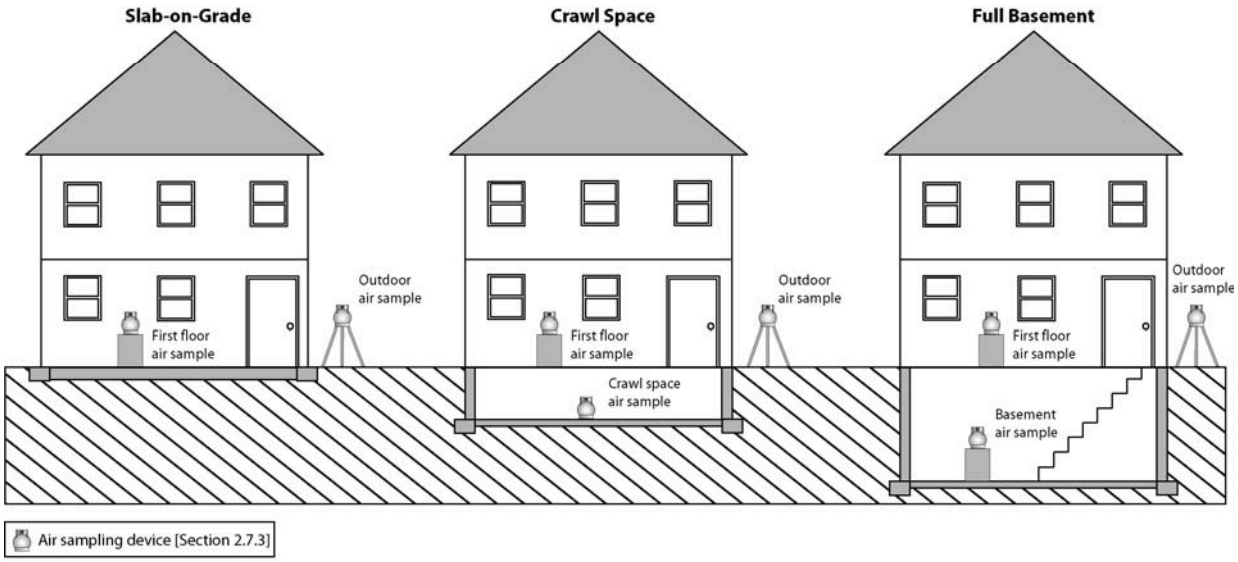


Figure 2.1
Schematic of indoor and outdoor air sampling locations

2.6.4 Outdoor air

Typically, an outdoor air sample is collected outside of each building where an indoor air sample is collected. However, if several buildings are being sampled within a localized area, representative outdoor air samples may be appropriate. For example, one outdoor air sample may be sufficient for three houses being sampled in a cul-de-sac. Outdoor air samples should be collected from a representative upwind location, away from wind obstructions (e.g., trees or bushes), and at a height above the ground to represent breathing zones (3 to 5 feet) [Figure 2.1]. A representative sample is one that is not biased toward obvious sources of volatile chemicals (e.g., automobiles, lawn mowers, oil storage tanks, gasoline stations, industrial facilities, etc.). For buildings with HVAC systems that draw outdoor air into the building, an outdoor air sample collected near the outdoor air intake may be appropriate.

2.7 Sampling protocols

The procedures recommended here may be modified depending on site-specific conditions, the sampling objectives, or emerging technologies and methodologies. Alternative sampling procedures should be described thoroughly and proposed in a work plan submitted for review by the State. The State will review and comment on the proposed procedure and consider the efficacy of the alternative sampling procedure based on the objectives of investigation. In all cases, work plans should thoroughly describe the proposed sampling procedure. Similarly, the procedures that were implemented in the field should be documented and included in the final report of the sampling results.

2.7.1 Soil vapor

Soil vapor probe installations [Figure 2.2] may be permanent, semi-permanent or temporary. In general, permanent or semi-permanent installations are preferred for data consistency reasons and to ensure outdoor air infiltration does not occur. Temporary probes should only be used if measures are taken to ensure that an adequate surface seal is created to prevent outdoor air infiltration and if tracer gas is used at every sampling location. [See Section 2.7.5 for additional information about the use of tracer gas when collecting soil vapor samples.] Soil vapor implants or probes should be constructed in the same manner at all sampling locations to minimize possible discrepancies. The following procedures should be included in any permanent construction protocol:

a. implants should be installed using an appropriate method based on site conditions (e.g., direct push, manually driven, auger — if necessary to attain the desired depth or if sidewall smearing is a concern, etc.);

b. porous, inert backfill material (e.g., glass beads, washed #1 crushed stone, etc.) should be used to create a sampling zone 1 to 2 feet in length;

c. implants should be fitted with inert tubing (e.g., polyethylene, stainless steel, nylon, Teflon®, etc.) of the appropriate size (typically 1/8 inch to 1/4 inch diameter) and of laboratory or food grade quality to the surface;

d. soil vapor probes should be sealed above the sampling zone with a bentonite slurry for a minimum distance of 3 feet to prevent outdoor air infiltration and the remainder of the borehole backfilled with clean material;

e. for multiple probe depths, the borehole should be grouted with bentonite between probes to create discrete sampling zones or separate nested probes should be installed [Figure 2.2]; and

f. steps should be taken to minimize infiltration of water or outdoor air and to prevent accidental damage (e.g., setting a protective casing around the top of the probe tubing and grouting in place to the top of bentonite, sloping the ground surface to direct water away from the borehole like a groundwater monitoring well, etc.).

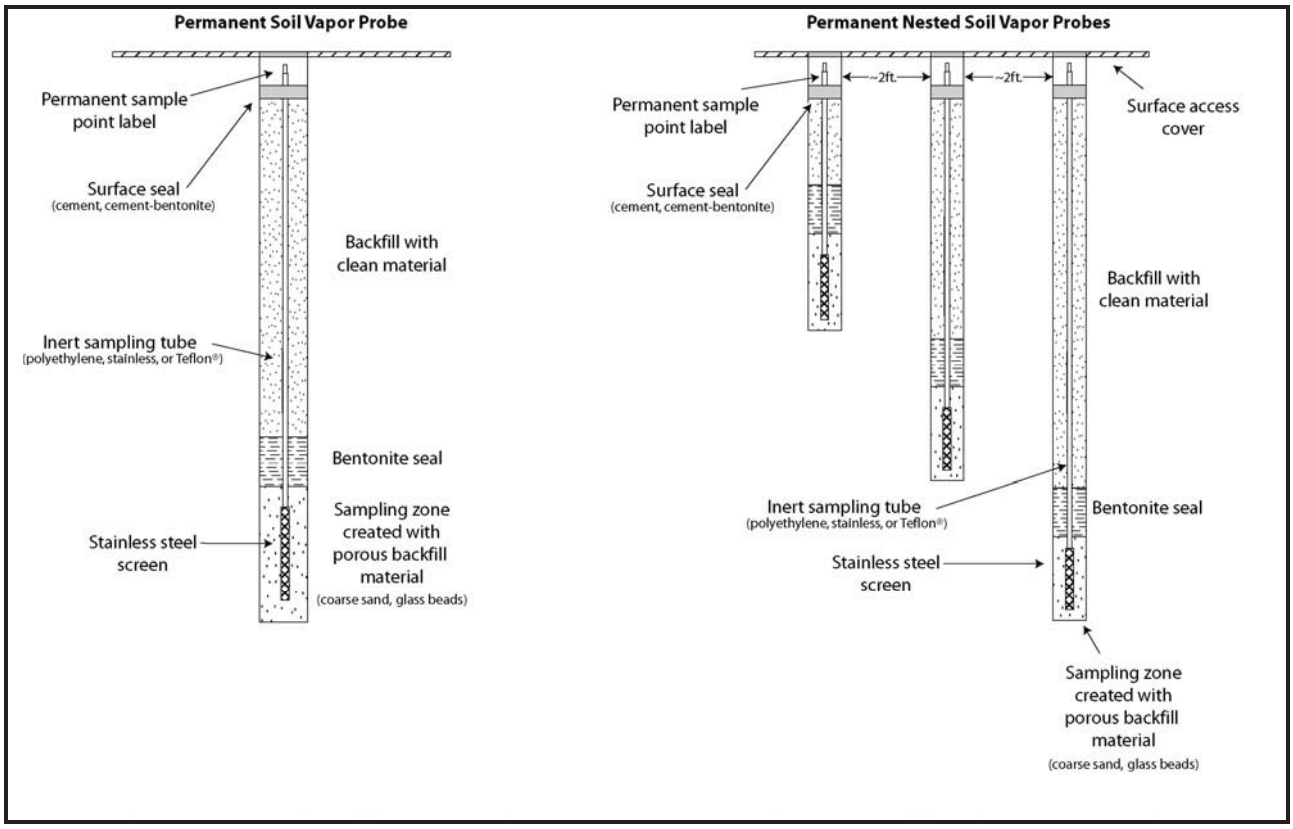


Figure 2.2

Schematics of a generic permanent soil vapor probe and permanent nested soil vapor probes

[Note: Many variations exist and may be proposed in a work plan. Proposed installations should meet the sampling objectives and requirements of the analytical methods.]

To obtain representative samples and to minimize possible discrepancies, soil vapor samples should be collected in the following manner at all locations:

a. at least 24 hours after the installation of permanent probes and shortly after the installation of temporary probes, one to three implant volumes (i.e., the volume of the sample probe and tube) should be purged prior to collecting the samples;

b. flow rates for both purging and collecting should not exceed 0.2 liters per minute to minimize outdoor air infiltration during sampling;

c. samples should be collected, using conventional sampling methods, in an appropriate container — one which

   i. meets the objectives of the sampling (e.g., investigation of areas where low or high concentrations of volatile chemicals are expected; to minimize losses of volatile chemicals that are susceptible to photodegradation),

   ii. is consistent with the sampling and analytical methods (e.g., low flow rate; Summa® canisters if analyzing by using EPA Method TO-15), and

   iii. is certified clean by the laboratory;

d. sample size depends upon the volume of that will achieve minimum reporting limits [Section 2.9]; and

e. a tracer gas (e.g., helium, butane, sulfur hexafluoride, etc.) should be used when collecting soil vapor samples to verify that adequate sampling techniques are being implemented (i.e., to verify infiltration of outdoor air is not occurring) [Section 2.7.5].

In some cases, weather conditions may present certain limitations on soil vapor sampling. For example, condensation in the sample tubing may be encountered during winter sampling due to low outdoor air temperatures. Devices, such as tube warmers, may be used to address these conditions. Anticipated limitations to the sampling should be discussed prior to the sampling event so appropriate measures can be taken to address these difficulties and produce representative and reliable data.

When soil vapor samples are collected, the following actions should be taken to document local conditions during sampling that may influence interpretation of the results:

a. if sampling near a commercial or industrial building, uses of volatile chemicals during normal operations of the facility should be identified;

b. outdoor plot sketches should be drawn that include the site, area streets, neighboring commercial or industrial facilities (with estimated distance to the site), outdoor air sampling locations (if applicable), and compass orientation (north);

c. weather conditions (e.g., precipitation and outdoor temperature) should be noted for the past 24 to 48 hours; and

d. any pertinent observations should be recorded, such as odors and readings from field instrumentation.

Additional information that could be gathered to assist in the interpretation of the results includes barometric pressure, wind speed and wind direction.

The field sampling team should maintain a sample log sheet summarizing the following:

a. sample identification,

b. date and time of sample collection,

c. sampling depth,

d. identity of samplers,

e. sampling methods and devices,

f. purge volumes,

g. volume of soil vapor extracted,

h. if canisters used, the vacuum before and after samples were collected,

i. apparent moisture content (dry, moist, saturated, etc.) of the sampling zone, and

j. chain of custody protocols and records used to track samples from sampling point to analysis.

2.7.2 Sub-slab vapor

During colder months, heating systems should be operating to maintain normal indoor air temperatures (i.e., 65 – 75 °F) for at least 24 hours prior to and during the scheduled sampling time. Prior to installation of the sub-slab vapor probe, the building floor should be inspected and any penetrations (cracks, floor drains, utility perforations, sumps, etc.) should be noted and recorded. Probes should be installed at locations where the potential for ambient air infiltration via floor penetrations is minimal.

Sub-slab vapor probe installations [Figure 2.3] may be permanent, semi-permanent or temporary. A vacuum should not be used to remove drilling debris from the sampling port. Sub-slab implants or probes should be constructed in the same manner at all sampling locations to minimize possible discrepancies. The following procedures should be included in any construction protocol:

a. permanent recessed probes should be constructed with brass or stainless steel tubing and fittings;

b. temporary probes should be constructed with inert tubing (e.g., polyethylene, stainless steel, nylon, Teflon®, etc.) of the appropriate size (typically 1/8 inch to 1/4 inch diameter), and of laboratory or food grade quality;

c. tubing should not extend further than 2 inches into the sub-slab material;

d. porous, inert backfill material (e.g., glass beads, washed #1 crushed stone, etc.) should be added to cover about 1 inch of the probe tip for permanent installations; and

e. the implant should be sealed to the surface with non-VOC-containing and non-shrinking products for temporary installations (e.g., permagum grout, melted beeswax, putty, etc.) or cement for permanent installations.

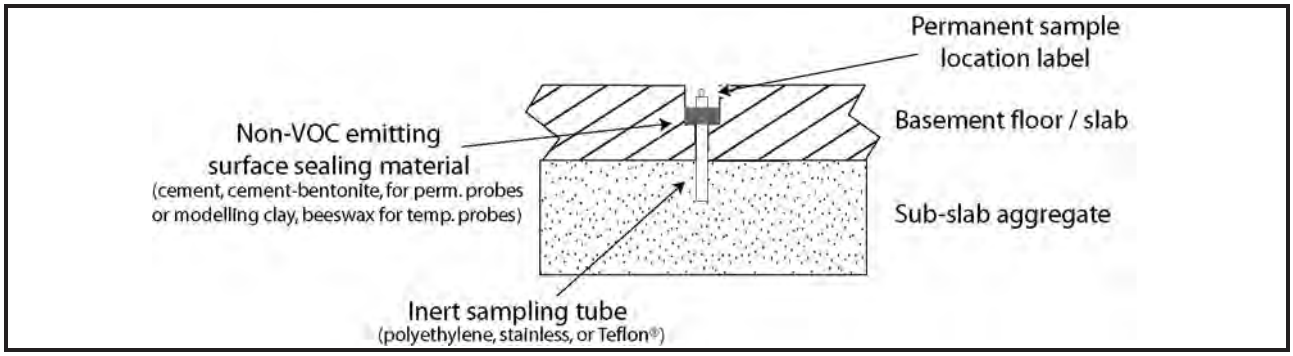


Figure 2.3

Schematic of a generic sub-slab vapor probe

[Note: Many variations exist and may be proposed in a work plan. Proposed installations should meet the sampling objectives and requirements of the analytical methods.]

To obtain representative samples that meet the data quality objectives, sub-slab vapor samples should be collected in the following manner:

a. after installation of the probes, one to three volumes (i.e., the volume of the sample probe and tube) must be purged prior to collecting the samples to ensure samples collected are representative;

b. flow rates for both purging and collecting must not exceed 0.2 liters per minute to minimize ambient air infiltration during sampling; and

c. samples should be collected, using conventional sampling methods, in an appropriate container — one which

    i. meets the objectives of the sampling (e.g., investigation of areas where low or high concentrations of volatile chemicals are expected; to minimize losses of volatile chemicals that are susceptible to photodegradation),

    ii. is consistent with the sampling and analytical methods (e.g., low flow rate; Summa® canisters if analyzing by using EPA Method TO-15), and

    iii. is certified clean by the laboratory;

d. sample size depends upon the volume of that will achieve minimum reporting limits [Section 2.9], the flow rate, and the sampling duration; and

e. ideally, samples should be collected over the same period of time as concurrent indoor and outdoor air samples.

When sub-slab vapor samples are collected, the following actions should be taken to document conditions during sampling and ultimately to aid in the interpretation of the sampling results [Section 3]:

a. historic and current storage and uses of volatile chemicals should be identified, especially if sampling within a commercial or industrial building (e.g., use of volatile chemicals in commercial or industrial processes and/or during building maintenance);

b. the use of heating or air conditioning systems during sampling should be noted;

c. floor plan sketches should be drawn that include the floor layout with sampling locations, chemical storage areas, garages, doorways, stairways, location of basement sumps or subsurface drains and utility perforations through building foundations, HVAC system air supply and return registers, compass orientation (north), footings that create separate foundation sections, and any other pertinent information should be completed;

d. outdoor plot sketches should be drawn that include the building site, area streets, outdoor air sampling locations (if applicable), compass orientation (north), and paved areas;

e. weather conditions (e.g., precipitation and indoor and outdoor temperature) and ventilation conditions (e.g., heating system active and windows closed) should be reported; and

f. any pertinent observations, such as spills, floor stains, smoke tube results, odors and readings from field instrumentation (e.g., vapors via PID, ppbRAE, Jerome Mercury Vapor Analyzer, etc.), should be recorded.

Additional documentation that could be gathered to assist in the interpretation of the results includes information about air flow patterns and pressure relationships obtained by using smoke tubes or other devices (especially between floor levels and between suspected

contaminant sources and other areas), the barometric pressure and photographs to accompany floor plan sketches.

The field sampling team should maintain a sample log sheet summarizing the following:

a. sample identification,
b. date and time of sample collection,
c. sampling depth,
d. identity of samplers,
e. sampling methods and devices,
f. soil vapor purge volumes,
g. volume of soil vapor extracted,
h. if canisters used, vacuum of canisters before and after samples collected,
i. apparent moisture content (dry, moist, saturated, etc.) of the sampling zone, and
j. chain of custody protocols and records used to track samples from sampling point to analysis.

2.7.3 Indoor air

[Reference: NYSDOH's *Indoor Air Sampling & Analysis Guidance (February 1, 2005)*]

During colder months, heating systems should be operating to maintain normal indoor air temperatures (i.e., 65 – 75 °F) for at least 24 hours prior to and during the scheduled sampling time. If possible, prior to collecting indoor samples, a pre-sampling inspection [Section 2.11.1] should be performed to evaluate the physical layout and conditions of the building being investigated, to identify conditions that may affect or interfere with the proposed sampling, and to prepare the building for sampling. This process is described in Section 2.11.1.

In general, indoor air samples should be collected in the following manner:

a. sampling duration should reflect the exposure scenario being evaluated without compromising the detection limit or sample collection flow rate (e.g., an 8 hour sample from a workplace with a single shift versus a 24 hour sample from a workplace with multiple shifts). To ensure that air is representative of the locations sampled and to avoid undue influence from sampling personnel, samples should be collected for at least 1 hour. If the goal of the sampling is to represent average concentrations over longer periods, then longer duration sampling periods may be appropriate. Typically, 24 hour samples are collected from residential settings;
b. personnel should avoid lingering in the immediate area of the sampling device while samples are being collected;
c. sample flow rates must conform to the specifications in the sample collection method and, if possible, should be consistent with the flow rates for concurrent outdoor air and sub-slab samples; and
d. samples must be collected, using conventional sampling methods, in an appropriate container — one which

i. meets the objectives of the sampling (e.g., investigation of areas where low or high concentrations of volatile chemicals are expected; to minimize losses of volatile chemicals that are susceptible to photodegradation),

ii. is consistent with the sampling and analytical methods (e.g., low flow rate; Summa® canisters if analyzing by using EPA Method TO-15), and

iii. is certified clean by the laboratory.

At sites with tetrachloroethene contamination, passive air monitors that are specifically analyzed for tetrachloroethene (i.e., "perc badges") are commonly used to collect indoor and outdoor air samples. If site characterization activities indicate that degradation products of tetrachloroethene also represent a vapor intrusion concern, perc badges may be used to indicate the likelihood of vapor intrusion (i.e., by using tetrachloroethene as a surrogate) followed, as appropriate, by more comprehensive sampling and laboratory analyses to quantify both tetrachloroethene and its degradation products. Perc badge samples ideally should be collected over a twenty-four hour period, but for no less than eight hours.

The following actions should be taken to document conditions during indoor air sampling and ultimately to aid in the interpretation of the sampling results [Section 3]:

a. historic and current uses and storage of volatile chemicals should be identified, especially if sampling within a commercial or industrial building (e.g., use of volatile chemicals in commercial or industrial processes and/or during building maintenance);

b. a product inventory survey documenting sources of volatile chemicals present in the building during the indoor air sampling that could potentially influence the sample results should be completed [Section 2.11.2];

c. the use of heating or air conditioning systems during sampling should be noted;

d. floor plan sketches should be drawn that include the floor layout with sampling locations, chemical storage areas, garages, doorways, stairways, location of basement sumps or subsurface drains and utility perforations through building foundations, HVAC system supply and return registers, compass orientation (north), footings that create separate foundation sections, and any other pertinent information should be completed;

e. outdoor plot sketches should be drawn that include the building site, area streets, outdoor air sampling locations (if applicable), compass orientation (north), and paved areas;

f. weather conditions (e.g., precipitation and indoor and outdoor temperature) and ventilation conditions (e.g., heating system active and windows closed) should be reported; and

g. any pertinent observations, such as spills, floor stains, smoke tube results, odors and readings from field instrumentation (e.g., vapors via PID, ppbRAE, Jerome Mercury Vapor Analyzer, etc.), should be recorded.

Additional documentation that could be gathered to assist in the interpretation of the results includes information about air flow patterns and pressure relationships obtained by using smoke tubes or other devices (especially between floor levels and between suspected contaminant sources and other areas), the barometric pressure and photographs to accompany floor plan sketches.

The field sampling team should maintain a sample log sheet summarizing the following:

a. sample identification,
b. date and time of sample collection,
c. sampling height,
d. identity of samplers,
e. sampling methods and devices,
f. depending upon the method, volume of air sampled,
g. if canisters are used, vacuum of canisters before and after samples collected, and
h. chain of custody protocols and records used to track samples from sampling point to analysis.

2.7.4 Outdoor air

Outdoor air samples should be collected simultaneously with indoor air samples to evaluate the potential influence, if any, of outdoor air on indoor air quality. They may also be collected simultaneously with soil vapor samples to identify potential outdoor air interferences associated with infiltration of outdoor air into the sampling apparatus while the soil vapor was collected. To obtain representative samples that meet the data quality objectives, outdoor air samples should be collected in a manner consistent with that for indoor air samples (described in Section 2.7.3).

The following actions should be taken to document conditions during outdoor air sampling and ultimately to aid in the interpretation of the sampling results [Section 3]:

a. outdoor plot sketches should be drawn that include the building site, area streets, outdoor air sampling locations, the location of potential interferences (e.g., gasoline stations, factories, lawn movers, etc.), compass orientation (north), and paved areas;
b. weather conditions (e.g., precipitation and outdoor temperature) should be reported; and
c. any pertinent observations, such as odors, readings from field instrumentation, and significant activities in the vicinity (e.g., operation of heavy equipment or dry cleaners) should be recorded.

2.7.5 Tracer gas

When collecting soil vapor samples as part of a vapor intrusion evaluation, a tracer gas serves as a quality assurance/quality control measure to verify the integrity of the soil vapor probe seal. Without the use of a tracer, there is no way to verify that a soil vapor sample has not been diluted by outdoor air.

Depending on the nature of the contaminants of concern, a number of different compounds can be used as a tracer. Typically, sulfur hexafluoride (SF_6) or helium are used as tracers because they are readily available, have low toxicity, and can be monitored with portable measurement devices. Butane and propane (or other gases) could also be used as a tracer in some situations. Compounds other than those mentioned here may be appropriate, provided they meet project-specific data quality objectives. Where applicable, steps should

be taken to ensure that the gas used by the laboratory to clean the air sampling container is different from the gas used as a tracer during sampling (e.g., helium).

The protocol for using a tracer gas is straightforward: simply enrich the atmosphere in the immediate vicinity of the area where the probe intersects the ground surface with the tracer gas, and measure a vapor sample from the probe for the presence of high concentrations (> 10%) of the tracer. A cardboard box, a plastic pail, or even a garbage bag can serve to keep the tracer gas in contact with the probe during the testing. If there are concerns about infiltration of ambient air through other parts of the sampling train (such as around the fittings, not just at the probe/ground interface), then consideration should be given to ensuring that the tracer gas is in contact with the entire sampling apparatus. In these cases, field personnel may prefer to use a liquid tracer — soaking paper towels with a liquid tracer and placing the towels around the probe/ground interface, around fittings, and/or in the corner of a shroud.

There are two basic approaches to testing for the tracer gas:

1. include the tracer gas in the list of target analytes reported by the laboratory; or
2. use a portable monitoring device to analyze a sample of soil vapor for the tracer prior to and after sampling for the compounds of concern. (Note that the tracer gas samples can be collected via syringe, Tedlar® bag etc. They need not be collected in Summa® canisters or minicans.)

The advantage of the second approach is that the real time tracer sampling results can be used to confirm the integrity of the probe seals prior to formal sample collection.

Figure 2.4 depicts common methods for using tracer gas. In examples a, b and c, the tracer gas is released in the enclosure prior to initially purging the sample point. Care should be taken to avoid excessive purging prior to sample collection. Care should also be taken to prevent pressure build-up in the enclosure during introduction of the tracer gas. Inspection of the installed sample probe, specifically noting the integrity of the surface seal and the porosity of the soil in which the probe is installed, will help to determine the tracer gas setup. Figure 2.4a may be most effective at preventing tracer gas infiltration, however, it may not be appropriate in some situations depending on site-specific conditions. Figures 2.4b and 2.4c may be sufficient for probes installed in tight soils with well-constructed surface seals. Figure 2d provides an example of using a liquid tracer. In all cases, the same tracer gas application should be used for all probes at any given site.

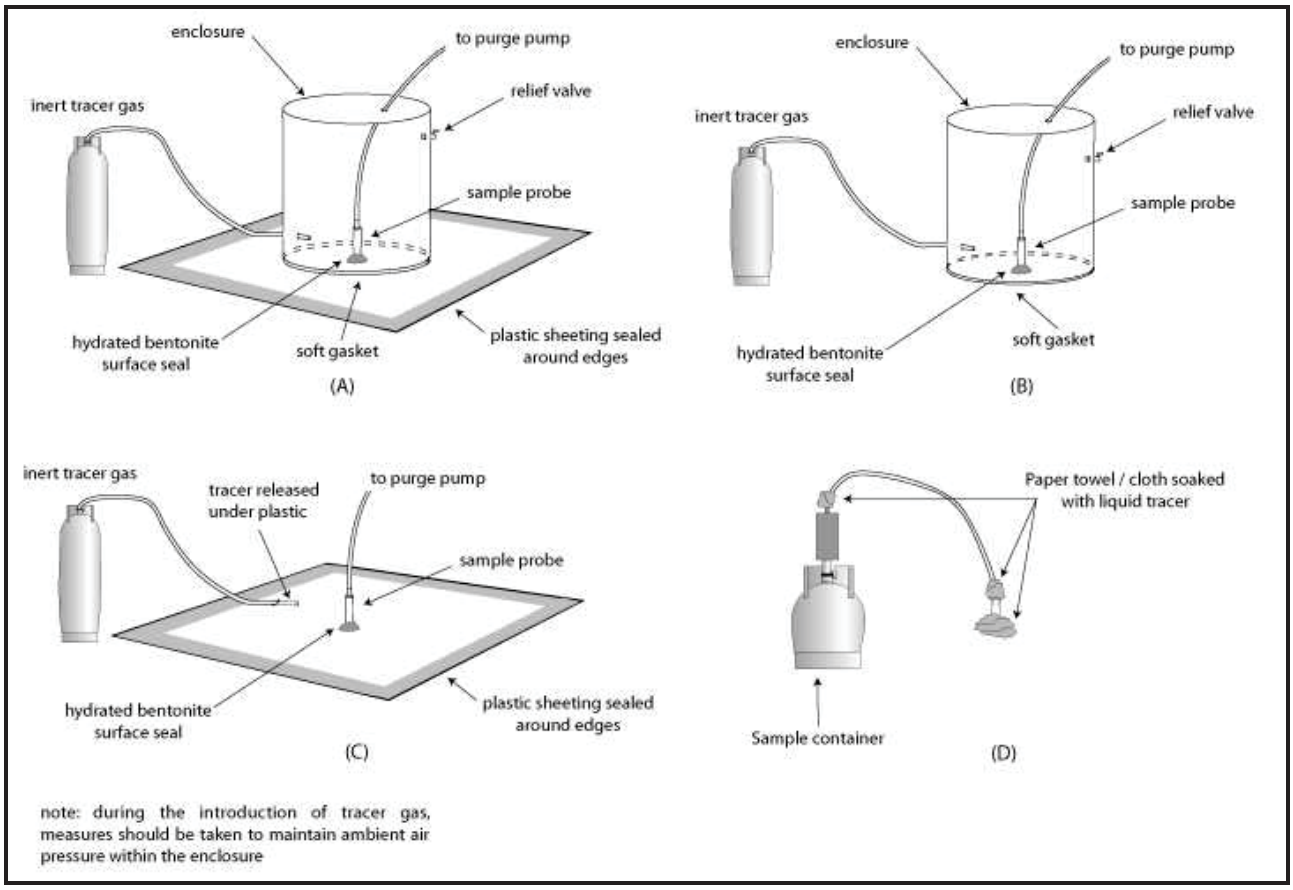


Figure 2.4
Schematics of generic tracer gas applications when collecting soil vapor samples

Because minor leakage around the probe seal should not materially affect the usability of the soil vapor sampling results, the mere presence of the tracer gas in the sample should not be a cause for alarm. Consequently, portable field monitoring devices with detection limits in the low ppm range are more than adequate for screening samples for the tracer. If high concentrations (> 10%) of tracer gas are observed in a sample, the probe seal should be enhanced to reduce the infiltration of outdoor air.

Where permanent or semi-permanent sampling probes are used, tracer gas samples should be collected at each of the sampling probes during the initial stages of a soil vapor sampling program. If the results of the initial samples indicate that the probe seals are adequate, reducing the number of locations at which tracer gas samples are employed may be considered. At a minimum, tracer gas samples should be collected with at least 10% of the soil vapor samples collected in subsequent sampling rounds. When using permanent soil vapor probes as part of a long-term monitoring program, annual testing of the probe integrity is recommended. Where temporary probes are used, tracer gas should be used at every sampling location, every time.

Supplement E – Decontamination

1.0 Purpose and Scope

This SOP supplement provides guidance to project personnel for the decontamination of field equipment, but does not specifically address all of the required procedures, and is intended to be used in conjunction with available operating manuals supplied by equipment manufacturers. Decontamination must be performed in accordance with other relevant project-specific documentation, including work plans, sampling and analysis plans, health and safety plans, quality assurance project plans, and additional SOPs, as appropriate.

2.0 General

Decontamination of sampling and heavy equipment, as well as personal protective equipment (PPE), is performed as a quality assurance measure and a safety precaution. Decontamination prevents cross-contamination between samples, minimizes contaminant transport (it is critical that equipment used in one area not serve as a source of contamination of another), and helps to maintain a clean working environment for the safety of field personnel. General decontamination requirements will be specified in project plans. Note: All decontamination procedures must comply with specific requirements when sampling for per- and polyfluoroalkyl substances (PFAS).

Field personnel will review and be familiar with required decontamination procedures, including those for cleaning field equipment, proper storage of cleaned field equipment, and for properly disposing of waste generated from decontamination procedures. Decontamination conducted on site will be performed in a designated, controlled location that will not impact collected samples. Decontamination activities will be appropriately documented in the field notes. Wastes generated in the field will be collected, stored, and properly disposed in accordance with applicable project requirements.

Decontamination consists of physically removing contaminants from the surface of equipment and/or materials potentially exposed to contaminants. A decontamination plan assumes that protective clothing and equipment that leave the exclusion zone are contaminated, and a system is established to wash and rinse non-disposable equipment and dispose of disposable equipment.

Decontamination procedures will vary depending on project-specific requirements as listed in the project-specific work plan, type of equipment, and the required analytical parameters. The effectiveness of the decontamination procedure is verified by collecting and analyzing equipment blank samples (as required).

To minimize or eliminate the need for decontamination, it is recommended that dedicated disposable equipment be used whenever possible.

Document all decontamination activities, and flag equipment with decontamination issues, in fieldwork log books and related fieldwork forms.

3.0 Responsibilities

3.1 Fieldwork Manager

The Fieldwork Manager (FM), in conjunction with the Project Manager (PM), is responsible for overall compliance with SOPs. The FM, or designee, is responsible for ensuring and verifying that all equipment and materials are decontaminated, as required.

3.2 Site Personnel

Site personnel are required to read SOP documentation before engaging in fieldwork activities. The FM will inform personnel who will be responsible for decontamination of specific equipment.

4.0 Procedures

These are standard (typically applicable) operating procedures, which may be varied or changed as required, dependent on site conditions, equipment limitations or limitations imposed by the procedure. In all instances, the ultimate procedures employed should be documented. All decontamination procedures are to be modified, as appropriate, when sampling for PFAS (see applicable sampling SOPs).

Decontaminate non-disposable sampling equipment used at the site both before activities begin and after each sample is collected. Decontaminate drilling and excavation equipment both before activities begin and between each investigation location. Take care that materials and solutions used for decontamination procedures are themselves not hazardous or could potentially contaminate samples (e.g., solvents, acids).

4.1 Decontamination Area

A localized decontamination area should be establish where decontamination fluids and soil wastes can be managed and controlled with minimal risk to the surrounding environment. Decontamination should be performed in a non-contaminated area (as possible), that is large enough to allow temporary storage of cleaned equipment and materials before use, as well as to stage drums of decontamination investigation-derived waste (IDW).

In the case of large decontamination areas (e.g., hollow-stem-auger decontamination), line each area with a heavy-gauge plastic sheeting and include a collection system designed to capture potential decontamination IDW. Decontamination areas will, in all cases, be laid out in such a way as to prevent overspray while performing equipment and personnel decontamination.

Smaller decontamination tasks, such as the cleaning of soil or water sampling equipment, and Geoprobe drive rods and barrels, may take place at the sampling location. In this case, all required decontamination supplies and equipment must be brought to the sampling location. This decontamination will use various containment systems to capture the decontamination IDW, which can then be transferred to larger containers as needed.

4.2 Health and Safety Precautions

Decontamination procedures may involve exposure to contaminants in site media and/or dangerous materials used during decontamination (e.g., solvents or acids), and physical hazards associated with the operation of the decontamination equipment. All work should be performed in accordance with the HASP, including decontamination of PPE. Safety Data Sheets for any solvents/chemical stored or used during fieldwork should be available at the site. At a minimum, eye protection, safety shoes, and gloves are to be worn. There are several types of gloves that may be worn, depending on equipment being cleaned, type and extent of equipment contamination, and cleaning solutions or solvents being used. Nitrile gloves (or similar) may be worn when the equipment to be decontaminated is not heavily coated with constituents such as tars/oils. In cases where heavy accumulations of tars/oils are present on the equipment, neoprene or similar chemically compatible gloves are recommended. If a potential for skin contact exists, protective clothing should be worn.

4.3 General Equipment Decontamination Procedures

All sampling equipment must be decontaminated before use to ensure that contaminants have not been introduced to the sample during the sampling process through contact with the sampling device. Monitoring well riser pipes, screens and drilling augers must also be decontaminated, as appropriate, to prevent the introduction of contaminants.

Unless the decontaminated sampling devices that will come in contact with samples are to be used immediately, they should be wrapped in aluminum foil, shiny side out, and stored in a designated “clean” area. Field equipment can also be stored in plastic bags to eliminate the potential for contamination. Larger size equipment, such drill rods, backhoe buckets, etc. need not be wrapped or covered, but must not be stored directly on the ground surface. Field equipment should be inspected and decontaminated prior to use if the equipment has been stored for long periods of time.

4.4 Decontamination Equipment

The following is a list equipment and materials typically needed to perform decontamination:

- Health and safety equipment, including appropriate PPE
- Plastic sheeting (to serve as secondary containment for liquids and protect equipment)
- Brushes and flat-bladed scrapers
- Garden-type water sprayers (without oil-lubricated, moving parts)
- High-pressure washer or portable steam cleaner
- Sump or collection system for contaminated liquid
- Wash basins and buckets
- Spray and rinse bottles
- Potable water, distilled/deionized water (DIW), and laboratory-grade detergent

- Isopropyl alcohol (free of ketones) or methanol (can be wipes or diluted with DIW)
- Airtight, sealable plastic baggies
- Plastic waste bags
- Leak-tight liquid waste containers (55-gallon drums or similar)
- Bulk solid waste containers (55-gallon drums, or similar)

4.5 Specific Decontamination Procedures

For all procedures, decontamination fluids and other wastes may be transferred from smaller to larger containers (e.g., 55-gallon drums or 5-gallon buckets, with tight fitting lids, and transported to the IDW storage facility.

4.5.1 Sampling Equipment

Conduct consistent decontamination of sampling equipment to ensure the quality of the samples collected. Decontaminate all sampling equipment that comes into contact with potentially contaminated samples. Disposable equipment intended for one-time use that is factory-wrapped generally does not need to be decontaminated before use, unless evidence of contamination is present.

Disposable equipment (e.g., water bailers, plastic scoops, VOC sampling syringes) is preferred over reusable equipment; use wherever appropriate. Decontaminate sampling equipment, including split-spoon samplers, Geoprobe Macro-Core cutting shoes, hand augers, reusable bailers, spoons, trowels, and shovels used to collect samples for chemical analyses before sampling at a new sampling location. All decontamination fluids will be captured in a containment system as appropriate.

Take the following steps to decontaminate non-dedicated, non-disposable sampling equipment:

1. Remove as much gross contamination (such as pieces of soil) as possible off equipment at the sampling site.
2. Wash water-resistant equipment thoroughly and vigorously with potable water containing non-phosphate laboratory-grade detergent such as Liquinox®, Alconox®, or equivalent, and using a bristle brush or similar utensil to remove any remaining residual contamination.
3. Rinse equipment thoroughly with potable water.
4. Repeat the first three steps as necessary until all residue is removed.
5. Rinse equipment thoroughly with DIW.
6. If metals are a constituent of interest, rinse with 10% nitric acid and then with DIW.
7. If organics are constituents of interest, rinse with methanol and allow to air dry on a clean surface.

8. Air dry at a location where dust or other fugitive contaminants may not contact the sample equipment. Alternatively, wet equipment maybe dried with a clean, disposable paper towel to assist the drying process. All equipment should be dry before reuse.
9. If the equipment is not used soon after decontamination, it should be covered or wrapped in new, oil-free aluminum foil or new, unused plastic bags to protect the decontaminated equipment from fugitive contaminants before reuse.
10. Store decontaminated equipment at a secure, unexposed location out of the weather and any potential contaminant exposure.

4.5.2 Groundwater Sampling Pumps

[Note: This procedure does not apply to dedicated submersible pumps which have been permanently installed in wells.] Proper decontamination between wells is essential to avoid introducing contaminants from the sampling equipment to another well. If peristaltic pumps are being used, it is necessary only to replace the pump head tubing after sampling each well. If sampling with submersible pumps that come into direct contact with groundwater, the equipment must be decontaminated. The following procedure will be used to decontaminate submersible pumps and non-dedicated tubing before and between sample collection points, as well as the end of each day of use.

Preparation

Pre-clean appropriately sized buckets and prepare cleaning solutions (detergent solution, tap water rinse, distilled/deionized water rinse) and field blank water.

Detergent wash and tap water rinse

a) Put on disposable, powderless gloves. Rest pump in a washbasin or pail partially filled with detergent solution and clean exterior of pump and tubing with a soft brush. Rinse thoroughly with tap water. (DIW can be used instead of tap water, but is less efficient in detergent removal and requires a greater volume of water than tap water).
b) Place pump into bucket, add detergent solution to level above pump intake, and route the intake and discharge ends of pump tubing into the bucket. Begin pumping. Circulate detergent solution for several minutes. If possible, pump detergent solution through tubing at alternating high and low speeds.
c) Change gloves. Manually rinse detergent from pump, tubing and bucket with tap water.
d) Place pump into bucket, add tap water to level above pump intake, and route the intake and discharge ends of pump tubing into the bucket. Begin pumping. Circulate tap water for several minutes. If possible, pump tap water through tubing at alternating high and low speeds. Replace water in bucket and repeat cycle until no sudsing is observed. Change gloves as needed.

DIW Rinse

If a pump will be used to collect inorganic samples, manually rinse pump and tubing with DIW, then place in clean bucket, add DIW to level above pump intake, and route the discharge end of pump tubing outside the bucket. Begin pumping to rinse DIW through the equipment without recirculating. Collect water for use as a field blank, as required, from the pump discharge.

Equipment Storage

1. Place pump into a clean, non-contaminating storage bag and tie the bag shut.
2. Cover the pump reel and tubing with plastic bags or sheeting for transport to the next site.
3. On reaching the next monitoring well, place the pump in the well casing and wipe dry the power and discharge lines with a chemical-free paper towel as the pump is lowered.
4. For long-term storage (longer than 3 days), the pump and exterior and interior of the tubing must be dry before being placed into plastic bags.

4.5.3 Measurement Devices & Monitoring Equipment

For water quality instruments, oil-water interface indicators, water level indicators, continuous water level data loggers, and other field instruments that have the potential to come into contact with site media, at a minimum, wash with dilute laboratory-grade detergent (e.g., Alconox) and double rinse with tap water and DIW before and after each use or by using a similar procedure as discussed in Section 4.4.1. All decontamination fluids will be captured in a containment system as appropriate.

4.5.4 Subsurface Drilling Equipment

Drilling equipment and associated materials (drill bits, augers, and drilling stems) will be decontaminated by the drilling contractor prior to any drilling operations and between borings. These decontamination activities should be performed in the defined decontamination area as described in Section 4.1.

All down-hole Geoprobe tools (drive rods, Macro-Core barrels, etc.) that come in direct contact with potentially contaminated soil or groundwater shall be decontaminated between each sampling location, and may take place at the sampling location using a mobile decontamination platform with a containment system or other means to capture the decontamination IDW.

Decontamination will be performed using the following basic sequence:

1. Remove as much gross contamination as possible off equipment at the sampling site.
2. Wash equipment thoroughly and vigorously with potable water using a high-pressure washer and/or steam cleaner. A bristle brush is also suggested to remove any persistent gross contamination.
3. Air dry at a location where dust or other contaminants may not contact the sample equipment. All equipment should be dry before reuse.
4. Store decontaminated equipment at a location away from any potential exposure from fugitive contamination.

4.5.5 Heavy Equipment

Wash earthwork equipment (such as excavators and back-hoes) with high-pressure potable water, if possible, before leaving a contaminated area using similar steps as outlined in Section 4.4.4, otherwise the equipment may be moved to the decontamination area discussed in Section 4.1. Hand washing with a brush and detergent, followed by a potable water rinse, can also be used. In some instances, tires and tracks of equipment maybe only need to be thoroughly brushed with a dry brush. Take particular care with the components in direct contact with contaminants, such as tires and backhoe buckets.

Any part of earthwork equipment that may come in direct contact with analytical samples (that is, sampling from the excavator bucket) must be thoroughly decontaminated before excavation activities and between sample locations.

4.6 Quality Assurance/Quality Control

To ensure that sampling equipment is cleaned properly and sample cross-contamination does not occur, field rinsate blanks may be collected if required by project plans. A rinsate blank will consist of pouring deionized organic-free water over the specific sampling device or pouring it through the device after it has been cleaned. The rinsate sample is collected in the field under the same conditions as occurred for the sampling activity, and is handled exactly like any other samples collected that day.

Generally, one rinsate blank is collected each day of sampling or at a rate of 1 per 20 for each parameter, whichever is less, for each matrix being sampled or for each type of sampling instrument decontaminated and reused per day. The rinsate samples are analyzed for the specific parameters of concern (for each matrix). Rinsate blanks should be labeled like a routine environmental sample, and laboratory analysis instructions should be included on the chain-of-custody form. Rinsate blanks are not required if dedicated sampling equipment is used. Additional quality assurance samples may be collected if deemed necessary by project specific requirements.

Supplement F – PFAS Sampling Guidance

NEW YORK STATE OF OPPORTUNITY.
Department of Environmental Conservation

SAMPLING, ANALYSIS, AND ASSESSMENT OF PER- AND POLYFLUOROALKYL SUBSTANCES (PFAS)

Under NYSDEC's Part 375 Remedial Programs

April 2023



www.dec.ny.gov

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ERRATA SHEET for

SAMPLING, ANALYSIS, AND ASSESSMENT OF PER- AND POLYFLUOROALKYL SUBSTANCES (PFAS) Under NYSDEC's Part 375 Remedial Programs Issued January 17, 2020

Citation and Page Number	Current Text	Corrected Text	Date
Title of Appendix I, page 32	Appendix H	Appendix I	2/25/2020
Document Cover, page 1	Guidelines for Sampling and Analysis of PFAS	Sampling, Analysis, and Assessment of Per- and Polyfluoroalkyl Substances (PFAS) Under NYSDEC's Part 375 Remedial Programs	9/15/2020
Data Assessment and Application to Site Cleanup Page 3	Until such time as Ambient Water Quality Standards (AWQS) and Soil Cleanup Objectives (SCOs) for PFOA and PFOS are published	Until such time as Soil Cleanup Objectives (SCOs) for PFOA and PFOS are published	3/28/2023
Water Sample Results Page 3	PFOA and PFOS should be further assessed and considered as potential contaminants of concern in groundwater or surface water if PFOA or PFOS is detected in any water sample at or above 10 ng/L (ppt) and is determined to be attributable to the site, either by a comparison of upgradient and downgradient levels, or the presence of soil source areas, as defined below.	NYSDEC has adopted ambient water quality guidance values for PFOA and PFOS. Groundwater samples should be compared to the human health criteria of 6.7 ng/l (ppt) for PFOA and 2.7 ng/l (ppt) for PFOS. These guidance values also include criteria for surface water for PFOS applicable for aquatic life, which may be applicable at some sites. Drinking water sample results should be compared to the NYS maximum contaminant level (MCL) of 10 ng/l (ppt).Analysis to determine if PFOA and PFOS concentrations are attributable to the site should include a comparison between upgradient and downgradient levels, and the presence of soil source areas, as defined below.	3/28/2023
Soil Sample Results Page 3	Soil cleanup objectives for PFOA and PFOS have been proposed in an upcoming revision to 6 NYCRR Part 375-6. Until SCOs are in effect, the following are to be used as guidance values:	NYSDEC will delay adding soil cleanup objectives for PFOA and PFOS to 6 NYCRR Part 375-6 until the PFAS rural soil background study has been completed. Until SCOs are in effect, the following are to be used as guidance values:	3/28/2023
Protection of Groundwater Page 3	PFOA (ppb) 1.1 PFOS (ppb) 3.7	PFOA (ppb) 0.8 PFOS (ppb) 1.0	3/28/2023

Citation and Page Number	Current Text	Corrected Text	Date
Footnote 2 Page 3	The movement of PFAS in the environment is being aggressively researched at this time; that research will eventually result in more accurate models for the behaviors of these chemicals. In the meantime, DEC has calculated the guidance value for the protection of groundwater using the same procedure used for all other chemicals, as described in Section 7.7 of the Technical Support Document (http://www.dec.ny.gov/docs/remediation_hudson_pdf/techsuppdoc.pdf).	The Protection of Groundwater values are based on the above referenced ambient groundwater guidance values. Details on that calculation are available in the following document, prepared for the February 2022 proposed changes to Part 375 (https://www.dec.ny.gov/docs/remediation_hudson_pdf/part375techsupport.pdf). The movement of PFAS in the environment is being aggressively researched at this time; that research will eventually result in more accurate models for the behaviors of these chemicals. In the meantime, DEC has calculated the guidance value for the protection of groundwater using the same procedure used for all other chemicals, as described in Section 7.7 of the Technical Support Document (http://www.dec.ny.gov/docs/remediation_hudson_pdf/techsuppdoc.pdf).	3/28/2023
Testing for Imported Soil Page 4	If the concentrations of PFOA and PFOS in leachate are at or above 10 ppt (the Maximum Contaminant Levels established for drinking water by the New York State Department of Health), then the soil is not acceptable.	If the concentrations of PFOA and PFOS in leachate are at or above the ambient water quality guidance values for groundwater, then the soil is not acceptable.	3/28/2023
Routine Analysis, page 9	"However, laboratories analyzing environmental samples…PFOA and PFOS in drinking water by EPA Method 537, 537.1 or ISO 25101."	"However, laboratories analyzing environmental samples…PFOA and PFOS in drinking water by EPA Method 537, 537.1, ISO 25101, or Method 533."	9/15/2020
Additional Analysis, page 9, new paragraph regarding soil parameters	None	"In cases where site-specific cleanup objectives for PFOA and PFOS are to be assessed, soil parameters, such as Total Organic Carbon (EPA Method 9060), soil pH (EPA Method 9045), clay content (percent), and cation exchange capacity (EPA Method 9081), should be included in the analysis to help evaluate factors affecting the leachability of PFAS in site soils."	9/15/2020

Citation and Page Number	Current Text	Corrected Text	Date
Data Assessment and Application to Site Cleanup Page 10	Until such time as Ambient Water Quality Standards (AWQS) and Soil Cleanup Objectives (SCOs) for PFAS are published, the extent of contaminated media potentially subject to remediation should be determined on a case-by-case basis using the procedures discussed below and the criteria in DER-10. Target levels for cleanup of PFAS in other media, including biota and sediment, have not yet been established by the DEC.	Until such time as Ambient Water Quality Standards (AWQS) and Soil Cleanup Objectives (SCOs) for PFOA and PFOS are published, the extent of contaminated media potentially subject to remediation should be determined on a case-by-case basis using the procedures discussed below and the criteria in DER-10. Preliminary target levels for cleanup of PFOA and PFOS in other media, including biota and sediment, have not yet been established by the DEC.	9/15/2020
Water Sample Results Page 10	PFAS should be further assessed and considered as a potential contaminant of concern in groundwater or surface water (…) If PFAS are identified as a contaminant of concern for a site, they should be assessed as part of the remedy selection process in accordance with Part 375 and DER-10.	PFOA and PFOS should be further assessed and considered as potential contaminants of concern in groundwater or surface water (…) If PFOA and/or PFOS are identified as contaminants of concern for a site, they should be assessed as part of the remedy selection process in accordance with Part 375 and DER-10.	9/15/2020

Citation and Page Number	Current Text	Corrected Text	Date
Soil Sample Results, page 10	"The extent of soil contamination for purposes of delineation and remedy selection should be determined by having certain soil samples tested by Synthetic Precipitation Leaching Procedure (SPLP) and the leachate analyzed for PFAS. Soil exhibiting SPLP results above 70 ppt for either PFOA or PFOS (individually or combined) are to be evaluated during the cleanup phase."	"Soil cleanup objectives for PFOA and PFOS will be proposed in an upcoming revision to 6 NYCRR Part 375-6. Until SCOs are in effect, the following are to be used as guidance values. " [Interim SCO Table] "PFOA and PFOS results for soil are to be compared against the guidance values listed above. These guidance values are to be used in determining whether PFOA and PFOS are contaminants of concern for the site and for determining remedial action objectives and cleanup requirements. Site-specific remedial objectives for protection of groundwater can also be presented for evaluation by DEC. Development of site-specific remedial objectives for protection of groundwater will require analysis of additional soil parameters relating to leachability. These additional analyses can include any or all the parameters listed above (soil pH, cation exchange capacity, etc.) and/or use of SPLP. As the understanding of PFAS transport improves, DEC welcomes proposals for site-specific remedial objectives for protection of groundwater. DEC will expect that those may be dependent on additional factors including soil pH, aqueous pH, % organic carbon, % Sand/Silt/Clay, soil cations: K, Ca, Mg, Na, Fe, Al, cation exchange capacity, and anion exchange capacity. Site-specific remedial objectives should also consider the dilution attenuation factor (DAF). The NJDEP publication on DAF can be used as a reference: https://www.nj.gov/dep/srp/guidance/rs/daf.pdf. "	9/15/2020

Citation and Page Number	Current Text	Corrected Text	Date
Testing for Imported Soil Page 11	Soil imported to a site for use in a soil cap, soil cover, or as backfill is to be tested for PFAS in general conformance with DER-10, Section 5.4(e) for the PFAS Analyte List (Appendix F) using the analytical procedures discussed below and the criteria in DER-10 associated with SVOCs. If PFOA or PFOS is detected in any sample at or above 1 µg/kg, then soil should be tested by SPLP and the leachate analyzed for PFAS. If the SPLP results exceed 10 ppt for either PFOA or PFOS (individually) then the source of backfill should be rejected, unless a site-specific exemption is provided by DER. SPLP leachate criteria is based on the Maximum Contaminant Levels proposed for drinking water by New York State's Department of Health, this value may be updated based on future Federal or State promulgated regulatory standards. Remedial parties have the option of analyzing samples concurrently for both PFAS in soil and in the SPLP leachate to minimize project delays. Category B deliverables should be submitted for backfill samples, though a DUSR is not required.	Testing for PFAS should be included any time a full TAL/TCL analyte list is required. Results for PFOA and PFOS should be compared to the applicable guidance values. If PFOA or PFOS is detected in any sample at or above the guidance values then the source of backfill should be rejected, unless a site-specific exemption is provided by DER based on SPLP testing, for example. If the concentrations of PFOA and PFOS in leachate are at or above 10 ppt (the Maximum Contaminant Levels established for drinking water by the New York State Department of Health), then the soil is not acceptable. PFOA, PFOS and 1,4-dioxane are all considered semi-volatile compounds, so composite samples are appropriate for these compounds when sampling in accordance with DER-10, Table 5.4(e)10. Category B deliverables should be submitted for backfill samples, though a DUSR is not required.	9/15/2020

Citation and Page Number	Current Text	Corrected Text	Date
Footnotes	None	[1] TOP Assay analysis of highly contaminated samples, such as those from an AFFF (aqueous film-forming foam) site, can result in incomplete oxidation of the samples and an underestimation of the total perfluoroalkyl substances. [2] The movement of PFAS in the environment is being aggressively researched at this time; that research will eventually result in more accurate models for the behaviors of these chemicals. In the meantime, DEC has calculated the soil cleanup objective for the protection of groundwater using the same procedure used for all other chemicals, as described in Section 7.7 of the Technical Support Document (http://www.dec.ny.gov/docs/remediation_hudson_pdf/techsuppdoc.pdf).	9/15/2020
Additional Analysis, page 9	In cases… soil parameters, such as Total Organic Carbon (EPA Method 9060), soil…	In cases… soil parameters, such as Total Organic Carbon (Lloyd Kahn), soil…	1/8/2021
Appendix A, General Guidelines, fourth bullet	List the ELAP-approved lab(s) to be used for analysis of samples	List the ELAP- certified lab(s) to be used for analysis of samples	1/8/2021
Appendix E, Laboratory Analysis and Containers	Drinking water samples collected using this protocol are intended to be analyzed for PFAS by ISO Method 25101.	Drinking water samples collected using this protocol are intended to be analyzed for PFAS by EPA Method 537, 537.1, 533, or ISO Method 25101	1/8/2021
Water Sample Results Page 9	"In addition, further assessment of water may be warranted if either of the following screening levels are met: a. any other individual PFAS (not PFOA or PFOS) is detected in water at or above 100 ng/L; or b. total concentration of PFAS (including PFOA and PFOS) is detected in water at or above 500 ng/L"	Deleted	6/15/2021

Citation and Page Number	Current Text	Corrected Text	Date
Routine Analysis, Page XX	Currently, New York State Department of Health's Environmental Laboratory Approval Program (ELAP)… criteria set forth in the DER's laboratory guidelines for PFAS in non-potable water and solids (Appendix H - Laboratory Guidelines for Analysis of PFAS in Non-Potable Water and Solids).	Deleted	5/31/2022
Analysis and Reporting, Page XX	As of October 2020, the United States Environmental Protection Agency (EPA) does not have a validated method for analysis of PFAS for media commonly analyzed under DER remedial programs (non-potable waters, solids). DER has developed the following guidelines to ensure consistency in analysis and reporting of PFAS.	Deleted	5/31/2022
Routine Analysis, Page XX	LC-MS/MS analysis for PFAS using methodologies based on EPA Method 537.1 is the procedure to use for environmental samples. Isotope dilution techniques should be utilized for the analysis of PFAS in all media.	EPA Method 1633 is the procedure to use for environmental samples.	
Soil Sample Results, Page XX	Soil cleanup objectives for PFOA and PFOS will be proposed in an upcoming revision to 6 NYCRR Part 375-6	Soil cleanup objectives for PFOA and PFOS have been proposed in an upcoming revision to 6 NYCRR Part 375-6	
Appendix A	"Include in the text… LC-MS/MS for PFAS using methodologies based on EPA Method 537.1"	"Include in the text ….EPA Method 1633"	
Appendix A	"Laboratory should have ELAP certification for PFOA and PFOS in drinking water by EPA Method 537, 537.1, EPA Method 533, or ISO 25101"	Deleted	
Appendix B	"Samples collected using this protocol are intended to be analyzed for PFAS using methodologies based on EPA Method 537.1"	"Samples collected using this protocol are intended to be analyzed for PFAS using EPA Method 1633"	

Citation and Page Number	Current Text	Corrected Text	Date
Appendix C	"Samples collected using this protocol are intended to be analyzed for PFAS using methodologies based on EPA Method 537.1"	"Samples collected using this protocol are intended to be analyzed for PFAS using EPA Method 1633"	
Appendix D	"Samples collected using this protocol are intended to be analyzed for PFAS using methodologies based on EPA Method 537.1"	"Samples collected using this protocol are intended to be analyzed for PFAS using EPA Method 1633"	
Appendix G		Updated to include all forty PFAS analytes in EPA Method 533	
Appendix H		Deleted	
Appendix I	Appendix I	Appendix H	
Appendix H	"These guidelines are intended to be used for the validation of PFAS analytical results for projects within the Division of Environmental Remediation (DER) as well as aid in the preparation of a data usability summary report."	"These guidelines are intended to be used for the validation of PFAS using EPA Method 1633 for projects within the Division of Environmental Remediation (DER)."	
Appendix H	"The holding time is 14 days…"	"The holding time is 28 days…"	
Appendix H, Initial Calibration	"The initial calibration should contain a minimum of five standards for linear fit…"	"The initial calibration should contain a minimum of six standards for linear fit…"	
Appendix H, Initial Calibration	Linear fit calibration curves should have an R^2 value greater than 0.990.	Deleted	
Appendix H, Initial Calibration Verification	Initial Calibration Verification Section	Deleted	
Appendix H	secondary Ion Monitoring Section	Deleted	
Appendix H	Branched and Linear Isomers Section	Deleted	

Sampling, Analysis, and Assessment of Per- and Polyfluoroalkyl Substances (PFAS) Under NYSDEC's Part 375 Remedial Programs

Objective

New York State Department of Environmental Conservation's Division of Environmental Remediation (DER) performs or oversees sampling of environmental media and subsequent analysis of PFAS as part of remedial programs implemented under 6 NYCRR Part 375. To ensure consistency in sampling, analysis, reporting, and assessment of PFAS, DER has developed this document which summarizes currently accepted procedures and updates previous DER technical guidance pertaining to PFAS.

Applicability

All work plans submitted to DEC pursuant to one of the remedial programs under Part 375 shall include PFAS sampling and analysis procedures that conform to the guidelines provided herein.

As part of a site investigation or remedial action compliance program, whenever samples of potentially affected media are collected and analyzed for the standard Target Analyte List/Target Compound List (TAL/TCL), PFAS analysis should also be performed. Potentially affected media can include soil, groundwater, surface water, and sediment. Based upon the potential for biota to be affected, biota sampling and analysis for PFAS may also be warranted as determined pursuant to a Fish and Wildlife Impact Analysis. Soil vapor sampling for PFAS is not required.

Field Sampling Procedures

DER-10 specifies technical guidance applicable to DER's remedial programs. Given the prevalence and use of PFAS, DER has developed "best management practices" specific to sampling for PFAS. As specified in DER-10 Chapter 2, quality assurance procedures are to be submitted with investigation work plans. Typically, these procedures are incorporated into a work plan, or submitted as a stand-alone document (e.g., a Quality Assurance Project Plan). Quality assurance guidelines for PFAS are listed in Appendix A - Quality Assurance Project Plan (QAPP) Guidelines for PFAS.

Field sampling for PFAS performed under DER remedial programs should follow the appropriate procedures outlined for soils, sediments, or other solids (Appendix B), non-potable groundwater (Appendix C), surface water (Appendix D), public or private water supply wells (Appendix E), and fish tissue (Appendix F).

QA/QC samples (e.g. duplicates, MS/MSD) should be collected as specified in DER-10, Section 2.3(c). For sampling equipment coming in contact with aqueous samples only, rinsate or equipment blanks should be collected. Equipment blanks should be collected at a minimum frequency of one per day per site or one per twenty samples, whichever is more frequent.

Analysis and Reporting

The investigation work plan should describe analysis and reporting procedures, including laboratory analytical procedures for the methods discussed below. As specified in DER-10 Section 2.2, laboratories should provide a full Category B deliverable. In addition, a Data Usability Summary Report (DUSR) should be prepared by an independent, third-party data validator. Electronic data submissions should meet the requirements provided at: https://www.dec.ny.gov/chemical/62440.html.

DER has developed a *PFAS Analyte List* (Appendix G) for remedial programs to understand the nature of contamination at sites. It is expected that reported results for PFAS will include, at a minimum, all the compounds listed. If lab and/or matrix specific issues are encountered for any analytes, the DER project manager, in consultation with the DER chemist, will make case-by-case decisions as to whether certain analytes may be temporarily or permanently discontinued from analysis at each site. As with other contaminants that are analyzed for at a site, the *PFAS Analyte List* may be refined for future sampling events based on investigative findings.

Routine Analysis

EPA Method 1633 is the procedure to use for environmental samples. Reporting limits for PFOA and PFOS in aqueous samples should not exceed 2 ng/L. Reporting limits for PFOA and PFOS in solid samples should not exceed 0.5 µg/kg. Reporting limits for all other PFAS in aqueous and solid media should be as close to these limits as possible. If laboratories indicate that they are not able to achieve these reporting limits for the entire *PFAS Analyte List*, site-specific decisions regarding acceptance of elevated reporting limits for specific PFAS can be made by the DER project manager in consultation with the DER chemist. Data review guidelines were developed by DER to ensure data comparability and usability (Appendix H - Data Review Guidelines for Analysis of PFAS in Non-Potable Water and Solids).

Additional Analysis

Additional laboratory methods for analysis of PFAS may be warranted at a site, such as the Synthetic Precipitation Leaching Procedure (SPLP) and Total Oxidizable Precursor Assay (TOP Assay).

In cases where site-specific cleanup objectives for PFOA and PFOS are to be assessed, soil parameters, such as Total Organic Carbon (Lloyd Kahn), soil pH (EPA Method 9045), clay content (percent), and cation exchange capacity (EPA Method 9081), should be included in the analysis to help evaluate factors affecting the leachability of PFAS in site soils.

SPLP is a technique used to determine the mobility of chemicals in liquids, soils and wastes, and may be useful in determining the need for addressing PFAS-containing material as part of the remedy. SPLP by EPA Method 1312 should be used unless otherwise specified by the DER project manager in consultation with the DER chemist.

Impacted materials can be made up of PFAS that are not analyzable by routine analytical methodology. A TOP Assay can be utilized to conceptualize the amount and type of oxidizable PFAS which could be liberated in the environment, which approximates the maximum concentration of perfluoroalkyl substances that could be generated if all polyfluoroalkyl substances were oxidized. For example, some polyfluoroalkyl substances may degrade or transform to form perfluoroalkyl substances (such as PFOA or PFOS), resulting in an increase in perfluoroalkyl substance concentrations as contaminated groundwater moves away from a source. The TOP Assay converts, through oxidation, polyfluoroalkyl substances (precursors) into perfluoroalkyl substances that can be detected by routine analytical methodology.[1]

[1] TOP Assay analysis of highly contaminated samples, such as those from an AFFF (aqueous film-forming foam) site, can result in incomplete oxidation of the samples and an underestimation of the total perfluoroalkyl substances.

Commercial laboratories have adopted methods which allow for the quantification of targeted PFAS in air and biota. The EPA's Office of Research and Development (ORD) is currently developing methods which allow for air emissions characterization of PFAS, including both targeted and non-targeted analysis of PFAS. Consult with the DER project manager and the DER chemist for assistance on analyzing biota/tissue and air samples.

Data Assessment and Application to Site Cleanup

Until such time as Soil Cleanup Objectives (SCOs) for PFOA and PFOS are published, the extent of contaminated media potentially subject to remediation should be determined on a case-by-case basis using the procedures discussed below and the criteria in DER-10. Preliminary target levels for cleanup of PFOA and PFOS in other media, including biota and sediment, have not yet been established by the DEC.

Water Sample Results

NYSDEC has adopted ambient water quality guidance values for PFOA and PFOS. Groundwater samples should be compared to the human health criteria of 6.7 ng/l (ppt) for PFOA and 2.7 ng/l (ppt) for PFOS. These human health criteria should also be applied to surface water that is used as a water supply. This guidance also includes criteria for surface water for PFOS applicable for aquatic life, which may be applicable at some sites. Drinking water sample results should be compared to the NYS maximum contaminant level (MCL) of 10 ng/l (ppt). Analysis to determine if PFOA and PFOS concentrations are attributable to the site should include a comparison between upgradient and downgradient levels, and the presence of soil source areas, as defined below.

If PFOA and/or PFOS are identified as contaminants of concern for a site, they should be assessed as part of the remedy selection process in accordance with Part 375 and DER-10.

Soil Sample Results

NYSDEC will delay adding soil cleanup objectives for PFOA and PFOS to 6 NYCRR Part 375-6 until the PFAS rural soil background study has been completed. Until SCOs are in effect, the following are to be used as guidance values:

Guidance Values for Anticipated Site Use	PFOA (ppb)	PFOS (ppb)
Unrestricted	0.66	0.88
Residential	6.6	8.8
Restricted Residential	33	44
Commercial	500	440
Industrial	600	440
Protection of Groundwater[2]	0.8	1.0

PFOA and PFOS results for soil are to be compared against the guidance values listed above. These guidance values are to be used in determining whether PFOA and PFOS are contaminants of concern for the site and for determining remedial action objectives and cleanup requirements. Site-specific remedial objectives for protection of groundwater can also be presented for evaluation by DEC. Development of site-specific remedial objectives for protection of groundwater will require analysis of additional soil parameters relating to leachability. These

[2] The Protection of Groundwater values are based on the above referenced ambient groundwater guidance values. Details on that calculation are available in the following document, prepared for the February 2022 proposed changes to Part 375 (https://www.dec.ny.gov/docs/remediation_hudson_pdf/part375techsupport.pdf). The movement of PFAS in the environment is being aggressively researched at this time; that research will eventually result in more accurate models for the behaviors of these chemicals. In the meantime, DEC has calculated the guidance value for the protection of groundwater using the same procedure used for all other chemicals, as described in Section 7.7 of the Technical Support Document (http://www.dec.ny.gov/docs/remediation_hudson_pdf/techsuppdoc.pdf).

additional analyses can include any or all the parameters listed above (soil pH, cation exchange capacity, etc.) and/or use of SPLP.

As the understanding of PFAS transport improves, DEC welcomes proposals for site-specific remedial objectives for protection of groundwater. DEC will expect that those may be dependent on additional factors including soil pH, aqueous pH, % organic carbon, % Sand/Silt/Clay, soil cations: K, Ca, Mg, Na, Fe, Al, cation exchange capacity, and anion exchange capacity. Site-specific remedial objectives should also consider the dilution attenuation factor (DAF). The NJDEP publication on DAF can be used as a reference: https://www.nj.gov/dep/srp/guidance/rs/daf.pdf.

Testing for Imported Soil

Testing for PFAS should be included any time a full TAL/TCL analyte list is required. Results for PFOA and PFOS should be compared to the applicable guidance values. If PFOA or PFOS is detected in any sample at or above the guidance values then the source of backfill should be rejected, unless a site-specific exemption is provided by DER based on SPLP testing, for example. If the concentrations of PFOA and PFOS in leachate are at or above the ambient water quality guidance values for groundwater, then the soil is not acceptable.

PFOA, PFOS and 1,4-dioxane are all considered semi-volatile compounds, so composite samples are appropriate for these compounds when sampling in accordance with DER-10, Table 5.4(e)10. Category B deliverables should be submitted for backfill samples, though a DUSR is not required.

Appendix A - Quality Assurance Project Plan (QAPP) Guidelines for PFAS

The following guidelines (general and PFAS-specific) can be used to assist with the development of a QAPP for projects within DER involving sampling and analysis of PFAS.

General Guidelines in Accordance with DER-10

- Document/work plan section title – Quality Assurance Project Plan
- Summarize project scope, goals, and objectives
- Provide project organization including names and resumes of the project manager, Quality Assurance Officer (QAO), field staff, and Data Validator
    - The QAO should not have another position on the project, such as project or task manager, that involves project productivity or profitability as a job performance criterion
- List the ELAP certified lab(s) to be used for analysis of samples
- Include a site map showing sample locations
- Provide detailed sampling procedures for each matrix
- Include Data Quality Usability Objectives
- List equipment decontamination procedures
- Include an "Analytical Methods/Quality Assurance Summary Table" specifying:
    - Matrix type
    - Number or frequency of samples to be collected per matrix
    - Number of field and trip blanks per matrix
    - Analytical parameters to be measured per matrix
    - Analytical methods to be used per matrix with minimum reporting limits
    - Number and type of matrix spike and matrix spike duplicate samples to be collected
    - Number and type of duplicate samples to be collected
    - Sample preservation to be used per analytical method and sample matrix
    - Sample container volume and type to be used per analytical method and sample matrix
    - Sample holding time to be used per analytical method and sample matrix
- Specify Category B laboratory data deliverables and preparation of a DUSR

Specific Guidelines for PFAS

- Include in the text that sampling for PFAS will take place
- Include in the text that PFAS will be analyzed by EPA Method 1633
- Include the list of PFAS compounds to be analyzed (*PFAS Analyte List*)
- Include the laboratory SOP for PFAS analysis
- List the minimum method-achievable Reporting Limits for PFAS
    - Reporting Limits should be less than or equal to:
        - Aqueous – 2 ng/L (ppt)
        - Solids – 0.5 µg/kg (ppb)
- Include the laboratory Method Detection Limits for the PFAS compounds to be analyzed
-
- Include detailed sampling procedures
    - Precautions to be taken
    - Pump and equipment types
    - Decontamination procedures
    - Approved materials only to be used
- Specify that regular ice only will be used for sample shipment
- Specify that equipment blanks should be collected at a minimum frequency of 1 per day per site for each matrix

Appendix B - Sampling Protocols for PFAS in Soils, Sediments and Solids

General

The objective of this protocol is to give general guidelines for the collection of soil, sediment and other solid samples for PFAS analysis. The sampling procedure used should be consistent with Sampling Guidelines and Protocols – Technological Background and Quality Control/Quality Assurance for NYS DEC Spill Response Program – March 1991 (http://www.dec.ny.gov/docs/remediation_hudson_pdf/sgpsect5.pdf), with the following limitations.

Laboratory Analysis and Containers

Samples collected using this protocol are intended to be analyzed for PFAS using EPA Method 1633.

The preferred material for containers is high density polyethylene (HDPE). Pre-cleaned sample containers, coolers, sample labels, and a chain of custody form will be provided by the laboratory.

Equipment

Acceptable materials for sampling include stainless steel, HDPE, PVC, silicone, acetate, and polypropylene. Additional materials may be acceptable if pre-approved by New York State Department of Environmental Conservation's Division of Environmental Remediation.

No sampling equipment components or sample containers should come in to contact with aluminum foil, low density polyethylene, glass, or polytetrafluoroethylene (PTFE, Teflon™) materials including sample bottle cap liners with a PTFE layer.

A list of acceptable equipment is provided below, but other equipment may be considered appropriate based on sampling conditions.

- stainless steel spoon
- stainless steel bowl
- steel hand auger or shovel without any coatings

Equipment Decontamination

Standard two step decontamination using detergent (Alconox is acceptable) and clean, PFAS-free water will be performed for sampling equipment. All sources of water used for equipment decontamination should be verified in advance to be PFAS-free through laboratory analysis or certification.

Sampling Techniques

Sampling is often conducted in areas where a vegetative turf has been established. In these cases, a pre-cleaned trowel or shovel should be used to carefully remove the turf so that it may be replaced at the conclusion of sampling. Surface soil samples (e.g. 0 to 6 inches below surface) should then be collected using a pre-cleaned, stainless steel spoon. Shallow subsurface soil samples (e.g. 6 to ~36 inches below surface) may be collected by digging a hole using a pre-cleaned hand auger or shovel. When the desired subsurface depth is reached, a pre-cleaned hand auger or spoon shall be used to obtain the sample.

When the sample is obtained, it should be deposited into a stainless steel bowl for mixing prior to filling the sample containers. The soil should be placed directly into the bowl and mixed thoroughly by rolling the material into the middle until the material is homogenized. At this point the material within the bowl can be placed into the laboratory provided container.

Sample Identification and Logging

A label shall be attached to each sample container with a unique identification. Each sample shall be included on the chain of custody (COC).

Quality Assurance/Quality Control

- Immediately place samples in a cooler maintained at 4 ± 2º Celsius using ice
- Collect one field duplicate for every sample batch, minimum 1 duplicate per 20 samples. The duplicate shall consist of an additional sample at a given location
- Collect one matrix spike / matrix spike duplicate (MS/MSD) for every sample batch, minimum 1 MS/MSD per 20 samples. The MS/MSD shall consist of an additional two samples at a given location and identified on the COC
- Request appropriate data deliverable (Category B) and an electronic data deliverable

Documentation

A soil log or sample log shall document the location of the sample/borehole, depth of the sample, sampling equipment, duplicate sample, visual description of the material, and any other observations or notes determined to be appropriate. Additionally, care should be performed to limit contact with PFAS containing materials (e.g. waterproof field books, food packaging) during the sampling process.

Personal Protection Equipment (PPE)

For most sampling Level D PPE is anticipated to be appropriate. The sampler should wear nitrile gloves while conducting field work and handling sample containers.

Field staff shall consider the clothing to be worn during sampling activities. Clothing that contains PTFE material (including GORE-TEX®) or that have been waterproofed with PFAS materials should be avoided. All clothing worn by sampling personnel should have been laundered multiple times.

Appropriate rain gear (PVC, polyurethane, or rubber rain gear are acceptable), bug spray, and sunscreen should be used that does not contain PFAS. Well washed cotton coveralls may be used as an alternative to bug spray and/or sunscreen.

PPE that contains PFAS is acceptable when site conditions warrant additional protection for the samplers and no other materials can be used to be protective. Documentation of such use should be provided in the field notes.

Appendix C - Sampling Protocols for PFAS in Monitoring Wells

General

The objective of this protocol is to give general guidelines for the collection of groundwater samples for PFAS analysis. The sampling procedure used should be consistent with Sampling Guidelines and Protocols – Technological Background and Quality Control/Quality Assurance for NYS DEC Spill Response Program – March 1991 (http://www.dec.ny.gov/docs/remediation_hudson_pdf/sgpsect5.pdf), with the following limitations.

Laboratory Analysis and Container

Samples collected using this protocol are intended to be analyzed for PFAS using EPA Method 1633.

The preferred material for containers is high density polyethylene (HDPE). Pre-cleaned sample containers, coolers, sample labels, and a chain of custody form will be provided by the laboratory.

Equipment

Acceptable materials for sampling include: stainless steel, HDPE, PVC, silicone, acetate, and polypropylene. Additional materials may be acceptable if pre-approved by New York State Department of Environmental Conservation's Division of Environmental Remediation.

No sampling equipment components or sample containers should come in contact with aluminum foil, low density polyethylene, glass, or polytetrafluoroethylene (PTFE, Teflon™) materials including plumbers tape and sample bottle cap liners with a PTFE layer.

A list of acceptable equipment is provided below, but other equipment may be considered appropriate based on sampling conditions.

- stainless steel inertia pump with HDPE tubing
- peristaltic pump equipped with HDPE tubing and silicone tubing
- stainless steel bailer with stainless steel ball
- bladder pump (identified as PFAS-free) with HDPE tubing

Equipment Decontamination

Standard two step decontamination using detergent (Alconox is acceptable) and clean, PFAS-free water will be performed for sampling equipment. All sources of water used for equipment decontamination should be verified in advance to be PFAS-free through laboratory analysis or certification.

Sampling Techniques

Monitoring wells should be purged in accordance with the sampling procedure (standard/volume purge or low flow purge) identified in the site work plan, which will determine the appropriate time to collect the sample. If sampling using standard purge techniques, additional purging may be needed to reduce turbidity levels, so samples contain a limited amount of sediment within the sample containers. Sample containers that contain sediment may cause issues at the laboratory, which may result in elevated reporting limits and other issues during the sample preparation that can compromise data usability. Sampling personnel should don new nitrile gloves prior to sample collection due to the potential to contact PFAS containing items (not related to the sampling equipment) during the purging activities.

Sample Identification and Logging

A label shall be attached to each sample container with a unique identification. Each sample shall be included on the chain of custody (COC).

Quality Assurance/Quality Control

- Immediately place samples in a cooler maintained at 4 ± 2º Celsius using ice
- Collect one field duplicate for every sample batch, minimum 1 duplicate per 20 samples. The duplicate shall consist of an additional sample at a given location
- Collect one matrix spike / matrix spike duplicate (MS/MSD) for every sample batch, minimum 1 MS/MSD per 20 samples. The MS/MSD shall consist of an additional two samples at a given location and identified on the COC
- Collect one equipment blank per day per site and minimum 1 equipment blank per 20 samples. The equipment blank shall test the new and decontaminated sampling equipment utilized to obtain a sample for residual PFAS contamination. This sample is obtained by using laboratory provided PFAS-free water and passing the water over or through the sampling device and into laboratory provided sample containers
- Additional equipment blank samples may be collected to assess other equipment that is utilized at the monitoring well
- Request appropriate data deliverable (Category B) and an electronic data deliverable

Documentation

A purge log shall document the location of the sample, sampling equipment, groundwater parameters, duplicate sample, visual description of the material, and any other observations or notes determined to be appropriate. Additionally, care should be performed to limit contact with PFAS containing materials (e.g. waterproof field books, food packaging) during the sampling process.

Personal Protection Equipment (PPE)

For most sampling Level D PPE is anticipated to be appropriate. The sampler should wear nitrile gloves while conducting field work and handling sample containers.

Field staff shall consider the clothing to be worn during sampling activities. Clothing that contains PTFE material (including GORE-TEX®) or that have been waterproofed with PFAS materials should be avoided. All clothing worn by sampling personnel should have been laundered multiple times.

Appropriate rain gear (PVC, polyurethane, or rubber rain gear are acceptable), bug spray, and sunscreen should be used that does not contain PFAS. Well washed cotton coveralls may be used as an alternative to bug spray and/or sunscreen.

PPE that contains PFAS is acceptable when site conditions warrant additional protection for the samplers and no other materials can be used to be protective. Documentation of such use should be provided in the field notes.

Appendix D - Sampling Protocols for PFAS in Surface Water

General

The objective of this protocol is to give general guidelines for the collection of surface water samples for PFAS analysis. The sampling procedure used should be consistent with Sampling Guidelines and Protocols – Technological Background and Quality Control/Quality Assurance for NYS DEC Spill Response Program – March 1991 (http://www.dec.ny.gov/docs/remediation_hudson_pdf/sgpsect5.pdf), with the following limitations.

Laboratory Analysis and Container

Samples collected using this protocol are intended to be analyzed for PFAS using EPA Method 1633.

The preferred material for containers is high density polyethylene (HDPE). Pre-cleaned sample containers, coolers, sample labels, and a chain of custody form will be provided by the laboratory.

Equipment

Acceptable materials for sampling include: stainless steel, HDPE, PVC, silicone, acetate, and polypropylene. Additional materials may be acceptable if pre-approved by New York State Department of Environmental Conservation's Division of Environmental Remediation.

No sampling equipment components or sample containers should come in contact with aluminum foil, low density polyethylene, glass, or polytetrafluoroethylene (PTFE, Teflon™) materials including sample bottle cap liners with a PTFE layer.

A list of acceptable equipment is provided below, but other equipment may be considered appropriate based on sampling conditions.

- stainless steel cup

Equipment Decontamination

Standard two step decontamination using detergent (Alconox is acceptable) and clean, PFAS-free water will be performed for sampling equipment. All sources of water used for equipment decontamination should be verified in advance to be PFAS-free through laboratory analysis or certification.

Sampling Techniques

Where conditions permit, (e.g. creek or pond) sampling devices (e.g. stainless steel cup) should be rinsed with site medium to be sampled prior to collection of the sample. At this point the sample can be collected and poured into the sample container.

If site conditions permit, samples can be collected directly into the laboratory container.

Sample Identification and Logging

A label shall be attached to each sample container with a unique identification. Each sample shall be included on the chain of custody (COC).

Quality Assurance/Quality Control

- Immediately place samples in a cooler maintained at 4 ± 2º Celsius using ice
- Collect one field duplicate for every sample batch, minimum 1 duplicate per 20 samples. The duplicate shall consist of an additional sample at a given location
- Collect one matrix spike / matrix spike duplicate (MS/MSD) for every sample batch, minimum 1 MS/MSD per 20 samples. The MS/MSD shall consist of an additional two samples at a given location and identified on the COC
- Collect one equipment blank per day per site and minimum 1 equipment blank per 20 samples. The equipment blank shall test the new and decontaminated sampling equipment utilized to obtain a sample for residual PFAS contamination. This sample is obtained by using laboratory provided PFAS-free water and passing the water over or through the sampling device and into laboratory provided sample containers
- Request appropriate data deliverable (Category B) and an electronic data deliverable

Documentation

A sample log shall document the location of the sample, sampling equipment, duplicate sample, visual description of the material, and any other observations or notes determined to be appropriate. Additionally, care should be performed to limit contact with PFAS containing materials (e.g. waterproof field books, food packaging) during the sampling process.

Personal Protection Equipment (PPE)

For most sampling Level D PPE is anticipated to be appropriate. The sampler should wear nitrile gloves while conducting field work and handling sample containers.

Field staff shall consider the clothing to be worn during sampling activities. Clothing that contains PTFE material (including GORE-TEX®) or that have been waterproofed with PFAS materials should be avoided. All clothing worn by sampling personnel should have been laundered multiple times.

Appropriate rain gear (PVC, polyurethane, or rubber rain gear are acceptable), bug spray, and sunscreen should be used that does not contain PFAS. Well washed cotton coveralls may be used as an alternative to bug spray and/or sunscreen.

PPE that contains PFAS is acceptable when site conditions warrant additional protection for the samplers and no other materials can be used to be protective. Documentation of such use should be provided in the field notes.

Appendix E - Sampling Protocols for PFAS in Private Water Supply Wells

General

The objective of this protocol is to give general guidelines for the collection of water samples from private water supply wells (with a functioning pump) for PFAS analysis. The sampling procedure used should be consistent with Sampling Guidelines and Protocols – Technological Background and Quality Control/Quality Assurance for NYS DEC Spill Response Program – March 1991 (http://www.dec.ny.gov/docs/remediation_hudson_pdf/sgpsect5.pdf), with the following limitations.

Laboratory Analysis and Container

Drinking water samples collected using this protocol are intended to be analyzed for PFAS by EPA Method 537, 537.1, 533, or ISO Method 25101. The preferred material for containers is high density polyethylene (HDPE). Pre-cleaned sample containers, coolers, sample labels, and a chain of custody form will be provided by the laboratory.

Equipment

Acceptable materials for sampling include stainless steel, HDPE, PVC, silicone, acetate, and polypropylene. Additional materials may be acceptable if pre-approved by New York State Department of Environmental Conservation's Division of Environmental Remediation.

No sampling equipment components or sample containers should come in contact with aluminum foil, low density polyethylene, glass, or polytetrafluoroethylene (PTFE, Teflon™) materials (e.g. plumbers tape), including sample bottle cap liners with a PTFE layer.

Equipment Decontamination

Standard two step decontamination using detergent (Alconox is acceptable) and clean, PFAS-free water will be performed for sampling equipment. All sources of water used for equipment decontamination should be verified in advance to be PFAS-free through laboratory analysis or certification.

Sampling Techniques

Locate and assess the pressure tank and determine if any filter units are present within the building. Establish the sample location as close to the well pump as possible, which is typically the spigot at the pressure tank. Ensure sampling equipment is kept clean during sampling as access to the pressure tank spigot, which is likely located close to the ground, may be obstructed and may hinder sample collection.

Prior to sampling, a faucet downstream of the pressure tank (e.g., washroom sink) should be run until the well pump comes on and a decrease in water temperature is noted which indicates that the water is coming from the well. If the homeowner is amenable, staff should run the water longer to purge the well (15+ minutes) to provide a sample representative of the water in the formation rather than standing water in the well and piping system including the pressure tank. At this point a new pair of nitrile gloves should be donned and the sample can be collected from the sample point at the pressure tank.

Sample Identification and Logging

A label shall be attached to each sample container with a unique identification. Each sample shall be included on the chain of custody (COC).

Quality Assurance/Quality Control

- Immediately place samples in a cooler maintained at 4 ± 2º Celsius using ice
- Collect one field duplicate for every sample batch, minimum 1 duplicate per 20 samples. The duplicate shall consist of an additional sample at a given location
- Collect one matrix spike / matrix spike duplicate (MS/MSD) for every sample batch, minimum 1 MS/MSD per 20 samples. The MS/MSD shall consist of an additional two samples at a given location and identified on the COC
- If equipment was used, collect one equipment blank per day per site and a minimum 1 equipment blank per 20 samples. The equipment blank shall test the new and decontaminated sampling equipment utilized to obtain a sample for residual PFAS contamination. This sample is obtained by using laboratory provided PFAS-free water and passing the water over or through the sampling device and into laboratory provided sample containers.
- A field reagent blank (FRB) should be collected at a rate of one per 20 samples. The lab will provide a FRB bottle containing PFAS free water and one empty FRB bottle. In the field, pour the water from the one bottle into the empty FRB bottle and label appropriately.
- Request appropriate data deliverable (Category B) and an electronic data deliverable
- For sampling events where multiple private wells (homes or sites) are to be sampled per day, it is acceptable to collect QC samples at a rate of one per 20 across multiple sites or days.

Documentation

A sample log shall document the location of the private well, sample point location, owner contact information, sampling equipment, purge duration, duplicate sample, visual description of the material, and any other observations or notes determined to be appropriate and available (e.g. well construction, pump type and location, yield, installation date). Additionally, care should be performed to limit contact with PFAS containing materials (e.g. waterproof field books, food packaging) during the sampling process.

Personal Protection Equipment (PPE)

For most sampling Level D PPE is anticipated to be appropriate. The sampler should wear nitrile gloves while conducting field work and handling sample containers.

Field staff shall consider the clothing to be worn during sampling activities. Clothing that contains PTFE material (including GORE-TEX®) or that have been waterproofed with PFAS materials should be avoided. All clothing worn by sampling personnel should have been laundered multiple times.

Appendix F - Sampling Protocols for PFAS in Fish

This appendix contains a copy of the current SOP developed by the Division of Fish and Wildlife (DFW) entitled "General Fish Handling Procedures for Contaminant Analysis" (Ver. 8). This SOP should be followed when collecting fish for contaminant analysis. Note, however, that the Bureau of Ecosystem Health will not be supplying bags or tags. All supplies are the responsibility of the collector

Procedure Name: General Fish Handling Procedures for Contaminant Analysis

Number: FW-005

Purpose: This procedure describes data collection, fish processing and delivery of fish collected for contaminant monitoring. It contains the chain of custody and collection record forms that should be used for the collections.

Organization: Environmental Monitoring Section
Bureau of Ecosystem Health
Division of Fish and Wildlife (DFW)
New York State Department of Environmental Conservation (NYSDEC)
625 Broadway
Albany, New York 12233-4756

Version: 8

Previous Version Date: 21 March 2018

Summary of Changes to this Version: Updated bureau name to Bureau of Ecosystem Health. Added direction to list the names of all field crew on the collection record. Minor formatting changes on chain of custody and collection records.

Originator or Revised by: Wayne Richter, Jesse Becker

Date: 26 April 2019

Quality Assurance Officer and Approval Date: Jesse Becker, 26 April 2019

NEW YORK STATE
DEPARTMENT OF ENVIRONMENTAL CONSERVATION

GENERAL FISH HANDLING PROCEDURES FOR CONTAMINANT ANALYSES

A. Original copies of all continuity of evidence (i.e., Chain of Custody) and collection record forms must accompany delivery of fish to the lab. A copy shall be directed to the Project Leader or as appropriate, Wayne Richter. All necessary forms will be supplied by the Bureau of Ecosystem Health. Because some samples may be used in legal cases, it is critical that each section is filled out completely. Each Chain of Custody form has three main sections:

   1. The top box is to be filled out **and signed** by the person responsible for the fish collection (e.g., crew leader, field biologist, researcher). This person is responsible for delivery of the samples to DEC facilities or personnel (e.g., regional office or biologist).

   2. The second section is to be filled out **and signed** by the person responsible for the collections while being stored at DEC, before delivery to the analytical lab. This may be the same person as in (1), but it is still required that they complete the section. Also important is the **range of identification numbers** (i.e., tag numbers) included in the sample batch.

   3. Finally, the bottom box is to record any transfers between DEC personnel and facilities. Each subsequent transfer should be **identified, signed, and dated**, until laboratory personnel take possession of the fish.

B. The following data are required on each **Fish Collection Record** form:

   1. Project and Site Name.

   2. DEC Region.

   3. All personnel (and affiliation) involved in the collection.

   4. Method of collection (gill net, hook and line, etc.)

   5. Preservation Method.

C. The following data are to be taken on each fish collected and recorded on the **Fish Collection Record** form:

   1. Tag number - Each specimen is to be individually jaw tagged at time of collection with a unique number. Make sure the tag is turned out so that the number can be read without opening the bag. Use tags in sequential order. For small fish or composite samples place the tag inside the bag with the samples. The Bureau of Ecosystem Health can supply the tags.

   2. Species identification (please be explicit enough to enable assigning genus and species). Group fish by species when processing.

   3. Date collected.

   4. Sample location (waterway and nearest prominent identifiable landmark).

   5. Total length (nearest mm or smallest sub-unit on measuring instrument) and weight (nearest g or

smallest sub-unit of weight on weighing instrument). Take all measures as soon as possible with calibrated, protected instruments (e.g. from wind and upsets) and prior to freezing.

6. Sex - fish may be cut enough to allow sexing or other internal investigation, but do not eviscerate. Make any incision on the right side of the belly flap or exactly down the midline so that a left-side fillet can be removed.

D. General data collection recommendations:

1. It is helpful to use an ID or tag number that will be unique. It is best to use metal striped bass or other uniquely numbered metal tags. If uniquely numbered tags are unavailable, values based on the region, water body and year are likely to be unique: for example, R7CAY11001 for Region 7, Cayuga Lake, 2011, fish 1. If the fish are just numbered 1 through 20, we have to give them new numbers for our database, making it more difficult to trace your fish to their analytical results and creating an additional possibility for errors.

2. Process and record fish of the same species sequentially. Recording mistakes are less likely when all fish from a species are processed together. Starting with the bigger fish species helps avoid missing an individual.

3. If using Bureau of Ecosystem Health supplied tags or other numbered tags, use tags in sequence so that fish are recorded with sequential Tag Numbers. This makes data entry and login at the lab and use of the data in the future easier and reduces keypunch errors.

4. Record length and weight as soon as possible after collection and before freezing. Other data are recorded in the field upon collection. An age determination of each fish is optional, but if done, it is recorded in the appropriate "Age" column.

5. For composite samples of small fish, record the number of fish in the composite in the Remarks column. Record the length and weight of each individual in a composite. All fish in a composite sample should be of the same species and members of a composite should be visually matched for size.

6. Please submit photocopies of topographic maps or good quality navigation charts indicating sampling locations. GPS coordinates can be entered in the Location column of the collection record form in addition to or instead for providing a map. These records are of immense help to us (and hopefully you) in providing documented location records which are not dependent on memory and/or the same collection crew. In addition, they may be helpful for contaminant source trackdown and remediation/control efforts of the Department.

7. When recording data on fish measurements, it will help to ensure correct data recording for the data recorder to call back the numbers to the person making the measurements.

E. Each fish is to be placed in its own individual plastic bag. For small fish to be analyzed as a composite, put all of the fish for one composite in the same bag but use a separate bag for each composite. It is important to individually bag the fish to avoid difficulties or cross contamination when processing the fish for chemical analysis. Be sure to include the fish's tag number inside the bag, preferably attached to the fish with the tag number turned out so it can be read. Tie or otherwise secure the bag closed. **The Bureau of Ecosystem Health will supply the bags.** If necessary, food grade bags may be procured from a suitable vendor (e.g., grocery store). It is preferable to redundantly label each bag with a manila tag tied between the knot and the body of the bag. This tag should be labeled with the project name, collection location, tag number, collection date, and fish species. If scales are collected, the scale envelope should be labeled with

the same information.

F. Groups of fish, by species, are to be placed in one large plastic bag per sampling location. **The Bureau of Ecosystem Health will supply the larger bags.** Tie or otherwise secure the bag closed. Label the site bag with a manila tag tied between the knot and the body of the bag. The tag should contain: project, collection location, collection date, species and **tag number ranges**. Having this information on the manila tag enables lab staff to know what is in the bag without opening it.

G. Do not eviscerate, fillet or otherwise dissect the fish unless specifically asked to. If evisceration or dissection is specified, the fish must be cut along the exact midline or on the right side so that the left side fillet can be removed intact at the laboratory. If filleting is specified, the procedure for taking a standard fillet (SOP PREPLAB 4) must be followed, including removing scales.

H. Special procedures for PFAS: Unlike legacy contaminants such as PCBs, which are rarely found in day to day life, PFAS are widely used and frequently encountered. Practices that avoid sample contamination are therefore necessary. While no standard practices have been established for fish, procedures for water quality sampling can provide guidance. The following practices should be used for collections when fish are to be analyzed for PFAS:

No materials containing Teflon.
No Post-it notes.
No ice packs; only water ice or dry ice.
Any gloves worn must be powder free nitrile.
No Gore-Tex or similar materials (Gore-Tex is a PFC with PFOA used in its manufacture).
No stain repellent or waterproof treated clothing; these are likely to contain PFCs.
Avoid plastic materials, other than HDPE, including clipboards and waterproof notebooks.
Wash hands after handling any food containers or packages as these may contain PFCs.
Keep pre-wrapped food containers and wrappers isolated from fish handling.
Wear clothing washed at least six times since purchase.
Wear clothing washed without fabric softener.
Staff should avoid cosmetics, moisturizers, hand creams and similar products on the day of sampling as many of these products contain PFCs (Fujii et al. 2013). Sunscreen or insect repellent should not contain ingredients with “fluor” in their name. Apply any sunscreen or insect repellent well downwind from all materials. Hands must be washed after touching any of these products.

I. All fish must be kept at a temperature <45° F (<8° C) immediately following data processing. As soon as possible, freeze at -20° C ± 5° C. Due to occasional freezer failures, daily freezer temperature logs are required. The freezer should be locked or otherwise secured to maintain chain of custody.

J. In most cases, samples should be delivered to the Analytical Services Unit at the Hale Creek field station. Coordinate delivery with field station staff and send copies of the collection records, continuity of evidence forms and freezer temperature logs to the field station. For samples to be analyzed elsewhere, non-routine collections or other questions, contact Wayne Richter, Bureau of Ecosystem Health, NYSDEC, 625 Broadway, Albany, New York 12233-4756, 518-402-8974, or the project leader about sample transfer. Samples will then be directed to the analytical facility and personnel noted on specific project descriptions.

K. A recommended equipment list is at the end of this document.

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
DIVISION OF FISH AND WILDLIFE
FISH COLLECTION RECORD

Project and Site Name _____ DEC Region _____

Collections made by (include all crew) _____

Sampling Method: ☐Electrofishing ☐Gill netting ☐Trap netting ☐Trawling ☐Seining ☐Angling ☐Other _____

Preservation Method: ☐Freezing ☐Other _____ Notes (SWFDB survey number): _____

FOR LAB USE ONLY- LAB ENTRY NO.	COLLECTION OR TAG NO.	SPECIES	DATE TAKEN	LOCATION	AGE	SEX &/OR REPROD. CONDIT	LENGTH ( )	WEIGHT ( )	REMARKS

richter: revised 2011, 5/7/15, 10/4/16, 3/20/17; becker: 3/23/17, 4/26/19

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
CHAIN OF CUSTODY

I, _____, of _____ collected the
(Print Name) (Print Business Address)

following on _____, 20____ from _____
(Date) (Water Body)

in the vicinity of _____
(Landmark, Village, Road, etc.)

Town of _____, in _____ County.

Item(s) _____

_____

Said sample(s) were in my possession and handled according to standard procedures provided to me prior to collection. The sample(s) were placed in the custody of a representative of the New York State Department of Environmental Conservation on _____, 20_____.

_____ _____
Signature Date

I, _____, received the above mentioned sample(s) on the date specified and assigned identification number(s) _____ to the sample(s). I have recorded pertinent data for the sample(s) on the attached collection records. The sample(s) remained in my custody until subsequently transferred, prepared or shipped at times and on dates as attested to below.

_____ _____
Signature Date

SECOND RECIPIENT (Print Name)	TIME & DATE	PURPOSE OF TRANSFER
SIGNATURE	UNIT	
THIRD RECIPIENT (Print Name)	TIME & DATE	PURPOSE OF TRANSFER
SIGNATURE	UNIT	
FOURTH RECIPIENT (Print Name)	TIME & DATE	PURPOSE OF TRANSFER
SIGNATURE	UNIT	
RECEIVED IN LABORATORY BY (Print Name)	TIME & DATE	REMARKS
SIGNATURE	UNIT	
LOGGED IN BY (Print Name)	TIME & DATE	ACCESSION NUMBERS
SIGNATURE	UNIT	

richter: revised 21 April 2014; becker: 23 March 2017, 26 April, 2019

NOTICE OF WARRANTY

By signature to the chain of custody (reverse), the signatory warrants that the information provided is truthful and accurate to the best of his/her ability. The signatory affirms that he/she is willing to testify to those facts provided and the circumstances surrounding the same. Nothing in this warranty or chain of custody negates responsibility nor liability of the signatories for the truthfulness and accuracy of the statements provided.

HANDLING INSTRUCTIONS

On day of collection, collector(s) name(s), address(es), date, geographic location of capture (attach a copy of topographic map or navigation chart), species, number kept of each species, and description of capture vicinity (proper noun, if possible) along with name of Town and County must be indicated on reverse.

Retain organisms in manila tagged plastic bags to avoid mixing capture locations. Note appropriate information on each bag tag.

Keep samples as cool as possible. Put on ice if fish cannot be frozen within 12 hours. If fish are held more than 24 hours without freezing, they will not be retained or analyzed.

Initial recipient (either DEC or designated agent) of samples from collector(s) is responsible for obtaining and recording information on the collection record forms which will accompany the chain of custody. This person will seal the container using packing tape and writing his signature, the time and the date across the tape onto the container with indelible marker. Any time a seal is broken, for whatever purpose, the incident must be recorded on the Chain of Custody (reason, time, and date) in the purpose of transfer block. Container then is resealed using new tape and rewriting signature, with time and date.

EQUIPMENT LIST

Scale or balance of appropriate capacity for the fish to be collected.

Fish measuring board.

Plastic bags of an appropriate size for the fish to be collected and for site bags.

Individually numbered metal tags for fish.

Manila tags to label bags.

Small envelops, approximately 2” x 3.5”, if fish scales are to be collected.

Knife for removing scales.

Chain of custody and fish collection forms.

Clipboard.

Pens or markers.

Paper towels.

Dish soap and brush.

Bucket.

Cooler.

Ice.

Duct tape.

Appendix G – PFAS Analyte List

Group	Chemical Name	Abbreviation	CAS Number
Perfluoroalkyl sulfonic acids	Perfluorobutanesulfonic acid	PFBS	375-73-5
	Perfluoropentanesulfonic acid	PFPeS	2706-91-4
	Perfluorohexanesulfonic acid	PFHxS	355-46-4
	Perfluoroheptanesulfonic acid	PFHpS	375-92-8
	Perfluorooctanesulfonic acid	PFOS	1763-23-1
	Perfluorononanesulfonic acid	PFNS	68259-12-1
	Perfluorodecanesulfonic acid	PFDS	335-77-3
	Perfluorododecanesulfonic acid	PFDoS	79780-39-5
Perfluoroalkyl carboxylic acids	Perfluorobutanoic acid	PFBA	375-22-4
	Perfluoropentanoic acid	PFPeA	2706-90-3
	Perfluorohexanoic acid	PFHxA	307-24-4
	Perfluoroheptanoic acid	PFHpA	375-85-9
	Perfluorooctanoic acid	PFOA	335-67-1
	Perfluorononanoic acid	PFNA	375-95-1
	Perfluorodecanoic acid	PFDA	335-76-2
	Perfluoroundecanoic acid	PFUnA	2058-94-8
	Perfluorododecanoic acid	PFDoA	307-55-1
	Perfluorotridecanoic acid	PFTrDA	72629-94-8
	Perfluorotetradecanoic acid	PFTeDA	376-06-7
Per- and Polyfluoroether carboxylic acids	Hexafluoropropylene oxide dimer acid	HFPO-DA	13252-13-6
	4,8-Dioxa-3H-perfluorononanoic acid	ADONA	919005-14-4
	Perfluoro-3-methoxypropanoic acid	PFMPA	377-73-1
	Perfluoro-4-methoxybutanoic acid	PFMBA	863090-89-5
	Nonafluoro-3,6-dioxaheptanoic acid	NFDHA	151772-58-6
Fluorotelomer sulfonic acids	4:2 Fluorotelomer sulfonic acid	4:2-FTS	757124-72-4
	6:2 Fluorotelomer sulfonic acid	6:2-FTS	27619-97-2
	8:2 Fluorotelomer sulfonic acid	8:2-FTS	39108-34-4
Fluorotelomer carboxylic acids	3:3 Fluorotelomer carboxylic acid	3:3 FTCA	356-02-5
	5:3 Fluorotelomer carboxylic acid	5:3 FTCA	914637-49-3
	7:3 Fluorotelomer carboxylic acid	7:3 FTCA	812-70-4
Perfluorooctane sulfonamides	Perfluorooctane sulfonamide	PFOSA	754-91-6
	N-methylperfluorooctane sulfonamide	NMeFOSA	31506-32-8
	N-ethylperfluorooctane sulfonamide	NEtFOSA	4151-50-2
Perfluorooctane sulfonamidoacetic acids	N-methylperfluorooctane sulfonamidoacetic acid	N-MeFOSAA	2355-31-9
	N-ethylperfluorooctane sulfonamidoacetic acid	N-EtFOSAA	2991-50-6
Perfluorooctane sulfonamide ethanols	N-methylperfluorooctane sulfonamidoethanol	MeFOSE	24448-09-7
	N-ethylperfluorooctane sulfonamidoethanol	EtFOSE	1691-99-2

Group	Chemical Name	Abbreviation	CAS Number
Ether sulfonic acids	9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (F-53B Major)	9Cl-PF3ONS	756426-58-1
	11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (F-53B Minor)	11Cl-PF3OUdS	763051-92-9
	Perfluoro(2-ethoxyethane) sulfonic acid	PFEESA	113507-82-7

Appendix H - Data Review Guidelines for Analysis of PFAS in Non-Potable Water and Solids

General

These guidelines are intended to be used for the validation of PFAS using EPA Method 1633 for projects within the Division of Environmental Remediation (DER). Data reviewers should understand the methodology and techniques utilized in the analysis. Consultation with the end user of the data may be necessary to assist in determining data usability based on the data quality objectives in the Quality Assurance Project Plan. A familiarity with the laboratory's Standard Operating Procedure may also be needed to fully evaluate the data. If you have any questions, please contact DER's Quality Assurance Officer, Dana Barbarossa, at dana.barbarossa@dec.ny.gov.

Preservation and Holding Time

Samples should be preserved with ice to a temperature of less than 6°C upon arrival at the lab. The holding time is 28 days to extraction for aqueous and solid samples. The time from extraction to analysis for aqueous samples is 28 days and 40 days for solids.

Temperature greatly exceeds 6ºC upon arrival at the lab*	Use professional judgement to qualify detects and non-detects as estimated or rejected
Holding time exceeding 28 days to extraction	Use professional judgement to qualify detects and non-detects as estimated or rejected if holding time is grossly exceeded

*Samples that are delivered to the lab immediately after sampling may not meet the thermal preservation guidelines. Samples are considered acceptable if they arrive on ice or an attempt to chill the samples is observed.

Initial Calibration

The initial calibration should contain a minimum of six standards for linear fit and six standards for a quadratic fit. The relative standard deviation (RSD) for a quadratic fit calibration should be less than 20%.

The low-level calibration standard should be within 50% - 150% of the true value, and the mid-level calibration standard within 70% - 130% of the true value.

%RSD >20%	J flag detects and UJ non detects

Continuing Calibration Verification

Continuing calibration verification (CCV) checks should be analyzed at a frequency of one per ten field samples. If CCV recovery is very low, where detection of the analyte could be in question, ensure a low level CCV was analyzed and use to determine data quality.

CCV recovery <70 or >130%	J flag results

Blanks

There should be no detections in the method blanks above the reporting limits. Equipment blanks, field blanks, rinse blanks etc. should be evaluated in the same manner as method blanks. Use the most contaminated blank to evaluate the sample results.

Blank Result	Sample Result	Qualification
Any detection	<Reporting limit	Qualify as ND at reporting limit
Any detection	>Reporting Limit and >10x the blank result	No qualification
>Reporting limit	>Reporting limit and <10x blank result	J+ biased high

Field Duplicates

A blind field duplicate should be collected at rate of one per twenty samples. The relative percent difference (RPD) should be less than 30% for analyte concentrations greater than two times the reporting limit. Use the higher result for final reporting.

RPD >30%	Apply J qualifier to parent sample

Lab Control Spike

Lab control spikes should be analyzed with each extraction batch or one for every twenty samples. In the absence of lab derived criteria, use 70% - 130% recovery criteria to evaluate the data.

Recovery <70% or >130% (lab derived criteria can also be used)	Apply J qualifier to detects and UJ qualifier to non detects

Matrix Spike/Matrix Spike Duplicate

One matrix spike and matrix spike duplicate should be collected at a rate of one per twenty samples. Use professional judgement to reject results based on out of control MS/MSD recoveries.

Recovery <70% or >130% (lab derived criteria can also be used)	Apply J qualifier to detects and UJ qualifier to non detects of parent sample only
RPD >30%	Apply J qualifier to detects and UJ qualifier to non detects of parent sample only

Extracted Internal Standards (Isotope Dilution Analytes)

Problematic analytes (e.g. PFBA, PFPeA, fluorotelomer sulfonates) can have wider recoveries without qualification. Qualify corresponding native compounds with a J flag if outside of the range.

Recovery <50% or >150%	Apply J qualifier
Recovery <25% or >150% for poor responding analytes	Apply J qualifier
Isotope Dilution Analyte (IDA) Recovery <10%	Reject results

Signal to Noise Ratio

The signal to noise ratio for the quantifier ion should be at least 3:1. If the ratio is less than 3:1, the peak is discernable from the baseline noise and symmetrical, the result can be reported. If the peak appears to be baseline noise and/or the shape is irregular, qualify the result as tentatively identified.

Reporting Limits

If project-specific reporting limits were not met, please indicate that in the report along with the reason (e.g. over dilution, dilution for non-target analytes, high sediment in aqueous samples).

Peak Integrations

Target analyte peaks should be integrated properly and consistently when compared to standards. Ensure branched isomer peaks are included for PFAS where standards are available. Inconsistencies should be brought to the attention of the laboratory or identified in the data review summary report.

EGLE Michigan Department of Environment, Great Lakes, and Energy

EGLE PFAS Sampling Quick Reference Field Guide[1]

All Items Used During Sampling Event

● Prohibited
• Items or materials that contain fluoropolymers such as o Polytetrafluoroethylene (PTFE), that includes the trademarks Teflon® and Hostaflon® o Polyvinylidene fluoride (PVDF), that includes the trademark Kynar® o Polycholotrifluoroethylene (PCTFE), that includes the trademark Neoflon ® o Ethylene-tetrafluoro-ethylene (ETFE), that includes the trademark Tefzel® o Fluorinated ethylene propylene (FEP), that includes the trademarks Teflon® FEP and Hostaflon® FEP • Items or materials that contain any other fluoropolymer

Pumps, Tubing, and Sampling Equipment

● Prohibited	■ Allowable	▲Needs Screening[2]
• Items or materials containing any fluoropolymer (potential items include tubing, valves, or pipe thread seal tape)	• High-density polyethylene (HDPE) • Low-density polyethylene (LDPE) tubing • Polypropylene • Silicone • Stainless-steel • Any items used to secure sampling bottles made from: o Natural rubber o Nylon (cable ties) o Uncoated metal springs o Polyethylene	• Any items or materials that will come into direct contact with the sample that have **not** been verified to be PFAS-free o Do not assume that any sampling items or materials are PFAS-free based on composition alone

Sample Storage and Preservation

● Prohibited	■ Allowable	▲Needs Screening[2]
• Polytetrafluoroethylene (PTFE): Teflon® lined bottles or caps	• Glass jars[4] • Laboratory-provided PFAS-Free bottles: o HDPE or polypropylene • Regular wet ice • Thin HDPE sheeting • LDPE resealable storage bags (i.e. Ziploc®) that will not contact the sample media[6]	• Aluminium foil[4] • Chemical or blue ice[5] • Plastic storage bags other than those listed as ■ Allowable • Low-density polyethylene (LDPE) bottles

Field Documentation

● Prohibited	■ Allowable	▲Needs Screening[2]
• Clipboards coated with PFAS • Notebooks made with PFAS treated paper • PFAS treated loose paper • PFAS treated adhesive paper products	• Loose paper (non-waterproof, non-recycled) • Rite in the Rain® notebooks • Aluminium, polypropylene, or Masonite field clipboards • Ballpoint pens, pencils, and Fine or Ultra-Fine Point Sharpie® markers	• Plastic clipboards, binders, or spiral hard cover notebooks • All markers not listed as ■ Allowable • Post-It® Notes or other adhesive paper products • Waterproof field books

Decontamination

● Prohibited	■ Allowable	▲Needs Screening[2]
• Decon 90® • PFAS treated paper towel	• Alconox®, Liquinox®, or Citranox® • Triple rinse with PFAS-free deionized water • Cotton cloth or untreated paper towel	• Municipal water • Recycled paper towels or chemically treated paper towels

Clothing, Boots, Rain Gear, and PPE

● Prohibited	■ Allowable	▲Needs Screening[2]
• New or unwashed clothing • Anything made of or with: o Gore-Tex™ or other water-resistant synthetics • Anything applied with or recently washed with: o Fabric softeners o Fabric protectors, including UV protection o Insect resistant chemicals o Water, dirt, and/or stain resistant chemicals	• Powderless nitrile gloves • Well-laundered synthetic or 100% cotton clothing, with most recent launderings not using fabric softeners • Made of or with: o Polyurethane o Polyvinyl chloride (PVC) o Wax coated fabrics o Rubber / Neoprene o Uncoated Tyvek®	• Latex gloves • Water and/or dirt resistant leather gloves • Any special gloves required by a HASP • Tyvek® suits, clothing that contains Tyvek®, or coated Tyvek®

Food and Beverages

● Prohibited	■ Allowable
• No food should be consumed in the staging or sampling areas, including pre-packaged food or snacks. ■ If consuming food on-site becomes necessary, move to the staging area and remove PPE. After eating, wash hands thoroughly and put on new PPE.	• Brought and consumed only outside the vicinity of the sampling area: o Bottled water o Hydration drinks (i.e. Gatorade®, Powerade®)

Personal Care Products (PCPs) - for day of sample collection[6]

● Prohibited	■ Allowable	▲Needs Screening[2]
• Any PCPs[6], sunscreen, and insect repellent applied in the sampling area.	PCPs[6], sunscreens, and insect repellents applied in the staging area, away from sampling bottles and equipment followed by thoroughly washing hands: **PCPs[6]:** • Cosmetics, deodorants/antiperspirants, moisturizers, hand creams, and other PCPs[6] **Sunscreens:** • Banana Boat® for Men Triple Defense Continuous Spray Sunscreen SPF 30 • Banana Boat® Sport Performance Coolzone Broad Spectrum SPF 30 • Banana Boat® Sport Performance Sunscreen Lotion Broad Spectrum SPF 30 • Banana Boat® Sport Performance Sunscreen Stick SPF 50 • Coppertone® Sunscreen Lotion Ultra Guard Broad Spectrum SPF 50 • Coppertone® Sport High Performance AccuSpray Sunscreen SPF 30 • Coppertone® Sunscreen Stick Kids SPF 55 • L'Oréal® Silky Sheer Face Lotion 50 • Meijer® Clear Zinc Sunscreen Lotion Broad Spectrum SPF 50 • Meijer® Sunscreen Continuous Spray Broad Spectrum SPF 30 • Meijer® Clear Zinc Sunscreen Lotion Broad Spectrum SPF 15, 30 and 50 • Meijer® Wet Skin Kids Sunscreen Continuous Spray Broad Spectrum SPF 70 • Neutrogena® Beach Defense Water+Sun Barrier Lotion SPF 70 • Neutrogena® Beach Defense Water+Sun Barrier Spray Broad Spectrum SPF 30 • Neutrogena® Pure & Free Baby Sunscreen Broad Spectrum SPF 60+ • Neutrogena® UltraSheer Dry-Touch Sunscreen Broad Spectrum SPF 30 **Insect Repellents:** • OFF® Deep Woods • Sawyer® Permethrin	• Products other than those listed as ■Allowable

[1] This table is not considered to be a complete listing of prohibited or allowable materials. All materials should be evaluated prior to use during sampling. The manufacturers of various products should be contacted in order to determine if PFAS was used in the production of any particular product.

[2] Equipment blank samples should be taken to verify these products are PFAS-free prior to use during sampling.

[3] **For surface water foam samples:** LDPE storage bags may be used in the sampling of foam on surface waters. In this instance, it is allowable for the LDPE bag to come into direct contact with the sample media.

[4] **For fish and other wildlife samples:** Depending on the project objectives, glass jars and aluminum foil might be used for PFAS sampling. PFAS has been found to bind to glass and if the sample is stored in a glass jar, a rinse of the jar is required during the sample analysis. PFAS are sometimes used as a protective layer for some aluminum foils. An equipment blank sample should be collected prior to any aluminum foil use.

[5] Regular ice is recommended as there are concerns that chemical and blue ice may not cool and maintain the sample at or below 42.8˚F (6°C) (as determined by EPA 40 CFR 136 – NPDES) during collection and through transit to the laboratory.

[6] Based on evidence, avoidance of PCPs is considered to be precautionary because none have been documented as having cross-contaminated samples due to their use. However, if used, application of PCPs must be done at the staging area and away from sampling bottles and equipment, and hands must be thoroughly washed after the use of any PCPs prior to sampling.

● - Prohibited ■ - Allowable ▲ - Needs Screening

Attachment C: Soil Cleanup Objectives

Department of Environmental Conservation

Division of Environmental Remediation

6 NYCRR PART 375

Environmental Remediation Programs

Effective December 31, 2025

New York State Department of Environmental Conservation

Subpart 375-6 Remedial Program Soil Cleanup Objectives

375-6.1 Purpose; applicability.
375-6.2 Definitions.
375-6.3 Unrestricted use soil cleanup objectives.
375-6.4 Restricted use soil cleanup objectives for the protection of public health.
375-6.5 Soil cleanup objectives for the protection of groundwater.
375-6.6 Soil cleanup objectives for the protection of ecological resources.
375-6.7 Other considerations and media.
375-6.8 Soil cleanup objective tables.
375-6.9 Development or modification of soil cleanup objectives.

375-6.1 Purpose; applicability.

(a) This Subpart applies to the development and implementation of the remedial programs for soil and other media set forth in Subparts 375-2 through 375-4 of this Part.

(b) This Subpart includes the soil cleanup objective tables developed pursuant to ECL 27-1415(6).

375-6.2 Definitions.

(a) *Contract required quantitation limit* or *CRQL* means the minimum level of quantitation acceptable for department analytical services contracts. The value represents minimum quantitation limits, not absolute detection limits. The minimum quantitation limit is the lowest level at which the analytical instrument can determine the concentration of a chemical that exists in the sample. The detection limit is the minimum level at which the analytical instrument can confirm the presence of the chemical in the sample. At the detection limit, the analytical instrument can confirm that there is some amount of the chemical in the sample but cannot determine the concentration that exists with certainty.

(b) *Technical support document* means the *New York State Brownfield Cleanup Program Development of Soil Cleanup Objectives Technical Support Document* dated September 2006, as amended by the *2019 Soil Cleanup Objective Technical Support Document Update* which is the document that presents the assumptions, rationale, algorithms and calculations utilized by the department and the New York State Department of Health to develop the soil cleanup objectives in ECL 27-1415(6).

375-6.3 Unrestricted use soil cleanup objectives.

(a) Applicability. The unrestricted use soil cleanup objectives represent the concentration of a contaminant in soil which, when achieved at a site, will require no use restrictions on the site for the protection of public health, groundwater and ecological resources due to the presence of contaminants in the soil.

(b) Soil cleanup objectives.

(1) The calculated values for the protection of groundwater, ecological resources and public health were considered in developing the unrestricted use soil cleanup

objectives. The unrestricted soil cleanup objectives in Table 375-6.8(a) of this Subpart represent the lowest of the three values for protection of groundwater, ecological resources and public health developed as set forth in ECL 27-1415(6).

(2) Unrestricted use, as set forth in section 375-1.8(g)(1)(i) of this Part, is achieved when a remedial program for soil meets the unrestricted use soil cleanup objectives in Table 375-6.8(a) of this Subpart.

375-6.4 Restricted use soil cleanup objectives for the protection of public health.

(a) Applicability. A protection of public health soil cleanup objective is applicable for the protection of public health at every restricted use site where contamination has been identified in soil above the residential use soil cleanup objectives for a compound included in Table 375-6.8(b) of this Subpart, and the department has determined that remediation is required to protect public health.

(b) Soil cleanup objectives. Protection of public health soil cleanup objectives have been developed for:

(1) Residential use, as set forth in section 375-1.8(g)(2)(i) of this Part. The residential use soil cleanup objectives are presented in the protection of public health-residential use column of Table 375-6.8(b) of this Subpart.

(2) Restricted-residential use, as set forth in section 375-1.8(g)(2)(ii) of this Part. The restricted-residential use soil cleanup objectives are presented in the protection of public health, restricted-residential use column of Table 375-6.8(b) of this Subpart.

(3) Commercial use, as set forth in section 375-1.8(g)(2)(iii) of this Part. The commercial use soil cleanup objectives are presented in the protection of public health-commercial use column of Table 375-6.8(b) of this Subpart.

(4) Industrial use, as set forth in section 375-1.8(g)(2)(iv) of this Part. The industrial use soil cleanup objectives are presented in the protection of public health-industrial use column of Table 375-6.8(b) of this Subpart.

(c) Selection of the restricted use soil cleanup objectives. In addition to the protection of public health soil cleanup objective for the identified use of the site, protection of groundwater and ecological resources soil cleanup objectives shall be considered where applicable. The contaminant-specific soil cleanup objectives for the soil cleanup component of the remedial program shall be the lowest of the applicable contaminant-specific soil cleanup objectives which are identified for the site as set forth in paragraphs (1) through (3) of this subdivision.

(1) The protection of groundwater soil cleanup objectives in Table 375-6.8(b) of this Subpart will be applicable to the site and evaluated in determining the soil cleanup objectives for a site as set forth in section 375-6.5 of this Title.

(2) The protection of ecological resources soil cleanup objectives in Table 375-6.8(b) of this Subpart will be applicable to the site and evaluated in determining the soil cleanup objectives in section 375-6.6 of this Subpart.

(3) The protection of public health soil cleanup objective for the current, intended and reasonably anticipated future use of the site in Table 375-6.8(b) of this Subpart will

be applicable and evaluated in determining the soil cleanup objectives for every site, unless a site-specific soil cleanup objective is proposed.

375-6.5 Soil cleanup objectives for the protection of groundwater.

(a) Applicability. Except as provided in paragraphs (1) and (2) of this subdivision, the protection of groundwater soil cleanup objectives are applicable at restricted use sites where contamination has been identified in on-site soil by the remedial investigation and groundwater standards are, or are threatened to be, contravened by the presence of soil contamination at concentrations above the protection of groundwater soil cleanup objectives.

(1) The protection of groundwater soil cleanup objectives may not be applicable where:

(i) the groundwater standard contravention is the result of an on-site source which is addressed by the remedial program;

(ii) an environmental easement will be put in place which provides for a groundwater use restriction on the site as set forth in section 375-1.8(h)(2) of this Part;

(iii) the department determines that contaminated groundwater at the site:

(*a*) is not migrating, or likely to migrate, off-site; or

(*b*) is migrating, or is likely to migrate, off-site, however, the remedy includes controls or treatment to address off-site migration; and

(iv) the department determines the groundwater quality will improve over time.

(2) The protection of groundwater soil cleanup objectives are not applicable if the contravention of groundwater standards at the site is determined to be solely the result of an off-site source, as set forth in section 375-1.8(d)(2) of this Part.

(b) Soil cleanup objectives. The protection of groundwater soil cleanup objectives are in Table 375-6.8(b) of this Subpart in the protection of groundwater column.

375-6.6 Soil cleanup objectives for the protection of ecological resources.

(a) Applicability. The soil cleanup objectives for protection of ecological resources must be considered and applied as set forth in this section for the upland soils at sites where terrestrial flora and fauna and the habitats that support them are identified.

(1) Protection of ecological resources soil cleanup objectives apply to sites or portions of sites where the department determines:

(i) ecological resources are present at or adjacent to the site, or will be present under the reasonably anticipated future use of the site, as set forth in subdivision (b) of this section which constitute an important component of the environment

(ii) an impact or threat to the ecological resource has been identified as set forth in subdivision 375-6.6(c) of this section; and

(iii) soil contaminant concentrations exceed the protection of ecological resources soil cleanup objectives, as set forth in subdivision 375-6.6(d) of this section.

(2) Protection of ecological resources soil cleanup objectives do not and/or will not apply to:

(i) sites or portions of sites where the condition of the land (e.g., paved, covered by impervious surfaces, buildings and other structures) precludes the existence of an ecological resource which constitutes an important component of the environment;

(ii) protection of the aquatic environment; or

(iii) such non-wild biota as:

(*a*) pets or livestock;

(*b*) agricultural or horticultural crops; and

(*c*) landscaping in developed areas.

(b) Identification of ecological resources. The presence of ecological resources shall be determined during the investigation of a site.

(1) The remedial party for a remedial program undertaken pursuant to either Subpart 375-2 or 375-4 of this Part shall conduct an ecological resource characterization as part of a fish and wildlife impact analysis according to department guidance to document the presence of fish, wildlife, plants and habitats both on and adjacent to the site.

(2) The remedial party for a remedial program undertaken pursuant to Subpart 375-3 of this Part shall conduct a resource characterization as part of the qualitative exposure assessment required by ECL 27-1415(2)(b) and in accordance with department guidance to document the presence of fish, wildlife, plants and habitats both on and adjacent to the site.

(3) The department shall determine whether the characterization conducted as set forth in paragraphs (1) and (2) of this subdivision:

(i) has identified ecological resources to be present at or adjacent to a site, or a portion thereof; and

(ii) if such ecological resources constitute an important component of the environment at, or in the vicinity of, the site.

(c) Consideration of impact or threat of impact. If ecological resources that constitute an important component of the environment at, or adjacent to, the site are determined to be present the protection of ecological resources soil cleanup objectives must be considered in the remedial program for the site. An impact or threat of impact exists when:

(1) a threat to the environment exists, as set forth in sections 375-2.7(a)(1)(i) to (iv) of this Part, as a result of contaminants in the soil of the site, unless the department determines that a more stringent cleanup is necessary to meet the requirements of sections 375-2.8(a) and 375-2.8(b)(1) of this Part; or

(2) an ecological resource is, or is potentially, impacted by contaminants in the soil of the site.

(d) Soil cleanup objectives. The protection of ecological resources soil cleanup objectives are the same for both unrestricted and restricted use and are incorporated in the soil cleanup objective tables.

(1) For an unrestricted use site, Table 375-6.8(a) of this Subpart presents the lower of the protection of groundwater, ecological resources and unrestricted public health soil cleanup objectives, as calculated and presented in the technical support document.

(2) For a restricted use site, Table 375-6.8(b) of this Subpart includes a protection of ecological resources column, which is applicable to a site regardless of the identified use, as set forth in subdivision (a) of this section.

(3) Protection of ecological resources soil cleanup objectives were not developed for contaminants identified in Table 375-6.8(b) of this Subpart as *NS*. For such contaminants, the applicant may be required to calculate a protection of ecological resources soil cleanup objective for any site, as set forth in section 375-6.9 of this Subpart.

375-6.7 Other considerations and media.

(a) Soil vapor and vapor intrusion.

(1) The soil cleanup objectives presented in this Subpart do not account for the impact of concentrations of contaminants in soil relative to soil vapor or vapor intrusion attributable to a remedial site.

(2) The nature and extent of any contamination of the soil vapor media, if present at the site, will be evaluated by the remedial investigation.

(3) The remedy will be protective for soil vapor and vapor intrusion and shall address through appropriate removal or engineering controls the migration of contaminants in soil and groundwater at levels which could impact the indoor air of buildings.

(b) Surface water and sediments.

(1) The soil cleanup objectives presented in this Subpart do not account for the impact of contaminants in soil relative to surface water and surface water sediments attributable to a remedial site.

(2) The nature and extent of any contamination of the surface water and sediment, if present at the site, will be evaluated by the remedial investigation.

(3) The remedy for a site will eliminate or mitigate the threat to public health and the environment from contaminated surface water and surface water sediments and shall, to the extent feasible:

(i) remove, contain or treat the source of a discharge of contaminants from the site to the surface water and sediments;

(ii) address through appropriate removal or engineering controls the migration of contaminants in soil and groundwater at levels which could impact the water quality or adversely impact the sediments of a surface water body on or adjacent to the site; and

(iii) remove, contain or treat the impacted surface water and surface water sediments based upon the cleanup objectives developed for the remedial program.

(c) Adjacent residential properties.

(1) The soil cleanup objectives presented for commercial or industrial use in this Subpart do not directly account for the impact of concentrations of contaminants in soil relative to adjacent residential properties attributable to a remedial site.

(2) The remedy for a site using the commercial or industrial soil cleanup objectives will be protective of adjacent residential properties and shall address, through appropriate removal or engineering controls, the migration of contaminants in soil which could impact residential properties adjacent to the site.

(d) Soil covers and backfill.

(1) Soil brought to the site for use as a soil cover or backfill must not exceed the applicable soil cleanup objectives for the use of the site, as set forth in Table 375-6.8(a) or (b) of this Subpart, as follows:

(i) for unrestricted use sites, as set forth in Table 375-6.8(a) of this Subpart;

(ii) for residential, restricted-residential, and commercial use sites use the lower of the protection of groundwater or the protection of public health soil cleanup objectives, for the identified use of the site as set forth in Table 375-6.8(b) of this Subpart;

(iii) for industrial use sites, use the lower of the protection of groundwater or the protection of public health soil cleanup objectives for commercial use as set forth in Table 375-6.8(b) of this Subpart;

(iv) for restricted use sites where an ecological resource that constitutes an important component of the environment is determined to be present, the protection of ecological resources soil cleanup objective must also be considered, so as not to preclude the growth and development of plants and soil dwelling organisms nor inhibit the activity of burrowing organisms; or

(v) a site-specific modification to a soil cleanup objective, as set forth in section 375-6.9(e) of this Subpart, may also be utilized in compliance with clauses (ii)(*a*) through (*d*) of this subparagraph.

(2) Analytical data is required to demonstrate that the material complies with the requirements of paragraph (1) of this subdivision. The number of samples required to confirm compliance will be approved in the work plan. The department may issue a site-specific exemption for the analytical testing requirements, based upon documentation of the origin and composition of the material.

(3) The department may issue a site-specific exemption for one or more of the requirements set forth in paragraph (1) of this subdivision, based upon site-specific conditions, including but not limited to, the following:

(i) the use and redevelopment of the site;

(ii) the depth of placement of the backfill material;

(iii) the depth of placement of the backfill material relative to groundwater;
(iv) the volume of backfill material;
(v) the potential for odor from the backfill material;
(vi) a department issued beneficial use determination, pursuant to Part 360 of this Title; or
(vii) background levels of contamination in areas surrounding the site.

375-6.8 Soil cleanup objective tables.

Table 375-6.8(a). Unrestricted use soil cleanup objectives

Table 375-6.8(a). Unrestricted use soil cleanup objectives.

Contaminant	CAS Number	Unrestricted Use
Metals		
Arsenic	7440-38-2	13 [c]
Barium	7440-39-3	410 [c]
Beryllium	7440-41-7	4.4
Cadmium	7440-43-9	2.5 [c]
Chromium, hexavalent [e]	18540-29-9	1 [b]
Chromium, trivalent [e]	16065-83-1	30 [c]
Copper	7440-50-8	50
Total Cyanide [e, f]		2.3 [c]
Lead	7439-92-1	63 [c]
Manganese	7439-96-5	1600 [c]
Mercury (Total)		0.18 [c]
Nickel	7440-02-0	30
Selenium	7782-49-2	3.9 [c]
Silver	7440-22-4	2
Zinc	7440-66-6	109 [c]
PCBs/Pesticides		
4,4’-DDE	72-55-9	0.0033 [b]
4,4’-DDT	50-29-3	0.0033 [b]
4,4’-DDD	72-54-8	0.0033 [b]

Table 375-6.8(a). Unrestricted use soil cleanup objectives.

Contaminant	**CAS Number**	**Unrestricted Use**
Aldrin	309-00-2	0.0048 [c]
alpha-BHC	319-84-6	0.02
beta-BHC	319-85-7	0.021
Chlordane (alpha)	5103-71-9	0.014
delta-BHC [g]	319-86-8	0.04
Dieldrin	60-57-1	0.005 [c]
Endosulfan I [d, f]	959-98-8	4.3
Endosulfan II [d, f]	33213-65-9	4.3
Endosulfan sulfate [d, f]	1031-07-8	4.3
Endrin	72-20-8	0.014
Heptachlor	76-44-8	0.013
Lindane	58-89-9	0.025
Polychlorinated biphenyls	1336-36-3	0.1
Semivolatile organic compounds		
1,4 Dioxane	123-91-1	0.1 [b]
Acenaphthene	83-32-9	20
Acenaphthylene [f]	208-96-8	100 [a]
Anthracene [f]	120-12-7	100 [a]
Benz(a)anthracene [f]	56-55-3	1 [c]
Benzo(a)pyrene	50-32-8	1 [c]
Benzo(b)fluoranthene [f]	205-99-2	1 [c]

Table 375-6.8(a). Unrestricted use soil cleanup objectives.

Contaminant	**CAS Number**	**Unrestricted Use**
Benzo(g,h,i)perylene [f]	191-24-2	0.64
Benzo(k)fluoranthene [f]	207-08-9	0.8 [c]
Chrysene [f]	218-01-9	1 [c]
Dibenz(a,h)anthracene [f]	53-70-3	0.33 [b]
Dibenzofuran [f]	132-64-9	2.1
Fluoranthene [f]	206-44-0	85
Fluorene	86-73-7	30
Indeno(1,2,3-cd)pyrene [f]	193-39-5	0.5 [c]
m-Cresol [f]	108-39-4	0.33 [b]
Naphthalene [f]	91-20-3	12
o-Cresol [f]	95-48-7	0.33 [b]
p-Cresol [f]	106-44-5	0.33 [b]
Pentachlorophenol	87-86-5	0.8 [b]
Phenanthrene [f]	85-01-8	1.1 [c]
Phenol	108-95-2	0.33 [b]
Pyrene [f]	129-00-0	64
Volatile organic compounds		
1,1,1-Trichloroethane [f]	71-55-6	0.68
1,1-Dichloroethane [f]	75-34-3	0.27
1,1-Dichloroethene [f]	75-35-4	0.24
1,2-Dichlorobenzene [f]	95-50-1	1.1

Table 375-6.8(a). Unrestricted use soil cleanup objectives.

Contaminant	CAS Number	Unrestricted Use
1,2-Dichloroethane	107-06-2	0.02 [c]
cis -1,2-Dichloroethene [f]	156-59-2	0.19
trans-1,2-Dichloroethene [f]	156-60-5	0.19
1,3-Dichlorobenzene [f]	541-73-1	2.6
1,4-Dichlorobenzene	106-46-7	1.8
Acetone	67-64-1	0.03
Aniline	62-53-3	0.04
Benzene	71-43-2	0.06
n-Butylbenzene [f]	104-51-8	18
Carbon tetrachloride [f]	56-23-5	0.76
Chlorobenzene	108-90-7	4.5
Chloroform	67-66-3	0.37
Ethylbenzene [f]	100-41-4	1
Hexachlorobenzene [f]	118-74-1	0.33 [b]
Methyl ethyl ketone	78-93-3	0.10
Methyl tert-butyl ether [f]	1634-04-4	0.1
Methylene chloride	75-09-2	0.05
Nitrobenzene	98-95-3	0.08[c]
n – Propylbenzene [f]	103-65-1	5
sec-Butylbenzene [f]	135-98-8	25
tert-Butylbenzene [f]	98-06-6	11

Table 375-6.8(a). Unrestricted use soil cleanup objectives.

Contaminant	CAS Number	Unrestricted Use
Tetrachloroethene	127-18-4	1.3
Toluene	108-88-3	0.7
Trichloroethene	79-01-6	0.47
1,2,4-Trimethylbenzene [f]	95-63-6	5.9
1,3,5-Trimethylbenzene [f]	108-67-8	3.1
Vinyl chloride [f]	75-01-4	0.03
Xylene (mixed)	1330-20-7	0.26
All soil cleanup objectives are in parts per million (ppm).		

[a.] The soil cleanup objectives for unrestricted use were capped at a maximum value of 100 ppm. See the New York State Department of Environmental Conservation Technical Support Document (2006), section 9.3.
[b.] For constituents where the calculated soil cleanup objective was lower than the contract required quantitation limit, the contract required quantitation limit is used as the Track 1 soil cleanup objective value.
[c.] For constituents where the calculated soil cleanup objective was lower than the rural soil background concentration, the rural soil background concentration is used as the Track 1 soil cleanup objective value for this use of the site. See the New York State Department of Environmental Conservation Technical Support Document (2006), Section 9 and Appendix D.
[d.] The soil cleanup objective is the sum of endosulfan I, endosulfan II, and endosulfan sulfate.
[e.] The soil cleanup objective for this specific compound (or family of compounds) is met if the analysis for the total species of this contaminant is below the specific soil cleanup objective.
[f.] Protection of ecological resources soil cleanup objectives were not developed for contaminants identified in Table 375-6.8(b) with “NS”. Where such contaminants appear in Table 375-6.8(a), the applicant may be required by the department to calculate a protection of ecological resources soil cleanup objective according to the New York State Department of Environmental Conservation Technical Support Document (2006).
[g] This soil cleanup objective is derived from data on mixed isomers of BHC.

Table 375-6.8(b). Restricted use soil cleanup objectives.

Table 375-6.8(b) Restricted use soil cleanup objectives.

Contaminant	CAS Number	Protection of Public Health				Protection of Ecological Resources	Protection of Ground-water
		Residential	Restricted Residential	Commercial	Industrial		
Metals							
Arsenic	7440-38-2	16 [f]	16 [f]	16 [f]	16 [f]	13 [f]	16 [f]
Barium	7440-39-3	410	410	410	10,000 [d]	433	820
Beryllium	7440-41-7	8.8	43	670	750	10	47
Cadmium	7440-43-9	2.5 [f]	2.5 [f]	3.7	4.4	4	7.5
Chromium, hexavalent [h]	18540-29-9	1 [e]	1 [e]	11	11	20	19
Chromium, trivalent [h]	16065-83-1	30 [f]	110	1,700	2,000	160	NS
Copper	7440-50-8	280	280	280	10,000 [d]	50	1720
Total Cyanide [h]		2.6	13	28	240	NS	40
Lead	7439-92-1	400	400	1,000	3,900	63 [f]	450
Manganese	7439-96-5	2,000 [f]	2,000 [f]	10,000 [d]	10,000 [d]	1600 [f]	2,000 [f]
Mercury (Total)		0.30 [j]	0.30 [j]	1.1 [j]	1.1 [j]	0.18 [f]	0.73
Nickel	7440-02-0	87	320	320	5,900	30	130
Selenium	7782-49-2	22	110	1,700	2,000	3.9 [f]	4 [f]
Silver	7440-22-4	22	110	1,700	2,000	2	8.3
Zinc	7440-66-6	1,300	6,600	10,000 [d]	10,000 [d]	109 [f]	2,480
PCBs/Pesticides							
4,4’-DDE	72-55-9	0.78	3.4	22	22	0.0033 [e]	9.3

Table 375-6.8(b) Restricted use soil cleanup objectives.

Contaminant	CAS Number	Protection of Public Health				Protection of Ecological Resources	Protection of Ground-water
		Residential	Restricted Residential	Commercial	Industrial		
4,4'-DDT	50-29-3	0.78	3.8	27	27	0.0033 [e]	135
4,4'- DDD	72-54-8	1.2	5	33	33	0.0033 [e]	14
Aldrin	309-00-2	0.0088	0.044	0.33	0.33	0.14	0.19
alpha-BHC	319-84-6	0.042	0.18	1.2	1.2	0.04 [g]	0.02
beta-BHC	319-85-7	0.042	0.18	1.8	2.9	0.6	0.09
Chlordane (alpha)	5103-71-9	0.14	0.65	8.2	11	1.3	4.5
delta-BHC	319-86-8	100	100 [a]	500 [b]	1,000 [c]	0.04 [g]	0.1
Dieldrin	60-57-1	0.017	0.075	0.48	0.48	0.006	0.1
Endosulfan I	959-98-8	8.4 [i]	35 [i]	360 [i]	580 [i]	NS	65
Endosulfan II	33213-65-9	8.4 [i]	35 [i]	360 [i]	580 [i]	NS	44
Endosulfan sulfate	1031-07-8	8.4 [i]	35 [i]	360 [i]	580 [i]	NS	47 [c]
Endrin	72-20-8	1.2	5.3	55	87	0.014	0.06
Heptachlor	76-44-8	0.12	0.53	5.1	5.1	0.14	0.38
Lindane	58-89-9	0.05	0.21	0.21	3.4	6	0.05
Polychlorinated biphenyls	1336-36-3	1	1	1	25	1	3.2
Semivolatiles							
1,4-Dioxane	123-91-1	1.4	5.7	36	36	0.1 [e]	0.1 [e]
Acenaphthene	83-32-9	100 [a]	100 [a]	500 [b]	1,000 [c]	20	98

Table 375-6.8(b) Restricted use soil cleanup objectives.

Contaminant	CAS Number	Protection of Public Health				Protection of Ecological Resources	Protection of Ground-water
		Residential	Restricted Residential	Commercial	Industrial		
Acenaphthylene	208-96-8	100 [a]	100 [a]	500 [b]	1,000 [c]	NS	365
Anthracene	120-12-7	100 [a]	100 [a]	500 [b]	1,000 [c]	NS	1,000 [c]
Benz(a)anthracene	56-55-3	1 [f]	1.4	37	37	NS	1 [f]
Benzo(a)pyrene	50-32-8	1 [f]	1 [f]	3.7	3.7	2.6	22
Benzo(b)fluoranthene	205-99-2	1 [f]	1.4	37	37	NS	2.1
Benzo(g,h,i)perylene	191-24-2	1.2	4.9	47	78	NS	1,000 [c]
Benzo(k)fluoranthene	207-08-9	1.2	4.9	47	78	NS	2
Chrysene	218-01-9	1.2	4.9	47	78	NS	1 [f]
Dibenz(a,h) anthracene	53-70-3	0.33 [e]	0.33 [e]	3.7	3.7	NS	1,000 [c]
Dibenzofuran	132-64-9	4.2	18	180	290	NS	110
Fluoranthene	206-44-0	100 [a]	100 [a]	500 [b]	1,000 [c]	NS	1,000 [c]
Fluorene	86-73-7	100 [a]	100 [a]	500 [b]	1,000 [c]	30	386
Indeno(1,2,3-cd) pyrene	193-39-5	0.5 [f]	1.4	37	37	NS	6.6
m-Cresol	108-39-4	100 [a]	100 [a]	500 [b]	1,000 [c]	NS	0.33 [e]
Naphthalene	91-20-3	84 [a]	100 [a]	500 [b]	1,000 [c]	NS	12
o-Cresol	95-48-7	100 [a]	100 [a]	500 [b]	1,000 [c]	NS	0.33 [e]
p-Cresol	106-44-5	100 [a]	100 [a]	500 [b]	1,000 [c]	NS	0.33 [e]
Pentachlorophenol	87-86-5	0.8 [e]	1.3	6.9	7	0.8 [e]	0.8 [e]

Table 375-6.8(b) Restricted use soil cleanup objectives.

Contaminant	CAS Number	Protection of Public Health				Protection of Ecological Resources	Protection of Ground-water
		Residential	Restricted Residential	Commercial	Industrial		
Phenanthrene	85-01-8	1.2	4.9	47	78	NS	1,000 [c]
Phenol	108-95-2	100 [a]	100 [a]	500 [b]	1,000 [c]	30	0.33 [e]
Pyrene	129-00-0	100 [a]	100 [a]	500 [b]	1,000 [c]	NS	1,000 [c]
Volatiles							
1,1,1-Trichloroethane	71-55-6	100 [a]	100 [a]	500 [b]	1,000 [c]	NS	0.68
1,1-Dichloroethane	75-34-3	19	47	240	240	NS	0.27
1,1-Dichloroethene	75-35-4	0.41	0.98	5.1	5.1	NS	0.33
1,2-Dichlorobenzene	95-50-1	100 [a]	100 [a]	500 [b]	1,000 [c]	NS	1.1
1,2-Dichloroethane	107-06-2	2.4	5.8	30	30	10	0.02
cis-1,2-Dichloroethene	156-59-2	8.7	41	500 [b]	590	NS	0.19
trans-1,2-Dichloroethene	156-60-5	75	100 [a]	500 [b]	1,000 [c]	NS	0.19
1,3-Dichlorobenzene	541-73-1	11	38	280	280	NS	2.6
1,4-Dichlorobenzene	106-46-7	10	24	130	130	20	1.8
Acetone	67-64-1	100 [a]	100 [b]	500 [b]	1,000 [c]	2.2	0.03
Aniline	62-53-3	6.7	8.1	36	36	32	0.04
Benzene	71-43-2	1.2	3.7	20	20	70	0.06
n-Butylbenzene	104-51-8	100 [a]	100 [a]	500 [b]	1,000 [c]	NS	18
Carbon tetrachloride	56-23-5	1.9	7.1	41	41	NS	0.76

Table 375-6.8(b) Restricted use soil cleanup objectives.

Contaminant	CAS Number	Protection of Public Health				Protection of Ecological Resources	Protection of Ground-water
		Residential	Restricted Residential	Commercial	Industrial		
Chlorobenzene	108-90-7	73	100 [a]	500 [b]	1,000 [c]	40	4.5
Chloroform	67-66-3	4.8	24	180	180	12	0.37
Ethylbenzene	100-41-4	32	76	390	390	NS	1
Hexachlorobenzene	118-74-1	0.33 [e]	0.33 [e]	1.8	2.9	NS	3.2
Methyl ethyl ketone	78-93-3	100 [a]	100 [a]	500 [b]	1,000 [c]	100 [a]	0.10
Methyl tert-butyl ether	1634-04-4	40	100 [a]	500 [b]	890	NS	0.1
Methylene chloride	75-09-2	17	81	500 [b]	1,000 [c]	12	0.05
Nitrobenzene	98-95-3	0.77	1.8	8.9	8.9	2	0.08[f]
n-Propylbenzene	103-65-1	100 [a]	100 [a]	500 [b]	1,000 [c]	NS	5
sec-Butylbenzene	135-98-8	100 [a]	100 [a]	500 [b]	1,000 [c]	NS	25
tert-Butylbenzene	98-06-6	100 [a]	100 [a]	500 [b]	1,000 [c]	NS	11
Tetrachloroethene	127-18-4	15	18	81	81	2	1.3
Toluene	108-88-3	100 [a]	100 [a]	500 [b]	1,000 [c]	36	0.7
Trichloroethene	79-01-6	1.7	6.4	54	54	2	0.47
1,2,4-Trimethylbenzene	95-63-6	41	100 [a]	500 [b]	1,000 [c]	NS	5.9
1,3,5-Trimethylbenzene	108-67-8	41	100 [a]	500 [b]	1,000 [c]	NS	3.1
Vinyl chloride	75-01-4	0.099	0.48	7.1	7.1	NS	0.03
Xylene (mixed)	1330-20-7	100 [a]	100 [a]	500 [b]	1,000 [c]	0.26	1.2

Table 375-6.8(b) Restricted use soil cleanup objectives.

Contaminant	CAS Number	Protection of Public Health				Protection of Ecological Resources	Protection of Ground-water
		Residential	Restricted Residential	Commercial	Industrial		
All soil cleanup objectives are in parts per million (ppm).							
NS = Not specified. See New York State Department of Environmental Conservation Technical Support Document (2006).							

[a.] The soil cleanup objectives for residential, restricted-residential, and ecological resources use were capped at a maximum value of 100 ppm. See New York State Department of Environmental Conservation Technical Support Document (2006) section 9.3.
[b.] The soil cleanup objectives for commercial use were capped at a maximum value of 500 ppm. See New York State Department of Environmental Conservation Technical Support Document (2006) section 9.3.
[c.] The soil cleanup objectives for industrial use and the protection of groundwater were capped at a maximum value of 1000 ppm. See New York State Department of Environmental Conservation Technical Support Document (2006) section 9.3.
[d.] The soil cleanup objectives for metals were capped at a maximum value of 10,000 ppm. See New York State Department of Environmental Conservation Technical Support Document (2006) section 9.3.
[e.] For constituents where the calculated soil cleanup objective was lower than the contract required quantitation limit, the contract required quantitation limit is used as the soil cleanup objective value.
[f.] For constituents where the calculated soil cleanup objective was lower than the rural soil background concentration, the rural soil background concentration is used as the Track 2 soil cleanup objective value for this use of the site. See the New York State Department of Environmental Conservation Technical Support Document (2006), Section 9 and Appendix D.
[g.] This soil cleanup objective is derived from data on mixed isomers of BHC.
[h.] The soil cleanup objective for this specific compound (or family of compounds) is considered to be met if the analysis for the total species of this contaminant is below the specific soil cleanup objective.
[i.] This soil cleanup objective is for the sum of endosulfan I, endosulfan II, and endosulfan sulfate.
[j.] Protection of public health soil cleanup objectives for total mercury are based on either the rural soil background concentration for total mercury (0.3 ppm or 0.18 ppm for habitat) or the most toxic mercury form that may be present in soil samples. If total mercury is found in soil

above the published soil cleanup objective, then subsequent analysis of the separate species of mercury can be taken into consideration during the remedy selection process.

375-6.9 Development or modification of soil cleanup objectives.

(a) Applicability. This section identifies when and the procedures under which a contaminant-specific soil cleanup objective may be developed or modified.

(1) Soil cleanup objectives for contaminants not included in Tables 375-6.8(a) and (b) of this Subpart may be developed by the remedial party or required by the department.

(2) Soil cleanup objectives for contaminants included in Tables 375-6.8(a) and (b) of this Subpart, may be modified based on site-specific data if desired by the remedial party; as set forth in:

(i) Subpart 375-3 for Tracks 3 or 4, as set forth in section 375-3.8(e)(3) or (4), respectively of this Part; or

(ii) Subparts 375-2 and 375-4 of this Part, as set forth in sections 375-2.8(b)(1)(iii) and 375-4.8(c)(1)(iii) of this Part.

(3) Protection of ecological resources soil cleanup objectives were not developed for certain contaminants, which are identified in Table 375-6.8(b) of this Subpart as *NS*. Where such contaminants:

(i) appear in Table 375-6.8(a) of this Subpart, the applicant may be required by the department to calculate a protection of ecological resources soil cleanup objective for the contaminant for use in Track 1 and apply such soil cleanup objective where it is lower than the soil cleanup objective set forth in Table 375-6.8(a) of this Subpart; or

(ii) are identified as impacting or threatening an ecological resource for a restricted use remedial program the department may require a protection of ecological resources soil cleanup objective be developed.

(b) New soil cleanup objectives must:

(1) Be developed utilizing the same methodologies that were used by the department to develop the respective soil cleanup objective, as provided in the technical support document.

(2) Apply the following caps, as set forth in section 9.3 of the technical support document, on any soil cleanup objective included in Tables 375-6.8(a) and (b) of this Subpart, with the exception of metals, as set forth in paragraph (3) of this subdivision, developed for:

(i) unrestricted use, residential use, restricted-residential use and the protection of ecological resources, a maximum value of 100 ppm;

(ii) commercial use, a maximum value of 500 ppm; and

(iii) industrial use and the protection of groundwater a maximum value of 1,000 ppm, and

(3) Apply a cap for metals at a maximum value of 10,000 ppm. This cap does not apply to metals which may naturally occur in some areas above that level including aluminum, calcium, iron, magnesium and potassium.

(c) Development of unrestricted use soil cleanup objectives. The unrestricted use soil cleanup objective for a compound will be the lowest of the soil cleanup values, calculated as set forth in appendix E of the technical support document, for the protection of groundwater, protection of ecological resources and protection of public health.

(d) Development of restricted use soil cleanup objectives. The protection of:

(1) Groundwater soil cleanup objective will be the values calculated for the protection of groundwater as set forth in appendix E of the technical support document;

(2) Ecological resources soil cleanup objectives will be the values calculated for the protection of ecological resources as set forth in appendix E of the technical support document; and

(3) Public health cleanup objective will be the values calculated for the protection of public health for the identified use of the site, as set forth in appendix E of the technical support document.

(e) Modification of soil cleanup objectives. The contaminant specific soil cleanup objectives set forth at Tables 375-6.8(a) and (b) of this Subpart may be modified by site-specific data as set forth in this subdivision.

(1) Contaminant specific soil cleanup objectives modified in accordance with this subdivision may be utilized by the remedial party for a site remedial program undertaken pursuant to:

(i) Subpart 375-3 in Tracks 3 or 4, as set forth in section 375-3.8(e)(3) or (4), respectively of this Part; or

(ii) Subparts 375-2 and 375-4 of this Part, as set forth in sections 375-2.8(b)(1)(ii) and 375-4.8(c)(1)(ii) of this Part.

(2) For the calculation of a protection of groundwater or ecological resources contaminant specific soil cleanup objective, the site-specific percentage of total organic carbon in the soil at the site may be substituted in the algorithms provided in appendix E of the technical support document.

(3) For the calculation of a protection of public health contaminant specific soil cleanup objective, site-specific data may be used to modify two of the five exposure pathways, as follows:

(i) for the particulate inhalation pathway six parameters rely on site-specific data; and

(ii) for the volatile inhalation pathway, four parameters rely on site-specific data.

(4) The algorithms to be used for each protection of public health pathway and details on the parameters which can be substituted are included in appendix E of the technical support document.

(f) Use of soil cleanup objectives developed or modified. Once approved by the department, contaminant specific soil cleanup objectives developed or modified as set forth in

this section may be utilized by the department at other sites consistent with paragraphs (1) and (2) of this subdivision.

(1) Contaminant specific soil cleanup objectives developed for contaminants not included in Tables 375-6.8(a) and (b) of this Subpart, as set forth in subdivision 375-6.9(b) of this section, will be used as guidance and shall be considered by the department for inclusion in the Tables in this Subpart during any subsequent reevaluation of the soil cleanup objectives, as set forth by ECL 27-1415.

(2) Contaminant specific soil cleanup objectives modified for site-specific parameters, as set forth in subdivision 375-6.9(e) of this section, may be utilized at sites manifesting similar parameters, if approved by the department.

CP-51 / Soil Cleanup Guidance

New York State Department of Environmental Conservation

DEC Policy

Issuing Authority: Alexander B. Grannis, Commissioner

Date Issued: October 21, 2010	**Latest Date Revised:**

I. Summary

This policy provides the framework and procedures for the selection of soil cleanup levels appropriate for each of the remedial programs in the New York State Department of Environmental Conservation (DEC) Division of Environmental Remediation (DER). This policy applies to the Inactive Hazardous Waste Disposal Site Remedial Program, known as the State Superfund Program (SSF); Brownfield Cleanup Program (BCP); Voluntary Cleanup Program (VCP); Environmental Restoration Program (ERP); Spill Response Program - Navigation Law (NL) section 176 (SRP); and the Resource Conservation and Recovery Act (RCRA) Corrective Action Program. It replaces *Technical and Administrative Guidance Memorandum (TAGM) 4046: Determination of Soil Cleanup Objectives and Cleanup Levels* (January 24, 1994); the *Petroleum Site Inactivation and Closure Memorandum* (February 23, 1998); and Sections III and IV of *Spill Technology and Remediation Series (STARS) #1* (August 1992).

This document is used in conjunction with the applicable statutes, regulations and guidance. Site-specific soil cleanup levels, determined in accordance with this guidance, are only applied after:

- the site, or area of concern, is fully investigated to determine the nature and extent of contamination;
- all sources of contamination are addressed consistent with the hierarchy provided in 6 NYCRR 375-1.8(c) or consistent with the RCRA Corrective Action Program (as appropriate);
- groundwater, if contaminated, has been evaluated for appropriate remedial actions consistent with 6 NYCRR 375-1.8(d) or consistent with the RCRA Corrective Action Program (as appropriate); and
- impacts on adjacent residential properties, surface water, aquatic ecological resources are evaluated, as well as indoor air, soil vapor, vapor intrusion and other appropriate media.

II. Policy

It is DEC's policy, consistent with applicable statutes and regulations, that all remedies will be protective of public health and the environment. DEC's preference is that remedial programs, including the selection of soil cleanup levels, be designed such that the performance standard results in the implementation of a permanent remedy resulting in no future land use restrictions. However, some of

DEC's remedial programs are predicated on future site use. Further, it is not always feasible to return to a condition where no restrictions are required.

The procedures set forth herein are intended for the use and guidance of both DEC and remedial parties to provide a uniform and consistent process for the determination of soil cleanup levels. This guidance is not intended to create any substantive or procedural rights, enforceable by any party in administrative or judicial litigation with DEC. DEC reserves the right to act at variance with these procedures to address site-specific circumstances and to change the procedures in this guidance at any time.

Please note that this guidance focuses only on soil cleanup levels. All remedies must be fully protective of public health and the environment and must prevent further off-site migration to the extent feasible, with special emphasis on preventing or minimizing migration onto adjacent residential properties. A remedial party is required to evaluate and investigate, if necessary, all environmental media including soil, groundwater, surface water, sediments, soil vapor, ambient air, and biota. [See 6 NYCRR 375-1.8(a)(6) or RCRA Corrective Action Program (as appropriate)]. This investigation will determine if any of the referenced media are, or may be, impacted by site contamination. Applicable guidance should be consulted for media other than soil.

Nothing contained in this guidance, in itself, forms the basis for changes to previously selected remedies. However, a change in the site remedy may be considered consistent with *DER-2: Making Changes to Selected Remedies* (April 1, 2008). [See Section VI, Related References.] To the extent that a change to a selected remedy at a site in one of DER's remedial programs is necessary as provided in DER-2, as applicable, the Soil Cleanup Objectives (SCOs) may be considered in the evaluation of appropriate changes to the selected remedy. For sites in other programs, applicable regulations and guidance must be used.

III. Purpose and Background

DEC has a number of different remedial programs that were developed over time based on separate and distinct authorities. These programs use different procedures to determine the extent of soil cleanup necessary to satisfy the remedial program goals. The purpose of this document is to set forth how soil cleanup levels are selected for the different programs.

Legislation establishing New York State's Brownfield Cleanup Program (Article 27, Title 14 of the Environmental Conservation Law [ECL]) required DEC, in consultation with the New York State Department of Health (NYSDOH), to develop an approach for the remediation of contamination at brownfield sites. The resulting regulation includes seven sets of SCOs. Four sets provide for the protection of public health for different land uses (residential, restricted residential, commercial, and industrial); two sets provide for the protection of other resources (groundwater and ecological resources); and one set includes SCOs for protection of public health and the environment for all uses (unrestricted use).

With the promulgation of the SCOs, it is necessary to discuss how the SCOs, and soil cleanup levels generally, are arrived at for a specific site. Some key definitions in understanding how cleanup levels for soil are arrived at follow.

Feasible, which means suitable to site conditions, capable of being successfully carried out with available technology, implementable and cost effective [see 6 NYCRR 375-1.2(s)].

Presumptive remedy, which means a technology or technique where experience has shown the remedy to be a proven solution for specific types of sites and/or contaminant classes [See *DER-15: Presumptive/Proven Remedial Technologies* February 27, 2007. Refer to Section VI, Related References.]

Soil cleanup level, which means the concentration of a given contaminant for a specific site that must be achieved under a remedial program for soil. Depending on the regulatory program, a soil cleanup level may be based on the regulation [6 NYCRR 375-6.8(a) or (b)], modified from the regulatory value based on site-specific differences, or based on other information, including background levels or feasibility. Soil cleanup levels may include:

- SCOs promulgated at 6 NYCRR 375-6;
- Supplemental Soil Cleanup Objectives (SSCOs);
- a "totals" approach for a family of contaminants known as Polycyclic Aromatic Hydrocarbons (PAHs);
- Presumptive remedy for Polychlorinated Biphenyls (PCBs); and
- Nuisance Condition.

Soil Cleanup Objective (SCO), which means the chemical concentrations for soil cleanup of individual chemicals contained in 6 NYCRR 375-6.8(a) or (b). The SCOs were developed using the process outlined in the Technical Support Document (TSD). The SCOs and the SSCOs defined below are applicable statewide and do not account for many site-specific considerations which could potentially result in higher levels. Soil concentrations that are higher than the SCOs and SSCOs are not necessarily a health or environmental concern. When an SCO (or SSCO) is exceeded, the degree of public health or environmental concern depends on several factors, including the magnitude of the exceedance, the accuracy of the exposure estimates, other sources of exposure to the contaminant, and the strength and quality of the available toxicological information on the contaminant.

Supplemental Soil Cleanup Objective (SSCO), which means a) an existing soil cleanup level for a contaminant which had been included in former TAGM 4046 and was not included in 6 NYCRR 375-6; b) has been developed using the same process used for development of the SCOs; and c) new cleanup levels for soil developed by the remedial party following the approach detailed in Appendix E of the TSD. The TSD provides information relative to the development of cleanup objectives for soil that are not set forth in 6 NYCRR 375-6. Cleanup objectives that have been established at the direction of DEC or the election of remedial parties are included in Table 1.

Technical Support Document (TSD), which refers to the document dated December 2006 detailing the development of the SCOs that were promulgated in 6 NYCRR 375-6. It provides the technical background and provides a detailed discussion of the considerations for development of the SCOs for the different land uses and exposure pathways. The TSD is available on DEC's website [see Section VI, Related References].

The purpose of this guidance is NOT to focus on media other than soil. Accordingly, the remedial program may require remedial activities to address media other than soil (e.g., groundwater, surface

water, sediment, and vapor). Applicable guidance should be consulted for media other than soil. This guidance is to be used in conjunction with the applicable statutes, regulations and guidance. Site-specific soil cleanup levels, determined in accordance with this guidance, are only applied after:

- the site, or area of concern, is fully investigated to determine the nature and extent of contamination;
- all sources of contamination are addressed consistent with the hierarchy provided in 6 NYCRR 375-1.8(c) or consistent with the RCRA Corrective Action Program (as appropriate);
- groundwater, if contaminated, has been evaluated for appropriate remedial actions consistent with 6 NYCRR 375-1.8(d) or consistent with the RCRA Corrective Action Program (as appropriate); and
- an evaluation of impacts on adjacent residential properties, surface water, aquatic ecological resources, as well as indoor air, soil vapor, vapor intrusion and other appropriate media.

IV. Responsibility

The responsibility for maintaining and updating this policy lies with DER. DEC staff are responsible for implementing this policy, with input (as applicable) from NYSDOH.

V. Procedures

A. General Approaches to the Selection of Soil Cleanup Levels

The determination of soil cleanup levels for a site is dependent on:

1. The regulatory program pursuant to which the site is being addressed;
2. Whether the groundwater beneath or down gradient of the site is, or may become contaminated with site-related contaminants;
3. Whether ecological resources constitute an important component of the environment at or adjacent to a site, and which are, or may be, impacted by site-related contaminants; and
4. Other impacted environmental media such as surface water, sediment, and soil vapor.

After fully evaluating the nature and extent of soil contamination associated with a site, the soil cleanup levels will be based on one, or a combination of, the following four approaches.

Approach 1: **Utilize the Unrestricted Use Soil Cleanup Objectives** [see 6 NYCRR Table 375-6.8(a)]. Under this approach, the soil cleanup levels will be established consistent with the SCOs set forth in 6 NYCRR Table 375-6.8(a). For contaminants of concern which are not included in the rule, DEC may direct development of a soil cleanup level which is protective of public health and the environment without restrictions following the procedure outlined in Appendix E of the TSD. Under this approach, the unrestricted SCOs are applied throughout the soil matrix to the top of bedrock (including the saturated zone).

Approach 2: **Utilize the Restricted Use Soil Cleanup Objectives** [see 6 NYCRR Table 375-6.8(b)]. Under this approach, soil cleanup levels will be established consistent with the SCOs set forth in 6 NYCRR Table 375-6.8(b) selecting the lowest SCO in the categories described in A

through C below. Generally, after source removal, the soil cleanup levels do not need to be achieved to more than 15 feet below ground surface or to the top of bedrock, whichever is shallower.

A. Select the applicable land use category for the protection of public health (residential, restricted residential, commercial or industrial);

B. Determine if the SCOs for the protection of groundwater are applicable (see Section V.D); and

C. Determine if the SCOs for the protection of ecological resources are applicable (see Section V.C).

Approach 3: **Limited Site-Specific Modifications to Soil Cleanup Objectives.** This approach allows for consideration of site-specific information to modify the SCOs promulgated in 6 NYCRR Tables 375-6.8 (a) and (b) following the approach detailed in Appendix E of the TSD. The equations and basic methodology specified for calculating the 6 NYCRR 375-6.8 (a) and (b) values may not be modified under this approach. However, in instances where site-specific parameters were used in the calculation of the SCOs, site data different from the assumptions used to calculate the SCOs may be used to modify the soil cleanup levels for a specific site. These instances are very limited and occur only in certain pathways that are listed below.

- Protection of groundwater pathway
- Particulate inhalation pathway
- Volatile inhalation pathway
- Protection of ecological resources pathway

It should be noted that even if site-specific data modifies these pathways, it may not result in modifying the SCOs because the lowest value from all applicable pathways is used to determine each SCO. The inhalation pathway is very seldom the controlling pathway in the determination of the protection of public health. The specific parameters that can be modified are identified in Appendix E of the TSD (e.g., inhalation dispersion terms, fraction of organic carbon in soil, etc.).

The remedial party should consider the cost of collecting the data necessary to support a request to modify the SCOs with the potential for deriving a higher SCO that provides an appropriate level of protection. The remedial party may be required to submit additional data to support the use of modified SCOs. Once DEC approves one or more modified SCOs, they are applied in the manner described under Approach 2.

Approach 4: **Site-Specific Soil Cleanup Objectives.** Under this approach, the remedial party may propose site-specific cleanup levels or approaches for soil which are protective of public health and the environment based on other information. This approach sets forth a flexible framework to develop soil cleanup levels by allowing the remedial party to conduct a more detailed evaluation of site information in an effort to calculate protective soil cleanup levels or approaches unique to a site. Under this approach, the remedial party may propose a remedy that does not include specific soil cleanup levels (e.g., excavate the top 6 feet in an area extending 75 feet in all directions from boring B12); modify the input parameters used in the SCO calculations; use site data to improve or confirm predictions of exposures to receptors to contaminants of concern; analyze site-specific risks using

risk assessments; use toxicological information available from alternate sources; or consider site background and historic fill. Data supporting these site-specific adjustments or use of alternate methodologies must also be provided to DEC for review and approval to ensure that the resulting soil cleanup levels are protective.

The Approach 4 framework leaves DEC with discretion to determine whether a different approach is appropriate for the site and, if a different approach is to be used, the proper method of implementation. The remedial party should consider the cost of collecting the data necessary to develop site-specific soil cleanup levels (or approaches) with the potential for deriving a soil cleanup level which is higher than a particular SCO and which provides an appropriate level of protection. The remedial party may also be required to submit additional data to support the use of methodologies in the calculation of site-specific soil cleanup levels or to support the proposed approach.

B. Application of Soil Cleanup Levels for the Specific Remedial Programs: Soil cleanup levels are determined on a site-specific basis depending on the program under which the site is being remediated. In some cases (e.g., BCP Track 1 or Track 2), the soil cleanup levels are the SCOs taken directly from 6 NYCRR 375-6. In other cases, soil cleanup levels may be derived from the Part 375 SCOs but modified based on other information. In yet other cases, the soil cleanup levels may have no relationship or connection to the SCOs, but rather be developed in accordance with DEC-approved methodologies or approaches.

1. <u>Inactive Hazardous Waste Disposal Site Remedial Program (State Superfund Program)</u>: The goal of the remedial program for a specific site is to restore that site to pre-disposal conditions, to the extent feasible. The unrestricted use SCOs are considered to be representative of pre-disposal conditions unless an impact to ecological resources has been identified (see 6 NYCRR 375-2.8(b)(2)). However, it must be recognized that achievement of this goal may not be feasible in every case. At a minimum, all remedies must be protective of public health and the environment. The following procedure is used to determine the most feasible remedy.

(a) The remedial party shall evaluate, and if feasible, implement a cleanup utilizing Approach 1 (application of unrestricted SCOs).

(b) Where DEC determines that achieving unrestricted SCOs is not feasible as documented in a feasibility study, the remedial party may evaluate alternatives to remediate the site to the greatest extent feasible (see *DER-10: Technical Guidance for Site Investigation and Remediation*, Chapter 4.3). [See Section VI, Related References.] In this event, the remedial party may propose soil cleanup levels in accordance with any of the general approaches. However, when considering restricted use soil cleanup levels, the remedial party should apply the least restrictive use category feasible. For purposes of this discussion, residential use is the least restrictive use and industrial use is the most restrictive category. This process starts with consideration of residential use, followed by restricted residential use, commercial use, and then industrial use. The evaluation proceeds through the different land uses until a feasible remedy is found. This evaluation is not bound to the SCOs in regulation or SSCOs set forth in this guidance but may result in a site-specific soil cleanup level that is between the SCOs or soil cleanup level for two different land uses (e.g., above the restricted residential SCO and below the commercial SCO).

2. <u>Brownfield Cleanup Program</u> The remedy shall be fully protective of public health and the environment, including, but not limited to, groundwater according to its classification pursuant to ECL 17-0301, drinking water, surface water, air (including indoor air), sensitive populations (including children), and ecological resources (including fish and wildlife). Soil cleanup levels corresponding to the cleanup track under which the site is being remediated are required to be met. The four cleanup tracks are:

<u>Track 1</u>: Cleanups pursuant to this track must achieve unrestricted use of the site. This track requires that the remedial party implement a cleanup utilizing Approach 1. Institutional and engineering controls are allowed only for periods of less than five years (defined as short-term controls) except in the limited instance where a volunteer has conducted remedial activities resulting in a bulk reduction in groundwater contamination to asymptotic levels.

<u>Track 2</u> : Cleanups pursuant to this track may consider the current, intended, or reasonably anticipated future use in determining the appropriate cleanup levels for soil. This track requires that the remedial party implement a cleanup that achieves the SCOs in the tables in 6 NYCRR 375-6.7(b) for the top 15 feet of soil (or bedrock if less than 15 feet). This track follows approach 2. Institutional and engineering controls are allowed for soil (for the top 15 feet of soil or bedrock if less than 15 feet) for less than five years (defined as short-term controls). Institutional and engineering controls which limit site use and the use of onsite groundwater can be used without regard to duration. Track 2 cleanups at restricted residential, commercial or industrial use sites require site management plans to ensure that material removed from the site (post remedial action) is managed appropriately and to ensure that any buffer zone protecting adjacent residential use sites or ecological resources is maintained.

<u>Track 3</u>: Cleanups pursuant to this track may consider the current, intended, or reasonably anticipated use in determining the appropriate cleanup levels for soil. This track requires that the remedial party implement a cleanup utilizing Approach 3 for those SCOs which the remedial party seeks to modify an established SCO. Institutional and engineering controls are allowed for soil (for the top 15 feet of soil or bedrock if less than 15 feet) for less than 5 years (defined as short-term controls). Institutional and engineering controls which limit site use and the use of on-site groundwater can be used without regard to duration. Track 3 cleanups at restricted residential, commercial or industrial use sites require site management plans to ensure that material removed from the site (post remedial action)is managed appropriately and to ensure that any buffer zone protecting adjacent residential use sites or ecological resources is maintained.

<u>Track 4</u>: Cleanups pursuant to this track may consider the current, intended, or reasonably anticipated use in determining the appropriate cleanup levels for soil. This track allows for the development of site-specific soil cleanup levels below the cover system in accordance with Approach 4. Track 4 remedies must address all sources as a component of the remedy. Short- and long-term institutional and engineering controls are allowed to achieve protection of public health and the environment. The remedy under Track 4 must provide a cover system over exposed residual soil contamination. Soils which are not otherwise covered by structures such as buildings, sidewalks or pavement (i.e., exposed surface soils) must be covered with soil that complies with the use-based SCOs in 6 NYCRR Table 375-6.8(b) levels for the top one foot (non-residential uses) or top two feet (restricted residential use).

3. Environmental Restoration Program: The goal of the program for a specific site is to select a remedy that is protective of public health and the environment, including, but not limited to, groundwater according to its classification pursuant to ECL 17-0301, drinking water, surface water and air (including indoor air), sensitive populations (including children) and ecological resources (including fish and wildlife). At a minimum, the remedy selected shall eliminate or mitigate all significant threats to public health and to the environment presented by contaminants disposed at the site through the proper application of scientific and engineering principles. Soil cleanup levels may be developed in accordance with Approaches 1 – 4 without restriction.

4. Voluntary Cleanup Program: The goal of the program for a specific site is to select a remedy that is protective of public health and the environment for the contemplated use. The soil cleanup levels may be developed in accordance with Approaches 1 – 4 without restriction.

5. Petroleum Spill Response Program: The goal of the Petroleum Spill Response Program is to achieve pre-spill conditions [6 NYCRR 611.6(a)(4)]. Remedial activities under this program shall be undertaken relative to the petroleum contamination that was released along with any co-mingled contamination from other sources. The remedial party shall achieve, to the extent feasible, the unrestricted SCOs for petroleum-related contaminants listed in 6 NYCRR Table 375-6.8(a). For petroleum contaminants not included in 6 NYCRR Table 375-6.8(a) (discussed in Section E below), the remedial party shall apply, to the extent feasible, the soil cleanup levels provided in Table 1. For ease of implementation, two lists of petroleum contaminants (Gasoline and Fuel Oil, Tables 2 and 3) are attached. The tables combine the applicable petroleum-related SCOs from 6 NYCRR 375-6.8(a) and the applicable petroleum related SSCOs from Table 1. Where DEC determines that it is not feasible to achieve the soil cleanup levels as set forth in this paragraph, the remedial party may propose soil cleanup levels in accordance with any of the general approaches. However, when considering restricted use soil cleanup levels, the remedial party should apply the least restrictive use category feasible.

For purposes of this discussion, residential use is the least restrictive use, and industrial use is the most restrictive category. This process starts with consideration of residential use, followed by restricted residential use, commercial use, and then industrial use. The evaluation proceeds through the different land uses until a feasible remedy is found. If the protection of groundwater or ecological SCOs apply, the lower of the applicable protection of the public health SCO or the applicable protection of groundwater or ecological SCO should be achieved to the extent feasible. This evaluation is not bound to the SCOs in regulation or the SSCOs set forth in this guidance but may result in a site-specific soil cleanup level that is between the SCOs or soil cleanup level for two different land uses (e.g., above the restricted residential SCO and below the commercial SCO).

6. RCRA Corrective Action Program: The RCRA program was promulgated to regulate facilities that actively manage hazardous waste. DER administers the RCRA Corrective Action Program, with a goal of achieving soil cleanup levels at Solid Waste Management Units (SWMUs) and Areas of Concern (AOCs) that eliminate risks to public health and the environment (i.e., clean the site to unrestricted use) or control said risks (i.e., clean the site or unit(s) to the lowest possible soil cleanup objective, regardless of site use), to the extent feasible. This goal takes into account that certain units at the facility may be permitted to manage hazardous waste under New York State's Hazardous Waste Management (HWM) regulations (6 NYCRR Part 373). The requirements of active HWM facilities, as well as the site's history, will be considered when soil cleanup levels are determined. Selected remedies must be protective of public health and the environment. Soil cleanup levels will be selected using the following procedure.

(a) The remedial party shall evaluate, and if feasible, implement a cleanup utilizing Approach 1. Under this approach, the unrestricted SCOs apply to the entire soil matrix to the top of bedrock. For contaminants not listed in 6 NYCRR 375-6, a new or existing SSCO may be used.

(b) If DEC determines that achieving unrestricted SCOs is not feasible, the remedial party may evaluate other alternatives to remediate the site. In this event, the remedial party may propose soil cleanup levels in accordance with any of the general approaches. However, when considering restricted use soil cleanup levels, the remedial party shall apply the use category which is both feasible and least restricted. For purposes of this discussion, residential use is the least restricted category and industrial use is the most restricted category. A soil cleanup level between two different land uses (e.g., residential and restricted residential) may be determined to be feasible, and if selected, must be achieved.

Any soil cleanup levels specified in regulation (i.e., 6 NYCRR 373-2.6(b)-(k) for "regulated units" as defined in 6 NYCRR 373-2.6 (a)(1)(ii)) or in a DEC enforceable document (Part 373 permits, Consent Orders, etc.) shall take precedence over the soil cleanup levels which could be established through use of this document.

C. Determination of Whether Ecological Resources SCOs Apply to a Site: SCOs developed to protect ecological resources (ESCOs) are incorporated in the Unrestricted Use SCO in 6 NYCRR Table 375-6.8(a) and are included as a separate category in 6 NYCRR Table 375-6.8(b). For contaminants of concern which do not have a calculated ESCO in regulation, DEC may direct the remedial party to develop a soil cleanup level which is protective of ecological resources where appropriate, based on the process outlined in Appendix E of the TSD.

The presence of ecological resources and any impact to those resources will be assessed during the remedial investigation. For sites where there is the potential for an ecological resource impact to be present, or where it is likely to be present, an assessment of fish and wildlife resource impacts will be performed. For sites in DER's SSF, BCP, VCP and ERP, the assessment will be performed in accordance with DEC's guidance, *Fish and Wildlife Impact Analysis for Inactive Hazardous Waste Sites*, October, 1994, as described in DER-10, Section 3.10. For sites in the RCRA Corrective Action Program, the assessment will be performed using the above referenced fish and wildlife impact analysis document as guidance, and by consulting with appropriate personnel in DEC's Division of Fish, Wildlife and Marine Resources.

Soil cleanup levels which are protective of ecological resources must be considered and applied, as appropriate, for the upland soils (not sediment) at sites where DEC determines, based on the foregoing analysis, that:

- ecological resources are present, or will be present, under the reasonably anticipated future use of the site, and such resources constitute an important component of the environment at, or adjacent to, the site;

- an impact or threat of impact to the ecological resource has been identified; and

- contaminant concentrations in soil exceed the ESCOs as set forth in 6 NYCRR 375-6.8(b) or the Protection of Ecological Resources SSCOs contained in this document.

Sites or portions thereof that will be covered by buildings, structures or pavement are not subject to the ESCOs. Further, ecological resources do not include pets, livestock, agricultural or horticultural crops, or landscaping in developed areas. (See 6 NYCRR 375-6.6 for more detail.)

D. Determination of Whether Protection of Groundwater SCOs Apply: SCOs developed to protect groundwater are incorporated in the Unrestricted Use SCOs in 6 NYCRR Table 375-6.8(a) and are included as a separate category in 6 NYCRR Table 375-6.8(b). For contaminants of concern which do not have a protection of groundwater SCO, DEC may direct the remedial party to develop a soil cleanup level which is protective of groundwater using the process in Appendix E of the TSD.

1. Except as provided for in (2) below, the protection of groundwater SCOs will be applicable where:

   (i) contamination has been identified in on-site soil by the remedial investigation; and
   (ii) groundwater standards are, or are threatened to be, contravened by the presence of soil contamination at concentrations above the protection of groundwater SCOs.

2. DEC may provide an exception to the applicability of the protection of groundwater SCOs, as set forth in 6 NYCRR 375-6.5(a)(1), when (i), (ii), and (iii) exist and either (iv) or (v) also apply, as described below.

   (i) The groundwater standard contravention is the result of an on-site source which is addressed by the remedial program.
   (ii) An environmental easement or other institutional control will be put in place which provides for a groundwater use restriction.
   (iii) DEC determines that contaminated groundwater at the site:
      (a) is not migrating, nor is likely to migrate, off-site; or
      (b) is migrating, or is likely to migrate, off-site; however, the remedy includes active groundwater management to address off-site migration.
   (iv) DEC determines the groundwater quality will improve over time.
   (v) The groundwater contamination migrating from the site is the result of an off-site source of contamination, and site contaminants are not contributing consequential amounts to the groundwater contamination.

3. In determining whether to provide the exemption set forth in subparagraph 2 above, DEC will consider:

   (i) all of the remedy selection criteria at 6 NYCRR 375-1.8(h) or in the RCRA Corrective Action program;
   (ii) the amount of time that the groundwater will need to be actively managed for the protection of public health and the environment; and
   (iii) the potential impact that groundwater contamination may have on media not specifically addressed by the SCOs (e.g., vapor intrusion, protection of surface water, and protection of aquatic ecological resources).

E. Supplemental Soil Cleanup Objectives: SSCOs are either existing cleanup levels in Table 1 or are new soil cleanup levels developed by the remedial party as part of its remedial program. These SSCOs are in addition to the SCOs that are included in Part 375.

Existing SSCOs: The Table 1 list of SSCOs includes contaminants from former TAGM 4046 that were not included in 6 NYCRR 375-6.8 and soil cleanup levels developed using the process detailed in Appendix E of the TSD but not promulgated. For those contaminants which were part of the former TAGM 4046, soil cleanup levels exist for the protection of public health (based on ingestion) and for the protection of groundwater. In some cases, to be determined on a site-by-site basis, evaluation of other factors is likely needed for the protection of public health, especially when the use of a site includes residential use.

These other factors include other exposure pathways (e.g., homegrown vegetable ingestion, inhalation and dermal contact), potential non-site exposures to the contaminant and current toxicological data on the contaminant. In these instances, DEC (in consultation with NYSDOH) will determine if the additional factors have been adequately addressed. The SSCOs identified in Table 1 (subject to the limitation described above) may be used as if they were included in Part 375. A remedial party is not required to use the SSCOs set forth in Table 1. In lieu of applying an SSCO, the remedial party may elect to develop a soil cleanup level (using the process described in Appendix E of the TSD and discussed below.) Table 1 also includes SSCOs that were developed for some pathways using the same process detailed in the TSD. A remedial party may elect to use those SSCOs directly or confirm that the calculated value for that pathway is correct.

New SSCOs: The remedial party may elect to, or DEC may direct a remedial party to, develop a contaminant-specific SCO for any contaminant not included in 6 NYCRR Tables 375-6.8(a) or (b). Generally, DEC will request that an SCO be developed only where the contaminant is a predominant contaminant of concern (COC) at the site and is not otherwise being addressed to DEC's satisfaction as part of the proposed remedy. This could happen, for example, when a remedial party is seeking a Track 1 cleanup and non-SCO/SSCO contaminants are present and may not be satisfactorily addressed by the remedial activities addressing the SCOs or SSCOs. Guidance on the process for developing new SCOs is provided in Appendix E of the TSD. DEC will include all newly developed soil cleanup levels, developed and approved pursuant to this paragraph in a revised Table 1. The developed SSCO must:

1. be developed utilizing the same methodologies that were used by DEC to develop SCOs that are set forth in Part 375; and

2. apply the maximum acceptable soil concentrations (caps), as set forth in section 9.3 of the TSD.

F. Use of SCOs and SSCOs as a Screening Tool: The SCOs and SSCOs may be used to identify areas of soil contamination and to determine the extent of soil contamination. As noted in Section V.K, consideration of other media is required to determine if remedial action is needed.

1. At sites or areas of concern where contaminant concentrations are equal to or below the unrestricted SCOs in 6 NYCRR Table 375-6.8(a), no action or study is warranted because of soil contamination.

2. The exceedance of one or more applicable SCOs or SSCOs, (which is the lower of protection of public health, protection of groundwater, or protection of ecological resources soil cleanup objectives as described in Section III below), alone does not trigger the need for remedial action, define "unacceptable" levels of contaminants in soil, or indicates that a site qualifies for any DEC remedial program (e.g., BCP, SSF). As noted in the definition of SCO above, SCOs and SSCOs are applicable statewide and do not account for many site-specific considerations which could potentially result in higher levels. Therefore, soil concentrations that are higher than the applicable SCOs or SSCOs are not necessarily health or environmental concerns.

3. When an applicable SCO or SSCO is exceeded, the degree of public health or environmental concern depends on several factors, including:

    - magnitude of the exceedance;
    - accuracy of the exposure estimates;
    - other sources of exposure to the contaminant; and
    - strength and quality of the available toxicological information on the contaminant.

G. Soil Cleanup Levels for Nuisance Conditions: Experience has shown that contaminants in soil that meets the DEC-approved soil cleanup levels can exhibit a distinct odor or other type of nuisance (e.g., staining). This is true even though the contaminants will not leach from the soil (e.g., certain soils with more insoluble substances at higher concentrations). When DEC determines that soil remaining after the remedial action will result in the continuation of a nuisance (e.g., odors, staining, etc), DEC will require that additional remedial measures be evaluated, and may require additional remedial actions be taken to address the nuisance condition.

H. Subsurface Soil Cleanup for Total Polycyclic Aromatic Hydrocarbons: For non-residential use sites (i.e., commercial or industrial use sites) where the ESCOs are not applicable, DEC may approve a remedial program which achieves a soil cleanup level of 500 parts per million (ppm) for total PAHs for all subsurface soil. The 500 ppm soil cleanup level is in lieu of achieving all of the PAH-specific SCOs in 6 NYCRR 375-6. For purposes of this provision, subsurface soil shall mean the soil beneath permanent structures, pavement, or similar cover systems; or at least one foot of soil cover (which must meet the applicable SCOs). Institutional controls (e.g., an environmental easement) along with a site management plan will be required when this soil cleanup level is employed at a site. This cleanup level is determined to be feasible and protective based on DEC's experience in its various remedial programs. This approach has existed in TAGM 4046 since it was first issued in 1992.

I. Soil Cleanup for PCBs: DEC may approve a remedial program which achieves a soil cleanup level for PCBs as set forth herein:

1. **For Non-BCP sites:** An acceptable presumptive remedy for soil where neither the unrestricted SCOs nor the ESCOs are applied in the remedial program may include a soil cleanup level for PCBs of 1 ppm in the surface soils and 10 ppm in subsurface soils.

2. **For BCP sites:** An acceptable presumptive remedy for soil may include a soil cleanup level for PCBs of 1 ppm (the applicable SCO) in the surface soils and 10 ppm in subsurface in limited circumstances as follows:

- cleanup track is Track 4;
- site use will be restricted residential, commercial or industrial; and
- ESCOs do not apply.

3. **At industrial use sites,** a level of 25 ppm for PCBs provided that access is limited and individual occupancy is restricted to less than an average of 6.7 hours per week.

For purposes of this provision, subsurface soil shall mean:

- soil beneath permanent structures, pavement, or similar cover systems;
- soil beneath 1 foot of soil cover for commercial and industrial uses; or
- soil beneath 2 feet of soil cover for residential and restricted residential uses.

Institutional controls (i.e., an environmental easement), along with a site management plan, will be required when this soil cleanup level is employed at a site. As with all presumptive remedies, just because a remedy is presumptive does not mean that it will work at every site. For example, this presumptive remedy for PCBs in soil is not applicable at most landfills. This cleanup level is determined to be feasible and protective based on DEC's experience in its various remedial programs. Further, this approach has existed in TAGM 4046 since it was first issued in 1992.

J. Sampling and Compliance with Soil Cleanup Levels: The number of samples to determine if the SCOs have been achieved should be sufficient to be representative of the area being sampled. See attached Table 4 for suggested sampling frequency and subdivision 5.4(e) of DER-10 for details. This frequency can be used for confirmatory samples or for backfill. It is DEC's goal that all confirmatory samples demonstrate that the remedy has achieved the DEC-approved soil cleanup levels. However, recognizing the heterogeneity of contaminated sites and the uncertainty of sampling and analysis, DEC project manager has limited discretion to determine that remediation is complete where some discrete samples do not meet the soil cleanup levels established for a site. See DER-10 for more information regarding the determination that remediation is complete.

K. Other Considerations: All remedies must be fully protective of public health and the environment and prevent off-site migration to the extent feasible with special emphasis for the prevention or minimization of migration onto adjacent residential properties or into ecological resources. A remedial party is required to investigate all environmental media including soil, groundwater, surface water, sediments, soil vapor, indoor air, and biota. (See 6 NYCRR 375-1.8(a)(6) or RCRA Corrective Action Program). This investigation will determine if any of the referenced media are, or may be, impacted by site contamination. However, the SCOs do not directly address these other media. DEC may require remedial actions to address such media and impacts, including but not limited to the application of lower soil cleanup levels or buffer zones where it determines, based on the investigation, that any of these media are, or may be, impacted by site contamination.

VI. Related References:

- Environmental Conservation Law, Article 27 Titles 3, 5, 9, 13 and 14.
- Article 12 of the Navigation Law, Section 178.

- 6 NYCRR Part 375, Environmental Remediation Programs. December 14, 2006.
- 6 NYCRR Subparts 373-1, 373-2 and 373-3, Requirements for Hazardous Waste Management Facilities. September 6, 2006.
- 6 NYCRR Part 611, Environmental Priorities and Procedures in Petroleum Cleanup and Removal. November 5, 1984 (amended).
- Development of Soil Cleanup Objectives: Technical Support Document. New York State Department of Environmental Conservation. December 14, 2006.
- Supplemental Guidance to RAGS: Calculating the Concentration Term. United States Environmental Protection Agency. Publication 9285.7-081. May 1992.
- New York State Guidelines for Urban Erosion and Sediment Control. 1997.
- Fish and Wildlife Impact Analysis for Inactive Hazardous Waste Sites. New York State Department of Environmental Conservation. October 1994.
- Program Policy DER-2, *Making Changes to Selected Remedies*. New York State Department of Environmental Conservation. April 1, 2008.
- Program Policy DER-10, *Technical Guidance for Site Investigation and Remediation*. New York State Department of Environmental Conservation. May 3, 2010.
- Program Policy DER-15, *Presumptive/Proven Remedial Technologies*. New York State Department of Environmental Conservation. February 27, 2007.

TABLES

1 - Supplemental Soil Cleanup Objectives
2 - Soil Cleanup Levels for Gasoline Contaminated Soils
3 - Soil Cleanup Levels for Fuel Oil Contaminated Soils
4 - Recommended Number of Soil Samples for Soil Imported to or Exported From a Site

Table 1

Supplemental Soil Cleanup Objectives
(ppm)

Contaminant	CAS Number	Residential	Restricted Residential	Commercial	Industrial	Protection of Ecological Resources	Protection of Ground-water
METALS							
Aluminum	7429-90-5					10,000 [a,b]	
Antimony	7440–36-0					12[c]	
Boron	7440-42-8					0.5	
Calcium	7440-70-2					10,000 [a,b]	
Cobalt	7440-48-4	30				20	
Iron	7439-89-6	2,000					
Lithium	7439-93-2					2	
Molybdenum	7439-98-7					2	
Technetium	7440-26-8					0.2	
Thallium	7440-28-0					5 [c]	
Tin	7440-31-5					50	
Uranium	7440-61-1					5	
Vanadium	7440-62-2	100 [a]				39[b]	
PESTICIDES							
Biphenyl	92-52-4					60	
Chlordecone (Kepone)	143-50-0					0.06	
Dibenzofuran	132-64-9						6.2
2,4-D (2,4-Dichloro-phenoxyacetic acid)	94-75-7	100 [a]					0.5
Furan	110-00-9					600	
Gamma Chlordane	5103-74-2	0.54					14
Heptachlor Epoxide	1024-57-3	0.077					0.02
Methoxychlor	72-43-5	100 [a]				1.2	900

Contaminant	CAS Number	Residential	Restricted Residential	Commercial	Industrial	Protection of Ecological Resources	Protection of Ground-water
Parathion	56-38-2	100 [a]					1.2
2,4,5-T	93-76-5	100 [a]					1.9
2,3,7,8-TCDD	1746-01-6					0.000001	
2,3,7,8-TCDF	51207-31-9					0.000001	
SEMIVOLATILE ORGANIC COMPOUNDS							
Aniline	62-53-3	48	100[a]	500[a]	1000[a]		0.33[b]
Bis(2-ethylhexyl) phthalate	117-81-7	50				239	435
Benzoic Acid	65-85-0	100[a]					2.7
Butylbenzyl-phthalate	85-68-7	100 [a]					122
4-Chloroaniline	106-47-8	100 [a]					0.22
Chloroethane	75-00-3						1.9
2-Chlorophenol	95-57-8	100 [a]				0.8	
3-Chloroaniline	108-42-9					20	
3-Chlorophenol	108-43-0					7	
Di-n-butyl-phthalate	84-74-2	100 [a]				0.014	8.1
2,4-Dichlorophenol	120-83-2	100 [a]				20	0.40
3,4-Dichlorophenol	95-77-2					20	
Diethylphthalate	84-66-2	100 [a]				100	7.1
Di-*n*-hexyl-phthalate	84-75-3					0.91	
2,4-Dinitrophenol	51-28-5	100 [a]				20	0.2
Dimethylphthlate	131-11-3	100 [a]				200	27
Di-n-octylphthlate	117-84-0	100 [a]					120
1,2,3,6,7,8-HCDF	57117-44-9					0.00021	
Hexachloro-benzene	118-74-1	0.41					1.4
2,6-Dinitrotoluene	606-20-2	1.03					1.0
Isophorone	78-59-1	100 [a]					4.4

Contaminant	CAS Number	Residential	Restricted Residential	Commercial	Industrial	Protection of Ecological Resources	Protection of Ground-water
4-methyl-2-pentanone	108-10-1						1.0
2-methyl-naphthalene	91-57-6	0.41					36.4
2-Nitroaniline	88-74-4						0.4
3-Nitroaniline	99-09-2						0.5
Nitrobenzene	98-95-3	3.7	15	69	140	40	0.17[b]
2-Nitrophenol	88-75-5					7	0.3
4-Nitrophenol	100-02-7					7	0.1
Pentachloroaniline	527-20-8					100	
2,3,5,6-Tetrachloroaniline	3481-20-7					20	
2,3,4,5-Tetrachlorophenol	4901-51-3					20	
2,4,5-Trichloroaniline	636-30-6					20	
2,4,5-Trichlorophenol	95-95-4	100 [a]				4	0.1
2,4,6-Trichlorophenol	88-06-2					10	
VOLATILE ORGANIC COMPOUNDS							
2-Butanone	78-93-3	100 [a]					0.3
Carbon Disulfide	75-15-0	100 [a]					2.7
Chloroacetamide	79-07-2					2	
Dibromochloro-methane	124-48-1					10	
2,4-Dichloro aniline	554-00-7					100	
3,4-Dichloroaniline	95-76-1					20	
1,2-Dichloropropane	78-87-5					700	
1,3-Dichloropropane	142-28-9						0.3
2,6-Dinitrotoluene	606-20-2	1.03					0.17[b]
Ethylacetate	141-78-6					48	

Contaminant	CAS Number	Residential	Restricted Residential	Commercial	Industrial	Protection of Ecological Resources	Protection of Ground-water
4-methyl-2-pentanone	108-10-1						1.0
113 Freon (1,1,2- TFE)	76-13-1	100 [a]					6
isopropylbenzene	98-82-8	100 [a]					2.3
p-isopropyltoluene	99-87-6						10
Hexachlorocyclo-pentadiene	77-47-4					10	
Methanol	67-56-1					6.5	
N-nitrosodiphenyl-amine	86-30-6					20	
Pentachloro-benzene	608-93-5					20	
Pentachloronitro-benzene	82-68-8					10	
Styrene	100-42-5					300	
1,2,3,4-Tetrachlorobenzene	634-66-2					10	
1,1,2,2-Tetrachloroethane	79-34-5	35					0.6
1,1,2,2-Tetrachloroethylene	127-18-4					2	
1,2,3-Trichlorobenzene	87-61-6					20	
1,2,4-Trichlorobenzene	120-82-1					20	3.4
1,2,3-Trichloropropane	96-18-4	80					0.34

[a] SCOs for organic contaminants (volatile organic compounds, semivolatile organic compounds, and pesticides) are capped at 100 ppm for residential use, 500 ppm for commercial use, 1000 ppm for industrial use. SCOs for metals are capped at 10,000 ppm.

[b] Based on rural background study

[c] SCO limited by contract required quantitation limit.

Table 2

Soil Cleanup Levels for Gasoline Contaminated Soils

Contaminant	CAS Registry Number	Soil Cleanup Level (ppm)
Benzene	71-43-2	0.06
n-Butylbenzene	104-51-8	12.0
sec-Butylbenzene	135-98-8	11.0
Ethylbenzene	100-41-4	1.0
Isopropylbenzene	98-82-8	2.3
p-Isopropyltoluene	99-87-6	10.0
Methyl-Tert-Butyl-Ether	1634-04-4	0.93
Naphthalene	91-20-3	12.0
n-Propylbenzene	103-65-1	3.9
Tert-Butylbenzene	98-06-6	5.9
Toluene	108-88-3	0.7
1,2,4-Trimethylbenzene	95-63-6	3.6
1,3,5-Trimethylbenzene	108-67-8	8.4
Xylene (Mixed)	1330-20-7	0.26

Table 3

Soil Cleanup Levels for Fuel Oil Contaminated Soil

Contaminant	CAS Registry Number	Soil Cleanup Level (ppm)
Acenaphthene	83-32-9	20
Acenaphthylene	208-96-8	100
Anthracene	120-12-7	100
Benz(a)Anthracene	56-55-3	1.0
Dibenzo(a,h)Anthracene	53-70-3	0.33
Benzene	71-43-2	0.06
n-Butylbenzene	104-51-8	12.0
sec-Butylbenzene	135-98-8	11.0
Tert-Butylbenzene	98-06-6	5.9
Chrysene	218-01-9	1.0
Ethylbenzene	100-41-4	1.0
Fluoranthene	206-44-0	100
Benzo(b)Fluoranthene	205-99-2	1.0
Benzo(k)Fluoranthene	207-08-9	0.8
Fluorene	86-73-7	30
Isopropylbenzene	98-82-8	2.3
p-Isopropyltoluene	99-87-6	10.0
Naphthalene	91-20-3	12.0
n-Propylbenzene	103-65-1	3.9
Benzo(g,h,i)Perylene	191-24-2	100
Phenanthrene	85-01-8	100
Pyrene	129-00-0	100
Benzo(a)Pyrene	50-32-8	1.0
Indeno(1,2,3-cd)Pyrene	193-39-5	0.5
1,2,4-Trimethylbenzene	95-63-6	3.6
1,3,5-Trimethylbenzene	108-67-8	8.4
Toluene	108-88-3	0.7
Xylene (Mixed)	1330-20-7	0.26

Table 4

Recommended Number of Soil Samples for Soil Imported To or Exported From a Site

Contaminant	VOCs[a]	SVOCs, Inorganics & PCBs/Pesticides	
Soil Quantity (cubic yards)	**Discrete Samples**	**Composite**	**Discrete Samples/Composite**
0-50	1	1	Each composite sample for analysis is created from 3-5 discrete samples from representative locations in the fill.
50-100	2	1	
100-200	3	1	
200-300	4	1	
300-400	4	2	
400-500	5	2	
500-800	6	2	
800-1000	7	2	
➢ 1000	Add an additional 2 VOC and 1 composite for each additional 1000 Cubic yards or consult with DER.[b]		

[a] VOC samples cannot be composited. Discrete samples must be taken to maximize the representativeness of the results.

[b] For example, a 3,000 cubic yard soil pile to be sampled and analyzed for VOCs would require 11 discrete representative samples. The same pile to be sampled for SVOCs would require 4 composite samples with each composite sample consisting of 3-5 discrete samples.

Attachment D: Resumes

Daniel A. Bellucci, P.E.

27 Belcrest Road • West Hartford, CT 06107 • (845) 803-4347 • bellucciengineeringpllc@gmail.com

Education & Certifications

B.S. Environmental Engineering University of New Hampshire 2011
Professional Engineer (Environmental) MA, NY
40 Hour HAZWOPER Training Certification- 29 CFR 1910.120
Understanding the MCP Course – UMass Lowell (Spring 2019)
ASTM E 1527 Phase I Environmental Site Assessment (ESA) Training, 2012
National Groundwater Association - Certified Well Driller (CWD)
Dig Safe Certified Excavator in Safe Digging Practices, 2019-2024

Employment History

Environmental Engineer, P.E Bellucci Engineering, PLLC 2019 to Present

- Principal Engineer specializing in Brownfield Cleanup Program (BCP) site investigation, remediation and closure.

Environmental Engineer, P.E. EBI Consulting, Site Investigation and Remediation (SIR) Group, Burlington, MA (October 2012 to July 2019)

- Project Management including site investigation proposal preparation, management of junior field staff and client correspondence, project invoicing (fixed fee)
- Extensive field experience conducting hundreds of Phase II Subsurface Investigations throughout Eastern US
- Sub-slab depressurization system pilot testing, design, installation, system startup and ongoing operation, maintenance and sampling
- Field and project management experience associated with the following: soil, groundwater, soil vapor, and surface water sampling / monitoring, UST closure, monitoring well elevation surveys, monitoring well installation and abandonments, operation and maintenance of groundwater pump and treat systems; construction site air monitoring, soil management plans, site plan creation using AutoCAD
- Annual US Airforce base stormwater and wastewater sampling
- Broad spectrum of Real Estate Due Diligence projects including Phase I Environmental Site Assessments (ESAs), State File Reviews, Telecommunications ESAs, Environmental Protection Plans, Soil Management Plans, Release Abatement Measure Plans and Spill Prevention Control and Countermeasure Plans

Environmental Engineer HydroEnvironmental Solutions Inc., Somers, NY (November 2011 to October 2012)

- Oversight and project management of remediation projects including petroleum release sites, industrial redevelopment soil characterization and disposal, and construction dewatering discharge permitting
- Detailed field reporting, soil and water sampling and analysis of laboratory data
- Operator: Geoprobe® Direct Push macro core sampling drill rig
- Invoice review, cost estimates, spill closure report compilation, review and output
- O&M of pumps, carbon filtration units, and oil/water separators
- Spill Prevention, Control and Countermeasure Plan compilation and review

Field Technician Tri-State Environmental Services Inc., Hawthorne, NY (September 2011 to November 2011)

- Hazardous materials handling, transportation, and disposal procedures

Owner/ Partner Core Down Drilling, LLC 2012 to Present

Related Educational Experience

- Senior Research Presentation on Microbial Degradation of PCB's in the Hudson River
- Advanced Water Treatment Facility Full Scale Team Design
- Membrane filtration design to optimize pathogen removal prior to disinfection, decreasing disinfection byproducts

Engineering & Business Software Experience

AutoCAD, Adobe, Win Log/ Strata Explorer, Sales Force/ Financial Force, Parcel, Microsoft

References furnished upon request

RICHARD HOOKER, PH.D.

GALLAGHER BASSETT

CURRENT POSITION: MANAGER, ENVIRONMENTAL CONSULTING

PROFESSIONAL SUMMARY

Richard Hooker serves as Manager of Environmental Consulting for investigative and remedial projects including NYSDEC and OER Brownfields sites, Phase II investigations, and environmental management of construction projects. He also prepares and evaluates interdisciplinary, comprehensive environmental impact assessment reviews (NEPA, SEQR and CEQR) and has a particular expertise in noise issues. Mr. Hooker develops investigative and remedial work plans, health and safety plans, performs fieldwork, and prepares technical reports. He works with regulatory authorities and subcontractors including construction personnel, waste repositories and haulage contractors, laboratories and drillers. His responsibilities include: designing noise studies, investigating site histories, and document reviews, cost benefit analysis of remedial alternatives, overseeing excavations and in situ remediation, sampling, sample data evaluation, report preparation, and obtaining regulatory closure. He has extensive experience of sampling and sample collection protocols for soil, vapor, indoor air, sediment, and groundwater and has worked to remediate a wide range of environmental contaminants including petroleum, heavy metals, PCBs, and solvents.

Mr. Hooker holds a Ph.D. from the University of St. Andrews, St. Andrews, Scotland and a BA from Staffordshire University, Stoke-on-Trent, England. Prior to relocating to the Hudson Valley, he served as an Assistant Professor at the University of Glasgow, Scotland.

PROFESSIONAL EXPERIENCE

3475 Third Avenue, Bronx, NY—Investigated and remediated this former manufacturing facility to NYSDEC Brownfields to Track 1 cleanup standards. This site was the first project in the OER Jumpstart program established to assist cleanup on government supported affordable and supportive housing projects in NYC. Under this program OER sponsored enrollment in the NYS Brownfield Cleanup Program. Work on this trailblazing project required liaising with OER and NYSDEC Region 2 to ensure documentation met the requirements of both agencies. Certificate of Completion secured in 2016.

Former A.C. Dutton Lumber Yard, Dutchess County, NY—Documented hazardous concentrations of arsenic and chromium in soils and concrete surfaces at this NYSDEC Brownfields site contaminated by the historical pressure treatment of lumber. Developed a Workplan for site remediation and directed environmental restoration activities, including: characterization, excavation and removal of hazardous soils, scarification concrete warehouse floors, removal aboveground and underground chemical and petroleum storage tanks.

Crannell Square, Dutchess County, NY —oversaw the investigation and remediation of this Track 1 BCP site.

EDUCATION:

- Ph.D., University of St. Andrews, Scotland
- BA, Staffordshire University, England

SCOTT SPITZER

GALLAGHER BASSETT | TECHNICAL SERVICES

CURRENT POSITION: DIRECTOR OF ENVIRONMENTAL INVESTIGATIONS

PROFESSIONAL SUMMARY

Scott Spitzer serves as Director of Environmental Investigations, overseeing the technical elements of Phase I and Phase II technical environmental investigations and remedial projects, including Brownfield sites. Mr. Spitzer supervises all GBTS field staff and reviews all documents prepared by GBTS to ensure consistency and technical accuracy.

His responsibilities associated with the preparation of site assessments include: investigating site histories, conducting facility inspections, reviewing regulatory agency records, documenting facility compliance with relevant State and Federal regulations, and preparing reports. As project manager for complex technical environmental investigations (including sites currently on the NYSDEC Registry of Inactive Hazardous Waste Sites), Mr. Spitzer is involved with: coordinating subcontractors; overseeing fieldwork; designing and implementing material, soil, and water sampling plans, preparing technical reports and interfacing with regulatory agency personnel.

Mr. Spitzer has 15 years' experience in the preparation of Phase I, Phase II and Brownfields investigations and in the management of complex remediation projects. He is knowledgeable in both New York State and Federal environmental regulations and has an understanding of a broad range of remedial technologies. Mr. Spitzer studied environmental science at SUNY Purchase and holds a BS in Biology from SUNY at Stony Brook, Stony Brook, New York.

PROFESSIONAL EXPERIENCE

Former NuHart Plastics Manufacturing Site, Brooklyn, NY: GBTS conducted a complex remedial investigation of a NYSDEC Class 2 Inactive Hazardous Waste Disposal ("Superfund") site, where a plume of liquid phthalates and chlorinated solvents had impacted groundwater. Extensive sampling was conducted of both on- and off-site soil, soil vapor and groundwater, and phthalates were removed from recovery wells as an interim remedial measure. A Remedial Investigation Report was completed, allowing the site owner to move create a Remedial Design Document.

Sakmann Restaurant Corporation Site, Fort Montgomery, NY: Conducted Phase I Environmental Site Assessment and Phase II Subsurface Investigations for former filling station and automotive repair garage contaminated by solvent and waste-oil discharges to an on-site drywell. Designed and implemented a sampling plan for soils impacted by chlorinated hydrocarbons, petroleum, and metals. Created Work Plan (in coordination with the NYSDEC Voluntary Cleanup Program) for remediation of on-site contamination and long-term sampling of on-site groundwater monitoring wells.

EDUCATION:

- BS, Biology, SUNY at Stony Brook, NY

ERICK SALAZAR

GALLAGHER BASSETT

CURRENT POSITION: SENIOR PROJECT MANAGER

PROFESSIONAL SUMMARY

Erick Salazar serves as Senior Project Manager for environmental site assessments and Phase II technical environmental investigations. His responsibilities include: investigating site histories, conducting facility inspections, reviewing regulatory agency records, documenting facility compliance with relevant State and Federal regulations, and preparing reports. He assists with Phase II technical environmental investigations and fieldwork including implementation of community air monitoring plans (CAMP), collecting soil and water samples and tank removal oversight.

Mr. Salazar has experience in the implementation of CAMP monitoring, personal sampling for lead and dust of workers, coordinating pre-demolition C&D waste inventory as part of Sandy relief work on Staten Island, and providing oversight of site remedial activities on rural properties.

PROFESSIONAL EXPERIENCE

Mr. Salazar has experience in the implementation of CAMP monitoring, personal sampling for lead and dust of workers, coordinating pre-demolition C&D waste inventory as part of Sandy relief work on Staten Island, and providing oversight of site remedial activities on rural properties.
Mr. Salazar's experience with Health and Safety services include:

- Complete OSHA training and three years' experience of Sites handling regulated materials as well as hazardous and non-hazardous wastes.
- Preparation of Environmental Health & Safety Plan for (EHASP) for debris removal and soil sampling project in Ulster County, New York.
- Assistance in the preparation of EHASPs for NYSDEC sites in Dutchess and Westchester Counties.
- Implementation of CAMP at sites in Dutchess, Ulster, Bronx and Queens Counties, including preparation of status reports, preparation of incident reports, and communication with involved regulatory agencies.
- Collection/analysis of media samples (air, water and soil) per requirements of the EHASP and/or remedial work plans.

EDUCATION:

- BS, Biology, State University at New Paltz, NY

REGISTRATIONS / CERTIFICATIONS:

- OSHA, 40-hr Hazardous Waste Operations & Emergency Response Health & Safety Certification
- OSHA, 10-hr General Construction Industry Training & Certification

Attachment E: Laboratory Documents

PFAS Field Sampling Guidelines for Groundwater and Soil

For Waters: 2 x 125 mL Bottles per sample filled to the neck of the bottle

PLEASE READ THESE INSTRUCTIONS PRIOR TO CONDUCTING SAMPLING

Sampling for PFAS for determination using EPA 537m can be challenging due to the prevalence of these compounds in consumer products. The following guidelines reflect current knowledge and are recommended when conducting sampling.

Consider Sampling for PFAS First...

Sample containers for other methods may have PFAS present on their sampling containers which could cross-contaminate your sample(s). We are analyzing down to the low parts-per-trillion (ppt) range so cross-contamination prevention is an important consideration.

SAMPLING

All Sampling done with Nitrile Gloves, provided by YORK

SAMPLE CONTAINERS

All sample containers - PP ONLY (Target list of 21 PFAS) Caps are unlined and made of PP (no Teflon® lined caps) Bottles are Batch Certified to be Target PFAS-free (< Reporting Limit)

FIELD EQUIPMENT

-Must not contain Teflon® (aka PTFE) or LDPE materials

-All sampling materials must be made from stainless steel, HDPE, acetate, silicone, or polypropylene

-No waterproof field notebooks can be used

-No plastic clipboards, binders, or the like

-No adhesives (e.g.Post-It® Notes, Duct tape) can be used

-Sharpies and permanent markers not allowed; regular ball point pens are acceptable

-Aluminum foil must not be used

-Keep PFAS samples in separate cooler, away from sampling containers that may contain PFAS

-Coolers filled with regular ice only - Do not use chemical (blue) ice packs

EQUIPMENT DECON

-"PFAS-free" water (e.g. Poland Spring*)-on-site for decontamination

-Only Alconox and Liquinox can be used for decontamination

* *Poland Spring has been demonstrated to be PFAS -free when freshly opened*

FIELD SAMPLING CLOTHING CONSIDERATIONS

Do not use fabric softener on clothing to be worn in field

Do not used cosmetics, moisturizers, hand cream, or other related products the morning of sampling

Do not use sunscreen or insect repellants

No materials containing Tyvek®

All safety boots made from polyurethane and PVC

No clothing or boots containing Gore-Tex®

Wet weather gear made of polyurethane and PVC only

FOOD CONSIDERATIONS

No food or drink when PFAS Sampling with exception of bottled water and/or hydration drinks (i.e., Gatorade and Powerade) that is available for consumption only in the staging area.

SAMPLE CONTAINER HANDLING

-For **AQUEOUS** Samples: Each sample set contains 2 x 125 mL containers. Fill each container to the neck

-For **SOILS**-1 x 250 mL container, FILL HALF WAY ONLY

-No preservative is necessary for this appliction at this time.

-Place closed, labeled Sample bottles into ZipLock bag.

-Dispose of Nitrile gloves in provided waste bag.

-Place in separate cooler from other samples, WET ICE only

-Follow instructions on next page for more detail.

-If you have a Quality Assurance Project Plan follow that guidance

York Analytical Laboratories, Inc. ***Emerging Contaminants Laboratory***
132-02 89th Avenue SUITE 217 Richmond Hill, NY 11418

Rev 2.0 12/20

PFAS -Recommended Field Sampling Guidelines

PLEASE READ INSTRUCTIONS ENTIRELY PRIOR TO SAMPLING EVENT

Sampler should wash hands before wearing nitrile gloves in order to limit contamination during sampling. Each sample set* requires a set of containers to comply with the method as indicated below. **Sample set is composed of samples collected from the same sample site and at the same time.* **A pair of Nitrile gloves is included with each sample Zip-lock bag/bottle set. One Field Blank set per day is provided.**

Note: PP is Polypropylene

Sample Containers	Bottle Type	Preservation
2 Sampling Containers - Empty- per sample-Waters **SOILS- 1 Container-fill only half way**	125 mL PP container-Waters 250 mL PP for Soils	None, Cool <6C
1 PP Bottle with PFAS-free Water for Field Blank	125 mL PP container	None, Cool <6C
1 Field Blank (FRB) - Empty-per sampling day	125 mL PP container	None, Cool <6C
2 - Empty PP bottles for MS/DUP when needed (Soils MS/DUP come from same Bottle)	125 mL PP container	None, Cool <6C

NOTE: Sampling containers for WATERS must be filled to the neck. **SOILS, fill bottle only 1/2 full**

FIELD BLANK and MS/DUP Bottles are labeled with NEON GREEN LABELS

Field blanks are required per sampling event day and the containers have been provided. Follow the instructions below.

Field Blank Instructions:

1. Locate the PFAS Field Blank bottle (empty, labeled) supplied The PFAS Field Blank Water container is pre-filled at YORK with PFAS-free water to transfer to the empty PFAS Field Blank bottle.
2. Locate the empty container labeled "Field Blank" with Neon green labels
3. Open both containers and proceed to transfer contents of the "PFAS FIELD BLANK WATER" container into the "PFAS FIELD BLANK" Bottle
4. Field Blanks to be analyzed must be listed on the Chain-of-Custody.
5. Both the empty Field Blank water container and the filled Field Blank container must be returned to YORK along with the samples taken.

Matrix Spike/ Matrix Dup Instructions: Note: Soil MS/MSD can be from the same container as the sample

1. Locate the PFAS MS and DUP bottles (empty, labeled-NEON GREEN) supplied -normally 1 set per 20 field samples
2. Transfer chosen Field MS /Dup as a normal sample and indicate sample ID on container and on Chain-of-Custody

Sampling Instructions: ALL SAMPLE BOTTLES HAVE NEON YELLOW LABELS

1. Do not overfill or rinse the container. Any sample(s) for Matrix Spike and Matrix Duplicates are treated similarly.
2. Close containers securely. Label legibly and place containers in ZipLoc® bags, and in a separate cooler (no other container types).
3. Ensure Chain-of-Custody and all sample labels contain required information. Place all samples in separate coolers (separate from other samples for different parameters). Place wet ice (bagged) on samples for return to YORK. Samples should be kept at 4°C ±2. Samples must not exceed 10°C during first 48 hours after collection. **Hold time is 14 days.**

York Analytical Laboratories, Inc. ***Emerging Contaminants Laboratory***
132-02 89th Avenue SUITE 217 Richmond Hill, NY 11418

PFAS Target compounds and Reporting Limits

Analytical Method Information

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PFAS, EPA 1633 Target List in Soil (EPA 1633 Draft 2)

Preservation: Cool 4°C

Container: 10_250mL Plastic Cool to 4° C **Amount Required:** 250 mL **Hold Time:** 28 days

Analyte	MDL	Reporting Limit	Surrogate %Rec	Duplicate RPD	----Matrix Spike---- %Rec	RPD	--Blank Spike / LCS-- %Rec	RPD
Perfluorobutanesulfonic acid (PFBS)	0.111	0.177 ug/kg		30	25-150	35	50-150	30
Perfluorohexanoic acid (PFHxA)	0.0530	0.200 ug/kg		30	25-150	35	50-150	30
Perfluoroheptanoic acid (PFHpA)	0.105	0.200 ug/kg		30	25-150	35	50-150	30
Perfluorohexanesulfonic acid (PFHxS)	0.179	0.183 ug/kg		30	25-150	35	50-150	30
Perfluorooctanoic acid (PFOA)	0.172	0.200 ug/kg		30	25-150	35	50-150	30
Perfluorooctanesulfonic acid (PFOS)	0.167	0.186 ug/kg		30	25-150	35	50-150	30
Perfluorononanoic acid (PFNA)	0.189	0.200 ug/kg		30	25-150	35	50-150	30
Perfluorodecanoic acid (PFDA)	0.191	0.200 ug/kg		30	25-150	35	50-150	30
Perfluoroundecanoic acid (PFUnA)	0.198	0.200 ug/kg		30	25-150	35	50-150	30
Perfluorododecanoic acid (PFDoA)	0.163	0.200 ug/kg		30	25-150	35	50-150	30
Perfluorotridecanoic acid (PFTrDA)	0.125	0.200 ug/kg		30	25-150	35	50-150	30
Perfluorotetradecanoic acid (PFTA)	0.103	0.200 ug/kg		30	25-150	35	50-150	30
N-MeFOSAA	0.148	0.200 ug/kg		30	25-150	35	50-150	30
N-EtFOSAA	0.194	0.200 ug/kg		30	25-150	35	50-150	30
Perfluoropentanoic acid (PFPeA)	0.109	0.400 ug/kg		30	25-150	35	50-150	30
Perfluoro-1-octanesulfonamide (FOSA)	0.146	0.200 ug/kg		30	25-150	35	50-150	30
Perfluoro-1-heptanesulfonic acid (PFHpS)	0.155	0.200 ug/kg		30	25-150	35	50-150	30
Perfluoro-1-decanesulfonic acid (PFDS)	0.191	0.193 ug/kg		30	25-150	35	50-150	30
1H,1H,2H,2H-Perfluorooctanesulfonic acid (6:2 FTS)	0.595	0.760 ug/kg		30	25-150	35	50-150	30
1H,1H,2H,2H-Perfluorodecanesulfonic acid (8:2 FTS)	0.755	0.768 ug/kg		30	25-150	35	50-150	30
Perfluoro-n-butanoic acid (PFBA)	0.109	0.800 ug/kg		30	25-150	35	50-150	30
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	0.139	0.356 ug/kg		30	25-150	30	50-150	30
Perfluoro-3,6-dioxaheptanoic acid (NFDHA)	0.193	0.400 ug/kg		30	25-150	30	50-150	30
Perfluoro-4-oxapentanoic acid (PFMPA)	0.0620	0.400 ug/kg		30	25-150	30	50-150	30
Perfluoro-5-oxahexanoic acid (PFMBA)	0.0960	0.400 ug/kg		30	25-150	30	50-150	30
Perfluoro-1-pentanesulfonate (PFPeS)	0.157	0.188 ug/kg		30	25-150	30	50-150	30
1H,1H,2H,2H-Perfluorohexanesulfonic acid (4:2 FTS)	0.595	0.750 ug/kg		30	25-150	30	50-150	30
HFPO-DA (Gen-X)	0.608	0.800 ug/kg		30	25-150	30	50-150	30
11CL-PF3OUdS	0.311	0.756 ug/kg		30	25-150	30	50-150	30
9CL-PF3ONS	0.246	0.748 ug/kg		30	25-150	30	50-150	30
ADONA	0.174	0.756 ug/kg		30	25-150	30	50-150	30
Perfluorododecanesulfonic acid (PFDoS)	0.169	0.194 ug/kg		30	25-150	30	50-150	30
Perfluoro-1-nonanesulfonic acid (PFNS)	0.124	0.192 ug/kg		30	25-150	30	50-150	30
3-Perfluoropropyl propanoic acid (FPrPA)	0.634	1.00 ug/kg		30	25-150	30	50-150	30
3-Perfluoropentyl propanoic acid (FPePA)	2.10	5.00 ug/kg		30	25-150	30	50-150	30
3-Perfluoroheptyl propanoic acid (FHpPA)	1.50	5.00 ug/kg		30	25-150	30	50-150	30
N-MeFOSE	0.611	2.00 ug/kg		30	25-150	30	50-150	30
N-MeFOSA	0.180	0.200 ug/kg		30	25-150	30	50-150	30
N-EtFOSE	0.697	2.00 ug/kg		30	25-150	30	50-150	30
N-EtFOSA	0.198	0.200 ug/kg		30	25-150	30	50-150	30
Surr: M3PFBS			25-150					

Analytical Method Information

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(Continued)

PFAS, EPA 1633 Target List in Soil (EPA 1633 Draft 2) (Continued)

Analyte	MDL	Reporting Limit	Surrogate %Rec	Duplicate RPD	----Matrix Spike---- %Rec	RPD	--Blank Spike / LCS-- %Rec	RPD
Surr: M5PFHxA			25-150					
Surr: M4PFHpA			25-150					
Surr: M3PFHxS			25-150					
Surr: Perfluoro-n-[13C8]octanoic acid (M8PFOA)			25-150					
Surr: M6PFDA			25-150					
Surr: M7PFUdA			25-150					
Surr: Perfluoro-n-[1,2-13C2]dodecanoic acid (MPFDoA)			25-150					
Surr: M2PFTeDA			10-150					
Surr: Perfluoro-n-[13C4]butanoic acid (MPFBA)			25-150					
Surr: Perfluoro-1-[13C8]octanesulfonic acid (M8PFOS)			25-150					
Surr: Perfluoro-n-[13C5]pentanoic acid (M5PFPeA)			25-150					
Surr: Perfluoro-1-[13C8]octanesulfonamide (M8FOSA)			10-150					
Surr: d3-N-MeFOSAA			25-150					
Surr: d5-N-EtFOSAA			25-150					
Surr: M2-6:2 FTS			25-200					
Surr: M2-8:2 FTS			25-200					
Surr: M9PFNA			25-150					
Surr: M2-4:2 FTS			25-150					
Surr: d-N-MeFOSA			25-150					
Surr: d-N-EtFOSA			25-150					
Surr: M3HFPO-DA			25-150					
Surr: d9-N-EtFOSE			25-150					
Surr: d7-N-MeFOSE			25-150					
M3PFBA								
MPFDA								
MPFHxA								
MPFHxS								
MPFNA								
MPFOA								
MPFOS								
Perfluoro-n-[13C9]nonanoic acid (M9PFNA)-EIS								
Perfluoro-n-[13C8]octanoic acid (M8PFOA)-EIS								
Perfluoro-n-[13C54]pentanoic acid (M5PFPeA)-EIS								
Perfluoro-n-[13C4]butanoic acid (MPFBA)-EIS								
Perfluoro-n-[1,2-13C2]dodecanoic acid (MPFDoA)-EIS								
Perfluoro-1-[13C8]octanesulfonic acid (M8PFOS)-EIS								
Perfluoro-1-[13C8]octanesulfonamide (M8FOSA)-EIS								
M7PFUdA-EIS								
M6PFDA-EIS								
M5PFHxA-EIS								
M4PFHpA-EIS								
M3PFHxS-EIS								
M3PFBS-EIS								
M3-HFPO-DA-EIS								
M2PFTeDA-EIS								

Analytical Method Information

(Continued)

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PFAS, EPA 1633 Target List in Soil (EPA 1633 Draft 2) (Continued)

Analyte	MDL	Reporting Limit	Surrogate %Rec	Duplicate RPD	----Matrix Spike---- %Rec	RPD	--Blank Spike / LCS-- %Rec	RPD
M2-8-2FTS-EIS								
M2-6-2FTS-EIS								
M2-4-2FTS-EIS								
d9-NEtFOSE-EIS								
d7-NMeFOSE-EIS								
d5-NEtFOSA-EIS								
d5-N-EtFOSAA-EIS								
d3-NMeFOSA-EIS								
d3-N-MeFOSAA-EIS								

Analytical Method Information

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(Continued)

PFAS, EPA 1633 Target List in Water (EPA 1633 Draft 2)

Preservation: Cool 4°C

Container: 10_250mL Plastic Cool to 4° C **Amount Required:** 250 mL **Hold Time:** 28 days

Analyte	MDL	Reporting Limit	Surrogate %Rec	Duplicate RPD	----Matrix Spike---- %Rec	RPD	--Blank Spike / LCS-- %Rec	RPD
Perfluorobutanesulfonic acid (PFBS)	0.470	1.77 ng/L		30	25-150	35	50-150	30
Perfluorohexanoic acid (PFHxA)	0.350	2.00 ng/L		30	25-150	35	50-150	30
Perfluoroheptanoic acid (PFHpA)	0.710	2.00 ng/L		30	25-150	35	50-150	30
Perfluorohexanesulfonic acid (PFHxS)	0.680	1.83 ng/L		30	25-150	35	50-150	30
Perfluorooctanoic acid (PFOA)	0.420	2.00 ng/L		30	25-150	35	50-150	30
Perfluorooctanesulfonic acid (PFOS)	0.820	1.86 ng/L		30	25-150	35	50-150	30
Perfluorononanoic acid (PFNA)	0.520	2.00 ng/L		30	25-150	35	50-150	30
Perfluorodecanoic acid (PFDA)	0.750	2.00 ng/L		30	25-150	35	50-150	30
Perfluoroundecanoic acid (PFUnA)	1.13	2.00 ng/L		30	25-150	35	50-150	30
Perfluorododecanoic acid (PFDoA)	0.880	2.00 ng/L		30	25-150	35	50-150	30
Perfluorotridecanoic acid (PFTrDA)	0.740	2.00 ng/L		30	25-150	35	50-150	30
Perfluorotetradecanoic acid (PFTA)	0.690	2.00 ng/L		30	25-150	35	50-150	30
N-MeFOSAA	0.790	2.00 ng/L		30	25-150	35	50-150	30
N-EtFOSAA	1.03	2.00 ng/L		30	25-150	35	50-150	30
Perfluoropentanoic acid (PFPeA)	0.230	4.00 ng/L		30	25-150	35	50-150	30
Perfluoro-1-octanesulfonamide (FOSA)	0.880	2.00 ng/L		30	25-150	35	50-150	30
Perfluoro-1-heptanesulfonic acid (PFHpS)	0.910	1.91 ng/L		30	25-150	35	50-150	30
Perfluoro-1-decanesulfonic acid (PFDS)	1.32	1.93 ng/L		30	25-150	35	50-150	30
1H,1H,2H,2H-Perfluorooctanesulfonic acid (6:2 FTS)	1.06	7.60 ng/L		30	25-150	35	50-150	30
1H,1H,2H,2H-Perfluorodecanesulfonic acid (8:2 FTS)	2.05	7.68 ng/L		30	25-150	35	50-150	30
Perfluoro-n-butanoic acid (PFBA)	0.330	8.00 ng/L		30	25-150	35	50-150	30
Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	0.500	3.56 ng/L		30	25-150	30	50-150	30
Perfluoro-3,6-dioxaheptanoic acid (NFDHA)	2.14	4.00 ng/L		30	25-150	30	50-150	30
Perfluoro-4-oxapentanoic acid (PFMPA)	0.250	4.00 ng/L		30	25-150	30	50-150	30
Perfluoro-5-oxahexanoic acid (PFMBA)	0.370	4.00 ng/L		30	25-150	30	50-150	30
Perfluoro-1-pentanesulfonate (PFPeS)	0.760	1.88 ng/L		30	25-150	30	50-150	30
1H,1H,2H,2H-Perfluorohexanesulfonic acid (4:2 FTS)	1.79	7.50 ng/L		30	25-150	30	50-150	30
HFPO-DA (Gen-X)	3.23	8.00 ng/L		30	25-150	30	50-150	30
11CL-PF3OUdS	1.38	7.56 ng/L		30	25-150	30	50-150	30
9CL-PF3ONS	0.700	7.48 ng/L		30	25-150	30	50-150	30
ADONA	0.530	7.56 ng/L		30	25-150	30	50-150	30
Perfluorododecanesulfonic acid (PFDoS)	0.930	1.94 ng/L		30	25-150	30	50-150	30
Perfluoro-1-nonanesulfonic acid (PFNS)	0.860	1.92 ng/L		30	25-150	30	50-150	30
3-Perfluoropropyl propanoic acid (FPrPA)	2.03	5.00 ng/L		30	25-150	30	50-150	30
3-Perfluoropentyl propanoic acid (FPePA)	7.33	25.0 ng/L		30	25-150	30	50-150	30
3-Perfluoroheptyl propanoic acid (FHpPA)	9.47	25.0 ng/L		30	25-150	30	50-150	30
N-MeFOSE	3.99	20.0 ng/L		30	25-150	30	50-150	30
N-MeFOSA	1.58	2.00 ng/L		30	25-150	30	50-150	30
N-EtFOSE	3.99	20.0 ng/L		30	25-150	30	50-150	30
N-EtFOSA	1.80	2.00 ng/L		30	25-150	30	50-150	30
Surr: M3PFBS			25-150					

Analytical Method Information

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(Continued)

PFAS, EPA 1633 Target List in Water (EPA 1633 Draft 2) (Continued)

Analyte	MDL	Reporting Limit	Surrogate %Rec	Duplicate RPD	----Matrix Spike---- %Rec	----Matrix Spike---- RPD	--Blank Spike / LCS-- %Rec	--Blank Spike / LCS-- RPD
Surr: M5PFHxA			25-150					
Surr: M4PFHpA			25-150					
Surr: M3PFHxS			25-150					
Surr: Perfluoro-n-[13C8]octanoic acid (M8PFOA)			25-150					
Surr: M6PFDA			25-150					
Surr: M7PFUdA			25-150					
Surr: Perfluoro-n-[1,2-13C2]dodecanoic acid (MPFDoA)			25-150					
Surr: M2PFTeDA			10-150					
Surr: Perfluoro-n-[13C4]butanoic acid (MPFBA)			25-150					
Surr: Perfluoro-1-[13C8]octanesulfonic acid (M8PFOS)			25-150					
Surr: Perfluoro-n-[13C5]pentanoic acid (M5PFPeA)			25-150					
Surr: Perfluoro-1-[13C8]octanesulfonamide (M8FOSA)			10-150					
Surr: d3-N-MeFOSAA			25-150					
Surr: d5-N-EtFOSAA			25-150					
Surr: M2-6:2 FTS			25-200					
Surr: M2-8:2 FTS			25-200					
Surr: M9PFNA			25-150					
Surr: M2-4:2 FTS			25-150					
Surr: d-N-MeFOSA			25-150					
Surr: d-N-EtFOSA			25-150					
Surr: M3HFPO-DA			25-150					
Surr: d9-N-EtFOSE			25-150					
Surr: d7-N-MeFOSE			25-150					
M3PFBA								
MPFDA								
MPFHxA								
MPFHxS								
MPFNA								
MPFOA								
MPFOS								
Perfluoro-n-[13C9]nonanoic acid (M9PFNA)-EIS								
Perfluoro-n-[13C8]octanoic acid (M8PFOA)-EIS								
Perfluoro-n-[13C54]pentanoic acid (M5PFPeA)-EIS								
Perfluoro-n-[13C4]butanoic acid (MPFBA)-EIS								
Perfluoro-n-[1,2-13C2]dodecanoic acid (MPFDoA)-EIS								
Perfluoro-1-[13C8]octanesulfonic acid (M8PFOS)-EIS								
Perfluoro-1-[13C8]octanesulfonamide (M8FOSA)-EIS								
M7PFUdA-EIS								
M6PFDA-EIS								
M5PFHxA-EIS								
M4PFHpA-EIS								
M3PFHxS-EIS								
M3PFBS-EIS								
M3-HFPO-DA-EIS								
M2PFTeDA-EIS								

Analytical Method Information

(Continued)

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PFAS, EPA 1633 Target List in Water (EPA 1633 Draft 2) (Continued)

Analyte	MDL	Reporting Limit	Surrogate %Rec	Duplicate RPD	----Matrix Spike---- %Rec	RPD	--Blank Spike / LCS-- %Rec	RPD
M2-8-2FTS-EIS								
M2-6-2FTS-EIS								
M2-4-2FTS-EIS								
d9-NEtFOSE-EIS								
d7-NMeFOSE-EIS								
d5-NEtFOSA-EIS								
d5-N-EtFOSAA-EIS								
d3-NMeFOSA-EIS								
d3-N-MeFOSAA-EIS								

Laboratory Standard Operating Procedure

Determination of PFAS in Aqueous and Solid matrices by

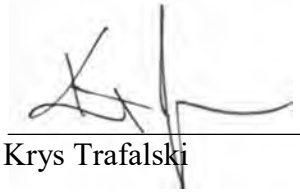
Isotope Dilution Analysis by HPLC/MS-MS (EPA 1633 Draft 2)

Standard Operating Procedure

Determination of Target Per- and Polyfluoroalkyl Substances (PFAS) in Aqueous and Solid matrices by Isotope Dilution Analysis by HPLC/MS-MS According to EPA Method 1633 Draft 2

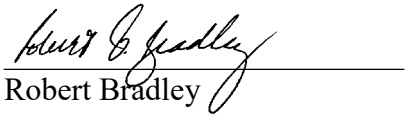
Approvals

Laboratory Director/QA Officer



Krys Trafalski

Vice President/Chief Scientific Officer



Robert Bradley

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1. SCOPE AND APPLICATION

This method is used to identify and quantitate specific PFAS compounds in extracts of non-potable water and solid (soil/sediment) samples using HPLC/MS-MS (high pressure liquid chromatography/tandem mass spectrometry. Currently the compounds (40) that are measured by this methodology are listed in the Table 1.0 below.

Table 1.0-Target PFAS

Perfluoroalkyl carboxylic acids		
Perfluorobutanoic acid	PFBA	375-22-4
Perfluoropentanoic acid	PFPeA	2706-90-3
Perfluorohexanoic acid	PFHxA	307-24-4
Perfluoroheptanoic acid	PFHpA	375-85-9
Perfluorooctanoic acid	PFOA	335-67-1
Perfluorononanoic acid	PFNA	375-95-1
Perfluorodecanoic acid	PFDA	335-76-2
Perfluoroundecanoic acid	PFUnA	2058-94-8
Perfluorododecanoic acid	PFDoA	307-55-1
Perfluorotridecanoic acid	PFTrDA	72629-94-8
Perfluorotetradecanoic acid	PFTeDA	376-06-7
Perfluoroalkyl sulfonic acids Acid Form		
Perfluorobutanesulfonic acid	PFBS	375-73-5
Perfluoropentansulfonic acid	PFPeS	2706-91-4
Perfluorohexanesulfonic acid	PFHxS	355-46-4
Perfluoroheptanesulfonic acid	PFHpS	375-92-8
Perfluorooctanesulfonic acid	PFOS	1763-23-1
Perfluorononanesulfonic acid	PFNS	68259-12-1
Perfluorodecanesulfonic acid	PFDS	335-77-3
Perfluorododecanesulfonic acid	PFDoS	79780-39-5
Fluorotelomer sulfonic acids		
1*H*,1*H*, 2*H*, 2*H*-Perfluorohexane sulfonic acid	4:2FTS	757124-72-4
1*H*,1*H*, 2*H*, 2*H*-Perfluorooctane sulfonic acid	6:2FTS	27619-97-2
1*H*,1*H*, 2*H*, 2*H*-Perfluorodecane sulfonic acid	8:2FTS	39108-34-4
Perfluorooctane sulfonamides		
Perfluorooctanesulfonamide	PFOSA	754-91-6
N-methyl perfluorooctanesulfonamide	NMeFOSA	31506-32-8
N-ethyl perfluorooctanesulfonamide	NEtFOSA	4151-50-2
Perfluorooctane sulfonamidoacetic acids		
N-methyl perfluorooctanesulfonamidoacetic acid	NMeFOSAA	2355-31-9
N-ethyl perfluorooctanesulfonamidoacetic acid	NEtFOSAA	2991-50-6
Perfluorooctane sulfonamide ethanols		
N-methyl perfluorooctanesulfonamidoethanol	NMeFOSE	24448-09-7
N-ethyl perfluorooctanesulfonamidoethanol	NEtFOSE	1691-99-2
Per- and Polyfluoroether carboxylic acids		
Hexafluoropropylene oxide dimer acid	HFPO-DA	13252-13-6
4,8-Dioxa-3*H*-perfluorononanoic acid	ADONA	919005-14-4
Perfluoro-3-methoxypropanoic acid	PFMPA	377-73-1
Perfluoro-4-methoxybutanoic acid	PFMBA	863090-89-5
Nonafluoro-3,6-dioxaheptanoic acid	NFDHA	151772-58-6
Ether sulfonic acids		
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	9Cl-PF3ONS	756426-58-1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	11Cl-PF3OUdS	763051-92-9
Perfluoro(2-ethoxyethane)sulfonic acid	PFEESA	113507-82-7
Fluorotelomer carboxylic acids		
3-Perfluoropropyl propanoic acid	3:3FTCA	356-02-5
2*H*,2*H*,3*H*,3*H*-Perfluorooctanoic acid	5:3FTCA	914637-49-3
3-Perfluoroheptyl propanoic acid	7:3FTCA	812-70-4

The estimated reporting limits (MRL) based upon the preparation/analysis parameters herein at the time of this revision are approximately 2.0-20.0 ng/L (ppt) for aqueous samples and 0.5-5.0 ug/kG for solids . The linear range for these PFAS can be extended by dilution. These MRLs are based upon a volume of 0.250L-0.500L extracted for aqueous samples and 2-5 g. for solids.

This method is "performance-based," which means that modifications may be made without additional EPA review to improve performance (e.g., overcome interferences, or improve the sensitivity, accuracy, or precision of the results) *provided that* all performance criteria in this method are met. Requirements for establishing equivalency are in Section 9.1.2 and include 9.1.2.2c. For CWA uses, additional flexibility is described at 40 CFR 136.6. Changes in performance, sensitivity, selectivity, precision, recovery, etc., that result from modifications within the scope of 40 CFR Part 136.6, and Section 9.0 of this method must be documented, as well as how these modifications compare to the specifications in this method. Changes outside the scope of 40 CFR Part 136.6 and Section 9.0 of this method may require prior review or approval.

2. SUMMARY

Environmental samples are prepared and extracted using method-specific procedures. Sample extracts are subjected to cleanup procedures designed to remove interferences. Analyses of the sample extracts are conducted by LC-MS/MS in the multiple reaction monitoring (MRM) mode. Sample concentrations are determined by isotope dilution or extracted internal standard quantification (see Section 10.3) using isotopically labeled compounds added to the samples before extraction

2.1 Extraction

2.1.1 Aqueous samples are spiked with isotopically labeled standards, extracted using solid-phase extraction (SPE) cartridges and undergo cleanup using carbon before analysis.

2.1.2 Solid samples are spiked with isotopically labeled standards, extracted into basic methanol, and cleaned up by carbon and SPE cartridges before analysis.

2.2 Analysis

2.2.1 Extracts are then analyzed by HPLC-MS/MS in the MRM mode. Extracts contain Non-extracted Internal Standards (NIS) to monitor instrument performance and used for quantitative analysis.

2.2.2 Individual PFAS analytes are identified through peak analysis of the quantification and confirmation ions (Precursor and product ions) where applicable.

2.2.3 The concentration of each analyte is calculated using the isotope dilution technique. This approach corrects the target analytes for surrogate analog recoveries and these surrogates are essentially extracted internal standards (EIS). For QC purposes, the percent recoveries of the isotope dilution analogues are calculated using the integrated peak areas of isotope performance standards, which are added to the final extract and function as traditional internal standards (non-extracted internal standards), exclusively applied to the isotope dilution analogues.

3. DEFINITIONS

3.1 ANALYSIS BATCH – A set of samples that is analyzed on the same instrument during a 24-hour period, including no more than 20 Field Samples, that begins and ends with the analysis of the appropriate Continuing Calibration Check (CCC) standards. Additional CCCs may be required depending on the length of the analysis batch and/or the number of Field Samples.

3.2 CALIBRATION STANDARD (CAL) – A solution of the method analytes, isotope dilution analogues, and isotope performance standards (Internal standards) prepared from the Primary Dilution Standards and stock standards. The calibration standards are used to calibrate the instrument response with respect to analyte concentration.

3.3 CONTINUING CALIBRATION VERIFICATION (CCV) – A calibration standard containing the method analytes, internal standard(s) and surrogate(s). The CCV is analyzed periodically to verify the accuracy of the existing calibration for those analytes.

3.4 EXTRACTION BATCH – A set of up to 20 Field Samples (not including QC Samples) extracted together by the same person(s) during a work day using the same lot of SPE devices, solvents, surrogate, internal standard and fortifying solutions. Required QC samples include Method blank, and Matrix spike/duplicate pair.

3.5 FIELD DUPLICATES – Separate samples collected at the same time and sampling location, shipped and stored under identical conditions. Method precision, including the contribution from sample collection procedures, is estimated from the analysis of Field Duplicates. Field Duplicates are used to prepare matrix spike/matrix spike duplicate QC samples.

3.6 FIELD BLANK (FBLK) – An aliquot of reagent water that is placed in a sample container in the laboratory and treated as a sample in all respects, including shipment to the sampling site, exposure to sampling site conditions, storage, preservation, and all analytical procedures. The purpose of the FBLK is to determine if method analytes or other interferences are introduced into the sample from shipping, storage, and the field environment.

3.7 ISOTOPE DILUTION ANALOGUES - Isotopically labeled analogues of the method analytes that are added to the sample prior to extraction in a known amount. Note: Not all target PFAS currently have an isotopically labeled analogue. In these cases, an alternate isotopically labeled analogue is used as detailed in our SOP and in the reference method.

3.8 ISOTOPE DILUTION TECHNIQUE - An analytical technique for measuring analyte concentration using the ratio of the peak area of the native analyte to that of an isotopically labeled analogue, added to the original sample in a known amount and carried through the entire analytical procedure.

3.9 ISOTOPE PERFORMANCE STANDARDS (Internal Standards) - Quality control compounds that are added to all standard solutions and extracts in a known amount and used to measure the relative response of the isotopically labelled analogues that are components of the same solution. For this method, the isotope performance standards are three isotopically labeled analogues of the method analytes. The isotope performance standards are indicators of instrument performance and are used to calculate the recovery of the isotope dilution analogues through the extraction procedure. In this method, the isotope performance standards are not used in the calculation of the recovery of the native analytes.

3.10 METHOD BLANK – An aliquot of reagent water to which known quantities of the method analytes and isotope dilution analogues are added. The results of the MBLK verify method performance in the absence of sample matrix.

3.11 MATRIX SPIKE/MATRIX SPIKE DUPLICATE (MS/MSD) – Aliquots of field samples that have been fortified with a known concentration of target compounds, prior to sample preparation and extraction, and analyzed to measure the effect of matrix interferences. The use of MS/MSD samples is generally not required in isotope dilution methods because the labeled compounds added to every sample provide more performance data than spiking a single sample in each preparation batch.

3.12 LIMIT OF QUANTITATION (LOQ) – The smallest concentration that produces a quantitative result with known and recorded precision and bias. The LOQ shall be set at or above the concentration of the lowest initial calibration standard (the lowest calibration standard must fall within the linear range). Determined by matrix through the entire preparation and analysis process.

3.13 METHOD DETECTION LIMIT (MDL) – The minimum measured concentration of a substance that can be reported with 99% confidence that the measured analyte concentration is distinguishable from method blank results (40 CFR 136, Appendix B).

3.14 MINIMUM LEVEL OF QUANTITATION (ML) – The lowest level at which the entire analytical system must give a recognizable signal and acceptable calibration point for the analyte. The ML represents the lowest concentration at which an analyte can be measured with a known level of confidence. It may be equivalent to the concentration of

the lowest calibration standard, assuming that all method-specified sample weights, volumes, and cleanup procedures have been employed. Alternatively, the ML may be established by multiplying the MDL (pooled or unpooled, as appropriate) by 3.18 and rounding the result to the number nearest to 1, 2, or 5 x 10n, where n is zero or an integer (see 68 FR 11770).

3.15 PRECURSOR ION – For the purpose of this method, the precursor ion is the deprotonated molecule ([M-H]-) of the method analyte (with the exception of HFPO-DA, in which the precursor ion is formed by decarboxylation). In MS/MS, the precursor ion is mass selected and fragmented by collisionally activated dissociation to produce distinctive product ions of smaller *m/z*.

3.16 PRIMARY DILUTION STANDARD (PDS) SOLUTION – A solution containing the analytes prepared in the laboratory from stock standard solutions and diluted as needed to prepare calibration solutions and other needed analyte solutions.

3.17 PRODUCT ION – For the purpose of this method, a product ion is one of the fragment ions produced in MS/MS by collisionally activated dissociation of the precursor ion.

3.18 INITIAL CALIBRATION VERIFICATION (ICV) – A calibration standard prepared independently from the primary calibration solutions. For this method, the ICV is a repeat of the entire dilution scheme starting with the same stock materials (neat compounds or purchased stock solutions) used to prepare the primary calibration solutions. Independent sources and separate lots of the starting materials are not required, provided the laboratory has obtained the purest form of the starting materials commercially available. The purpose of the ICV is to verify the integrity of the primary calibration standards.

3.19 QUANTITATIVE STANDARD - A quantitative standard of assayed concentration and purity traceable to a Certificate of Analysis.

3.20 STOCK STANDARD SOLUTION - A concentrated solution containing one or more method analytes prepared in the laboratory using assayed reference materials or purchased from a reputable commercial source with a Certificate of Analysis.

3.21 TECHNICAL GRADE STANDARD – As defined for this method, a technical-grade standard includes a mixture of the branched and linear isomers of a method analyte. For the purposes of this method, technical-grade standards are used to identify retention times of branched and linear isomers of method analytes.

3.22 ANALYTE – A PFAS compound included in this method. The analytes are listed in Table 1.

3.23 CALIBRATION STANDARD (CS) – A solution prepared from a secondary standard and/or stock solutions and used to calibrate the response of the LC-MS/MS instrument.

3.24 CONTINUING CALIBRATION VERIFICATION (CCV) STANDARD – The mid-point calibration standard that is used to verify calibration.

3.25 CFR – Code of Federal Regulations

3.26 EXTRACTED INTERNAL STANDARD (EIS) QUANTIFICATION – The response of the target compound is compared to the response of the labeled analog of another compound in the same LOC.

3.27 INSTRUMENT SENSITIVITY CHECK – solution used to check the sensitivity of the instrument. The solution contains the native compounds at the concentration of the LOQ.

3.28 IPR – INITIAL PRECISION AND RECOVERY; four aliquots of a reference matrix spiked with the analytes of interest and labeled compounds and analyzed to establish the ability of the laboratory to generate acceptable precision and recovery. An IPR is performed prior to the first time this method is used and any time the method or instrumentation is modified

3.29 OPR - ONGOING PRECISION AND RECOVERY- – Ongoing precision and recovery standard (OPR); a method blank spiked with known quantities of analytes. The OPR is analyzed exactly like a sample. Its purpose is to assure that the results produced by the laboratory remain within the limits specified in this method for precision and recovery. Applies to OPR and LLOPR (low level OPR at **2x** the LOQ level).

3.30 SPE – SOLID PHASE EXTRACTION; a technique in which an analyte is extracted from an aqueous solution or a solid extract by passage over or through a material capable of reversibly adsorbing the analyte. Also termed liquid-solid extraction.

4. INTERFERENCES

LC-MS/MS data from blanks, samples, and spikes must be evaluated for interferences. If any interferences are present, take corrective action if necessary. Do not use aluminum foil because PFAAs can be potentially transferred from the aluminum foil to the glassware. Only aluminum foil rinsed with LC/MS grade methanol can be used where necessary.

4.1 PFAS have been used in a wide variety of manufacturing processes, and laboratory supplies should be considered potentially contaminated until they have been tested and shown to be otherwise. The materials and supplies used during the method validation process have been tested and shown to be clean. These items are listed in the Reagents section.

4.2 Method interferences may be caused by contaminants in solvents, reagents (including DI water), sample bottles and caps, and other sample processing hardware that lead to discrete artifacts and/or elevated baselines in the chromatograms. All items such as these must be routinely demonstrated to be free from interferences (less than 1/2 the Reporting Limit), under the conditions of the analysis by analyzing Method Blanks. Subtracting blank values from sample results is not permitted.

4.3 PTFE products can be a source of PFAS (PFOA) contamination. The use of PTFE in the procedure should be avoided. Polypropylene (PP) or polyethylene (PE, HDPE) products may be used in place of PTFE products to minimize PFOA contamination.

4.3.1 Standards and samples are injected from polypropylene autosampler vials with polypropylene or polyolefin snap caps, once. Multiple injections may be performed on Primers when conditioning the instrument for analysis.

4.3.2 Random evaporation losses have been observed with the polypropylene caps causing high Internal Std. recovery after the vial was punctured and sample re-injected. For this reason, it is best to inject standards and samples once in the analytical sequence, then recap with polyolefin caps for storage.

4.3.2 Teflon-lined screw caps have detected PFAS at low concentrations. Repeated injection from the same teflon-lined screw cap have detected PFNA at increasing concentration as each repeated injection was performed, therefore, it is best to use polypropylene snap caps.

4.3.3 Aqueous samples should not come in contact with any glass containers or pipettes as PFAS analytes can potentially adsorb to glass surfaces. Standards dissolved in organic solvent may be purchased in glass ampoules. These standards in organic solvent are acceptable and subsequent transfers may be performed using glass syringes and pipets. Following extraction, the eluate must be collected in a polypropylene tube prior to concentration to dryness. Concentration to dryness in glass tubes may cause poor recovery.

4.4 LC/MS grade methanol must be used for all steps where methanol is used in this method. HPLC grade methanol has been demonstrated to be acceptable if tested prior to use.

4.5 Matrix interferences may be caused by contaminants that are co-extracted from the sample. The extent of matrix interferences will vary considerably from source to source, depending upon the nature of the sample.

4.5.1 Co-extracted Organic Material - Under normal LC conditions matrix effects due to co-extracted organic material enhanced the ionization of 4:2 FTS appreciably. Total organic carbon (TOC) is a good indicator of humic content of the sample.

4.5.2 Solid phase extraction cartridges may be a source of interferences. The analysis of field and laboratory reagent blanks can provide important information regarding the presence or absence of such interferences. SPE cartridges should be sealed while in storage to prevent ambient contamination of the SPE sorbent.

4.6 Contamination by carryover can occur whenever a high-concentration and low concentration samples are sequentially analyzed. To reduce carryover, the sample syringe in automatically rinsed with solvent between injections. These operations are programmed into the LC multi-sampler system.

4.7 Volumetric glassware and syringes are difficult to clean after being used for solutions containing high levels of PFOA. These items should be labeled for use only with similarly concentrated solutions or verified clean prior to re-use. To the extent possible, disposable labware is used.

4.8 Both branched and linear PFAS isomers can potentially be found in the environment. Linear and branched isomers are known to exist for PFOS, PFOA, PFHxS, and PFBS, based upon the scientific literature. We have also seen branched isomers for PFHpA, NMeFOSAA, NEtFOSAA and PFNA. If multiple isomers are present for one of these PFAS they likely are adjacent peaks that completely resolve or not, but usually with a deflection point resolved during peak integration. The later of these peaks matches the retention time of its labeled linear analog. In general, earlier peaks are the branched isomers and are not the result of peak splitting.

Currently, all these species are available as linear isomers. Some available branched and linear reference standards of the technical mixtures for these specific PFAS are used to ensure that all appropriate peaks are included during peak integration. These species currently include PFOA, PFHxS, NMeFOSAA, and NEtFOSAA. These branched isomers elute before the linear isomer and are integrated and reported as total for those species. Others are also included at this time such as those listed in section 7.3.4.

4.9 In an attempt to reduce PFOS bias, it is required that *m/z* 499>80 transition be used as the quantitation transition.

5. SAMPLE HANDLING

5.1 **Aqueous Samples** - samples are collected by our clients in 250 or 500ml HDPE bottles with unlined HDPE or polypropylene caps and filled to the neck. Each sample submitted should be submitted in triplicate-with one used for determination of Suspended solids and possible pre-screening. Sub-sampling should be avoided whenever possible. When historical data are available indicating high levels of PFAS, sub-sampling may be an advisable option.

5.2 **Soil Samples** – samples are collected in wide mouth 125 or 250 mL HDPE bottles with PP unlined caps.

5.3 SAMPLE SHIPMENT AND STORAGE/HOLDING TIMES – Maintain all aqueous samples protected from light at 0 - 6 ºC from the time of collection until shipped to the laboratory. Samples must be shipped as soon as practical with sufficient ice to maintain the sample temperature below 6 ºC during transport. Sample are to be received by the laboratory within 48 hours of collection. The laboratory must confirm that the sample temperature is 0 - 6 ºC upon receipt. Once received by the laboratory, the samples may be stored at ≤ -20 ºC, or at 0 - 6 ºC, until sample preparation. However, the allowable holding time for samples depends on the storage temperature, as described below:

5.3.1 Aqueous samples may be held in the laboratory for up to 90 days from collection, when stored at ≤ -20 ºC and protected from the light. When stored at 0 - 6 ºC and protected from the light, aqueous samples may be held for up to **28 days**, with the caveat that issues were observed with certain perfluorooctane sulfonamide ethanols and perfluorooctane sulfonamidoacetic acids after **7 days**. These issues are more likely to elevate the observed concentrations of other PFAS compounds via the transformation of these precursors if they are present in the sample.

5.3.2 Solid samples (soils and sediments) may be held for up to 90 days, if stored in the dark at either 0 - 6 ºC or ≤ -20 ºC, with the caveat that samples may need to be extracted as soon as possible if NFDHA is an important analyte.

5.4 **SAMPLE EXTRACT HOLDING TIMES** – Store sample extracts in the dark at less than 0 - 4 ºC until analyzed. If stored in the dark at less than 0 - 4 ºC, sample extracts may be stored for up to 90 days, with the caveat that issues were observed for some ether sulfonates after 28 days. These issues may elevate the observed concentrations of the ether sulfonates in the extract over time. Samples may need to be extracted as soon as possible if NFDHA is an important analyte.

6. APPARATUS AND MATERIALS (as listed or demonstrated equivalents)

6.1 250-500 mL polypropylene bottles with polypropylene caps. VWR Scientific or equivalent: Part no. 414004-125, 12 pk. Alternate: White PP unlined lid L238WH and 16oz. clarified PP single wall jar 70-400 neck, item J066-Containers and Packaging.com or equivalent.

6.2 Transport Tube: Virgin Polypropylene, White, Plastic, 10 mL Capacity, 16 mm OD, 93 mm Overall Lg, Self-Standing, 250 PK， Item 710Z420, Gamut.com (Grainger), with PP cap or equivalent.

6.3 Graduated cylinders, 50, 100, 250, 500 and 1000mL, Polypropylene, VWR Scientific or equivalent

6.4 Analytical Balance, 0.0001g., checked for accuracy each day of use with Class S weights, certified annually by an outside service

6.5 Extract concentrators: Organomation Model N-EVAP 112, 24 position concentrator with water batch control and nitrogen supply controls or equivalent

6.6 3.1 Micron in-line filters, Promochrom only

6.7 1.0-2.0 mL polypropylene snap cap vials, Agilent part no. 5182-0567 or equivalent

6.8 Snap caps, polypropylene or olefin, 11 mm, 11/9k, Agilent Part no. 5182-0542

6.9 Solid Phase Extraction Tubes: for EPA 1633: WAX (weak anion exchange mixed mode polymeric sorbent – Phenomenex No. 8B-S038-HCH 200 mg or Waters Oasis 150 mg Cat. # 186002493. Must have a pKa > 8 to remain positively charged during the extraction. Alternate is Agilent Bond Elute WAX 200 mg-cat. No. 5610-2151

6.10 Syringes, Hamilton or equivalent 5.0 uL, 10 uL 25 uL, 100 uL, 250 uL, 500 uL, teflon free

6.11 Solid Phase Extraction System-automated-Promochrom 8 position autosampler system for 6 mL capacity SPE tubes. System retrofit to remove all PTFE components and replaced with PEEK tubing or PFAS free tubing. Automated bottle rinsing feature required with 3.1 um in line PP filters

6.12 Nitrogen Evaporation System- TurboVap nitrogen evaporation system operated at less than 55C.

6.13 LC/MS-MS system- Agilent 1260 or 1290 HPLC system interfaced to an Agilent 6470A or 6460C Triple Quadrupole system. The instrument control and qualitative/quantitative software is Mass Hunter versions B.8.0 and B.9.0 or later.

6.13.1 HPLC System-Agilent 1260 or 1290 Infinity II

6.13.1.1 The Agilent 1260 or 1290 Infinity II HPLC system is configured with temperature controlled column oven compartment. 4 column configuration, temperature controlled (refrigerated) auto sampler compartments, injection valve, proportioning valves, variable flow controls and variable injection capabilities.

6.13.1.2 The delay column (PFAS and other interference removal) is an Agilent Eclipse Plus C18, 4.6mm x 50 mm, 3.5 um-Part no. 959943-902 or equivalent.

6.13.1.3 The analytical column is a Restek Raptor C18 part no. 9304252 50mm x 2.1 mm ID, 1.8 u particle size or equivalent

6.13.2 Agilent LC/MS-MS- Agilent 6470AAR/6460C

6.14.2.1 Agilent model 6470AAR/6460C triple Quadrupole system with Agilent Jet Stream ESI source. UHP nitrogen is used as cell gas and High purity nitrogen is delivered for the sheath gas from a Peak Scientific nitrogen generator system.

6.14 Vortex Mixer- Benchmark Industries or equivalent

6.15 Variable Speed shaker table, 18" x 12"- Orbital Shaker- Jiangau Tenlin Instr. Co., Ltd., Model no. TLSK-III 20-230 RPM, 0-999 min, or equivalent

6.16 Centrifuge, 50 mL, Premiere Model XC-2450 Series Centrifuge 6 x 50 mL, 3500 RPM max., or equivalent

6.17 Mechanical Pipettors- 10-100 uL; 100-1000 uL; 1000-5000 uL-4 E'S Scientific or equivalent, calibrated quarterly.

6.18 Vortex Mixer- Benchmark Industries or equivalent

6.19 pH paper, short range 6-8 and full range with 0.5 pH readability- VWR Scientific or equivalent

6.20 15 mL PP or HDPE Centrifuge tubes, Corning Part no. 430791

6.21 3 mL Disposable Transfer pipets, PE, VWR part no. 16001-176

6.22 1.0 mL polypropylene snap cap vials, Agilent part no. 5182-0567

6.23 Snap caps, polypropylene, 11 mm, 11/9k, Agilent Part no. 5182-0542

6.24 2mL self standing PP microcentrifuge snap cap tubes, SKS Scientific part no. 0747-17

6.25 Collection tubes, 15 mL graduated PP or HDPE Centrifuge tubes, Corning Part no. 430791
6.26 Disposable 10 mg scoops, PP
6.27 Ultrasonic mixer
6.28 10 mL disposable syringes, PP or HDPE, luer fitting
6.29 13mm or 25 mm 0.2 um Nylon membrane filters, PALL Acrodisc or equivalent

7. REAGENTS AND STANDARDS-as listed or equivalents

7.1 ALL REAGENTS and STANDARDS MUST BE LOGGED INTO THE ELEMENT LIMS SYSTEM. This includes lot numbers, expiration, open and prepared dates, receipt date, Certification/traceability documents from supplier(s) if provided and preparer.

7.2 SOLVENTS and REAGENTS-all as listed or equivalents

7.2.1 Methanol, hypergrade for LC/MS. (Merck) from Sigma Aldrich Part no. 1060354000 or equivalent (HPLC Plus grade is an acceptable alternate)

7.2.2 Water, hypergrade for LC/MS. (Merck) from Sigma Aldrich Part no. 1153334000 or equivalent (HPLC plus grade is an acceptable alternate). Alternatively, York PFAS free water demonstrated ion and PFAS free can be used.

7.2.3 Acetic Acid, glacial. ACS grade or equivalent.

7.2.4 Ammonium Hydroxide, conc. Cert. ACS grade, 28-30% in water, Sigma Aldrich part no.1054231000, or equivalent

7.2.5 Methanolic Potassium Hydroxide (0.05 M) – add 3.3 g of KOH to 1L MeOH

7.2.6 Sodium Hydroxide, pellets, ACS grade- Sigma Aldrich part no. 221465-500G, or equivalent

7.2.7 Potassium Hydroxide, pellets, ACS grade

7.2.8 Ammonium Acetate – ACS grade or better, Ammonium Acetate, HPLC or cert. ACS grade. Sigma Aldrich Part no. 73594-100-G-F or equivalent.

7.2.9 Ammonium Acetate 5 mM for HPLC in aqueous solution: HPLC gradient A-- Weigh 0.3854 g (+ 0.0005) Ammonium Acetate and add to 1 liter hypergrade Water. Mix until dissolved then sonicate for 5 mins. To remove air bubbles. Stability - 2 weeks.

7.2.10 **Methanolic Ammonium Hydroxide 0.3 %** - take 2.5 mL of conc. ammonium hydroxide into 247 mL MeOH (measure the 247 mL in a PP graduated cylinder-they are under QQ1 somewhere). Use a mechanical pipet to add the 2.5 mL (not strictly quantitative FYI)-**Make 4 bottles of this**. *Used for soil extractions*.- 1 month life

7.2.11 **Methanolic Ammonium Hydroxide 1.0 %** - take 8.25 mL of conc. ammonium hydroxide into 242 mL MeOH (measure the 242 mL in a PP graduated cylinder-they are under QQ1 somewhere). Use a mechanical pipet to add the 8.25 mL (not strictly quantitative FYI)- **Make 4 bottles of this -***used in Promochrom-*1 month life.

7.2.12 **Aqueous Ammonium Hydroxide 3%-** take 24.8 mL of ammonium hydroxide and add to 242 mL PFAS free water. 3 month life- *used for pH adjustment*

7.2.13 **Methanol with 4% water, 1% ammonium hydroxide and 0.625% acetic acid** – add ammonium hydroxide (3.3 mL, 30%), reagent water (1.7 mL) and acetic acid (0.625 mL) to methanol (92 mL), store at room temperature, replace after 1 month. **This solution is used to prepare the instrument blank, calibration stds and is used to dilute the extracts of samples that exceed the calibration range.**

7.2.14 **Formic Acid 0.1M-aqueous** – add 873 uL formic acid into 250 mL PFAS free water- **Make 2 bottles of this-***used to prepare 7 below.* 2 year life

7.2.15 **Formic Acid, 0.3M**-aqueous- add 2.62 mL (2619 uL) into 250 mL PFAS free water- **Make 4 bottles of this -***used in Promochrom-*2 year life

7.2.16 **Formic Acid methanolic 1:1, 0.1M formic acid**- mix equal volumes of Methanol and 0.1 M formic acid- **Make 4 bottles of this -***used in Promochrom-*2 year life

7.2.17 **Formic Acid 5% aqueous**- add 12.5 mL Formic acid into 250 mL PFAS free water. *Used for pH adjustment.* 2 year life

7.3 Stock Standards

Stock Standards are purchased in mid to high concentration levels from Wellington Laboratories, Inc. Guelph, ONT, CA. Currently, Wellington is the preferred supplier of these materials. As a second source verification, prepare a mid-level from the stock independently from the preparation used for initial calibration. Document this preparation in Element. See Attachments 1,2, and 3 for detailed information.

7.3.1 Internal Standards (7-Non-Extracted –NIS)) used for the method are MPFOA, MPFOS, M3PFBA, MPFDA, MPFHxA, MPFHxS and MPFNA.

These are purchased at 250 - 1000 ng/mL depending upon the ISTD in a mixture. This mixture is purchased from Wellington Labs in 1.2 mL volumes with the following **part no.: MPFAC-HIF-IS**. Stored at 4C or less unopened this solution has a 5 year life. Once opened, the life is one year from open date.

7.3.2 Isotopic Surrogate Analogs (24 isotopes) are purchased for the method described from Wellington Labs at 250-5000 ng/mL levels, depending upon the isotope. The part no. is **MPFAC-HIF-ES**.

7.3.3 Stock Standard mixtures of both linear and branched isomers of the EPA 1633 - 40 list are purchased from Wellington Labs at varying concentrations in 5 different mixtures under part nos. PFAC-MXJ, PFAS-MXI, PFAC-MXH, PFAC-MXG, PFAC-MXF.

7.3.4 Qualitative branched isomers mix- individual available branched and linear mixes for the following PFAS are used daily to allow for qualitative knowledge of the PFAS branched isomers so they are integrated/included in quantitative analysis: T-PFOA, lp-PFNA, br-FOSA, br-NEtFOSA, br-NMeFOSA, br-NEtFOSE and br-NMeFOSE. These are purchased at 50,000 ng/mL levels from Wellington Labs-the names above are the Catalogue nos. These have a five year life at stock concentrations.

Make a 100 ng/mL Intermediate mix by adding 2.0 uL of the individual stocks up to 1.0 mL with MeOH.

Make a working solution by taking 200 uL of the 100 ng/mL intermediate into 750 uL of cal matrix solution (7.2.13) and add 50 uL of 1:10 EIS mix.

Transfer 300 uL to an autosampler vials, add 3 uL of ISTD working mix, cap, vortex and store until needed. Life is 1 year.

The summary below details the procurement requirements for this method - All from Wellington Laboratories, Inc.:

Description	Part nos.	Comes in
40 Compound Target 1633 list targets	PFAC-MXJ PFAS-MXI PFAC-MXH PFAC-MXG PFAC-MXF	4 Days – 1.2 mL
Isotopic Surrogates-24	MPFAC-HIF-ES	4 Days – 1.2 mL
EPA 1633 - 7 Internal Stds	MPFAC-HIF-IS	4 Days – 1.2 mL

7.4 Preparation of Standards

7.4.1 Preparation of Working Standards and Intermediates from STOCK Materials

All stock standards are prepared by the vendor in methanol containing a bit of sodium hydroxide to prevent losses of target PFAS compounds due to potential esterification in methanolic solution. The stocks come prepared with 4 molar equivalents (a 3x excess) of sodium hydroxide for stocks at the 50 ug/mL levels. This insures their stability with respect to potential loss due to esterification. The basic solution insures that any acidic sites on the glass ampules or acidic impurities in the methanol are neutralized to prevent ester formation and forms the sodium salt of the PFAS to stabilize it.

When preparing any intermediate level standards, the dilution must be prepared in alkaline methanol to prevent the above from occurring.

In order to do this, prepare a 5.0 mM NaOH in Hypergrade Methanol (or LC/MSMS grade) by dissolving 0.02 g. of sodium hydroxide into 100 mL of MeOH. This has a 2 week life.

For intermediate standards that are made to 10 mL final volume, add 100 uL of 5.0 mM NaOH/MeOH as part of the preparation. This results in a final concentration of NaOH at 0.05 mM.

For intermediate standards prepared to a final volume of 1.0 mL. add 10 uL of the 5.0 mM NaOH/MeOH.

For working calibration standards/CCV/SCV made to 500 uL final volume, using the mixture detailed in section 7.1.13 (MeOH/Water/acetic acid/ammonium hydroxide). This approximates the matrix of the final extracts for analysis.

7.4.2 Storage and Handling of Standards

All working standards should be stored at either room temperature or 4C provided the containers are sealed properly.

Stock Standards may be stored at 4-10 deg. C but before using must sit to allow equilibration to room temperature followed by either vigorous vortex mixing or sonication for 3-5 mins.

7.4.3 Detailed Standards Preparation Procedure-EPA 1633

7.4.4 Internal Standards-*See Attachment 1*

Internal Standards are purchased as a **stock mixture** at 250-1000 ng/mL

These as transferred to a snap cap vial that has been pre-rinsed with 5 mM NaOH/MeOH then allowed to dry.

7.4.4.1 Working level of Non-Extracted Internal Standard (NIS) –make a 1:1 dilution of the stock by taking 500 uL of the Stock and adding 500 uL MeOH.

Use as is by adding 3 uL to 300 uL volumes for QC, samples or calibration.

7.4.5 Isotopic Surrogates (Extracted Internal Standards)- *See Attachment 2*

7.4.5.1 Stock Surrogates are purchased as a mixture at 250-5000 ng/mL. These are transferred to a snap cap vial that has been pre-rinsed with 5 mM NaOH/MeOH then allowed to dry.

Option 1- Use Stock as received and add 25 uL to all samples/QC to be extracted

Option 2- Prepare **2** mL of Working EIS by preparing a 1:2 dilution to yield 125-2500 ng/mL for use as follows:
Take 1000 uL of the Surrogate Stock, plus 25 uL of 5 mM NaOH/MeOH and 975 uL MeOH to give 2.0 mL final volume**. 50 uL are added to ALL preparation blanks, samples and QC**. This is sufficient for approx. 40 x 50 uL additions to all blanks, QC and samples.

This corresponds to adding 5 to 100 ng of EIS compounds to the initial samples and QC. The final volume of extractions will typically be 5.0 ml so this yields 1-20 ng/mL of the isotope EISs in the final extract for analysis.

For calibration, the Stock mix at 250-5000 ng/mL is used by adding 100 uL up to 1.0 mL final volume to yield 25/500 ng/mL in each calibration level as directed in the calibration section 7.4.7.1.

7.4.6 Target Analytes- EPA 1633- *See Attachment 3*

The target analytes for this method are purchased commercially from Wellington Labs under the 5 part nos. described in Section 7.3.3 which contains the method target analytes only at varying concentrations. These mixtures are transferred from their glass ampules to snap cap vials that have been pre-rinsed with 5 mM NaOH/MeOH then allowed to dry. Again these are the nominal concentrations and the actual anion concentrations for those present as salts are listed in the documentation and are reflected in both Mass Hunter and Element.

Preparation of a 1.0 mL volume of a 10 x intermediate of each of the 5 mixes for Calibration. Some of the higher levels on the curve use aliquots of the stock as shown in Figure 2.

Scale the volume accordingly if less is desired. Note that the EPA 1633 mixes come 1.2 mL per vial so this recipe may consume one vial quickly.

7.4.6.1 OPR and LLOPR - these are a mid-level blank spike and low level blank spike (at 2x the LOQ). These are prepared as follows from the EPA 1633 Target mixtures (5 components) by taking 200 uL of each STOCK into a snap cap vial giving 1.0 mL final volume.

1. Element ID Y22B199- PFAC-MXF mix 200 uL
2. Element ID Y22B200- PFAC-MXG mix 200 uL
3. Element ID Y22B201- PFAC-MXH mix 200 uL
4. Element ID Y22B204- PFAC-MXI mix 200 uL
5. Element ID Y22B205- PFAC-MXJ mix 200 uL

For OPR (BS) at mid-level add 100 uL to each matrix for the batch OPR and for the **LLOPR add 20 uL** of the spike mix and process through all steps of the specific matrix preparation.

7.4.7 Calibration

Calibration of the LC-MSMS systems is done by an eight level calibration covering the range 0.2 to 1650 ng/mL, nominal. Various PFAS species are present as salts and at differing concentrations and these are reflected in Mass Hunter and Element as their actual concentrations. Six to eight levels are prepared depending upon the analyte. These levels are prepared as directed below using the internal standards, surrogates and target analytes from above.
This is made to a final volume of 1000 uL in the matrix described in section 7.1.13 (MeOH/Water/acetic acid/ammonium hydroxide)

This preparation excludes the ISTD in the initial preparation. After preparation as directed, withdraw 300 uL of each level into a 500 uL PP vial and add 3 uL of ISTD before analysis, cap and vortex to mix.
These are stored at <10C and are stable for 6 months when prepared as directed.

7.4.7.1 Calibration Curve Preparation - Based upon a final volume of 1.0 mL in CAL Matrix Solution*
See Attachment 4 for details.

EPA 1633 Calibration Standard Preparation
Rev 1.,0 10/03/22

For Final volume of 1.0 mL
Recipe uses both a 1:10 intermediate for some levels AND the Stock for other points as indicated
All standards in Stds refrig. Adjacent to QQQ1 N2 generator in box labeled EPA 1633 standards- all are opened, labeled and good to use.

Level	*Stock: Y22B201* **1633 MXH Targets Intermediate @10x *** uL of MXH 10x Interm.	*Stock: Y22B200* **1633 MXG Targets Intermediate at 10x*** ul of MXG interm.	*Stock: Y22B199* **1633 MXF Targets Intermediate at 10x*** ul of MXF interm.	*Stock: Y22B204* **1633 MXI Targets Intermediate at 10x*** ul of MXI interm.	*Stock: Y22B205* **1633 MXJ Targets Intermediate at 10x*** ul of MXJ interm.	*Stock: Y22B198* **1633 EIS isotope Mix Intermediate at 10x** uL of EIS Interm.
1	2	2	4	2	2.5	50
2	5	5	10	5	6.25	50
3	12.5	12.5	25	12.5	15.6	50
4	25	25	50	25	31.3	50
5	50	50	100	50	62.5	50
6	125	125	250	125	15.6 of Stock	50
7	25 of Stock	25 of Stock	50 of Stock	25 of Stock	31.2 of Stock	50
8	62.5 of STOCK	62.5 of STOCK	125 of STOCK	62.5 of STOCK	78.0 of Stock	50

* 100 uL up to 1 mL in MeOH

*CAL MATRIX: Methanol with 4% water, 1% ammonium hydroxide and 0.625% acetic acid – Prepared by adding ammonium hydroxide (3.3 mL, 30%), reagent water (1.7 mL) and acetic acid (0.625 mL) to methanol (92 mL), store at room temperature, replace after 1 month. This solution is used to prepare the instrument blank and is used to dilute the extracts of samples that exceed the calibration range.

Amount of CAL Matrix to make up to 1.0 mL Final volumes:

CAL LEVEL	uL of CAL Matrix
1	937.5
2	918.8
3	871.9
4 *	793.7
5	637.5
6	309.0
7	843.8
8	609.5

INTERNAL STANDARD MIX (non-extracted IS-NIS). Mix 500 uL of STOCK ISTD at 250-1000 ng/mL with 500 uL of Methanol. This results in 125-500 ng/mL Intermediate ISTD. See 7.4.4.1.

Add 3.0 uL to 300 uL of each level 1-8 in a 500 uL PP autosampler vials and cap with polyolefin cap, vortex to mix and run. Add 3 uL to 300 uL of all sample/QC extracts before analysis.

*Level 4 is also used as the CCV for each analysis sequence run initially, then after every 10 samples and at the end of the sequence. Multiple vials should be prepared for this level.

7.4.8 Checking the Efficacy of the Surrogate/Spike Mixes

On a monthly basis the surrogate (EIS) and spike mixes from the vials used for spiking are assayed to ensure stability. These are prepared for the analysis by taking 3.0 uL of the surrogate (EIS) mix and 3 uL of the Spike mix into 294 uL MeOH/Water/Acetic Acid/Ammonium hydroxide from 7.1.13, then add 3 uL of NIS (ISTD). This yields a 1:100 dilution of the EIS and Spike mixes. Use 100 as the dilution factor in the Mass Hunter worklist.

7.4.9 Second Source - Initial Calibration Verification (ICV)

Currently, the EPA method 1633 does not require a second source ICV. Rather, the initial calibration is verified by preparing a Level 5 -5.0 ng/mL (nominal) calibration standard independently from calibration standard preparation. This serves as the ICV.

8. PROCEDURE

8.1 Preventative and Routine Maintenance

HPLC/MS/MS Preventative Maintenance	
As Needed: Change pump seals. Change in-line filters in autosampler (HPLC). Check/replace in-line frit if excessive pressure or poor performance. Replace column if no change following in-line frit change. Clean needle. Replace or clean Capillary Replace fused silica tube in ESI interface. Clean lenses. Clean skimmer. Ballast rough pump 30 minutes. Check Nozzle flow pattern	**Daily (When in use)** Check solvent reservoirs for sufficient level of solvent. Verify that pump is primed, operating pulse free. (ripple < 1%) Check needle wash reservoir for sufficient solvent. Verify capillary heater temperature functioning. Verify vaporizer heater temperature. Verify rough pump oil levels. Verify turbo-pump functioning. Verify nitrogen pressure for auxiliary and sheath gasses. Possible Checktune
Semi-Annually Replace oil mist and odor elements. Replace activated alumina filter if applicable	**Annually** Vacuum system components including fans and fan covers. Clean/replace fan filters, if applicable.

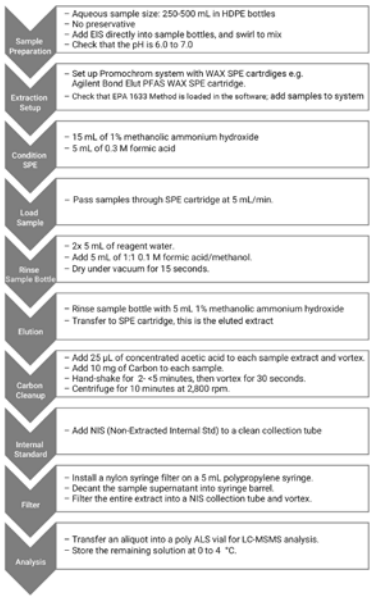
8.2 Sample Preparation (Extraction, Clean-up and Concentration)- Aqueous Matrices

A summary of the steps for the steps related to aqueous samples are shown in Figure 1.0 and in the summary below.

1. Determine % Suspended Solids – 10.0 mLs $\pm$ 0.02 mL through a tared 0.2 um PP filter. Dry filter $\geq$ 12 hours @ 105C, cool in dessicator. Calc % TSS
2. Check pH with short range pH paper to insure pH = 6.5 $\pm$ 0.5. Adjust if necessary with either 5% aqueous formic acid to lower pH or with 3% aqueous ammonium hydroxide to raise pH.
3. Weigh sample bottle as is to $\pm$ 0.1 g.-remove cap first since that will not be weighed later since autosampler caps are used
4. Homogenize sample by inversion 3-4 x-place full volume on Promochrom System using WAX SPE cartridges.

5. Set up MBLK, OPR at 2x LOQ (low LCS) and mid-level OPR (mid-level LCS)-spike with 10 uL of Spike mix for LLOPR and 100 uL of spike mix for mid-OPR.
6. Spike all with 25 uL EIS solution (isotopic surrogates)
7. Follow Promochrom method for EPA 1633
8. Initiate SPE program EPA1633AQ on the Promochrom system
9. Once the program is finished there will be 5 ml in the collection tube. If less, make up to exactly 5.0 mL with MeOH.
10. Remove the sample bottle from the Promochrom system and weigh the empty bottle. That will determine the weight (volume for water) assume 1g. = 1.0 mL. Enter this value into the element bench sheet and the initial volume.
11. Add 25 uL of concentrated acetic acid to each collection tube and vortex to mix.
12. Add 10 mg of activated carbon to all samples and QC. Hand mix and vortex mix for no more than 2 minutes
13. Centrifuge at 2800 rpm for approx. 10 minutes.
14. Filter the final volume through 0.2 um nylon filter using a syringe.
15. If the client provides only 250 mL of sample, in order to meet reporting limits, it may be required to concentrate the unfiltered extract by a factor of at least 2 on a TurboVap at 1.2 Liters/min with nitrogen at <55ºC.. For example if final volume is 5.0 mL, concentrate to 2.0 mL final volume (2.5 x concentration). If 500 ml provided, skip this step.
16. Enter the final volume achieved into the bench sheet in Element.
17. Transfer a portion of the final extract to a 2 mL snap cap, labeled.
18. Take a 300 uL portion of the extract into a 500 uL PP autosampler vial, add 3 uL of NIS (non-extracted internal std.). Cap, vortex, store at <6ºC.
19. Sample is ready for analysis.

Figure 1.0 Aqueous Sample Preparation Steps



8.2.1 To measure sample initial volume for aqueous samples, remove the cap and weight the bottle and record the weight in the sample weight. For MBLK, LLOPR and OPR use 250-500 mL volumes). After SPE processing, be sure the empty bottle is dry and weight to determine the amount of sample in grams (essentially equal to volume in mL). Use that number for the initial volume in Element LIMS.

8.2.2 For every 20 field samples (Field blanks are considered field samples in as they are treated as such), a blank (MBLK), blank spikes, (2 levels-LLOPR and OPR as BS1 and BS2 respectively. A matrix spike is not necessary since isotope dilution is used. If an MS/MSD is required by a specific project, spike 100 uL of the mid-level BS mix (OPR).

8.2.3 All polypropylene equipment including graduated cylinders and sample transfer lines/reservoirs should be washed prior to using with extraction solvent (Methanol).

8.2.4 Add 25 uL of EIS (isotopic surrogates) (250/5000 ng/mL) to each sample and QC sample, recap and invert to mix well.

8.2.5 Add, 5ul (low level spike), 50 uL (mid-level spike)

8.2.6 Using the Promochrom automated system, run a cleaning run. Be sure the reservoirs of LC/MS grade methanol and HPLC plus grade water or equivalent are full. Prime all lines and align all components.

8.2.7. Load in the EPA1633 method and adjust the sample volume to 10 ml more than the highest volume container measured by visual comparison to a calibrated bottle of the same size.

8.2.8 The SPE method solvents for extractions are as follows:

- Solvent 1 = MeOH
- Solvent 2 = H_2O
- Solvent 3 = 0.3 M Formic acid,
- Solvent 4 = 1:1 0.1M Formic Acid/MeOH,
- Solvent 5 = MeOH with 1% ammonium hydroxide ("Basic MeOH")
  W1 = Aqueous waste, W2 = Organic waste

8.2.9 Place labeled 15 mL graduated collection vessels in the sample collection tray and use Element labels to identify the vials at this point. Print 2 sets of labels for each since they will be used after the concentration step as well. These are graduated.

8.2.10 Connect the bottles to the automated system.

8.2.12 Initiate the EPA1633Aq SPE Extraction Program. Each run is approximately 1 hour 45 minutes.

8.2.13 **Evaporation Options**-Aqueous Samples

N-EVAP systems

8.2.13.1 The resulting 5 mL extracts are not further concentrated unless Work Plan reporting limits need to be lower than standard RLs. When this is required by the Work Plan, the extracts and QC are transferred to the N-EVAP concentrator systems operated at 50-55 degrees C (never more than 55C) in their original collection vials. The nitrogen flow is initiated at 1.2 ml/min and adjusted on each individual sample to provide a gentle stream causing a slight disturbance at the surface of the methanol extracts.

8.2.13.2 As this evaporation proceeds the walls of each vessel are rinsed with methanol when the volume is approximately 2.5 mls and then again when the volume is reduced to just below 2.0 mL. Then Bring up the final volume to 2.5 mL. This is a 2x concentration when needed.

8.2.14 Swirl final extract, make up to 2.0 mL with methanol. Using a disposable polypropylene pipet, carefully transfer to a 2 mL PP snap cap vial.

8.2.15 Withdraw an aliquot of 300 uL into a 500 uL autosampler vial (PP) and add 3.0 uL of ISTD (NIS) mix. .

8.2.16 Cap with polyolefin flexible caps and vortex to mix.

8.2.17 Store Extracts at <6ºC until analysis.

8.3 Sample Preparation (Extraction, Clean-up and Concentration)- Soil Matrices

1. Determine % solids: use 5 grams; dry at 110C $\geq$ 12 hours.
2. Mix sample with a stainless steel spatula to homogenize-exclude Sticks, vegetation, rocks and the like.
3. Remove 5.0 g. from the homogenized sample container. Add to a tared 50 mL centrifuge tube. Determine the weight $\pm$ 0.01 g.
4. Prepare QC using clean matrix (Ottawa Sand) wetted with 1 mL PFAS free water in 50 mL centrifuge tubes
5. For all samples, QC blanks and LCSs (LLOPR and ML OPR) and a 25 uL aliquot of EIS onto the soil. The current Element standard ID is Y22J305. For the OPRs add appropriate amount of spike solution (10 uL for LLOPR and 100 uL for OPR. The current Element Std ID is Y22J304.
6. Swirl the samples to mix then let sit for 30 minutes.
7. Add 10 mL of 0.3% methanolic ammonium hydroxide to each centrifuge tube.
8. Vortex to mix then shake on the shaker table for 30 minutes.
9. Next, centrifuge at 3500 rpm for 5 minutes or 2800 rpm for 10 minutes.
10. Transfer the supernatant liquid to a clean 50 mL centrifuge tube
11. Add 15 mL of 0.3% methanolic ammonium hydroxide to each of the original centrifuge tubes.
12. Vortex to mix then shake on the shaker table for 30 minutes
13. Next, centrifuge at 3500 rpm for 5 minutes or 2800 rpm for 10 minutes.
14. Transfer the supernatant liquid to the centrifuge tubes from 10.0 above
15. Add another 5 mL of 0.3% methanolic ammonium hydroxide to each of the original centrifuge tubes.
16. Vortex to mix then shake on shaker table for 30 minutes
17. Next, centrifuge at 3500 rpm for 5 minutes or 2800 rpm for 10 minutes.
18. Transfer the supernatant liquid to the centrifuge tubes from 10.0 above
19. Add 10 mg of activated carbon to the combined extract using a 10 mg scoop and hand swirl for 2 minutes (never more than 5 minutes of losses of Target PFAS will occur)
20. Centrifuge at 3500 rpm for 5 minutes or 2800 rpm for 10 minutes
21. Immediately Decant into a 50 mL centrifuge tube.
22. Place in Turbovap or on the N-EVAP system and concentrate at 55 deg. C to a final volume of approx..7 mL at a nitrogen flow of 1.2 ml/min.
23. Add 35-40 mL of PFAS free water to the tube and vortex to mix.
24. Check the pH= 6.5 $\pm$ 0.5 if not adjust accordingly using 5% formic acid to lower pH or 3% aqueous ammonium hydroxide to raise pH rto within this range.

25. Set up the soil EPA 1633 method on the Promochrom be sure volume is set to 50 ml for sample size.
26. Place samples and QC centrifuge tubes on the autosampler
27. Once the program is finished, note the final volume and use that in the Element benchsheet as final volume. Should be 5.0 mL. If less make up to 5.0 mL with MeOH.
28. Add 25 uL of concentrated acetic acid to each collection tube and vortex to mix.
29. Add 10 mg of carbon to all samples and QC and mix for 2 minutes (no more than 5 minutes).
30. Immediately centrifuge at 2800 rpm for 10 minutes.
31. Filter the extract through a 0.2 um nylon membrane using a syringe and filter into a 2 mL snap cap vial.
32. When ready for analysis, remove 300 uL of extract and transfer to a 500 uL autosampler vial. Add 3 uL of NIS (internal standard), vortex to mix. Cap with polyolefin flexible caps and vortex to mix.
33. Store Extracts at <6ºC until analysis
34. Samples/QC are now ready for analysis.

8.4 Sample Analysis--Running Samples/QC - Acquisition Method

The acquisition method is detailed in Attachment 4 (HPLC) and Attachment 5 (MS/MS) of this SOP. The method is a HPLC with dynamic MRM method with precursor and product ions with specific acquisition parameters to maximize sensitivity and specificity. This list may be modified to add other PFAS target analytes as necessary.

8.3.1 The triple Quadrupole (QQQ) system must be optimized for each target analyte (including surrogates and internal standards) using the Mass Hunter Optimizer program. This program determines the most abundant precursor and product ions for each compound and their abundances. These data are then used to build an MRM (multiple reaction monitor) method for acquisition. This is done initially or after any major maintenance procedures are performed to the triple quadrupole system. A high level standard is used for this in the $[M-H]^-$ mode or M-COOH for HFPO-DA.

8.3.2 The QQQ is checked for tuning on a weekly basis (if necessary) before analysis using the Tune context by selecting the CHECKTUNE radio button. This is done only in negative ion mode since that what we are operating under. If the Checktune fails, run the Autotune program-note: this takes approx. 45 mins. in negative mode. After autotune or any tuning adjustment, a re-calibration of the instrument is required.

8.3.3 Before any QC or samples can be run, the HPLC must be allowed to purge for at least thirty minutes. This purge must be done using the initial mobile phase conditions used in the method must be allowed to run for 15 minutes or until pressure has stabilized (ripple must be < 1%)

8.3.4 An instrument sequence (Worklist) is then made. It should begin with a blank, a primer (5 ng/mL) followed by a blank with ISTD to establish system cleanliness.

8.3.5 After a successful initial calibration has been completed, the analytical sequence for a batch of samples analyzed during the same time period is as follows. Standards and sample extracts must be brought to room temperature and vortexed prior to aliquoting into an instrument vial in order to ensure homogeneity of the extract.

8.3.6 **Analysis Sequence**

1. Instrument Blank *
2. Instrument Sensitivity Check –**LOQ Standard Level (SEQ-CAL 1) S/N > 3:1**
3. Calibration Verification Standard (CCV)
4. Qualitative Identification Standards –Branched PFAS
   PFOA, PFNA, PFOSA, NMeFOSA, NEtFOSA, NEtFOSE, and NMeFOSE.
5. Instrument Blank (SEQ-CCB)*
6. Method Blank (Batchxxxx-BLK1)
7. Low-level OPR (LLOPR) (Batchxxxx-BS1)
8. OPR (Batchxxxx-BS2)
9. Field Samples (10 or fewer)
10. Calibration Verification Standard (SEQ-CCVn)
11. Instrument Blank (SEQ-CCBn)*
12. Field Samples (10 or fewer)
13. Calibration Verification Standard (SEQ-CCVn)
14. Instrument Blank (SEQ-CCBn)*

* Contains solvent system for calibration, NIS and EIS

8.3.7 The run can end with a script to put the instrument into standby mode.

8.4 Daily Sample Preparation/Analysis Sequence

- Prepare extracts for analysis by placing a 300 ul aliquot of sample extract containing 3 uL of internal standards into a PP auto-sampler vial. Apply Polyolefin cap.
- Confirm that the samples loaded on the auto-sampler were entered correctly in the injection log. Make any necessary corrections.
- Run instrument CCV checks at the RL (0.25-0.5 ng/mL), then at a mid level and high level rotating every ten samples (5, 25 ng/mL) and ending with a mid level CCV.
- Enter the Worklist (injection sequence) into the instrument software and load samples onto the auto-sampler in the order shown above in Section 8.3.6

8.5 Data Review

The Agilent Mass Hunter Quantitation program is used to review all data. All identifications are based upon acceptable ion ratios for the abundance of both precursor and product ions along with retention time information. All positive detections of target PFAS must be less that the high point conc. of the Cal. Curve.

8.5.1 Since certain PFAS species are manufactured by different processes the presence of branched as well as linear isomers may be found. In order to properly quantitate these species, the analyst must sum the related branched and linear isomers. This affects the following species: PFOS, PFHxS, PFOA, PFNA, PFOSA, NMeFOSA, NEtFOSA, NEtFOSE, and NMeFOSE.

8.5.2 Any detection greater than the upper limit of the calibration curve requires dilution into the upper half of the curve, where possible.

9. CALIBRATION

9.1 Initial Calibration

The initial calibration covers the range 0.20 ng/mL to 1560 ng/mL nominal conc. or higher depending upon the linearity of the PFAS species. After acquisition, the data are quantitated in Mass Hunter and the default calibration model for target compounds is generated using Quadratic regression, FORCED through the origin where applicable. All same level species (EIS) used average response factor model. Depending upon the response and accuracy at each level as shown in the Mass Hunter program, use Linear, Forced, weighted (1/x) or quadratic, Forced, with or without weighting to achieve the best fit which is based upon the best accuracy on a compound by compound basis. In any case, the correlation coefficient must be greater than 0.990. Average response factor RSD should be $\leq$ 20% where used.

9.1.1 The calibration levels as shown in Section 7.6.3 use 8 levels. All points are included in the calibration with exception of some species that saturate at levels 7 and 8.

9.2 ICV/SCV

An independently prepared Initial Calibration Verification must be run immediately following initial calibration. The concentration of this standard should be in the middle of the calibration range (e.g. 5.0 ng/mL) and prepared from a separate preparation as that of the calibration. Unless project-specific data quality objectives are required, the values from the second-source check should be $\pm$ 30% of the expected concentration.

Corrective Action: Quantitative sample analyses should not proceed for a failing ICV. Recalibrate and re-run the ICV if necessary.

9.3 Continuing Calibration Verification

The first CCV is at a mid-level and run every 10 client samples including a closing CCV.

The mid-Level CCV must be ± 30% of the true value.

Corrective Action: If any of the required calibration check criteria fail, the system must be evaluated and any appropriate instrument repair or maintenance must be performed. Sample data are unacceptable and must be rerun. Reinjection the standard may be done. If the calibration check standard still fails, the system must be recalibrated.

10. Quality Control

10.1 Initial Demonstration of Capability (IDOC)

10.1.1 The initial demonstration requirement of EPA 1633 must be acceptable before analysis of samples may begin. To establish the ability to generate acceptable precision and recovery, the laboratory must perform the following operations for each sample matrix type to which the method will be applied by that laboratory.

The IDOC includes the following key elements:

- Initial Demonstration of Precision and Recovery (IPR)
- MDL determination

10.1.2 Initial Demonstration of Precision and Recovery-IPR

- Extract, concentrate, and analyze four aliquots of aqueous and soil matrices spiked with 100 uL of the native spike solution OPR Mix Y22J304, 50 µL of the EIS solution no. Y22J305. At least one method blank, matching the matrix being analyzed, must be prepared with the IPR batches by matrix. All sample processing steps that are used for processing samples, including preparation and extractions, cleanup and concentration, must be included in this test.

- Using results of the set of four analyses, compute the average percent recovery (R) of the extracts and the relative standard deviation (RSD) of the concentration for each target and EIS compound.
- For each native and isotopically labeled compound, compare RSD and % recovery with the corresponding limits for initial precision and recovery in Table 5. If RSD and R for all compounds meet the acceptance criteria, system performance is acceptable, and analysis of blanks and samples may begin. *Note these acceptance criteria are not finalized and are based upon a single lab validation. Data for this table are derived from the single-laboratory validation study, and are only provided as examples for this draft method. The data will be updated to reflect the inter-laboratory study results in a subsequent revision. Therefore, these criteria will change after inter-laboratory validation. Several sections of this method state that Table 5 criteria are required, this is standard language that will be applicable when the method is finalized.*

10.1.3 MDL Determination

MDL Determination –In order to perform the MDL study, 7 total extractions are performed on 3 different days (Extraction day 1= 3 LRBs and 3 LFBs); Extraction day 2 is 2 of each, and Extraction day 3 is also 2 of each).

The levels extracted represent approx. 3-5 x the expected LOQ.

Once extracted, the analyses are conducted on 3 separate days (we use only QQQ2 for EPA 1633 so all runs are on that system). The MDL is determined according to the EPA MDL protocol defined in Definition and Procedure of the Determination of the Method Detection Limit, Revision 2 Dec. 2016 as detailed below:

Make all computations as specified in the analytical method and express the final results in the method-specified reporting units.

Calculate the sample standard deviation (SD) of the replicate spiked sample measurements and the sample standard deviation of the replicate method blank measurements from all instruments to which the MDL will be applied.

Compute the MDLs (the MDL based on spiked samples) as follows:

MDL_s = 3.143 x SD (for seven replicates; SD = Standard Deviation)

Compute the MDLb (MDL based on method blanks-LRBs) as follows:

- If none of the blanks give numerical results then the MDLb does not apply
- If only some of the blanks (but not all) give a result, set the MDLb to the highest result found

- If ALL method blanks show a detections then use the following calculation to determine MDLb:

MDLb = Average of Blank Detections + (3.143 x Std. Dev.)

Calculate the final MDL by selecting the greater of MDLs or MDLb.

10.2 On-going QC Requirements

Preparation Batches are defined at the sample preparation step. Batches should be kept together through the whole analytical process as far as possible, but it is not mandatory to analyze prepared extracts on the same instrument or in the same sequence.

The quality control batch is a set of up to 20 samples of the same matrix processed using the same procedure and reagents within the same time period. The quality control batch may contain a matrix spike/matrix spike duplicate (MS/MSD), two laboratory control sample (LCS-LLOPR and OPR) and a method blank. Laboratory generated QC samples (Blank, LLOPR, OPR, MS/MSD) do not count toward the maximum 20 samples in a batch. Field QC samples are included in the batch count. In some cases, at client request, the MS/MSD may be replaced with a matrix spike and sample duplicate.

10.2.1 METHOD BLANK - One method blank must be extracted with every prep batch of similar matrix, not to exceed twenty (20) samples. For aqueous samples the matrix is Lab reagent water. For Soils the method blank matrix is Ottawa sand. Criteria:

- The method blank must not contain any analyte at or above 1/2 the LOQ (Reporting Limit).
- Re-extraction and reanalysis of samples associated with an unacceptable method blank is required when reportable concentrations are determined in the samples.

10.2.2 LABORATORY CONTROL SAMPLES (LCS- also called OPR and LLOPR) must be extracted with every process batch of similar matrix, not to exceed twenty (20) samples. The LCS is an aliquot of laboratory matrix (e.g. water for aqueous spiked with analytes of known identity and concentration and isotopic surrogate analogs. The OPRs must be processed in the same manner and at the same time as the associated samples. Recovery for Aqueous low level OPR target analytes is 40-150% until more data are derived. For all other Aqueous OPR levels recovery targets are 50-150%. These data are based upon EPA 1633 draft ranges that will change and are not used for acceptance/rejection but are reported until such time that fully validated acceptance ranges are provided in the final version of the method.

10.2.3 Matrix spike/Matrix spike duplicate (MS/MSD or MS/MSD). These are not typically required since each sample contains isotopic PFAS analogues that correct for any matrix effects. If the client requests them, then they are processed accordingly but are not a requirement of this method. If done they are by matrix, not to exceed twenty (20) samples. An MS/MSD pair is aliquots of a selected field sample spiked with analytes of known identity and concentration. The MS/MSD pair must be processed in the same manner and at the same time as the associated samples. Spiked analytes with recoveries or precision outside of the Laboratory control limits are flagged accordingly. Until enough statistical data per matrix is available, no criteria are offered. If a specific QA Project Plan has required limits, this is preempted. Any outliers must be qualified accordingly.

10.2.4 Initial calibration verification (ICV) –A second source standard is not required for this method. A second independently prepared mid-level standard is prepared and used for this purpose and analyzed after the ICAL. The concentration should be at the mid range of the curve and must recover within 70-130 % of expected value.

Corrective actions for the ICV include:

- Rerun the ICV
- Remake or acquire a new ICV.
- Evaluate the instrument conditions.
- Evaluate the initial calibration standards.
- Rerun the initial calibration.

10.2.5 Internal Standard- The Non-extracted Internal Standard (NIS) is added to each field and QC sample prior to analysis. The IS response (peak area) must not deviate by more than 50-200% from the mean response (peak area) of the initial calibration. If the areas are low for all the field samples and QC samples in the batch, it suggests a loss of instrument sensitivity, while low areas in only some field or QC samples suggests a possible bad injection.

Corrective action includes:

- Reinject the questionable samples
- Verifying the CCV NIS areas are compliant with the range, if so, this suggests either matrix effects and may require a small dilution to mitigate interference if only some of the NIS compounds are affected
- Qualify affected data

10.3 Initial Demonstration of Capability (IDC)

Initial Demonstration of Capability involves the following processes listed ion Table 1.0 as follows.

Table 1.0 - Initial Demonstration of Capability (IDC)

Requirement	Specification and Frequency	Acceptance Criteria
Initial Demonstration of Precision and Recovery (IPR)	Extract, concentrate, and analyze four aliquots of the matrix (aqueous and soil) spiked with target native standard solution, EIS solution and finally the NIS (ISTD). Extract a method blank of each matrix with each matrix IPR batch. All steps that are used for processing samples, including preparation and extraction must be included.	Using results of the set of four analyses, compute the average percent recovery (R) of the extracts and the relative standard deviation (RSD) of the concentration for each target and EIS compound.
		For each native and isotopically labeled compound, compare RSD and % recovery with the corresponding limits for initial precision and recovery in Table 5. If RSD and R for all compounds meet the acceptance criteria, system performance is acceptable, and analysis of blanks and samples may begin.
Method Detection Limit (MDL)	Method detection limit (MDL) - Each laboratory must also establish MDLs for all the analytes using the MDL procedure at 40 CFR Part 136, Appendix B. An MDL determination must be performed for all target compounds.	The minimum level of quantification (ML) can be calculated by multiplying the MDL by 3.18 and rounding to the nearest integer
Calibration Verification (ICV or SCV) *Section 9.1.5*	Analyze a mid-level ICV, each time a new calibration is performed or at a minimum, quarterly. The ICV must be an independent dilution beginning with the common starting materials used for ICAL. No 2nd source is required due to availability.	Results must be 70-130% of true value.

10.4 QC Requirements

Ongoing QC requirements are detailed in Table 3.0 as follows.

Table 3.0 QC Requirements

Summary of Quality Control		
Method Reference	**Requirement**	**Specification and Frequency**
Section 10.1	Mass Calibration	Annually and on as-needed basis
Section 10.1.7	Mass Calibration Verification	After mass calibration
Section 10.3	Initial Calibration (ICAL)	Minimum 6 calibration standards for linear model and 7 calibration standards for non-linear models.
Sections 10.2.2, 14.4	Retention Time (RT) window	After ICAL and at the beginning of analytical sequence
Sections 7.3.1, 9.4	Extracted Internal Standard (EIS) Analytes	All CAL standards, batch QC and field samples

Sections 7.3.2	Non-extracted Internal Standards (NIS)	All CAL standards, batch QC and field samples
Sections 7.3.4, 10.3.1, 13.3	Instrument Sensitivity Check (ISC)	Daily, prior to analysis
Section 14.2	Calibration Verification (CV) (CCV)	At the beginning and every 10 samples and at the end
Section 14.6	Instrument Blank	Daily prior to analysis and after high standards
Sections 9.1.3, 9.5, 14.7	Method Blank (MB)	One per preparation batch
Section 14.5	Ongoing Precision Recovery (OPR)	One per preparation batch
Section 11.0	Limit of Quantitation Verification (LLOPR)	Prior to analyzing samples
Section 11.0	Matrix Spike (MS/MSD)	One per preparation batch (if required) Normally not needed, since Isotope dilution is employed

11.0 DATA REVIEW, CALCULATIONS AND REPORTING

Samples concentrations are determined using either or linear regression or quadratic regression FORCED through the origin. Weighted ($1/x$ or $1/x^2$) may assist with low level accuracy and is recommended where necessary. All calibration curves have greater than 6 points. Any target analyte exceeding the calibration range will require dilution.

11.1 Data interpretation

All sample data calculations are performed by the Agilent Mass Hunter software in ng/mL and then final data are calculated taking into account final extract volumes and the initial sample volumes extracted which are entered into the Element bench sheet.

11.2 Linear and Branched Isomers are addressed in Section 8.5 and are reported for the noted species as Total which is a sum of the linear and branched isomers for affected species.

11.3 All Data are uploaded into Element LIMS and all final concentration calculations and associated recoveries are detailed. All pdfs of Mass Hunter Quant reports are uploaded to the Element Raw_Data drive for association with ICALs and all batch and analysis sequence runs. Data are set to Analyzed status once uploaded and initially reviewed, then locked.

11.4 The Data are then evaluated using the York Qualinator ^{TM} data review tool which evaluates all data CCVs, QC, ISTDS, Recoveries, etc. and automatically assigns outlier qualifiers for review and acceptance by the reviewer. The accepted data are then uploaded to Element and final reviewed in Laboratory Data Entry/Review module. Once reviewed, the status is set to Reviewed indicating the data are ready to be Reported by the Reporting Group.

12. HEALTH AND SAFETY

12.1 General safety considerations and requirements are detailed in the York Laboratory Safety and Health Standard Operating Procedure No. Safety011600.

Specific safety rules applying to the conduct of this analysis requiring the following:

- When handling standards and samples, latex gloves are required.
- Also, when handling neat materials, a fume hood and safety glasses are required.
- When handling samples, gloves and glasses are required.
- Highly odorous samples must be handled in a fume hood.
- Refer to SDSs for specific safety/health information.

12.2 The analysts must exercise normal care and be supervised and trained to work in an analytical chemistry laboratory. The analysts will be handling fragile glassware, needles, syringes, volatile and flammable chemicals, toxic chemicals and corrosive chemicals.

- No smoking or open flames are allowed.
- No food or food products may be brought into the laboratory.

Solvents should not be left uncovered on the laboratory benches.
All solvent transfers should be done in the hoods.

Hood doors must be kept in the position which yields approx. 100 fpm face velocity.
Solvent evaporation must be done in the hood with exhaust elevated and in the rear.

Waste containers that had solvents must be vented to a hood until all solvents have evaporated.

Safety glasses are provided and must be worn at all times in the laboratory.
Gloves are provided and must be worn when working with chemicals.
Laboratory coats are provided and should be worn to protect the analysts' clothes.
Syringes and needles must be kept in their original cases when not in use.
Care must be exercised in using and handling syringes to avoid injury.
Report any sticking with a needle immediately to your supervisor.

12.3 Specific Safety Concerns

12.3.1 Preliminary toxicity studies indicate that PFAS could have significant toxic effects. In the interest of keeping exposure levels as low as reasonably achievable, PFAS must be handled in the laboratory as hazardous and toxic chemicals.

12.3.2 Exercise caution when using syringes with attached filter

disc assemblies. Application of excessive force has, upon occasion, caused a filter disc to burst during the process.

12.3.3 Laboratory procedures such as repetitive use of pipets, repetitive transferring of extracts and manipulation of filled separatory funnels and other glassware represent a significant potential for repetitive motion or other ergonomic injuries. Laboratory associates performing these procedures are in the best position to realize when they are at risk for these types of injuries.

12.3.4 Eye protection, laboratory coat, and nitrile gloves must be worn while handling samples, standards, solvents, and reagents. Disposable gloves that have been contaminated will be removed and discarded; other gloves will be cleaned immediately.

12.3.5 Perfluorocarboxylic acids are acids and are not compatible with strong bases.

12.3.6 Primary Materials Used- The following is a list of the materials used in this method, which have a serious or significant hazard rating. NOTE: This list does not include all materials used in the method. The table contains a summary of the primary hazards listed in the SDS for each of the materials listed in the table. A complete list of materials used in the method can be found in the reagents and materials section. Employees must review the information in the SDS for each material before using it for the first time or when there are major changes to the SDS.

Methanol	-Flammable Poison -Irritant	200 ppm (TWA)	A slight irritant to the mucous membranes. Toxic effects exerted upon nervous system, particularly the optic nerve. Symptoms of overexposure may include headache, drowsiness and dizziness. Methyl alcohol is a defatting agent and may cause skin to become dry and cracked. Skin absorption can occur; symptoms may parallel inhalation exposure. Irritant to the eyes.

Acetic Acid, Glacial	-Flammable liquid and vapor. -Irritation	10 ppm TWA; 25 mg/m3 TWA	**Eye:** Causes severe eye irritation. Contact with liquid or vapor causes severe burns and possible irreversible eye damage. **Skin:** Causes skin burns. May be harmful if absorbed through the skin. Contact with the skin may cause blackening and hyperkeratosis of the skin of the hands. **Ingestion:** May cause severe and permanent damage to the digestive tract. Causes severe pain, nausea, vomiting, diarrhea, and shock. May cause polyuria, oliguria (excretion of a diminished amount of urine in relation to the fluid intake) and anuria (complete suppression of urination). Rapidly absorbed from the gastrointestinal tract. **Inhalation:** Effects may be delayed. Causes chemical burns to the respiratory tract. Exposure may lead to bronchitis, pharyngitis, and dental erosion. May be absorbed through the lungs. **Chronic:** Chronic exposure to acetic acid may cause erosion of dental enamel, bronchitis, eye irritation, darkening of the skin, and chronic inflammation of the respiratory tract. Acetic acid can cause occupational asthma. One case of a delayed asthmatic response to glacial acetic acid has been reported in a person with bronchial asthma. Skin sensitization to acetic acid is rare, but has occurred.
Ammonium Hydroxide, conc. 28-30%	- Inhalation hazard - Skin Corrosion -Eye Damage and Irritation	OSHA PEL: 35 mg/m3 ; 50 ppm OSHA TWA: 18 mg/m3; 25 ppm	Ammonia is an irritant and corrosive to the skin, eyes, respiratory tract and mucous membranes. May cause severe chemical burns to the eyes, lungs and skin. Skin and respiratory related diseases could be aggravated by exposure. The extent of injury produced by exposure to ammonia depends on the duration of the exposure, the concentration of the liquid or vapor and the depth of inhalation. Exposure Routes: Inhalation (vapors), skin and/or eye contact (vapors, liquid), ingestion (liquid).
Formic Acid, conc.	-Flammable liquid and vapor -Harmful if swallowed -Causes severe skin burns and eye damage -Toxic if inhaled -May cause respiratory irritation	OSHA TWA: 5 ppm or 9 mg/m3 OSHA PEL: 10 ppm	Formic acid is an irritant and corrosive to the skin, eyes, respiratory tract and mucous membranes. May cause severe chemical burns to the eyes, lungs and skin. Skin and respiratory related diseases could be aggravated by exposure. The extent of injury produced by exposure to ammonia depends on the duration of the exposure, the concentration of the liquid or vapor and the depth of inhalation. Exposure Routes: Inhalation (vapors), skin and/or eye contact (vapors, liquid), ingestion (liquid).

13. WASTE MANAGEMENT/POLLUTION PREVENTION

Neat Materials

Waste management procedures require the prudent use of neat materials. The ordering of neat standards and materials must be done to minimize unused material which would result in storage or handling of excess material. Quantities ordered should be sufficient to provide for necessary standards with consideration to shelf life. When ordering a unique material for a standard, be sure to order the smallest practical quantity.

Solvents

The solvents used at York for this procedure include isopropanol and Methanol. These solvents are used for sample extraction or LC cleanup, all amounts are either consumed during concentration or placed in one liter amber jars in the hood areas for evaporation. Any remaining solvent/water is transferred to a drum designated for solvent waste.

Acids and Bases

The acids and bases used for this procedure include: Acetic Acid and Formic Acid. The bases used are Ammonium hydroxide, sodium hydroxide and potassium hydroxide. Store concentrated base and acids separately whether waste or neat material.

Samples

Unused or remaining water samples are returned to the sample control room for continued storage for proper disposal by the sample control group.

14. REFERENCES

1. EPA METHOD 1633 Draft 2 June, 2022- Analysis of Per- and Polyfluoroalkyl Substances (PFAS) in Aqueous, Solid, Biosolids, and Tissue Samples by LC-MS/MS; EPA 821-D-22-001

15. REVISION HISTORY

Revision 1.0	10/24/2022	First issue.
Revision 1.1	02/10/2023	Modified LLOPR in Section 7.4.6.1 to reflect 2x the MRL

Attachment 1 – Non-Extracted Internal Standards (NIS)

YORK
ANALYTICAL LABORATORIES, INC.

Analytical Standard Record

Standard ID: **Y22B197**

Description:	MPFAC-HIF-IS-EPA 1633 ISTD STOCK	Prepared:	02/16/2022
Standard Type:	Other	Expires:	09/07/2026
Solvent:	Methanol/Water (<1%)	Prepared By:	Robert Q. Bradley
Final Volume (mls):	1	Department:	PFAS
Vials:	1	Lot No.:	MPFACHIFIS0921
Vendor:	Wellington Laboratories		

Comments: Stock ISTD for EPA method 1633

Analyte	CAS Number	Concentration	Units
M3PFBA		1	ug/mL
MPFDA		0.25	ug/mL
MPFHxA		0.5	ug/mL
MPFHxS		0.474	ug/mL
MPFNA		0.25	ug/mL
MPFOA		0.5	ug/mL
MPFOS		0.479	ug/mL

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

MPFAC-HIF-IS

Mass-Labelled Perfluoroalkyl Substance Injection Standard Solution/Mixture

PRODUCT CODE:	MPFAC-HIF-IS
LOT NUMBER:	MPFACHIFIS0921
SOLVENT(S):	Methanol/Water (<1%)
DATE PREPARED: (mm/dd/yyyy)	09/07/2021
LAST TESTED: (mm/dd/yyyy)	09/07/2021
EXPIRY DATE: (mm/dd/yyyy)	09/07/2026
RECOMMENDED STORAGE:	Store ampoule in a cool, dark place

DESCRIPTION:

MPFAC-HIF-IS is a solution/mixture of five mass-labelled (^{13}C) perfluoroalkylcarboxylic acids (C_4, C_8, C_9-C_{10}) and two mass-labelled (^{18}O and ^{13}C) perfluoroalkanesulfonates (C_8 and C_8). The components and their concentrations are given in Table A.

The individual mass-labelled perfluoroalkylcarboxylic acids and mass-labelled perfluoroalkanesulfonates all have chemical purities of >98% and isotopic purities of ≥99% per ^{13}C or >94% per ^{18}O.

DOCUMENTATION/ DATA ATTACHED:

Table A: Components and Concentrations of the Solution/Mixture
Figure 1: LC/MS Data (SIR)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

ADDITIONAL INFORMATION:

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acids to their respective methyl esters.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
519-822-2436 • Fax: 519-822-2849 • info@well-labs.com

INTENDED USE:

The products prepared by Wellington Laboratories Inc. are for laboratory use only. This certified reference material (CRM) was designed to be used as a standard for the identification and/or quantification of the specific chemical compounds it contains.

HANDLING:

This product should only be used by qualified personnel familiar with its potential hazards and trained in the handling of hazardous chemicals. Due care should be exercised to prevent unnecessary human contact or ingestion. All procedures should be carried out in a well-functioning fume hood and suitable gloves, eye protection, and clothing should be worn at all times. Waste should be disposed of according to national and regional regulations. Safety Data Sheets (SDSs) are available upon request.

SYNTHESIS / CHARACTERIZATION:

Our products are synthesized using single-product unambiguous routes whenever possible. They are then characterized, and their structures and purities confirmed, using a combination of the most relevant techniques, such as NMR, GC/MS, LC/MS/MS, SFC/UV/MS/MS, x-ray crystallography, and melting point. Isotopic purities of mass-labelled compounds are also confirmed using HRGC/HRMS and/or LC/MS/MS.

HOMOGENEITY:

Prior to solution preparation, crystalline material is tested for homogeneity using a variety of techniques (as stated above) and its solubility in a given diluent is taken into consideration. Duplicate solutions of a new product are prepared from the same crystalline lot and, after the addition of an appropriate internal standard, they are compared by GC/MS, LC/MS/MS, and/or SFC/UV/MS/MS. The relative response factors of the analyte of interest in each solution are required to be <5% RSD. New solution lots of existing products, as well as mixtures and calibration solutions, are compared to older lots in a similar manner. This further confirms the homogeneity of the crystalline material as well as the stability and homogeneity of the solutions in the storage containers. In order to maintain the integrity of the assigned value(s), and associated uncertainty, the dilution or injection of a subsample of this product should be performed using calibrated measuring equipment.

UNCERTAINTY:

The maximum combined relative standard uncertainty of our reference standard solutions is calculated using the following equation:

The combined relative standard uncertainty, $u_c(y)$, of a value y and the uncertainty of the independent parameters $x_1, x_2, \ldots x_n$ on which it depends is:

$$u_c(y(x_1, x_2, \ldots x_n)) = \sqrt{\sum_{i=1}^{n} u(y, x_i)^2}$$

where x is expressed as a relative standard uncertainty of the individual parameter.

The individual uncertainties taken into account include those associated with weights (calibration of the balance) and volumes (calibration of the volumetric glassware). An expanded maximum combined percent relative uncertainty of ±5% (calculated with a coverage factor of 2 and a level of confidence of 95%) is stated on the Certificate of Analysis for all of our products.

TRACEABILITY:

All reference standard solutions are traceable to specific crystalline lots. The microbalances used for solution preparation are regularly calibrated by an external ISO/IEC 17025 accredited laboratory. In addition, their calibration is verified prior to each weighing using calibrated external weights traceable to an ISO/IEC 17025 accredited laboratory. All volumetric glassware used is calibrated, of Class A tolerance, and traceable to an ISO/IEC 17025 accredited laboratory. For certain products, traceability to international interlaboratory studies has also been established.

EXPIRY DATE / PERIOD OF VALIDITY:

Ongoing stability studies of this product have demonstrated stability in its composition and concentration, until the specified expiry date, in the unopened ampoule. Monitoring for any degradation or change in concentration of the listed analyte(s) is performed on a routine basis.

LIMITED WARRANTY:

At the time of shipment, all products are warranted to be free of defects in material and workmanship and to conform to the stated technical and purity specifications.

QUALITY MANAGEMENT:

This product was produced using a Quality Management System registered to the latest versions of ISO 9001 by SAI Global, ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA; A1226), and ISO 17034 by ANSI National Accreditation Board (ANAB; AR-1523).

CALA Testing Accreditation No. A1226

ANAB ACCREDITED 17034 REFERENCE MATERIAL PRODUCER

For additional information or assistance concerning this or any other products from Wellington Laboratories Inc., please visit our website at www.well-labs.com or contact us directly at info@well-labs.com

Table A: **MPFAC-HIF-IS; Components and Concentrations (ng/mL, ± 5% in methanol/water (<1%))**

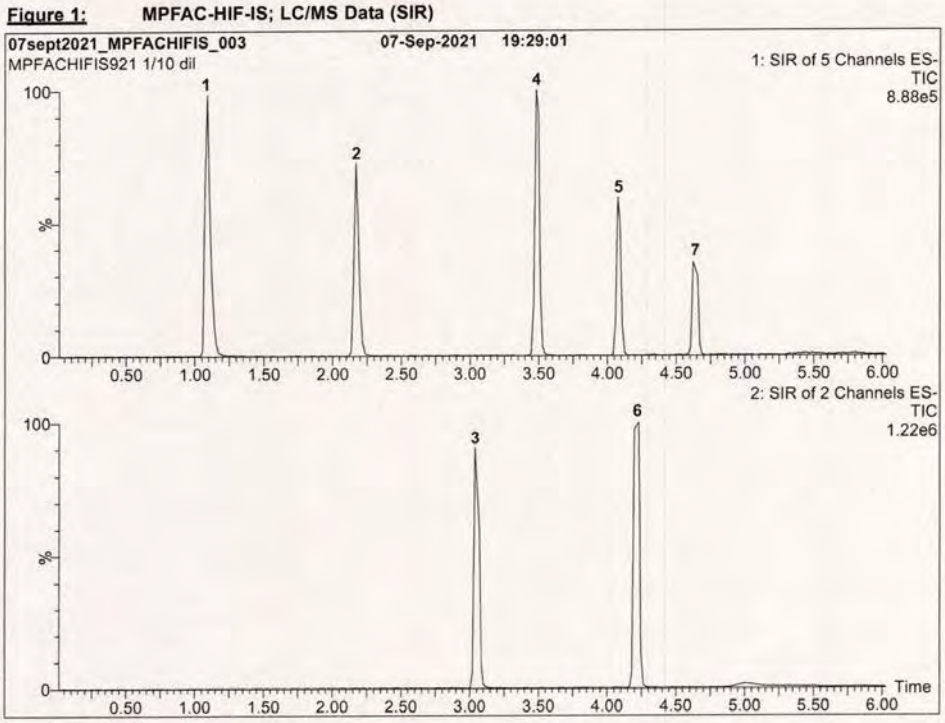
Compound	Acronym	Concentration (ng/mL)		Peak Assignment in Figure 1
Perfluoro-n-(2,3,4-$^{13}C_3$)butanoic acid	M3PFBA	1000		1
Perfluoro-n-(1,2-$^{13}C_2$)hexanoic acid	MPFHxA	500		2
Perfluoro-n-(1,2,3,4-$^{13}C_4$)octanoic acid	MPFOA	500		4
Perfluoro-n-(1,2,3,4,5-$^{13}C_5$)nonanoic acid	MPFNA	250		5
Perfluoro-n-(1,2-$^{13}C_2$)decanoic acid	MPFDA	250		7
Compound	**Acronym**	**Concentration* (ng/mL)**		**Peak Assignment in Figure 1**
		as the salt	**as the acid**	
Sodium perfluoro-1-hexane($^{18}O_2$)sulfonate	MPFHxS	500	474	3
Sodium perfluoro-1-(1,2,3,4-$^{13}C_4$)octanesulfonate	MPFOS	500	479	6

* Concentrations have been rounded to three significant figures.

Certified By: _____ **Date:** 10/13/2021 (mm/dd/yyyy)

B.G. Chittim, General Manager

Figure 1: **MPFAC-HIF-IS; LC/MS Data (SIR)**



Conditions for Figure 1:

Waters Acquity Ultra Performance LC
Waters Xevo TQ-S micro MS

Chromatographic Conditions:

Column: Acquity UPLC BEH Shield RP_{18}
1.7 µm, 2.1 x 100 mm

Mobile phase: Gradient
Start: 50% H_2O / 50% (80:20 MeOH:ACN)
(both with 10 mM NH_4OAc buffer)
Ramp to 90% organic over 9 min and hold for
2 min before returning to initial conditions in 1 min.
Time: 15 min

Flow: 300 µL/min

MS Parameters:

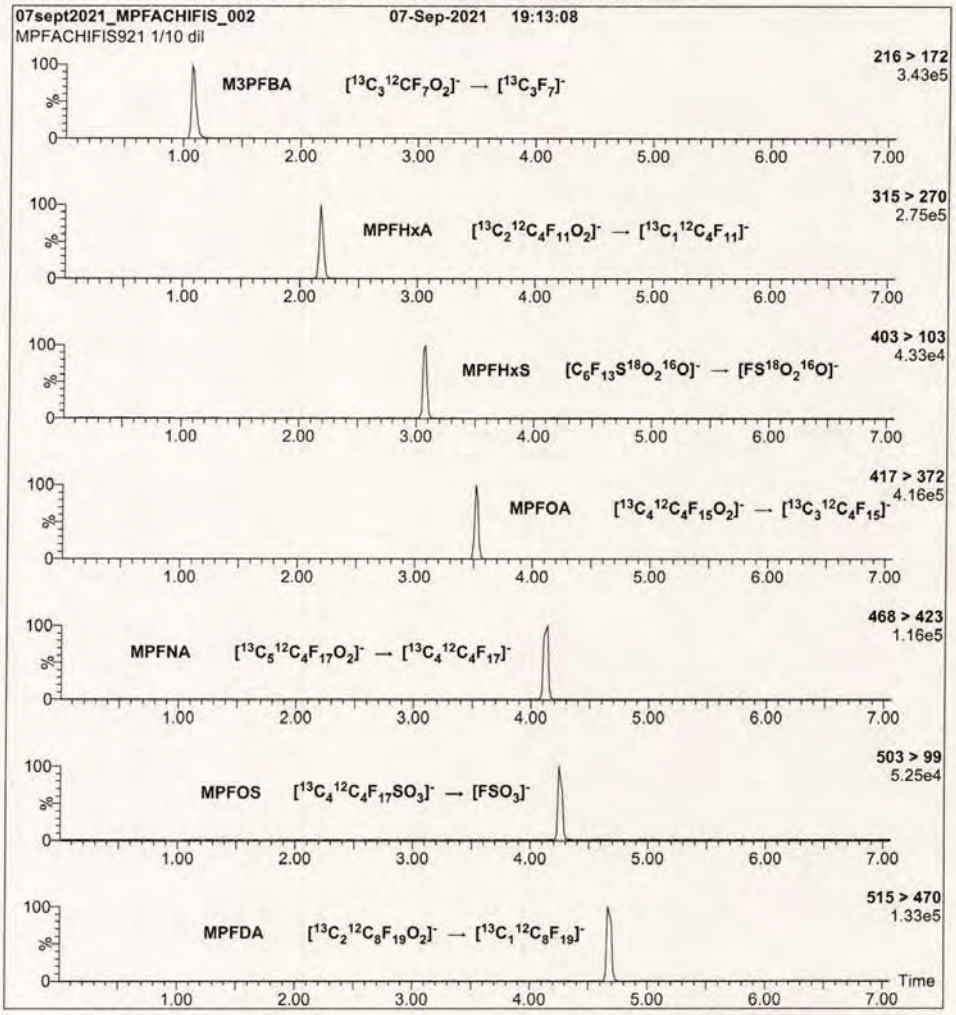
Experiment: SIR

Source: Electrospray (negative)
Capillary Voltage (kV) = 2.00
Cone Voltage (V) = variable (2-6)
Desolvation Temperature (°C) = 350
Desolvation Gas Flow (L/hr) = 1000

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rev1

Figure 2: **MPFAC-HIF-IS; LC/MS/MS Data (Selected MRM Transitions)**



Conditions for Figure 2:

Injection: On-column (MPFAC-HIF-IS)

Mobile phase: Same as Figure 1

Flow: 300 µL/min

MS Parameters:

Collision Gas (mbar) = 3.18e-3
Collision Energy (eV) = 4-64 (variable)

Formlt:13, Issued 2004-11-10
Revision#:9, Revised 2020-12-23

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rev1

Attachment 2 – Extracted Internal Standards (EIS)

YORK
ANALYTICAL LABORATORIES, INC.

Analytical Standard Record

Standard ID: **Y22B198**

Description:	MPFAC-HIF-ES-EPA 1633 STOCK EIS mix	Prepared:	02/17/2022
Standard Type:	Other	Expires:	08/06/2024
Solvent:	MeOH/IPA/1% H2O	Prepared By:	Robert Q. Bradley
Final Volume (mls):	1	Department:	PFAS
Vials:	1	Lot No.:	MPFACHIFES0821
Vendor:	Wellington Laboratories		

Comments:

Analyte	CAS Number	Concentration	Units
d3-N-MeFOSAA		1	ug/mL
d5-N-EtFOSAA		1	ug/mL
d7-N-MeFOSE		5	ug/mL
d9-N-EtFOSE		5	ug/mL
d-N-EtFOSA		0.5	ug/mL
d-N-MeFOSA		0.5	ug/mL
M2-4:2FTS		0.938	ug/mL
M2-6:2FTS		0.951	ug/mL
M2-8:2FTS		0.96	ug/mL
M2PFTeDA		0.25	ug/mL
M3HFPO-DA		2	ug/mL
M3PFBS		0.466	ug/mL
M3PFHxS		0.474	ug/mL
M4PFHpA		0.5	ug/mL
M5PFHxA		0.5	ug/mL
M5PFPeA		1	ug/mL
M6PFDA		0.25	ug/mL
M7PFUdA		0.25	ug/mL
M8FOSA		0.5	ug/mL
M8PFOA		0.5	ug/mL
M8PFOS		0.479	ug/mL
M9PFNA		0.25	ug/mL
MPFBA		2	ug/mL
MPFDoA		0.25	ug/mL

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

MPFAC-HIF-ES

Mass-Labelled Per- and Poly-fluoroalkyl Substance Extraction Standard Solution/Mixture

PRODUCT CODE:	MPFAC-HIF-ES
LOT NUMBER:	MPFACHIFES0821
SOLVENT(S):	Methanol/Isopropanol (1%)/Water (<1%)
DATE PREPARED: (mm/dd/yyyy)	08/05/2021
LAST TESTED: (mm/dd/yyyy)	08/16/2021
EXPIRY DATE: (mm/dd/yyyy)	08/16/2024
RECOMMENDED STORAGE:	Refrigerate ampoule

DESCRIPTION:

MPFAC-HIF-ES is a solution/mixture of ten mass-labelled (^{13}C) perfluoroalkylcarboxylic acids (C_4-C_{12}, C_{14}), three mass-labelled (^{13}C) perfluoroalkanesulfonates (C_4, C_8, and C_8), three mass-labelled (one ^{13}C and two ^{2}H) perfluoro-1-octanesulfonamides, three mass-labelled (^{13}C) fluorotelomer sulfonates (4:2, 6:2, and 8:2), two mass-labelled (^{2}H) perfluorooctanesulfonamidoacetic acids, two mass-labelled (^{2}H) perfluorooctanesulfonamidoethanols, and mass-labelled (^{13}C) hexafluoropropylene oxide dimer acid. The components and their concentrations are given in Table A.

The individual mass-labelled perfluoroalkylcarboxylic acids, mass-labelled perfluoroalkanesulfonates, mass-labelled fluorotelomer sulfonates, perfluoro-1-($^{13}C_8$)octanesulfonamide, and mass-labelled hexafluoropropylene oxide dimer acid all have chemical purities of >98% and isotopic purities of ≥99%. The individual mass-labelled perfluorooctanesulfonamidoacetic acids, mass-labelled perfluorooctanesulfonamidoethanols, and two mass-labelled (^{2}H) perfluoro-1-octanesulfonamides all have chemical purities of >98% and isotopic purities of ≥98%.

DOCUMENTATION/ DATA ATTACHED:

Table A: Components and Concentrations of the Solution/Mixture
Figure 1: LC/MS Data (SIR)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

ADDITIONAL INFORMATION:

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acids to their respective methyl esters.

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Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
519-822-2436 • Fax: 519-822-2849 • info@well-labs.com

INTENDED USE:

The products prepared by Wellington Laboratories Inc. are for laboratory use only. This certified reference material (CRM) was designed to be used as a standard for the identification and/or quantification of the specific chemical compounds it contains.

HANDLING:

This product should only be used by qualified personnel familiar with its potential hazards and trained in the handling of hazardous chemicals. Due care should be exercised to prevent unnecessary human contact or ingestion. All procedures should be carried out in a well-functioning fume hood and suitable gloves, eye protection, and clothing should be worn at all times. Waste should be disposed of according to national and regional regulations. Safety Data Sheets (SDSs) are available upon request.

SYNTHESIS / CHARACTERIZATION:

Our products are synthesized using single-product unambiguous routes whenever possible. They are then characterized, and their structures and purities confirmed, using a combination of the most relevant techniques, such as NMR, GC/MS, LC/MS/MS, SFC/UV/MS/MS, x-ray crystallography, and melting point. Isotopic purities of mass-labelled compounds are also confirmed using HRGC/HRMS and/or LC/MS/MS.

HOMOGENEITY:

Prior to solution preparation, crystalline material is tested for homogeneity using a variety of techniques (as stated above) and its solubility in a given diluent is taken into consideration. Duplicate solutions of a new product are prepared from the same crystalline lot and, after the addition of an appropriate internal standard, they are compared by GC/MS, LC/MS/MS, and/or SFC/UV/MS/MS. The relative response factors of the analyte of interest in each solution are required to be <5% RSD. New solution lots of existing products, as well as mixtures and calibration solutions, are compared to older lots in a similar manner. This further confirms the homogeneity of the crystalline material as well as the stability and homogeneity of the solutions in the storage containers. In order to maintain the integrity of the assigned value(s), and associated uncertainty, the dilution or injection of a subsample of this product should be performed using calibrated measuring equipment.

UNCERTAINTY:

The maximum combined relative standard uncertainty of our reference standard solutions is calculated using the following equation:

The combined relative standard uncertainty, $u_c(y)$, of a value y and the uncertainty of the independent parameters $x_1, x_2, \ldots x_n$ on which it depends is:

$$u_c(y(x_1, x_2, \ldots x_n)) = \sqrt{\sum_{i=1}^{n} u(y, x_i)^2}$$

where x is expressed as a relative standard uncertainty of the individual parameter.

The individual uncertainties taken into account include those associated with weights (calibration of the balance) and volumes (calibration of the volumetric glassware). An expanded maximum combined percent relative uncertainty of ±5% (calculated with a coverage factor of 2 and a level of confidence of 95%) is stated on the Certificate of Analysis for all of our products.

TRACEABILITY:

All reference standard solutions are traceable to specific crystalline lots. The microbalances used for solution preparation are regularly calibrated by an external ISO/IEC 17025 accredited laboratory. In addition, their calibration is verified prior to each weighing using calibrated external weights traceable to an ISO/IEC 17025 accredited laboratory. All volumetric glassware used is calibrated, of Class A tolerance, and traceable to an ISO/IEC 17025 accredited laboratory. For certain products, traceability to international interlaboratory studies has also been established.

EXPIRY DATE / PERIOD OF VALIDITY:

Ongoing stability studies of this product have demonstrated stability in its composition and concentration, until the specified expiry date, in the unopened ampoule. Monitoring for any degradation or change in concentration of the listed analyte(s) is performed on a routine basis.

LIMITED WARRANTY:

At the time of shipment, all products are warranted to be free of defects in material and workmanship and to conform to the stated technical and purity specifications.

QUALITY MANAGEMENT:

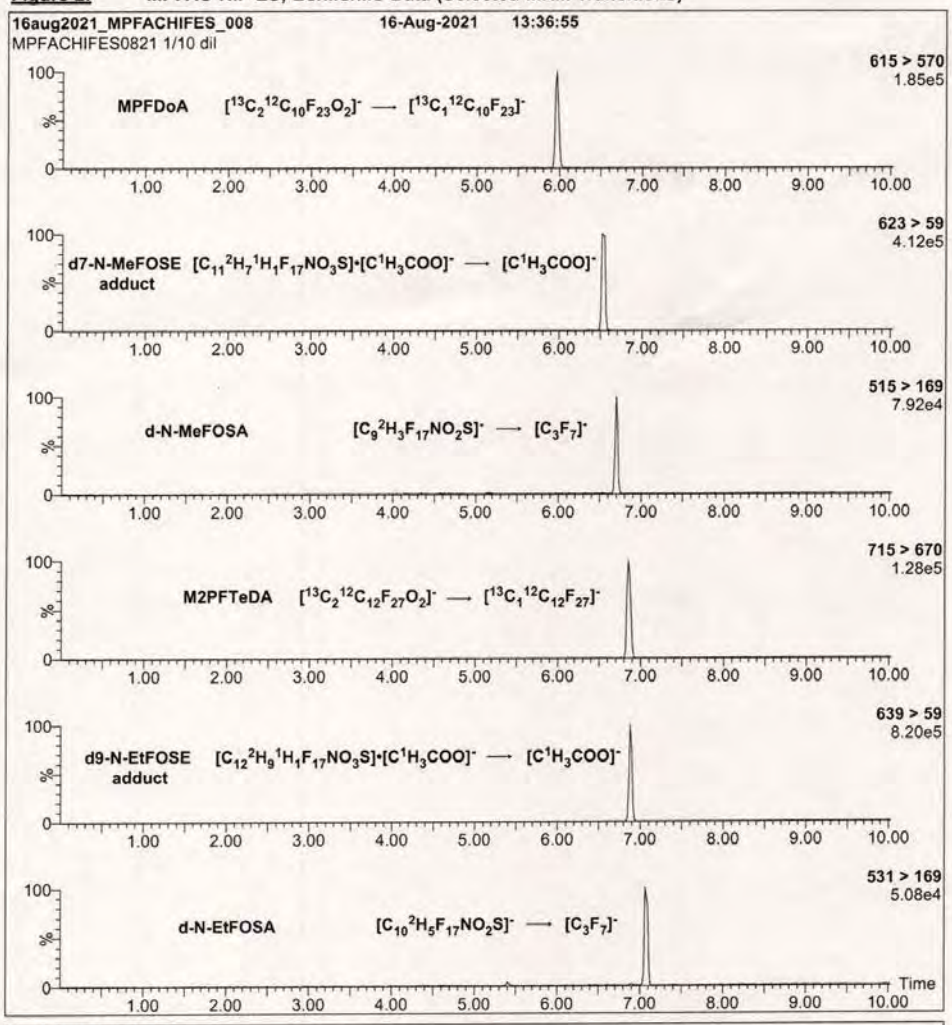
This product was produced using a Quality Management System registered to the latest versions of ISO 9001 by SAI Global, ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA; A1226), and ISO 17034 by ANSI National Accreditation Board (ANAB; AR-1523).

CALA Testing Accreditation No. A1226

ANAB ACCREDITED REFERENCE MATERIAL PRODUCER

For additional information or assistance concerning this or any other products from Wellington Laboratories Inc., please visit our website at www.well-labs.com or contact us directly at info@well-labs.com

Figure 2: **MPFAC-HIF-ES; LC/MS/MS Data (Selected MRM Transitions)**



Conditions for Figure 2:

Injection: On-column (MPFAC-HIF-ES)

Mobile phase: Same as Figure 1

Flow: 300 µL/min

MS Parameters:

Collision Gas (mbar) = 3.41e-3
Collision Energy (eV) = 4-64 (variable)

Form#:13, Issued 2004-11-10
Revision#:9, Revised 2020-12-23

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rev1

Table A: **MPFAC-HIF-ES; Components and Concentrations (ng/mL, ± 5% in Methanol/Isopropanol (1%)/Water (<1%))**

Compound	Acronym	Concentration (ng/mL)	Peak Assignment in Figure 1
Perfluoro-n-($^{13}C_4$)butanoic acid	MPFBA	2000	1
Perfluoro-n-($^{13}C_5$)pentanoic acid	M5PFPeA	1000	2
Perfluoro-n-(1,2,3,4,6-$^{13}C_5$)hexanoic acid	M5PFHxA	500	5
Perfluoro-n-(1,2,3,4-$^{13}C_4$)heptanoic acid	M4PFHpA	500	7
Perfluoro-n-($^{13}C_8$)octanoic acid	M8PFOA	500	10
Perfluoro-n-($^{13}C_9$)nonanoic acid	M9PFNA	250	11
Perfluoro-n-(1,2,3,4,5,6-$^{13}C_6$)decanoic acid	M6PFDA	250	14
Perfluoro-n-(1,2,3,4,5,6,7-$^{13}C_7$)undecanoic acid	M7PFUdA	250	17
Perfluoro-n-(1,2-$^{13}C_2$)dodecanoic acid	MPFDoA	250	19
Perfluoro-n-(1,2-$^{13}C_2$)tetradecanoic acid	M2PFTeDA	250	22
Perfluoro-1-($^{13}C_8$)octanesulfonamide	M8FOSA	500	18
N-methyl-d_3-perfluoro-1-octanesulfonamide	d-N-MeFOSA	500	21
N-ethyl-d_5-perfluoro-1-octanesulfonamide	d-N-EtFOSA	500	24
N-methyl-d_3-perfluoro-1-octanesulfonamidoacetic acid	d3-N-MeFOSAA	1000	15
N-ethyl-d_5-perfluoro-1-octanesulfonamidoacetic acid	d5-N-EtFOSAA	1000	16
2-(N-methyl-d_3-perfluoro-1-octanesulfonamido)ethan-d_4-ol	d7-N-MeFOSE	5000	20
2-(N-ethyl-d_5-perfluoro-1-octanesulfonamido)ethan-d_4-ol	d9-N-EtFOSE	5000	23
2,3,3,3-Tetrafluoro-2-(1,1,2,2,3,3,3-heptafluoropropoxy)($^{13}C_3$)propanoic acid	M3HFPO-DA	2000	6

Compound	Acronym	Concentration* (ng/mL)		Peak Assignment in Figure 1
		as the salt	as the acid	
Sodium perfluoro-1-(2,3,4-$^{13}C_3$)butanesulfonate	M3PFBS	500	466	3
Sodium perfluoro-1-(1,2,3-$^{13}C_3$)hexanesulfonate	M3PFHxS	500	474	8
Sodium perfluoro-1-($^{13}C_8$)octanesulfonate	M8PFOS	500	479	12
Sodium 1H,1H,2H,2H-perfluoro-(1,2-$^{13}C_2$)hexanesulfonate	M2-4:2FTS	1000	938	4
Sodium 1H,1H,2H,2H-perfluoro-(1,2-$^{13}C_2$)octanesulfonate	M2-6:2FTS	1000	951	9
Sodium 1H,1H,2H,2H-perfluoro-(1,2-$^{13}C_2$)decanesulfonate	M2-8:2FTS	1000	960	13

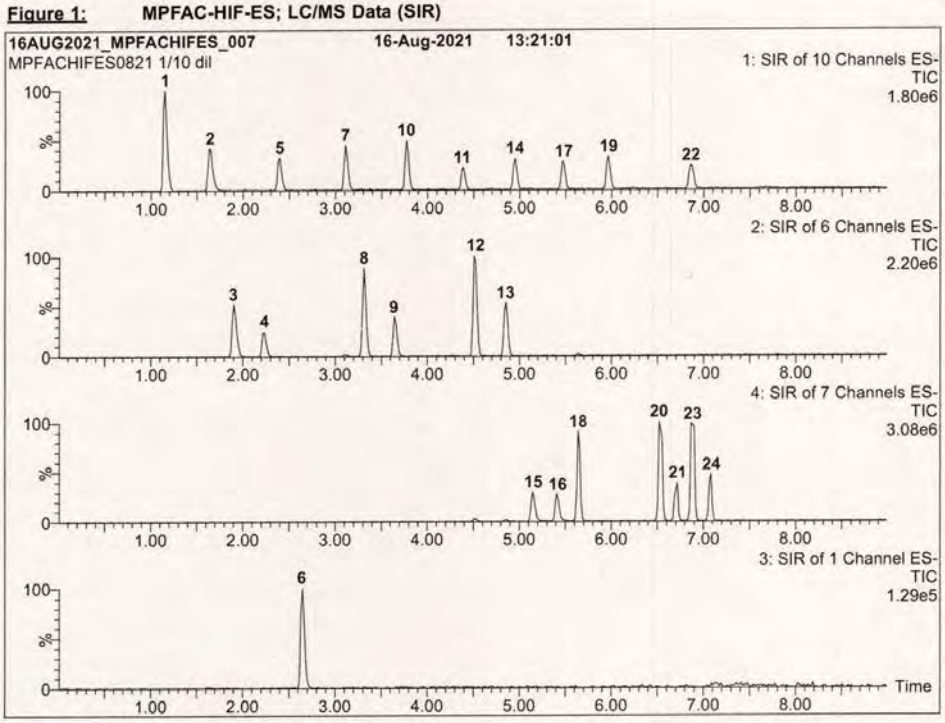
* Concentrations have been rounded to three significant figures.

Certified By: _____ **Date:** 10/13/2021 (mm/dd/yyyy)
B.G. Chittim, General Manager

Form#:13, Issued 2004-11-10
Revision#:9, Revised 2020-12-23

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rev1

Figure 1: **MPFAC-HIF-ES; LC/MS Data (SIR)**



Conditions for Figure 1:

Waters Acquity Ultra Performance LC
Waters Xevo TQ-S micro MS

Chromatographic Conditions:

Column: Acquity UPLC BEH Shield RP_{18}
1.7 µm, 2.1 x 100 mm

Mobile phase: Gradient
Start: 50% H_2O / 50% (80:20 MeOH:ACN)
(both with 10 mM NH_4OAc buffer)
Ramp to 90% organic over 9 min and hold for
2 min before returning to initial conditions in 1 min.
Time: 15 min

Flow: 300 µL/min

MS Parameters:

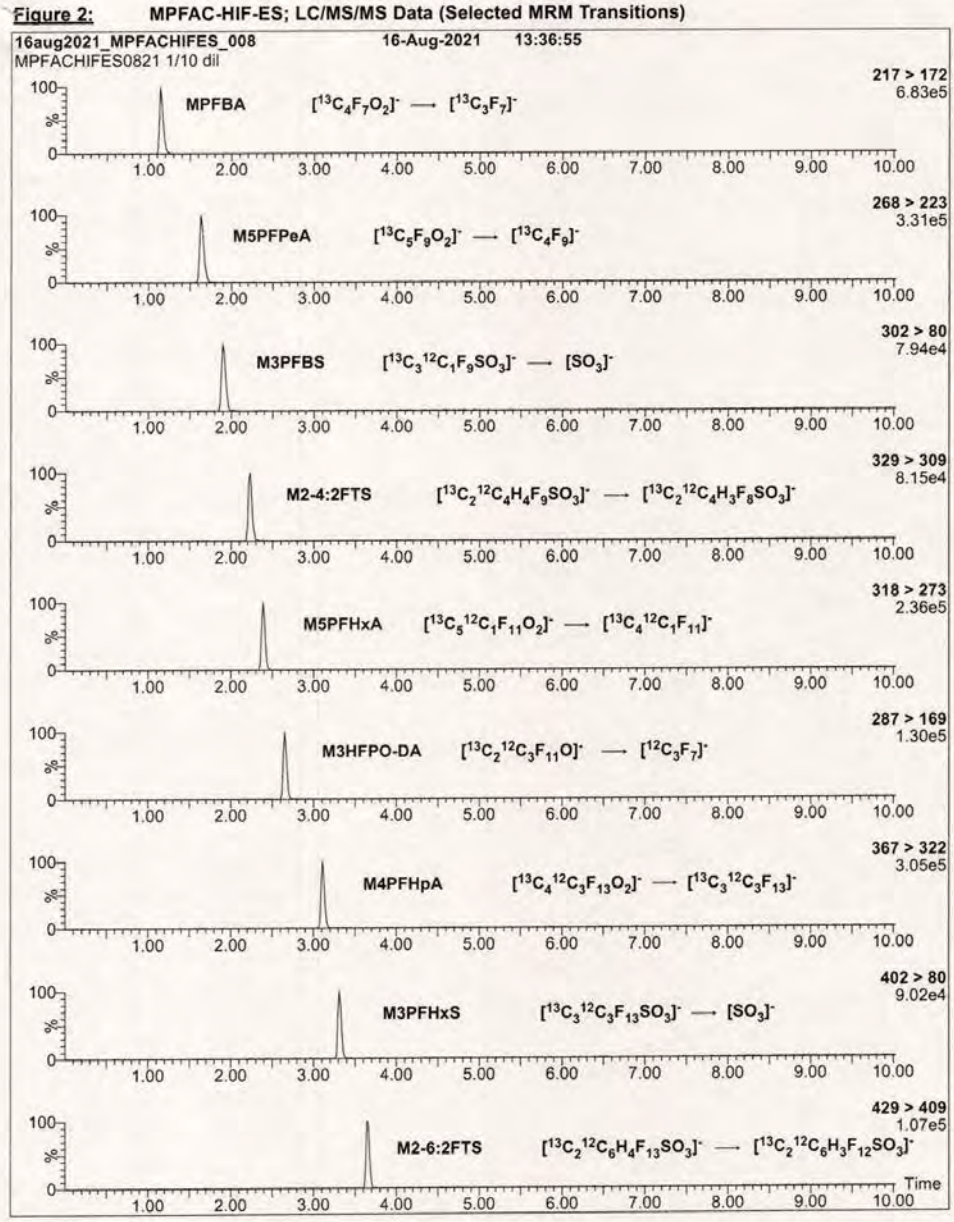
Experiment: SIR

Source: Electrospray (negative)
Capillary Voltage (kV) = 2.00
Cone Voltage (V) = variable (2-44)
Desolvation Temperature (°C) = 350
Desolvation Gas Flow (L/hr) = 1000

Form#:13, Issued 2004-11-10
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MPFACHIFES0821 (4 of 7)
rev1

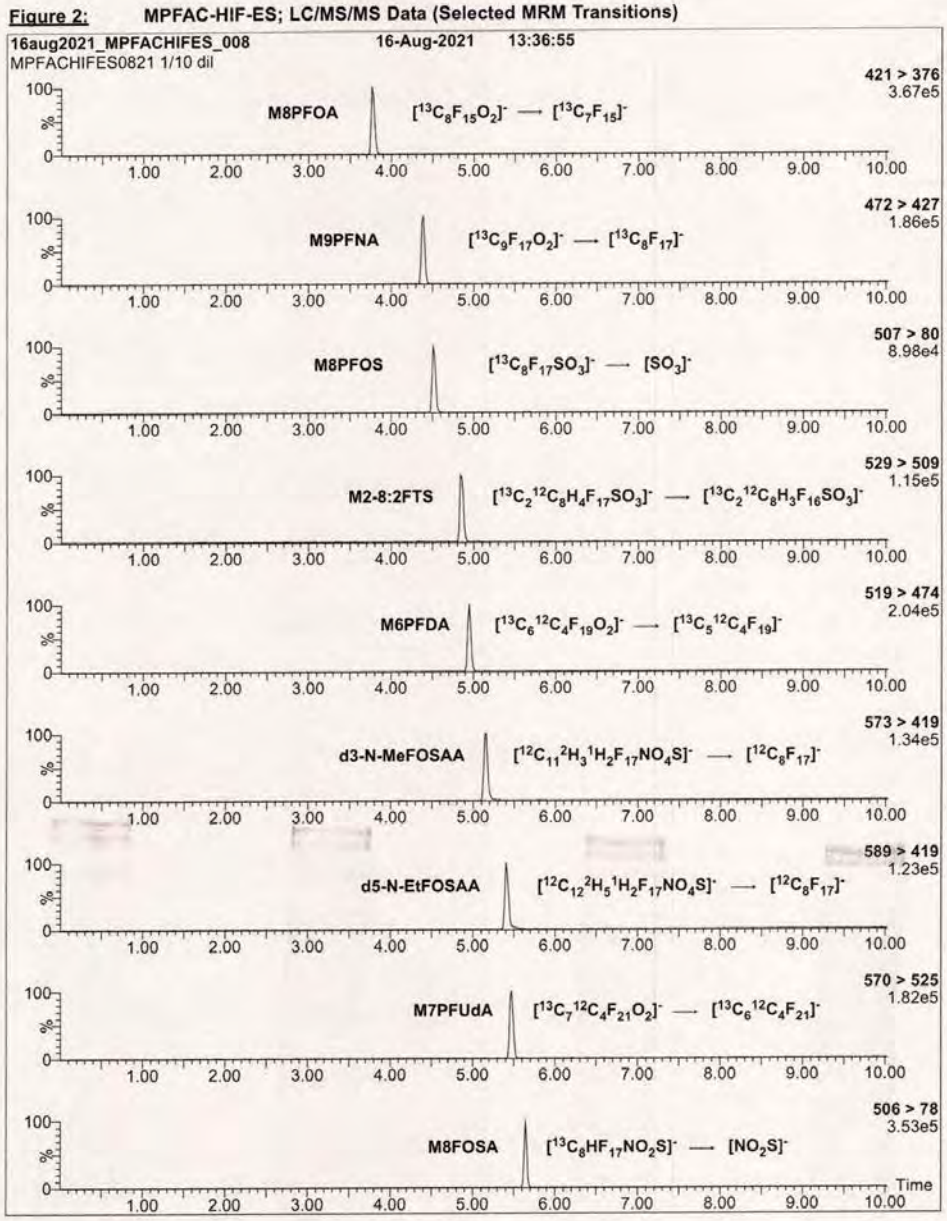
Figure 2: **MPFAC-HIF-ES; LC/MS/MS Data (Selected MRM Transitions)**



Form#:13, Issued 2004-11-10
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rev1

Figure 2: **MPFAC-HIF-ES; LC/MS/MS Data (Selected MRM Transitions)**

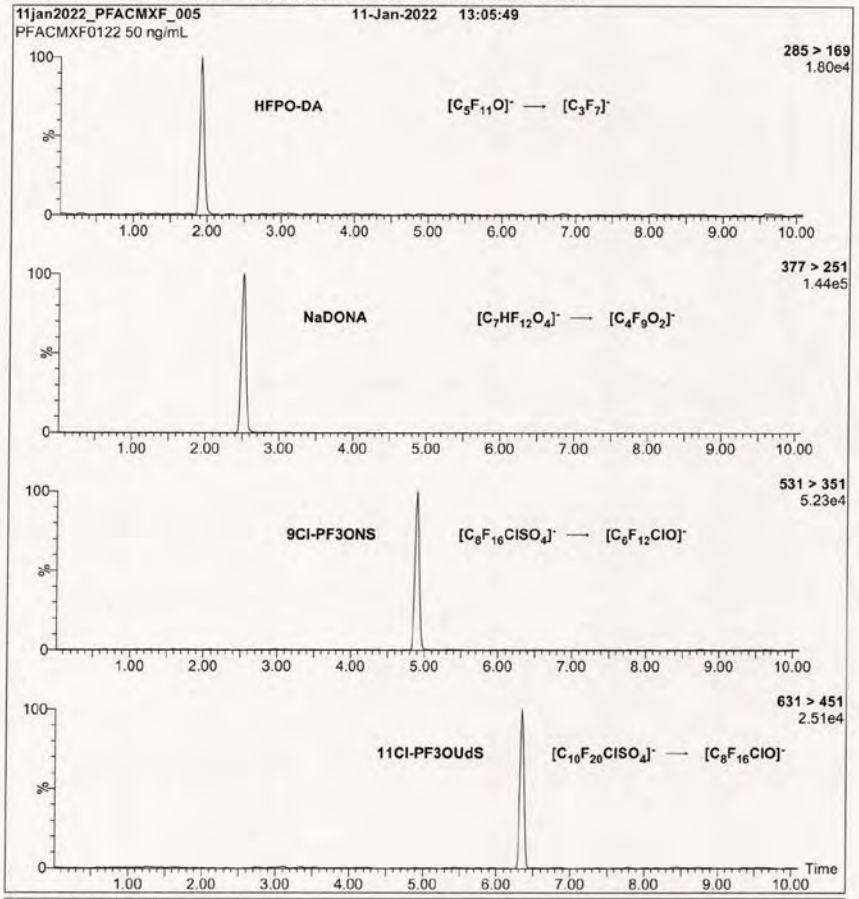


Form#:13, Issued 2004-11-10
Revision#:9, Revised 2020-12-23

MPFACHIFES0821 (6 of 7)
rev1

Attachment 3 – Target Analyte Mixtures

Figure 2: PFAC-MXF; LC/MS/MS Data (Selected MRM Transitions)



Conditions for Figure 2:

Injection: On-column (PFAC-MXF)

Mobile phase: Same as Figure 1

Flow: 300 µL/min

MS Parameters:
Collision Gas (mbar) = 3.43e-3
Collision Energy (eV) = 6-60 (variable)

INTENDED USE:

The products prepared by Wellington Laboratories Inc. are for laboratory use only. This certified reference material (CRM) was designed to be used as a standard for the identification and/or quantification of the specific chemical compounds it contains.

HANDLING:

This product should only be used by qualified personnel familiar with its potential hazards and trained in the handling of hazardous chemicals. Due care should be exercised to prevent unnecessary human contact or ingestion. All procedures should be carried out in a well-functioning fume hood and suitable gloves, eye protection, and clothing should be worn at all times. Waste should be disposed of according to national and regional regulations. Safety Data Sheets (SDSs) are available upon request.

SYNTHESIS / CHARACTERIZATION:

Our products are synthesized using single-product unambiguous routes whenever possible. They are then characterized, and their structures and purities confirmed, using a combination of the most relevant techniques, such as NMR, GC/MS, LC/MS/MS, SFC/UV/MS/MS, x-ray crystallography, and melting point. Isotopic purities of mass-labelled compounds are also confirmed using HRGC/HRMS and/or LC/MS/MS.

HOMOGENEITY:

Prior to solution preparation, crystalline material is tested for homogeneity using a variety of techniques (as stated above) and its solubility in a given diluent is taken into consideration. Duplicate solutions of a new product are prepared from the same crystalline lot and, after the addition of an appropriate internal standard, they are compared by GC/MS, LC/MS/MS, and/or SFC/UV/MS/MS. The relative response factors of the analyte of interest in each solution are required to be <5% RSD. New solution lots of existing products, as well as mixtures and calibration solutions, are compared to older lots in a similar manner. This further confirms the homogeneity of the crystalline material as well as the stability and homogeneity of the solutions in the storage containers. In order to maintain the integrity of the assigned value(s), and associated uncertainty, the dilution or injection of a subsample of this product should be performed using calibrated measuring equipment.

UNCERTAINTY:

The maximum combined relative standard uncertainty of our reference standard solutions is calculated using the following equation:

The combined relative standard uncertainty, $u_c(y)$, of a value y and the uncertainty of the independent parameters $x_1, x_2,...x_n$ on which it depends is:

$$u_c(y(x_1, x_2, ...x_n)) = \sqrt{\sum_{i=1}^{n} u(y, x_i)^2}$$

where x is expressed as a relative standard uncertainty of the individual parameter.

The individual uncertainties taken into account include those associated with weights (calibration of the balance) and volumes (calibration of the volumetric glassware). An expanded maximum combined percent relative uncertainty of ±5% (calculated with a coverage factor of 2 and a level of confidence of 95%) is stated on the Certificate of Analysis for all of our products.

TRACEABILITY:

All reference standard solutions are traceable to specific crystalline lots. The microbalances used for solution preparation are regularly calibrated by an external ISO/IEC 17025 accredited laboratory. In addition, their calibration is verified prior to each weighing using calibrated external weights traceable to an ISO/IEC 17025 accredited laboratory. All volumetric glassware used is calibrated, of Class A tolerance, and traceable to an ISO/IEC 17025 accredited laboratory. For certain products, traceability to international interlaboratory studies has also been established.

EXPIRY DATE / PERIOD OF VALIDITY:

Ongoing stability studies of this product have demonstrated stability in its composition and concentration, until the specified expiry date, in the unopened ampoule. Monitoring for any degradation or change in concentration of the listed analyte(s) is performed on a routine basis.

LIMITED WARRANTY:

At the time of shipment, all products are warranted to be free of defects in material and workmanship and to conform to the stated technical and purity specifications.

QUALITY MANAGEMENT:

This product was produced using a Quality Management System registered to the latest versions of ISO 9001 by SAI Global, ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA; A1226), and ISO 17034 by ANSI National Accreditation Board (ANAB; AR-1523).

CALA Testing Accreditation No. A1226

ANAB ANSI National Accreditation Board ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

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Form#:13, Issued 2004-11-10
Revision#:9, Revised 2020-12-23

PFACMXF0122 (2 of 5)
rev0

Table A: **PFAC-MXF; Components and Concentrations (ng/mL; ± 5% in Methanol/Water (<1%))**

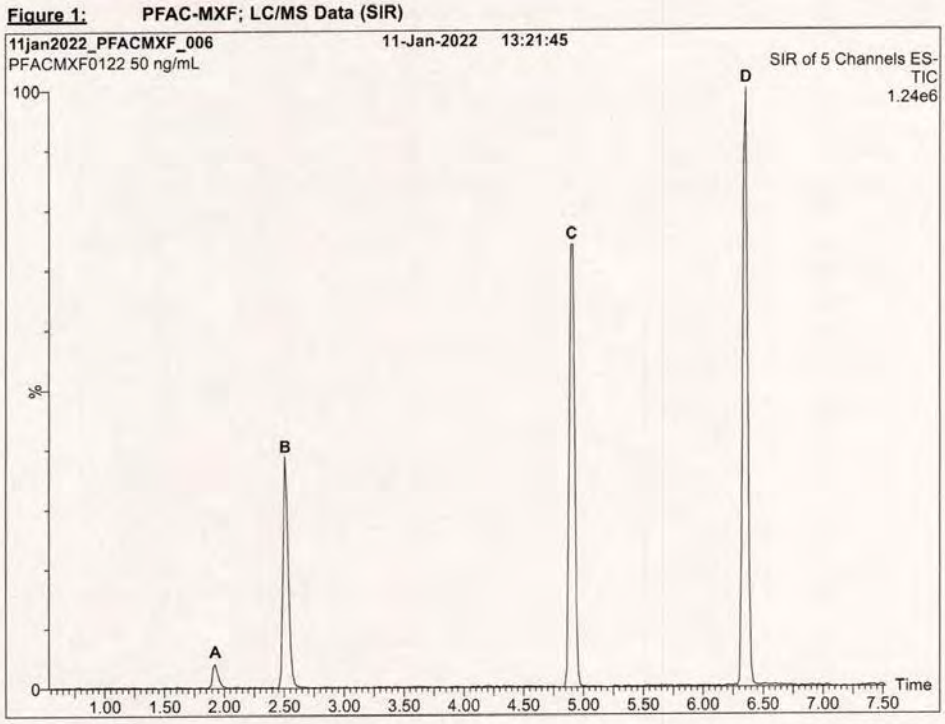
Compound	Acronym	Concentration* (ng/ml)	Peak Assignment in Figure 1
2,3,3,3-Tetrafluoro-2-(1,1,2,2,3,3,3-heptafluoropropoxy)-propanoic acid	HFPO-DA	2000	A

Compound	Acronym	Concentration* (ng/mL)		Peak Assignment in Figure 1
		as the salt	as the acid	
Sodium dodecafluoro-3H-4,8-dioxanonanoate	NaDONA	2000	1890	B
Potassium 9-chlorohexadecafluoro-3-oxanonane-1-sulfonate	9Cl-PF3ONS	2000	1870	C
Potassium 11-chloroeicosafluoro-3-oxaundecane-1-sulfonate	11Cl-PF3OUdS	2000	1890	D

* Concentrations have been rounded to three significant figures.

Certified By: _____ **Date:** 01/12/2022 (mm/dd/yyyy)
B.G. Chittim, General Manager

Figure 1: **PFAC-MXF; LC/MS Data (SIR)**



Conditions for Figure 1:

Waters Acquity Ultra Performance LC
Waters Xevo TQ-S micro MS

Chromatographic Conditions:

Column: Acquity UPLC BEH Shield RP_{18}
1.7 µm, 2.1 x 100 mm

Mobile phase: Gradient
Start: 45% H_2O / 55% (80:20 MeOH:ACN)
(both with 10 mM NH_4OAc buffer)
Ramp to 90% organic over 8 min and hold for 2 min
before returning to initial conditions in 0.75 min.
Time: 12 min

Flow: 300 µL/min

MS Parameters:

Experiment: SIR

Source: Electrospray (negative)
Capillary Voltage (kV) = 2.00
Cone Voltage (V) = variable (15-74)
Desolvation Temperature (°C) = 325
Desolvation Gas Flow (L/hr) = 1000

Form#:13, Issued 2004-11-10
Revision#:9, Revised 2020-12-23

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rev0

YORK
ANALYTICAL LABORATORIES, INC.

Analytical Standard Record

Standard ID: **Y22B199**

Description:	PFAC-MXF-Native Repl.STOCK EPA 1633 PFAS	Prepared:	02/17/2022
Standard Type:	Other	Expires:	01/11/2025
Solvent:	MeOH/H20	Prepared By:	Robert Q. Bradley
Final Volume (mls):	1	Department:	PFAS
Vials:	1	Lot No.:	PFACMXF0122
Vendor:	Wellington Laboratories		
Comments:			

Analyte	CAS Number	Concentration	Units
11CL-PF3OUdS	763051-92-9	1.89	ug/mL
9CL-PF3ONS	756426-58-1	1.87	ug/mL
ADONA	919005-14-4	1.89	ug/mL
HFPO-DA (Gen-X)	13252-13-6	2	ug/mL

Reviewed By: Date:

Page 1 of 1

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PFAC-MXF

Native Replacement PFAS Solution/Mixture

PRODUCT CODE:	PFAC-MXF
LOT NUMBER:	PFACMXF0122
SOLVENT(S):	Methanol / Water (<1%)
DATE PREPARED: (mm/dd/yyyy)	01/10/2022
LAST TESTED: (mm/dd/yyyy)	01/11/2022
EXPIRY DATE: (mm/dd/yyyy)	01/11/2025
RECOMMENDED STORAGE:	Refrigerate ampoule

DESCRIPTION:

PFAC-MXF is a solution/mixture of sodium dodecafluoro-3H-4,8-dioxanonanoate (NaDONA), the major and minor components of F-53B (9Cl-PF3ONS and 11Cl-PF3OUdS), and GenX (HFPO-DA). The components and their concentrations are given in Table A.

The individual native components of this mixture all have chemical purities of >98%.

DOCUMENTATION/ DATA ATTACHED:

Table A: Components and Concentrations of the Solution/Mixture
Figure 1: LC/MS Data (SIR)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

ADDITIONAL INFORMATION:

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acid to the methyl ester.

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Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
519-822-2436 • Fax: 519-822-2849 • info@well-labs.com

Form#:13, Issued 2004-11-10
Revision#:9, Revised 2020-12-23

Table A: **PFAC-MXI; Components and Concentrations (µg/mL; ± 5% in methanol)**

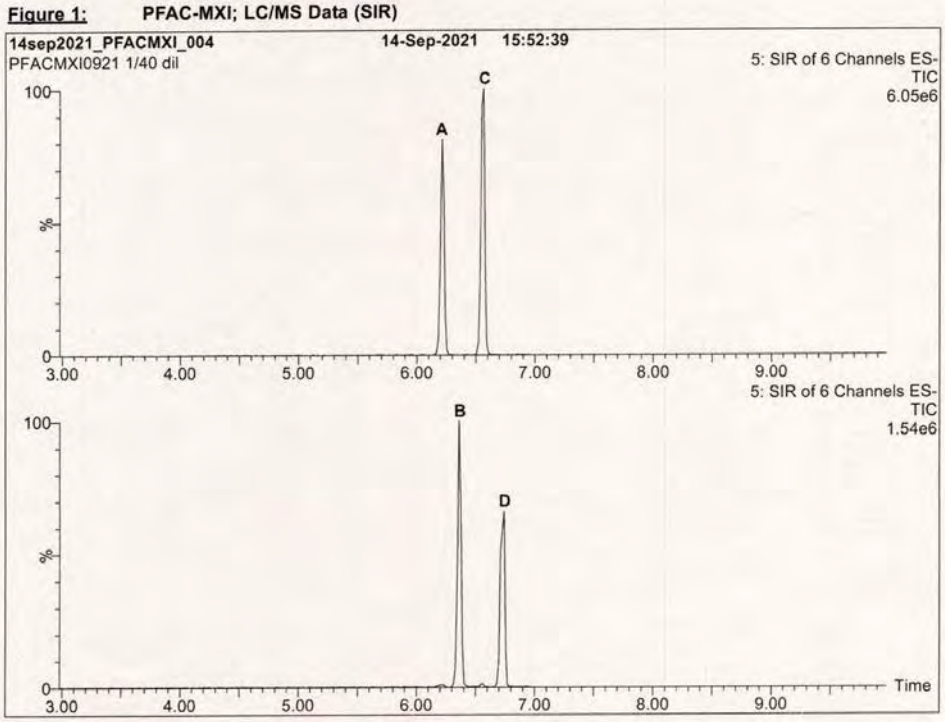
Compound	Acronym	Concentration (µg/mL)	Peak Assignment in Figure 1
N-methylperfluoro-1-octanesulfonamide	N-MeFOSA	1.00	B
N-ethylperfluoro-1-octanesulfonamide	N-EtFOSA	1.00	D
2-(N-methylperfluoro-1-octanesulfonamido)-ethanol	N-MeFOSE	10.0	A
2-(N-ethylperfluoro-1-octanesulfonamido)-ethanol	N-EtFOSE	10.0	C

Certified By: _____ **Date:** 09/23/2021
(mm/dd/yyyy)
B.G. Chittim, General Manager

Form#:13, Issued 2004-11-10
Revision#:9, Revised 2020-12-23

PFACMXI0921 (3 of 5)
rev0

Figure 1: **PFAC-MXI; LC/MS Data (SIR)**



Conditions for Figure 1:

Waters Acquity Ultra Performance LC
Waters Xevo TQ-S micro MS

Chromatographic Conditions:

Column: Acquity UPLC BEH Shield RP_{18}
1.7 µm, 2.1 x 100 mm

Mobile phase: Gradient
Start: 50% H_2O / 50% (80:20 MeOH:ACN)
(both with 10 mM NH_4OAc buffer)
Ramp to 90% organic over 9 min and hold for
2 min before returning to initial conditions in 1 min.
Time: 15 min

Flow: 300 µL/min

MS Parameters:

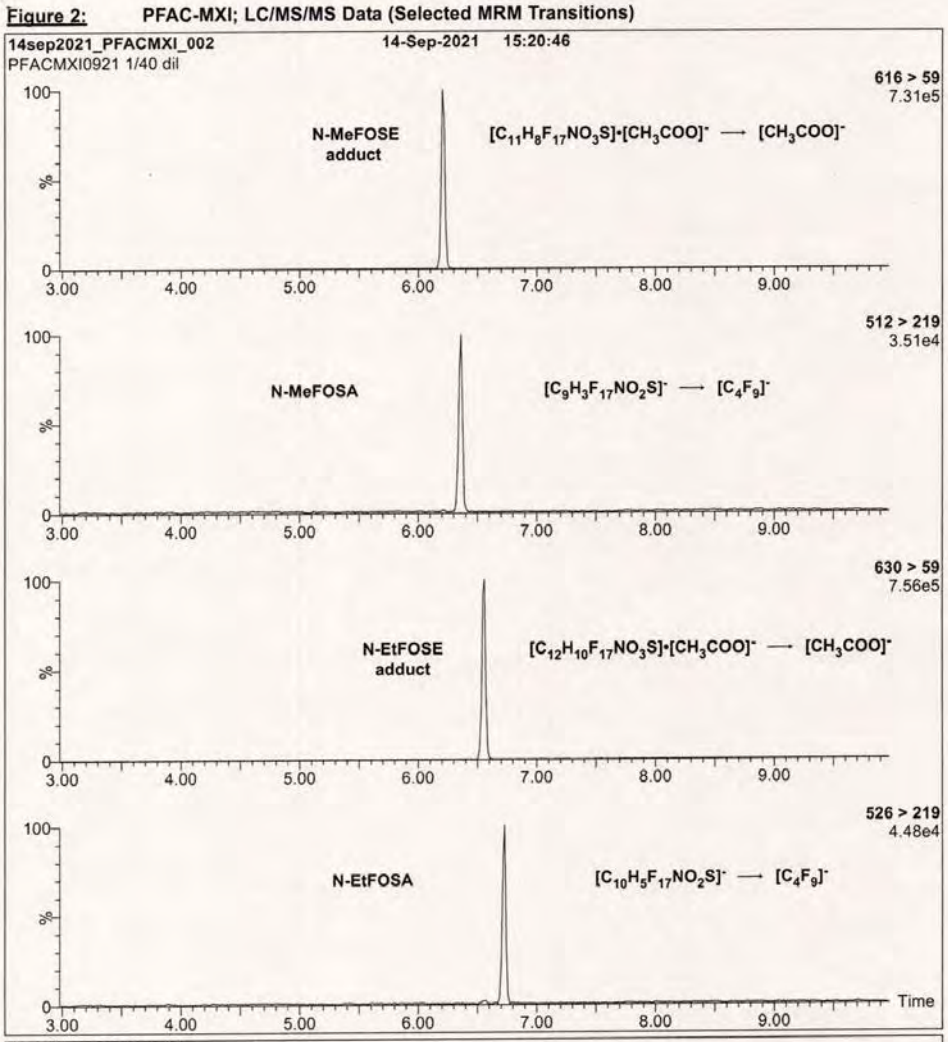
Experiment: SIR

Source: Electrospray (negative)
Capillary Voltage (kV) = 2.50
Cone Voltage (V) = variable (2-74)
Desolvation Temperature (°C) = 350
Desolvation Gas Flow (L/hr) = 1000

Form#:13, Issued 2004-11-10
Revision#:9, Revised 2020-12-23

PFACMXI0921 (4 of 5)
rev0

Figure 2: **PFAC-MXI; LC/MS/MS Data (Selected MRM Transitions)**



Conditions for Figure 2:

Injection: On-column (PFAC-MXI)

Mobile phase: Same as Figure 1

Flow: 300 µL/min

MS Parameters:
Collision Gas (mbar) = 3.31e-3
Collision Energy (eV) = 6-60 (variable)

Form#:13, Issued 2004-11-10
Revision#:9, Revised 2020-12-23

PFACMXI0921 (5 of 5)
rev0

YORK
ANALYTICAL LABORATORIES, INC.

Analytical Standard Record

Standard ID: **Y22B204**

Description:	PFAC-MXI-EPA 1633 Stock	Prepared:	02/17/2022
Standard Type:	Other	Expires:	02/17/2023
Solvent:	Methanol	Prepared By:	Robert Q. Bradley
Final Volume (mls):	1	Department:	PFAS
Vials:	1	Lot No.:	PFACMXI0921
Vendor:	Wellington Laboratories		
Comments:			

Analyte	CAS Number	Concentration	Units
N-EtFOSA	4151-50-2	1	ug/mL
N-EtFOSE	1691-99-2	10	ug/mL
N-MeFOSA	31506-32-8	1	ug/mL
N-MeFOSE	24448-09-7	10	ug/mL

Reviewed By: Date:

Page 1 of 1

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PFAC-MXI

Native Perfluorooctanesulfonamide and Perfluorooctanesulfonamidoethanol Solution/Mixture

PRODUCT CODE:	PFAC-MXI
LOT NUMBER:	PFACMXI0921
SOLVENT(S):	Methanol
DATE PREPARED: (mm/dd/yyyy)	09/08/2021
LAST TESTED: (mm/dd/yyyy)	09/14/2021
EXPIRY DATE: (mm/dd/yyyy)	09/14/2026
RECOMMENDED STORAGE:	Store ampoule in a cool, dark place

DESCRIPTION:

PFAC-MXI is a solution/mixture of two native perfluorooctanesulfonamides (FOSAs) and two native perfluorooctanesulfonamidoethanols (FOSEs). The components and their concentrations are given in Table A.

The individual components have a chemical purity of >98%.

DOCUMENTATION/ DATA ATTACHED:

Table A: Components and Concentrations of the Solution/Mixture
Figure 1: LC/MS Data (SIR)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

ADDITIONAL INFORMATION:

- See page 2 for further details.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
519-822-2436 • Fax: 519-822-2849 • info@well-labs.com

Form#:13, Issued 2004-11-10
Revision#:9, Revised 2020-12-23

INTENDED USE:

The products prepared by Wellington Laboratories Inc. are for laboratory use only. This certified reference material (CRM) was designed to be used as a standard for the identification and/or quantification of the specific chemical compounds it contains.

HANDLING:

This product should only be used by qualified personnel familiar with its potential hazards and trained in the handling of hazardous chemicals. Due care should be exercised to prevent unnecessary human contact or ingestion. All procedures should be carried out in a well-functioning fume hood and suitable gloves, eye protection, and clothing should be worn at all times. Waste should be disposed of according to national and regional regulations. Safety Data Sheets (SDSs) are available upon request.

SYNTHESIS / CHARACTERIZATION:

Our products are synthesized using single-product unambiguous routes whenever possible. They are then characterized, and their structures and purities confirmed, using a combination of the most relevant techniques, such as NMR, GC/MS, LC/MS/MS, SFC/UV/MS/MS, x-ray crystallography, and melting point. Isotopic purities of mass-labelled compounds are also confirmed using HRGC/HRMS and/or LC/MS/MS.

HOMOGENEITY:

Prior to solution preparation, crystalline material is tested for homogeneity using a variety of techniques (as stated above) and its solubility in a given diluent is taken into consideration. Duplicate solutions of a new product are prepared from the same crystalline lot and, after the addition of an appropriate internal standard, they are compared by GC/MS, LC/MS/MS, and/or SFC/UV/MS/MS. The relative response factors of the analyte of interest in each solution are required to be <5% RSD. New solution lots of existing products, as well as mixtures and calibration solutions, are compared to older lots in a similar manner. This further confirms the homogeneity of the crystalline material as well as the stability and homogeneity of the solutions in the storage containers. In order to maintain the integrity of the assigned value(s), and associated uncertainty, the dilution or injection of a subsample of this product should be performed using calibrated measuring equipment.

UNCERTAINTY:

The maximum combined relative standard uncertainty of our reference standard solutions is calculated using the following equation:

The combined relative standard uncertainty, $u_c(y)$, of a value y and the uncertainty of the independent parameters $x_1, x_2, \ldots x_n$ on which it depends is:

$$u_r(y(x_1, x_2, \ldots x_n)) = \sqrt{\sum_{i=1}^{n} u(y, x_i)^2}$$

where x is expressed as a relative standard uncertainty of the individual parameter.

The individual uncertainties taken into account include those associated with weights (calibration of the balance) and volumes (calibration of the volumetric glassware). An expanded maximum combined percent relative uncertainty of ±5% (calculated with a coverage factor of 2 and a level of confidence of 95%) is stated on the Certificate of Analysis for all of our products.

TRACEABILITY:

All reference standard solutions are traceable to specific crystalline lots. The microbalances used for solution preparation are regularly calibrated by an external ISO/IEC 17025 accredited laboratory. In addition, their calibration is verified prior to each weighing using calibrated external weights traceable to an ISO/IEC 17025 accredited laboratory. All volumetric glassware used is calibrated, of Class A tolerance, and traceable to an ISO/IEC 17025 accredited laboratory. For certain products, traceability to international interlaboratory studies has also been established.

EXPIRY DATE / PERIOD OF VALIDITY:

Ongoing stability studies of this product have demonstrated stability in its composition and concentration, until the specified expiry date, in the unopened ampoule. Monitoring for any degradation or change in concentration of the listed analyte(s) is performed on a routine basis.

LIMITED WARRANTY:

At the time of shipment, all products are warranted to be free of defects in material and workmanship and to conform to the stated technical and purity specifications.

QUALITY MANAGEMENT:

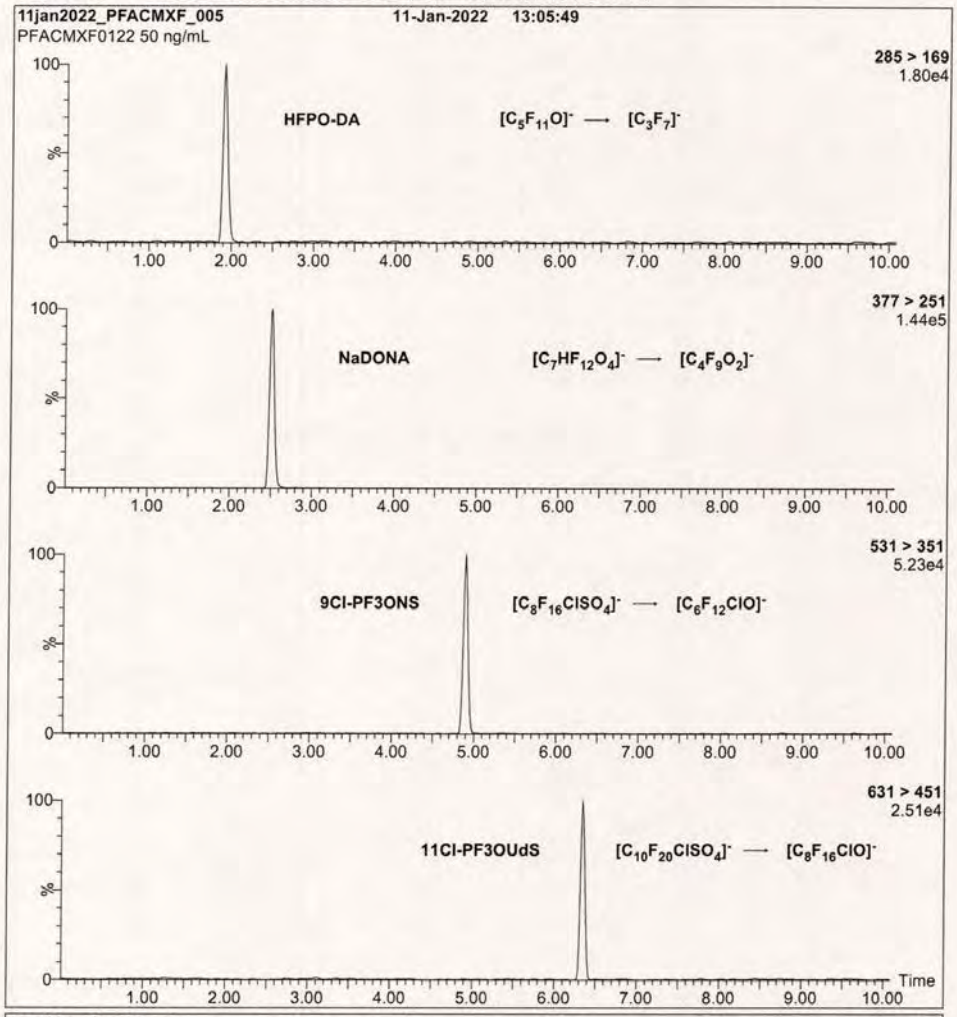
This product was produced using a Quality Management System registered to the latest versions of ISO 9001 by SAI Global, ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA; A1226), and ISO 17034 by ANSI National Accreditation Board (ANAB; AR-1523).

CALA Testing Accreditation No. A1226

ANAB ACCREDITED REFERENCE MATERIAL PRODUCER

For additional information or assistance concerning this or any other products from Wellington Laboratories Inc., please visit our website at www.well-labs.com or contact us directly at info@well-labs.com

Figure 2: **PFAC-MXF; LC/MS/MS Data (Selected MRM Transitions)**



Conditions for Figure 2:

Injection: On-column (PFAC-MXF)

Mobile phase: Same as Figure 1

Flow: 300 µL/min

MS Parameters:
Collision Gas (mbar) = 3.43e-3
Collision Energy (eV) = 6-60 (variable)

Form#:13, Issued 2004-11-10
Revision#:9, Revised 2020-12-23

PFACMXF0122 (5 of 5)
rev0

INTENDED USE:

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HANDLING:

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The combined relative standard uncertainty, $u_c(y)$, of a value y and the uncertainty of the independent parameters $x_1, x_2, \ldots x_n$ on which it depends is:

$$u_c(y(x_1, x_2, \ldots x_n)) = \sqrt{\sum_{i=1}^{n} u(y, x_i)^2}$$

where x is expressed as a relative standard uncertainty of the individual parameter.

The individual uncertainties taken into account include those associated with weights (calibration of the balance) and volumes (calibration of the volumetric glassware). An expanded maximum combined percent relative uncertainty of ±5% (calculated with a coverage factor of 2 and a level of confidence of 95%) is stated on the Certificate of Analysis for all of our products.

TRACEABILITY:

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EXPIRY DATE / PERIOD OF VALIDITY:

Ongoing stability studies of this product have demonstrated stability in its composition and concentration, until the specified expiry date, in the unopened ampoule. Monitoring for any degradation or change in concentration of the listed analyte(s) is performed on a routine basis.

LIMITED WARRANTY:

At the time of shipment, all products are warranted to be free of defects in material and workmanship and to conform to the stated technical and purity specifications.

QUALITY MANAGEMENT:

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CALA Testing Accreditation No. A1226

ANAB ANSI National Accreditation Board ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

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Form#:13, Issued 2004-11-10
Revision#:9, Revised 2020-12-23

PFACMXF0122 (2 of 5)
rev0

Table A: **PFAC-MXF; Components and Concentrations (ng/mL; ± 5% in Methanol/Water (<1%))**

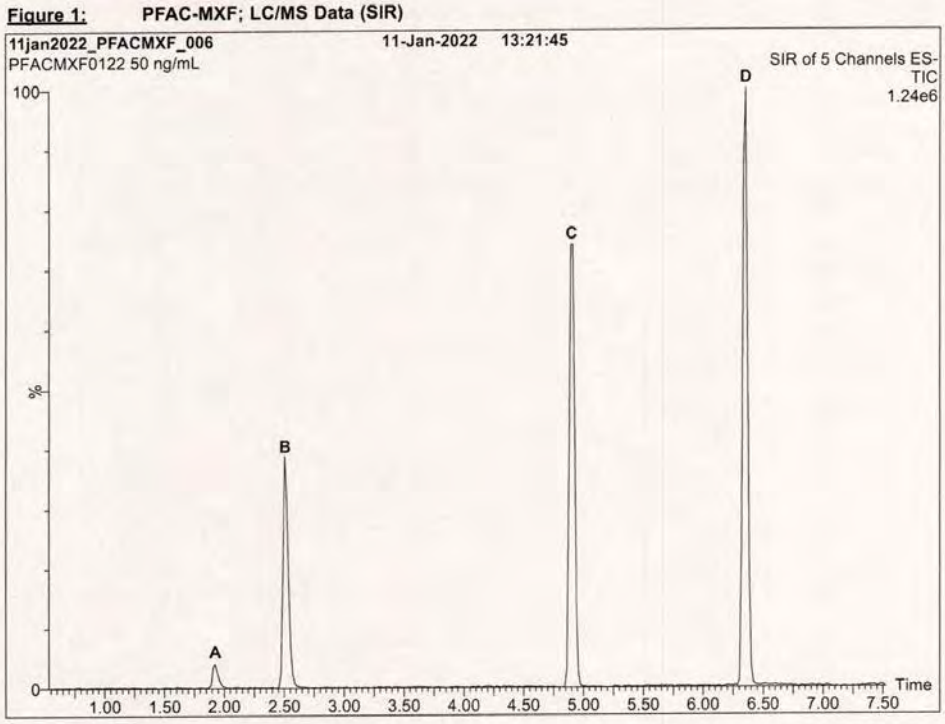
Compound	Acronym	Concentration* (ng/ml)	Peak Assignment in Figure 1
2,3,3,3-Tetrafluoro-2-(1,1,2,2,3,3,3-heptafluoropropoxy)-propanoic acid	HFPO-DA	2000	A

Compound	Acronym	Concentration* (ng/mL)		Peak Assignment in Figure 1
		as the salt	as the acid	
Sodium dodecafluoro-3H-4,8-dioxanonanoate	NaDONA	2000	1890	B
Potassium 9-chlorohexadecafluoro-3-oxanonane-1-sulfonate	9Cl-PF3ONS	2000	1870	C
Potassium 11-chloroeicosafluoro-3-oxaundecane-1-sulfonate	11Cl-PF3OUdS	2000	1890	D

* Concentrations have been rounded to three significant figures.

Certified By: _____ **Date:** 01/12/2022
(mm/dd/yyyy)
B.G. Chittim, General Manager

Figure 1: **PFAC-MXF; LC/MS Data (SIR)**



Conditions for Figure 1:

Waters Acquity Ultra Performance LC
Waters Xevo TQ-S micro MS

Chromatographic Conditions:

Column: Acquity UPLC BEH Shield RP_{18}
1.7 µm, 2.1 x 100 mm

Mobile phase: Gradient
Start: 45% H_2O / 55% (80:20 MeOH:ACN)
(both with 10 mM NH_4OAc buffer)
Ramp to 90% organic over 8 min and hold for 2 min
before returning to initial conditions in 0.75 min.
Time: 12 min

Flow: 300 µL/min

MS Parameters:

Experiment: SIR

Source: Electrospray (negative)
Capillary Voltage (kV) = 2.00
Cone Voltage (V) = variable (15-74)
Desolvation Temperature (°C) = 325
Desolvation Gas Flow (L/hr) = 1000

Form#:13, Issued 2004-11-10
Revision#:9, Revised 2020-12-23

PFACMXF0122 (4 of 5)
rev0

YORK
ANALYTICAL LABORATORIES, INC.

Analytical Standard Record

Standard ID: **Y22B199**

Description:	PFAC-MXF-Native Repl.STOCK EPA 1633 PFAS	Prepared:	02/17/2022
Standard Type:	Other	Expires:	01/11/2025
Solvent:	MeOH/H20	Prepared By:	Robert Q. Bradley
Final Volume (mls):	1	Department:	PFAS
Vials:	1	Lot No.:	PFACMXF0122
Vendor:	Wellington Laboratories		
Comments:			

Analyte	CAS Number	Concentration	Units
11CL-PF3OUdS	763051-92-9	1.89	ug/mL
9CL-PF3ONS	756426-58-1	1.87	ug/mL
ADONA	919005-14-4	1.89	ug/mL
HFPO-DA (Gen-X)	13252-13-6	2	ug/mL

Reviewed By: Date:

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WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PFAC-MXF

Native Replacement PFAS Solution/Mixture

PRODUCT CODE:	PFAC-MXF
LOT NUMBER:	PFACMXF0122
SOLVENT(S):	Methanol / Water (<1%)
DATE PREPARED: (mm/dd/yyyy)	01/10/2022
LAST TESTED: (mm/dd/yyyy)	01/11/2022
EXPIRY DATE: (mm/dd/yyyy)	01/11/2025
RECOMMENDED STORAGE:	Refrigerate ampoule

DESCRIPTION:

PFAC-MXF is a solution/mixture of sodium dodecafluoro-3H-4,8-dioxanonanoate (NaDONA), the major and minor components of F-53B (9Cl-PF3ONS and 11Cl-PF3OUdS), and GenX (HFPO-DA). The components and their concentrations are given in Table A.

The individual native components of this mixture all have chemical purities of >98%.

DOCUMENTATION/ DATA ATTACHED:

Table A: Components and Concentrations of the Solution/Mixture
Figure 1: LC/MS Data (SIR)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

ADDITIONAL INFORMATION:

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acid to the methyl ester.

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Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
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Form#:13, Issued 2004-11-10
Revision#:9, Revised 2020-12-23

Table A: **PFAC-MXJ; Components and Concentrations (µg/mL; ± 5% in methanol)**

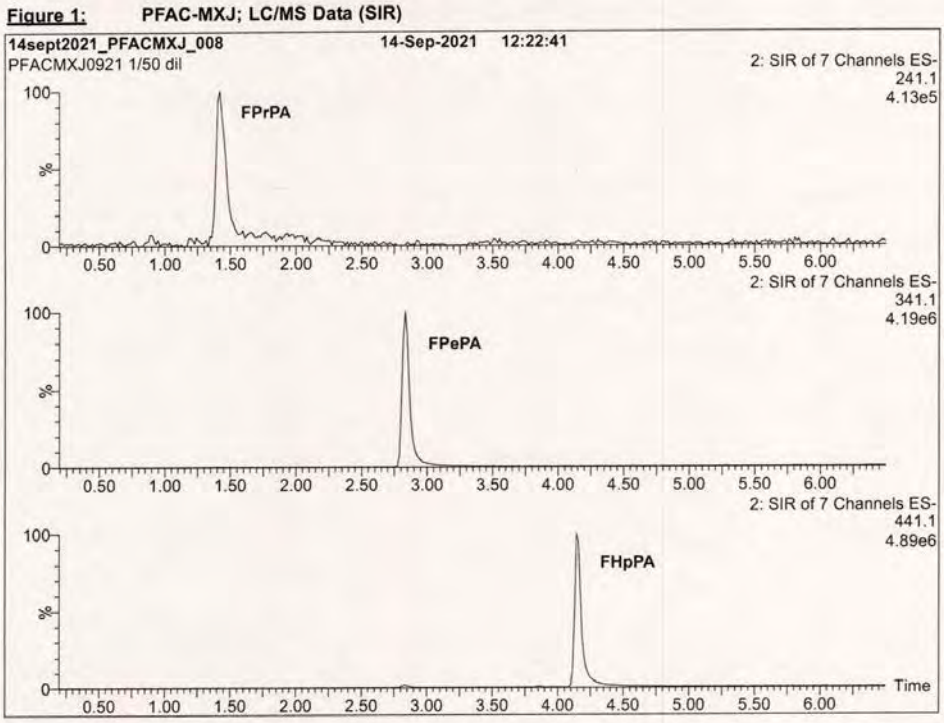
Compound	Acronym	Concentration (µg/mL)
3-Perfluoropropyl propanoic acid	FPrPA	4.00
3-Perfluoropentyl propanoic acid	FPePA	20.0
3-Perfluoroheptyl propanoic acid	FHpPA	20.0

Certified By: _____ **Date:** 10/02/2021
(mm/dd/yyyy)
B.G. Chittim, General Manager

Form#:13, Issued 2004-11-10
Revision#:9, Revised 2020-12-23

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rev1

Figure 1: **PFAC-MXJ; LC/MS Data (SIR)**



Conditions for Figure 1:

Waters Acquity Ultra Performance LC
Waters Xevo TQ-S micro MS

Chromatographic Conditions:

Column: Acquity UPLC BEH Shield RP_{18}
1.7 µm, 2.1 x 100 mm

Mobile phase: Gradient
Start: 50% H_2O / 50% (80:20 MeOH:ACN)
(both with 10 mM NH_4OAc buffer)
Ramp to 90% organic over 9 min and hold for
2 min before returning to initial conditions in 1 min.
Time: 15 min

Flow: 300 µL/min

MS Parameters:

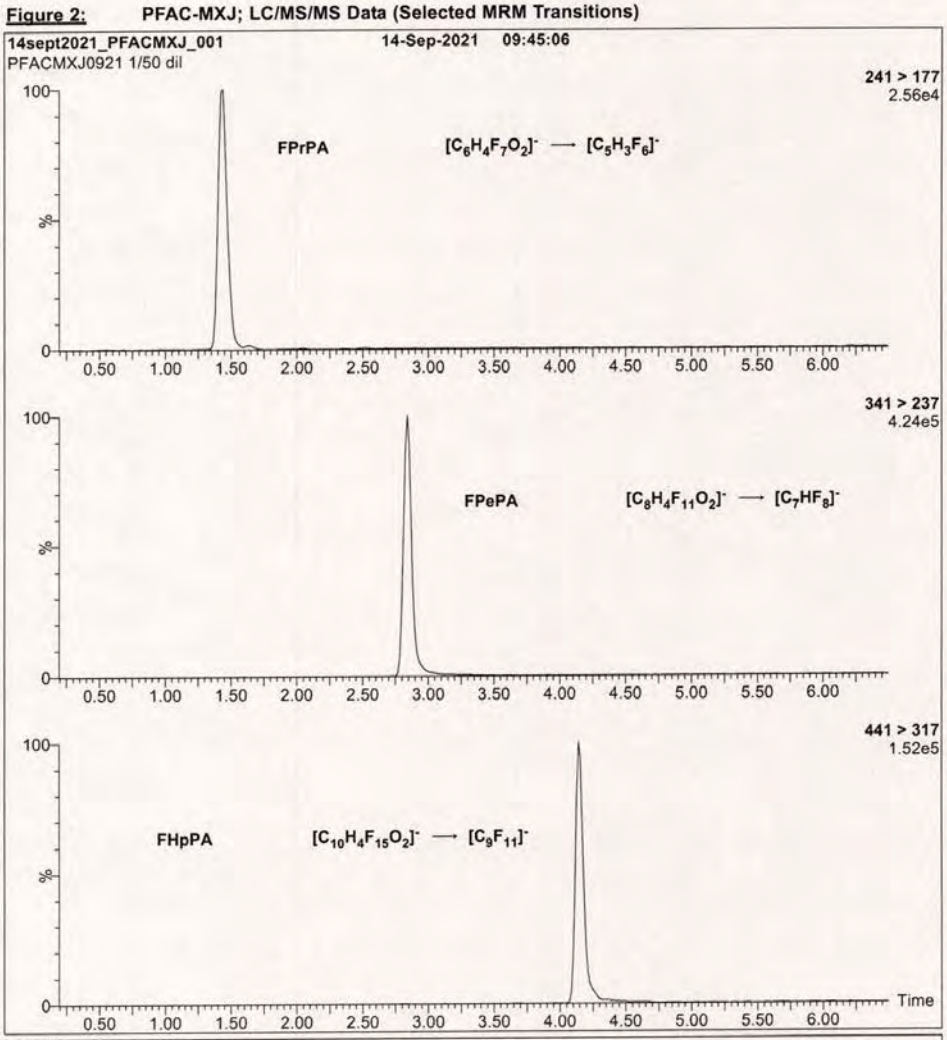
Experiment: SIR

Source: Electrospray (negative)
Capillary Voltage (kV) = 2.50
Cone Voltage (V) = variable (2-74)
Desolvation Temperature (°C) = 350
Desolvation Gas Flow (L/hr) = 1000

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rev1

Figure 2: **PFAC-MXJ; LC/MS/MS Data (Selected MRM Transitions)**



Conditions for Figure 2:

Injection: On-column (PFAC-MXJ)

Mobile phase: Same as Figure 1

Flow: 300 µL/min

MS Parameters:
Collision Gas (mbar) = 3.31e-3
Collision Energy (eV) = 6-60 (variable)

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rev1

YORK
ANALYTICAL LABORATORIES, INC.

Analytical Standard Record

Standard ID: **Y22B205**

Description:	PFAC-MXJ-EPA 1633 Stock mix	Prepared:	02/17/2022
Standard Type:	Other	Expires:	09/14/2026
Solvent:	Methanol	Prepared By:	Robert Q. Bradley
Final Volume (mls):	1	Department:	PFAS
Vials:	1	Lot No.:	PFACMXJ0921
Vendor:	Wellington Laboratories		

Comments:

Analyte	CAS Number	Concentration	Units
3-Perfluoroheptyl propanoic acid (FHpPA	812-70-4	20	ug/mL
3-Perfluoropentyl propanoic acid (FPePA)	914637-49-3	20	ug/mL
3-Perfluoropropyl propanoic acid (FPrPA)	356-02-2	4	ug/mL

Reviewed By Date

Page 1 of 1

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PFAC-MXJ

Native X:3 Fluorotelomer Carboxylic Acid Solution/Mixture

PRODUCT CODE:	PFAC-MXJ
LOT NUMBER:	PFACMXJ0921
SOLVENT(S):	Methanol
DATE PREPARED: (mm/dd/yyyy)	09/08/2021
LAST TESTED: (mm/dd/yyyy)	09/14/2021
EXPIRY DATE: (mm/dd/yyyy)	09/14/2026
RECOMMENDED STORAGE:	Store ampoule in a cool, dark place

DESCRIPTION:

PFAC-MXJ is a solution/mixture of three native X:3 fluorotelomer carboxylic acids. The components and their concentrations are given in Table A.

The individual components have a chemical purity of >98%.

DOCUMENTATION/ DATA ATTACHED:

Table A: Components and Concentrations of the Solution/Mixture
Figure 1: LC/MS Data (SIR)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

ADDITIONAL INFORMATION:

- See page 2 for further details.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

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Form#:13, Issued 2004-11-10
Revision#:9, Revised 2020-12-23

INTENDED USE:

The products prepared by Wellington Laboratories Inc. are for laboratory use only. This certified reference material (CRM) was designed to be used as a standard for the identification and/or quantification of the specific chemical compounds it contains.

HANDLING:

This product should only be used by qualified personnel familiar with its potential hazards and trained in the handling of hazardous chemicals. Due care should be exercised to prevent unnecessary human contact or ingestion. All procedures should be carried out in a well-functioning fume hood and suitable gloves, eye protection, and clothing should be worn at all times. Waste should be disposed of according to national and regional regulations. Safety Data Sheets (SDSs) are available upon request.

SYNTHESIS / CHARACTERIZATION:

Our products are synthesized using single-product unambiguous routes whenever possible. They are then characterized, and their structures and purities confirmed, using a combination of the most relevant techniques, such as NMR, GC/MS, LC/MS/MS, SFC/UV/MS/MS, x-ray crystallography, and melting point. Isotopic purities of mass-labelled compounds are also confirmed using HRGC/HRMS and/or LC/MS/MS.

HOMOGENEITY:

Prior to solution preparation, crystalline material is tested for homogeneity using a variety of techniques (as stated above) and its solubility in a given diluent is taken into consideration. Duplicate solutions of a new product are prepared from the same crystalline lot and, after the addition of an appropriate internal standard, they are compared by GC/MS, LC/MS/MS, and/or SFC/UV/MS/MS. The relative response factors of the analyte of interest in each solution are required to be <5% RSD. New solution lots of existing products, as well as mixtures and calibration solutions, are compared to older lots in a similar manner. This further confirms the homogeneity of the crystalline material as well as the stability and homogeneity of the solutions in the storage containers. In order to maintain the integrity of the assigned value(s), and associated uncertainty, the dilution or injection of a subsample of this product should be performed using calibrated measuring equipment.

UNCERTAINTY:

The maximum combined relative standard uncertainty of our reference standard solutions is calculated using the following equation:

The combined relative standard uncertainty, $u_c(y)$, of a value y and the uncertainty of the independent parameters $x_1, x_2, \ldots x_n$ on which it depends is:

$$u_c(y(x_1, x_2, \ldots x_n)) = \sqrt{\sum_{i=1}^{n} u(y, x_i)^2}$$

where x is expressed as a relative standard uncertainty of the individual parameter.

The individual uncertainties taken into account include those associated with weights (calibration of the balance) and volumes (calibration of the volumetric glassware). An expanded maximum combined percent relative uncertainty of ±5% (calculated with a coverage factor of 2 and a level of confidence of 95%) is stated on the Certificate of Analysis for all of our products.

TRACEABILITY:

All reference standard solutions are traceable to specific crystalline lots. The microbalances used for solution preparation are regularly calibrated by an external ISO/IEC 17025 accredited laboratory. In addition, their calibration is verified prior to each weighing using calibrated external weights traceable to an ISO/IEC 17025 accredited laboratory. All volumetric glassware used is calibrated, of Class A tolerance, and traceable to an ISO/IEC 17025 accredited laboratory. For certain products, traceability to international interlaboratory studies has also been established.

EXPIRY DATE / PERIOD OF VALIDITY:

Ongoing stability studies of this product have demonstrated stability in its composition and concentration, until the specified expiry date, in the unopened ampoule. Monitoring for any degradation or change in concentration of the listed analyte(s) is performed on a routine basis.

LIMITED WARRANTY:

At the time of shipment, all products are warranted to be free of defects in material and workmanship and to conform to the stated technical and purity specifications.

QUALITY MANAGEMENT:

This product was produced using a Quality Management System registered to the latest versions of ISO 9001 by SAI Global, ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA; A1226), and ISO 17034 by ANSI National Accreditation Board (ANAB; AR-1523).

CALA Testing Accreditation No. A1226

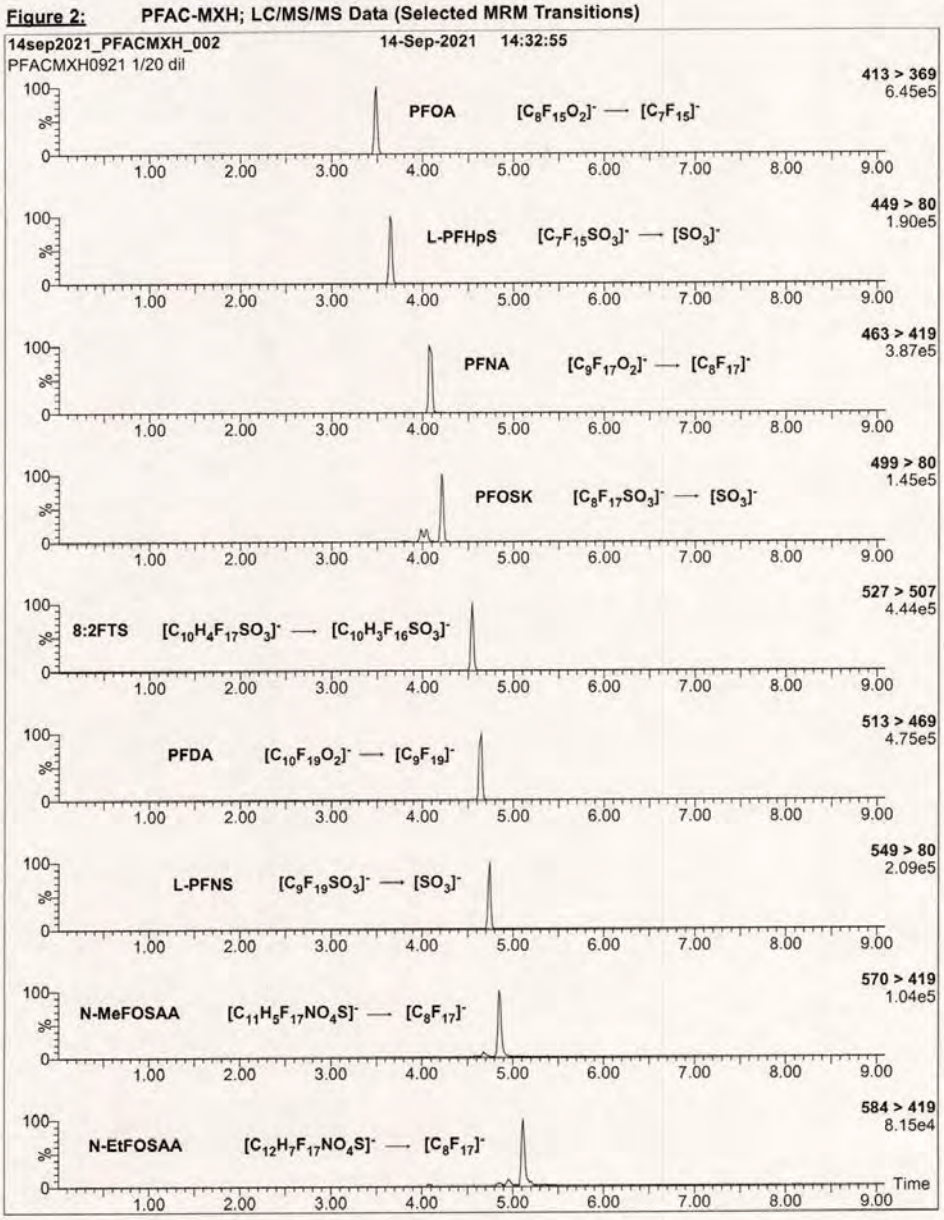
ANAB ANSI National Accreditation Board ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

For additional information or assistance concerning this or any other products from Wellington Laboratories Inc., please visit our website at www.well-labs.com or contact us directly at info@well-labs.com

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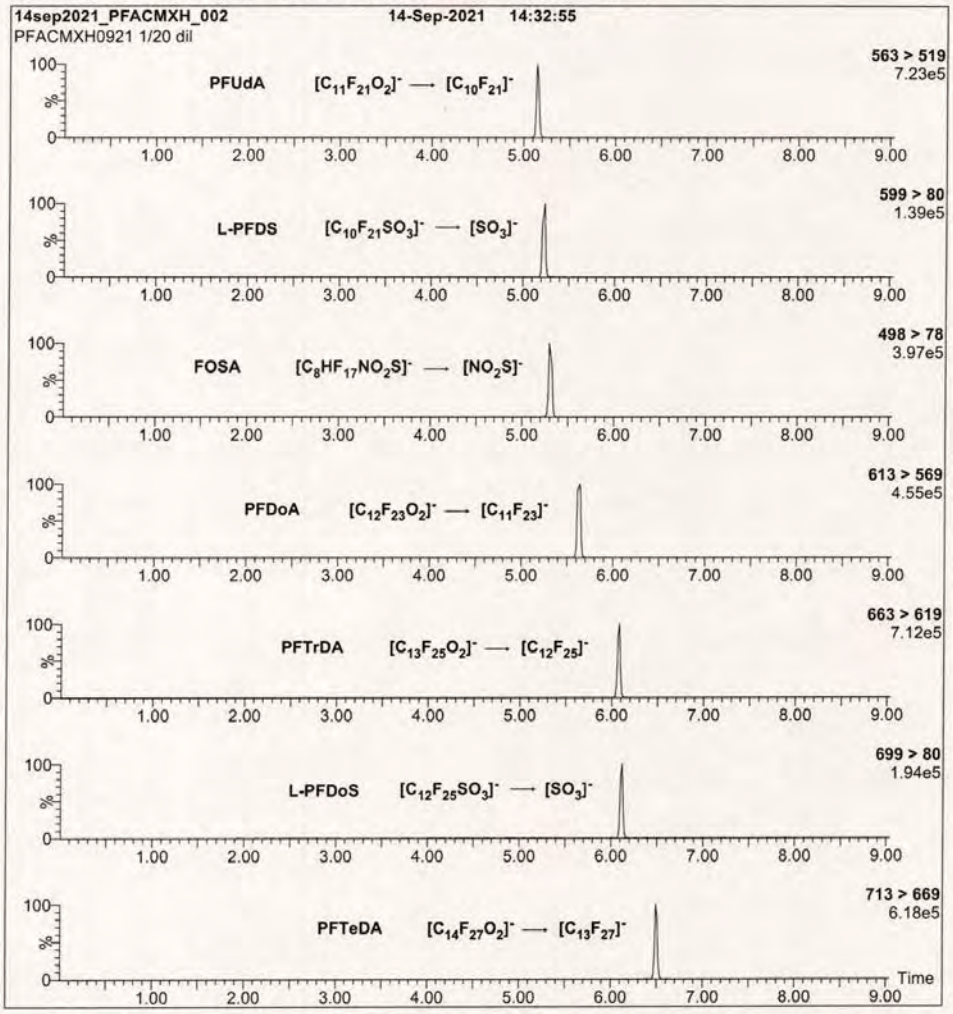
Figure 2: **PFAC-MXH; LC/MS/MS Data (Selected MRM Transitions)**



Form#:13, Issued 2004-11-10
Revision#:9, Revised 2020-12-23

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rev0

Figure 2: **PFAC-MXH; LC/MS/MS Data (Selected MRM Transitions)**



Conditions for Figure 2:

Injection: On-column (PFAC-MXH)

Mobile phase: Same as Figure 1

Flow: 300 µL/min

MS Parameters:
Collision Gas (mbar) = 3.31e-3
Collision Energy (eV) = 6-60 (variable)

Form#:13, Issued 2004-11-10
Revision#:9, Revised 2020-12-23

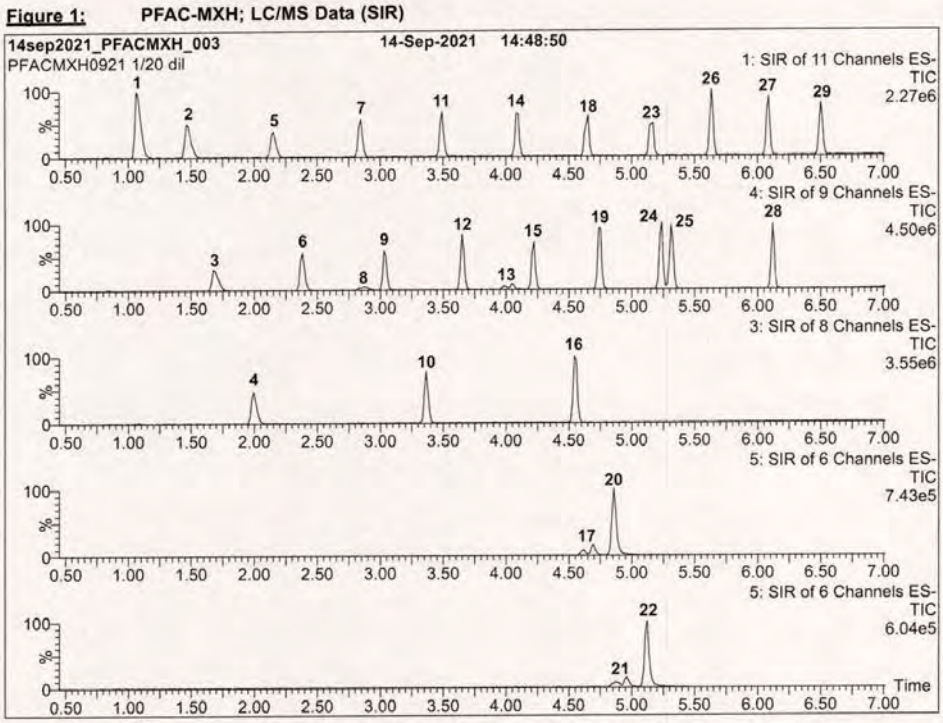
PFACMXH0921 (11 of 11)
rev0

Table E: **PFOSK; Isomeric Components and Percent Composition (by ^{19}F-NMR)***

Isomer	Compound	Structure	Percent Composition by ^{19}F-NMR	
1	Potassium perfluoro-1-octanesulfonate	$CF_3CF_2CF_2CF_2CF_2CF_2CF_2CF_2SO_3^-K^+$	78.8	78.8
2	Potassium 1-trifluoromethylperfluoroheptanesulfonate**	$CF_3CF_2CF_2CF_2CF_2CF_2CF(CF_3)SO_3^-K^+$	1.2	21.1
3	Potassium 2-trifluoromethylperfluoroheptanesulfonate	$CF_3CF_2CF_2CF_2CF_2CF(CF_3)CF_2SO_3^-K^+$	0.6	
4	Potassium 3-trifluoromethylperfluoroheptanesulfonate	$CF_3CF_2CF_2CF_2CF(CF_3)CF_2CF_2SO_3^-K^+$	1.9	
5	Potassium 4-trifluoromethylperfluoroheptanesulfonate	$CF_3CF_2CF_2CF(CF_3)CF_2CF_2CF_2SO_3^-K^+$	2.2	
6	Potassium 5-trifluoromethylperfluoroheptanesulfonate	$CF_3CF_2CF(CF_3)CF_2CF_2CF_2CF_2SO_3^-K^+$	4.5	
7	Potassium 6-trifluoromethylperfluoroheptanesulfonate	$CF_3CF(CF_3)CF_2CF_2CF_2CF_2CF_2SO_3^-K^+$	10.0	
8	Potassium 5,5-di(trifluoromethyl)perfluorohexanesulfonate	$CF_3C(CF_3)CF_2CF_2CF_2CF_2SO_3^-K^+$	0.2	
9	Potassium 4,4-di(trifluoromethyl)perfluorohexanesulfonate	$CF_3CF_2C(CF_3)CF_2CF_2CF_2SO_3^-K^+$	0.03	
10	Potassium 4,5-di(trifluoromethyl)perfluorohexanesulfonate	$CF_3CF(CF_3)CF_2CF_2CF_2SO_3^-K^+$	0.4	
11	Potassium 3,5-di(trifluoromethyl)perfluorohexanesulfonate	$CF_3CF(CF_3)CF_2CF_2CF_2SO_3^-K^+$	0.07	

* Percent of total perfluorooctanesulfonate isomers only.
** Systematic Name: Potassium perfluorooctane-2-sulfonate.

Figure 1: **PFAC-MXH; LC/MS Data (SIR)**



Conditions for Figure 1:

Waters Acquity Ultra Performance LC
Waters Xevo TQ-S micro MS

Chromatographic Conditions:

Column: Acquity UPLC BEH Shield RP_{18}
1.7 µm, 2.1 x 100 mm

Mobile phase: Gradient
Start: 50% H_2O / 50% (80:20 MeOH:ACN)
(both with 10 mM NH_4OAc buffer)
Ramp to 90% organic over 9 min and hold for 2 min
before returning to initial conditions in 1 min.
Time: 15 min

Flow: 300 µL/min

MS Parameters:

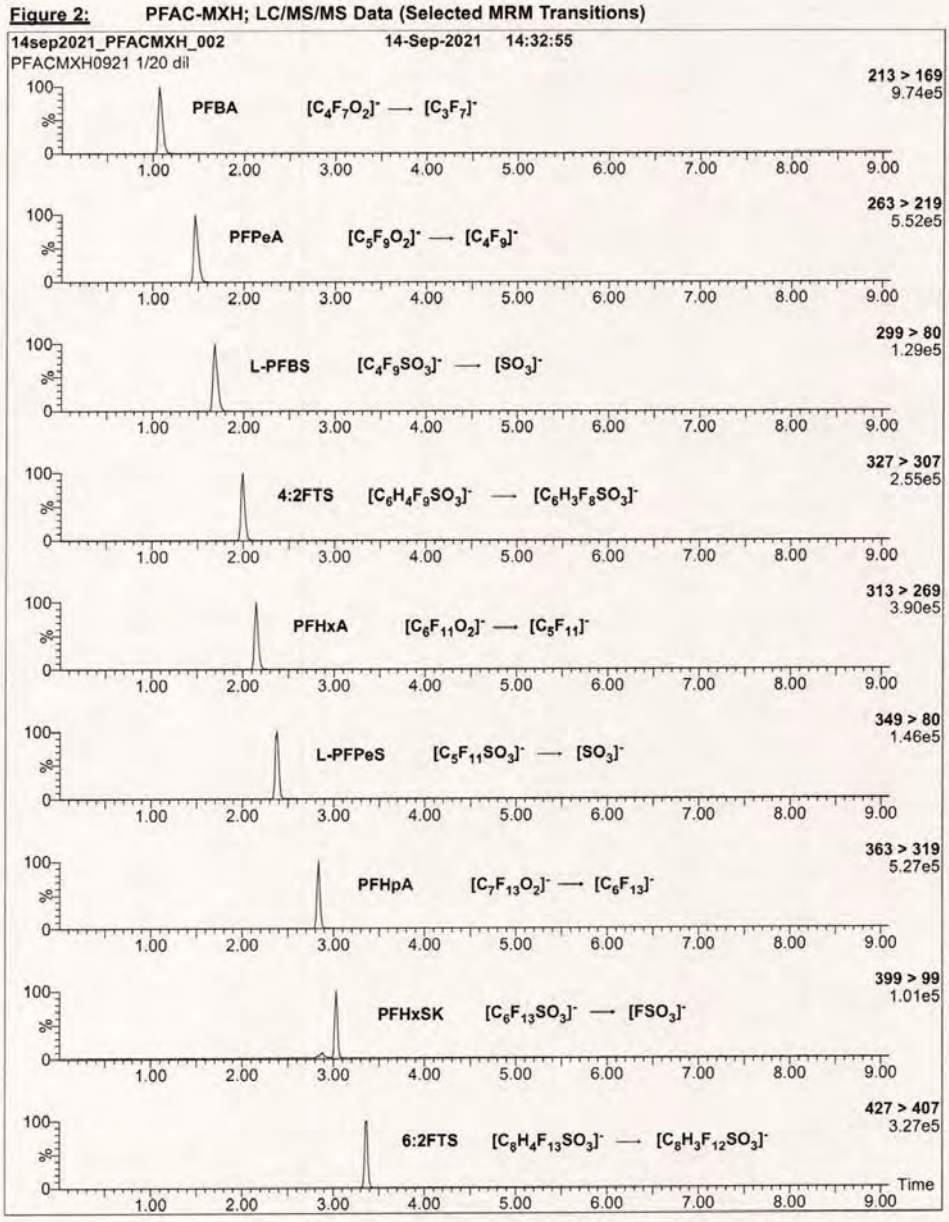
Experiment: SIR

Source: Electrospray (negative)
Capillary Voltage (kV) = 2.50
Cone Voltage (V) = variable (2-74)
Desolvation Temperature (°C) = 350
Desolvation Gas Flow (L/hr) = 1000

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Figure 2: **PFAC-MXH; LC/MS/MS Data (Selected MRM Transitions)**



Form#:13, Issued 2004-11-10
Revision#:9, Revised 2020-12-23

PFACMXH0921 (9 of 11)
rev0

Table B: **br-NMeFOSAA; Isomeric Components and Percent Composition (by ^{19}F-NMR)***

Isomer	Compound	Structure	Percent Composition by ^{19}F-NMR	
1	N-methylperfluoro-1-octanesulfonamidoacetic acid	$CF_3(CF_2)_7SO_2N(CH_3)CH_2CO_2H$	76.0	76.0
2	N-methylperfluoro-3-methylheptanesulfonamidoacetic acid	$CF_3(CF_2)_3CF(CF_3)(CF_2)_2SO_2N(CH_3)CH_2CO_2H$	0.7	24.0
3	N-methylperfluoro-4-methylheptanesulfonamidoacetic acid	$CF_3(CF_2)_2CF(CF_3)(CF_2)_3SO_2N(CH_3)CH_2CO_2H$	2.0	
4	N-methylperfluoro-5-methylheptanesulfonamidoacetic acid	$CF_3CF_2CF(CF_3)(CF_2)_4SO_2N(CH_3)CH_2CO_2H$	6.0	
5	N-methylperfluoro-6-methylheptanesulfonamidoacetic acid	$CF_3CF(CF_3)(CF_2)_5SO_2N(CH_3)CH_2CO_2H$	14.0	
6	N-methylperfluoro-5,5-dimethylhexanesulfonamidoacetic acid	$CF_3C(CF_3)_2(CF_2)_4SO_2N(CH_3)CH_2CO_2H$	0.2	
7	Other Unidentified Isomers		1.1	

* Percent of total N-methylperfluorooctanesulfonamidoacetic acid isomers only.

Table C: **br-NEtFOSAA; Isomeric Components and Percent Composition (by ^{19}F-NMR)***

Isomer	Compound	Structure	Percent Composition by ^{19}F-NMR	
1	N-ethylperfluoro-1-octanesulfonamidoacetic acid	$CF_3(CF_2)_7SO_2NCH_2CO_2H$ C_2H_5	77.5	77.5
2	N-ethylperfluoro-3-methylheptanesulfonamidoacetic acid	$CF_3(CF_2)_3CF(CF_2)_2SO_2NCH_2CO_2H$ CF_3 C_2H_5	2.3	22.5
3	N-ethylperfluoro-4-methylheptanesulfonamidoacetic acid	$CF_3(CF_2)_2CF(CF_2)_3SO_2NCH_2CO_2H$ CF_3 C_2H_5	2.2	
4	N-ethylperfluoro-5-methylheptanesulfonamidoacetic acid	$CF_3CF_2CF(CF_2)_4SO_2NCH_2CO_2H$ CF_3 C_2H_5	5.4	
5	N-ethylperfluoro-6-methylheptanesulfonamidoacetic acid	$CF_3CF(CF_2)_5SO_2NCH_2CO_2H$ CF_3 C_2H_5	10.4	
6	N-ethylperfluoro-5,5-dimethylhexanesulfonamidoacetic acid	$CF_3C(CF_2)_4SO_2NCH_2CO_2H$ CF_3 C_2H_5	0.3	
7	N-ethylperfluoro-4,5-dimethylhexanesulfonamidoacetic acid	$CF_3CFCF(CF_2)_3SO_2NCH_2CO_2H$ CF_3 C_2H_5	0.3	
8	N-ethylperfluoro-3,5-dimethylhexanesulfonamidoacetic acid	$CF_3CFCF_2CF(CF_2)_2SO_2NCH_2CO_2H$ CF_3 C_2H_5	0.3	
9	Other Unidentified Isomers		1.3	

* Percent of total N-ethylperfluorooctanesulfonamidoacetic acid isomers only.

Table D: **PFHxSK; Isomeric Components and Percent Composition (by ^{19}F-NMR)***

Isomer	Compound	Structure	Percent Composition by ^{19}F-NMR	
1	Potassium perfluoro-1-hexanesulfonate	$CF_3CF_2CF_2CF_2CF_2CF_2SO_3^-K^+$	81.1	81.1
2	Potassium 1-trifluoromethylperfluoropentanesulfonate**	$CF_3CF_2CF_2CF_2CF(CF_3)SO_3^-K^+$	2.9	18.9
3	Potassium 2-trifluoromethylperfluoropentanesulfonate	$CF_3CF_2CF_2CF(CF_3)CF_2SO_3^-K^+$	1.4	
4	Potassium 3-trifluoromethylperfluoropentanesulfonate	$CF_3CF_2CF(CF_3)CF_2CF_2SO_3^-K^+$	5.0	
5	Potassium 4-trifluoromethylperfluoropentanesulfonate	$CF_3CF(CF_3)CF_2CF_2CF_2SO_3^-K^+$	8.9	
6	Potassium 3,3-di(trifluoromethyl)perfluorobutanesulfonate	$CF_3C(CF_3)CF_2CF_2SO_3^-K^+$	0.2	
7	Other Unidentified Isomers		0.5	

* Percent of total perfluorohexanesulfonate isomers only.
** Systematic Name: Potassium perfluorohexane-2-sulfonate.

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

PFAC-MXH

Native Per- and Poly-fluoroalkyl Substance Solution/Mixture

PRODUCT CODE:	PFAC-MXH
LOT NUMBER:	PFACMXH0921
SOLVENT(S):	Methanol / Isopropanol (2%) / Water (<1%)
DATE PREPARED: (mm/dd/yyyy)	09/09/2021
LAST TESTED: (mm/dd/yyyy)	09/14/2021
EXPIRY DATE: (mm/dd/yyyy)	09/14/2026
RECOMMENDED STORAGE:	Refrigerate ampoule

DESCRIPTION:

PFAC-MXH is a solution/mixture of eleven native linear perfluoroalkylcarboxylic acids (C_4-C_{14}), eight native perfluoroalkanesulfonates (C_4, C_6, C_7, C_8, C_{10} and C_{12} linear; C_6 and C_8 linear and branched), three native fluorotelomer sulfonates (4:2, 6:2, and 8:2), two native linear and branched perfluorooctanesulfonamidoacetic acids, and perfluoro-1-octanesulfonamide (FOSA). The components and their concentrations are given in Table A.

The individual components of this mixture all have chemical purities of >98%.

DOCUMENTATION/ DATA ATTACHED:

Table A: Components and Concentrations of the Solution/Mixture
Table B: Isomeric Components and Percent Composition of br-NMeFOSAA
Table C: Isomeric Components and Percent Composition of br-NEtFOSAA
Table D: Isomeric Components and Percent Composition of PFHxSK
Table E: Isomeric Components and Percent Composition of PFOSK
Figure 1: LC/MS Data (SIR)
Figure 2: LC/MS/MS Data (Selected MRM Transitions)

ADDITIONAL INFORMATION:

- See page 2 for further details.
- Contains 4 mole eq. of NaOH to prevent conversion of the carboxylic acids to their respective methyl esters.

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INTENDED USE:

The products prepared by Wellington Laboratories Inc. are for laboratory use only. This certified reference material (CRM) was designed to be used as a standard for the identification and/or quantification of the specific chemical compounds it contains.

HANDLING:

This product should only be used by qualified personnel familiar with its potential hazards and trained in the handling of hazardous chemicals. Due care should be exercised to prevent unnecessary human contact or ingestion. All procedures should be carried out in a well-functioning fume hood and suitable gloves, eye protection, and clothing should be worn at all times. Waste should be disposed of according to national and regional regulations. Safety Data Sheets (SDSs) are available upon request.

SYNTHESIS / CHARACTERIZATION:

Our products are synthesized using single-product unambiguous routes whenever possible. They are then characterized, and their structures and purities confirmed, using a combination of the most relevant techniques, such as NMR, GC/MS, LC/MS/MS, SFC/UV/MS/MS, x-ray crystallography, and melting point. Isotopic purities of mass-labelled compounds are also confirmed using HRGC/HRMS and/or LC/MS/MS.

HOMOGENEITY:

Prior to solution preparation, crystalline material is tested for homogeneity using a variety of techniques (as stated above) and its solubility in a given diluent is taken into consideration. Duplicate solutions of a new product are prepared from the same crystalline lot and, after the addition of an appropriate internal standard, they are compared by GC/MS, LC/MS/MS, and/or SFC/UV/MS/MS. The relative response factors of the analyte of interest in each solution are required to be <5% RSD. New solution lots of existing products, as well as mixtures and calibration solutions, are compared to older lots in a similar manner. This further confirms the homogeneity of the crystalline material as well as the stability and homogeneity of the solutions in the storage containers. In order to maintain the integrity of the assigned value(s), and associated uncertainty, the dilution or injection of a subsample of this product should be performed using calibrated measuring equipment.

UNCERTAINTY:

The maximum combined relative standard uncertainty of our reference standard solutions is calculated using the following equation:

The combined relative standard uncertainty, $u_c(y)$, of a value y and the uncertainty of the independent parameters $x_1, x_2, \ldots x_n$ on which it depends is:

$$u_c(y(x_1, x_2, \ldots x_n)) = \sqrt{\sum_{i=1}^{n} u(y, x_i)^2}$$

where x is expressed as a relative standard uncertainty of the individual parameter.

The individual uncertainties taken into account include those associated with weights (calibration of the balance) and volumes (calibration of the volumetric glassware). An expanded maximum combined percent relative uncertainty of ±5% (calculated with a coverage factor of 2 and a level of confidence of 95%) is stated on the Certificate of Analysis for all of our products.

TRACEABILITY:

All reference standard solutions are traceable to specific crystalline lots. The microbalances used for solution preparation are regularly calibrated by an external ISO/IEC 17025 accredited laboratory. In addition, their calibration is verified prior to each weighing using calibrated external weights traceable to an ISO/IEC 17025 accredited laboratory. All volumetric glassware used is calibrated, of Class A tolerance, and traceable to an ISO/IEC 17025 accredited laboratory. For certain products, traceability to international interlaboratory studies has also been established.

EXPIRY DATE / PERIOD OF VALIDITY:

Ongoing stability studies of this product have demonstrated stability in its composition and concentration, until the specified expiry date, in the unopened ampoule. Monitoring for any degradation or change in concentration of the listed analyte(s) is performed on a routine basis.

LIMITED WARRANTY:

At the time of shipment, all products are warranted to be free of defects in material and workmanship and to conform to the stated technical and purity specifications.

QUALITY MANAGEMENT:

This product was produced using a Quality Management System registered to the latest versions of ISO 9001 by SAI Global, ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA; A1226), and ISO 17034 by ANSI National Accreditation Board (ANAB; AR-1523).

CALA Testing Accreditation No. A1226

ANAB ANSI National Accreditation Board ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

For additional information or assistance concerning this or any other products from Wellington Laboratories Inc., please visit our website at www.well-labs.com or contact us directly at info@well-labs.com

Form#:13, Issued 2004-11-10
Revision#:9, Revised 2020-12-23

PFACMXH0921 (2 of 11)
rev0

Table A: **PFAC-MXH; Components and Concentrations (µg/mL, ± 5% in methanol / isopropanol (2%) / water (<1%))**

Compound	Acronym	Concentration* (µg/mL)	Peak Assignment in Figure 1
Perfluoro-n-butanoic acid	PFBA	4.00	1
Perfluoro-n-pentanoic acid	PFPeA	2.00	2
Perfluoro-n-hexanoic acid	PFHxA	1.00	5
Perfluoro-n-heptanoic acid	PFHpA	1.00	7
Perfluoro-n-octanoic acid	PFOA	1.00	11
Perfluoro-n-nonanoic acid	PFNA	1.00	14
Perfluoro-n-decanoic acid	PFDA	1.00	18
Perfluoro-n-undecanoic acid	PFUdA	1.00	23
Perfluoro-n-dodecanoic acid	PFDoA	1.00	26
Perfluoro-n-tridecanoic acid	PFTrDA	1.00	27
Perfluoro-n-tetradecanoic acid	PFTeDA	1.00	29
Perfluoro-1-octanesulfonamide	FOSA	1.00	25
N-methylperfluorooctanesulfonamidoacetic acid [a]	N-MeFOSAA: linear isomer	0.760	20
	N-MeFOSAA: ∑ branched isomers	0.240	17
N-ethylperfluorooctanesulfonamidoacetic acid [b]	N-EtFOSAA: linear isomer	0.775	22
	N-EtFOSAA: ∑ branched isomers	0.225	21

Compound	Acronym	Concentration* (µg/mL)		Peak Assignment in Figure 1
		as the salt	as the acid	
Potassium perfluoro-1-butanesulfonate	L-PFBS	1.00	0.887	3
Sodium perfluoro-1-pentanesulfonate	L-PFPeS	1.00	0.941	6
Potassium perfluorohexanesulfonate [c]	PFHxSK: linear isomer	0.811	0.741	9
	PFHxSK: ∑ branched isomers	0.189	0.173	8
Sodium perfluoro-1-heptanesulfonate	L-PFHpS	1.00	0.953	12
Potassium perfluorooctanesulfonate [d]	PFOSK: linear isomer	0.788	0.732	15
	PFOSK: ∑ branched isomers	0.211	0.196	13
Sodium perfluoro-1-nonanesulfonate	L-PFNS	1.00	0.962	19
Sodium perfluoro-1-decanesulfonate	L-PFDS	1.00	0.965	24
Sodium perfluoro-1-dodecanesulfonate	L-PFDoS	1.00	0.970	28
Sodium 1H,1H,2H,2H-perfluorohexanesulfonate	4:2FTS	4.00	3.75	4
Sodium 1H,1H,2H,2H-perfluorooctanesulfonate	6:2FTS	4.00	3.80	10
Sodium 1H,1H,2H,2H-perfluorodecanesulfonate	8:2FTS	4.00	3.84	16

[a] See Table B for percent composition of linear and branched N-MeFOSAA isomers.
[b] See Table C for percent composition of linear and branched N-EtFOSAA isomers.
[c] See Table D for percent composition of linear and branched PFHxSK isomers.
[d] See Table E for percent composition of linear and branched PFOSK isomers.

* Concentrations have been rounded to three significant figures.

Certified By: _____ **Date:** 09/23/2021 (mm/dd/yyyy)
B.G. Chittim, General Manager

Form#:13, Issued 2004-11-10
Revision#:9, Revised 2020-12-23

PFACMXH0921 (3 of 11)
rev0

YORK
ANALYTICAL LABORATORIES, INC.

Analytical Standard Record

Standard ID: **Y22B201**

Description:	PFAC-MXH STOCK PFAS EPA 1633	Prepared:	02/17/2022
Standard Type:	Other	Expires:	09/14/2026
Solvent:	MeOH/IPA/H2O	Prepared By:	Robert Q. Bradley
Final Volume (mls):	1	Department:	PFAS
Vials:	1	Lot No.:	PFACMXH0921
Vendor:	Wellington Laboratories		
Comments:			

Analyte	CAS Number	Concentration	Units
1H,1H,2H,2H-Perfluorodecanesulfonic acid	39108-34-4	3.84	ug/mL
1H,1H,2H,2H-Perfluorohexanesulfonic acid	757124-72-4	3.75	ug/mL
1H,1H,2H,2H-Perfluorooctanesulfonic acid	27619-97-2	3.8	ug/mL
N-EtFOSAA	2991-50-6	1	ug/mL
N-MeFOSAA	2355-31-9	1	ug/mL
Perfluoro-1-decanesulfonic acid (PFDS)	335-77-3	0.965	ug/mL
Perfluoro-1-heptanesulfonic acid (PFHpS)	375-92-8	0.953	ug/mL
Perfluoro-1-nonanesulfonic acid (PFNS)	68259-12-1	0.962	ug/mL
Perfluoro-1-octanesulfonamide (FOSA)	754-91-6	1	ug/mL
Perfluoro-1-pentanesulfonate (PFPeS)	2706-91-4	0.941	ug/mL
Perfluorobutanesulfonic acid (PFBS)	375-73-5	0.887	ug/mL
Perfluorodecanesulfonic acid(PFDS)	335-77-3	0.965	ug/mL
Perfluorodecanoic acid (PFDA)	335-76-2	1	ug/mL
Perfluorododecanoic acid (PFDoA)	307-55-1	1	ug/ml
Perfluoroheptanoic acid (PFHpA)	375-85-9	1	ug/mL
Perfluorohexanesulfonic acid (PFHxS)	355-46-4	0.914	ug/mL
Perfluorohexanoic acid (PFHxA)	307-24-4	1	ug/mL
Perfluoro-n-butanoic acid (PFBA)	375-22-4	4	ug/mL
Perfluorononanoic acid (PFNA)	375-95-1	1	ug/mL
Perfluorooctanesulfonic acid (PFOS)	1763-23-1	0.928	ug/mL
Perfluorooctanoic acid (PFOA)	335-67-1	1	ug/mL
Perfluoropentanoic acid (PFPeA)	2706-90-3	1	ug/mL
Perfluorotetradecanoic acid (PFTA)	376-06-7	1	ug/mL
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	1	ug/mL
Perfluoroundecanoic acid (PFUnA)	2058-94-8	1	ug/mL

Reviewed By: Date:

Page 1 of 1

Attachment 4 – Calibration Concentrations, nominal

Calibration Solutions (ng/mL) Compound

CS1 (LOQ) CS2 Perfluoroalkyl carboxylic			CS3	CS4 (CV[1])	CS5	CS6	CS7[2]
acids							
PFBA	0.8	2	5	10	20	50	250
PFPeA	0.4	1	2.5	5	10	25	125
PFHxA	0.2	0.5	1.25	2.5	5	12.5	62.5
PFHpA	0.2	0.5	1.25	2.5	5	12.5	62.5
PFOA	0.2	0.5	1.25	2.5	5	12.5	62.5
PFNA	0.2	0.5	1.25	2.5	5	12.5	62.5
PFDA	0.2	0.5	1.25	2.5	5	12.5	62.5
PFUnA	0.2	0.5	1.25	2.5	5	12.5	62.5
PFDoA	0.2	0.5	1.25	2.5	5	12.5	62.5
PFTrDA	0.2	0.5	1.25	2.5	5	12.5	62.5
PFTeDA	0.2	0.5	1.25	2.5	5	12.5	62.5
Perfluoroalkyl sulfonic acids							
PFBS	0.2	0.5	1.25	2.5	5	12.5	62.5
PFPeS	0.2	0.5	1.25	2.5	5	12.5	62.5
PFHxS	0.2	0.5	1.25	2.5	5	12.5	62.5
PFHpS	0.2	0.5	1.25	2.5	5	12.5	62.5
PFOS	0.2	0.5	1.25	2.5	5	12.5	62.5
PFNS	0.2	0.5	1.25	2.5	5	12.5	62.5
PFDS	0.2	0.5	1.25	2.5	5	12.5	62.5
PFDoS	0.2	0.5	1.25	2.5	5	12.5	62.5
Fluorotelomer sulfonic acids							
4:2FTS	0.8	2	5	10	20	50	NA
6:2FTS	0.8	2	5	10	20	50	NA
8:2FTS	0.8	2	5	10	20	50	NA
Perfluorooctane sulfonamides							
PFOSA	0.2	0.5	1.25	2.5	5	12.5	62.5
NMeFOSA	0.2	0.5	1.25	2.5	5	12.5	62.5
NEtFOSA	0.2	0.5	1.25	2.5	5	12.5	62.5
Perfluorooctane sulfonamidoacetic acids							
NMeFOSAA	0.2	0.5	1.25	2.5	5	12.5	62.5
NEtFOSAA	0.2	0.5	1.25	2.5	5	12.5	62.5
Perfluorooctane sulfonamide ethanols							
NMeFOSE	2	5	12.5	25	50	125	625
NEtFOSE	2	5	12.5	25	50	125	625
Per- and polyfluoroether carboxylic acids							
HFPO-DA	0.8	2	5	10	20	50	250
ADONA	0.8	2	5	10	20	50	250
PFMPA	0.4	1	2.5	5	10	25	125
PFMBA	0.4	1	2.5	5	10	25	125
NFDHA	0.4	1	2.5	5	10	25	125
Ether sulfonic acids							
9Cl-PF3ONS	0.8	2	5	10	20	50	250
11Cl-PF3OUdS	0.8	2	5	10	20	50	250
PFEESA	0.4	1	2.5	5	10	25	125

Calibration Solutions (ng/mL) Compound

CS1 (LOQ)	CS2	CS3	CS4 (CV[1])	CS5	CS6	CS7[2]
Fluorotelomer carboxylic acids						
3:3FTCA	1.0	2.5	6.26	12.5	25	62.4	312
5:3FTCA	5.0	12.5	31.3	62.5	125	312	1560
7:3FTCA	5.0	12.5	31.3	62.5	125	312	1560
Extracted Internal Standard (EIS) Analytes							
$^{13}C_4$-PFBA	10	10	10	10	10	10	10
$^{13}C_5$-PFPeA	5	5	5	5	5	5	5
$^{13}C_5$-PFHxA	2.5	2.5	2.5	2.5	2.5	2.5	2.5
$^{13}C_4$-PFHpA	2.5	2.5	2.5	2.5	2.5	2.5	2.5
$^{13}C_8$-PFOA	2.5	2.5	2.5	2.5	2.5	2.5	2.5
$^{13}C_9$-PFNA	1.25	1.25	1.25	1.25	1.25	1.25	1.25
$^{13}C_6$-PFDA	1.25	1.25	1.25	1.25	1.25	1.25	1.25
$^{13}C_7$-PFUnA	1.25	1.25	1.25	1.25	1.25	1.25	1.25
$^{13}C_2$-PFDoA	1.25	1.25	1.25	1.25	1.25	1.25	1.25
$^{13}C_2$-PFTeDA	1.25	1.25	1.25	1.25	1.25	1.25	1.25
$^{13}C_3$-PFBS	2.5	2.5	2.5	2.5	2.5	2.5	2.5
$^{13}C_3$-PFHxS	2.5	2.5	2.5	2.5	2.5	2.5	2.5
$^{13}C_8$-PFOS	2.5	2.5	2.5	2.5	2.5	2.5	2.5
$^{13}C_2$-4:2FTS	5	5	5	5	5	5	5
$^{13}C_2$-6:2FTS	5	5	5	5	5	5	5
$^{13}C_2$-8:2FTS	5	5	5	5	5	5	5
$^{13}C_8$-PFOSA	2.5	2.5	2.5	2.5	2.5	2.5	2.5
D_3-NMeFOSA	2.5	2.5	2.5	2.5	2.5	2.5	2.5
D_5-NEtFOSA	2.5	2.5	2.5	2.5	2.5	2.5	2.5
D_3-NMeFOSAA	5	5	5	5	5	5	5
D_5-NEtFOSAA	5	5	5	5	5	5	5
D_7-NMeFOSE	25	25	25	25	25	25	25
D_9-NEtFOSE	25	25	25	25	25	25	25
$^{13}C_3$-HFPO-DA	10	10	10	10	10	10	10
Non-extracted Internal Standard (NIS) Analytes							
$^{13}C_3$-PFBA	5	5	5	5	5	5	5
$^{13}C_2$-PFHxA	2.5	2.5	2.5	2.5	2.5	2.5	2.5
$^{13}C_4$-PFOA	2.5	2.5	2.5	2.5	2.5	2.5	2.5
$^{13}C_5$-PFNA	1.25	1.25	1.25	1.25	1.25	1.25	1.25
$^{13}C_2$-PFDA	1.25	1.25	1.25	1.25	1.25	1.25	1.25
$^{18}O_2$-PFHxS	2.5	2.5	2.5	2.5	2.5	2.5	2.5
$^{13}C_4$-PFOS	2.5	2.5	2.5	2.5	2.5	2.5	2.5

[1] This calibration point is used as the calibration verification (CV)

[2] A minimum of six contiguous calibrations standards are required for linear models and a minimum of seven calibration standards are required for second-order models.

Attachment 5 -HPLC Method Parameters

HPLC Acquisition Method Report

Stroke A
- **Automatic Stroke Calculation A** — Yes

Compress A
- **Compressibility Mode A** — Compressibility Value Set
- **Compressibility A** — 70 10e-6/bar

Compress B
- **Compressibility Mode B** — Compressibility Value Set
- **Compressibility B** — 90 10e-6/bar

Stop Time
- **Stoptime Mode** — Time set
- **Stoptime** — 10.00 min

Post Time
- **Posttime Mode** — Time set
- **Posttime** — 1.50 min

Injection
- Injection with needle wash
- 3.00 µL

Solvent Composition

	Channel	Name 1	Name 2	Selected	Used	Percent
1	A	Water 5mM ammonium acetate		Ch. 1	Yes	90.00 %
2	B	Methanol		Ch. 1	Yes	10.00 %

Timetable

	Time	A	B	Flow
1	3.50 min	50.00 %	50.00 %	0.400 mL/min
2	8.00 min	10.00 %	90.00 %	0.400 mL/min
3	8.50 min	90.00 %	10.00 %	0.400 mL/min

Name: **Column Comp.** Module: **G1316C**

Left Temperature Control
- **Temperature Control Mode** — Temperature Set
- **Temperature** — 50.0 °C

Enable Analysis Left Temperature
- **Enable Analysis Left Temperature On** — Yes
- **Enable Analysis Left Temperature Value** — 0.8 °C

Right Temperature Control
- **Right temperature Control Mode** — Temperature Set
- **Right temperature** — 50.0 °C

Enable Analysis Right Temperature
- **Enable Analysis Right Temperature On** — Yes
- **Enable Analysis Right Temperature Value** — 0.8 °C

Stop Time
- **Stoptime Mode** — As pump/injector

Post Time
- **Posttime Mode** — Off

Timetable
- **Valve Position** — Position 1 (Port 1 -> 2)
- **Ready when front door open** — Yes

Attachment 6 - Triple Quadrupole Acquisition Method

Acquisition Method Report

Agilent Technologies

Acquisition Method Info

Method Name PFAS1633_ACQ_092922.m

Method Path D:\MassHunter\methods\PFAS1633_ACQ_092922.m

Method Description EPA 1633_Target PFAS Isotope Dilution_Acquisition

Device List

HiP Sampler
Binary Pump
Column Comp.
QQQ

MS QQQ Mass Spectrometer

Ion Source	AJS ESI	**Tune File**	D:\MassHunter\Tune\QQQ\G6460C\atunes.TUNE.XML
Stop Mode	No Limit/As Pump	**Stop Time (min)**	1
Time Filter	On	**Time Filter Width (min)**	0.07
LC->Waste Pre Row	N/A	**LC->Waste Post Row**	N/A

Time Segments

Index	Start Time (min)	Scan Type	Ion Mode	Div Valve	Delta EMV	Store	Cycle Time (ms)	Triggered?	MRM Repeats
1	0	DynamicMRM	ESI+Agilent Jet Stream	To MS	350	Yes	550	Yes	3

Time Segment 1

Scan Segments

Cpd Name	ISTD?	Prec Ion	MS1 Res	Prod Ion	MS2 Res	Primary	Trigger	Frag (V)	CE (V)	Cell Acc (V)	Ret Time (min)	Ret Window	Polarity
11-Cl-PF3OUdS	No	631	Unit/Enh (6490)	451	Unit/Enh (6490)	Yes	No	170	33	4	7.62	3	Negative
1H,1H,2H,2H-perfluoro-1-decanesulfonate (8:2 FTS)	No	527	Unit/Enh (6490)	507	Unit/Enh (6490)	Yes	No	170	28	4	7.14	3	Negative
1H,1H,2H,2H-perfluoro-1-decanesulfonate (8:2 FTS)	No	527	Unit/Enh (6490)	80.9	Unit/Enh (6490)	Yes	No	170	40	4	7.14	3	Negative
1H,1H,2H,2H-perfluoro-1-hexanesulfonate (4:2 FTS)	No	327	Unit/Enh (6490)	307	Unit/Enh (6490)	Yes	No	162	20	4	4.788	3	Negative
1H,1H,2H,2H-perfluoro-1-hexanesulfonate (4:2 FTS)	No	327	Unit/Enh (6490)	80.9	Unit/Enh (6490)	Yes	No	162	36	4	4.788	3	Negative
1H,1H,2H,2H-perfluoro-1-octanesulfonate (6:2 FTS)	No	427	Unit/Enh (6490)	407	Unit/Enh (6490)	Yes	No	162	24	4	6.168	3	Negative
1H,1H,2H,2H-perfluoro-1-octanesulfonate (6:2 FTS)	No	427	Unit/Enh (6490)	79.7	Unit/Enh (6490)	Yes	No	162	48	4	6.168	3	Negative
3:3FTCA	No	241	Unit/Enh (6490)	177	Unit/Enh (6490)	Yes	No	74	4	4	3.4	3	Negative
3-3FTCA	No	241	Unit/Enh (6490)	117	Unit/Enh (6490)	Yes	No	74	44	4	3.4	3	Negative

Report generation date: 18-Oct-2022 09:01:43 AM

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Acquisition Method Report

Agilent Technologies

Cpd Name	ISTD?	Prec Ion	MS1 Res	Prod Ion	MS2 Res	Primary	Trigger	Frag (V)	CE (V)	Cell Acc (V)	Ret Time (min)	Ret Window	Polarity
5-3FTCA	No	341	Unit/Enh (6490)	237	Unit/Enh (6490)	Yes	No	84	12	4	5.73	3	Negative
5-3FTCA	No	341	Unit/Enh (6490)	217	Unit/Enh (6490)	Yes	No	84	24	4	5.73	3	Negative
7-3FTCA	No	441	Unit/Enh (6490)	337	Unit/Enh (6490)	Yes	No	76	12	4	6.7	3	Negative
7-3FTCA	No	441	Unit/Enh (6490)	317	Unit/Enh (6490)	Yes	No	76	24	4	6.7	3	Negative
9-Cl-PF3ONS	No	531	Unit/Enh (6490)	351	Unit/Enh (6490)	Yes	No	175	29	4	6.89	3	Negative
ADONA	No	377	Unit/Enh (6490)	251	Unit/Enh (6490)	Yes	No	103	9	4	5.62	3	Negative
ADONA	No	377	Unit/Enh (6490)	85	Unit/Enh (6490)	Yes	No	103	37	4	5.62	3	Negative
d3-NMeFOSA	No	515	Unit/Enh (6490)	219	Unit/Enh (6490)	Yes	No	134	20	4	7.17	3	Negative
d3-N-MeFOSAA	No	572.99	Unit/Enh (6490)	418.8	Unit/Enh (6490)	Yes	No	130	20	4	7.17	3	Negative
d5-NEtFOSA	No	531	Unit/Enh (6490)	219	Unit/Enh (6490)	Yes	No	150	20	4	8.52	3	Negative
d5-NEtFOSA	No	531	Unit/Enh (6490)	169	Unit/Enh (6490)	Yes	No	150	20	4	8.52	3	Negative
d5-N-EtFOSAA	No	589.02	Unit/Enh (6490)	530.9	Unit/Enh (6490)	Yes	No	130	20	4	7.36	3	Negative
d5-N-EtFOSAA	No	589.02	Unit/Enh (6490)	418.8	Unit/Enh (6490)	Yes	No	130	20	4	7.36	3	Negative
d7-NMeFOSE	No	623	Unit/Enh (6490)	310	Unit/Enh (6490)	Yes	No	150	15	4	8.28	3	Negative
d7-NMeFOSE	No	623	Unit/Enh (6490)	59	Unit/Enh (6490)	Yes	No	88	15	4	8.28	3	Negative
d9-NEtFOSE	No	639	Unit/Enh (6490)	59	Unit/Enh (6490)	Yes	No	150	15	4	8.6	3	Negative
HFPO-DA	No	285	Unit/Enh (6490)	169.1	Unit/Enh (6490)	Yes	No	100	20	4	4.95	3	Negative
M2-4-2FTS	No	329	Unit/Enh (6490)	309	Unit/Enh (6490)	Yes	No	156	20	4	4.787	3	Negative
M2-4-2FTS	No	329	Unit/Enh (6490)	81	Unit/Enh (6490)	Yes	No	156	28	4	4.787	3	Negative
M2-6-2FTS	No	429	Unit/Enh (6490)	409	Unit/Enh (6490)	Yes	No	162	24	4	6.01	3	Negative
M2-6-2FTS	No	429	Unit/Enh (6490)	81	Unit/Enh (6490)	Yes	No	162	40	4	6.01	3	Negative
M2-8-2FTS	No	529	Unit/Enh (6490)	509	Unit/Enh (6490)	Yes	No	165	28	4	6.98	3	Negative
M2-8-2FTS	No	529	Unit/Enh (6490)	81	Unit/Enh (6490)	Yes	No	165	40	4	6.98	3	Negative
M2PFTeDA	No	715	Unit/Enh (6490)	670	Unit/Enh (6490)	Yes	No	62	12	4	8.25	3	Negative
M3-HFPO-DA	No	287	Unit/Enh (6490)	169	Unit/Enh (6490)	Yes	No	90	5	4	4.99	3	Negative
M3PFBA	Yes	216	Unit/Enh (6490)	172	Unit/Enh (6490)	Yes	No	90	5	4	1.2	2	Negative
M3PFBS	No	302	Unit/Enh (6490)	98.9	Unit/Enh (6490)	Yes	No	114	32	4	3.94	3	Negative
M3PFBS	No	302	Unit/Enh (6490)	79.9	Unit/Enh (6490)	Yes	No	114	40	4	3.94	3	Negative
M3PFHxS	No	402	Unit/Enh (6490)	98.9	Unit/Enh (6490)	Yes	No	165	40	4	5.55	3	Negative
M3PFHxS	No	402	Unit/Enh (6490)	80	Unit/Enh (6490)	Yes	No	165	48	4	5.55	3	Negative
M4PFHpA	No	367	Unit/Enh (6490)	322	Unit/Enh (6490)	Yes	No	124	8	4	5.601	3	Negative
M5PFHxA	No	318	Unit/Enh (6490)	273	Unit/Enh (6490)	Yes	No	70	4	4	5.47	3	Negative
M5PFHxA	No	318	Unit/Enh (6490)	120	Unit/Enh (6490)	Yes	No	70	4	4	5.47	3	Negative
M6PFDA	No	519	Unit/Enh (6490)	473.9	Unit/Enh (6490)	Yes	No	59	8	4	6.99	3	Negative
M7PFUdA	No	570	Unit/Enh (6490)	525	Unit/Enh (6490)	Yes	No	64	8	4	7.38	3	Negative
MPFDA	Yes	514.98	Unit/Enh (6490)	469.8	Unit/Enh (6490)	Yes	No	94	5	4	6.972	2	Negative
MPFHxA	Yes	314.99	Unit/Enh (6490)	269.8	Unit/Enh (6490)	Yes	No	86	4	4	4.705	2	Negative
MPFHxA	Yes	314.99	Unit/Enh (6490)	120	Unit/Enh (6490)	Yes	No	86	4	4	4.705	2	Negative
MPFHxS	Yes	403	Unit/Enh (6490)	103	Unit/Enh (6490)	Yes	No	110	37	4	5.63	2	Negative
MPFHxS	Yes	403	Unit/Enh (6490)	84	Unit/Enh (6490)	Yes	No	110	40	4	5.63	2	Negative
MPFNA	Yes	468	Unit/Enh (6490)	423	Unit/Enh (6490)	Yes	No	66	4	4	6.541	2	Negative
MPFOA	Yes	417	Unit/Enh (6490)	372	Unit/Enh (6490)	Yes	No	84	4	4	6.03	2	Negative
MPFOS	Yes	502.96	Unit/Enh (6490)	99	Unit/Enh (6490)	Yes	No	148	48	4	6.57	3	Negative

Acquisition Method Report

Agilent Technologies

Cpd Name	ISTD?	Prec Ion	MS1 Res	Prod Ion	MS2 Res	Primary	Trigger	Frag (V)	CE (V)	Cell Acc (V)	Ret Time (min)	Ret Window	Polarity
MPFOS	Yes	502.96	Unit/Enh (6490)	80	Unit/Enh (6490)	Yes	No	148	54	4	6.57	3	Negative
NEtFOSA	No	526	Unit/Enh (6490)	219	Unit/Enh (6490)	Yes	No	120	20	4	8.528	3	Negative
NEtFOSA	No	526	Unit/Enh (6490)	169	Unit/Enh (6490)	Yes	No	120	20	4	8.528	3	Negative
N-EtFOSAA	No	584	Unit/Enh (6490)	525.9	Unit/Enh (6490)	Yes	No	130	20	4	7.521	3	Negative
N-EtFOSAA	No	584	Unit/Enh (6490)	418.8	Unit/Enh (6490)	Yes	No	130	20	4	7.521	3	Negative
NEtFOSE	No	630	Unit/Enh (6490)	59	Unit/Enh (6490)	Yes	No	120	20	4	8.301	3	Negative
NFDHA	No	295	Unit/Enh (6490)	201.1	Unit/Enh (6490)	Yes	No	92	2	4	4.641	3	Negative
NFDHA	No	295	Unit/Enh (6490)	84.9	Unit/Enh (6490)	Yes	No	92	34	4	4.641	3	Negative
NMeFOSA	No	512	Unit/Enh (6490)	219	Unit/Enh (6490)	Yes	No	120	20	4	8.298	3	Negative
NMeFOSA	No	512	Unit/Enh (6490)	169	Unit/Enh (6490)	Yes	No	120	20	4	8.298	3	Negative
N-MeFOSAA	No	570	Unit/Enh (6490)	511.9	Unit/Enh (6490)	Yes	No	150	20	4	7.335	3	Negative
N-MeFOSAA	No	570	Unit/Enh (6490)	418.9	Unit/Enh (6490)	Yes	No	150	20	4	7.335	3	Negative
NMeFOSE	No	616	Unit/Enh (6490)	59	Unit/Enh (6490)	Yes	No	120	20	4	8.301	3	Negative
Perfluoro-1-[13C8]octanesulfonamide (M8FOSA)	No	506	Unit/Enh (6490)	78	Unit/Enh (6490)	Yes	No	162	48	4	7.59	3	Negative
Perfluoro-1-[13C8]octanesulfonic acid (M8PFOS)	No	507	Unit/Enh (6490)	98.9	Unit/Enh (6490)	Yes	No	174	48	4	6.59	3	Negative
Perfluoro-1-[13C8]octanesulfonic acid (M8PFOS)	No	507	Unit/Enh (6490)	80	Unit/Enh (6490)	Yes	No	174	54	4	6.59	3	Negative
Perfluoro-1-decanesulfonate (L-PFDS)	No	598.9	Unit/Enh (6490)	98.9	Unit/Enh (6490)	Yes	No	156	50	4	7.546	3	Negative
Perfluoro-1-decanesulfonate (L-PFDS)	No	598.9	Unit/Enh (6490)	98.9	Unit/Enh (6490)	Yes	No	100	60	4	7.546	3	Negative
Perfluoro-1-heptanesulfonate (L-PFHpS)	No	448.9	Unit/Enh (6490)	98.9	Unit/Enh (6490)	Yes	No	162	48	4	6.252	3	Negative
Perfluoro-1-heptanesulfonate (L-PFHpS)	No	448.9	Unit/Enh (6490)	80	Unit/Enh (6490)	Yes	No	162	48	4	6.252	3	Negative
Perfluoro-1-octanesulfonamide (FOSA)	No	497.9	Unit/Enh (6490)	478	Unit/Enh (6490)	Yes	No	156	100	4	7.651	3	Negative
Perfluoro-1-octanesulfonamide (FOSA)	No	497.9	Unit/Enh (6490)	78	Unit/Enh (6490)	Yes	No	156	40	4	7.651	3	Negative
Perfluoro-1-pentanesulfonate (L-PFPeS)	No	348.9	Unit/Enh (6490)	98.9	Unit/Enh (6490)	Yes	No	150	36	4	5.042	3	Negative
Perfluoro-1-pentanesulfonate (L-PFPeS)	No	348.9	Unit/Enh (6490)	79.9	Unit/Enh (6490)	Yes	No	150	40	4	5.042	3	Negative

Acquisition Method Report

Agilent Technologies

Cpd Name	ISTD?	Prec Ion	MS1 Res	Prod Ion	MS2 Res	Primary	Trigger	Frag (V)	CE (V)	Cell Acc (V)	Ret Time (min)	Ret Window	Polarity
Perfluorobutanesulfonic acid (PFBS)	No	298.9	Unit/Enh (6490)	98.9	Unit/Enh (6490)	Yes	No	150	32	4	4.042	3	Negative
Perfluorobutanesulfonic acid (PFBS)	No	298.9	Unit/Enh (6490)	79.9	Unit/Enh (6490)	Yes	No	150	36	4	4.042	3	Negative
Perfluorodecanoic acid (PFDA)	No	513	Unit/Enh (6490)	468.8	Unit/Enh (6490)	Yes	No	90	8	4	7.158	3	Negative
Perfluorodecanoic acid (PFDA)	No	513	Unit/Enh (6490)	268.8	Unit/Enh (6490)	Yes	No	90	16	4	7.158	3	Negative
Perfluorododecanesulfonic acid (PFDoS)	No	699	Unit/Enh (6490)	99	Unit/Enh (6490)	Yes	No	100	60	4	7.984	3	Negative
Perfluorododecanesulfonic acid (PFDoS)	No	699	Unit/Enh (6490)	80	Unit/Enh (6490)	Yes	No	156	50	4	7.984	3	Negative
Perfluorododecanoic acid (PFDoA)	No	613	Unit/Enh (6490)	568.8	Unit/Enh (6490)	Yes	No	90	12	4	7.876	3	Negative
Perfluorododecanoic acid (PFDoA)	No	613	Unit/Enh (6490)	168.7	Unit/Enh (6490)	Yes	No	90	28	4	7.876	3	Negative
Perfluoroheptanoic acid (PFHpA)	No	363	Unit/Enh (6490)	318.8	Unit/Enh (6490)	Yes	No	90	8	4	5.601	3	Negative
Perfluoroheptanoic acid (PFHpA)	No	363	Unit/Enh (6490)	168.9	Unit/Enh (6490)	Yes	No	90	16	4	5.601	3	Negative
Perfluorohexanesulfonic acid (PFHxS)	No	398.9	Unit/Enh (6490)	98.9	Unit/Enh (6490)	Yes	No	150	40	4	5.685	3	Negative
Perfluorohexanesulfonic acid (PFHxS)	No	398.9	Unit/Enh (6490)	79.9	Unit/Enh (6490)	Yes	No	150	44	4	5.685	3	Negative
Perfluorohexanoic acid (PFHxA)	No	313	Unit/Enh (6490)	268.9	Unit/Enh (6490)	Yes	No	70	4	4	4.856	3	Negative
Perfluorohexanoic acid (PFHxA)	No	313	Unit/Enh (6490)	119	Unit/Enh (6490)	Yes	No	70	20	4	4.856	3	Negative
Perfluoro-n-[1,2-13C2]dodecanoic acid (MPFDoA)	No	615	Unit/Enh (6490)	570	Unit/Enh (6490)	Yes	No	53	8	4	7.71	3	Negative
Perfluoro-n-[13C4]butanoic acid (MPFBA)	No	217	Unit/Enh (6490)	172	Unit/Enh (6490)	Yes	No	59	4	4	1.22	3	Negative
Perfluoro-n-[13C5]pentanoic acid (M5PFPeA)	No	268	Unit/Enh (6490)	223	Unit/Enh (6490)	Yes	No	62	4	4	3.44	3	Negative
Perfluoro-n-[13C8]octanoic acid (M8PFOA)	No	421	Unit/Enh (6490)	376	Unit/Enh (6490)	Yes	No	59	4	4	6.05	3	Negative
Perfluoro-n-[13C8]octanoic acid (M8PFOA)	No	421	Unit/Enh (6490)	172	Unit/Enh (6490)	Yes	No	59	16	4	6.05	3	Negative

Acquisition Method Report

Agilent Technologies

Cpd Name	ISTD?	Prec Ion	MS1 Res	Prod Ion	MS2 Res	Primary	Trigger	Frag (V)	CE (V)	Cell Acc (V)	Ret Time (min)	Ret Window	Polarity
Perfluoro-n-[13C9]nonanoic acid (M9PFNA)	No	472	Unit/Enh (6490)	427	Unit/Enh (6490)	Yes	No	59	8	4	6.56	3	Negative
Perfluoro-n-[13C9]nonanoic acid (M9PFNA)	No	472	Unit/Enh (6490)	223	Unit/Enh (6490)	Yes	No	59	16	4	6.56	3	Negative
Perfluoro-n-butanoic acid (PFBA)	No	213	Unit/Enh (6490)	169.9	Unit/Enh (6490)	Yes	No	70	4	4	1.246	3	Negative
Perfluorononanesulfonate (L-PFNS)	No	548.9	Unit/Enh (6490)	98.9	Unit/Enh (6490)	Yes	No	159	48	4	7.174	3	Negative
Perfluorononanesulfonate (L-PFNS)	No	548.9	Unit/Enh (6490)	79.9	Unit/Enh (6490)	Yes	No	159	48	4	7.174	3	Negative
Perfluorononanoic acid (PFNA)	No	463	Unit/Enh (6490)	418.8	Unit/Enh (6490)	Yes	No	90	8	4	6.718	3	Negative
Perfluorononanoic acid (PFNA)	No	463	Unit/Enh (6490)	218.8	Unit/Enh (6490)	Yes	No	90	16	4	6.718	3	Negative
Perfluoro-n-pentanoic acid (PFPeA)	No	263	Unit/Enh (6490)	219	Unit/Enh (6490)	Yes	No	62	4	4	3.526	3	Negative
Perfluorooctanesulfonic acid (PFOS)	No	498.9	Unit/Enh (6490)	98.9	Unit/Enh (6490)	Yes	No	150	44	4	6.743	3	Negative
Perfluorooctanesulfonic acid (PFOS)	No	498.9	Unit/Enh (6490)	79.9	Unit/Enh (6490)	Yes	No	150	84	4	6.743	3	Negative
Perfluorooctanoic acid (PFOA)	No	413	Unit/Enh (6490)	368.8	Unit/Enh (6490)	Yes	No	90	8	4	6.202	3	Negative
Perfluorooctanoic acid (PFOA)	No	413	Unit/Enh (6490)	168.9	Unit/Enh (6490)	Yes	No	90	16	4	6.202	3	Negative
Perfluorotetradecanoic acid (PFTA)	No	713	Unit/Enh (6490)	669	Unit/Enh (6490)	Yes	No	110	12	4	8.414	3	Negative
Perfluorotetradecanoic acid (PFTA)	No	713	Unit/Enh (6490)	168.8	Unit/Enh (6490)	Yes	No	110	28	4	8.414	3	Negative
Perfluorotridecanoic acid (PFTrDA)	No	663	Unit/Enh (6490)	618.8	Unit/Enh (6490)	Yes	No	90	12	4	8.164	3	Negative
Perfluoroundecanoic acid (PFUnA)	No	563	Unit/Enh (6490)	519	Unit/Enh (6490)	Yes	No	90	8	4	7.538	3	Negative
Perfluoroundecanoic acid (PFUnA)	No	563	Unit/Enh (6490)	169	Unit/Enh (6490)	Yes	No	90	24	4	7.538	3	Negative
PFEESA	No	315	Unit/Enh (6490)	135	Unit/Enh (6490)	Yes	No	112	26	4	4.464	3	Negative
PFEESA	No	315	Unit/Enh (6490)	83	Unit/Enh (6490)	Yes	No	112	14	4	4.464	3	Negative
PFMBA	No	279	Unit/Enh (6490)	85	Unit/Enh (6490)	Yes	No	75	18	4	4.011	3	Negative
PFMPA	No	229	Unit/Enh (6490)	85	Unit/Enh (6490)	Yes	No	59	6	4	2.15	3	Negative

Scan Parameters

Data Stg	Threshold
Centroid	0

Acquisition Method Report

Agilent Technologies

Source Parameters

Parameter	Value (+)	Value (-)
Gas Temp (°C)	230	230
Gas Flow (l/min)	5	5
Nebulizer (psi)	15	15
SheathGasHeater	350	350
SheathGasFlow	12	12
Capillary (V)	3500	2500
VCharging	500	0

Chromatograms

Chrom Type	Label	Offset	Y-Range
TIC	TIC	0	10000000

Instrument Curves

Actual

Name: HiP Sampler **Module: G4226A**

Auxiliary	
Draw Speed	100.0 µL/min
Eject Speed	400.0 µL/min
Draw Position Offset	1.5 mm
Wait Time After Drawing	1.2 s
Sample Flush Out Factor	5.0
Vial/Well bottom sensing	Yes
Injection	
Injection Mode	Injection with needle wash
Injection Volume	3.00 µL
Needle Wash	
Needle Wash Location	Flush Port
Wash Time	10.0 s
High throughput	
Automatic Delay Volume Reduction	No
Overlapped Injection	
Enable Overlapped Injection	No
Valve Switching	
Valve Movements	0
Valve Switch Time 1	
Switch Time 1 Enabled	No
Valve Switch Time 2	
Switch Time 2 Enabled	No
Valve Switch Time 3	
Switch Time 3 Enabled	No
Valve Switch Time 4	
Switch Time 4 Enabled	No
Stop Time	
Stoptime Mode	As pump/No limit
Post Time	
Posttime Mode	Off

Name: Binary Pump **Module: G4220A**

Flow	0.400 mL/min
Use Solvent Types	No
Stroke Mode	Synchronized
Low Pressure Limit	0.00 bar
High Pressure Limit	600.00 bar
Max. Flow Ramp Up	100.000 mL/min²
Max. Flow Ramp Down	100.000 mL/min²
Expected Mixer	No check

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APPENDIX G – Green and Sustainable Remediation

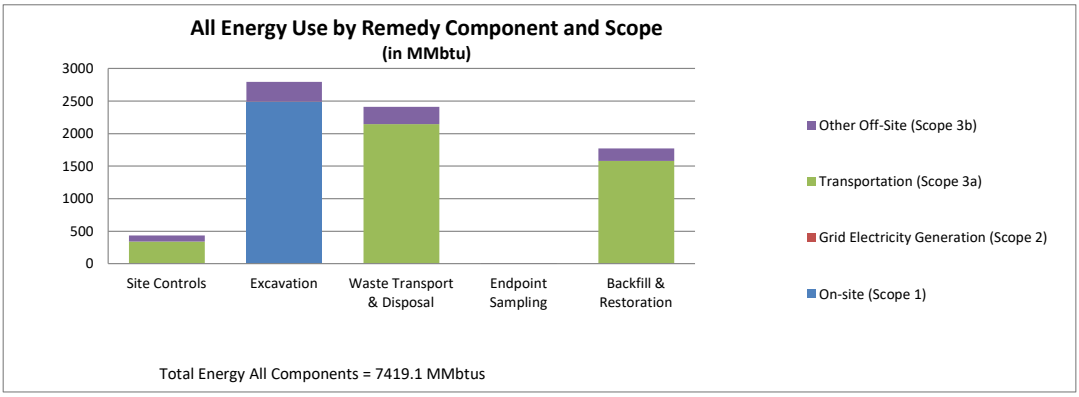
Environmental Footprint Summary

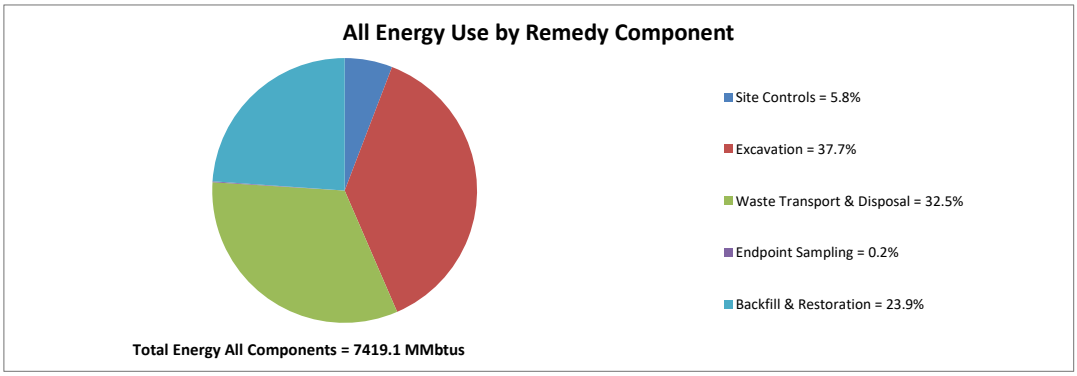
Core Element	Metric		Unit of Measure	Footprint					
				Site Controls	Excavation	Waste Transport & Disposal	Endpoint Sampling	Backfill & Restoration	Total
Materials & Waste	M&W-1	Refined materials used on-site	Tons	21.5	0.0	0.0	0.0	10.2	31.7
	M&W-2	% of refined materials from recycled or reused material	%	0.0%				0.0%	0.0%
	M&W-3	Unrefined materials used on-site	Tons	120.000	0.000	0.000	0.000	13,605.926	13,725.9
	M&W-4	% of unrefined materials from recycled or reused material	%	100.0%				100.0%	100.0%
	M&W-5	On-site hazardous waste disposed of off-site	Tons	0.0	0.0	0.0	0.0	0.0	0.0
	M&W-6	On-site non-hazardous waste disposed of off-site	Tons	0.0	0.0	13,605.9	0.0	0.0	13,605.9
	M&W-7	Recycled or reused waste	Tons	0.0	0.0	0.0	0.0	0.0	0.0
	M&W-8	% of total potential waste recycled or reused	%			0.0%			0.0%
Water (used on-site)	W-1	Public water use	MG	0.3	0.0	0.0	0.0	0.0	0.3
	W-2	Groundwater use	MG	0.0	0.0	0.0	0.0	0.0	0.0
	W-3	Surface water use	MG	0.0	0.0	0.0	0.0	0.0	0.0
	W-4	Reclaimed water use	MG	0.0	0.0	0.0	0.0	0.0	0.0
	W-5	Storm water use	MG	0.0	0.0	0.0	0.0	0.0	0.0
	W-6	User-defined water resource #1	MG	0.0	0.0	0.0	0.0	0.0	0.0
	W-7	User-defined water resource #2	MG	0.0	0.0	0.0	0.0	0.0	0.0
	W-8	Wastewater generated	MG	0.0	0.0	0.0	0.0	0.0	0.0
Energy	E-1	Total energy used (on-site and off-site)	MMBtu	433.7	2,793.6	2,408.9	11.2	1,771.6	7,419.1
	E-2	Energy voluntarily derived from renewable resources							
	E-2A	On-site renewable energy generation or use + on-site biodiesel use + biodiesel and other renewable resource use for transportation	MMBtu	0.0	0.0	0.0	0.0	0.0	0.0
	E-2B	Voluntary purchase of renewable electricity	MWh	0.0	0.0	0.0	0.0	0.0	0.0
	E-3	Voluntary purchase of RECs	MWh	0.0	0.0	0.0	0.0	0.0	0.0
	E-4	On-site grid electricity use	MWh	0.000	0.000	0.000	0.000	0.000	0.0
Air	A-1	On-site NOx, SOx, and PM emissions	Pounds	0.0	1,970.7	0.0	0.0	0.0	1,970.7
	A-2	On-site HAP emissions	Pounds	0.0	0.7	0.0	0.0	0.0	0.7
	A-3	Total NOx, SOx, and PM emissions	Pounds	138.2	2,205.9	2,961.7	68.6	2,178.2	7,552.6
	A-3A	Total NOx emissions	Pounds	104.0	1,900.9	2,703.8	19.2	1,988.6	6,716.4
	A-3B	Total SOx emissions	Pounds	17.1	113.4	179.1	42.9	131.7	484.3
	A-3C	Total PM emissions	Pounds	17.1	191.5	78.8	6.5	57.9	351.8
	A-4	Total HAP emissions	Pounds	20.5	20.4	17.1	4.8	12.6	75.3
	A-5	Total greenhouse gas emissions	Tons CO2e*	31.9	226.2	197.0	0.7	144.9	600.7
Land & Ecosystems	Soil disturbance, land redevelopment for residential use								

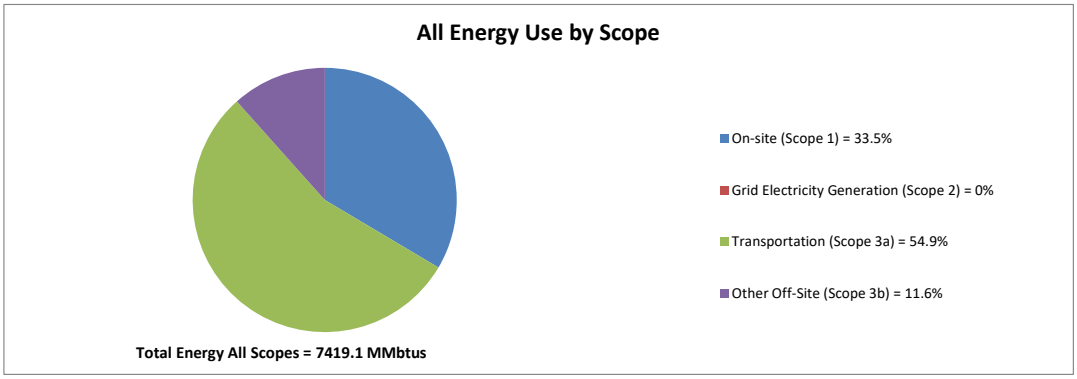
** Total greenhouse gases emissions (in CO2e) include consideration of CO2, CH4, and N2O (Nitrous oxide) emissions.*
"MMBtu" = millions of Btus
"MG" = millions of gallons
"CO2e" = carbon dioxide equivalents of global warming potential
"MWh" = megawatt hours (i.e., thousands of kilowatt-hours or millions of Watt-hours)
"Tons" = short tons (2,000 pounds)

The above metrics are consistent with EPA's Methodology for Understanding and Reducing a Project's Environmental Footprint (EPA 542-R-12-002), February 2012

Notes:







Total Energy
MMbtus

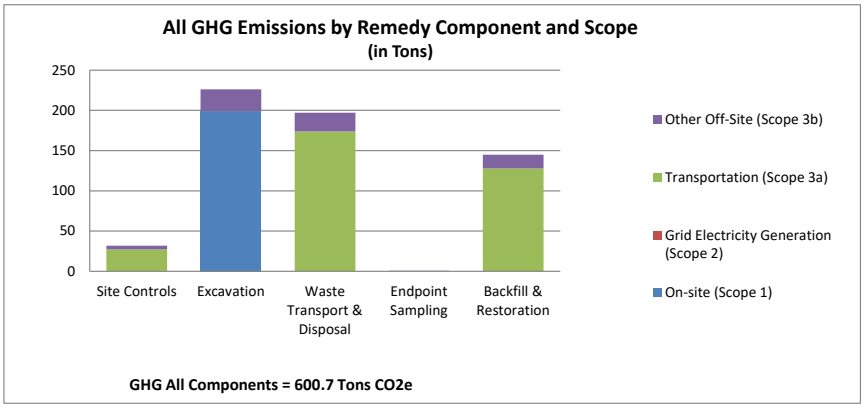
	Site Controls	Excavation	Waste Transport & Disposal	Endpoint Sampling	Backfill & Restoration	Total
On-site (Scope 1)	0.0	2,487.3	0.0	0.0	0.0	2,487.3
Grid Electricity Generation (Scope 2)	0.0	0.0	0.0	0.0	0.0	0.0
Transportation (Scope 3a)	342.0	1.9	2,146.4	2.7	1,578.6	4,071.6
Other Off-Site (Scope 3b)	91.7	304.4	262.5	8.5	193.1	860.2
Total	433.7	2,793.6	2,408.9	11.2	1,771.6	7,419.1

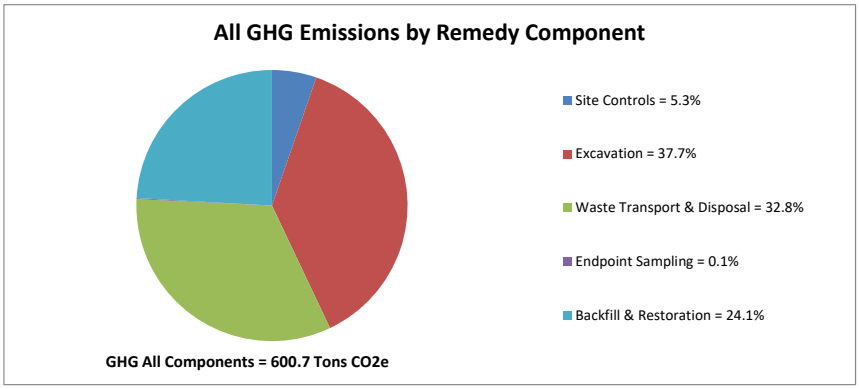
Site Controls = 5.8%
Excavation = 37.7%
Waste Transport & Disposal = 32.5%
Endpoint Sampling = 0.2%
Backfill & Restoration = 23.9%

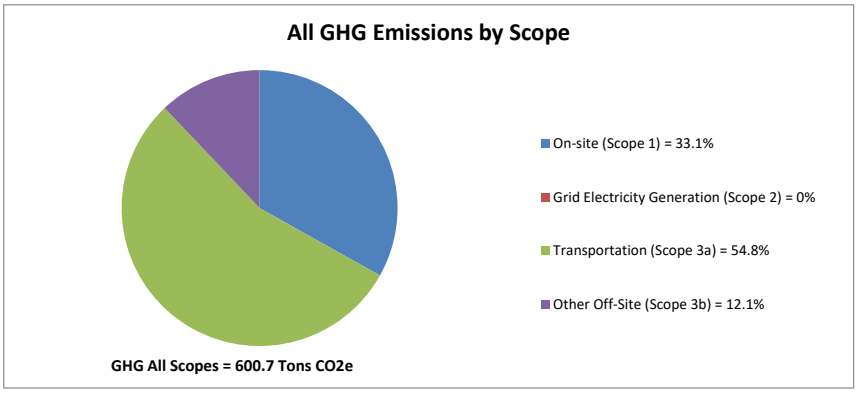
On-site (Scope 1) = 33.5%
Grid Electricity Generation (Scope 2) = 0%
Transportation (Scope 3a) = 54.9%
Other Off-Site (Scope 3b) = 11.6%

Total Energy All Components = 7419.1 MMbtus
Total Energy All Scopes = 7419.1 MMbtus

Total Fuel Footprints		Site Controls	Excavation	Waste Transport & Disposal	Endpoint Sampling	Backfill & Restoration	Total
Diesel (gal)	Transportation	100	13.4	15441.6	0	11356.666	26911.67
	On-site equipment	0	17894.42308	0	0	0	17894.42
Gasoline (gal)	Transportation	2646	0	0	22	0	2668
	On-site equipment	0	0	0	0	0	0







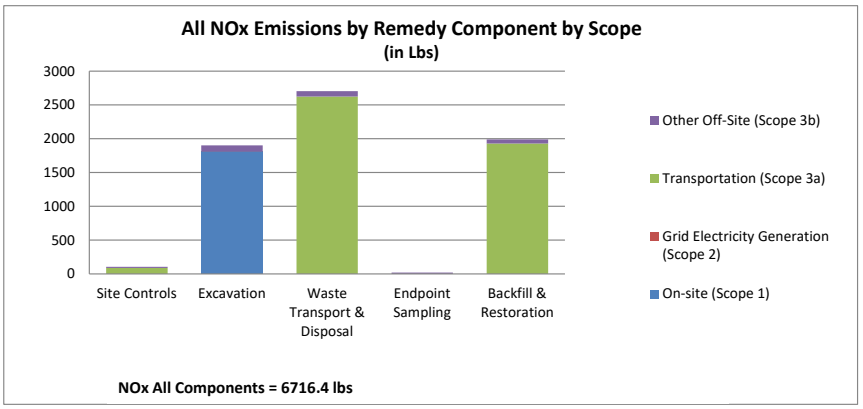
GHG
Tons CO2e

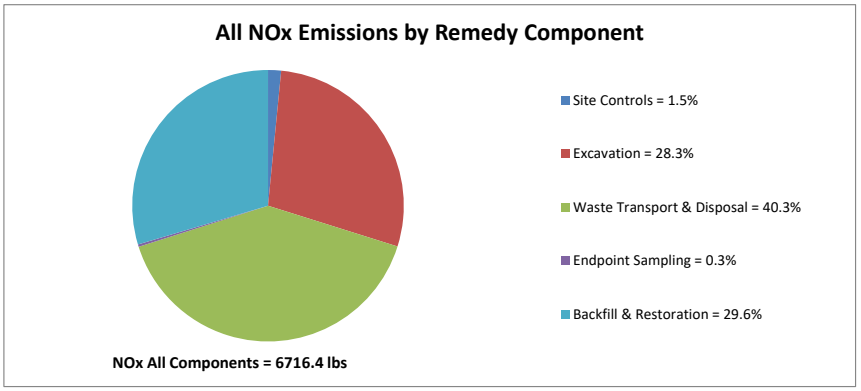
	Site Controls	Excavation	Waste Transport & Disposal	Endpoint Sampling	Backfill & Restoration	Total
On-site (Scope 1)	0.0	199.0	0.0	0.0	0.0	199.0
Grid Electricity Generation (Scope 2)	0.0	0.0	0.0	0.0	0.0	0.0
Transportation (Scope 3a)	27.3	0.2	173.7	0.2	127.8	329.1
Other Off-Site (Scope 3b)	4.6	27.0	23.3	0.5	17.1	72.6
Total	31.9	226.2	197.0	0.7	144.9	600.7

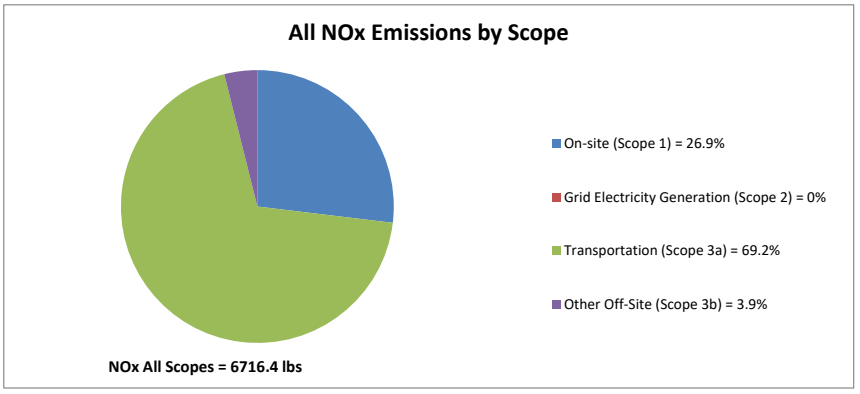
Site Controls = 5.3%
Excavation = 37.7%
Waste Transport & Disposal = 32.8%
Endpoint Sampling = 0.1%
Backfill & Restoration = 24.1%

GHG All Components = 600.7 Tons CO2e
GHG All Scopes = 600.7 Tons CO2e

On-site (Scope 1) = 33.1%
Grid Electricity Generation (Scope 2) = 0%
Transportation (Scope 3a) = 54.8%
Other Off-Site (Scope 3b) = 12.1%







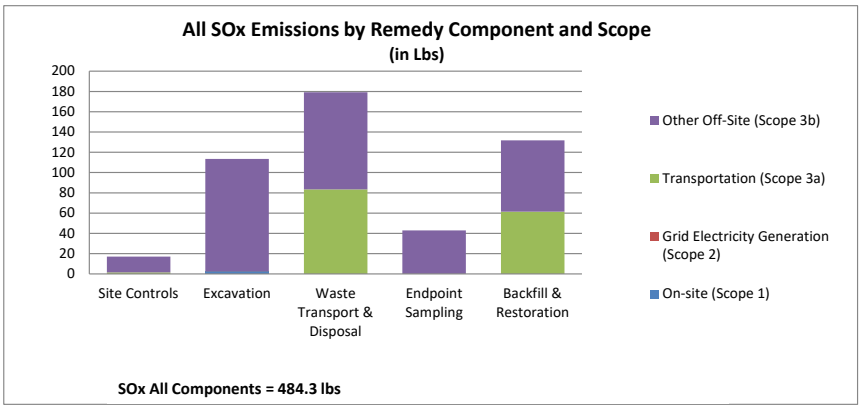
NOx lbs

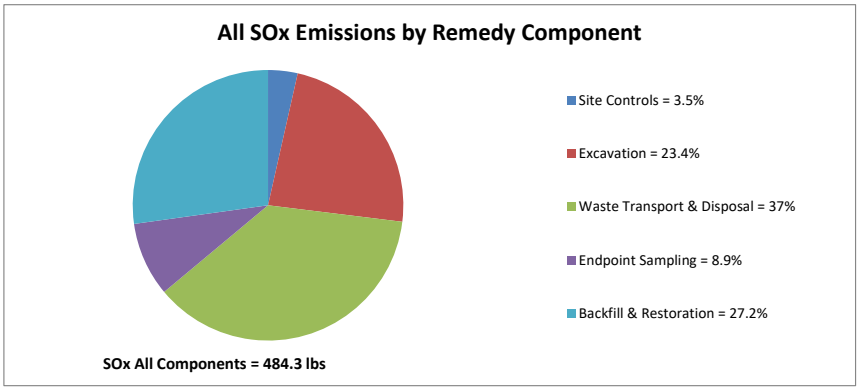
	Site Controls	Excavation	Waste Transport & Disposal	Endpoint Sampling	Backfill & Restoration	Total
On-site (Scope 1)	0.0	1,807.3	0.0	0.0	0.0	1,807.3
Grid Electricity Generation (Scope 2)	0.0	0.0	0.0	0.0	0.0	0.0
Transportation (Scope 3a)	88.4	2.3	2,625.1	0.6	1,930.6	4,647.0
Other Off-Site (Scope 3b)	15.5	91.3	78.8	18.6	57.9	262.1
Total	104.0	1,900.9	2,703.8	19.2	1,988.6	6,716.4

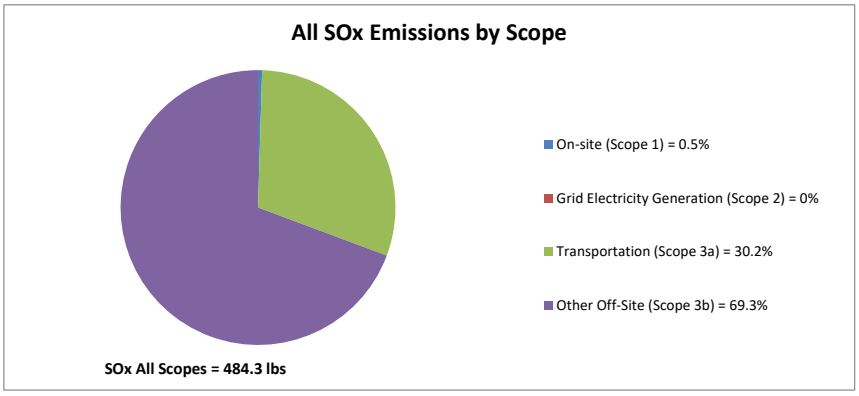
Site Controls = 1.5%
Excavation = 28.3%
Waste Transport & Disposal = 40.3%
Endpoint Sampling = 0.3%
Backfill & Restoration = 29.6%

NOx All Components = 6716.4 lbs
NOx All Scopes = 6716.4 lbs

On-site (Scope 1) = 26.9%
Grid Electricity Generation (Scope 2) = 0%
Transportation (Scope 3a) = 69.2%
Other Off-Site (Scope 3b) = 3.9%







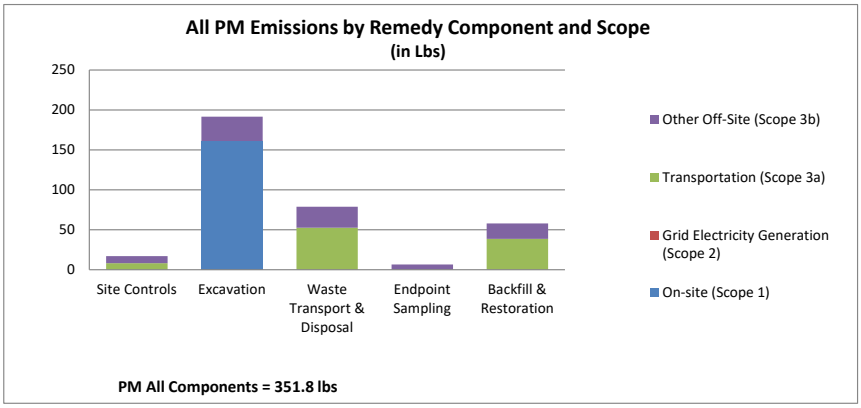
SOx lbs

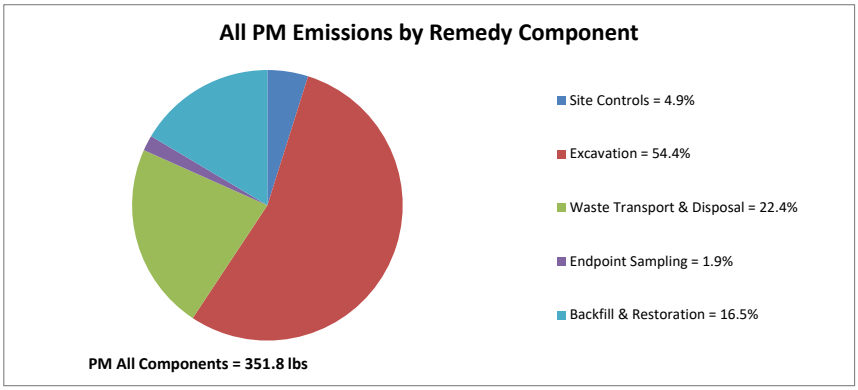
	Site Controls	Excavation	Waste Transport & Disposal	Endpoint Sampling	Backfill & Restoration	Total
On-site (Scope 1)	0.0	2.3	0.0	0.0	0.0	2.3
Grid Electricity Generation (Scope 2)	0.0	0.0	0.0	0.0	0.0	0.0
Transportation (Scope 3a)	1.5	0.1	83.4	0.0	61.3	146.3
Other Off-Site (Scope 3b)	15.6	111.0	95.7	42.9	70.4	335.7
Total	17.1	113.4	179.1	42.9	131.7	484.3

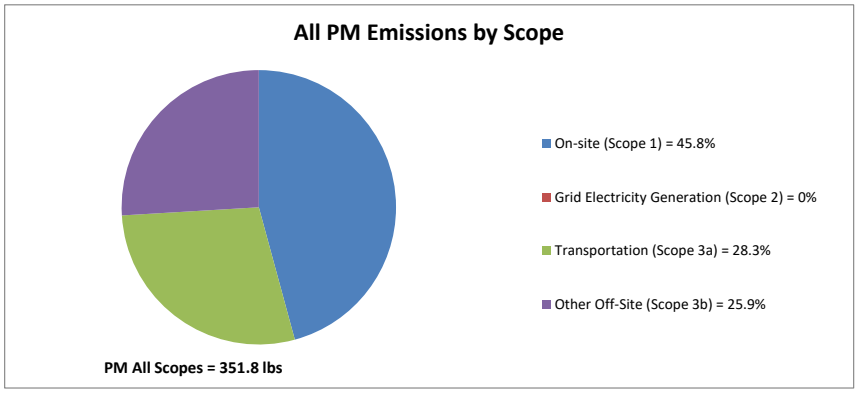
Site Controls = 3.5%
Excavation = 23.4%
Waste Transport & Disposal = 37%
Endpoint Sampling = 8.9%
Backfill & Restoration = 27.2%

SOx All Components = 484.3 lbs
SOx All Scopes = 484.3 lbs

On-site (Scope 1) = 0.5%
Grid Electricity Generation (Scope 2) = 0%
Transportation (Scope 3a) = 30.2%
Other Off-Site (Scope 3b) = 69.3%







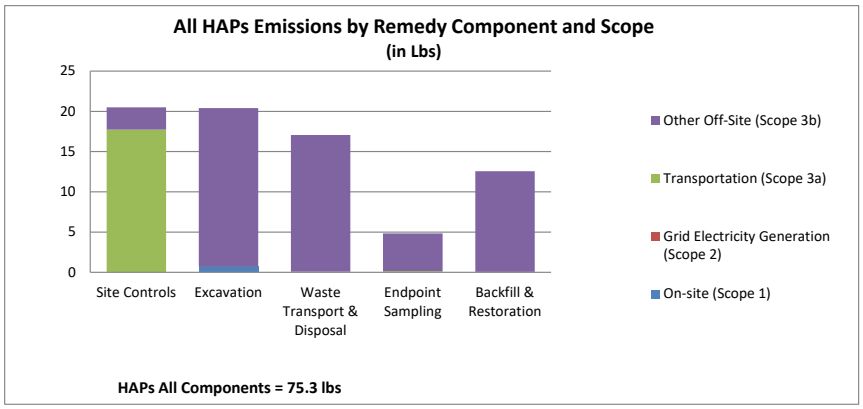
PM lbs

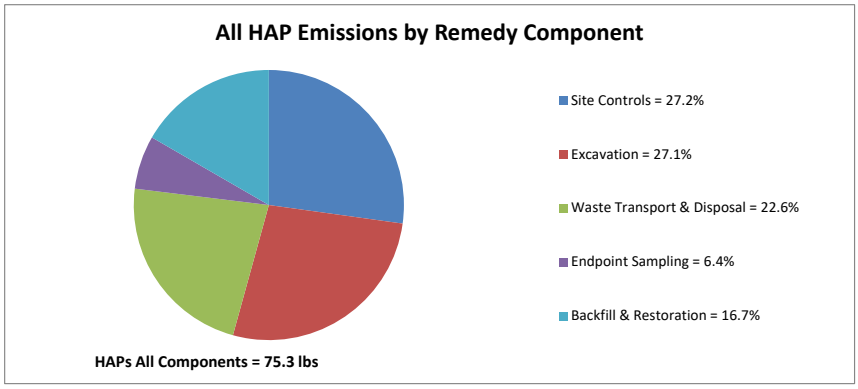
	Site Controls	Excavation	Waste Transport & Disposal	Endpoint Sampling	Backfill & Restoration	Total
On-site (Scope 1)	0.0	161.0	0.0	0.0	0.0	161.0
Grid Electricity Generation (Scope 2)	0.0	0.0	0.0	0.0	0.0	0.0
Transportation (Scope 3a)	8.3	0.0	52.5	0.1	38.6	99.5
Other Off-Site (Scope 3b)	8.8	30.4	26.3	6.5	19.3	91.3
Total	17.1	191.5	78.8	6.5	57.9	351.8

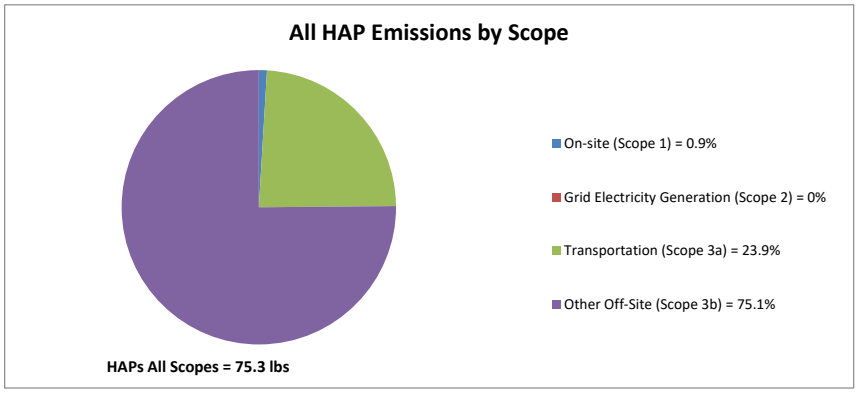
Site Controls = 4.9%
Excavation = 54.4%
Waste Transport & Disposal = 22.4%
Endpoint Sampling = 1.9%
Backfill & Restoration = 16.5%

PM All Components = 351.8 lbs
PM All Scopes = 351.8 lbs

On-site (Scope 1) = 45.8%
Grid Electricity Generation (Scope 2) = 0%
Transportation (Scope 3a) = 28.3%
Other Off-Site (Scope 3b) = 25.9%







HAPs
lbs

	Site Controls	Excavation	Waste Transport & Disposal	Endpoint Sampling	Backfill & Restoration	Total
On-site (Scope 1)	0.0	0.7	0.0	0.0	0.0	0.7
Grid Electricity Generation (Scope 2)	0.0	0.0	0.0	0.0	0.0	0.0
Transportation (Scope 3a)	17.7	0.0	0.1	0.1	0.1	18.0
Other Off-Site (Scope 3b)	2.8	19.7	17.0	4.7	12.5	56.6
Total	20.5	20.4	17.1	4.8	12.6	75.3

Site Controls = 27.2%
Excavation = 27.1%
Waste Transport & Disposal = 22.6%
Endpoint Sampling = 6.4%
Backfill & Restoration = 16.7%

HAPs All Components = 75.3 lbs
HAPs All Scopes = 75.3 lbs

On-site (Scope 1) = 0.9%
Grid Electricity Generation (Scope 2) = 0%
Transportation (Scope 3a) = 23.9%
Other Off-Site (Scope 3b) = 75.1%

Site Controls - Energy & Air Compiled Results

Category	Total Energy	GHG	NOx	SOx	PM	NOx + SOx + PM	HAPs
	MMbtus	lbs CO2e	lbs	lbs	lbs	lbs	lbs
On-site (Scope 1)	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Grid Electricity Generation (Scope 2)	**0.000**	**0**	**0**	**0**	**0**	**0**	**0**
Transportation (Scope 3a)	**342**	**54,561**	**88**	**1**	**8**	**98**	**18**
Other Off-Site (Scope 3b)	**92**	**9,181**	**16**	**16**	**9**	**40**	**3**
Remedy Totals	**434**	**63,742**	**104**	**17**	**17**	**138**	**20**

Values that are forwarded to the "Summary" tab are indicated in orange.

Voluntary Renewable Energy Use	Unit	Quantity	
On-site renewable energy generation or use	MMBtu	**0**	
On-site biodiesel use	MMBtu	**0**	
Biodiesel and other renewable resource use for transportation	MMBtu	**0**	
On-site renewable energy generation or use + on-site biodiesel use + biodiesel and other renewable resource use for transportation	MMBtu	**0**	*(This value is the sum of the three rows above)*
Voluntary purchase of renewable electricity	MWh	**0**	
Voluntary purchase of RECs	MWh	**0**	

This worksheet is not intended for user input. Values on this worksheet are obtained from the following file:
The Green - Track 1 SEFA_calculations.xlsx

Excavation - Energy & Air Compiled Results

Category	Total Energy	GHG	NOx	SOx	PM	NOx + SOx + PM	HAPs
	MMbtus	lbs CO2e	lbs	lbs	lbs	lbs	lbs
On-site (Scope 1)	**2,487**	**397,972**	**1,807**	**2**	**161**	**1,971**	**1**
Grid Electricity Generation (Scope 2)	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Transportation (Scope 3a)	**2**	**302**	**2**	**0**	**0**	**2**	**0**
Other Off-Site (Scope 3b)	**304**	**54,082**	**91**	**111**	**30**	**233**	**20**
Remedy Totals	**2,794**	**452,355**	**1,901**	**113**	**192**	**2,206**	**20**

Values that are forwarded to the "Summary" tab are indicated in orange.

Voluntary Renewable Energy Use	Unit	Quantity	
On-site renewable energy generation or use	MMBtu	**0**	
On-site biodiesel use	MMBtu	**0**	
Biodiesel and other renewable resource use for transportation	MMBtu	**0**	
On-site renewable energy generation or use + on-site biodiesel use + biodiesel and other renewable resource use for transportation	MMBtu	**0**	*(This value is the sum of the three rows above)*
Voluntary purchase of renewable electricity	MWh	**0**	
Voluntary purchase of RECs	MWh	**0**	

This worksheet is not intended for user input. Values on this worksheet are obtained from the following file:
The Green - Track 1 SEFA_calculations.xlsx

Waste Transport & Disposal - Energy & Air Compiled Results

Category	Total Energy	GHG	NOx	SOx	PM	NOx + SOx + PM	HAPs
	MMbtus	lbs CO2e	lbs	lbs	lbs	lbs	lbs
On-site (Scope 1)	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Grid Electricity Generation (Scope 2)	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Transportation (Scope 3a)	**2,146**	**347,436**	**2,625**	**83**	**53**	**2,761**	**0**
Other Off-Site (Scope 3b)	**263**	**46,634**	**79**	**96**	**26**	**201**	**17**
Remedy Totals	**2,409**	**394,070**	**2,704**	**179**	**79**	**2,962**	**17**

Values that are forwarded to the "Summary" tab are indicated in orange.

Voluntary Renewable Energy Use	Unit	Quantity	
On-site renewable energy generation or use	MMBtu	**0**	
On-site biodiesel use	MMBtu	**0**	
Biodiesel and other renewable resource use for transportation	MMBtu	**0**	
On-site renewable energy generation or use + on-site biodiesel use + biodiesel and other renewable resource use for transportation	MMBtu	**0**	*(This value is the sum of the three rows above)*
Voluntary purchase of renewable electricity	MWh	**0**	
Voluntary purchase of RECs	MWh	**0**	

This worksheet is not intended for user input. Values on this worksheet are obtained from the following file:
The Green - Track 1 SEFA_calculations.xlsx

Endpoint Sampling - Energy & Air Compiled Results

Category	Total Energy	GHG	NOx	SOx	PM	NOx + SOx + PM	HAPs
	MMbtus	lbs CO2e	lbs	lbs	lbs	lbs	lbs
On-site (Scope 1)	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Grid Electricity Generation (Scope 2)	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Transportation (Scope 3a)	**3**	**435**	**1**	**0**	**0**	**1**	**0**
Other Off-Site (Scope 3b)	**8**	**993**	**19**	**43**	**6**	**68**	**5**
Remedy Totals	**11**	**1,428**	**19**	**43**	**7**	**69**	**5**

Values that are forwarded to the "Summary" tab are indicated in orange.

Voluntary Renewable Energy Use	Unit	Quantity	
On-site renewable energy generation or use	MMBtu	**0**	
On-site biodiesel use	MMBtu	**0**	
Biodiesel and other renewable resource use for transportation	MMBtu	**0**	
On-site renewable energy generation or use + on-site biodiesel use + biodiesel and other renewable resource use for transportation	MMBtu	**0**	*(This value is the sum of the three rows above)*
Voluntary purchase of renewable electricity	MWh	**0**	
Voluntary purchase of RECs	MWh	**0**	

This worksheet is not intended for user input. Values on this worksheet are obtained from the following file:
The Green - Track 1 SEFA_calculations.xlsx

Backfill & Restoration - Energy & Air Compiled Results

Category	Total Energy	GHG	NOx	SOx	PM	NOx + SOx + PM	HAPs
	MMbtus	lbs CO2e	lbs	lbs	lbs	lbs	lbs
On-site (Scope 1)	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Grid Electricity Generation (Scope 2)	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Transportation (Scope 3a)	**1,579**	**255,525**	**1,931**	**61**	**39**	**2,031**	**0**
Other Off-Site (Scope 3b)	**193**	**34,297**	**58**	**70**	**19**	**148**	**12**
Remedy Totals	**1,772**	**289,822**	**1,989**	**132**	**58**	**2,178**	**13**

Values that are forwarded to the "Summary" tab are indicated in orange.

Voluntary Renewable Energy Use	Unit	Quantity	
On-site renewable energy generation or use	MMBtu	**0**	
On-site biodiesel use	MMBtu	**0**	
Biodiesel and other renewable resource use for transportation	MMBtu	**0**	
On-site renewable energy generation or use + on-site biodiesel use + biodiesel and other renewable resource use for transportation	MMBtu	**0**	*(This value is the sum of the three rows above)*
Voluntary purchase of renewable electricity	MWh	**0**	
Voluntary purchase of RECs	MWh	**0**	

This worksheet is not intended for user input. Values on this worksheet are obtained from the following file:
The Green - Track 1 SEFA_calculations.xlsx

All - Energy & Air Compiled Results

Category	Total Energy	GHG	NOx	SOx	PM	NOx + SOx + PM	HAPs
	MMbtus	lbs CO2e	lbs	lbs	lbs	lbs	lbs
On-site (Scope 1)	**2,487**	**397,972**	**1,807**	**2**	**161**	**1,971**	**1**
Grid Electricity Generation (Scope 2)	**0.000**	**0**	**0**	**0**	**0**	**0**	**0**
Transportation (Scope 3a)	**4,072**	**658,259**	**4,647**	**146**	**100**	**4,893**	**18**
Other Off-Site (Scope 3b)	**860**	**145,187**	**262**	**336**	**91**	**689**	**57**
Remedy Totals	**7,419**	**1,201,417**	**6,716**	**484**	**352**	**7,553**	**75**

Values that are forwarded to the "Summary" tab are indicated in orange.

Voluntary Renewable Energy Use	Unit	Quantity	
On-site renewable energy generation or use	MMBtu	**0**	
On-site biodiesel use	MMBtu	**0**	
Biodiesel and other renewable resource use for transportation	MMBtu	**0**	
On-site renewable energy generation or use + on-site biodiesel use + biodiesel and other renewable resource use for transportation	MMBtu	**0**	*(This value is the sum of the three rows above)*
Voluntary purchase of renewable electricity	MWh	**0**	
Voluntary purchase of RECs	MWh	**0**	

This worksheet is not intended for user input. Values on this worksheet are obtained from the following file:
The Green - Track 1 SEFA_calculations.xlsx

Input Summary

Remedy Component Number →		1	2	3	4	5	Remedy Component Subtotals					
		Column headings in Row 6 must match the name of "Input" tabs in this workbook for Columns C - P in this table to be populated ("0" in Row 4 means "Input" tab is turned Off and will not be grouped to a Remedy Component (Columns Q - V) or used in subsequent calculations)										
Item		SC	Excavation	Waste T&D	EPS	B&R	1	2	3	4	5	Total
On-Site												
On-site Renewable Energy												
Renewable electricity generated on-site	MWh	0	0	0	0	0	0	0	0	0	0	0
Landfill gas combusted on-site for energy use	ccf CH_4	0	0	0	0	0	0	0	0	0	0	0
On-site biodiesel use	gal	0	0	0	0	0	0	0	0	0	0	0
On-site biodiesel use - Other	gal	0	0	0	0	0	0	0	0	0	0	0
User-defined on-site renewable energy use #1	TBD	0	0	0	0	0	0	0	0	0	0	0
User-defined on-site renewable energy use #2	TBD	0	0	0	0	0	0	0	0	0	0	0
On-Site Conventional Energy												
Grid electricity	MWh	0	0	0	0	0	0	0	0	0	0	0
On-site diesel use - Other	Gal	0	0	0	0	0	0	0	0	0	0	0
On-site diesel use <75 hp	Gal	0	0	0	0	0	0	0	0	0	0	0
On-site diesel use 75<hp<750	Gal	0	17894.423	0	0	0	0	17894.423	0	0	0	17894.423
On-site diesel use >750 hp	Gal	0	0	0	0	0	0	0	0	0	0	0
On-site gasoline use - Other	Gal	0	0	0	0	0	0	0	0	0	0	0
On-site gasoline use <25 hp	Gal	0	0	0	0	0	0	0	0	0	0	0
On-site gasoline use >25 hp	Gal	0	0	0	0	0	0	0	0	0	0	0
On-site natural gas use	ccf	0	0	0	0	0	0	0	0	0	0	0
On-site compressed natural gas use - Other	ccf	0	0	0	0	0	0	0	0	0	0	0
On-site compressed natural gas use	ccf	0	0	0	0	0	0	0	0	0	0	0
On-site liquified petroleum gas use - Other	gal	0	0	0	0	0	0	0	0	0	0	0
On-site liquified petroleum gas use	gal	0	0	0	0	0	0	0	0	0	0	0
Other forms of on-site conventional energy use #1	TBD	0	0	0	0	0	0	0	0	0	0	0
Other forms of on-site conventional energy use #2	TBD	0	0	0	0	0	0	0	0	0	0	0
Other On-site Emissions												
On-site HAP process emissions	Lbs	0	0	0	0	0	0	0	0	0	0	0
On-site GHG emissions	Lbs CO2e	0	0	0	0	0	0	0	0	0	0	0
On-site carbon storage	Lbs CO2e	0	0	0	0	0	0	0	0	0	0	0
GHG avoided by flaring on-site landfill methane	ccf CH4	0	0	0	0	0	0	0	0	0	0	0
Other on-site NOx emissions or reductions	Lbs	0	0	0	0	0	0	0	0	0	0	0
Other on-site SOx emissions or reductions	Lbs	0	0	0	0	0	0	0	0	0	0	0
Other on-site PM emissions or reductions	Lbs	0	0	0	0	0	0	0	0	0	0	0
Electricity Generation												
Grid electricity	MWh	0	0	0	0	0	0	0	0	0	0	0
Voluntary purchase of renewable electricity	MWh	0	0	0	0	0	0	0	0	0	0	0
Voluntary purchase of RECs	MWh	0	0	0	0	0	0	0	0	0	0	0
Transportation												
Transportation Fuel Use Breakdown												
Biodiesel use - Personnel Transport	gal	0	0	0	0	0	0	0	0	0	0	0
Biodiesel use - Personnel Transport - User Defined	gal	0	0	0	0	0	0	0	0	0	0	0
Biodiesel use - Equipment Transport	gal	0	0	0	0	0	0	0	0	0	0	0
Biodiesel use - Equipment Transport - User Defined	gal	0	0	0	0	0	0	0	0	0	0	0
Biodiesel use - Material Transport	gal	0	0	0	0	0	0	0	0	0	0	0
Biodiesel use - Material Transport - User Defined	gal	0	0	0	0	0	0	0	0	0	0	0
Biodiesel use - Waste Transport	gal	0	0	0	0	0	0	0	0	0	0	0
Biodiesel use - Waste Transport - User Defined	gal	0	0	0	0	0	0	0	0	0	0	0
Diesel use - Personnel Transport - other vehicles	gal	0	0	0	0	0	0	0	0	0	0	0
Diesel use - Personnel Transport - car	gal	0	0	0	0	0	0	0	0	0	0	0
Diesel use - Personnel Transport - passenger truck	gal	0	0	0	0	0	0	0	0	0	0	0
Diesel use - Personnel Transport - User Defined	gal	0	0	0	0	0	0	0	0	0	0	0
Diesel use - Equipment Transport	gal	0	13.4	0	0	0	0	13.4	0	0	0	13.4
Diesel use - Equipment Transport - User Defined	gal	0	0	0	0	0	0	0	0	0	0	0
Diesel use - Material Transport	gal	100	0	0	0	11356.666	100	0	0	0	11356.666	11456.666
Diesel use - Material Transport - User Defined	gal	0	0	0	0	0	0	0	0	0	0	0
Diesel use - Waste Transport	gal	0	0	15441.6	0	0	0	0	15441.6	0	0	15441.6
Diesel use - Waste Transport - User Defined	gal	0	0	0	0	0	0	0	0	0	0	0
Gasoline use - Personnel Transport - other vehicles	gal	0	0	0	0	0	0	0	0	0	0	0
Gasoline use - Personnel Transport - car	gal	2646	0	0	22	0	2646	0	0	22	0	2668
Gasoline use - Personnel Transport - passenger truck	gal	0	0	0	0	0	0	0	0	0	0	0
Gasoline use - Personnel Transport - User Defined	gal	0	0	0	0	0	0	0	0	0	0	0
Gasoline use - Equipment Transport	gal	0	0	0	0	0	0	0	0	0	0	0
Gasoline use - Equipment Transport - User Defined	gal	0	0	0	0	0	0	0	0	0	0	0
Natural Gas use - Personnel Transport	ccf	0	0	0	0	0	0	0	0	0	0	0
Natural Gas use - Personnel Transport - User Defined	ccf	0	0	0	0	0	0	0	0	0	0	0
Natural Gas use - Equipment Transport	ccf	0	0	0	0	0	0	0	0	0	0	0

Input Summary

Remedy Component Number →		1	2	3	4	5	Remedy Component Subtotals					
		Column headings in Row 6 must match the name of "Input" tabs in this workbook for Columns C - P in this table to be populated ("0" in Row 4 means "Input" tab is turned Off and will not be grouped to a Remedy Component (Columns Q - V) or used in subsequent calculations)										
Item		SC	Excavation	Waste T&D	EPS	B&R	1	2	3	4	5	Total
Conventional Energy												
Transportation diesel use	gal	100	13.4	15441.6	0	11356.666	100	13.4	15441.6	0	11356.666	26911.666
Transportation gasoline use	gal	2646	0	0	22	0	2646	0	0	22	0	2668
Transportation natural gas use	ccf	0	0	0	0	0	0	0	0	0	0	0
User-defined conventional energy transportation #1	TBD	10	10	10	10	10	10	10	10	10	10	50
User-defined conventional energy transportation #2	TBD	0	0	0	0	0	0	0	0	0	0	0
Renewable Energy												
Transportation biodiesel use	gal	0	0	0	0	0	0	0	0	0	0	0
User-defined renewable energy transportation #1	TBD	0	0	0	0	0	0	0	0	0	0	0
User-defined renewable energy transportation #2	TBD	0	0	0	0	0	0	0	0	0	0	0
Off-Site												
Construction Materials												
Aluminum, Rolled Sheet	lb	0	0	0	0	0	0	0	0	0	0	0
Asphalt, mastic	lb	0	0	0	0	0	0	0	0	0	0	0
Asphalt, paving-grade	lb	0	0	0	0	0	0	0	0	0	0	0
Ethanol, Corn, 95%	lb	0	0	0	0	0	0	0	0	0	0	0
Ethanol, Corn, 99.7%	lb	0	0	0	0	0	0	0	0	0	0	0
Ethanol, Petroleum, 99.7%	lb	0	0	0	0	0	0	0	0	0	0	0
Gravel/Sand Mix, 65% Gravel	lb	0	0	0	0	0	0	0	0	0	0	0
Gravel/sand/clay	lb	0	0	0	0	0	0	0	0	0	0	0
HDPE	lb	0	0	0	0	0	0	0	0	0	0	0
Photovoltaic system (installed)	W	0	0	0	0	0	0	0	0	0	0	0
PVC	lb	0	0	0	0	0	0	0	0	0	0	0
Portland cement, US average	lb	0	0	0	0	0						
Ready-mixed concrete, 20 MPa	ft3	0	0	0	0	0	0	0	0	0	0	0
Round Gravel	lb	0	0	0	0	0	0	0	0	0	0	0
Sand	lb	0	0	0	0	0	0	0	0	0	0	0
Stainless Steel	lb	0	0	0	0	0	0	0	0	0	0	0
Steel	lb	0	0	0	0	0	0	0	0	0	0	0
Other refined construction materials	lb	0	0	0	0	0	0	0	0	0	0	0
Other unrefined construction materials	lb	0	0	0	0	0	0	0	0	0	0	0
Treatment Materials & Chemicals												
Cheese Whey	lbs	0	0	0	0	0	0	0	0	0	0	0
Emulsified vegetable oil	lbs	0	0	0	0	0	0	0	0	0	0	0
Granular activated carbon, primary	lbs	0	0	0	0	0	0	0	0	0	0	0
Granular activated carbon, regenerated	lbs	0	0	0	0	0	0	0	0	0	0	0
Hydrogen Peroxide, 50% in H2O	lbs	0	0	0	0	0	0	0	0	0	0	0
Iron (II) Sulfate	lbs	0	0	0	0	0	0	0	0	0	0	0
Lime, Hydrated, Packed	lbs	0	0	0	0	0	0	0	0	0	0	0
Molasses	lbs	0	0	0	0	0	0	0	0	0	0	0
Phosphoric Acid, 70% in H2O	lbs	0	0	0	0	0	0	0	0	0	0	0
Potassium Permanganate	lbs	0	0	0	0	0	0	0	0	0	0	0
Sodium Hydroxide, 50% in H2O	lbs	0	0	0	0	0	0	0	0	0	0	0
Other Treatment Chemicals & Materials	lbs	0	0	0	0	0	0	0	0	0	0	0
Material Type												
Total Virgin Refined Materials	tons	21.455	0	0	0	10.219176	21.455	0	0	0	10.219176	31.674176
Total Recycled Refined Materials	tons	0	0	0	0	0	0	0	0	0	0	0
Total Reused Refined Materials	tons	0	0	0	0	0	0	0	0	0	0	0
Total Refined Material	tons	21.455	0	0	0	10.219176	21.455	0	0	0	10.219176	31.674176
Total Virgin Unrefined Materials	tons	0	0	0	0	0	0	0	0	0	0	0
Total Recycled Unrefined Materials	tons	120	0	0	0	13605.926	120	0	0	0	13605.926	13725.926
Total Reused Unrefined Materials	tons	0	0	0	0	0	0	0	0	0	0	0
Total Unrefined Material	tons	120	0	0	0	13605.926	120	0	0	0	13605.926	13725.926
Fuel Processing												
Biodiesel produced	gal	0	0	0	0	0	0	0	0	0	0	0
Diesel produced	gal	100	17907.823	15441.6	0	11356.666	100	17907.823	15441.6	0	11356.666	44806.089
Gasoline produced	gal	2646	0	0	22	0	2646	0	0	22	0	2668
Compressed natural gas produced	ccf	0	0	0	0	0	0	0	0	0	0	0
Liquified petroleum gas produced	gal	0	0	0	0	0	0	0	0	0	0	0
Natural gas produced	ccf	0	0	0	0	0	0	0	0	0	0	0
Water Use												
Public Water Supply	gal x 1000	294	0	0	0	0	294	0	0	0	0	294
Extracted Groundwater	gal x 1000	0	0	0	0	0	0	0	0	0	0	0
Surface Water	gal x 1000	0	0	0	0	0	0	0	0	0	0	0
Reclaimed Water	gal x 1000	0	0	0	0	0	0	0	0	0	0	0
Collected/Diverted Storm Water	gal x 1000	0	0	0	0	0	0	0	0	0	0	0
User-defined water resource #1	gal x 1000	0	0	0	0	0	0	0	0	0	0	0
User-defined water resource #2	gal x 1000	0	0	0	0	0	0	0	0	0	0	0

Input Summary

Remedy Component Number →		1	2	3	4	5	Remedy Component Subtotals					
		Column headings in Row 6 must match the name of "Input" tabs in this workbook for Columns C - P in this table to be populated ("0" in Row 4 means "Input" tab is turned Off and will not be grouped to a Remedy Component (Columns Q - V) or used in subsequent calculations)										
Item		SC	Excavation	Waste T&D	EPS	B&R	1	2	3	4	5	Total
Waste/Recycle Handling												
Hazardous waste incineration	lbs	0	0	0	0	0	0	0	0	0	0	0
Off-site waste water treatment (POTW)	gal x 1000	0	0	0	0	0	0	0	0	0	0	0
Off-site non-hazardous waste landfill	tons	0	0	0	0	0	0	0	0	0	0	0
Off-site hazardous waste landfill	tons	0	0	0	0	0	0	0	0	0	0	0
Recycled/Reused On-Site	tons	0	0	0	0	0	0	0	0	0	0	0
Recycled/Reused Off-Site	tons	0	0	0	0	0	0	0	0	0	0	0
Solid Waste Totals												
Total Non-Hazardous Waste	tons	0	0	13605.926	0	0	0	0	13605.926	0	0	13605.926
Total Hazardous Waste	tons	0	0	0	0	0	0	0	0	0	0	0
Total Recycled/Reused	tons	0	0	0	0	0	0	0	0	0	0	0
Total Waste (all types)	tons	0	0	13605.926	0	0	0	0	13605.926	0	0	13605.926
Lab Services												
Off-site Laboratory Analysis - Other	sample	0	0	0	50	0	0	0	0	50	0	50
Off-site Laboratory Analysis - Metals	sample	0	0	0	10	0	0	0	0	10	0	10
Off-site Laboratory Analysis - Mercury	sample	0	0	0	10	0	0	0	0	10	0	10
Off-site Laboratory Analysis - Inorganic Anions	sample	0	0	0	0	0	0	0	0	0	0	0
Off-site Laboratory Analysis - Alkalinity	sample	0	0	0	0	0	0	0	0	0	0	0
Off-site Laboratory Analysis - Perchlorate	sample	0	0	0	0	0	0	0	0	0	0	0
Off-site Laboratory Analysis - Nitrogen/Nitrate	sample	0	0	0	0	0	0	0	0	0	0	0
Off-site Laboratory Analysis - Sulfate	sample	0	0	0	0	0	0	0	0	0	0	0
Off-site Laboratory Analysis - PCBs	sample	0	0	0	10	0	0	0	0	10	0	10
Off-site Laboratory Analysis - VOCs	sample	0	0	0	10	0	0	0	0	10	0	10
Off-site Laboratory Analysis - SVOCs	sample	0	0	0	10	0	0	0	0	10	0	10
Resource Extraction for Electricity												
Coal extraction and processing	MWh	0	0	0	0	0	0	0	0	0	0	0
Natural gas extraction and processing	MWh	0	0	0	0	0	0	0	0	0	0	0
Nuclear fuel extraction and processing	MWh	0	0	0	0	0	0	0	0	0	0	0
Oil extraction and processing	MWh	0	0	0	0	0	0	0	0	0	0	0
Other fuel extraction and processing	MWh	0	0	0	0	0	0	0	0	0	0	0
Electricity Transmission												
Transmission and distribution losses	MWh	0	0	0	0	0	0	0	0	0	0	0

Input Summary

Remedy Component Number →		1	2	3	4	5	Remedy Component Subtotals					
		Column headings in Row 6 must match the name of "Input" tabs in this workbook for Columns C - P in this table to be populated ("0" in Row 4 means "Input" tab is turned Off and will not be grouped to a Remedy Component (Columns Q - V) or used in subsequent calculations)										
Item		SC	Excavation	Waste T&D	EPS	B&R	1	2	3	4	5	Total
Other												
BENSEAL (Sodium Bentonite)	50 lb bag	0	0	0	0	0	0	0	0	0	0	0
orange mesh fencing	ft	600	0	0	0	0	600	0	0	0	0	600
absorbent composite socks	ft	2000	0	0	0	0	2000	0	0	0	0	2000
6-mil 40' x 100' polyurethane sheeting	rolls	10	0	0	0	0	10	0	0	0	0	10
aggregate 2" stone	ton	120	0	0	0	0	120	0	0	0	0	120
filter cloth	lb	120	0	0	0	0	120	0	0	0	0	120
20-mil vapor barrier	sqft	0	0	0	0	74052	0	0	0	0	74052	74052
Clean Fill	ton	0	0	0	0	4785.9259	0	0	0	0	4785.9259	4785.9259
Recycled Stone	ton	0	0	0	0	8820	0	0	0	0	8820	8820
User-defined material #10	TBD	0	0	0	0	0	0	0	0	0	0	0
User-defined material #11	TBD	0	0	0	0	0	0	0	0	0	0	0
User-defined material #12	TBD	0	0	0	0	0	0	0	0	0	0	0
User-defined material #13	TBD	0	0	0	0	0	0	0	0	0	0	0
User-defined material #14	TBD	0	0	0	0	0	0	0	0	0	0	0
User-defined material #15	TBD	0	0	0	0	0	0	0	0	0	0	0
User-defined material #16	TBD	0	0	0	0	0	0	0	0	0	0	0
User-defined material #17	TBD	0	0	0	0	0	0	0	0	0	0	0
User-defined material #18	TBD	0	0	0	0	0	0	0	0	0	0	0
User-defined material #19	TBD	0	0	0	0	0	0	0	0	0	0	0
User-defined material #20	TBD	0	0	0	0	0	0	0	0	0	0	0
User-defined Waste Destinations												
User-defined recycled/reused on-site #1	TBD	0	0	0	0	0	0	0	0	0	0	0
User-defined recycled/reused on-site #2	TBD	0	0	0	0	0	0	0	0	0	0	0
User-defined recycled/reused on-site #3	TBD	0	0	0	0	0	0	0	0	0	0	0
User-defined recycled/reused off-site #1	ton	0	0	0	0	0	0	0	0	0	0	0
User-defined recycled/reused off-site #2	ton	0	0	0	0	0	0	0	0	0	0	0
User-defined recycled/reused off-site #3	TBD	0	0	0	0	0	0	0	0	0	0	0
User-defined non-hazardous waste destination #1	ton	0	0	13605.926	0	0	0	0	13605.926	0	0	13605.926
User-defined non-hazardous waste destination #2	ton	0	0	0	0	0	0	0	0	0	0	0
User-defined non-hazardous waste destination #3	ton	0	0	0	0	0	0	0	0	0	0	0
User-defined hazardous waste destination #1	TBD	0	0	0	0	0	0	0	0	0	0	0
User-defined hazardous waste destination #2	TBD	0	0	0	0	0	0	0	0	0	0	0
User-defined hazardous waste destination #3	TBD	0	0	0	0	0	0	0	0	0	0	0

Input Worksheet for SC

Please specify which Remedy Component this Input worksheet is part of: (Select "Off" to exclude this Input worksheet from calculations and results)	**Component 1**	**Site Controls**

General Scope

Crew mobilization and the establishment and maintenance of SESC measures, Storm Water Pollution Control, Dust Control, etc. for the duration of the remediation remedy implementation. Estimated Project duration is 147 days. Note: 1. All "Personnel Transportation" for the duration of the work has been captured in this Component as the same personnel will be onsite for each Component (2-5). 2. Remediation equipment mobilization is outlined in Component 3.

Example Items Eliminated through Screening Process

Other Notes and References

Assume 147 days, 2 additional months compared to Track 2 Alternative

Personnel Transportation

Participant	Number of Roundtrips to Site	Roundtrip Distance to Site (miles)	Mode of Transportation*	Transport Fuel Type*	Total Distance Transported (miles)	Default Fuel Usage Rate**	Fuel Usage Rate Override**	Fuel Used for Personnel Transport**	Activity or Notes
Gallagher Bassett Technical Services Tech	147	30	Car	Gasoline	4410	25		176.4	Environmental Oversight
Contractor (7 empl.)	1029	60	Car	Gasoline	61740	25		2469.6	

**** See the "Detailed Notes and Explanations" tab for explanation of transport and fuel options.***

***** for biodiesel, B20, diesel, and gasoline, units are gallons for Fuel Used and miles/gallon for Fuel Usage Rate; for natural gas, units are hundreds of cubic feet (ccf) for Fuel Used and ccf/miles for Fuel Usage Rate; for electricity, units are miles/kWh for Fuel Usage Rate and the kWh (Fuel Used) are added to total grid electricity used (cell G69).***

On-Site Equipment Use and Transportation

Equipment Type*	HP*	Load Factor (%)*	Equipment Fuel Type**	Equipment Fuel Usage Rate	Equipment Hours Operated	Fuel Used for On-site Equipment	Equipment weight (tons)	Number of Equipment Roundtrips to Site	Roundtrip Distance to Site (miles)	Total Distance Transported (miles)	Mode of Transportation	Transport Fuel Type***	Default Transport Fuel Usage Rate (gptm or mpg)	Transport Fuel Usage Rate Override (gptm or mpg)	Fuel Used for Equipment Transport (gallons)	Activity or Notes

**** HP and Load Factor must be entered by user in Columns C and D. Please see the "Detailed Notes and Explanations" tab for further explanation.***

***** For biodiesel, B20, diesel, gasoline, and liquified petroleum gas, units are gallons for Fuel Used for On-site Equipment and gallons/hr for Equipment Fuel Usage Rate; for compressed natural gas units are ccf (hundreds of cubic feet) for Fuel Used for On-site Equipment and ccf/hr for Equipment Fuel Usage Rate.***

****** Please see the "Detailed Notes and Explanations" tab for instructions on selecting mode of transportation and other aspects of data entry in Columns M, N, and P. Units are gallons for Fuel Used for Equipment Transport and miles/gallon (mpg) or gallons per ton-mile (gptm) for Transport Fuel Usage Rate.***

Input Worksheet for SC

Remedy Component that this Input worksheet is part of:	Component 1	Site Controls

On-Site Electricity Use

Equipment Type	HP	Load Factor (%)	Efficiency (%)	Electrical Rating (kW)	Hours Used	Energy Used (kWh)	Notes
<Equip. with HP, Efficiency, and Hours>							
<Equip. with HP, Efficiency, and Hours>							
<Equip. with HP, Efficiency, and Hours>							
<Equip. with HP, Efficiency, and Hours>							
<Equip. with known kW rating>							DustTrak II (ASM - 1)
<Equip. with known kW rating>							DustTrak II (ASM - 2)
<Equip. with known kW rating>							
<Equip. with known kW rating>							
<Equip. with known total Energy Used>							
<Equip. with known total Energy Used>							
<Equip. with known total Energy Used>							
<Equip. with known total Energy Used>							
					Estimated Total Electricity Usage Based on Above	0	
					Renewable Electricity Generated On-Site*		
					Total Electricity Usage Based on Personnel Transportation	0	
					Total Grid Electricity Used	0	

**** Electricity generated on-site from renewable resources, for which the facility retains the rights to the renewable energy (i.e., does not sell renewable energy certificates associated with the renewable energy generation).***

On-Site Natural Gas Use

Equipment Type	Power Rating (Btu/hr)	Efficiency (%)	Hours Used	Energy Required (Btu)	Natural Gas Used (ccf)	Notes
					0	
				0		
			Totals	0	0	0	

Landfill Gas Combusted On-Site for Energy Use

Equipment Type	Landfill Gas (ccf)	% Methane by volume	Used for electricity?	Landfill Gas Methane Used (ccf)	Notes
				0	
				0	
				0	
			Total	0	

Please see the "Detailed Notes and Explanations" tab for instructions on using the two tables above ("On-site Natural Gas Use" and "Landfill Gas Combusted On-Site for Energy Use"). In the two tables above, ccf = hundreds of cubic feet.

Materials Use and Transportation

Material Type*	Unit	Quantity	Tons	Is the Material Refined or Unrefined?**	Material Source: Virgin, Recycled, or Reused?**	Calculate Item Footprint?**	Default One-way Distance to Site (miles)	One-way Distance to Site Override (miles)	Number of One-way Trips to Site	Include Return Trip in Calculations?	Total Distance Transported (miles)	Mode of Transportation***	Transport Fuel Type	Default Transport Fuel Usage Rate (gptm or mpg)	Transport Fuel Usage Rate Override (gptm or mpg)	Fuel Used for Materials Transport (gallons)	Notes and Description of Materials
orange mesh fencing	ft	600	7.8	Refined	Virgin	Yes	500	60	1	No	60	Truck (mpg)	Diesel	6		10.000	
			0					60	1	No	60	Truck (mpg)	Diesel	6		10.000	
absorbent composite socks	ft	2000	13	Refined	Virgin	Yes	500	60	1	No	60	Truck (mpg)	Diesel	6		10.000	erosion control (assuming 1000 ft, replaced once)
			0					60	1	No	60	Truck (mpg)	Diesel	6		10.000	
6-mil 40' x 100' polyurethane sheeting	rolls	10	0.595	Refined	Virgin	Yes	500	60	1	No	60	Truck (mpg)	Diesel	6		10.000	used for soil stockpiles
			0					60	1	No	60	Truck (mpg)	Diesel	6		10.000	
aggregate 2" stone	ton	120	120	Unrefined	Recycled	Yes	500	60	1	No	60	Truck (mpg)	Diesel	6		10.000	construction entrance pad (60 tons refreshed once)
			0					60	1	No	60	Truck (mpg)	Diesel	6		10.000	
filter cloth	lb	120	0.06	Refined	Virgin	Yes	500	60	1	No	60	Truck (mpg)	Diesel	6		10.000	construction entrance pad (based on Mirari 100x
			0					60	1	No	60	Truck (mpg)	Diesel	6		10.000	
			0														
			0														
			0														
			0														
			0														
			0														
			0														
			0														

**** Please see the "Detailed Notes and Explanations" tab for instructions on specifying "User-Defined Materials" in the dropdown menu.***

***** Selections must be made in Columns F - H in order for the footprint calculations to be performed. Please see the "Detailed Notes and Explanations" tab for further information.***

****** Please see the "Detailed Notes and Explanations" tab for instructions on selecting mode of transportation, accounting for empty return trips, and other aspects of data entry in Columns L, N, O, and Q. Units are gallons for Fuel Used for Materials Transport and miles/gallon (mpg) or gallons per ton-mile (gptm) for Transport Fuel Usage Rate.***

Input Worksheet for SC

Remedy Component that this Input worksheet is part of:	Component 1	Site Controls

Waste Disposal and Transportation

Waste Destination*	Unit	Quantity	Tons	Default One-way Distance to Site (miles)	One-way Distance to Site Override (miles)	Number of One-way Trips to Site	Include Return Trip in Calculations?	Total Distance Transported (miles)	Mode of Transportation **	Transport Fuel Type	Default Transport Fuel Usage Rate (gptm or mpg)	Transport Fuel Usage Rate Override (gptm or mpg)	Fuel Used for Waste Transport (gallons)	Notes and Description of Waste
			0											
			0											
			0											
			0											
			0											
			0											
			0											
			0											
			0											
			0											
			0											
			0											

**** No footprint is calculated for the Recycled/Reused On-Site and Off-Site selections. Please see the "Detailed Notes and Explanations" tab for instructions on specifying "User-Defined" selections in the dropdown menu.***

***** Please see the "Detailed Notes and Explanations" tab for instructions on selecting mode of transportation, accounting for empty return trips, and other aspects of data entry in Columns I, K, L, and N. Units are gallons for Fuel Used for Waste Transport and miles/gallon (mpg) or gallons per ton-mile (gptm) for Transport Fuel Usage Rate.***

Type of Water Used

Source of Water Used*	Unit	Quantity	Tons	Source Location/Aquifer (optional)	Quality of Water Used (optional)	Water Uses (optional)	Fate of Used Water (optional)
Public Water	gal x 1000	294	1225.98			Assuming 2,000 gal/day for tire washing, dust mitigation/control	
			0				
			0				
			0				
			0				
			0				
			0				
			0				
			0				
			0				
			0				
			0				

**** Only the "Public Water" selection has an associated footprint. No footprint is calculated for the other water source selections.***

Note: Information entered in Columns F - V (Source/Quality/Use/Fate) is not compiled or reported by SEFA.

Input Worksheet for SC

Remedy Component that this Input worksheet is part of:	Component 1	Site Controls

Other Energy Use and Air Emissions

Item		Units	Quantity	Notes
On-Site				
User-defined on-site conventional energy use #1	*User-Defined	TBD		
User-defined on-site conventional energy use #2	*User-Defined	TBD		
On-site HAP process emissions**		lbs		
On-site GHG emissions**		lbs CO2e		
On-site carbon storage**		lbs CO2e		
Landfill gas flared on-site		ccf CH4		
Other on-site NOx emissions or reductions**		lbs		
Other on-site SOx emissions or reductions**		lbs		
Other on-site PM emissions or reductions**		lbs		
Transportation		**Units**	**Quantity**	**Notes**
User-defined conventional energy transportation #1	*User-Defined	TBD	10	
User-defined conventional energy transportation #2	*User-Defined	TBD		

**** Enter units and conversion factors on "User Defined Factors" tab***
***** Enter a positive number for emissions and a negative number for reductions, avoidances, or storage***
See the "Detailed Notes and Explanations" tab for use of this table.

Other Voluntary Renewable Energy Use

Item		Units	Quantity	Notes
User-defined on-site renewable energy use #1	*User-Defined	TBD		
User-defined on-site renewable energy use #2	*User-Defined	TBD		
User-defined renewable energy transportation #1	*User-Defined	TBD		
User-defined renewable energy transportation #2	*User-Defined	TBD		
Voluntary purchase of renewable electricity**		MWh		
Voluntary purchase of RECs**		MWh		

**** Enter units and conversion factors on "User Defined Factors" tab***
***** Complete information on provider in the table to the right. No footprint reductions are associated with the voluntary purchases.***
See the "Detailed Notes and Explanations" tab for use of this table

Off-Site Laboratory Analysis

Parameter and Notes	Number of Samples	Comments
Totals	**0**	

Description of purchased renewable electricity (green pricing product or green marketing product)	Provider:	
	Type of product:	
	Type of renewable energy source:	
	Date of renewable system installation:	
Description of purchased RECs	Provider:	
	Type of renewable energy source:	
	Date of renewable system installation:	
	Location of renewable system installation:	

Input Worksheet for Excavation

Please specify which Remedy Component this Input worksheet is part of: (Select "Off" to exclude this Input worksheet from calculations and results)	Component 2	Excavation

General Scope

Excavation and drilling of insitu soils located at the site, loading into tri-axle trucks for off-site disposal. Estimated Project duration is 206 days. Note: 1. All "Personnel Transportation" for the duration of the work has been captured in Component 2 as the same personnel will be on-site for each Component (2-5).

Example Items Eliminated through Screening Process

Other Notes and References

Assume only soil exceeding UU and RRU SCOs is removed

Personnel Transportation

Participant	Number of Roundtrips to Site	Roundtrip Distance to Site (miles)	Mode of Transportation*	Transport Fuel Type*	Total Distance Transported (miles)	Default Fuel Usage Rate**	Fuel Usage Rate Override**	Fuel Used for Personnel Transport**	Activity or Notes
Gallagher Bassett Technical Services Tech									
Contractor (7 empl.)									

**** See the "Detailed Notes and Explanations" tab for explanation of transport and fuel options.***

***** for biodiesel, B20, diesel, and gasoline, units are gallons for Fuel Used and miles/gallon for Fuel Usage Rate; for natural gas, units are hundreds of cubic feet (ccf) for Fuel Used and ccf/miles for Fuel Usage Rate; for electricity, units are miles/kWh for Fuel Usage Rate and the kWh (Fuel Used) are added to total grid electricity used (cell G69).***

On-Site Equipment Use and Transportation

Equipment Type*	HP*	Load Factor (%)*	Equipment Fuel Type**	Equipment Fuel Usage Rate	Equipment Hours Operated	Fuel Used for On-site Equipment	Equipment weight (tons)	Number of Equipment Roundtrips to Site	Roundtrip Distance to Site (miles)	Total Distance Transported (miles)	Mode of Transportation	Transport Fuel Type***	Default Transport Fuel Usage Rate (gptm or mpg)	Transport Fuel Usage Rate Override (gptm or mpg)	Fuel Used for Equipment Transport (gallons)	Activity or Notes
Excavator - medium (175 HP)	165	75%	Diesel between 75 and 750 hp	6.799450549	1029	6996.634615	27.83	1	40	40	Truck (mpg)	Diesel	6		6.7	PC238 Excavator Specs (example)
Excavator - large (250 HP)	257	75%	Diesel between 75 and 750 hp	10.59065934	1029	10897.78846	40.2735	1	40	40	Truck (mpg)	Diesel	6		6.7	PC360 Excavator Specs (example)

**** HP and Load Factor must be entered by user in Columns C and D. Please see the "Detailed Notes and Explanations" tab for further explanation.***

***** For biodiesel, B20, diesel, gasoline, and liquified petroleum gas, units are gallons for Fuel Used for On-site Equipment and gallons/hr for Equipment Fuel Usage Rate; for compressed natural gas units are ccf (hundreds of cubic feet) for Fuel Used for On-site Equipment and ccf/hr for Equipment Fuel Usage Rate.***

****** Please see the "Detailed Notes and Explanations" tab for instructions on selecting mode of transportation and other aspects of data entry in Columns M, N, and P. Units are gallons for Fuel Used for Equipment Transport and miles/gallon (mpg) or gallons per ton-mile (gptm) for Transport Fuel Usage Rate.***

Input Worksheet for Excavation

Remedy Component that this Input worksheet is part of:	Component 2	Excavation

On-Site Electricity Use

Equipment Type	HP	Load Factor (%)	Efficiency (%)	Electrical Rating (kW)	Hours Used	Energy Used (kWh)	Notes
<Equip. with HP, Efficiency, and Hours>							
<Equip. with HP, Efficiency, and Hours>							
<Equip. with HP, Efficiency, and Hours>							
<Equip. with HP, Efficiency, and Hours>							
<Equip. with known kW rating>							
<Equip. with known kW rating>							
<Equip. with known kW rating>							
<Equip. with known kW rating>							
<Equip. with known total Energy Used>							
<Equip. with known total Energy Used>							
<Equip. with known total Energy Used>							
<Equip. with known total Energy Used>							
						Estimated Total Electricity Usage Based on Above	0	
						Renewable Electricity Generated On-Site*		
						Total Electricity Usage Based on Personnel Transportation	0	
						Total Grid Electricity Used	0	

** Electricity generated on-site from renewable resources, for which the facility retains the rights to the renewable energy (i.e., does not sell renewable energy certificates associated with the renewable energy generation).*

On-Site Natural Gas Use

Equipment Type	Power Rating (Btu/hr)	Efficiency (%)	Hours Used	Energy Required (Btu)	Natural Gas Used (ccf)	Notes
					0	
				0		
			Totals	0	0	0	

Landfill Gas Combusted On-Site for Energy Use

Equipment Type	Landfill Gas (ccf)	% Methane by volume	Used for electricity?	Landfill Gas Methane Used (ccf)	Notes
				0	
				0	
				0	
			Total	0	

Please see the "Detailed Notes and Explanations" tab for instructions on using the two tables above ("On-site Natural Gas Use" and "Landfill Gas Combusted On-Site for Energy Use"). In the two tables above, ccf = hundreds of cubic feet.

Materials Use and Transportation

Material Type*	Unit	Quantity	Tons	Is the Material Refined or Unrefined?**	Material Source: Virgin, Recycled, or Reused?**	Calculate Item Footprint?**	Default One-way Distance to Site (miles)	One-way Distance to Site Override (miles)	Number of One-way Trips to Site	Include Return Trip in Calculations?	Total Distance Transported (miles)	Mode of Transportation***	Transport Fuel Type	Default Transport Fuel Usage Rate (gptm or mpg)	Transport Fuel Usage Rate Override (gptm or mpg)	Fuel Used for Materials Transport (gallons)	Notes and Description of Materials
			0														
			0														
			0														
			0														
			0														
			0														
			0														
			0														
			0														
			0														
			0														
			0														
			0														
			0														
			0														
			0														
			0														
			0														
			0														

** Please see the "Detailed Notes and Explanations" tab for instructions on specifying "User-Defined Materials" in the dropdown menu.*

*** Selections must be made in Columns F - H in order for the footprint calculations to be performed. Please see the "Detailed Notes and Explanations" tab for further information.*

**** Please see the "Detailed Notes and Explanations" tab for instructions on selecting mode of transportation, accounting for empty return trips, and other aspects of data entry in Columns L, N, O, and Q. Units are gallons for Fuel Used for Materials Transport and miles/gallon (mpg) or gallons per ton-mile (gptm) for Transport Fuel Usage Rate.*

Input Worksheet for Excavation

Remedy Component that this Input worksheet is part of:	Component 2	Excavation

Waste Disposal and Transportation

Waste Destination*	Unit	Quantity	Tons	Default One-way Distance to Site (miles)	One-way Distance to Site Override (miles)	Number of One-way Trips to Site	Include Return Trip in Calculations?	Total Distance Transported (miles)	Mode of Transportation **	Transport Fuel Type	Default Transport Fuel Usage Rate (gptm or mpg)	Transport Fuel Usage Rate Override (gptm or mpg)	Fuel Used for Waste Transport (gallons)	Notes and Description of Waste
			0											
			0											
			0											
			0											
			0											
			0											
			0											
			0											
			0											
			0											
			0											
			0											

** No footprint is calculated for the Recycled/Reused On-Site and Off-Site selections. Please see the "Detailed Notes and Explanations" tab for instructions on specifying "User-Defined" selections in the dropdown menu.*

*** Please see the "Detailed Notes and Explanations" tab for instructions on selecting mode of transportation, accounting for empty return trips, and other aspects of data entry in Columns I, K, L, and N. Units are gallons for Fuel Used for Waste Transport and miles/gallon (mpg) or gallons per ton-mile (gptm) for Transport Fuel Usage Rate.*

Type of Water Used

Source of Water Used*	Unit	Quantity	Tons	Source Location/Aquifer (optional)	Quality of Water Used (optional)	Water Uses (optional)	Fate of Used Water (optional)
			0				
			0				
			0				
			0				
			0				
			0				
			0				
			0				
			0				
			0				
			0				

** Only the "Public Water" selection has an associated footprint. No footprint is calculated for the other water source selections.*

Note: Information entered in Columns F - V (Source/Quality/Use/Fate) is not compiled or reported by SEFA.

Input Worksheet for Excavation

Remedy Component that this Input worksheet is part of:	Component 2	Excavation

Other Energy Use and Air Emissions

Item		Units	Quantity	Notes
On-Site				
User-defined on-site conventional energy use #1	*User-Defined	TBD		
User-defined on-site conventional energy use #2	*User-Defined	TBD		
On-site HAP process emissions**		lbs		
On-site GHG emissions**		lbs CO2e		
On-site carbon storage**		lbs CO2e		
Landfill gas flared on-site		ccf CH4		
Other on-site NOx emissions or reductions**		lbs		
Other on-site SOx emissions or reductions**		lbs		
Other on-site PM emissions or reductions**		lbs		
Transportation		**Units**	**Quantity**	**Notes**
User-defined conventional energy transportation #1	*User-Defined	TBD	10	
User-defined conventional energy transportation #2	*User-Defined	TBD		

**** Enter units and conversion factors on "User Defined Factors" tab***
***** Enter a positive number for emissions and a negative number for reductions, avoidances, or storage***
See the "Detailed Notes and Explanations" tab for use of this table.

Off-Site Laboratory Analysis

Parameter and Notes	Number of Samples	Comments
Totals	**0**	

Other Voluntary Renewable Energy Use

Item		Units	Quantity	Notes
User-defined on-site renewable energy use #1	*User-Defined	TBD		
User-defined on-site renewable energy use #2	*User-Defined	TBD		
User-defined renewable energy transportation #1	*User-Defined	TBD		
User-defined renewable energy transportation #2	*User-Defined	TBD		
Voluntary purchase of renewable electricity**		MWh		
Voluntary purchase of RECs**		MWh		

**** Enter units and conversion factors on "User Defined Factors" tab***
***** Complete information on provider in the table to the right. No footprint reductions are associated with the voluntary purchases.***
See the "Detailed Notes and Explanations" tab for use of this table

Description of purchased renewable electricity (green pricing product or green marketing product)	Provider:	
	Type of product:	
	Type of renewable energy source:	
	Date of renewable system installation:	
Description of purchased RECs	Provider:	
	Type of renewable energy source:	
	Date of renewable system installation:	
	Location of renewable system installation:	

Input Worksheet for Waste T&D

Please specify which Remedy Component this Input worksheet is part of: (Select "Off" to exclude this Input worksheet from calculations and results)	**Component 3**	**Waste Transport & Disposal**

General Scope

Transportation and disposal of contaminated soil at approved permitted off-site disposal facilities, for the duration of the remediation remedy implementation. Note: 1. All "Personnel Transportation" for the duration of the work has been captured in Component 2 as the same personnel will be on-site for each Component (2-5). Equipment is summarized in Component 3.

Example Items Eliminated through Screening Process

Other Notes and References

Personnel Transportation

Participant	Number of Roundtrips to Site	Roundtrip Distance to Site (miles)	Mode of Transportation*	Transport Fuel Type*	Total Distance Transported (miles)	Default Fuel Usage Rate**	Fuel Usage Rate Override**	Fuel Used for Personnel Transport**	Activity or Notes
Gallagher Bassett Technical Services Tech									
Contractor (7 empl.)									

**** See the "Detailed Notes and Explanations" tab for explanation of transport and fuel options.***

***** for biodiesel, B20, diesel, and gasoline, units are gallons for Fuel Used and miles/gallon for Fuel Usage Rate; for natural gas, units are hundreds of cubic feet (ccf) for Fuel Used and ccf/miles for Fuel Usage Rate; for electricity, units are miles/kWh for Fuel Usage Rate and the kWh (Fuel Used) are added to total grid electricity used (cell G69).***

On-Site Equipment Use and Transportation

Equipment Type*	HP*	Load Factor (%)*	Equipment Fuel Type**	Equipment Fuel Usage Rate	Equipment Hours Operated	Fuel Used for On-site Equipment	Equipment weight (tons)	Number of Equipment Roundtrips to Site	Roundtrip Distance to Site (miles)	Total Distance Transported (miles)	Mode of Transportation	Transport Fuel Type***	Default Transport Fuel Usage Rate (gptm or mpg)	Transport Fuel Usage Rate Override (gptm or mpg)	Fuel Used for Equipment Transport (gallons)	Activity or Notes

**** HP and Load Factor must be entered by user in Columns C and D. Please see the "Detailed Notes and Explanations" tab for further explanation.***

***** For biodiesel, B20, diesel, gasoline, and liquified petroleum gas, units are gallons for Fuel Used for On-site Equipment and gallons/hr for Equipment Fuel Usage Rate; for compressed natural gas units are ccf (hundreds of cubic feet) for Fuel Used for On-site Equipment and ccf/hr for Equipment Fuel Usage Rate.***

****** Please see the "Detailed Notes and Explanations" tab for instructions on selecting mode of transportation and other aspects of data entry in Columns M, N, and P. Units are gallons for Fuel Used for Equipment Transport and miles/gallon (mpg) or gallons per ton-mile (gptm) for Transport Fuel Usage Rate.***

Input Worksheet for Waste T&D

Remedy Component that this Input worksheet is part of:	Component 3	Waste Transport & Disposal

On-Site Electricity Use

Equipment Type	HP	Load Factor (%)	Efficiency (%)	Electrical Rating (kW)	Hours Used	Energy Used (kWh)	Notes
<Equip. with HP, Efficiency, and Hours>							
<Equip. with HP, Efficiency, and Hours>							
<Equip. with HP, Efficiency, and Hours>							
<Equip. with HP, Efficiency, and Hours>							
<Equip. with known kW rating>							
<Equip. with known kW rating>							
<Equip. with known kW rating>							
<Equip. with known kW rating>							
<Equip. with known total Energy Used>							
<Equip. with known total Energy Used>							
<Equip. with known total Energy Used>							
<Equip. with known total Energy Used>							
					Estimated Total Electricity Usage Based on Above	0	
					Renewable Electricity Generated On-Site*		
					Total Electricity Usage Based on Personnel Transportation	0	
					Total Grid Electricity Used	0	

**** Electricity generated on-site from renewable resources, for which the facility retains the rights to the renewable energy (i.e., does not sell renewable energy certificates associated with the renewable energy generation).***

On-Site Natural Gas Use

Equipment Type	Power Rating (Btu/hr)	Efficiency (%)	Hours Used	Energy Required (Btu)	Natural Gas Used (ccf)	Notes
					0	
				0		
			Totals	0	0	0

Landfill Gas Combusted On-Site for Energy Use

Equipment Type	Landfill Gas (ccf)	% Methane by volume	Used for electricity?	Landfill Gas Methane Used (ccf)	Notes
				0	
				0	
				0	
			Total	0	

Please see the "Detailed Notes and Explanations" tab for instructions on using the two tables above ("On-site Natural Gas Use" and "Landfill Gas Combusted On-Site for Energy Use"). In the two tables above, ccf = hundreds of cubic feet.

Materials Use and Transportation

Material Type*	Unit	Quantity	Tons	Is the Material Refined or Unrefined?**	Material Source: Virgin, Recycled, or Reused?**	Calculate Item Footprint?**	Default One-way Distance to Site (miles)	One-way Distance to Site Override (miles)	Number of One-way Trips to Site	Include Return Trip in Calculations?	Total Distance Transported (miles)	Mode of Transportation***	Transport Fuel Type	Default Transport Fuel Usage Rate (gptm or mpg)	Transport Fuel Usage Rate Override (gptm or mpg)	Fuel Used for Materials Transport (gallons)	Notes and Description of Materials
			0														
			0														
			0														
			0														
			0														
			0														
			0														
			0														
			0														
			0														
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			0														
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			0														
			0														
			0														
			0														
			0														
			0														

**** Please see the "Detailed Notes and Explanations" tab for instructions on specifying "User-Defined Materials" in the dropdown menu.***

***** Selections must be made in Columns F - H in order for the footprint calculations to be performed. Please see the "Detailed Notes and Explanations" tab for further information.***

****** Please see the "Detailed Notes and Explanations" tab for instructions on selecting mode of transportation, accounting for empty return trips, and other aspects of data entry in Columns L, N, O, and Q. Units are gallons for Fuel Used for Materials Transport and miles/gallon (mpg) or gallons per ton-mile (gptm) for Transport Fuel Usage Rate.***

Input Worksheet for Waste T&D

Remedy Component that this Input worksheet is part of:	Component 3	Waste Transport & Disposal

Waste Disposal and Transportation

Waste Destination*	Unit	Quantity	Tons	Default One-way Distance to Site (miles)	One-way Distance to Site Override (miles)	Number of One-way Trips to Site	Include Return Trip in Calculations?	Total Distance Transported (miles)	Mode of Transportation **	Transport Fuel Type	Default Transport Fuel Usage Rate (gptm or mpg)	Transport Fuel Usage Rate Override (gptm or mpg)	Fuel Used for Waste Transport (gallons)	Notes and Description of Waste
			0		85	545	No	46325	Truck (mpg)	Diesel	6		7720.8	
User-defined non-hazardous waste destination #1	ton	13,606	13605.92593	25	85	545	No	46325	Truck (mpg)	Diesel	6		7720.8	
			0											
			0											
			0											
			0											
			0											
			0											
			0											
			0											
			0											
			0											

**** No footprint is calculated for the Recycled/Reused On-Site and Off-Site selections. Please see the "Detailed Notes and Explanations" tab for instructions on specifying "User-Defined" selections in the dropdown menu.***

***** Please see the "Detailed Notes and Explanations" tab for instructions on selecting mode of transportation, accounting for empty return trips, and other aspects of data entry in Columns I, K, L, and N. Units are gallons for Fuel Used for Waste Transport and miles/gallon (mpg) or gallons per ton-mile (gptm) for Transport Fuel Usage Rate.***

Type of Water Used

Source of Water Used*	Unit	Quantity	Tons	Source Location/Aquifer (optional)	Quality of Water Used (optional)	Water Uses (optional)	Fate of Used Water (optional)
			0				
			0				
			0				
			0				
			0				
			0				
			0				
			0				
			0				
			0				
			0				

**** Only the "Public Water" selection has an associated footprint. No footprint is calculated for the other water source selections.***

Note: Information entered in Columns F - V (Source/Quality/Use/Fate) is not compiled or reported by SEFA.

Input Worksheet for Waste T&D

Remedy Component that this Input worksheet is part of:	Component 3	Waste Transport & Disposal

Other Energy Use and Air Emissions

Item		Units	Quantity	Notes
On-Site				
User-defined on-site conventional energy use #1	*User-Defined	TBD		
User-defined on-site conventional energy use #2	*User-Defined	TBD		
On-site HAP process emissions**		lbs		
On-site GHG emissions**		lbs CO2e		
On-site carbon storage**		lbs CO2e		
Landfill gas flared on-site		ccf CH4		
Other on-site NOx emissions or reductions**		lbs		
Other on-site SOx emissions or reductions**		lbs		
Other on-site PM emissions or reductions**		lbs		
Transportation		Units	Quantity	Notes
User-defined conventional energy transportation #1	*User-Defined	TBD	10	
User-defined conventional energy transportation #2	*User-Defined	TBD		

**** Enter units and conversion factors on "User Defined Factors" tab***
***** Enter a positive number for emissions and a negative number for reductions, avoidances, or storage***
See the "Detailed Notes and Explanations" tab for use of this table.

Off-Site Laboratory Analysis

Parameter and Notes	Number of Samples	Comments
Totals	0	

Other Voluntary Renewable Energy Use

Item		Units	Quantity	Notes
User-defined on-site renewable energy use #1	*User-Defined	TBD		
User-defined on-site renewable energy use #2	*User-Defined	TBD		
User-defined renewable energy transportation #1	*User-Defined	TBD		
User-defined renewable energy transportation #2	*User-Defined	TBD		
Voluntary purchase of renewable electricity**		MWh		
Voluntary purchase of RECs**		MWh		

**** Enter units and conversion factors on "User Defined Factors" tab***
***** Complete information on provider in the table to the right. No footprint reductions are associated with the voluntary purchases.***
See the "Detailed Notes and Explanations" tab for use of this table

Description of purchased renewable electricity (green pricing product or green marketing product)	Provider:	
	Type of product:	
	Type of renewable energy source:	
	Date of renewable system installation:	
Description of purchased RECs	Provider:	
	Type of renewable energy source:	
	Date of renewable system installation:	
	Location of renewable system installation:	

Input Worksheet for EPS

Please specify which Remedy Component this Input worksheet is part of: (Select "Off" to exclude this Input worksheet from calculations and results)	Component 4	Endpoint Sampling

General Scope

Scope of work includes endpoint sampling following site remediation

Example Items Eliminated through Screening Process

Other Notes and References

Assume endpoints will be analyzed for Full Part 375.

Personnel Transportation

Participant	Number of Roundtrips to Site	Roundtrip Distance to Site (miles)	Mode of Transportation*	Transport Fuel Type*	Total Distance Transported (miles)	Default Fuel Usage Rate**	Fuel Usage Rate Override**	Fuel Used for Personnel Transport**	Activity or Notes
Gallagher Bassett Technical Services									See Comp 1 - oversight & endpoints
Lab Courier - Phoenix	5	110	Car	Gasoline	550	25		22	Sample pick-up from GBTS Poughkeepsie office

**** See the "Detailed Notes and Explanations" tab for explanation of transport and fuel options.***

***** for biodiesel, B20, diesel, and gasoline, units are gallons for Fuel Used and miles/gallon for Fuel Usage Rate; for natural gas, units are hundreds of cubic feet (ccf) for Fuel Used and ccf/miles for Fuel Usage Rate; for electricity, units are miles/kWh for Fuel Usage Rate and the kWh (Fuel Used) are added to total grid electricity used (cell G69).***

On-Site Equipment Use and Transportation

Equipment Type*	HP*	Load Factor (%)*	Equipment Fuel Type**	Equipment Fuel Usage Rate	Equipment Hours Operated	Fuel Used for On-site Equipment	Equipment weight (tons)	Number of Equipment Roundtrips to Site	Roundtrip Distance to Site (miles)	Total Distance Transported (miles)	Mode of Transportation	Transport Fuel Type***	Default Transport Fuel Usage Rate (gptm or mpg)	Transport Fuel Usage Rate Override (gptm or mpg)	Fuel Used for Equipment Transport (gallons)	Activity or Notes

**** HP and Load Factor must be entered by user in Columns C and D. Please see the "Detailed Notes and Explanations" tab for further explanation.***

***** For biodiesel, B20, diesel, gasoline, and liquified petroleum gas, units are gallons for Fuel Used for On-site Equipment and gallons/hr for Equipment Fuel Usage Rate; for compressed natural gas units are ccf (hundreds of cubic feet) for Fuel Used for On-site Equipment and ccf/hr for Equipment Fuel Usage Rate.***

****** Please see the "Detailed Notes and Explanations" tab for instructions on selecting mode of transportation and other aspects of data entry in Columns M, N, and P. Units are gallons for Fuel Used for Equipment Transport and miles/gallon (mpg) or gallons per ton-mile (gptm) for Transport Fuel Usage Rate.***

Input Worksheet for EPS

Remedy Component that this Input worksheet is part of:	Component 4	Endpoint Sampling

On-Site Electricity Use

Equipment Type	HP	Load Factor (%)	Efficiency (%)	Electrical Rating (kW)	Hours Used	Energy Used (kWh)	Notes
<Equip. with HP, Efficiency, and Hours>							
<Equip. with HP, Efficiency, and Hours>							
<Equip. with HP, Efficiency, and Hours>							
<Equip. with HP, Efficiency, and Hours>							
<Equip. with known kW rating>							
<Equip. with known kW rating>							
<Equip. with known kW rating>							
<Equip. with known kW rating>							
<Equip. with known total Energy Used>							
<Equip. with known total Energy Used>							
<Equip. with known total Energy Used>							
<Equip. with known total Energy Used>							
						Estimated Total Electricity Usage Based on Above	0
						Renewable Electricity Generated On-Site*	
						Total Electricity Usage Based on Personnel Transportation	0
						Total Grid Electricity Used	0

** Electricity generated on-site from renewable resources, for which the facility retains the rights to the renewable energy (i.e., does not sell renewable energy certificates associated with the renewable energy generation).*

On-Site Natural Gas Use

Equipment Type	Power Rating (Btu/hr)	Efficiency (%)	Hours Used	Energy Required (Btu)	Natural Gas Used (ccf)	Notes
					0	
				0		
			Totals	0	0	0

Landfill Gas Combusted On-Site for Energy Use

Equipment Type	Landfill Gas (ccf)	% Methane by volume	Used for electricity?	Landfill Gas Methane Used (ccf)	Notes
				0	
				0	
				0	
			Total	0	

Please see the "Detailed Notes and Explanations" tab for instructions on using the two tables above ("On-site Natural Gas Use" and "Landfill Gas Combusted On-Site for Energy Use"). In the two tables above, ccf = hundreds of cubic feet.

Materials Use and Transportation

Material Type*	Unit	Quantity	Tons	Is the Material Refined or Unrefined?**	Material Source: Virgin, Recycled, or Reused?**	Calculate Item Footprint?**	Default One-way Distance to Site (miles)	One-way Distance to Site Override (miles)	Number of One-way Trips to Site	Include Return Trip in Calculations?	Total Distance Transported (miles)	Mode of Transportation***	Transport Fuel Type	Default Transport Fuel Usage Rate (gptm or mpg)	Transport Fuel Usage Rate Override (gptm or mpg)	Fuel Used for Materials Transport (gallons)	Notes and Description of Materials
			0														
			0														
			0														
			0														
			0														
			0														
			0														
			0														
			0														
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			0														
			0														
			0														
			0														
			0														

** Please see the "Detailed Notes and Explanations" tab for instructions on specifying "User-Defined Materials" in the dropdown menu.*

*** Selections must be made in Columns F - H in order for the footprint calculations to be performed. Please see the "Detailed Notes and Explanations" tab for further information.*

**** Please see the "Detailed Notes and Explanations" tab for instructions on selecting mode of transportation, accounting for empty return trips, and other aspects of data entry in Columns L, N, O, and Q. Units are gallons for Fuel Used for Materials Transport and miles/gallon (mpg) or gallons per ton-mile (gptm) for Transport Fuel Usage Rate.*

Input Worksheet for EPS

Remedy Component that this Input worksheet is part of:	Component 4	Endpoint Sampling

Waste Disposal and Transportation

Waste Destination*	Unit	Quantity	Tons	Default One-way Distance to Site (miles)	One-way Distance to Site Override (miles)	Number of One-way Trips to Site	Include Return Trip in Calculations?	Total Distance Transported (miles)	Mode of Transportation **	Transport Fuel Type	Default Transport Fuel Usage Rate (gptm or mpg)	Transport Fuel Usage Rate Override (gptm or mpg)	Fuel Used for Waste Transport (gallons)	Notes and Description of Waste
			0											
			0											
			0											
			0											
			0											
			0											
			0											
			0											
			0											
			0											
			0											
			0											

** No footprint is calculated for the Recycled/Reused On-Site and Off-Site selections. Please see the "Detailed Notes and Explanations" tab for instructions on specifying "User-Defined" selections in the dropdown menu.*

*** Please see the "Detailed Notes and Explanations" tab for instructions on selecting mode of transportation, accounting for empty return trips, and other aspects of data entry in Columns I, K, L, and N. Units are gallons for Fuel Used for Waste Transport and miles/gallon (mpg) or gallons per ton-mile (gptm) for Transport Fuel Usage Rate.*

Type of Water Used

Source of Water Used*	Unit	Quantity	Tons	Source Location/Aquifer (optional)	Quality of Water Used (optional)	Water Uses (optional)	Fate of Used Water (optional)
			0				
			0				
			0				
			0				
			0				
			0				
			0				
			0				
			0				
			0				
			0				

** Only the "Public Water" selection has an associated footprint. No footprint is calculated for the other water source selections.*

Note: Information entered in Columns F - V (Source/Quality/Use/Fate) is not compiled or reported by SEFA.

Input Worksheet for EPS

Remedy Component that this Input worksheet is part of:	Component 4	Endpoint Sampling

Other Energy Use and Air Emissions

Item		Units	Quantity	Notes
On-Site				
User-defined on-site conventional energy use #1	*User-Defined	TBD		
User-defined on-site conventional energy use #2	*User-Defined	TBD		
On-site HAP process emissions**		lbs		
On-site GHG emissions**		lbs CO2e		
On-site carbon storage**		lbs CO2e		
Landfill gas flared on-site		ccf CH4		
Other on-site NOx emissions or reductions**		lbs		
Other on-site SOx emissions or reductions**		lbs		
Other on-site PM emissions or reductions**		lbs		
Transportation		Units	Quantity	Notes
User-defined conventional energy transportation #1	*User-Defined	TBD	10	
User-defined conventional energy transportation #2	*User-Defined	TBD		

**** Enter units and conversion factors on "User Defined Factors" tab***
***** Enter a positive number for emissions and a negative number for reductions, avoidances, or storage***
See the "Detailed Notes and Explanations" tab for use of this table.

Other Voluntary Renewable Energy Use

Item		Units	Quantity	Notes
User-defined on-site renewable energy use #1	*User-Defined	TBD		
User-defined on-site renewable energy use #2	*User-Defined	TBD		
User-defined renewable energy transportation #1	*User-Defined	TBD		
User-defined renewable energy transportation #2	*User-Defined	TBD		
Voluntary purchase of renewable electricity**		MWh		
Voluntary purchase of RECs**		MWh		

**** Enter units and conversion factors on "User Defined Factors" tab***
***** Complete information on provider in the table to the right. No footprint reductions are associated with the voluntary purchases.***
See the "Detailed Notes and Explanations" tab for use of this table

Off-Site Laboratory Analysis

Parameter and Notes	Number of Samples	Comments
Off-site Laboratory Analysis - VOCs	10	
Off-site Laboratory Analysis - SVOCs	10	
Off-site Laboratory Analysis - Metals	10	
Off-site Laboratory Analysis - Mercury	10	
Off-site Laboratory Analysis - PCBs	10	
Off-site Laboratory Analysis - Other	10	
Off-site Laboratory Analysis - Other	10	
Off-site Laboratory Analysis - Other	10	
Off-site Laboratory Analysis - Other	10	
Off-site Laboratory Analysis - Other	10	
Totals	**100**	

Description of purchased renewable electricity (green pricing product or green marketing product)	Provider:	
	Type of product:	
	Type of renewable energy source:	
	Date of renewable system installation:	
Description of purchased RECs	Provider:	
	Type of renewable energy source:	
	Date of renewable system installation:	
	Location of renewable system installation:	

Input Worksheet for B&R

Please specify which Remedy Component this Input worksheet is part of: (Select "Off" to exclude this Input worksheet from calculations and results)	Component 5	Backfill & Restoration

General Scope

Importation of clean fill and backfill, grading and compaction to grade, for the duration of the temediation remedy. Note: 1. All "Personnel Transportation" for the duration of the work has been captured in Component 2 as the same personnel will be on-site for each Component (2-5). 2. Equipment is summarized in Component 3.

Example Items Eliminated through Screening Process

Other Notes and References

Personnel Transportation

Participant	Number of Roundtrips to Site	Roundtrip Distance to Site (miles)	Mode of Transportation*	Transport Fuel Type*	Total Distance Transported (miles)	Default Fuel Usage Rate**	Fuel Usage Rate Override**	Fuel Used for Personnel Transport**	Activity or Notes
Gallagher Bassett Technical Services Tech									
Contractor (7 empl.)									

**** See the "Detailed Notes and Explanations" tab for explanation of transport and fuel options.***

***** for biodiesel, B20, diesel, and gasoline, units are gallons for Fuel Used and miles/gallon for Fuel Usage Rate; for natural gas, units are hundreds of cubic feet (ccf) for Fuel Used and ccf/miles for Fuel Usage Rate; for electricity, units are miles/kWh for Fuel Usage Rate and the kWh (Fuel Used) are added to total grid electricity used (cell G69).***

On-Site Equipment Use and Transportation

Equipment Type*	HP*	Load Factor (%)*	Equipment Fuel Type**	Equipment Fuel Usage Rate	Equipment Hours Operated	Fuel Used for On-site Equipment	Equipment weight (tons)	Number of Equipment Roundtrips to Site	Roundtrip Distance to Site (miles)	Total Distance Transported (miles)	Mode of Transportation	Transport Fuel Type***	Default Transport Fuel Usage Rate (gptm or mpg)	Transport Fuel Usage Rate Override (gptm or mpg)	Fuel Used for Equipment Transport (gallons)	Activity or Notes

**** HP and Load Factor must be entered by user in Columns C and D. Please see the "Detailed Notes and Explanations" tab for further explanation.***

***** For biodiesel, B20, diesel, gasoline, and liquified petroleum gas, units are gallons for Fuel Used for On-site Equipment and gallons/hr for Equipment Fuel Usage Rate; for compressed natural gas units are ccf (hundreds of cubic feet) for Fuel Used for On-site Equipment and ccf/hr for Equipment Fuel Usage Rate.***

****** Please see the "Detailed Notes and Explanations" tab for instructions on selecting mode of transportation and other aspects of data entry in Columns M, N, and P. Units are gallons for Fuel Used for Equipment Transport and miles/gallon (mpg) or gallons per ton-mile (gptm) for Transport Fuel Usage Rate.***

Input Worksheet for B&R

Remedy Component that this Input worksheet is part of:	Component 5	Backfill & Restoration

On-Site Electricity Use

Equipment Type	HP	Load Factor (%)	Efficiency (%)	Electrical Rating (kW)	Hours Used	Energy Used (kWh)	Notes
<Equip. with HP, Efficiency, and Hours>							
<Equip. with HP, Efficiency, and Hours>							
<Equip. with HP, Efficiency, and Hours>							
<Equip. with HP, Efficiency, and Hours>							
<Equip. with known kW rating>							
<Equip. with known kW rating>							
<Equip. with known kW rating>							
<Equip. with known kW rating>							
<Equip. with known total Energy Used>							
<Equip. with known total Energy Used>							
<Equip. with known total Energy Used>							
<Equip. with known total Energy Used>							
						Estimated Total Electricity Usage Based on Above	0
						Renewable Electricity Generated On-Site*	
						Total Electricity Usage Based on Personnel Transportation	0
						Total Grid Electricity Used	0

**** Electricity generated on-site from renewable resources, for which the facility retains the rights to the renewable energy (i.e., does not sell renewable energy certificates associated with the renewable energy generation).***

On-Site Natural Gas Use

Equipment Type	Power Rating (Btu/hr)	Efficiency (%)	Hours Used	Energy Required (Btu)	Natural Gas Used (ccf)	Notes
					0	
				0		
			Totals	0	0	0

Landfill Gas Combusted On-Site for Energy Use

Equipment Type	Landfill Gas (ccf)	% Methane by volume	Used for electricity?	Landfill Gas Methane Used (ccf)	Notes
				0	
				0	
				0	
			Total	0	

Please see the "Detailed Notes and Explanations" tab for instructions on using the two tables above ("On-site Natural Gas Use" and "Landfill Gas Combusted On-Site for Energy Use"). In the two tables above, ccf = hundreds of cubic feet.

Materials Use and Transportation

Material Type*	Unit	Quantity	Tons	Is the Material Refined or Unrefined?**	Material Source: Virgin, Recycled, or Reused?**	Calculate Item Footprint?**	Default One-way Distance to Site (miles)	One-way Distance to Site Override (miles)	Number of One-way Trips to Site	Include Return Trip in Calculations?	Total Distance Transported (miles)	Mode of Transportation***	Transport Fuel Type	Default Transport Fuel Usage Rate (gptm or mpg)	Transport Fuel Usage Rate Override (gptm or mpg)	Fuel Used for Materials Transport (gallons)	Notes and Description of Materials
Clean Fill	ton	4786	4786	Unrefined	Recycled	Yes	500	50	240	No	12000	Truck (mpg)	Diesel	6		2000.000	
			0					50	240	No	12000	Truck (mpg)	Diesel	6		2000.000	
Recycled Stone	ton	8820	8820	Unrefined	Recycled	Yes	500	50	441	No	22050	Truck (mpg)	Diesel	6		3675.000	
			0					50	441	No	22050	Truck (mpg)	Diesel	6		3675.000	
20-mil vapor barrier	sqft	74052	10.219176	Refined	Virgin	Yes	500	20	1	No	20	Truck (mpg)	Diesel	6		3.333	Construction measure (not an EC)
			0					20	1	No	20	Truck (mpg)	Diesel	6		3.333	
			0														
			0														
			0														
			0														
			0														
			0														
			0														
			0														
			0														
			0														
			0														
			0														

**** Please see the "Detailed Notes and Explanations" tab for instructions on specifying "User-Defined Materials" in the dropdown menu.***

***** Selections must be made in Columns F - H in order for the footprint calculations to be performed. Please see the "Detailed Notes and Explanations" tab for further information.***

****** Please see the "Detailed Notes and Explanations" tab for instructions on selecting mode of transportation, accounting for empty return trips, and other aspects of data entry in Columns L, N, O, and Q. Units are gallons for Fuel Used for Materials Transport and miles/gallon (mpg) or gallons per ton-mile (gptm) for Transport Fuel Usage Rate.***

Input Worksheet for B&R

Remedy Component that this Input worksheet is part of:	Component 5	Backfill & Restoration

Waste Disposal and Transportation

Waste Destination*	Unit	Quantity	Tons	Default One-way Distance to Site (miles)	One-way Distance to Site Override (miles)	Number of One-way Trips to Site	Include Return Trip in Calculations?	Total Distance Transported (miles)	Mode of Transportation **	Transport Fuel Type	Default Transport Fuel Usage Rate (gptm or mpg)	Transport Fuel Usage Rate Override (gptm or mpg)	Fuel Used for Waste Transport (gallons)	Notes and Description of Waste
			0											
			0											
			0											
			0											
			0											
			0											
			0											
			0											
			0											
			0											
			0											
			0											

** No footprint is calculated for the Recycled/Reused On-Site and Off-Site selections. Please see the "Detailed Notes and Explanations" tab for instructions on specifying "User-Defined" selections in the dropdown menu.*

*** Please see the "Detailed Notes and Explanations" tab for instructions on selecting mode of transportation, accounting for empty return trips, and other aspects of data entry in Columns I, K, L, and N. Units are gallons for Fuel Used for Waste Transport and miles/gallon (mpg) or gallons per ton-mile (gptm) for Transport Fuel Usage Rate.*

Type of Water Used

Source of Water Used*	Unit	Quantity	Tons	Source Location/Aquifer (optional)	Quality of Water Used (optional)	Water Uses (optional)	Fate of Used Water (optional)
			0				
			0				
			0				
			0				
			0				
			0				
			0				
			0				
			0				
			0				
			0				
			0				

** Only the "Public Water" selection has an associated footprint. No footprint is calculated for the other water source selections.*

Note: Information entered in Columns F - V (Source/Quality/Use/Fate) is not compiled or reported by SEFA.

Input Worksheet for B&R

Remedy Component that this Input worksheet is part of:	Component 5	Backfill & Restoration

Other Energy Use and Air Emissions

Item		Units	Quantity	Notes
On-Site				
User-defined on-site conventional energy use #1	*User-Defined	TBD		
User-defined on-site conventional energy use #2	*User-Defined	TBD		
On-site HAP process emissions**		lbs		
On-site GHG emissions**		lbs CO2e		
On-site carbon storage**		lbs CO2e		
Landfill gas flared on-site		ccf CH4		
Other on-site NOx emissions or reductions**		lbs		
Other on-site SOx emissions or reductions**		lbs		
Other on-site PM emissions or reductions**		lbs		
Transportation		Units	Quantity	Notes
User-defined conventional energy transportation #1	*User-Defined	TBD	10	
User-defined conventional energy transportation #2	*User-Defined	TBD		

**** Enter units and conversion factors on "User Defined Factors" tab***
***** Enter a positive number for emissions and a negative number for reductions, avoidances, or storage***
See the "Detailed Notes and Explanations" tab for use of this table.

Off-Site Laboratory Analysis

Parameter and Notes	Number of Samples	Comments
Totals	0	

Other Voluntary Renewable Energy Use

Item		Units	Quantity	Notes
User-defined on-site renewable energy use #1	*User-Defined	TBD		
User-defined on-site renewable energy use #2	*User-Defined	TBD		
User-defined renewable energy transportation #1	*User-Defined	TBD		
User-defined renewable energy transportation #2	*User-Defined	TBD		
Voluntary purchase of renewable electricity**		MWh		
Voluntary purchase of RECs**		MWh		

**** Enter units and conversion factors on "User Defined Factors" tab***
***** Complete information on provider in the table to the right. No footprint reductions are associated with the voluntary purchases.***
See the "Detailed Notes and Explanations" tab for use of this table

Description of purchased renewable electricity (green pricing product or green marketing product)	Provider:	
	Type of product:	
	Type of renewable energy source:	
	Date of renewable system installation:	
Description of purchased RECs	Provider:	
	Type of renewable energy source:	
	Date of renewable system installation:	
	Location of renewable system installation:	

For use of this worksheet, please see instructions at the end of the worksheet

User Defined Activity, Material, or Service	Unit	Tons per Unit*	User Defined Conversion Factors — Parameters Used, Extracted, Emitted, or Generated: Energy (MMBtu/unit)	GHG (lbs CO2e/unit)	NOx (lbs NOx/unit)	SOx (lbs SOx/unit)	PM (lbs PM/unit)	HAPs (lbs HAPs/unit)	Ref.	Use this row only for:
User-defined emissions for biodiesel on-site equipment	gal									**User-defined emissions for biodiesel on-site equipment**
User-defined emissions for diesel on-site equipment	gal									**User-defined emissions for diesel on-site equipment**
User-defined emissions for gasoline on-site equipment	gal									**User-defined emissions for gasoline on-site equipment**
User-defined emissions for compressed natural gas on-site equ	ccf									**User-defined emissions for compressed natural gas on-site e**
User-defined emissions for liquified petroleum gas on-site equ	gal									**User-defined emissions for liquified petroleum gas on-site eq**
User-defined emissions for natural gas on-site equipment	ccf									**User-defined emissions for natural gas on-site equipment**
User-defined emissions for biodiesel transportation	gal									**User-defined emissions for biodiesel transportation**
User-defined emissions for diesel transportation	gal									**User-defined emissions for diesel transportation**
User-defined emissions for gasoline transportation	gal									**User-defined emissions for gasoline transportation**
User-defined emissions for natural gas transportation	ccf									**User-defined emissions for natural gas transportation**

Note: Entering user-defined emission conversion factors in Rows 7 - 16 will override default conversion factors for all emissions calculations of the same fuel/use throughout the SEFA workbooks.

BENSEAL (Sodium Bentonite)	50 lb bag	0.025								**User-defined material #1**
orange mesh fencing	ft	0.013								**User-defined material #2**
absorbent composite socks	ft	0.0065								**User-defined material #3**
6-mil 40' x 100' polyurethane sheeting	rolls	0.0595								**User-defined material #4**
aggregate 2" stone	ton	1								**User-defined material #5**
filter cloth	lb	0.0005								**User-defined material #6**
20-mil vapor barrier	sqft	0.000138								**User-defined material #7**
Clean Fill	ton	1								**User-defined material #8**
Recycled Stone	ton	1								**User-defined material #9**
User-defined material #10	TBD	TBD								**User-defined material #10**
User-defined material #11	TBD	TBD								**User-defined material #11**
User-defined material #12	TBD	TBD								**User-defined material #12**
User-defined material #13	TBD	TBD								**User-defined material #13**
User-defined material #14	TBD	TBD								**User-defined material #14**
User-defined material #15	TBD	TBD								**User-defined material #15**
User-defined material #16	TBD	TBD								**User-defined material #16**
User-defined material #17	TBD	TBD								**User-defined material #17**
User-defined material #18	TBD	TBD								**User-defined material #18**
User-defined material #19	TBD	TBD								**User-defined material #19**
User-defined material #20	TBD	TBD								**User-defined material #20**

Item or Service Used	Unit	Tons per Unit*	Energy (MMBtu/unit)	GHG (lbs CO2e/unit)	NOx (lbs NOx/unit)	SOx (lbs SOx/unit)	PM (lbs PM/unit)	HAPs (lbs HAPs/unit)	Ref.	Use this row only for:
User-defined recycled/reused on-site #1	TBD	TBD								User-defined recycled/reused on-site #1
User-defined recycled/reused on-site #2	TBD	TBD								User-defined recycled/reused on-site #2
User-defined recycled/reused on-site #3	TBD	TBD								User-defined recycled/reused on-site #3
User-defined recycled/reused off-site #1	ton	1								User-defined recycled/reused off-site #1
User-defined recycled/reused off-site #2	ton	1								User-defined recycled/reused off-site #2
User-defined recycled/reused off-site #3	TBD	TBD								User-defined recycled/reused off-site #3
User-defined non-hazardous waste destination #1	ton	1								User-defined non-hazardous waste destination #1
User-defined non-hazardous waste destination #2	ton	1								User-defined non-hazardous waste destination #2
User-defined non-hazardous waste destination #3	ton	TBD								User-defined non-hazardous waste destination #3
User-defined hazardous waste destination #1	TBD	TBD								User-defined hazardous waste destination #1
User-defined hazardous waste destination #2	TBD	TBD								User-defined hazardous waste destination #2
User-defined hazardous waste destination #3	TBD	TBD								User-defined hazardous waste destination #3

Item or Service Used	Unit	Tons per Unit*	Energy (MMBtu/unit)	GHG (lbs CO2e/unit)	NOx (lbs/unit)	SOx (lbs/unit)	PM (lbs/unit)	HAPs (lbs/unit)	Ref.	Use this row only for:
User-defined on-site conventional energy use #1	TBD									User-defined on-site conventional energy use #1
User-defined on-site conventional energy use #2	TBD									User-defined on-site conventional energy use #2
User-defined conventional energy transportation #1	TBD									User-defined conventional energy transportation #1
User-defined conventional energy transportation #2	TBD									User-defined conventional energy transportation #2
User-defined on-site renewable energy use #1	TBD									User-defined on-site renewable energy use #1
User-defined on-site renewable energy use #2	TBD									User-defined on-site renewable energy use #2
User-defined renewable energy transportation #1	TBD									User-defined renewable energy transportation #1
User-defined renewable energy transportation #2	TBD									User-defined renewable energy transportation #2
User-defined water resource #1	gal x 1000									User-defined water resource #1
User-defined water resource #2	gal x 1000									User-defined water resource #2

** "Tons per unit" refers to how many tons there are per unit of the material (e.g., 1 pound is 1/2000 of a ton or 0.0005 tons per unit)*

"MMBtu" = millions of Btus

Fuel Usage Rate								
User Defined Vehicles in Mode of Personnel Transportation	B20 mpg or pmpg	Biodiesel mpg or pmpg	Diesel mpg or pmpg	Electricity mpkWh	Gasoline mpg	Natural Gas mpccf	Ref.	
User Defined Vehicle #1								User Defined Vehicle #1
User Defined Vehicle #2								User Defined Vehicle #2
User Defined Vehicle #3								User Defined Vehicle #3
User Defined Vehicle #4								User Defined Vehicle #4
User Defined Vehicle #5								User Defined Vehicle #5

"mpg" = miles per gallon; "pmpg" = passenger miles per gallon; "mpkWh" = miles per kilowatt hour; "mpccf" = miles per 100 cubic feet"

Fuel Usage Rate					
User Defined Vehicles in Mode of Transportation for Equipment, Materials, and Waste	B20 mpg or gptm	Biodiesel mpg or gptm	Diesel mpg or gptm	Ref.	
User Defined Vehicle #1					User Defined Vehicle #1
User Defined Vehicle #2					User Defined Vehicle #2
User Defined Vehicle #3					User Defined Vehicle #3
User Defined Vehicle #4					User Defined Vehicle #4
User Defined Vehicle #5					User Defined Vehicle #5

Site Controls - On-Site Footprint (Scope 1)

Contributors to Footprints	Units	Usage	Energy		GHG		NOx		SOx		PM		HAPs	
			Conv. Factor	MMBtus	Conv. Factor	lbs CO2e	Conv. Factor	lbs	Conv. Factor	lbs	Conv. Factor	lbs	Conv. Factor	lbs
On-Site														
On-site Renewable Energy														
Renewable electricity generated on-site	MWh	0	3.413	0										
Landfill gas combusted on-site for energy use	ccf CH4	0	0.103	0	13.1	0	0.01	0	6.3E-06	0	0.00076	0	8.4E-06	0
On-site biodiesel use	gal	0	0.127	0	22.3	0	0.2	0	0	0	0.00099	0	NP	
On-site biodiesel use - User Defined	gal	0	0.127	0	22.3	0	0.2	0	0	0	0.00099	0	NP	
User-defined on-site renewable energy use #1	gal	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined on-site renewable energy use #2	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
On-site Renewable Energy Subtotals				**0**		**0**		**0**		**0**		**0**		**0**
Notes:														
On-site Conventional Energy														
On-site grid electricity	MWh	0	3.413	0										
On-site diesel use - Other	Gal	0	0.139	0	22.5	0	0.17	0	0.0054	0	0.0034	0	5.2E-06	0
On-site diesel use <75 hp	Gal	0	0.139	0	22.21	0	0.1565	0	0.000145	0	0.0145	0	0.00004	0
On-site diesel use 75<hp<750	Gal	0	0.139	0	22.24	0	0.101	0	0.00013	0	0.009	0	0.00004	0
On-site diesel use >750 hp	Gal	0	0.139	0	22.24	0	0.149	0	0.00013	0	0.006	0	0.00004	0
On-site gasoline use - Other	Gal	0	0.124	0	19.6	0	0.11	0	0.0045	0	0.00054	0	0.000039	0
On-site gasoline use <25 hp	Gal	0	0.124	0	17.48	0	0.037	0	0.00025	0	0.165	0	0.00008	0
On-site gasoline use >25 hp	Gal	0	0.124	0	19.93	0	0.032	0	0.00029	0	0.002	0	0.00009	0
On-site natural gas use	ccf	0	0.103	0	13.1	0	0.01	0	6.3E-06	0	0.00076	0	8.4E-06	0
On-site compressed natural gas use - Other	ccf	0	NP		1957.835	0	16.0325	0	0.023045	0	0.2775	0	0	0
On-site compressed natural gas use	ccf	0	NP		1957.835	0	16.0325	0	0.023045	0	0.2775	0	0	0
On-site liquified petroleum gas use - Other	gal	0	NP		12.69	0	0.021	0	0.00013	0	0.001	0	0	0
On-site liquified petroleum gas use	gal	0	NP		12.69	0	0.021	0	0.00013	0	0.001	0	0	0
Other forms of on-site conventional energy use #1	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
Other forms of on-site conventional energy use #2	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
On-site Conventional Energy Subtotals				**0**		**0**		**0**		**0**		**0**		**0**
Notes:														
Other On-site Emissions														
On-site HAP process emissions	lbs	0											1	0
On-site GHG emissions	lbs CO2e	0			1	0								
On-site carbon storage	lbs CO2e	0			1	0								
GHG avoided by flaring on-site landfill methane	Lbs	0			-262	0	0.01	0	6.3E-06	0	0.00076	0	8.4E-06	0
Other on-site NOx emissions or reductions	lbs	0					1	0						
Other on-site SOx emissions or reductions	lbs	0							1	0				
Other on-site PM emissions or reductions	lbs	0									1	0		
User-defined recycled/reused on-site #2	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined recycled/reused on-site #3	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined recycled/reused off-site #1	ton	0	0	0	0	0	0	0	0	0	0	0	0	0
Notes:														
On-site Totals				**0.00**		**0**		**0**		**0**		**0**		**0**

Site Controls - Electricity Generation Footprint (Scope 2)

Contributors to Footprints	Units	Usage	Energy		GHG		NOx		SOx		PM		HAPs	
			Conv. Factor	MMBtus	Conv. Factor	lbs CO2e	Conv. Factor	lbs	Conv. Factor	lbs	Conv. Factor	lbs	Conv. Factor	lbs
Electricity Generation														
Grid electricity	MWh	0	6.929	0	1124.3	0	2.2421	0	4.607887	0	0.057518	0	0.210237	0
Voluntary purchase of renewable electricity	MWh	0												
Voluntary purchase of RECs	MWh	0												
Notes:														

Site Controls - Transportation Footprint (Scope 3a)

Category	Units	Usage	Energy		Greenhouse Gas		NOx		SOx		PM		HAPs	
			Conv. Factor	MMBtus	Conv. Factor	lbs CO2e	Conv. Factor	lbs	Conv. Factor	lbs	Conv. Factor	lbs	Conv. Factor	lbs
Conventional Energy														
Transportation diesel use	gal	100	0.139	13.9	22.5	2250	0.17	17	0.0054	0.54	0.0034	0.34	5.2E-06	0.00052
Transportation diesel use - car	gal	0	0.139	0	22.57	0	0.015	0	0.0002	0	0.003	0	0.00252	0
Transportation diesel use - passenger truck	gal	0	0.139	0	22.545	0	0.0585	0	0.0002	0	0.007	0	0.002605	0
Transportation diesel use - User Defined	gal	0	0.139	0	22.5	0	0.17	0	0.0054	0	0.0034	0	5.2E-06	0
Transportation gasoline use	gal	0	0.124	0	19.6	0	0.11	0	0.0045	0	0.00054	0	0.000039	0
Transportation gasoline use - car	gal	2646	0.124	328.104	19.77	52311.42	0.027	71.442	0.00036	0.95256	0.003	7.938	0.0067	17.7282
Transportation gasoline use - passenger truck	gal	0	0.124	0	19.79	0	0.035	0	0.00036	0	0.003	0	0.00661	0
Transportation gasoline use - User Defined	gal	0	0.124	0	19.6	0	0.11	0	0.0045	0	0.00054	0	0.000039	0
Transportation natural gas use	ccf	0	0.103	0	13.1	0	0.01	0	6.3E-06	0	0.00076	0	8.4E-06	0
Transportation natural gas use - User Defined	ccf	0	0.103	0	13.1	0	0.01	0	6.3E-06	0	0.00076	0	8.4E-06	0
User-defined conventional energy transportation #1	TBD	10	0	0	0	0	0	0	0	0	0	0	0	0
User-defined conventional energy transportation #2	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
Conventional Energy Subtotals				**342**		**54,561**		**88**		**1**		**8**		**18**
Notes:														
Renewable Energy														
Transportation biodiesel use	gal	0	0.127	0	22.3	0	0.2	0	0	0	0.00099	0	NP	
Transportation biodiesel use - User Defined	gal	0	0.127	0	22.3	0	0.2	0	0	0	0.00099	0	NP	
User-defined renewable energy transportation #1	TBD	0	Biodiesel		0	0	0	0	0	0	0	0	Ref.	
User-defined renewable energy transportation #2	TBD	0	mpg or pmp		0	0	0	0	0	0	0	0	0	0
Renewable Energy Subtotals				**0**		**0**		**0**		**0**		**0**		**0**
Notes:														
Transportation Totals				**342**		**54561**		**88**		**1**		**8**		**18**

Site Controls - Off-Site Footprint (Scope 3b)

Category	Units	Usage	Energy		Greenhouse Gas		NOx		SOx		PM		HAPs	
			Conv. Factor	MMBtus	Conv. Factor	lbs CO2e	Conv. Factor	lbs	Conv. Factor	lbs	Conv. Factor	lbs	Conv. Factor	lbs
Construction Materials														
Aluminum, Rolled Sheet	lb	0	0.0633	0	9.15	0	0.0148	0	0.0283	0	0.0088	0	0.00102	0
Asphalt, mastic	lb	0	0.0412	0	0.85	0	0.00271	0	0.00798	0	0.000766	0	0.00107	0
Asphalt, paving-grade	lb	0	0.5	0	8.58	0	0.0299	0	0.0969	0	0.0091	0	0.0133	0
Ethanol, Corn, 95%	lb	0	0.0318	0	-0.0199	0	0.00425	0	0.00303	0	0.000469	0	8.46E-05	0
Ethanol, Corn, 99.7%	lb	0	0.0324	0	0.0591	0	0.00431	0	0.0031	0	0.000472	0	0.000087	0
Ethanol, Petroleum, 99.7%	lb	0	0.0205	0	1.25	0	0.00199	0	0.00214	0	0.000277	0	5.89E-05	0
Gravel/Sand Mix, 65% Gravel	lb	0	2.48E-05	0	0.0024	0	0.000018	0	4.52E-06	0	2.61E-06	0	3.08E-07	0
Gravel/sand/clay	lb	0	0.000028	0	0.00335	0	1.65E-05	0	0.000015	0	0.000002	0	2.05E-10	0
HDPE	lb	0	0.0332	0	1.94	0	0.00325	0	0.00409	0	0.000439	0	6.41E-05	0
Photovoltaic system (installed)	W	0	0.0336	0	4.47	0	0.015	0	0.032	0	0.00063	0	2.9E-06	0
PVC	lb	0	0.0262	0	2.02	0	0.004	0	0.00274	0	0.000372	0	0.000375	0
Portland cement, US average	lb	0	0.0139	0	1.34	0	0.00654	0	0.0104	0	0.00378	0	0.00097	0
Ready-mixed concrete, 20 MPa	ft3	0	0.217	0	19.5	0	0.0975	0	0.154	0	0.057	0	0.0141	0
Round Gravel	lb	0	2.48E-05	0	0.0024	0	0.000018	0	4.52E-06	0	2.61E-06	0	3.08E-07	0
Sand	lb	0	2.48E-05	0	0.0024	0	0.000018	0	4.52E-06	0	2.61E-06	0	3.08E-07	0
Stainless Steel	lb	0	0.0116	0	3.4	0	0.0075	0	0.012	0	0.0044	0	0.000144	0
Steel	lb	0	0.0044	0	1.1	0	0.0014	0	0.0017	0	0.00056	0	0.000067	0
Other refined construction materials	lb	0	0.01885	0	2.115	0	0.004038	0	0.005133	0	0.001443	0	0.000163	0
Other unrefined construction materials	lb	0	0.000028	0	0.00335	0	1.65E-05	0	0.000015	0	0.000002	0	2.05E-10	0

Notes:

Site Controls - Off-Site Footprint (Scope 3b)

Category	Units	Usage	Energy		Greenhouse Gas		NOx		SOx		PM		HAPs	
			Conv. Factor	MMBtus	Conv. Factor	lbs CO2e	Conv. Factor	lbs	Conv. Factor	lbs	Conv. Factor	lbs	Conv. Factor	lbs
Treatment Materials & Chemicals														
Cheese Whey	lbs	0	0.0025	0	0.031	0	0.000062	0	0.000033	0	0.000002	0	NP	
Emulsified vegetable oil	lbs	0	0.0077	0	3.44	0	0.0066	0	0.0019	0	0.000033	0	NP	
Granular activated carbon, primary	lbs	0	0.0356	0	4.82	0	0.0793	0	0.128	0	0.000987	0	0.000657	0
Granular activated carbon, regenerated	lbs	0	0.00873	0	1.7	0	0.00733	0	0.0129	0	0.000886	0	0.000671	0
Hydrogen Peroxide, 50% in H2O	lbs	0	0.00979	0	1.19	0	0.00142	0	0.0024	0	0.000308	0	6.29E-05	0
Iron (II) Sulfate	lbs	0	0.00147	0	0.167	0	0.000316	0	0.000589	0	0.000103	0	0.000023	0
Lime, Hydrated, Packed	lbs	0	0.00206	0	0.762	0	0.000513	0	0.000358	0	0.00013	0	6.57E-06	0
Molasses	lbs	0	0.0044	0	0.48	0	0.0011	0	0.00024	0	4.1E-06	0	NP	
Phosphoric Acid, 70% in H2O	lbs	0	0.0067	0	0.882	0	0.00282	0	0.0294	0	0.00171	0	0.000163	0
Potassium Permanganate	lbs	0	0.00981	0	1.16	0	0.00234	0	0.0032	0	0.000422	0	0.000122	0
Sodium Hydroxide, 50% in H2O	lbs	0	0.00977	0	1.09	0	0.00194	0	0.00352	0	0.000403	0	0.000129	0
Other Treatment Chemicals & Materials	lbs	0	0.015	0	1.67	0	0.003	0	0.0065	0	0.00061	0	0.000016	0
Notes:														
Fuel Processing														
Biodiesel produced	gal	0	0.029	0	-16.8	0	0.018	0	0.033	0	0.00082	0	NP	
Diesel produced	gal	100	0.017	1.7	3.02	302	0.0051	0.51	0.0062	0.62	0.0017	0.17	0.0011	0.11
Gasoline produced	gal	2646	0.033	87.318	2.8	7408.8	0.0046	12.1716	0.005	13.23	0.0015	3.969	0.001	2.646
Liquefied Petroleum Gas Produced	gal	0	0.088	0	1.47	0	0.0016	0	0.0024	0	0.0007	0	0.0003	0
Natural Gas - Compressed Produced	ccf	0	19.983	0	343.92	0	0.4732	0	2.1651	0	0.1846	0	0.2895	0
Natural Gas Produced	ccf	0	0.0052	0	2.2	0	0.0037	0	0.0046	0	0.000072	0	6.1E-06	0
Fuel Processing Subtotals				**89.018**		**7710.8**		**12.6816**		**13.85**		**4.139**		**2.756**
Notes:														
Public water	gal x 1000	294	0.0092	2.7048	5	1470	0.0097	2.8518	0.0059	1.7346	0.016	4.704	0.000015	0.00441
User-defined water resource #1	gal x 1000	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined water resource #2	gal x 1000	0	0	0	0	0	0	0	0	0	0	0	0	0
Notes:														

Site Controls - Off-Site Footprint (Scope 3b)

			Energy		Greenhouse Gas		NOx		SOx		PM		HAPs	
Category	Units	Usage	Conv. Factor	MMBtus	Conv. Factor	lbs CO2e	Conv. Factor	lbs	Conv. Factor	lbs	Conv. Factor	lbs	Conv. Factor	lbs
Off-Site Services														
Hazardous waste incineration	lb	0	0.00609	0	2.43	0	0.0016	0	0.00167	0	0.000209	0	0.000087	0
Off-site waste water treatment (POTW)	gal x 1000	0	0.015	0	4.4	0	0.016	0	0.015	0	NP		NP	
Off-site non-hazardous waste landfill	ton	0	0.16	0	25	0	0.14	0	0.075	0	0.4	0	0.0014	0
Off-site hazardous waste landfill	ton	0	0.18	0	27.5	0	0.154	0	0.0825	0	0.44	0	0.00154	0
Off-site Laboratory Analysis - Other	sample	0	0.058071	0	6.853438	0	0.131402	0	0.303876	0	0.04557	0	0.033017	0
Off-site Laboratory Analysis - Metals	sample	0	0.212	0	27.4693	0	0.6423	0	1.5072	0	0.2264	0	0.1643	0
Off-site Laboratory Analysis - Mercury	sample	0	0.073171	0	9.325458	0	0.212744	0	0.49824	0	0.074736	0	0.054233	0
Off-site Laboratory Analysis - Inorganic Anions	sample	0	0.007402	0	0.645948	0	0.006768	0	0.014793	0	0.002202	0	0.001554	0
Off-site Laboratory Analysis - Alkalinity	sample	0	0.01744	0	1.338192	0	0.007011	0	0.01325	0	0.00194	0	0.001283	0
Off-site Laboratory Analysis - Perchlorate	sample	0	0.023885	0	1.871705	0	0.007981	0	0.014154	0	0.002055	0	0.001287	0
Off-site Laboratory Analysis - Nitrogen/Nitrate	sample	0	0.033648	0	4.29897	0	0.095459	0	0.222665	0	0.03351	0	0.024251	0
Off-site Laboratory Analysis - Sulfate	sample	0	0.014122	0	1.472673	0	0.007981	0	0.013602	0	0.00198	0	0.001202	0
Off-site Laboratory Analysis - PCBs	sample	0	0.051277	0	5.224902	0	0.083334	0	0.190477	0	0.028439	0	0.021208	0
Off-site Laboratory Analysis - VOCs	sample	0	0.076204	0	9.016814	0	0.104498	0	0.227074	0	0.033951	0	0.023589	0
Off-site Laboratory Analysis - SVOCs	sample	0	0.07156	0	7.870422	0	0.145945	0	0.337304	0	0.050485	0	0.037258	0
Notes:														
Resource Extraction for Electricity														
Coal extraction and processing	MWh	0	3.1	0	180.0	0	0.8	0	0.2	0	0.0	0	NP	
Natural gas extraction and processing	MWh	0	1.6	0	270.0	0	0.2	0	13.0	0	0.0	0	NP	
Nuclear fuel extraction and processing	MWh	0	0.2	0	25.0	0	0.2	0	0.5	0	0.0	0	NP	
Oil extraction and processing	MWh	0	2.3	0	270.0	0	1.7	0	0.1	0	0.0	0	NP	
Other fuel extraction and processing	MWh	0	0	0	0	0	0	0	0	0	0	0	0	0
Resource Extraction Subtotals				**0**		**0**		**0**		**0**		**0**		**0**
Notes:														
Electricity Transmission														
Transmission and distribution losses	MWh	0	1.0342	0	112.43	0	0.22421	0	0.460789	0	0.005752	0	0.021024	0
Notes:														

Site Controls - Off-Site Footprint (Scope 3b)

			Energy		Greenhouse Gas		NOx		SOx		PM		HAPs	
Category	Units	Usage	Conv. Factor	MMBtus	Conv. Factor	lbs CO2e	Conv. Factor	lbs	Conv. Factor	lbs	Conv. Factor	lbs	Conv. Factor	lbs
User-defined Materials														
BENSEAL (Sodium Bentonite)	50 lb bag	0	0	0	0	0	0	0	0	0	0	0	0	0
orange mesh fencing	ft	600	0	0	0	0	0	0	0	0	0	0	0	0
absorbent composite socks	ft	2000	0	0	0	0	0	0	0	0	0	0	0	0
6-mil 40' x 100' polyurethane sheeting	rolls	10	0	0	0	0	0	0	0	0	0	0	0	0
aggregate 2" stone	ton	120	0	0	0	0	0	0	0	0	0	0	0	0
filter cloth	lb	120	0	0	0	0	0	0	0	0	0	0	0	0
20-mil vapor barrier	sqft	0	0	0	0	0	0	0	0	0	0	0	0	0
Clean Fill	ton	0	0	0	0	0	0	0	0	0	0	0	0	0
Recycled Stone	ton	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined material #10	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined material #11	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined material #12	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined material #13	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined material #14	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined material #15	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined material #16	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined material #17	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined material #18	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined material #19	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined material #20	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
Notes:														
User-defined Waste Destinations														
User-defined recycled/reused off-site #1	ton	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined recycled/reused off-site #2	ton	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined recycled/reused off-site #3	TBD	0	y(MMBtu/U		lbs CO2e/U		Ox(lbs/unit		Ox(lbs/unit		M(lbs/unit)		APs(lbs/unit	
User-defined non-hazardous waste destination #1	ton	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined non-hazardous waste destination #2	ton	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined non-hazardous waste destination #3	ton	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined hazardous waste destination #1	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined hazardous waste destination #2	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined hazardous waste destination #3	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
Notes:														
Off-site Totals				**91.7228**		**9180.8**		**15.5334**		**15.5846**		**8.843**		**2.76041**

Site Controls - Intermediate Totals

Category	Units	Usage	Energy		Greenhouse Gas		NOx		SOx		PM		HAPs	
			Conv. Factor	MMBtus	Conv. Factor	lbs CO2e	Conv. Factor	lbs	Conv. Factor	lbs	Conv. Factor	lbs	Conv. Factor	lbs
Total Grid Electricity Footprint														
On-site grid electricity	MWh	0	3.413	0										
Electricity Generation														
Grid electricity	MWh	0	6.929	0	1124.3	0	2.2421	0	4.607887	0	0.057518	0	0.210237	0
Resource Extraction for Electricity														
Coal extraction and processing	MWh	0	3.1	0	180.0	0	0.8	0	0.2	0	0.0	0	NP	
Natural gas extraction and processing	MWh	0	1.6	0	270.0	0	0.2	0	13.0	0	0.0	0	NP	
Nuclear fuel extraction and processing	MWh	0	0.2	0	25.0	0	0.2	0	0.5	0	0.0	0	NP	
Oil extraction and processing	MWh	0	2.3	0	270.0	0	1.7	0	0.1	0	0.0	0	NP	
Other fuel extraction and processing	MWh	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0
Electricity Transmission														
Transmission and distribution losses	MWh	0	1.0342	0	112.43	0	0.22421	0	0.460789	0	0.005752	0	0.021024	0
Total Grid Electricity Footprint				**0**		**0**		**0**		**0**		**0**		**0**
Total Fuel Footprints														
Total Gasoline Footprint														
On-site gasoline use - Other	gal	0	0.124	0	19.6	0	0.11	0	0.0045	0	0.00054	0	0.000039	0
On-site gasoline use <25 hp	gal	0	0.124	0	17.48	0	0.037	0	0.00025	0	0.165	0	0.00008	0
On-site gasoline use >25 hp	gal	0	0.124	0	19.93	0	0.032	0	0.00029	0	0.002	0	0.00009	0
Transportation gasoline use	gal	0	0.124	0	19.6	0	0.11	0	0.0045	0	0.00054	0	0.000039	0
Transportation gasoline use - car	gal	2646	0.124	328.104	19.77	52311.42	0.027	71.442	0.00036	0.95256	0.003	7.938	0.0067	17.7282
Transportation gasoline use - passenger truck	gal	0	0.124	0	19.79	0	0.035	0	0.00036	0	0.003	0	0.00661	0
Transportation gasoline use - User Defined	gal	0	0.124	0	19.6	0	0.11	0	0.0045	0	0.00054	0	0.000039	0
Gasoline produced	gal	2646	0.033	87.318	2.8	7408.8	0.0046	12.1716	0.005	13.23	0.0015	3.969	0.001	2.646
Total Gasoline Footprint		**2646**		**415.422**		**59720.22**		**83.6136**		**14.18256**		**11.907**		**20.3742**
Total Diesel Footprint														
On-site diesel use - Other	gal	0	0.139	0	22.5	0	0.17	0	0.0054	0	0.0034	0	5.2E-06	0
On-site diesel use <75 hp	gal	0	0.139	0	22.21	0	0.1565	0	0.000145	0	0.0145	0	0.00004	0
On-site diesel use 75<hp<750	gal	0	0.139	0	22.24	0	0.101	0	0.00013	0	0.009	0	0.00004	0
On-site diesel use >750 hp	gal	0	0.139	0	22.24	0	0.149	0	0.00013	0	0.006	0	0.00004	0
Transportation diesel use	gal	100	0.139	13.9	22.5	2250	0.17	17	0.0054	0.54	0.0034	0.34	5.2E-06	0.00052
Transportation diesel use - car	gal	0	0.139	0	22.57	0	0.015	0	0.0002	0	0.003	0	0.00252	0
Transportation diesel use - passenger truck	gal	0	0.139	0	22.545	0	0.0585	0	0.0002	0	0.007	0	0.002605	0
Transportation diesel use - User Defined	gal	0	0.139	0	22.5	0	0.17	0	0.0054	0	0.0034	0	5.2E-06	0
Diesel produced	gal	100	0.017	1.7	3.02	302	0.0051	0.51	0.0062	0.62	0.0017	0.17	0.0011	0.11
Total Diesel Footprint		**100**		**15.6**		**2552**		**17.51**		**1.16**		**0.51**		**0.11052**
Total Biodiesel Footprint														
On-site biodiesel use	gal	0	0.127	0	22.3	0	0.2	0	0	0	0.00099	0	NP	
On-site biodiesel use - User Defined	gal	0	0.127	0	22.3	0	0.2	0	0	0	0.00099	0	NP	
Transportation biodiesel use	gal	0	0.127	0	22.3	0	0.2	0	0	0	0.00099	0	NP	
Transportation biodiesel use - User Defined	gal	0	0.127	0	22.3	0	0.2	0	0	0	0.00099	0	NP	
Biodiesel produced	gal	0	0.029	0	-16.8	0	0.018	0	0.033	0	0.00082	0	NP	
Total Biodiesel Footprint		**0**		**0**		**0**		**0**		**0**		**0**		**0**
Total Natural Gas Footprint														
On-site natural gas use	ccf	0	0.103	0	13.1	0	0.01	0	6.3E-06	0	0.00076	0	8.4E-06	0
Transportation natural gas use	ccf	0	0.103	0	13.1	0	0.01	0	6.3E-06	0	0.00076	0	8.4E-06	0
Transportation natural gas use - User Defined	ccf	0	0.103	0	13.1	0	0.01	0	6.3E-06	0	0.00076	0	8.4E-06	0
Natural gas produced	ccf	0	0.0052	0	2.2	0	0.0037	0	0.0046	0	0.000072	0	6.1E-06	0
Total Natural Gas Footprint		**0**		**0**		**0**		**0**		**0**		**0**		**0**
Total Liquified Petroleum Gas Footprint														
On-site liquified petroleum gas use - Other	ccf	0	NP		12.69	0	0.021	0	0.00013	0	0.001	0	0	0
On-site liquified petroleum gas use	ccf	0	NP		12.69	0	0.021	0	0.00013	0	0.001	0	0	0
Liquified petroleum gas produced	ccf	0	0.088	0	1.47	0	0.0016	0	0.0024	0	0.0007	0	0.0003	0
Total Natural Gas Footprint		**0**		**0**		**0**		**0**		**0**		**0**		**0**
Total Compressed Gas Footprint														
On-site compressed gas use - Other	ccf	0	NP		1957.835	0	16.0325	0	0.023045	0	0.2775	0	0	0
On-site compressed gas use	ccf	0	NP		1957.835	0	16.0325	0	0.023045	0	0.2775	0	0	0
Compressed gas produced	ccf	0	19.983	0	343.92	0	0.4732	0	2.1651	0	0.1846	0	0.2895	0
Total Natural Gas Footprint		**0**		**0**		**0**		**0**		**0**		**0**		**0**

Notes:

Note: Please refer to the "Default Conversions" tab for references for the default conversion factors used on this calculation sheet.

Excavation - On-Site Footprint (Scope 1)

Contributors to Footprints	Units	Usage	Energy		GHG		NOx		SOx		PM		HAPs	
			Conv. Factor	MMBtus	Conv. Factor	lbs CO2e	Conv. Factor	lbs	Conv. Factor	lbs	Conv. Factor	lbs	Conv. Factor	lbs
On-Site														
On-site Renewable Energy														
Renewable electricity generated on-site	MWh	0	3.413	0										
Landfill gas combusted on-site for energy use	ccf CH4	0	0.103	0	13.1	0	0.01	0	6.3E-06	0	0.00076	0	8.4E-06	0
On-site biodiesel use	gal	0	0.127	0	22.3	0	0.2	0	0	0	0.00099	0	NP	
On-site biodiesel use - User Defined	gal	0	0.127	0	22.3	0	0.2	0	0	0	0.00099	0	NP	
User-defined on-site renewable energy use #1	gal	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined on-site renewable energy use #2	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
On-site Renewable Energy Subtotals				**0**		**0**		**0**		**0**		**0**		**0**
Notes:														
On-site Conventional Energy														
On-site grid electricity	MWh	0	3.413	0										
On-site diesel use - Other	Gal	0	0.139	0	22.5	0	0.17	0	0.0054	0	0.0034	0	5.2E-06	0
On-site diesel use <75 hp	Gal	0	0.139	0	22.21	0	0.1565	0	0.000145	0	0.0145	0	0.00004	0
On-site diesel use 75<hp<750	Gal	17894.42	0.139	2487.325	22.24	397972	0.101	1807.337	0.00013	2.326275	0.009	161.0498	0.00004	0.715777
On-site diesel use >750 hp	Gal	0	0.139	0	22.24	0	0.149	0	0.00013	0	0.006	0	0.00004	0
On-site gasoline use - Other	Gal	0	0.124	0	19.6	0	0.11	0	0.0045	0	0.00054	0	0.000039	0
On-site gasoline use <25 hp	Gal	0	0.124	0	17.48	0	0.037	0	0.00025	0	0.165	0	0.00008	0
On-site gasoline use >25 hp	Gal	0	0.124	0	19.93	0	0.032	0	0.00029	0	0.002	0	0.00009	0
On-site natural gas use	ccf	0	0.103	0	13.1	0	0.01	0	6.3E-06	0	0.00076	0	8.4E-06	0
On-site compressed natural gas use - Other	ccf	0	NP		1957.835	0	16.0325	0	0.023045	0	0.2775	0	0	0
On-site compressed natural gas use	ccf	0	NP		1957.835	0	16.0325	0	0.023045	0	0.2775	0	0	0
On-site liquified petroleum gas use - Other	gal	0	NP		12.69	0	0.021	0	0.00013	0	0.001	0	0	0
On-site liquified petroleum gas use	gal	0	NP		12.69	0	0.021	0	0.00013	0	0.001	0	0	0
Other forms of on-site conventional energy use #1	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
Other forms of on-site conventional energy use #2	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
On-site Conventional Energy Subtotals				**2,487**		**397,972**		**1,807**		**2**		**161**		**1**
Notes:														
Other On-site Emissions														
On-site HAP process emissions	lbs	0											1	0
On-site GHG emissions	lbs CO2e	0			1	0								
On-site carbon storage	lbs CO2e	0			1	0								
GHG avoided by flaring on-site landfill methane	Lbs	0			-262	0	0.01	0	6.3E-06	0	0.00076	0	8.4E-06	0
Other on-site NOx emissions or reductions	lbs	0					1	0						
Other on-site SOx emissions or reductions	lbs	0							1	0				
Other on-site PM emissions or reductions	lbs	0									1	0		
User-defined recycled/reused on-site #2	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined recycled/reused on-site #3	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined recycled/reused off-site #1	ton	0	0	0	0	0	0	0	0	0	0	0	0	0
Notes:														
On-site Totals				**2,487.32**		**397,972**		**1,807**		**2**		**161**		**1**

Excavation - Electricity Generation Footprint (Scope 2)

Contributors to Footprints	Units	Usage	Energy		GHG		NOx		SOx		PM		HAPs	
			Conv. Factor	MMBtus	Conv. Factor	lbs CO2e	Conv. Factor	lbs	Conv. Factor	lbs	Conv. Factor	lbs	Conv. Factor	lbs
Electricity Generation														
Grid electricity	MWh	0	6.929	0	352	0	1.504	0	1.46966	0	0.07546	0	0.045403	0
Voluntary purchase of renewable electricity	MWh	0												
Voluntary purchase of RECs	MWh	0												
Notes:														

Excavation - Transportation Footprint (Scope 3a)

Category	Units	Usage	Energy		Greenhouse Gas		NOx		SOx		PM		HAPs	
			Conv. Factor	MMBtus	Conv. Factor	lbs CO2e	Conv. Factor	lbs	Conv. Factor	lbs	Conv. Factor	lbs	Conv. Factor	lbs
Conventional Energy														
Transportation diesel use	gal	13.4	0.139	1.8626	22.5	301.5	0.17	2.278	0.0054	0.07236	0.0034	0.04556	5.2E-06	6.97E-05
Transportation diesel use - car	gal	0	0.139	0	22.57	0	0.015	0	0.0002	0	0.003	0	0.00252	0
Transportation diesel use - passenger truck	gal	0	0.139	0	22.545	0	0.0585	0	0.0002	0	0.007	0	0.002605	0
Transportation diesel use - User Defined	gal	0	0.139	0	22.5	0	0.17	0	0.0054	0	0.0034	0	5.2E-06	0
Transportation gasoline use	gal	0	0.124	0	19.6	0	0.11	0	0.0045	0	0.00054	0	0.000039	0
Transportation gasoline use - car	gal	0	0.124	0	19.77	0	0.027	0	0.00036	0	0.003	0	0.0067	0
Transportation gasoline use - passenger truck	gal	0	0.124	0	19.79	0	0.035	0	0.00036	0	0.003	0	0.00661	0
Transportation gasoline use - User Defined	gal	0	0.124	0	19.6	0	0.11	0	0.0045	0	0.00054	0	0.000039	0
Transportation natural gas use	ccf	0	0.103	0	13.1	0	0.01	0	6.3E-06	0	0.00076	0	8.4E-06	0
Transportation natural gas use - User Defined	ccf	0	0.103	0	13.1	0	0.01	0	6.3E-06	0	0.00076	0	8.4E-06	0
User-defined conventional energy transportation #1	TBD	10	0	0	0	0	0	0	0	0	0	0	0	0
User-defined conventional energy transportation #2	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
Conventional Energy Subtotals				**2**		**302**		**2**		**0**		**0**		**0**
Notes:														
Renewable Energy														
Transportation biodiesel use	gal	0	0.127	0	22.3	0	0.2	0	0	0	0.00099	0	NP	
Transportation biodiesel use - User Defined	gal	0	0.127	0	22.3	0	0.2	0	0	0	0.00099	0	NP	
User-defined renewable energy transportation #1	TBD	0	Biodiesel		0	0	0	0	0	0	0	0	Ref.	
User-defined renewable energy transportation #2	TBD	0	mpg or pmp		0	0	0	0	0	0	0	0	0	0
Renewable Energy Subtotals				**0**		**0**		**0**		**0**		**0**		**0**
Notes:														
Transportation Totals				**2**		**302**		**2**		**0**		**0**		**0**

Excavation - Off-Site Footprint (Scope 3b)

Category	Units	Usage	Energy		Greenhouse Gas		NOx		SOx		PM		HAPs	
			Conv. Factor	MMBtus	Conv. Factor	lbs CO2e	Conv. Factor	lbs	Conv. Factor	lbs	Conv. Factor	lbs	Conv. Factor	lbs
Construction Materials														
Aluminum, Rolled Sheet	lb	0	0.0633	0	9.15	0	0.0148	0	0.0283	0	0.0088	0	0.00102	0
Asphalt, mastic	lb	0	0.0412	0	0.85	0	0.00271	0	0.00798	0	0.000766	0	0.00107	0
Asphalt, paving-grade	lb	0	0.5	0	8.58	0	0.0299	0	0.0969	0	0.0091	0	0.0133	0
Ethanol, Corn, 95%	lb	0	0.0318	0	-0.0199	0	0.00425	0	0.00303	0	0.000469	0	8.46E-05	0
Ethanol, Corn, 99.7%	lb	0	0.0324	0	0.0591	0	0.00431	0	0.0031	0	0.000472	0	0.000087	0
Ethanol, Petroleum, 99.7%	lb	0	0.0205	0	1.25	0	0.00199	0	0.00214	0	0.000277	0	5.89E-05	0
Gravel/Sand Mix, 65% Gravel	lb	0	2.48E-05	0	0.0024	0	0.000018	0	4.52E-06	0	2.61E-06	0	3.08E-07	0
Gravel/sand/clay	lb	0	0.000028	0	0.00335	0	1.65E-05	0	0.000015	0	0.000002	0	2.05E-10	0
HDPE	lb	0	0.0332	0	1.94	0	0.00325	0	0.00409	0	0.000439	0	6.41E-05	0
Photovoltaic system (installed)	W	0	0.0336	0	4.47	0	0.015	0	0.032	0	0.00063	0	2.9E-06	0
PVC	lb	0	0.0262	0	2.02	0	0.004	0	0.00274	0	0.000372	0	0.000375	0
Portland cement, US average	lb	0	0.0139	0	1.34	0	0.00654	0	0.0104	0	0.00378	0	0.00097	0
Ready-mixed concrete, 20 MPa	ft3	0	0.217	0	19.5	0	0.0975	0	0.154	0	0.057	0	0.0141	0
Round Gravel	lb	0	2.48E-05	0	0.0024	0	0.000018	0	4.52E-06	0	2.61E-06	0	3.08E-07	0
Sand	lb	0	2.48E-05	0	0.0024	0	0.000018	0	4.52E-06	0	2.61E-06	0	3.08E-07	0
Stainless Steel	lb	0	0.0116	0	3.4	0	0.0075	0	0.012	0	0.0044	0	0.000144	0
Steel	lb	0	0.0044	0	1.1	0	0.0014	0	0.0017	0	0.00056	0	0.000067	0
Other refined construction materials	lb	0	0.01885	0	2.115	0	0.004038	0	0.005133	0	0.001443	0	0.000163	0
Other unrefined construction materials	lb	0	0.000028	0	0.00335	0	1.65E-05	0	0.000015	0	0.000002	0	2.05E-10	0

Notes:

Excavation - Off-Site Footprint (Scope 3b)

Category	Units	Usage	Energy		Greenhouse Gas		NOx		SOx		PM		HAPs	
			Conv. Factor	MMBtus	Conv. Factor	lbs CO2e	Conv. Factor	lbs	Conv. Factor	lbs	Conv. Factor	lbs	Conv. Factor	lbs
Treatment Materials & Chemicals														
Cheese Whey	lbs	0	0.0025	0	0.031	0	0.000062	0	0.000033	0	0.000002	0	NP	
Emulsified vegetable oil	lbs	0	0.0077	0	3.44	0	0.0066	0	0.0019	0	0.000033	0	NP	
Granular activated carbon, primary	lbs	0	0.0356	0	4.82	0	0.0793	0	0.128	0	0.000987	0	0.000657	0
Granular activated carbon, regenerated	lbs	0	0.00873	0	1.7	0	0.00733	0	0.0129	0	0.000886	0	0.000671	0
Hydrogen Peroxide, 50% in H2O	lbs	0	0.00979	0	1.19	0	0.00142	0	0.0024	0	0.000308	0	6.29E-05	0
Iron (II) Sulfate	lbs	0	0.00147	0	0.167	0	0.000316	0	0.000589	0	0.000103	0	0.000023	0
Lime, Hydrated, Packed	lbs	0	0.00206	0	0.762	0	0.000513	0	0.000358	0	0.00013	0	6.57E-06	0
Molasses	lbs	0	0.0044	0	0.48	0	0.0011	0	0.00024	0	4.1E-06	0	NP	
Phosphoric Acid, 70% in H2O	lbs	0	0.0067	0	0.882	0	0.00282	0	0.0294	0	0.00171	0	0.000163	0
Potassium Permanganate	lbs	0	0.00981	0	1.16	0	0.00234	0	0.0032	0	0.000422	0	0.000122	0
Sodium Hydroxide, 50% in H2O	lbs	0	0.00977	0	1.09	0	0.00194	0	0.00352	0	0.000403	0	0.000129	0
Other Treatment Chemicals & Materials	lbs	0	0.015	0	1.67	0	0.003	0	0.0065	0	0.00061	0	0.000016	0
Notes:														
Fuel Processing														
Biodiesel produced	gal	0	0.029	0	-16.8	0	0.018	0	0.033	0	0.00082	0	NP	
Diesel produced	gal	17907.82	0.017	304.433	3.02	54081.63	0.0051	91.3299	0.0062	111.0285	0.0017	30.4433	0.0011	19.69861
Gasoline produced	gal	0	0.033	0	2.8	0	0.0046	0	0.005	0	0.0015	0	0.001	0
Liquefied Petroleum Gas Produced	gal	0	0.088	0	1.47	0	0.0016	0	0.0024	0	0.0007	0	0.0003	0
Natural Gas - Compressed Produced	ccf	0	19.983	0	343.92	0	0.4732	0	2.1651	0	0.1846	0	0.2895	0
Natural Gas Produced	ccf	0	0.0052	0	2.2	0	0.0037	0	0.0046	0	0.000072	0	6.1E-06	0
Fuel Processing Subtotals				**304.433**		**54081.63**		**91.3299**		**111.0285**		**30.4433**		**19.69861**
Notes:														
Public water	gal x 1000	0	0.0092	0	5	0	0.0097	0	0.0059	0	0.016	0	0.000015	0
User-defined water resource #1	gal x 1000	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined water resource #2	gal x 1000	0	0	0	0	0	0	0	0	0	0	0	0	0
Notes:														

Excavation - Off-Site Footprint (Scope 3b)

			Energy		Greenhouse Gas		NOx		SOx		PM		HAPs	
Category	Units	Usage	Conv. Factor	MMBtus	Conv. Factor	lbs CO2e	Conv. Factor	lbs	Conv. Factor	lbs	Conv. Factor	lbs	Conv. Factor	lbs
Off-Site Services														
Hazardous waste incineration	lb	0	0.00609	0	2.43	0	0.0016	0	0.00167	0	0.000209	0	0.000087	0
Off-site waste water treatment (POTW)	gal x 1000	0	0.015	0	4.4	0	0.016	0	0.015	0	NP		NP	
Off-site non-hazardous waste landfill	ton	0	0.16	0	25	0	0.14	0	0.075	0	0.4	0	0.0014	0
Off-site hazardous waste landfill	ton	0	0.18	0	27.5	0	0.154	0	0.0825	0	0.44	0	0.00154	0
Off-site Laboratory Analysis - Other	sample	0	0.058071	0	6.853438	0	0.131402	0	0.303876	0	0.04557	0	0.033017	0
Off-site Laboratory Analysis - Metals	sample	0	0.212	0	27.4693	0	0.6423	0	1.5072	0	0.2264	0	0.1643	0
Off-site Laboratory Analysis - Mercury	sample	0	0.073171	0	9.325458	0	0.212744	0	0.49824	0	0.074736	0	0.054233	0
Off-site Laboratory Analysis - Inorganic Anions	sample	0	0.007402	0	0.645948	0	0.006768	0	0.014793	0	0.002202	0	0.001554	0
Off-site Laboratory Analysis - Alkalinity	sample	0	0.01744	0	1.338192	0	0.007011	0	0.01325	0	0.00194	0	0.001283	0
Off-site Laboratory Analysis - Perchlorate	sample	0	0.023885	0	1.871705	0	0.007981	0	0.014154	0	0.002055	0	0.001287	0
Off-site Laboratory Analysis - Nitrogen/Nitrate	sample	0	0.033648	0	4.29897	0	0.095459	0	0.222665	0	0.03351	0	0.024251	0
Off-site Laboratory Analysis - Sulfate	sample	0	0.014122	0	1.472673	0	0.007981	0	0.013602	0	0.00198	0	0.001202	0
Off-site Laboratory Analysis - PCBs	sample	0	0.051277	0	5.224902	0	0.083334	0	0.190477	0	0.028439	0	0.021208	0
Off-site Laboratory Analysis - VOCs	sample	0	0.076204	0	9.016814	0	0.104498	0	0.227074	0	0.033951	0	0.023589	0
Off-site Laboratory Analysis - SVOCs	sample	0	0.07156	0	7.870422	0	0.145945	0	0.337304	0	0.050485	0	0.037258	0
Notes:														
Resource Extraction for Electricity														
Coal extraction and processing	MWh	0	3.1	0	180.0	0	0.8	0	0.2	0	0.0	0	NP	
Natural gas extraction and processing	MWh	0	1.6	0	270.0	0	0.2	0	13.0	0	0.0	0	NP	
Nuclear fuel extraction and processing	MWh	0	0.2	0	25.0	0	0.2	0	0.5	0	0.0	0	NP	
Oil extraction and processing	MWh	0	2.3	0	270.0	0	1.7	0	0.1	0	0.0	0	NP	
Other fuel extraction and processing	MWh	0	0	0	0	0	0	0	0	0	0	0	0	0
Resource Extraction Subtotals				**0**		**0**		**0**		**0**		**0**		**0**
Notes:														
Electricity Transmission														
Transmission and distribution losses	MWh	0	1.0342	0	35.2	0	0.1504	0	0.146966	0	0.007546	0	0.00454	0
Notes:														

Excavation - Off-Site Footprint (Scope 3b)

			Energy		Greenhouse Gas		NOx		SOx		PM		HAPs	
Category	Units	Usage	Conv. Factor	MMBtus	Conv. Factor	lbs CO2e	Conv. Factor	lbs	Conv. Factor	lbs	Conv. Factor	lbs	Conv. Factor	lbs
User-defined Materials														
BENSEAL (Sodium Bentonite)	50 lb bag	0	0	0	0	0	0	0	0	0	0	0	0	0
orange mesh fencing	ft	0	0	0	0	0	0	0	0	0	0	0	0	0
absorbent composite socks	ft	0	0	0	0	0	0	0	0	0	0	0	0	0
6-mil 40' x 100' polyurethane sheeting	rolls	0	0	0	0	0	0	0	0	0	0	0	0	0
aggregate 2" stone	ton	0	0	0	0	0	0	0	0	0	0	0	0	0
filter cloth	lb	0	0	0	0	0	0	0	0	0	0	0	0	0
20-mil vapor barrier	sqft	0	0	0	0	0	0	0	0	0	0	0	0	0
Clean Fill	ton	0	0	0	0	0	0	0	0	0	0	0	0	0
Recycled Stone	ton	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined material #10	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined material #11	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined material #12	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined material #13	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined material #14	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined material #15	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined material #16	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined material #17	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined material #18	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined material #19	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Notes:														
User-defined Waste Destinations														
User-defined recycled/reused off-site #1	ton	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined recycled/reused off-site #2	ton	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined recycled/reused off-site #3	TBD	0	y(MMBtu/l		lbs CO2e/l		Ox(lbs/unit		Ox(lbs/unit		M(lbs/unit)		APs(lbs/unit	
User-defined non-hazardous waste destination #1	ton	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined non-hazardous waste destination #2	ton	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined non-hazardous waste destination #3	ton	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined hazardous waste destination #1	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined hazardous waste destination #2	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined hazardous waste destination #3	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
Notes:														
Off-site Totals				**304.433**		**54081.63**		**91.3299**		**111.0285**		**30.4433**		**19.69861**

Excavation - Intermediate Totals

Category	Units	Usage	Energy		Greenhouse Gas		NOx		SOx		PM		HAPs	
			Conv. Factor	MMBtus	Conv. Factor	lbs CO2e	Conv. Factor	lbs	Conv. Factor	lbs	Conv. Factor	lbs	Conv. Factor	lbs
Total Grid Electricity Footprint														
On-site grid electricity	MWh	0	3.413	0										
Electricity Generation														
Grid electricity	MWh	0	6.929	0	1124.3	0	2.2421	0	4.607887	0	0.057518	0	0.210237	0
Resource Extraction for Electricity														
Coal extraction and processing	MWh	0	3.1	0	180.0	0	0.8	0	0.2	0	0.0	0	NP	
Natural gas extraction and processing	MWh	0	1.6	0	270.0	0	0.2	0	13.0	0	0.0	0	NP	
Nuclear fuel extraction and processing	MWh	0	0.2	0	25.0	0	0.2	0	0.5	0	0.0	0	NP	
Oil extraction and processing	MWh	0	2.3	0	270.0	0	1.7	0	0.1	0	0.0	0	NP	
Other fuel extraction and processing	MWh	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0
Electricity Transmission														
Transmission and distribution losses	MWh	0	1.0342	0	112.43	0	0.22421	0	0.460789	0	0.005752	0	0.021024	0
Total Grid Electricity Footprint				**0**		**0**		**0**		**0**		**0**		**0**
Total Fuel Footprints														
Total Gasoline Footprint														
On-site gasoline use - Other	gal	0	0.124	0	19.6	0	0.11	0	0.0045	0	0.00054	0	0.000039	0
On-site gasoline use <25 hp	gal	0	0.124	0	17.48	0	0.037	0	0.00025	0	0.165	0	0.00008	0
On-site gasoline use >25 hp	gal	0	0.124	0	19.93	0	0.032	0	0.00029	0	0.002	0	0.00009	0
Transportation gasoline use	gal	0	0.124	0	19.6	0	0.11	0	0.0045	0	0.00054	0	0.000039	0
Transportation gasoline use - car	gal	0	0.124	0	19.77	0	0.027	0	0.00036	0	0.003	0	0.0067	0
Transportation gasoline use - passenger truck	gal	0	0.124	0	19.79	0	0.035	0	0.00036	0	0.003	0	0.00661	0
Transportation gasoline use - User Defined	gal	0	0.124	0	19.6	0	0.11	0	0.0045	0	0.00054	0	0.000039	0
Gasoline produced	gal	0	0.033	0	2.8	0	0.0046	0	0.005	0	0.0015	0	0.001	0
Total Gasoline Footprint		**0**		**0**		**0**		**0**		**0**		**0**		**0**
Total Diesel Footprint														
On-site diesel use - Other	gal	0	0.139	0	22.5	0	0.17	0	0.0054	0	0.0034	0	5.2E-06	0
On-site diesel use <75 hp	gal	0	0.139	0	22.21	0	0.1565	0	0.000145	0	0.0145	0	0.00004	0
On-site diesel use 75<hp<750	gal	17894.42	0.139	2487.325	22.24	397972	0.101	1807.337	0.00013	2.326275	0.009	161.0498	0.00004	0.715777
On-site diesel use >750 hp	gal	0	0.139	0	22.24	0	0.149	0	0.00013	0	0.006	0	0.00004	0
Transportation diesel use	gal	13.4	0.139	1.8626	22.5	301.5	0.17	2.278	0.0054	0.07236	0.0034	0.04556	5.2E-06	6.97E-05
Transportation diesel use - car	gal	0	0.139	0	22.57	0	0.015	0	0.0002	0	0.003	0	0.00252	0
Transportation diesel use - passenger truck	gal	0	0.139	0	22.545	0	0.0585	0	0.0002	0	0.007	0	0.002605	0
Transportation diesel use - User Defined	gal	0	0.139	0	22.5	0	0.17	0	0.0054	0	0.0034	0	5.2E-06	0
Diesel produced	gal	17907.82	0.017	304.433	3.02	54081.63	0.0051	91.3299	0.0062	111.0285	0.0017	30.4433	0.0011	19.69861
Total Diesel Footprint		**17907.82**		**2793.62**		**452355.1**		**1900.945**		**113.4271**		**191.5387**		**20.41445**
Total Biodiesel Footprint														
On-site biodiesel use	gal	0	0.127	0	22.3	0	0.2	0	0	0	0.00099	0	NP	
On-site biodiesel use - User Defined	gal	0	0.127	0	22.3	0	0.2	0	0	0	0.00099	0	NP	
Transportation biodiesel use	gal	0	0.127	0	22.3	0	0.2	0	0	0	0.00099	0	NP	
Transportation biodiesel use - User Defined	gal	0	0.127	0	22.3	0	0.2	0	0	0	0.00099	0	NP	
Biodiesel produced	gal	0	0.029	0	-16.8	0	0.018	0	0.033	0	0.00082	0	NP	
Total Biodiesel Footprint		**0**		**0**		**0**		**0**		**0**		**0**		**0**
Total Natural Gas Footprint														
On-site natural gas use	ccf	0	0.103	0	13.1	0	0.01	0	6.3E-06	0	0.00076	0	8.4E-06	0
Transportation natural gas use	ccf	0	0.103	0	13.1	0	0.01	0	6.3E-06	0	0.00076	0	8.4E-06	0
Transportation natural gas use - User Defined	ccf	0	0.103	0	13.1	0	0.01	0	6.3E-06	0	0.00076	0	8.4E-06	0
Natural gas produced	ccf	0	0.0052	0	2.2	0	0.0037	0	0.0046	0	0.000072	0	6.1E-06	0
Total Natural Gas Footprint		**0**		**0**		**0**		**0**		**0**		**0**		**0**
Total Liquified Petroleum Gas Footprint														
On-site liquified petroleum gas use - Other	ccf	0	NP		12.69	0	0.021	0	0.00013	0	0.001	0	0	0
On-site liquified petroleum gas use	ccf	0	NP		12.69	0	0.021	0	0.00013	0	0.001	0	0	0
Liquified petroleum gas produced	ccf	0	0.088	0	1.47	0	0.0016	0	0.0024	0	0.0007	0	0.0003	0
Total Natural Gas Footprint		**0**		**0**		**0**		**0**		**0**		**0**		**0**
Total Compressed Gas Footprint														
On-site compressed gas use - Other	ccf	0	NP		1957.835	0	16.0325	0	0.023045	0	0.2775	0	0	0
On-site compressed gas use	ccf	0	NP		1957.835	0	16.0325	0	0.023045	0	0.2775	0	0	0
Compressed gas produced	ccf	0	19.983	0	343.92	0	0.4732	0	2.1651	0	0.1846	0	0.2895	0
Total Natural Gas Footprint		**0**		**0**		**0**		**0**		**0**		**0**		**0**

Notes:

Note: Please refer to the "Default Conversions" tab for references for the default conversion factors used on this calculation sheet.

Waste Transport & Disposal - On-Site Footprint (Scope 1)

Contributors to Footprints	Units	Usage	Energy		GHG		NOx		SOx		PM		HAPs	
			Conv. Factor	MMBtus	Conv. Factor	lbs CO2e	Conv. Factor	lbs	Conv. Factor	lbs	Conv. Factor	lbs	Conv. Factor	lbs
On-Site														
On-site Renewable Energy														
Renewable electricity generated on-site	MWh	0	3.413	0										
Landfill gas combusted on-site for energy use	ccf CH4	0	0.103	0	13.1	0	0.01	0	6.3E-06	0	0.00076	0	8.4E-06	0
On-site biodiesel use	gal	0	0.127	0	22.3	0	0.2	0	0	0	0.00099	0	NP	
On-site biodiesel use - User Defined	gal	0	0.127	0	22.3	0	0.2	0	0	0	0.00099	0	NP	
User-defined on-site renewable energy use #1	gal	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined on-site renewable energy use #2	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
On-site Renewable Energy Subtotals				**0**		**0**		**0**		**0**		**0**		**0**
Notes:														
On-site Conventional Energy														
On-site grid electricity	MWh	0	3.413	0										
On-site diesel use - Other	Gal	0	0.139	0	22.5	0	0.17	0	0.0054	0	0.0034	0	5.2E-06	0
On-site diesel use <75 hp	Gal	0	0.139	0	22.21	0	0.1565	0	0.000145	0	0.0145	0	0.00004	0
On-site diesel use 75<hp<750	Gal	0	0.139	0	22.24	0	0.101	0	0.00013	0	0.009	0	0.00004	0
On-site diesel use >750 hp	Gal	0	0.139	0	22.24	0	0.149	0	0.00013	0	0.006	0	0.00004	0
On-site gasoline use - Other	Gal	0	0.124	0	19.6	0	0.11	0	0.0045	0	0.00054	0	0.000039	0
On-site gasoline use <25 hp	Gal	0	0.124	0	17.48	0	0.037	0	0.00025	0	0.165	0	0.00008	0
On-site gasoline use >25 hp	Gal	0	0.124	0	19.93	0	0.032	0	0.00029	0	0.002	0	0.00009	0
On-site natural gas use	ccf	0	0.103	0	13.1	0	0.01	0	6.3E-06	0	0.00076	0	8.4E-06	0
On-site compressed natural gas use - Other	ccf	0	NP		1957.835	0	16.0325	0	0.023045	0	0.2775	0	0	0
On-site compressed natural gas use	ccf	0	NP		1957.835	0	16.0325	0	0.023045	0	0.2775	0	0	0
On-site liquified petroleum gas use - Other	gal	0	NP		12.69	0	0.021	0	0.00013	0	0.001	0	0	0
On-site liquified petroleum gas use	gal	0	NP		12.69	0	0.021	0	0.00013	0	0.001	0	0	0
Other forms of on-site conventional energy use #1	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
Other forms of on-site conventional energy use #2	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
On-site Conventional Energy Subtotals				**0**		**0**		**0**		**0**		**0**		**0**
Notes:														
Other On-site Emissions														
On-site HAP process emissions	lbs	0											1	0
On-site GHG emissions	lbs CO2e	0			1	0								
On-site carbon storage	lbs CO2e	0			1	0								
GHG avoided by flaring on-site landfill methane	Lbs	0			-262	0	0.01	0	6.3E-06	0	0.00076	0	8.4E-06	0
Other on-site NOx emissions or reductions	lbs	0					1	0						
Other on-site SOx emissions or reductions	lbs	0							1	0				
Other on-site PM emissions or reductions	lbs	0									1	0		
User-defined recycled/reused on-site #2	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined recycled/reused on-site #3	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined recycled/reused off-site #1	ton	0	0	0	0	0	0	0	0	0	0	0	0	0
Notes:														
On-site Totals				**0.00**		**0**		**0**		**0**		**0**		**0**

Waste Transport & Disposal - Electricity Generation Footprint (Scope 2)

Contributors to Footprints	Units	Usage	Energy		GHG		NOx		SOx		PM		HAPs	
			Conv. Factor	MMBtus	Conv. Factor	lbs CO2e	Conv. Factor	lbs	Conv. Factor	lbs	Conv. Factor	lbs	Conv. Factor	lbs
Electricity Generation														
Grid electricity	MWh	0	6.929	0	352	0	1.504	0	1.46966	0	0.07546	0	0.045403	0
Voluntary purchase of renewable electricity	MWh	0												
Voluntary purchase of RECs	MWh	0												
Notes:														

Waste Transport & Disposal - Transportation Footprint (Scope 3a)

Category	Units	Usage	Energy		Greenhouse Gas		NOx		SOx		PM		HAPs	
			Conv. Factor	MMBtus	Conv. Factor	lbs CO2e	Conv. Factor	lbs	Conv. Factor	lbs	Conv. Factor	lbs	Conv. Factor	lbs
Conventional Energy														
Transportation diesel use	gal	15441.6	0.139	2146.382	22.5	347436	0.17	2625.072	0.0054	83.38464	0.0034	52.50144	5.2E-06	0.080296
Transportation diesel use - car	gal	0	0.139	0	22.57	0	0.015	0	0.0002	0	0.003	0	0.00252	0
Transportation diesel use - passenger truck	gal	0	0.139	0	22.545	0	0.0585	0	0.0002	0	0.007	0	0.002605	0
Transportation diesel use - User Defined	gal	0	0.139	0	22.5	0	0.17	0	0.0054	0	0.0034	0	5.2E-06	0
Transportation gasoline use	gal	0	0.124	0	19.6	0	0.11	0	0.0045	0	0.00054	0	0.000039	0
Transportation gasoline use - car	gal	0	0.124	0	19.77	0	0.027	0	0.00036	0	0.003	0	0.0067	0
Transportation gasoline use - passenger truck	gal	0	0.124	0	19.79	0	0.035	0	0.00036	0	0.003	0	0.00661	0
Transportation gasoline use - User Defined	gal	0	0.124	0	19.6	0	0.11	0	0.0045	0	0.00054	0	0.000039	0
Transportation natural gas use	ccf	0	0.103	0	13.1	0	0.01	0	6.3E-06	0	0.00076	0	8.4E-06	0
Transportation natural gas use - User Defined	ccf	0	0.103	0	13.1	0	0.01	0	6.3E-06	0	0.00076	0	8.4E-06	0
User-defined conventional energy transportation #1	TBD	10	0	0	0	0	0	0	0	0	0	0	0	0
User-defined conventional energy transportation #2	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
Conventional Energy Subtotals				**2,146**		**347,436**		**2,625**		**83**		**53**		**0**
Notes:														
Renewable Energy														
Transportation biodiesel use	gal	0	0.127	0	22.3	0	0.2	0	0	0	0.00099	0	NP	
Transportation biodiesel use - User Defined	gal	0	0.127	0	22.3	0	0.2	0	0	0	0.00099	0	NP	
User-defined renewable energy transportation #1	TBD	0	Biodiesel		0	0	0	0	0	0	0	0	Ref.	
User-defined renewable energy transportation #2	TBD	0	mpg or pmp		0	0	0	0	0	0	0	0	0	0
Renewable Energy Subtotals				**0**		**0**		**0**		**0**		**0**		**0**
Notes:														
Transportation Totals				**2146**		**347436**		**2625**		**83**		**53**		**0**

Waste Transport & Disposal - Off-Site Footprint (Scope 3b)

Category	Units	Usage	Energy		Greenhouse Gas		NOx		SOx		PM		HAPs	
			Conv. Factor	MMBtus	Conv. Factor	lbs CO2e	Conv. Factor	lbs	Conv. Factor	lbs	Conv. Factor	lbs	Conv. Factor	lbs
Construction Materials														
Aluminum, Rolled Sheet	lb	0	0.0633	0	9.15	0	0.0148	0	0.0283	0	0.0088	0	0.00102	0
Asphalt, mastic	lb	0	0.0412	0	0.85	0	0.00271	0	0.00798	0	0.000766	0	0.00107	0
Asphalt, paving-grade	lb	0	0.5	0	8.58	0	0.0299	0	0.0969	0	0.0091	0	0.0133	0
Ethanol, Corn, 95%	lb	0	0.0318	0	-0.0199	0	0.00425	0	0.00303	0	0.000469	0	8.46E-05	0
Ethanol, Corn, 99.7%	lb	0	0.0324	0	0.0591	0	0.00431	0	0.0031	0	0.000472	0	0.000087	0
Ethanol, Petroleum, 99.7%	lb	0	0.0205	0	1.25	0	0.00199	0	0.00214	0	0.000277	0	5.89E-05	0
Gravel/Sand Mix, 65% Gravel	lb	0	2.48E-05	0	0.0024	0	0.000018	0	4.52E-06	0	2.61E-06	0	3.08E-07	0
Gravel/sand/clay	lb	0	0.000028	0	0.00335	0	1.65E-05	0	0.000015	0	0.000002	0	2.05E-10	0
HDPE	lb	0	0.0332	0	1.94	0	0.00325	0	0.00409	0	0.000439	0	6.41E-05	0
Photovoltaic system (installed)	W	0	0.0336	0	4.47	0	0.015	0	0.032	0	0.00063	0	2.9E-06	0
PVC	lb	0	0.0262	0	2.02	0	0.004	0	0.00274	0	0.000372	0	0.000375	0
Portland cement, US average	lb	0	0.0139	0	1.34	0	0.00654	0	0.0104	0	0.00378	0	0.00097	0
Ready-mixed concrete, 20 MPa	ft3	0	0.217	0	19.5	0	0.0975	0	0.154	0	0.057	0	0.0141	0
Round Gravel	lb	0	2.48E-05	0	0.0024	0	0.000018	0	4.52E-06	0	2.61E-06	0	3.08E-07	0
Sand	lb	0	2.48E-05	0	0.0024	0	0.000018	0	4.52E-06	0	2.61E-06	0	3.08E-07	0
Stainless Steel	lb	0	0.0116	0	3.4	0	0.0075	0	0.012	0	0.0044	0	0.000144	0
Steel	lb	0	0.0044	0	1.1	0	0.0014	0	0.0017	0	0.00056	0	0.000067	0
Other refined construction materials	lb	0	0.01885	0	2.115	0	0.004038	0	0.005133	0	0.001443	0	0.000163	0
Other unrefined construction materials	lb	0	0.000028	0	0.00335	0	1.65E-05	0	0.000015	0	0.000002	0	2.05E-10	0

Notes:

Waste Transport & Disposal - Off-Site Footprint (Scope 3b)

Category	Units	Usage	Energy		Greenhouse Gas		NOx		SOx		PM		HAPs	
			Conv. Factor	MMBtus	Conv. Factor	lbs CO2e	Conv. Factor	lbs	Conv. Factor	lbs	Conv. Factor	lbs	Conv. Factor	lbs
Treatment Materials & Chemicals														
Cheese Whey	lbs	0	0.0025	0	0.031	0	0.000062	0	0.000033	0	0.000002	0	NP	
Emulsified vegetable oil	lbs	0	0.0077	0	3.44	0	0.0066	0	0.0019	0	0.000033	0	NP	
Granular activated carbon, primary	lbs	0	0.0356	0	4.82	0	0.0793	0	0.128	0	0.000987	0	0.000657	0
Granular activated carbon, regenerated	lbs	0	0.00873	0	1.7	0	0.00733	0	0.0129	0	0.000886	0	0.000671	0
Hydrogen Peroxide, 50% in H2O	lbs	0	0.00979	0	1.19	0	0.00142	0	0.0024	0	0.000308	0	6.29E-05	0
Iron (II) Sulfate	lbs	0	0.00147	0	0.167	0	0.000316	0	0.000589	0	0.000103	0	0.000023	0
Lime, Hydrated, Packed	lbs	0	0.00206	0	0.762	0	0.000513	0	0.000358	0	0.00013	0	6.57E-06	0
Molasses	lbs	0	0.0044	0	0.48	0	0.0011	0	0.00024	0	4.1E-06	0	NP	
Phosphoric Acid, 70% in H2O	lbs	0	0.0067	0	0.882	0	0.00282	0	0.0294	0	0.00171	0	0.000163	0
Potassium Permanganate	lbs	0	0.00981	0	1.16	0	0.00234	0	0.0032	0	0.000422	0	0.000122	0
Sodium Hydroxide, 50% in H2O	lbs	0	0.00977	0	1.09	0	0.00194	0	0.00352	0	0.000403	0	0.000129	0
Other Treatment Chemicals & Materials	lbs	0	0.015	0	1.67	0	0.003	0	0.0065	0	0.00061	0	0.000016	0
Notes:														
Fuel Processing														
Biodiesel produced	gal	0	0.029	0	-16.8	0	0.018	0	0.033	0	0.00082	0	NP	
Diesel produced	gal	15441.6	0.017	262.5072	3.02	46633.63	0.0051	78.75216	0.0062	95.73792	0.0017	26.25072	0.0011	16.98576
Gasoline produced	gal	0	0.033	0	2.8	0	0.0046	0	0.005	0	0.0015	0	0.001	0
Liquefied Petroleum Gas Produced	gal	0	0.088	0	1.47	0	0.0016	0	0.0024	0	0.0007	0	0.0003	0
Natural Gas - Compressed Produced	ccf	0	19.983	0	343.92	0	0.4732	0	2.1651	0	0.1846	0	0.2895	0
Natural Gas Produced	ccf	0	0.0052	0	2.2	0	0.0037	0	0.0046	0	0.000072	0	6.1E-06	0
Fuel Processing Subtotals				**262.5072**		**46633.63**		**78.75216**		**95.73792**		**26.25072**		**16.98576**
Notes:														
Public water	gal x 1000	0	0.0092	0	5	0	0.0097	0	0.0059	0	0.016	0	0.000015	0
User-defined water resource #1	gal x 1000	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined water resource #2	gal x 1000	0	0	0	0	0	0	0	0	0	0	0	0	0
Notes:														

Waste Transport & Disposal - Off-Site Footprint (Scope 3b)

			Energy		Greenhouse Gas		NOx		SOx		PM		HAPs	
Category	Units	Usage	Conv. Factor	MMBtus	Conv. Factor	lbs CO2e	Conv. Factor	lbs	Conv. Factor	lbs	Conv. Factor	lbs	Conv. Factor	lbs
Off-Site Services														
Hazardous waste incineration	lb	0	0.00609	0	2.43	0	0.0016	0	0.00167	0	0.000209	0	0.000087	0
Off-site waste water treatment (POTW)	gal x 1000	0	0.015	0	4.4	0	0.016	0	0.015	0	NP		NP	
Off-site non-hazardous waste landfill	ton	0	0.16	0	25	0	0.14	0	0.075	0	0.4	0	0.0014	0
Off-site hazardous waste landfill	ton	0	0.18	0	27.5	0	0.154	0	0.0825	0	0.44	0	0.00154	0
Off-site Laboratory Analysis - Other	sample	0	0.058071	0	6.853438	0	0.131402	0	0.303876	0	0.04557	0	0.033017	0
Off-site Laboratory Analysis - Metals	sample	0	0.212	0	27.4693	0	0.6423	0	1.5072	0	0.2264	0	0.1643	0
Off-site Laboratory Analysis - Mercury	sample	0	0.073171	0	9.325458	0	0.212744	0	0.49824	0	0.074736	0	0.054233	0
Off-site Laboratory Analysis - Inorganic Anions	sample	0	0.007402	0	0.645948	0	0.006768	0	0.014793	0	0.002202	0	0.001554	0
Off-site Laboratory Analysis - Alkalinity	sample	0	0.01744	0	1.338192	0	0.007011	0	0.01325	0	0.00194	0	0.001283	0
Off-site Laboratory Analysis - Perchlorate	sample	0	0.023885	0	1.871705	0	0.007981	0	0.014154	0	0.002055	0	0.001287	0
Off-site Laboratory Analysis - Nitrogen/Nitrate	sample	0	0.033648	0	4.29897	0	0.095459	0	0.222665	0	0.03351	0	0.024251	0
Off-site Laboratory Analysis - Sulfate	sample	0	0.014122	0	1.472673	0	0.007981	0	0.013602	0	0.00198	0	0.001202	0
Off-site Laboratory Analysis - PCBs	sample	0	0.051277	0	5.224902	0	0.083334	0	0.190477	0	0.028439	0	0.021208	0
Off-site Laboratory Analysis - VOCs	sample	0	0.076204	0	9.016814	0	0.104498	0	0.227074	0	0.033951	0	0.023589	0
Off-site Laboratory Analysis - SVOCs	sample	0	0.07156	0	7.870422	0	0.145945	0	0.337304	0	0.050485	0	0.037258	0
Notes:														
Resource Extraction for Electricity														
Coal extraction and processing	MWh	0	3.1	0	180.0	0	0.8	0	0.2	0	0.0	0	NP	
Natural gas extraction and processing	MWh	0	1.6	0	270.0	0	0.2	0	13.0	0	0.0	0	NP	
Nuclear fuel extraction and processing	MWh	0	0.2	0	25.0	0	0.2	0	0.5	0	0.0	0	NP	
Oil extraction and processing	MWh	0	2.3	0	270.0	0	1.7	0	0.1	0	0.0	0	NP	
Other fuel extraction and processing	MWh	0	0	0	0	0	0	0	0	0	0	0	0	0
Resource Extraction Subtotals				**0**		**0**		**0**		**0**		**0**		**0**
Notes:														
Electricity Transmission														
Transmission and distribution losses	MWh	0	1.0342	0	35.2	0	0.1504	0	0.146966	0	0.007546	0	0.00454	0
Notes:														

Waste Transport & Disposal - Off-Site Footprint (Scope 3b)

			Energy		Greenhouse Gas		NOx		SOx		PM		HAPs	
Category	Units	Usage	Conv. Factor	MMBtus	Conv. Factor	lbs CO2e	Conv. Factor	lbs	Conv. Factor	lbs	Conv. Factor	lbs	Conv. Factor	lbs
User-defined Materials														
BENSEAL (Sodium Bentonite)	50 lb bag	0	0	0	0	0	0	0	0	0	0	0	0	0
orange mesh fencing	ft	0	0	0	0	0	0	0	0	0	0	0	0	0
absorbent composite socks	ft	0	0	0	0	0	0	0	0	0	0	0	0	0
6-mil 40' x 100' polyurethane sheeting	rolls	0	0	0	0	0	0	0	0	0	0	0	0	0
aggregate 2" stone	ton	0	0	0	0	0	0	0	0	0	0	0	0	0
filter cloth	lb	0	0	0	0	0	0	0	0	0	0	0	0	0
20-mil vapor barrier	sqft	0	0	0	0	0	0	0	0	0	0	0	0	0
Clean Fill	ton	0	0	0	0	0	0	0	0	0	0	0	0	0
Recycled Stone	ton	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined material #10	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined material #11	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined material #12	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined material #13	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined material #14	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined material #15	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined material #16	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined material #17	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined material #18	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined material #19	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined material #20	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
Notes:														
User-defined Waste Destinations														
User-defined recycled/reused off-site #1	ton	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined recycled/reused off-site #2	ton	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined recycled/reused off-site #3	TBD	0	y(MMBtu/l		lbs CO2e/l		Ox(lbs/unit		Ox(lbs/unit		M(lbs/unit)		APs(lbs/unit	
User-defined non-hazardous waste destination #1	ton	13605.93	0	0	0	0	0	0	0	0	0	0	0	0
User-defined non-hazardous waste destination #2	ton	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined non-hazardous waste destination #3	ton	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined hazardous waste destination #1	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined hazardous waste destination #2	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined hazardous waste destination #3	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
Notes:														
Off-site Totals				**262.5072**		**46633.63**		**78.75216**		**95.73792**		**26.25072**		**16.98576**

Waste Transport & Disposal - Intermediate Totals

Category	Units	Usage	Energy		Greenhouse Gas		NOx		SOx		PM		HAPs	
			Conv. Factor	MMBtus	Conv. Factor	lbs CO2e	Conv. Factor	lbs	Conv. Factor	lbs	Conv. Factor	lbs	Conv. Factor	lbs
Total Grid Electricity Footprint														
On-site grid electricity	MWh	0	3.413	0										
Electricity Generation														
Grid electricity	MWh	0	6.929	0	1124.3	0	2.2421	0	4.607887	0	0.057518	0	0.210237	0
Resource Extraction for Electricity														
Coal extraction and processing	MWh	0	3.1	0	180.0	0	0.8	0	0.2	0	0.0	0	NP	
Natural gas extraction and processing	MWh	0	1.6	0	270.0	0	0.2	0	13.0	0	0.0	0	NP	
Nuclear fuel extraction and processing	MWh	0	0.2	0	25.0	0	0.2	0	0.5	0	0.0	0	NP	
Oil extraction and processing	MWh	0	2.3	0	270.0	0	1.7	0	0.1	0	0.0	0	NP	
Other fuel extraction and processing	MWh	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0
Electricity Transmission														
Transmission and distribution losses	MWh	0	1.0342	0	112.43	0	0.22421	0	0.460789	0	0.005752	0	0.021024	0
Total Grid Electricity Footprint				**0**		**0**		**0**		**0**		**0**		**0**
Total Fuel Footprints														
Total Gasoline Footprint														
On-site gasoline use - Other	gal	0	0.124	0	19.6	0	0.11	0	0.0045	0	0.00054	0	0.000039	0
On-site gasoline use <25 hp	gal	0	0.124	0	17.48	0	0.037	0	0.00025	0	0.165	0	0.00008	0
On-site gasoline use >25 hp	gal	0	0.124	0	19.93	0	0.032	0	0.00029	0	0.002	0	0.00009	0
Transportation gasoline use	gal	0	0.124	0	19.6	0	0.11	0	0.0045	0	0.00054	0	0.000039	0
Transportation gasoline use - car	gal	0	0.124	0	19.77	0	0.027	0	0.00036	0	0.003	0	0.0067	0
Transportation gasoline use - passenger truck	gal	0	0.124	0	19.79	0	0.035	0	0.00036	0	0.003	0	0.00661	0
Transportation gasoline use - User Defined	gal	0	0.124	0	19.6	0	0.11	0	0.0045	0	0.00054	0	0.000039	0
Gasoline produced	gal	0	0.033	0	2.8	0	0.0046	0	0.005	0	0.0015	0	0.001	0
Total Gasoline Footprint		**0**		**0**		**0**		**0**		**0**		**0**		**0**
Total Diesel Footprint														
On-site diesel use - Other	gal	0	0.139	0	22.5	0	0.17	0	0.0054	0	0.0034	0	5.2E-06	0
On-site diesel use <75 hp	gal	0	0.139	0	22.21	0	0.1565	0	0.000145	0	0.0145	0	0.00004	0
On-site diesel use 75<hp<750	gal	0	0.139	0	22.24	0	0.101	0	0.00013	0	0.009	0	0.00004	0
On-site diesel use >750 hp	gal	0	0.139	0	22.24	0	0.149	0	0.00013	0	0.006	0	0.00004	0
Transportation diesel use	gal	15441.6	0.139	2146.382	22.5	347436	0.17	2625.072	0.0054	83.38464	0.0034	52.50144	5.2E-06	0.080296
Transportation diesel use - car	gal	0	0.139	0	22.57	0	0.015	0	0.0002	0	0.003	0	0.00252	0
Transportation diesel use - passenger truck	gal	0	0.139	0	22.545	0	0.0585	0	0.0002	0	0.007	0	0.002605	0
Transportation diesel use - User Defined	gal	0	0.139	0	22.5	0	0.17	0	0.0054	0	0.0034	0	5.2E-06	0
Diesel produced	gal	15441.6	0.017	262.5072	3.02	46633.63	0.0051	78.75216	0.0062	95.73792	0.0017	26.25072	0.0011	16.98576
Total Diesel Footprint		**15441.6**		**2408.89**		**394069.6**		**2703.824**		**179.1226**		**78.75216**		**17.06606**
Total Biodiesel Footprint														
On-site biodiesel use	gal	0	0.127	0	22.3	0	0.2	0	0	0	0.00099	0	NP	
On-site biodiesel use - User Defined	gal	0	0.127	0	22.3	0	0.2	0	0	0	0.00099	0	NP	
Transportation biodiesel use	gal	0	0.127	0	22.3	0	0.2	0	0	0	0.00099	0	NP	
Transportation biodiesel use - User Defined	gal	0	0.127	0	22.3	0	0.2	0	0	0	0.00099	0	NP	
Biodiesel produced	gal	0	0.029	0	-16.8	0	0.018	0	0.033	0	0.00082	0	NP	
Total Biodiesel Footprint		**0**		**0**		**0**		**0**		**0**		**0**		**0**
Total Natural Gas Footprint														
On-site natural gas use	ccf	0	0.103	0	13.1	0	0.01	0	6.3E-06	0	0.00076	0	8.4E-06	0
Transportation natural gas use	ccf	0	0.103	0	13.1	0	0.01	0	6.3E-06	0	0.00076	0	8.4E-06	0
Transportation natural gas use - User Defined	ccf	0	0.103	0	13.1	0	0.01	0	6.3E-06	0	0.00076	0	8.4E-06	0
Natural gas produced	ccf	0	0.0052	0	2.2	0	0.0037	0	0.0046	0	0.000072	0	6.1E-06	0
Total Natural Gas Footprint		**0**		**0**		**0**		**0**		**0**		**0**		**0**
Total Liquified Petroleum Gas Footprint														
On-site liquified petroleum gas use - Other	ccf	0	NP		12.69	0	0.021	0	0.00013	0	0.001	0	0	0
On-site liquified petroleum gas use	ccf	0	NP		12.69	0	0.021	0	0.00013	0	0.001	0	0	0
Liquified petroleum gas produced	ccf	0	0.088	0	1.47	0	0.0016	0	0.0024	0	0.0007	0	0.0003	0
Total Natural Gas Footprint		**0**		**0**		**0**		**0**		**0**		**0**		**0**
Total Compressed Gas Footprint														
On-site compressed gas use - Other	ccf	0	NP		1957.835	0	16.0325	0	0.023045	0	0.2775	0	0	0
On-site compressed gas use	ccf	0	NP		1957.835	0	16.0325	0	0.023045	0	0.2775	0	0	0
Compressed gas produced	ccf	0	19.983	0	343.92	0	0.4732	0	2.1651	0	0.1846	0	0.2895	0
Total Natural Gas Footprint		**0**		**0**		**0**		**0**		**0**		**0**		**0**

Notes:

Note: Please refer to the "Default Conversions" tab for references for the default conversion factors used on this calculation sheet.

Endpoint Sampling - On-Site Footprint (Scope 1)

Contributors to Footprints	Units	Usage	Energy		GHG		NOx		SOx		PM		HAPs	
			Conv. Factor	MMBtus	Conv. Factor	lbs CO2e	Conv. Factor	lbs	Conv. Factor	lbs	Conv. Factor	lbs	Conv. Factor	lbs
On-Site														
On-site Renewable Energy														
Renewable electricity generated on-site	MWh	0	3.413	0										
Landfill gas combusted on-site for energy use	ccf CH4	0	0.103	0	13.1	0	0.01	0	6.3E-06	0	0.00076	0	8.4E-06	0
On-site biodiesel use	gal	0	0.127	0	22.3	0	0.2	0	0	0	0.00099	0	NP	
On-site biodiesel use - User Defined	gal	0	0.127	0	22.3	0	0.2	0	0	0	0.00099	0	NP	
User-defined on-site renewable energy use #1	gal	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined on-site renewable energy use #2	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
On-site Renewable Energy Subtotals				**0**		**0**		**0**		**0**		**0**		**0**
Notes:														
On-site Conventional Energy														
On-site grid electricity	MWh	0	3.413	0										
On-site diesel use - Other	Gal	0	0.139	0	22.5	0	0.17	0	0.0054	0	0.0034	0	5.2E-06	0
On-site diesel use <75 hp	Gal	0	0.139	0	22.21	0	0.1565	0	0.000145	0	0.0145	0	0.00004	0
On-site diesel use 75<hp<750	Gal	0	0.139	0	22.24	0	0.101	0	0.00013	0	0.009	0	0.00004	0
On-site diesel use >750 hp	Gal	0	0.139	0	22.24	0	0.149	0	0.00013	0	0.006	0	0.00004	0
On-site gasoline use - Other	Gal	0	0.124	0	19.6	0	0.11	0	0.0045	0	0.00054	0	0.000039	0
On-site gasoline use <25 hp	Gal	0	0.124	0	17.48	0	0.037	0	0.00025	0	0.165	0	0.00008	0
On-site gasoline use >25 hp	Gal	0	0.124	0	19.93	0	0.032	0	0.00029	0	0.002	0	0.00009	0
On-site natural gas use	ccf	0	0.103	0	13.1	0	0.01	0	6.3E-06	0	0.00076	0	8.4E-06	0
On-site compressed natural gas use - Other	ccf	0	NP		1957.835	0	16.0325	0	0.023045	0	0.2775	0	0	0
On-site compressed natural gas use	ccf	0	NP		1957.835	0	16.0325	0	0.023045	0	0.2775	0	0	0
On-site liquified petroleum gas use - Other	gal	0	NP		12.69	0	0.021	0	0.00013	0	0.001	0	0	0
On-site liquified petroleum gas use	gal	0	NP		12.69	0	0.021	0	0.00013	0	0.001	0	0	0
Other forms of on-site conventional energy use #1	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
Other forms of on-site conventional energy use #2	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
On-site Conventional Energy Subtotals				**0**		**0**		**0**		**0**		**0**		**0**
Notes:														
Other On-site Emissions														
On-site HAP process emissions	lbs	0											1	0
On-site GHG emissions	lbs CO2e	0			1	0								
On-site carbon storage	lbs CO2e	0			1	0								
GHG avoided by flaring on-site landfill methane	Lbs	0			-262	0	0.01	0	6.3E-06	0	0.00076	0	8.4E-06	0
Other on-site NOx emissions or reductions	lbs	0					1	0						
Other on-site SOx emissions or reductions	lbs	0							1	0				
Other on-site PM emissions or reductions	lbs	0									1	0		
User-defined recycled/reused on-site #2	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined recycled/reused on-site #3	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined recycled/reused off-site #1	ton	0	0	0	0	0	0	0	0	0	0	0	0	0
Notes:														
On-site Totals				**0.00**		**0**		**0**		**0**		**0**		**0**

Endpoint Sampling - Electricity Generation Footprint (Scope 2)

Contributors to Footprints	Units	Usage	Energy		GHG		NOx		SOx		PM		HAPs	
			Conv. Factor	MMBtus	Conv. Factor	lbs CO2e	Conv. Factor	lbs	Conv. Factor	lbs	Conv. Factor	lbs	Conv. Factor	lbs
Electricity Generation														
Grid electricity	MWh	0	6.929	0	352	0	1.504	0	1.46966	0	0.07546	0	0.045403	0
Voluntary purchase of renewable electricity	MWh	0												
Voluntary purchase of RECs	MWh	0												
Notes:														

Endpoint Sampling - Transportation Footprint (Scope 3a)

Category	Units	Usage	Energy		Greenhouse Gas		NOx		SOx		PM		HAPs	
			Conv. Factor	MMBtus	Conv. Factor	lbs CO2e	Conv. Factor	lbs	Conv. Factor	lbs	Conv. Factor	lbs	Conv. Factor	lbs
Conventional Energy														
Transportation diesel use	gal	0	0.139	0	22.5	0	0.17	0	0.0054	0	0.0034	0	5.2E-06	0
Transportation diesel use - car	gal	0	0.139	0	22.57	0	0.015	0	0.0002	0	0.003	0	0.00252	0
Transportation diesel use - passenger truck	gal	0	0.139	0	22.545	0	0.0585	0	0.0002	0	0.007	0	0.002605	0
Transportation diesel use - User Defined	gal	0	0.139	0	22.5	0	0.17	0	0.0054	0	0.0034	0	5.2E-06	0
Transportation gasoline use	gal	0	0.124	0	19.6	0	0.11	0	0.0045	0	0.00054	0	0.000039	0
Transportation gasoline use - car	gal	22	0.124	2.728	19.77	434.94	0.027	0.594	0.00036	0.00792	0.003	0.066	0.0067	0.1474
Transportation gasoline use - passenger truck	gal	0	0.124	0	19.79	0	0.035	0	0.00036	0	0.003	0	0.00661	0
Transportation gasoline use - User Defined	gal	0	0.124	0	19.6	0	0.11	0	0.0045	0	0.00054	0	0.000039	0
Transportation natural gas use	ccf	0	0.103	0	13.1	0	0.01	0	6.3E-06	0	0.00076	0	8.4E-06	0
Transportation natural gas use - User Defined	ccf	0	0.103	0	13.1	0	0.01	0	6.3E-06	0	0.00076	0	8.4E-06	0
User-defined conventional energy transportation #1	TBD	10	0	0	0	0	0	0	0	0	0	0	0	0
User-defined conventional energy transportation #2	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
Conventional Energy Subtotals				**3**		**435**		**1**		**0**		**0**		**0**
Notes:														
Renewable Energy														
Transportation biodiesel use	gal	0	0.127	0	22.3	0	0.2	0	0	0	0.00099	0	NP	
Transportation biodiesel use - User Defined	gal	0	0.127	0	22.3	0	0.2	0	0	0	0.00099	0	NP	
User-defined renewable energy transportation #1	TBD	0	Biodiesel		0	0	0	0	0	0	0	0	Ref.	
User-defined renewable energy transportation #2	TBD	0	mpg or pmp		0	0	0	0	0	0	0	0	0	0
Renewable Energy Subtotals				**0**		**0**		**0**		**0**		**0**		**0**
Notes:														
Transportation Totals				**3**		**435**		**1**		**0**		**0**		**0**

Endpoint Sampling - Off-Site Footprint (Scope 3b)

Category	Units	Usage	Energy		Greenhouse Gas		NOx		SOx		PM		HAPs	
			Conv. Factor	MMBtus	Conv. Factor	lbs CO2e	Conv. Factor	lbs	Conv. Factor	lbs	Conv. Factor	lbs	Conv. Factor	lbs
Construction Materials														
Aluminum, Rolled Sheet	lb	0	0.0633	0	9.15	0	0.0148	0	0.0283	0	0.0088	0	0.00102	0
Asphalt, mastic	lb	0	0.0412	0	0.85	0	0.00271	0	0.00798	0	0.000766	0	0.00107	0
Asphalt, paving-grade	lb	0	0.5	0	8.58	0	0.0299	0	0.0969	0	0.0091	0	0.0133	0
Ethanol, Corn, 95%	lb	0	0.0318	0	-0.0199	0	0.00425	0	0.00303	0	0.000469	0	8.46E-05	0
Ethanol, Corn, 99.7%	lb	0	0.0324	0	0.0591	0	0.00431	0	0.0031	0	0.000472	0	0.000087	0
Ethanol, Petroleum, 99.7%	lb	0	0.0205	0	1.25	0	0.00199	0	0.00214	0	0.000277	0	5.89E-05	0
Gravel/Sand Mix, 65% Gravel	lb	0	2.48E-05	0	0.0024	0	0.000018	0	4.52E-06	0	2.61E-06	0	3.08E-07	0
Gravel/sand/clay	lb	0	0.000028	0	0.00335	0	1.65E-05	0	0.000015	0	0.000002	0	2.05E-10	0
HDPE	lb	0	0.0332	0	1.94	0	0.00325	0	0.00409	0	0.000439	0	6.41E-05	0
Photovoltaic system (installed)	W	0	0.0336	0	4.47	0	0.015	0	0.032	0	0.00063	0	2.9E-06	0
PVC	lb	0	0.0262	0	2.02	0	0.004	0	0.00274	0	0.000372	0	0.000375	0
Portland cement, US average	lb	0	0.0139	0	1.34	0	0.00654	0	0.0104	0	0.00378	0	0.00097	0
Ready-mixed concrete, 20 MPa	ft3	0	0.217	0	19.5	0	0.0975	0	0.154	0	0.057	0	0.0141	0
Round Gravel	lb	0	2.48E-05	0	0.0024	0	0.000018	0	4.52E-06	0	2.61E-06	0	3.08E-07	0
Sand	lb	0	2.48E-05	0	0.0024	0	0.000018	0	4.52E-06	0	2.61E-06	0	3.08E-07	0
Stainless Steel	lb	0	0.0116	0	3.4	0	0.0075	0	0.012	0	0.0044	0	0.000144	0
Steel	lb	0	0.0044	0	1.1	0	0.0014	0	0.0017	0	0.00056	0	0.000067	0
Other refined construction materials	lb	0	0.01885	0	2.115	0	0.004038	0	0.005133	0	0.001443	0	0.000163	0
Other unrefined construction materials	lb	0	0.000028	0	0.00335	0	1.65E-05	0	0.000015	0	0.000002	0	2.05E-10	0

Notes:

Endpoint Sampling - Off-Site Footprint (Scope 3b)

Category	Units	Usage	Energy		Greenhouse Gas		NOx		SOx		PM		HAPs	
			Conv. Factor	MMBtus	Conv. Factor	lbs CO2e	Conv. Factor	lbs	Conv. Factor	lbs	Conv. Factor	lbs	Conv. Factor	lbs
Treatment Materials & Chemicals														
Cheese Whey	lbs	0	0.0025	0	0.031	0	0.000062	0	0.000033	0	0.000002	0	NP	
Emulsified vegetable oil	lbs	0	0.0077	0	3.44	0	0.0066	0	0.0019	0	0.000033	0	NP	
Granular activated carbon, primary	lbs	0	0.0356	0	4.82	0	0.0793	0	0.128	0	0.000987	0	0.000657	0
Granular activated carbon, regenerated	lbs	0	0.00873	0	1.7	0	0.00733	0	0.0129	0	0.000886	0	0.000671	0
Hydrogen Peroxide, 50% in H2O	lbs	0	0.00979	0	1.19	0	0.00142	0	0.0024	0	0.000308	0	6.29E-05	0
Iron (II) Sulfate	lbs	0	0.00147	0	0.167	0	0.000316	0	0.000589	0	0.000103	0	0.000023	0
Lime, Hydrated, Packed	lbs	0	0.00206	0	0.762	0	0.000513	0	0.000358	0	0.00013	0	6.57E-06	0
Molasses	lbs	0	0.0044	0	0.48	0	0.0011	0	0.00024	0	4.1E-06	0	NP	
Phosphoric Acid, 70% in H2O	lbs	0	0.0067	0	0.882	0	0.00282	0	0.0294	0	0.00171	0	0.000163	0
Potassium Permanganate	lbs	0	0.00981	0	1.16	0	0.00234	0	0.0032	0	0.000422	0	0.000122	0
Sodium Hydroxide, 50% in H2O	lbs	0	0.00977	0	1.09	0	0.00194	0	0.00352	0	0.000403	0	0.000129	0
Other Treatment Chemicals & Materials	lbs	0	0.015	0	1.67	0	0.003	0	0.0065	0	0.00061	0	0.000016	0
Notes:														
Fuel Processing														
Biodiesel produced	gal	0	0.029	0	-16.8	0	0.018	0	0.033	0	0.00082	0	NP	
Diesel produced	gal	0	0.017	0	3.02	0	0.0051	0	0.0062	0	0.0017	0	0.0011	0
Gasoline produced	gal	22	0.033	0.726	2.8	61.6	0.0046	0.1012	0.005	0.11	0.0015	0.033	0.001	0.022
Liquefied Petroleum Gas Produced	gal	0	0.088	0	1.47	0	0.0016	0	0.0024	0	0.0007	0	0.0003	0
Natural Gas - Compressed Produced	ccf	0	19.983	0	343.92	0	0.4732	0	2.1651	0	0.1846	0	0.2895	0
Natural Gas Produced	ccf	0	0.0052	0	2.2	0	0.0037	0	0.0046	0	0.000072	0	6.1E-06	0
Fuel Processing Subtotals				**0.726**		**61.6**		**0.1012**		**0.11**		**0.033**		**0.022**
Notes:														
Public water	gal x 1000	0	0.0092	0	5	0	0.0097	0	0.0059	0	0.016	0	0.000015	0
User-defined water resource #1	gal x 1000	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined water resource #2	gal x 1000	0	0	0	0	0	0	0	0	0	0	0	0	0
Notes:														

Endpoint Sampling - Off-Site Footprint (Scope 3b)

Category	Units	Usage	Energy		Greenhouse Gas		NOx		SOx		PM		HAPs	
			Conv. Factor	MMBtus	Conv. Factor	lbs CO2e	Conv. Factor	lbs	Conv. Factor	lbs	Conv. Factor	lbs	Conv. Factor	lbs
Off-Site Services														
Hazardous waste incineration	lb	0	0.00609	0	2.43	0	0.0016	0	0.00167	0	0.000209	0	0.000087	0
Off-site waste water treatment (POTW)	gal x 1000	0	0.015	0	4.4	0	0.016	0	0.015	0	NP		NP	
Off-site non-hazardous waste landfill	ton	0	0.16	0	25	0	0.14	0	0.075	0	0.4	0	0.0014	0
Off-site hazardous waste landfill	ton	0	0.18	0	27.5	0	0.154	0	0.0825	0	0.44	0	0.00154	0
Off-site Laboratory Analysis - Other	sample	50	0.058071	2.903551	6.853438	342.6719	0.131402	6.570098	0.303876	15.19379	0.04557	2.278491	0.033017	1.650826
Off-site Laboratory Analysis - Metals	sample	10	0.212	2.12	27.4693	274.693	0.6423	6.423	1.5072	15.072	0.2264	2.264	0.1643	1.643
Off-site Laboratory Analysis - Mercury	sample	10	0.073171	0.731715	9.325458	93.25458	0.212744	2.127439	0.49824	4.982396	0.074736	0.747359	0.054233	0.542332
Off-site Laboratory Analysis - Inorganic Anions	sample	0	0.007402	0	0.645948	0	0.006768	0	0.014793	0	0.002202	0	0.001554	0
Off-site Laboratory Analysis - Alkalinity	sample	0	0.01744	0	1.338192	0	0.007011	0	0.01325	0	0.00194	0	0.001283	0
Off-site Laboratory Analysis - Perchlorate	sample	0	0.023885	0	1.871705	0	0.007981	0	0.014154	0	0.002055	0	0.001287	0
Off-site Laboratory Analysis - Nitrogen/Nitrate	sample	0	0.033648	0	4.29897	0	0.095459	0	0.222665	0	0.03351	0	0.024251	0
Off-site Laboratory Analysis - Sulfate	sample	0	0.014122	0	1.472673	0	0.007981	0	0.013602	0	0.00198	0	0.001202	0
Off-site Laboratory Analysis - PCBs	sample	10	0.051277	0.512769	5.224902	52.24902	0.083334	0.833339	0.190477	1.904774	0.028439	0.284393	0.021208	0.212083
Off-site Laboratory Analysis - VOCs	sample	10	0.076204	0.762045	9.016814	90.16814	0.104498	1.04498	0.227074	2.270738	0.033951	0.339508	0.023589	0.235892
Off-site Laboratory Analysis - SVOCs	sample	10	0.07156	0.715602	7.870422	78.70422	0.145945	1.459445	0.337304	3.373038	0.050485	0.504853	0.037258	0.372577
Notes:														
Resource Extraction for Electricity														
Coal extraction and processing	MWh	0	3.1	0	180.0	0	0.8	0	0.2	0	0.0	0	NP	
Natural gas extraction and processing	MWh	0	1.6	0	270.0	0	0.2	0	13.0	0	0.0	0	NP	
Nuclear fuel extraction and processing	MWh	0	0.2	0	25.0	0	0.2	0	0.5	0	0.0	0	NP	
Oil extraction and processing	MWh	0	2.3	0	270.0	0	1.7	0	0.1	0	0.0	0	NP	
Other fuel extraction and processing	MWh	0	0	0	0	0	0	0	0	0	0	0	0	0
Resource Extraction Subtotals				**0**		**0**		**0**		**0**		**0**		**0**
Notes:														
Electricity Transmission														
Transmission and distribution losses	MWh	0	1.0342	0	35.2	0	0.1504	0	0.146966	0	0.007546	0	0.00454	0
Notes:														

Endpoint Sampling - Off-Site Footprint (Scope 3b)

			Energy		Greenhouse Gas		NOx		SOx		PM		HAPs	
Category	Units	Usage	Conv. Factor	MMBtus	Conv. Factor	lbs CO2e	Conv. Factor	lbs	Conv. Factor	lbs	Conv. Factor	lbs	Conv. Factor	lbs
User-defined Materials														
BENSEAL (Sodium Bentonite)	50 lb bag	0	0	0	0	0	0	0	0	0	0	0	0	0
orange mesh fencing	ft	0	0	0	0	0	0	0	0	0	0	0	0	0
absorbent composite socks	ft	0	0	0	0	0	0	0	0	0	0	0	0	0
6-mil 40' x 100' polyurethane sheeting	rolls	0	0	0	0	0	0	0	0	0	0	0	0	0
aggregate 2" stone	ton	0	0	0	0	0	0	0	0	0	0	0	0	0
filter cloth	lb	0	0	0	0	0	0	0	0	0	0	0	0	0
20-mil vapor barrier	sqft	0	0	0	0	0	0	0	0	0	0	0	0	0
Clean Fill	ton	0	0	0	0	0	0	0	0	0	0	0	0	0
Recycled Stone	ton	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined material #10	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined material #11	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined material #12	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined material #13	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined material #14	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined material #15	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined material #16	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined material #17	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined material #18	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined material #19	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined material #20	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
Notes:														
User-defined Waste Destinations														
User-defined recycled/reused off-site #1	ton	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined recycled/reused off-site #2	ton	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined recycled/reused off-site #3	TBD	0	y(MMBtu/U		lbs CO2e/U		Ox(lbs/unit		Ox(lbs/unit		M(lbs/unit)		APs(lbs/unit	
User-defined non-hazardous waste destination #1	ton	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined non-hazardous waste destination #2	ton	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined non-hazardous waste destination #3	ton	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined hazardous waste destination #1	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined hazardous waste destination #2	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined hazardous waste destination #3	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
Notes:														
Off-site Totals				**8.471682**		**993.3409**		**18.5595**		**42.90673**		**6.451606**		**4.67871**

Endpoint Sampling - Intermediate Totals

Category	Units	Usage	Energy		Greenhouse Gas		NOx		SOx		PM		HAPs	
			Conv. Factor	MMBtus	Conv. Factor	lbs CO2e	Conv. Factor	lbs	Conv. Factor	lbs	Conv. Factor	lbs	Conv. Factor	lbs
Total Grid Electricity Footprint														
On-site grid electricity	MWh	0	3.413	0										
Electricity Generation														
Grid electricity	MWh	0	6.929	0	1124.3	0	2.2421	0	4.607887	0	0.057518	0	0.210237	0
Resource Extraction for Electricity														
Coal extraction and processing	MWh	0	3.1	0	180.0	0	0.8	0	0.2	0	0.0	0	NP	
Natural gas extraction and processing	MWh	0	1.6	0	270.0	0	0.2	0	13.0	0	0.0	0	NP	
Nuclear fuel extraction and processing	MWh	0	0.2	0	25.0	0	0.2	0	0.5	0	0.0	0	NP	
Oil extraction and processing	MWh	0	2.3	0	270.0	0	1.7	0	0.1	0	0.0	0	NP	
Other fuel extraction and processing	MWh	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0
Electricity Transmission														
Transmission and distribution losses	MWh	0	1.0342	0	112.43	0	0.22421	0	0.460789	0	0.005752	0	0.021024	0
Total Grid Electricity Footprint				**0**		**0**		**0**		**0**		**0**		**0**
Total Fuel Footprints														
Total Gasoline Footprint														
On-site gasoline use - Other	gal	0	0.124	0	19.6	0	0.11	0	0.0045	0	0.00054	0	0.000039	0
On-site gasoline use <25 hp	gal	0	0.124	0	17.48	0	0.037	0	0.00025	0	0.165	0	0.00008	0
On-site gasoline use >25 hp	gal	0	0.124	0	19.93	0	0.032	0	0.00029	0	0.002	0	0.00009	0
Transportation gasoline use	gal	0	0.124	0	19.6	0	0.11	0	0.0045	0	0.00054	0	0.000039	0
Transportation gasoline use - car	gal	22	0.124	2.728	19.77	434.94	0.027	0.594	0.00036	0.00792	0.003	0.066	0.0067	0.1474
Transportation gasoline use - passenger truck	gal	0	0.124	0	19.79	0	0.035	0	0.00036	0	0.003	0	0.00661	0
Transportation gasoline use - User Defined	gal	0	0.124	0	19.6	0	0.11	0	0.0045	0	0.00054	0	0.000039	0
Gasoline produced	gal	22	0.033	0.726	2.8	61.6	0.0046	0.1012	0.005	0.11	0.0015	0.033	0.001	0.022
Total Gasoline Footprint		**22**		**3.454**		**496.54**		**0.6952**		**0.11792**		**0.099**		**0.1694**
Total Diesel Footprint														
On-site diesel use - Other	gal	0	0.139	0	22.5	0	0.17	0	0.0054	0	0.0034	0	5.2E-06	0
On-site diesel use <75 hp	gal	0	0.139	0	22.21	0	0.1565	0	0.000145	0	0.0145	0	0.00004	0
On-site diesel use 75<hp<750	gal	0	0.139	0	22.24	0	0.101	0	0.00013	0	0.009	0	0.00004	0
On-site diesel use >750 hp	gal	0	0.139	0	22.24	0	0.149	0	0.00013	0	0.006	0	0.00004	0
Transportation diesel use	gal	0	0.139	0	22.5	0	0.17	0	0.0054	0	0.0034	0	5.2E-06	0
Transportation diesel use - car	gal	0	0.139	0	22.57	0	0.015	0	0.0002	0	0.003	0	0.00252	0
Transportation diesel use - passenger truck	gal	0	0.139	0	22.545	0	0.0585	0	0.0002	0	0.007	0	0.002605	0
Transportation diesel use - User Defined	gal	0	0.139	0	22.5	0	0.17	0	0.0054	0	0.0034	0	5.2E-06	0
Diesel produced	gal	0	0.017	0	3.02	0	0.0051	0	0.0062	0	0.0017	0	0.0011	0
Total Diesel Footprint		**0**		**0**		**0**		**0**		**0**		**0**		**0**
Total Biodiesel Footprint														
On-site biodiesel use	gal	0	0.127	0	22.3	0	0.2	0	0	0	0.00099	0	NP	
On-site biodiesel use - User Defined	gal	0	0.127	0	22.3	0	0.2	0	0	0	0.00099	0	NP	
Transportation biodiesel use	gal	0	0.127	0	22.3	0	0.2	0	0	0	0.00099	0	NP	
Transportation biodiesel use - User Defined	gal	0	0.127	0	22.3	0	0.2	0	0	0	0.00099	0	NP	
Biodiesel produced	gal	0	0.029	0	-16.8	0	0.018	0	0.033	0	0.00082	0	NP	
Total Biodiesel Footprint		**0**		**0**		**0**		**0**		**0**		**0**		**0**
Total Natural Gas Footprint														
On-site natural gas use	ccf	0	0.103	0	13.1	0	0.01	0	6.3E-06	0	0.00076	0	8.4E-06	0
Transportation natural gas use	ccf	0	0.103	0	13.1	0	0.01	0	6.3E-06	0	0.00076	0	8.4E-06	0
Transportation natural gas use - User Defined	ccf	0	0.103	0	13.1	0	0.01	0	6.3E-06	0	0.00076	0	8.4E-06	0
Natural gas produced	ccf	0	0.0052	0	2.2	0	0.0037	0	0.0046	0	0.000072	0	6.1E-06	0
Total Natural Gas Footprint		**0**		**0**		**0**		**0**		**0**		**0**		**0**
Total Liquified Petroleum Gas Footprint														
On-site liquified petroleum gas use - Other	ccf	0	NP		12.69	0	0.021	0	0.00013	0	0.001	0	0	0
On-site liquified petroleum gas use	ccf	0	NP		12.69	0	0.021	0	0.00013	0	0.001	0	0	0
Liquified petroleum gas produced	ccf	0	0.088	0	1.47	0	0.0016	0	0.0024	0	0.0007	0	0.0003	0
Total Natural Gas Footprint		**0**		**0**		**0**		**0**		**0**		**0**		**0**
Total Compressed Gas Footprint														
On-site compressed gas use - Other	ccf	0	NP		1957.835	0	16.0325	0	0.023045	0	0.2775	0	0	0
On-site compressed gas use	ccf	0	NP		1957.835	0	16.0325	0	0.023045	0	0.2775	0	0	0
Compressed gas produced	ccf	0	19.983	0	343.92	0	0.4732	0	2.1651	0	0.1846	0	0.2895	0
Total Natural Gas Footprint		**0**		**0**		**0**		**0**		**0**		**0**		**0**

Notes:

Note: Please refer to the "Default Conversions" tab for references for the default conversion factors used on this calculation sheet.

Backfill & Restoration - On-Site Footprint (Scope 1)

Contributors to Footprints	Units	Usage	Energy		GHG		NOx		SOx		PM		HAPs	
			Conv. Factor	MMBtus	Conv. Factor	lbs CO2e	Conv. Factor	lbs	Conv. Factor	lbs	Conv. Factor	lbs	Conv. Factor	lbs
On-Site														
On-site Renewable Energy														
Renewable electricity generated on-site	MWh	0	3.413	0										
Landfill gas combusted on-site for energy use	ccf CH4	0	0.103	0	13.1	0	0.01	0	6.3E-06	0	0.00076	0	8.4E-06	0
On-site biodiesel use	gal	0	0.127	0	22.3	0	0.2	0	0	0	0.00099	0	NP	
On-site biodiesel use - User Defined	gal	0	0.127	0	22.3	0	0.2	0	0	0	0.00099	0	NP	
User-defined on-site renewable energy use #1	gal	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined on-site renewable energy use #2	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
On-site Renewable Energy Subtotals				**0**		**0**		**0**		**0**		**0**		**0**
Notes:														
On-site Conventional Energy														
On-site grid electricity	MWh	0	3.413	0										
On-site diesel use - Other	Gal	0	0.139	0	22.5	0	0.17	0	0.0054	0	0.0034	0	5.2E-06	0
On-site diesel use <75 hp	Gal	0	0.139	0	22.21	0	0.1565	0	0.000145	0	0.0145	0	0.00004	0
On-site diesel use 75<hp<750	Gal	0	0.139	0	22.24	0	0.101	0	0.00013	0	0.009	0	0.00004	0
On-site diesel use >750 hp	Gal	0	0.139	0	22.24	0	0.149	0	0.00013	0	0.006	0	0.00004	0
On-site gasoline use - Other	Gal	0	0.124	0	19.6	0	0.11	0	0.0045	0	0.00054	0	0.000039	0
On-site gasoline use <25 hp	Gal	0	0.124	0	17.48	0	0.037	0	0.00025	0	0.165	0	0.00008	0
On-site gasoline use >25 hp	Gal	0	0.124	0	19.93	0	0.032	0	0.00029	0	0.002	0	0.00009	0
On-site natural gas use	ccf	0	0.103	0	13.1	0	0.01	0	6.3E-06	0	0.00076	0	8.4E-06	0
On-site compressed natural gas use - Other	ccf	0	NP		1957.835	0	16.0325	0	0.023045	0	0.2775	0	0	0
On-site compressed natural gas use	ccf	0	NP		1957.835	0	16.0325	0	0.023045	0	0.2775	0	0	0
On-site liquified petroleum gas use - Other	gal	0	NP		12.69	0	0.021	0	0.00013	0	0.001	0	0	0
On-site liquified petroleum gas use	gal	0	NP		12.69	0	0.021	0	0.00013	0	0.001	0	0	0
Other forms of on-site conventional energy use #1	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
Other forms of on-site conventional energy use #2	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
On-site Conventional Energy Subtotals				**0**		**0**		**0**		**0**		**0**		**0**
Notes:														
Other On-site Emissions														
On-site HAP process emissions	lbs	0											1	0
On-site GHG emissions	lbs CO2e	0			1	0								
On-site carbon storage	lbs CO2e	0			1	0								
GHG avoided by flaring on-site landfill methane	Lbs	0			-262	0	0.01	0	6.3E-06	0	0.00076	0	8.4E-06	0
Other on-site NOx emissions or reductions	lbs	0					1	0						
Other on-site SOx emissions or reductions	lbs	0							1	0				
Other on-site PM emissions or reductions	lbs	0									1	0		
User-defined recycled/reused on-site #2	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined recycled/reused on-site #3	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined recycled/reused off-site #1	ton	0	0	0	0	0	0	0	0	0	0	0	0	0
Notes:														
On-site Totals				**0.00**		**0**		**0**		**0**		**0**		**0**

Backfill & Restoration - Electricity Generation Footprint (Scope 2)

Contributors to Footprints	Units	Usage	Energy		GHG		NOx		SOx		PM		HAPs	
			Conv. Factor	MMBtus	Conv. Factor	lbs CO2e	Conv. Factor	lbs	Conv. Factor	lbs	Conv. Factor	lbs	Conv. Factor	lbs
Electricity Generation														
Grid electricity	MWh	0	6.929	0	352	0	1.504	0	1.46966	0	0.07546	0	0.045403	0
Voluntary purchase of renewable electricity	MWh	0												
Voluntary purchase of RECs	MWh	0												
Notes:														

Backfill & Restoration - Transportation Footprint (Scope 3a)

Category	Units	Usage	Energy		Greenhouse Gas		NOx		SOx		PM		HAPs	
			Conv. Factor	MMBtus	Conv. Factor	lbs CO2e	Conv. Factor	lbs	Conv. Factor	lbs	Conv. Factor	lbs	Conv. Factor	lbs
Conventional Energy														
Transportation diesel use	gal	11356.67	0.139	1578.577	22.5	255525	0.17	1930.633	0.0054	61.326	0.0034	38.61266	5.2E-06	0.059055
Transportation diesel use - car	gal	0	0.139	0	22.57	0	0.015	0	0.0002	0	0.003	0	0.00252	0
Transportation diesel use - passenger truck	gal	0	0.139	0	22.545	0	0.0585	0	0.0002	0	0.007	0	0.002605	0
Transportation diesel use - User Defined	gal	0	0.139	0	22.5	0	0.17	0	0.0054	0	0.0034	0	5.2E-06	0
Transportation gasoline use	gal	0	0.124	0	19.6	0	0.11	0	0.0045	0	0.00054	0	0.000039	0
Transportation gasoline use - car	gal	0	0.124	0	19.77	0	0.027	0	0.00036	0	0.003	0	0.0067	0
Transportation gasoline use - passenger truck	gal	0	0.124	0	19.79	0	0.035	0	0.00036	0	0.003	0	0.00661	0
Transportation gasoline use - User Defined	gal	0	0.124	0	19.6	0	0.11	0	0.0045	0	0.00054	0	0.000039	0
Transportation natural gas use	ccf	0	0.103	0	13.1	0	0.01	0	6.3E-06	0	0.00076	0	8.4E-06	0
Transportation natural gas use - User Defined	ccf	0	0.103	0	13.1	0	0.01	0	6.3E-06	0	0.00076	0	8.4E-06	0
User-defined conventional energy transportation #1	TBD	10	0	0	0	0	0	0	0	0	0	0	0	0
User-defined conventional energy transportation #2	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
Conventional Energy Subtotals				**1,579**		**255,525**		**1,931**		**61**		**39**		**0**
Notes:														
Renewable Energy														
Transportation biodiesel use	gal	0	0.127	0	22.3	0	0.2	0	0	0	0.00099	0	NP	
Transportation biodiesel use - User Defined	gal	0	0.127	0	22.3	0	0.2	0	0	0	0.00099	0	NP	
User-defined renewable energy transportation #1	TBD	0	Biodiesel		0	0	0	0	0	0	0	0	Ref.	
User-defined renewable energy transportation #2	TBD	0	mpg or pmp		0	0	0	0	0	0	0	0	0	0
Renewable Energy Subtotals				**0**		**0**		**0**		**0**		**0**		**0**
Notes:														
Transportation Totals				**1579**		**255525**		**1931**		**61**		**39**		**0**

Backfill & Restoration - Off-Site Footprint (Scope 3b)

Category	Units	Usage	Energy		Greenhouse Gas		NOx		SOx		PM		HAPs	
			Conv. Factor	MMBtus	Conv. Factor	lbs CO2e	Conv. Factor	lbs	Conv. Factor	lbs	Conv. Factor	lbs	Conv. Factor	lbs
Construction Materials														
Aluminum, Rolled Sheet	lb	0	0.0633	0	9.15	0	0.0148	0	0.0283	0	0.0088	0	0.00102	0
Asphalt, mastic	lb	0	0.0412	0	0.85	0	0.00271	0	0.00798	0	0.000766	0	0.00107	0
Asphalt, paving-grade	lb	0	0.5	0	8.58	0	0.0299	0	0.0969	0	0.0091	0	0.0133	0
Ethanol, Corn, 95%	lb	0	0.0318	0	-0.0199	0	0.00425	0	0.00303	0	0.000469	0	8.46E-05	0
Ethanol, Corn, 99.7%	lb	0	0.0324	0	0.0591	0	0.00431	0	0.0031	0	0.000472	0	0.000087	0
Ethanol, Petroleum, 99.7%	lb	0	0.0205	0	1.25	0	0.00199	0	0.00214	0	0.000277	0	5.89E-05	0
Gravel/Sand Mix, 65% Gravel	lb	0	2.48E-05	0	0.0024	0	0.000018	0	4.52E-06	0	2.61E-06	0	3.08E-07	0
Gravel/sand/clay	lb	0	0.000028	0	0.00335	0	1.65E-05	0	0.000015	0	0.000002	0	2.05E-10	0
HDPE	lb	0	0.0332	0	1.94	0	0.00325	0	0.00409	0	0.000439	0	6.41E-05	0
Photovoltaic system (installed)	W	0	0.0336	0	4.47	0	0.015	0	0.032	0	0.00063	0	2.9E-06	0
PVC	lb	0	0.0262	0	2.02	0	0.004	0	0.00274	0	0.000372	0	0.000375	0
Portland cement, US average	lb	0	0.0139	0	1.34	0	0.00654	0	0.0104	0	0.00378	0	0.00097	0
Ready-mixed concrete, 20 MPa	ft3	0	0.217	0	19.5	0	0.0975	0	0.154	0	0.057	0	0.0141	0
Round Gravel	lb	0	2.48E-05	0	0.0024	0	0.000018	0	4.52E-06	0	2.61E-06	0	3.08E-07	0
Sand	lb	0	2.48E-05	0	0.0024	0	0.000018	0	4.52E-06	0	2.61E-06	0	3.08E-07	0
Stainless Steel	lb	0	0.0116	0	3.4	0	0.0075	0	0.012	0	0.0044	0	0.000144	0
Steel	lb	0	0.0044	0	1.1	0	0.0014	0	0.0017	0	0.00056	0	0.000067	0
Other refined construction materials	lb	0	0.01885	0	2.115	0	0.004038	0	0.005133	0	0.001443	0	0.000163	0
Other unrefined construction materials	lb	0	0.000028	0	0.00335	0	1.65E-05	0	0.000015	0	0.000002	0	2.05E-10	0

Notes:

Backfill & Restoration - Off-Site Footprint (Scope 3b)

Category	Units	Usage	Energy		Greenhouse Gas		NOx		SOx		PM		HAPs	
			Conv. Factor	MMBtus	Conv. Factor	lbs CO2e	Conv. Factor	lbs	Conv. Factor	lbs	Conv. Factor	lbs	Conv. Factor	lbs
Treatment Materials & Chemicals														
Cheese Whey	lbs	0	0.0025	0	0.031	0	0.000062	0	0.000033	0	0.000002	0	NP	
Emulsified vegetable oil	lbs	0	0.0077	0	3.44	0	0.0066	0	0.0019	0	0.000033	0	NP	
Granular activated carbon, primary	lbs	0	0.0356	0	4.82	0	0.0793	0	0.128	0	0.000987	0	0.000657	0
Granular activated carbon, regenerated	lbs	0	0.00873	0	1.7	0	0.00733	0	0.0129	0	0.000886	0	0.000671	0
Hydrogen Peroxide, 50% in H2O	lbs	0	0.00979	0	1.19	0	0.00142	0	0.0024	0	0.000308	0	6.29E-05	0
Iron (II) Sulfate	lbs	0	0.00147	0	0.167	0	0.000316	0	0.000589	0	0.000103	0	0.000023	0
Lime, Hydrated, Packed	lbs	0	0.00206	0	0.762	0	0.000513	0	0.000358	0	0.00013	0	6.57E-06	0
Molasses	lbs	0	0.0044	0	0.48	0	0.0011	0	0.00024	0	4.1E-06	0	NP	
Phosphoric Acid, 70% in H2O	lbs	0	0.0067	0	0.882	0	0.00282	0	0.0294	0	0.00171	0	0.000163	0
Potassium Permanganate	lbs	0	0.00981	0	1.16	0	0.00234	0	0.0032	0	0.000422	0	0.000122	0
Sodium Hydroxide, 50% in H2O	lbs	0	0.00977	0	1.09	0	0.00194	0	0.00352	0	0.000403	0	0.000129	0
Other Treatment Chemicals & Materials	lbs	0	0.015	0	1.67	0	0.003	0	0.0065	0	0.00061	0	0.000016	0
Notes:														
Fuel Processing														
Biodiesel produced	gal	0	0.029	0	-16.8	0	0.018	0	0.033	0	0.00082	0	NP	
Diesel produced	gal	11356.67	0.017	193.0633	3.02	34297.13	0.0051	57.919	0.0062	70.41133	0.0017	19.30633	0.0011	12.49233
Gasoline produced	gal	0	0.033	0	2.8	0	0.0046	0	0.005	0	0.0015	0	0.001	0
Liquefied Petroleum Gas Produced	gal	0	0.088	0	1.47	0	0.0016	0	0.0024	0	0.0007	0	0.0003	0
Natural Gas - Compressed Produced	ccf	0	19.983	0	343.92	0	0.4732	0	2.1651	0	0.1846	0	0.2895	0
Natural Gas Produced	ccf	0	0.0052	0	2.2	0	0.0037	0	0.0046	0	0.000072	0	6.1E-06	0
Fuel Processing Subtotals				**193.0633**		**34297.13**		**57.919**		**70.41133**		**19.30633**		**12.49233**
Notes:														
Public water	gal x 1000	0	0.0092	0	5	0	0.0097	0	0.0059	0	0.016	0	0.000015	0
User-defined water resource #1	gal x 1000	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined water resource #2	gal x 1000	0	0	0	0	0	0	0	0	0	0	0	0	0
Notes:														

Backfill & Restoration - Off-Site Footprint (Scope 3b)

			Energy		Greenhouse Gas		NOx		SOx		PM		HAPs	
Category	Units	Usage	Conv. Factor	MMBtus	Conv. Factor	lbs CO2e	Conv. Factor	lbs	Conv. Factor	lbs	Conv. Factor	lbs	Conv. Factor	lbs
Off-Site Services														
Hazardous waste incineration	lb	0	0.00609	0	2.43	0	0.0016	0	0.00167	0	0.000209	0	0.000087	0
Off-site waste water treatment (POTW)	gal x 1000	0	0.015	0	4.4	0	0.016	0	0.015	0	NP		NP	
Off-site non-hazardous waste landfill	ton	0	0.16	0	25	0	0.14	0	0.075	0	0.4	0	0.0014	0
Off-site hazardous waste landfill	ton	0	0.18	0	27.5	0	0.154	0	0.0825	0	0.44	0	0.00154	0
Off-site Laboratory Analysis - Other	sample	0	0.058071	0	6.853438	0	0.131402	0	0.303876	0	0.04557	0	0.033017	0
Off-site Laboratory Analysis - Metals	sample	0	0.212	0	27.4693	0	0.6423	0	1.5072	0	0.2264	0	0.1643	0
Off-site Laboratory Analysis - Mercury	sample	0	0.073171	0	9.325458	0	0.212744	0	0.49824	0	0.074736	0	0.054233	0
Off-site Laboratory Analysis - Inorganic Anions	sample	0	0.007402	0	0.645948	0	0.006768	0	0.014793	0	0.002202	0	0.001554	0
Off-site Laboratory Analysis - Alkalinity	sample	0	0.01744	0	1.338192	0	0.007011	0	0.01325	0	0.00194	0	0.001283	0
Off-site Laboratory Analysis - Perchlorate	sample	0	0.023885	0	1.871705	0	0.007981	0	0.014154	0	0.002055	0	0.001287	0
Off-site Laboratory Analysis - Nitrogen/Nitrate	sample	0	0.033648	0	4.29897	0	0.095459	0	0.222665	0	0.03351	0	0.024251	0
Off-site Laboratory Analysis - Sulfate	sample	0	0.014122	0	1.472673	0	0.007981	0	0.013602	0	0.00198	0	0.001202	0
Off-site Laboratory Analysis - PCBs	sample	0	0.051277	0	5.224902	0	0.083334	0	0.190477	0	0.028439	0	0.021208	0
Off-site Laboratory Analysis - VOCs	sample	0	0.076204	0	9.016814	0	0.104498	0	0.227074	0	0.033951	0	0.023589	0
Off-site Laboratory Analysis - SVOCs	sample	0	0.07156	0	7.870422	0	0.145945	0	0.337304	0	0.050485	0	0.037258	0
Notes:														
Resource Extraction for Electricity														
Coal extraction and processing	MWh	0	3.1	0	180.0	0	0.8	0	0.2	0	0.0	0	NP	
Natural gas extraction and processing	MWh	0	1.6	0	270.0	0	0.2	0	13.0	0	0.0	0	NP	
Nuclear fuel extraction and processing	MWh	0	0.2	0	25.0	0	0.2	0	0.5	0	0.0	0	NP	
Oil extraction and processing	MWh	0	2.3	0	270.0	0	1.7	0	0.1	0	0.0	0	NP	
Other fuel extraction and processing	MWh	0	0	0	0	0	0	0	0	0	0	0	0	0
Resource Extraction Subtotals				**0**		**0**		**0**		**0**		**0**		**0**
Notes:														
Electricity Transmission														
Transmission and distribution losses	MWh	0	1.0342	0	35.2	0	0.1504	0	0.146966	0	0.007546	0	0.00454	0
Notes:														

Backfill & Restoration - Off-Site Footprint (Scope 3b)

			Energy		Greenhouse Gas		NOx		SOx		PM		HAPs	
Category	Units	Usage	Conv. Factor	MMBtus	Conv. Factor	lbs CO2e	Conv. Factor	lbs	Conv. Factor	lbs	Conv. Factor	lbs	Conv. Factor	lbs
User-defined Materials														
BENSEAL (Sodium Bentonite)	50 lb bag	0	0	0	0	0	0	0	0	0	0	0	0	0
orange mesh fencing	ft	0	0	0	0	0	0	0	0	0	0	0	0	0
absorbent composite socks	ft	0	0	0	0	0	0	0	0	0	0	0	0	0
6-mil 40' x 100' polyurethane sheeting	rolls	0	0	0	0	0	0	0	0	0	0	0	0	0
aggregate 2" stone	ton	0	0	0	0	0	0	0	0	0	0	0	0	0
filter cloth	lb	0	0	0	0	0	0	0	0	0	0	0	0	0
20-mil vapor barrier	sqft	74052	0	0	0	0	0	0	0	0	0	0	0	0
Clean Fill	ton	4785.926	0	0	0	0	0	0	0	0	0	0	0	0
Recycled Stone	ton	8820	0	0	0	0	0	0	0	0	0	0	0	0
User-defined material #10	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined material #11	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined material #12	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined material #13	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined material #14	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined material #15	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined material #16	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined material #17	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined material #18	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined material #19	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined material #20	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
Notes:														
User-defined Waste Destinations														
User-defined recycled/reused off-site #1	ton	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined recycled/reused off-site #2	ton	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined recycled/reused off-site #3	TBD	0	y(MMBtu/U		lbs CO2e/U		Ox(lbs/unit		Ox(lbs/unit		M(lbs/unit)		APs(lbs/unit	
User-defined non-hazardous waste destination #1	ton	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined non-hazardous waste destination #2	ton	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined non-hazardous waste destination #3	ton	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined hazardous waste destination #1	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined hazardous waste destination #2	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined hazardous waste destination #3	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
Notes:														
Off-site Totals				**193.0633**		**34297.13**		**57.919**		**70.41133**		**19.30633**		**12.49233**

Backfill & Restoration - Intermediate Totals

Category	Units	Usage	Energy		Greenhouse Gas		NOx		SOx		PM		HAPs	
			Conv. Factor	MMBtus	Conv. Factor	lbs CO2e	Conv. Factor	lbs	Conv. Factor	lbs	Conv. Factor	lbs	Conv. Factor	lbs
Total Grid Electricity Footprint														
On-site grid electricity	MWh	0	3.413	0										
Electricity Generation														
Grid electricity	MWh	0	6.929	0	1124.3	0	2.2421	0	4.607887	0	0.057518	0	0.210237	0
Resource Extraction for Electricity														
Coal extraction and processing	MWh	0	3.1	0	180.0	0	0.8	0	0.2	0	0.0	0	NP	
Natural gas extraction and processing	MWh	0	1.6	0	270.0	0	0.2	0	13.0	0	0.0	0	NP	
Nuclear fuel extraction and processing	MWh	0	0.2	0	25.0	0	0.2	0	0.5	0	0.0	0	NP	
Oil extraction and processing	MWh	0	2.3	0	270.0	0	1.7	0	0.1	0	0.0	0	NP	
Other fuel extraction and processing	MWh	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0
Electricity Transmission														
Transmission and distribution losses	MWh	0	1.0342	0	112.43	0	0.22421	0	0.460789	0	0.005752	0	0.021024	0
Total Grid Electricity Footprint				**0**		**0**		**0**		**0**		**0**		**0**
Total Fuel Footprints														
Total Gasoline Footprint														
On-site gasoline use - Other	gal	0	0.124	0	19.6	0	0.11	0	0.0045	0	0.00054	0	0.000039	0
On-site gasoline use <25 hp	gal	0	0.124	0	17.48	0	0.037	0	0.00025	0	0.165	0	0.00008	0
On-site gasoline use >25 hp	gal	0	0.124	0	19.93	0	0.032	0	0.00029	0	0.002	0	0.00009	0
Transportation gasoline use	gal	0	0.124	0	19.6	0	0.11	0	0.0045	0	0.00054	0	0.000039	0
Transportation gasoline use - car	gal	0	0.124	0	19.77	0	0.027	0	0.00036	0	0.003	0	0.0067	0
Transportation gasoline use - passenger truck	gal	0	0.124	0	19.79	0	0.035	0	0.00036	0	0.003	0	0.00661	0
Transportation gasoline use - User Defined	gal	0	0.124	0	19.6	0	0.11	0	0.0045	0	0.00054	0	0.000039	0
Gasoline produced	gal	0	0.033	0	2.8	0	0.0046	0	0.005	0	0.0015	0	0.001	0
Total Gasoline Footprint		**0**		**0**		**0**		**0**		**0**		**0**		**0**
Total Diesel Footprint														
On-site diesel use - Other	gal	0	0.139	0	22.5	0	0.17	0	0.0054	0	0.0034	0	5.2E-06	0
On-site diesel use <75 hp	gal	0	0.139	0	22.21	0	0.1565	0	0.000145	0	0.0145	0	0.00004	0
On-site diesel use 75<hp<750	gal	0	0.139	0	22.24	0	0.101	0	0.00013	0	0.009	0	0.00004	0
On-site diesel use >750 hp	gal	0	0.139	0	22.24	0	0.149	0	0.00013	0	0.006	0	0.00004	0
Transportation diesel use	gal	11356.67	0.139	1578.577	22.5	255525	0.17	1930.633	0.0054	61.326	0.0034	38.61266	5.2E-06	0.059055
Transportation diesel use - car	gal	0	0.139	0	22.57	0	0.015	0	0.0002	0	0.003	0	0.00252	0
Transportation diesel use - passenger truck	gal	0	0.139	0	22.545	0	0.0585	0	0.0002	0	0.007	0	0.002605	0
Transportation diesel use - User Defined	gal	0	0.139	0	22.5	0	0.17	0	0.0054	0	0.0034	0	5.2E-06	0
Diesel produced	gal	11356.67	0.017	193.0633	3.02	34297.13	0.0051	57.919	0.0062	70.41133	0.0017	19.30633	0.0011	12.49233
Total Diesel Footprint		**11356.67**		**1771.64**		**289822.1**		**1988.552**		**131.7373**		**57.919**		**12.55139**
Total Biodiesel Footprint														
On-site biodiesel use	gal	0	0.127	0	22.3	0	0.2	0	0	0	0.00099	0	NP	
On-site biodiesel use - User Defined	gal	0	0.127	0	22.3	0	0.2	0	0	0	0.00099	0	NP	
Transportation biodiesel use	gal	0	0.127	0	22.3	0	0.2	0	0	0	0.00099	0	NP	
Transportation biodiesel use - User Defined	gal	0	0.127	0	22.3	0	0.2	0	0	0	0.00099	0	NP	
Biodiesel produced	gal	0	0.029	0	-16.8	0	0.018	0	0.033	0	0.00082	0	NP	
Total Biodiesel Footprint		**0**		**0**		**0**		**0**		**0**		**0**		**0**
Total Natural Gas Footprint														
On-site natural gas use	ccf	0	0.103	0	13.1	0	0.01	0	6.3E-06	0	0.00076	0	8.4E-06	0
Transportation natural gas use	ccf	0	0.103	0	13.1	0	0.01	0	6.3E-06	0	0.00076	0	8.4E-06	0
Transportation natural gas use - User Defined	ccf	0	0.103	0	13.1	0	0.01	0	6.3E-06	0	0.00076	0	8.4E-06	0
Natural gas produced	ccf	0	0.0052	0	2.2	0	0.0037	0	0.0046	0	0.000072	0	6.1E-06	0
Total Natural Gas Footprint		**0**		**0**		**0**		**0**		**0**		**0**		**0**
Total Liquified Petroleum Gas Footprint														
On-site liquified petroleum gas use - Other	ccf	0	NP		12.69	0	0.021	0	0.00013	0	0.001	0	0	0
On-site liquified petroleum gas use	ccf	0	NP		12.69	0	0.021	0	0.00013	0	0.001	0	0	0
Liquified petroleum gas produced	ccf	0	0.088	0	1.47	0	0.0016	0	0.0024	0	0.0007	0	0.0003	0
Total Natural Gas Footprint		**0**		**0**		**0**		**0**		**0**		**0**		**0**
Total Compressed Gas Footprint														
On-site compressed gas use - Other	ccf	0	NP		1957.835	0	16.0325	0	0.023045	0	0.2775	0	0	0
On-site compressed gas use	ccf	0	NP		1957.835	0	16.0325	0	0.023045	0	0.2775	0	0	0
Compressed gas produced	ccf	0	19.983	0	343.92	0	0.4732	0	2.1651	0	0.1846	0	0.2895	0
Total Natural Gas Footprint		**0**		**0**		**0**		**0**		**0**		**0**		**0**

Notes:

Note: Please refer to the "Default Conversions" tab for references for the default conversion factors used on this calculation sheet.

All Components - On-Site Footprint (Scope 1)

Contributors to Footprints	Units	Usage	Energy		GHG		NOx		SOx		PM		HAPs	
			Conv. Factor	MMBtus	Conv. Factor	lbs CO2e	Conv. Factor	lbs	Conv. Factor	lbs	Conv. Factor	lbs	Conv. Factor	lbs
On-Site														
On-site Renewable Energy														
Renewable electricity generated on-site	MWh	0	3.413	0										
Landfill gas combusted on-site for energy use	ccf CH4	0	0.103	0	13.1	0	0.01	0	6.3E-06	0	0.00076	0	8.4E-06	0
On-site biodiesel use	gal	0	0.127	0	22.3	0	0.2	0	0	0	0.00099	0	NP	
On-site biodiesel use - User Defined	gal	0	0.127	0	22.3	0	0.2	0	0	0	0.00099	0	NP	
User-defined on-site renewable energy use #1	gal	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined on-site renewable energy use #2	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
On-site Renewable Energy Subtotals				**0**		**0**		**0**		**0**		**0**		**0**
Notes:														
On-site Conventional Energy														
On-site grid electricity	MWh	0	3.413	0										
On-site diesel use - Other	Gal	0	0.139	0	22.5	0	0.17	0	0.0054	0	0.0034	0	5.2E-06	0
On-site diesel use <75 hp	Gal	0	0.139	0	22.21	0	0.1565	0	0.000145	0	0.0145	0	0.00004	0
On-site diesel use 75<hp<750	Gal	17894.42	0.139	2487.325	22.24	397972	0.101	1807.337	0.00013	2.326275	0.009	161.0498	0.00004	0.715777
On-site diesel use >750 hp	Gal	0	0.139	0	22.24	0	0.149	0	0.00013	0	0.006	0	0.00004	0
On-site gasoline use - Other	Gal	0	0.124	0	19.6	0	0.11	0	0.0045	0	0.00054	0	0.000039	0
On-site gasoline use <25 hp	Gal	0	0.124	0	17.48	0	0.037	0	0.00025	0	0.165	0	0.00008	0
On-site gasoline use >25 hp	Gal	0	0.124	0	19.93	0	0.032	0	0.00029	0	0.002	0	0.00009	0
On-site natural gas use	ccf	0	0.103	0	13.1	0	0.01	0	6.3E-06	0	0.00076	0	8.4E-06	0
On-site compressed natural gas use - Other	ccf	0	NP		1957.835	0	16.0325	0	0.023045	0	0.2775	0	0	0
On-site compressed natural gas use	ccf	0	NP		1957.835	0	16.0325	0	0.023045	0	0.2775	0	0	0
On-site liquified petroleum gas use - Other	gal	0	NP		12.69	0	0.021	0	0.00013	0	0.001	0	0	0
On-site liquified petroleum gas use	gal	0	NP		12.69	0	0.021	0	0.00013	0	0.001	0	0	0
Other forms of on-site conventional energy use #1	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
Other forms of on-site conventional energy use #2	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
On-site Conventional Energy Subtotals				**2,487**		**397,972**		**1,807**		**2**		**161**		**1**
Notes:														
Other On-site Emissions														
On-site HAP process emissions	lbs	0											1	0
On-site GHG emissions	lbs CO2e	0			1	0								
On-site carbon storage	lbs CO2e	0			1	0								
GHG avoided by flaring on-site landfill methane	Lbs	0			-262	0	0.01	0	6.3E-06	0	0.00076	0	8.4E-06	0
Other on-site NOx emissions or reductions	lbs	0					1	0						
Other on-site SOx emissions or reductions	lbs	0							1	0				
Other on-site PM emissions or reductions	lbs	0									1	0		
User-defined recycled/reused on-site #2	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined recycled/reused on-site #3	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined recycled/reused off-site #1	ton	0	0	0	0	0	0	0	0	0	0	0	0	0
Notes:														
On-site Totals				**2,487.32**		**397,972**		**1,807**		**2**		**161**		**1**

All Components - Electricity Generation Footprint (Scope 2)

Contributors to Footprints	Units	Usage	Energy		GHG		NOx		SOx		PM		HAPs	
			Conv. Factor	MMBtus	Conv. Factor	lbs CO2e	Conv. Factor	lbs	Conv. Factor	lbs	Conv. Factor	lbs	Conv. Factor	lbs
Electricity Generation														
Grid electricity	MWh	0	6.929	0	N/A*	0	N/A*	0	N/A*	0	N/A*	0	N/A*	0
**** Conversion factors are not applied to grid electricity in the "All Components" tab since multiple fuel mixes may be used. The value for each cell shaded yellow in Row 51 is the sum of values from Components 1 - 6.***														
Voluntary purchase of renewable electricity	MWh	0												
Voluntary purchase of RECs	MWh	0												

Notes:

All Components - Transportation Footprint (Scope 3a)

Category	Units	Usage	Energy		Greenhouse Gas		NOx		SOx		PM		HAPs	
			Conv. Factor	MMBtus	Conv. Factor	lbs CO2e	Conv. Factor	lbs	Conv. Factor	lbs	Conv. Factor	lbs	Conv. Factor	lbs
Conventional Energy														
Transportation diesel use	gal	26911.67	0.139	3740.722	22.5	605512.5	0.17	4574.983	0.0054	145.323	0.0034	91.49966	5.2E-06	0.139941
Transportation diesel use - car	gal	0	0.139	0	22.57	0	0.015	0	0.0002	0	0.003	0	0.00252	0
Transportation diesel use - passenger truck	gal	0	0.139	0	22.545	0	0.0585	0	0.0002	0	0.007	0	0.002605	0
Transportation diesel use - User Defined	gal	0	0.139	0	22.5	0	0.17	0	0.0054	0	0.0034	0	5.2E-06	0
Transportation gasoline use	gal	0	0.124	0	19.6	0	0.11	0	0.0045	0	0.00054	0	0.000039	0
Transportation gasoline use - car	gal	2668	0.124	330.832	19.77	52746.36	0.027	72.036	0.00036	0.96048	0.003	8.004	0.0067	17.8756
Transportation gasoline use - passenger truck	gal	0	0.124	0	19.79	0	0.035	0	0.00036	0	0.003	0	0.00661	0
Transportation gasoline use - User Defined	gal	0	0.124	0	19.6	0	0.11	0	0.0045	0	0.00054	0	0.000039	0
Transportation natural gas use	ccf	0	0.103	0	13.1	0	0.01	0	6.3E-06	0	0.00076	0	8.4E-06	0
Transportation natural gas use - User Defined	ccf	0	0.103	0	13.1	0	0.01	0	6.3E-06	0	0.00076	0	8.4E-06	0
User-defined conventional energy transportation #1	TBD	50	0	0	0	0	0	0	0	0	0	0	0	0
User-defined conventional energy transportation #2	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
Conventional Energy Subtotals				**4,072**		**658,259**		**4,647**		**146**		**100**		**18**
Notes:														
Renewable Energy														
Transportation biodiesel use	gal	0	0.127	0	22.3	0	0.2	0	0	0	0.00099	0	NP	
Transportation biodiesel use - User Defined	gal	0	0.127	0	22.3	0	0.2	0	0	0	0.00099	0	NP	
User-defined renewable energy transportation #1	TBD	0	Biodiesel		0	0	0	0	0	0	0	0	Ref.	
User-defined renewable energy transportation #2	TBD	0	mpg or pmp		0	0	0	0	0	0	0	0	0	0
Renewable Energy Subtotals				**0**		**0**		**0**		**0**		**0**		**0**
Notes:														
Transportation Totals				**4072**		**658259**		**4647**		**146**		**100**		**18**

All Components - Off-Site Footprint (Scope 3b)

Category	Units	Usage	Energy		Greenhouse Gas		NOx		SOx		PM		HAPs	
			Conv. Factor	MMBtus	Conv. Factor	lbs CO2e	Conv. Factor	lbs	Conv. Factor	lbs	Conv. Factor	lbs	Conv. Factor	lbs
Construction Materials														
Aluminum, Rolled Sheet	lb	0	0.0633	0	9.15	0	0.0148	0	0.0283	0	0.0088	0	0.00102	0
Asphalt, mastic	lb	0	0.0412	0	0.85	0	0.00271	0	0.00798	0	0.000766	0	0.00107	0
Asphalt, paving-grade	lb	0	0.5	0	8.58	0	0.0299	0	0.0969	0	0.0091	0	0.0133	0
Ethanol, Corn, 95%	lb	0	0.0318	0	-0.0199	0	0.00425	0	0.00303	0	0.000469	0	8.46E-05	0
Ethanol, Corn, 99.7%	lb	0	0.0324	0	0.0591	0	0.00431	0	0.0031	0	0.000472	0	0.000087	0
Ethanol, Petroleum, 99.7%	lb	0	0.0205	0	1.25	0	0.00199	0	0.00214	0	0.000277	0	5.89E-05	0
Gravel/Sand Mix, 65% Gravel	lb	0	2.48E-05	0	0.0024	0	0.000018	0	4.52E-06	0	2.61E-06	0	3.08E-07	0
Gravel/sand/clay	lb	0	0.000028	0	0.00335	0	1.65E-05	0	0.000015	0	0.000002	0	2.05E-10	0
HDPE	lb	0	0.0332	0	1.94	0	0.00325	0	0.00409	0	0.000439	0	6.41E-05	0
Photovoltaic system (installed)	W	0	0.0336	0	4.47	0	0.015	0	0.032	0	0.00063	0	2.9E-06	0
PVC	lb	0	0.0262	0	2.02	0	0.004	0	0.00274	0	0.000372	0	0.000375	0
Portland cement, US average	lb	0	0.0139	0	1.34	0	0.00654	0	0.0104	0	0.00378	0	0.00097	0
Ready-mixed concrete, 20 MPa	ft3	0	0.217	0	19.5	0	0.0975	0	0.154	0	0.057	0	0.0141	0
Round Gravel	lb	0	2.48E-05	0	0.0024	0	0.000018	0	4.52E-06	0	2.61E-06	0	3.08E-07	0
Sand	lb	0	2.48E-05	0	0.0024	0	0.000018	0	4.52E-06	0	2.61E-06	0	3.08E-07	0
Stainless Steel	lb	0	0.0116	0	3.4	0	0.0075	0	0.012	0	0.0044	0	0.000144	0
Steel	lb	0	0.0044	0	1.1	0	0.0014	0	0.0017	0	0.00056	0	0.000067	0
Other refined construction materials	lb	0	0.01885	0	2.115	0	0.004038	0	0.005133	0	0.001443	0	0.000163	0
Other unrefined construction materials	lb	0	0.000028	0	0.00335	0	1.65E-05	0	0.000015	0	0.000002	0	2.05E-10	0

Notes:

All Components - Off-Site Footprint (Scope 3b)

Category	Units	Usage	Energy		Greenhouse Gas		NOx		SOx		PM		HAPs	
			Conv. Factor	MMBtus	Conv. Factor	lbs CO2e	Conv. Factor	lbs	Conv. Factor	lbs	Conv. Factor	lbs	Conv. Factor	lbs
Treatment Materials & Chemicals														
Cheese Whey	lbs	0	0.0025	0	0.031	0	0.000062	0	0.000033	0	0.000002	0	NP	
Emulsified vegetable oil	lbs	0	0.0077	0	3.44	0	0.0066	0	0.0019	0	0.000033	0	NP	
Granular activated carbon, primary	lbs	0	0.0356	0	4.82	0	0.0793	0	0.128	0	0.000987	0	0.000657	0
Granular activated carbon, regenerated	lbs	0	0.00873	0	1.7	0	0.00733	0	0.0129	0	0.000886	0	0.000671	0
Hydrogen Peroxide, 50% in H2O	lbs	0	0.00979	0	1.19	0	0.00142	0	0.0024	0	0.000308	0	6.29E-05	0
Iron (II) Sulfate	lbs	0	0.00147	0	0.167	0	0.000316	0	0.000589	0	0.000103	0	0.000023	0
Lime, Hydrated, Packed	lbs	0	0.00206	0	0.762	0	0.000513	0	0.000358	0	0.00013	0	6.57E-06	0
Molasses	lbs	0	0.0044	0	0.48	0	0.0011	0	0.00024	0	4.1E-06	0	NP	
Phosphoric Acid, 70% in H2O	lbs	0	0.0067	0	0.882	0	0.00282	0	0.0294	0	0.00171	0	0.000163	0
Potassium Permanganate	lbs	0	0.00981	0	1.16	0	0.00234	0	0.0032	0	0.000422	0	0.000122	0
Sodium Hydroxide, 50% in H2O	lbs	0	0.00977	0	1.09	0	0.00194	0	0.00352	0	0.000403	0	0.000129	0
Other Treatment Chemicals & Materials	lbs	0	0.015	0	1.67	0	0.003	0	0.0065	0	0.00061	0	0.000016	0
Notes:														
Fuel Processing														
Biodiesel produced	gal	0	0.029	0	-16.8	0	0.018	0	0.033	0	0.00082	0	NP	
Diesel produced	gal	44806.09	0.017	761.7035	3.02	135314.4	0.0051	228.5111	0.0062	277.7978	0.0017	76.17035	0.0011	49.2867
Gasoline produced	gal	2668	0.033	88.044	2.8	7470.4	0.0046	12.2728	0.005	13.34	0.0015	4.002	0.001	2.668
Liquefied Petroleum Gas Produced	gal	0	0.088	0	1.47	0	0.0016	0	0.0024	0	0.0007	0	0.0003	0
Natural Gas - Compressed Produced	ccf	0	19.983	0	343.92	0	0.4732	0	2.1651	0	0.1846	0	0.2895	0
Natural Gas Produced	ccf	0	0.0052	0	2.2	0	0.0037	0	0.0046	0	0.000072	0	6.1E-06	0
Fuel Processing Subtotals				**849.7475**		**142784.8**		**240.7839**		**291.1378**		**80.17235**		**51.9547**
Notes:														
Public water	gal x 1000	294	0.0092	2.7048	5	1470	0.0097	2.8518	0.0059	1.7346	0.016	4.704	0.000015	0.00441
User-defined water resource #1	gal x 1000	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined water resource #2	gal x 1000	0	0	0	0	0	0	0	0	0	0	0	0	0
Notes:														

All Components - Off-Site Footprint (Scope 3b)

			Energy		Greenhouse Gas		NOx		SOx		PM		HAPs	
Category	Units	Usage	Conv. Factor	MMBtus	Conv. Factor	lbs CO2e	Conv. Factor	lbs	Conv. Factor	lbs	Conv. Factor	lbs	Conv. Factor	lbs
Off-Site Services														
Hazardous waste incineration	lb	0	0.00609	0	2.43	0	0.0016	0	0.00167	0	0.000209	0	0.000087	0
Off-site waste water treatment (POTW)	gal x 1000	0	0.015	0	4.4	0	0.016	0	0.015	0	NP		NP	
Off-site non-hazardous waste landfill	ton	0	0.16	0	25	0	0.14	0	0.075	0	0.4	0	0.0014	0
Off-site hazardous waste landfill	ton	0	0.18	0	27.5	0	0.154	0	0.0825	0	0.44	0	0.00154	0
Off-site Laboratory Analysis - Other	sample	50	0.058071	2.903551	6.853438	342.6719	0.131402	6.570098	0.303876	15.19379	0.04557	2.278491	0.033017	1.650826
Off-site Laboratory Analysis - Metals	sample	10	0.212	2.12	27.4693	274.693	0.6423	6.423	1.5072	15.072	0.2264	2.264	0.1643	1.643
Off-site Laboratory Analysis - Mercury	sample	10	0.073171	0.731715	9.325458	93.25458	0.212744	2.127439	0.49824	4.982396	0.074736	0.747359	0.054233	0.542332
Off-site Laboratory Analysis - Inorganic Anions	sample	0	0.007402	0	0.645948	0	0.006768	0	0.014793	0	0.002202	0	0.001554	0
Off-site Laboratory Analysis - Alkalinity	sample	0	0.01744	0	1.338192	0	0.007011	0	0.01325	0	0.00194	0	0.001283	0
Off-site Laboratory Analysis - Perchlorate	sample	0	0.023885	0	1.871705	0	0.007981	0	0.014154	0	0.002055	0	0.001287	0
Off-site Laboratory Analysis - Nitrogen/Nitrate	sample	0	0.033648	0	4.29897	0	0.095459	0	0.222665	0	0.03351	0	0.024251	0
Off-site Laboratory Analysis - Sulfate	sample	0	0.014122	0	1.472673	0	0.007981	0	0.013602	0	0.00198	0	0.001202	0
Off-site Laboratory Analysis - PCBs	sample	10	0.051277	0.512769	5.224902	52.24902	0.083334	0.833339	0.190477	1.904774	0.028439	0.284393	0.021208	0.212083
Off-site Laboratory Analysis - VOCs	sample	10	0.076204	0.762045	9.016814	90.16814	0.104498	1.04498	0.227074	2.270738	0.033951	0.339508	0.023589	0.235892
Off-site Laboratory Analysis - SVOCs	sample	10	0.07156	0.715602	7.870422	78.70422	0.145945	1.459445	0.337304	3.373038	0.050485	0.504853	0.037258	0.372577
Notes:														
Resource Extraction for Electricity														
Coal extraction and processing	MWh	0	3.1	0	180.0	0	0.8	0	0.2	0	0.0	0	NP	
Natural gas extraction and processing	MWh	0	1.6	0	270.0	0	0.2	0	13.0	0	0.0	0	NP	
Nuclear fuel extraction and processing	MWh	0	0.2	0	25.0	0	0.2	0	0.5	0	0.0	0	NP	
Oil extraction and processing	MWh	0	2.3	0	270.0	0	1.7	0	0.1	0	0.0	0	NP	
Other fuel extraction and processing	MWh	0	0	0	0	0	0	0	0	0	0	0	0	0
Resource Extraction Subtotals				**0**		**0**		**0**		**0**		**0**		**0**
Notes:														
Electricity Transmission														
Transmission and distribution losses	MWh	0	1.0342	0										
Notes:														

All Components - Off-Site Footprint (Scope 3b)

			Energy		Greenhouse Gas		NOx		SOx		PM		HAPs	
Category	Units	Usage	Conv. Factor	MMBtus	Conv. Factor	lbs CO2e	Conv. Factor	lbs	Conv. Factor	lbs	Conv. Factor	lbs	Conv. Factor	lbs
User-defined Materials														
BENSEAL (Sodium Bentonite)	50 lb bag	0	0	0	0	0	0	0	0	0	0	0	0	0
orange mesh fencing	ft	600	0	0	0	0	0	0	0	0	0	0	0	0
absorbent composite socks	ft	2000	0	0	0	0	0	0	0	0	0	0	0	0
6-mil 40' x 100' polyurethane sheeting	rolls	10	0	0	0	0	0	0	0	0	0	0	0	0
aggregate 2" stone	ton	120	0	0	0	0	0	0	0	0	0	0	0	0
filter cloth	lb	120	0	0	0	0	0	0	0	0	0	0	0	0
20-mil vapor barrier	sqft	74052	0	0	0	0	0	0	0	0	0	0	0	0
Clean Fill	ton	4785.926	0	0	0	0	0	0	0	0	0	0	0	0
Recycled Stone	ton	8820	0	0	0	0	0	0	0	0	0	0	0	0
User-defined material #10	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined material #11	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined material #12	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined material #13	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined material #14	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined material #15	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined material #16	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined material #17	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined material #18	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined material #19	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined material #20	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
Notes:														
User-defined Waste Destinations														
User-defined recycled/reused off-site #1	ton	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined recycled/reused off-site #2	ton	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined recycled/reused off-site #3	TBD	0	y(MMBtu/U		lbs CO2e/U		Ox(lbs/unit		Ox(lbs/unit		M(lbs/unit)		APs(lbs/unit	
User-defined non-hazardous waste destination #1	ton	13605.93	0	0	0	0	0	0	0	0	0	0	0	0
User-defined non-hazardous waste destination #2	ton	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined non-hazardous waste destination #3	ton	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined hazardous waste destination #1	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined hazardous waste destination #2	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined hazardous waste destination #3	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
Notes:														
Off-site Totals				**860.198**		**145186.5**		**262.094**		**335.6691**		**91.29496**		**56.61582**

All Components - Intermediate Totals

Category	Units	Usage	Energy		Greenhouse Gas		NOx		SOx		PM		HAPs	
			Conv. Factor	MMBtus	Conv. Factor	lbs CO2e	Conv. Factor	lbs	Conv. Factor	lbs	Conv. Factor	lbs	Conv. Factor	lbs
Total Grid Electricity Footprint														
On-site grid electricity	MWh	0	3.413	0										
Electricity Generation														
Grid electricity	MWh	0	6.929	0	1124.3	0	2.2421	0	4.607887	0	0.057518	0	0.210237	0
Resource Extraction for Electricity														
Coal extraction and processing	MWh	0	3.1	0	180.0	0	0.8	0	0.2	0	0.0	0	NP	
Natural gas extraction and processing	MWh	0	1.6	0	270.0	0	0.2	0	13.0	0	0.0	0	NP	
Nuclear fuel extraction and processing	MWh	0	0.2	0	25.0	0	0.2	0	0.5	0	0.0	0	NP	
Oil extraction and processing	MWh	0	2.3	0	270.0	0	1.7	0	0.1	0	0.0	0	NP	
Other fuel extraction and processing	MWh	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0
Electricity Transmission														
Transmission and distribution losses	MWh	0	1.0342	0	112.43	0	0.22421	0	0.460789	0	0.005752	0	0.021024	0
Total Grid Electricity Footprint				**0**		**0**		**0**		**0**		**0**		**0**
Total Fuel Footprints														
Total Gasoline Footprint														
On-site gasoline use - Other	gal	0	0.124	0	19.6	0	0.11	0	0.0045	0	0.00054	0	0.000039	0
On-site gasoline use <25 hp	gal	0	0.124	0	17.48	0	0.037	0	0.00025	0	0.165	0	0.00008	0
On-site gasoline use >25 hp	gal	0	0.124	0	19.93	0	0.032	0	0.00029	0	0.002	0	0.00009	0
Transportation gasoline use	gal	0	0.124	0	19.6	0	0.11	0	0.0045	0	0.00054	0	0.000039	0
Transportation gasoline use - car	gal	2668	0.124	330.832	19.77	52746.36	0.027	72.036	0.00036	0.96048	0.003	8.004	0.0067	17.8756
Transportation gasoline use - passenger truck	gal	0	0.124	0	19.79	0	0.035	0	0.00036	0	0.003	0	0.00661	0
Transportation gasoline use - User Defined	gal	0	0.124	0	19.6	0	0.11	0	0.0045	0	0.00054	0	0.000039	0
Gasoline produced	gal	2668	0.033	88.044	2.8	7470.4	0.0046	12.2728	0.005	13.34	0.0015	4.002	0.001	2.668
Total Gasoline Footprint		**2668**		**418.876**		**60216.76**		**84.3088**		**14.30048**		**12.006**		**20.5436**
Total Diesel Footprint														
On-site diesel use - Other	gal	0	0.139	0	22.5	0	0.17	0	0.0054	0	0.0034	0	5.2E-06	0
On-site diesel use <75 hp	gal	0	0.139	0	22.21	0	0.1565	0	0.000145	0	0.0145	0	0.00004	0
On-site diesel use 75<hp<750	gal	17894.42	0.139	2487.325	22.24	397972	0.101	1807.337	0.00013	2.326275	0.009	161.0498	0.00004	0.715777
On-site diesel use >750 hp	gal	0	0.139	0	22.24	0	0.149	0	0.00013	0	0.006	0	0.00004	0
Transportation diesel use	gal	26911.67	0.139	3740.722	22.5	605512.5	0.17	4574.983	0.0054	145.323	0.0034	91.49966	5.2E-06	0.139941
Transportation diesel use - car	gal	0	0.139	0	22.57	0	0.015	0	0.0002	0	0.003	0	0.00252	0
Transportation diesel use - passenger truck	gal	0	0.139	0	22.545	0	0.0585	0	0.0002	0	0.007	0	0.002605	0
Transportation diesel use - User Defined	gal	0	0.139	0	22.5	0	0.17	0	0.0054	0	0.0034	0	5.2E-06	0
Diesel produced	gal	44806.09	0.017	761.7035	3.02	135314.4	0.0051	228.5111	0.0062	277.7978	0.0017	76.17035	0.0011	49.2867
Total Diesel Footprint		**44806.09**		**6989.75**		**1138799**		**6610.831**		**425.447**		**328.7198**		**50.14242**
Total Biodiesel Footprint														
On-site biodiesel use	gal	0	0.127	0	22.3	0	0.2	0	0	0	0.00099	0	NP	
On-site biodiesel use - User Defined	gal	0	0.127	0	22.3	0	0.2	0	0	0	0.00099	0	NP	
Transportation biodiesel use	gal	0	0.127	0	22.3	0	0.2	0	0	0	0.00099	0	NP	
Transportation biodiesel use - User Defined	gal	0	0.127	0	22.3	0	0.2	0	0	0	0.00099	0	NP	
Biodiesel produced	gal	0	0.029	0	-16.8	0	0.018	0	0.033	0	0.00082	0	NP	
Total Biodiesel Footprint		**0**		**0**		**0**		**0**		**0**		**0**		**0**
Total Natural Gas Footprint														
On-site natural gas use	ccf	0	0.103	0	13.1	0	0.01	0	6.3E-06	0	0.00076	0	8.4E-06	0
Transportation natural gas use	ccf	0	0.103	0	13.1	0	0.01	0	6.3E-06	0	0.00076	0	8.4E-06	0
Transportation natural gas use - User Defined	ccf	0	0.103	0	13.1	0	0.01	0	6.3E-06	0	0.00076	0	8.4E-06	0
Natural gas produced	ccf	0	0.0052	0	2.2	0	0.0037	0	0.0046	0	0.000072	0	6.1E-06	0
Total Natural Gas Footprint		**0**		**0**		**0**		**0**		**0**		**0**		**0**
Total Liquified Petroleum Gas Footprint														
On-site liquified petroleum gas use - Other	ccf	0	NP		12.69	0	0.021	0	0.00013	0	0.001	0	0	0
On-site liquified petroleum gas use	ccf	0	NP		12.69	0	0.021	0	0.00013	0	0.001	0	0	0
Liquified petroleum gas produced	ccf	0	0.088	0	1.47	0	0.0016	0	0.0024	0	0.0007	0	0.0003	0
Total Natural Gas Footprint		**0**		**0**		**0**		**0**		**0**		**0**		**0**
Total Compressed Gas Footprint														
On-site compressed gas use - Other	ccf	0	NP		1957.835	0	16.0325	0	0.023045	0	0.2775	0	0	0
On-site compressed gas use	ccf	0	NP		1957.835	0	16.0325	0	0.023045	0	0.2775	0	0	0
Compressed gas produced	ccf	0	19.983	0	343.92	0	0.4732	0	2.1651	0	0.1846	0	0.2895	0
Total Natural Gas Footprint		**0**		**0**		**0**		**0**		**0**		**0**		**0**

Notes:

Note: Please refer to the "Default Conversions" tab for references for the default conversion factors used on this calculation sheet.

Spreadsheets for Environmental Footprint Analysis (SEFA) Version 3.0, November 2019

		Default Conversion Factors						
		Parameters Used, Extracted, Emitted, or Generated						
		Energy	GHG*	NOx	SOx	PM	HAPs	REFERENCE #
Item or Activity		Used	Emitted	Emitted	Emitted	Emitted	Emitted	(Corresponds to list of references below)
	Unit	MMBtu	lbs CO2e	lbs	lbs	lbs	lbs	
Fuel Combustion								
Biodiesel use	gal	0.127	22.3	0.20	0	0.00099	NP	1
Diesel use	gal	0.139	22.5	0.17	0.0054	0.0034	5.2E-06	2
Diesel use - equipment <75 hp	gal	0.139	22.21	0.1565	0.000145	0.0145	4.0E-05	3
Diesel use - equipment >75 hp and <750 hp	gal	0.139	22.24	0.101	0.00013	0.009	4.0E-05	3
Diesel use - equipment >750 hp	gal	0.139	22.24	0.149	0.00013	0.006	4.0E-05	3
Diesel use - passenger car	gal	0.139	22.57	0.015	0.0002	0.003	2.5E-03	3
Diesel use - passenger truck	gal	0.139	22.545	0.0585	0.0002	0.007	2.6E-03	3
Diesel use - transport with combination truck	gal	0.139	22.53	0.122	0.0002	0.011	2.1E-03	3
Diesel use - transport with freight train	gal	0.139	25.26	0.307	0.00634	0.009	4.4E-03	3
Diesel use - transport with single unit truck	gal	0.139	22.52	0.088	0.0002	0.012	2.0E-03	3
Gasoline use	gal	0.124	19.6	0.11	0.0045	0.00054	3.9E-05	4
Gasoline use - equipment <25 hp	gal	0.124	17.48	0.037	0.00025	0.165	8.0E-05	3
Gasoline use - equipment >25 hp	gal	0.124	19.93	0.032	0.00029	0.002	9.0E-05	3
Gasoline use - passenger car	gal	0.124	19.77	0.027	0.00036	0.003	6.7E-03	3
Gasoline use - passenger truck	gal	0.124	19.79	0.035	0.00036	0.003	6.6E-03	3
Liquified petroleum gas use	gal	NP	12.69	0.021	0.00013	0.001	0.0E+00	3
Natural gas use	ccf	0.103	13.1	0.01	0.0000063	0.00076	8.4E-06	5
Natural gas use - compressed	ccf	NP	1957.835	16.0325	0.023045	0.2775	0.0E+00	3
Landfill gas use	ccf CH4	0.103	13.1	0.01	0.0000063	0.00076	8.4E-06	5
Construction Materials								
Aluminum, Rolled Sheet	lb	0.0633	9.15	0.0148	0.0283	0.0088	0.00102	3
Asphalt, mastic	lb	0.0412	0.85	0.0027	0.00798	0.0008	0.00107	3
Asphalt, paving-grade	lb	0.5000	8.58	0.0299	0.0969	0.0091	0.0133	3
Ethanol, Corn, 95%	lb	0.0318	-0.0199	0.00425	0.00303	0.000469	8.46E-05	3
Ethanol, Corn, 99.7%	lb	0.0324	0.0591	0.00431	0.0031	0.000472	8.70E-05	3
Ethanol, Petroleum, 99.7%	lb	0.0205	1.25	0.00199	0.00214	0.000277	5.89E-05	3
Gravel/Sand Mix, 65% Gravel	lb	2.48E-05	0.0024	0.00002	4.52E-06	0.000003	3.08E-07	3
Gravel/sand/clay	lb	0.000028	0.0034	0.000017	0.000015	0.0000020	2.1E-10	6
HDPE	lb	3.32E-02	1.9400	0.003250	0.00409	0.000439	6.4E-05	7
Photovoltaic system (installed)	W	0.034	4.5	0.015	0.032	0.00063	2.9E-06	8
PVC	lb	0.0262	2.02	0.004	0.00274	0.000372	3.8E-04	3
Portland cement, US average	lb	0.0139	1.34	* 0.00654	0.0104	0.00378	9.7E-04	3
Ready-mixed concrete, 20 MPa	ft^3	0.217	19.5	0.0975	0.154	0.057	0.0141	3
Round Gravel	lb	0.0000248	0.0024	0.000018	4.52E-06	2.61E-06	3.1E-07	3
Sand	lb	0.0000248	0.0024	0.000018	4.52E-06	2.61E-06	3.1E-07	3
Stainless Steel	lb	0.012	3.4	0.0075	0.012	0.0044	1.4E-04	9
Steel	lb	0.0044	1.1	0.0014	0.0017	0.00056	6.7E-05	10
Other refined construction materials	lb	0.019	2.1150	0.0040	0.0051	0.0014	1.6E-04	11
Other unrefined construction materials	lb	0.000028	0.00335	0.000017	0.000015	0.000002	2.05E-10	12
Treatment Materials & Chemicals								
Cheese Whey	lb	0.0025	0.031	0.000062	0.000033	0.000002	NP	13
Emulsified vegetable oil	lb	0.0077	3.44	0.0066	0.0019	0.000033	NP	14
Granular activated carbon, primary	lb	0.0356	4.82	0.0793	0.128	0.000987	0.000657	3
Granular activated carbon, regenerated	lb	0.00873	1.7	0.00733	0.0129	0.000886	0.000671	3
Hydrogen Peroxide, 50% in H2O	lb	0.00979	1.19	0.00142	0.0024	0.000308	6.29E-05	3
Iron (II) Sulfate	lb	0.00147	0.167	0.000316	0.000589	0.000103	2.30E-05	3
Lime, Hydrated, Packed	lb	0.00206	0.762	0.000513	0.000358	0.00013	6.57E-06	3
Molasses	lb	0.0044	0.48	0.0011	0.00024	0.0000041	NP	15
Phosphoric Acid, 70% in H2O	lb	0.0067	0.882	0.00282	0.0294	0.00171	0.000163	3
Potassium Permanganate	lb	0.00981	1.16	0.00234	0.0032	0.000422	0.000122	3
Sodium Hydroxide, 50% in H2O	lb	0.00977	1.09	0.00194	0.00352	0.000403	0.000129	3
Other Treatment Chemicals & Materials*	lb	0.015	1.7	0.003	0.0065	0.00061	1.6E-05	16
Fuel Processing								
Biodiesel Produced	gal	0.029	-16.8	0.018	0.033	0.00082	NP	1
Diesel Produced	gal	0.017	3.02	0.0051	0.0062	0.0017	1.1E-03	17
Gasoline Produced	gal	0.033	2.8	0.0046	0.005	0.0015	1.0E-03	18
Liquefied Petroleum Gas	gal	0.088	1.47	0.0016	0.0024	0.0007	3.0E-04	3
Natural Gas - Compressed Produced	ccf	19.983	343.92	0.4732	2.1651	0.1846	2.9E-01	3
Natural Gas Produced	ccf	0.0052	2.2	0.0037	0.0046	0.000072	6.1E-06	19
Public water	gal x 1000	0.0092	5	0.0097	0.0059	0.016	1.50E-05	20
Off-Site Services								
Hazardous Waste Incineration	lb	0.00609	2.43	0.0016	0.00167	0.000209	0.000087	3
Off-site waste water treatment (POTW)	gal x 1000	0.015	4.4	0.016	0.015	NP	NP	21
Off-site non-hazardous waste landfill	ton	0.16	25	0.14	0.075	0.4	1.40E-03	22
Off-site hazardous waste landfill	ton	0.18	27.5	0.154	0.0825	0.44	1.54E-03	23
Off-site Laboratory Analysis - Other	sample	0.0581	6.8534	0.1314	0.3039	0.0456	0.0330	24
Off-site Laboratory Analysis - Metals	sample	0.2120	27.5	0.6423	1.5072	0.2264	1.64E-01	3
Off-site Laboratory Analysis - Mercury	sample	0.0732	9.3	0.2127	0.4982	0.0747	5.42E-02	3
Off-site Laboratory Analysis - Inorganic Anions	sample	0.0074	0.6	0.0068	0.0148	0.0022	1.55E-03	3

Off-site Laboratory Analysis - Alkalinity	sample	0.0174	1.3	0.0070	0.0132	0.0019	1.28E-03	3
Off-site Laboratory Analysis - Perchlorate	sample	0.0239	1.9	0.0080	0.0142	0.0021	1.29E-03	3
Off-site Laboratory Analysis - Nitrogen/Nitrate	sample	0.0336	4.3	0.0955	0.2227	0.0335	2.43E-02	3
Off-site Laboratory Analysis - Sulfate	sample	0.0141	1.5	0.0080	0.0136	0.0020	1.20E-03	3
Off-site Laboratory Analysis - PCBs	sample	0.0513	5.2	0.0833	0.1905	0.0284	2.12E-02	3
Off-site Laboratory Analysis - VOCs	sample	0.0762	9.0	0.1045	0.2271	0.0340	2.36E-02	3
Off-site Laboratory Analysis - SVOCs	sample	0.0716	7.9	0.1459	0.3373	0.0505	3.73E-02	3
Resource Extraction for Electricity								
Coal extraction and processing	MWh	3.1	180	0.77	0.15	0.018	NP	25
Natural gas extraction and processing	MWh	1.6	270	0.18	13	0.0071	NP	26
Nuclear fuel extraction and processing	MWh	0.16	25	0.15	0.5	0.0015	NP	27
Oil extraction and processing	MWh	2.3	270	1.7	0.069	0.042	NP	28
Grid renewable electricity	MWh	NP	NP	NP	NP	NP	NP	

**** Footprint conversion factors for greenhouse gases (CO2e) include consideration of CO2, CH4, and N2O (Nitrous oxide) emissions.***

REFERENCES:

Default Conversion Factors are from EPA's Methodology for Understanding and Reducing a Project's Environmental Footprint, February 2012

1. Life Cycle Inventory of Biodiesel and Petroleum Diesel for Use in an Urban Bus, NREL/SR-580-24089 UC Category 1503, U.S. Department of Agriculture and U.S. Department of Energy, May 1998. The CO2e emissions for "biodiesel produced" are negative because of the uptake of CO2 in the crops used to produce the fuels. This CO2 is emitted during fuel combustion and is reflected in the CO2e emissions for "biodiesel use".

2. Multiple sources

a. Energy and CO2e emissions from Direct Emissions from Mobile Combustion Sources, EPA430-K-08-004, U.S. EPA, May 2008.

b. NOx, SOx, PM, and HAPs from NREL: SS_Transport, single unit truck, diesel powered.xls

3. Randall, P., Meyer, D., Ingwersen, W., Vineyard, D., Bergmann, M., Unger, S., and Gonzalez, M., 2016. Life Cycle Inventory (LCI) Data- Treatment Chemicals, Construction Materials, Transportation, On-site Equipment, and Other Processes for Use in Spreadsheets for Environmental Footprint Analysis (SEFA): Revised Addition. U.S. Environmental Protection Agency, Office of Research and Development, Cincinnati, OH. EPA/600/R-16/176a.

4. Multiple sources

a. Energy and CO2e emissions from Direct Emissions from Mobile Combustion Sources, EPA430-K-08-004, U.S. EPA, May 2008.

b. NOx, SOx, PM, and HAPs from NREL: SS_Transport, single unit truck, gasoline powered.xls

5. Multiple sources and simplifying assumption that emissions of natural gas reasonably represent combustion of methane component of landfill gas

a. Energy and CO2e emissions for compressed natural gas in heavy vehicles from Direct Emissions from Mobile Combustion Sources, EPA430-K-08-004, U.S. EPA, May 2008.

b. NOx, SOx, PM, and HAPs from NREL: SS_Natural gas, combusted in industrial boiler.xls

6. EUROPA – Gravel 2/32

7. EUROPA – Polyethylene high density granulate (PE-HD)

8. Life-Cycle Assessment of the 33 kW Photovoltaic System on the Dana Building at the University of Michigan Thin Film Laminates, Multi-Crystalline Modules, and Balance of System Components Sergio Pacca, Deepak Sivaraman and Gregory A. Keoleian Center for Sustainable Systems, University of Michigan Report No. CSS05-09, June 1, 2006

9. EUROPA – Stainless steel

10. EUROPA – Average of Steel hot rolled section, Steel hot rolled coil, Steel rebar

11. Averages of conversion factors for cement, HDPE, PVC, stainless steel, and steel

12. Same as conversion factors for gravel/sand/clay

13. Offset values for cheese whey obtained from the module for yellow cheese from Nielsen PH, Nielsen AM, Weidema BP, Dalgaard R and Halberg N (2003). LCA food data base. www.lcafood.dk, Andersen M and Jensen JD (2003). Marginale producenter af udvalgte basislevnedsmidler (in Danish) Udkast d. 5. februar 2003.

14. Values for rapeseed oil from Nielsen PH, Nielsen AM, Weidema BP, Dalgaard R and Halberg N (2003). LCA food data base. www.lcafood.dk. Landbrugets rådgivningscenter (2000). Tal fra Fodermiddeltabellen, Raport nr. 91. In Danish. Weidema BP (1999). System expansions to handle co-products of renewable materials. Presentation Summaries of the 7th LCA Scenarios Symposium SETAC-Europe, 1999. Pp. 45-48. pdf. Weidema B (2003). Market information in life cycle assessments. Technical report, Danish Environmental Protection Agency (Environmental Project no. 863).

15. Offset values for molasses obtained from the module for sugar from Nielsen PH, Nielsen AM, Weidema BP, Dalgaard R and Halberg N (2003). LCA food data base. www.lcafood.dk, Sugar Production based on Danisco Sugar Author: Per H. Nielsen July 2003

16. Intended for any common treatment chemical in pure form including chemical oxidants and regenerated granular activated carbon. For chemical solutions, use only the mass of the chemical portion of the solution. Conversion factor is based on average value of conversion factors for the following seven common treatment chemicals as reported by Ecoinvent v2.1 from the Ecoinvent Centre for Life-Cycle Inventories, http://www.ecoinvent.ch/

- Hydrochloric Acid (30 percent) – normalized to pure hydrochloric acid by dividing by database results by 0.3.
- Sodium hydroxide (50 percent) – normalized to pure sodium hydroxide by dividing database results by 0.5.
- Ferric chloride (iron III chloride)
- Potassium permanganate
- Sodium persulfate
- Chlorine gas
- Hydrogen peroxide (50 percent) – normalized to pure hydrogen peroxide by dividing database result by 0.5.

This averaging approach adds an additional layer of uncertainty to the conversion factors provided. For example, the range for energy is approximately 0.007 MMBtu to 0.025 MMBtu. The average (0.015 MMBtu) may overestimate the energy use value for some of the chemicals below by more than 100 percent and underestimate the energy us value for other chemicals by 40 percent. Additionally, some common treatment chemicals (e.g., sulfuric acid and ferrous sulfate) have energy footprints that are substantially outside the presented range and would not be accurately represented by these values. If an additional level of accuracy is preferred, readers of this methodology are encouraged to seek and document well referenced conversion factors as part of footprint analysis submittals.

17. EUROPA – diesel at refinery

18. EUROPA – gasoline at refinery

19. EUROPA – natural gas at consumer

20. EUROPA - Drinking water from surface water and drinking water from groundwater

21. Calculated based on Life-Cycle Energy and Emissions for Municipal Water and Wastewater Services: Case-Studies of Treatment Plants in US Malavika Tripathi, Center for Sustainable Systems, University of Michigan Report No. CSS07-06, April 17, 2007

22. EUROPA – Inert waste disposal

23. Values from EUROPA inert waste disposal plus an arbitrary additional 10 percent to account additional practices required of a hazardous waste disposal facility

24. The default conversion factors for "Laboratory Analysis – Other" are averages of the default conversion factors for the 10 other laboratory analyses that are provided.

25. NREL – life cycle of electricity from bituminous coal minus the emissions from combusting coal

26. NREL – life cycle of electricity from natural gas minus the emissions from combusting natural gas

27. NREL – life cycle of electricity from nuclear

28. NREL – life cycle of electricity from residual oil minus the emissions from combusting residua oil

NREL = National Renewable Energy Laboratory, Life Cycle Inventory, provided by the National Renewable Energy Laboratory and operated by Alliance for Sustainable Energy, LLC under contract to the U.S. Department of Energy. www.nrel.gov/lci

EUROPA = European Reference Life Cycle Database (ELCD core database), version II compiled under contract on behalf of the European Commission - DG Joint Research Centre - Institute for Environment and Sustainability with technical and scientific support by JRC-IES from early 2008 to early 2009. (http://lca.jrc.ec.europa.eu/lcainfohub/datasetArea.vm)

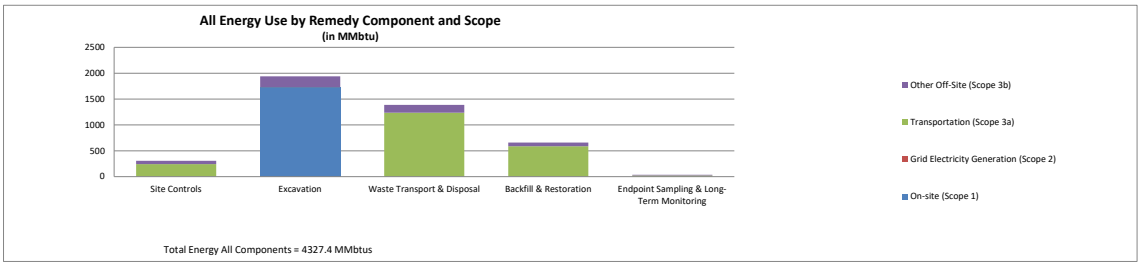
Environmental Footprint Summary

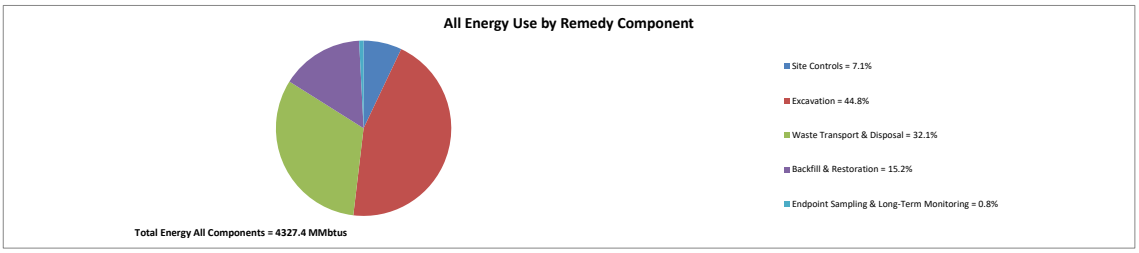
Core Element	Metric		Unit of Measure	Footprint					
				Site Controls	Excavation	Waste Transport & Disposal	Backfill & Restoration	Endpoint Sampling & Long-Term Monitoring	Total
Materials & Waste	M&W-1	Refined materials used on-site	Tons	12.1	0.0	0.0	10.2	0.0	22.4
	M&W-2	% of refined materials from recycled or reused material	%	0.0%			0.0%		0.0%
	M&W-3	Unrefined materials used on-site	Tons	60.000	0.000	0.000	7,848.426	0.000	7,908.4
	M&W-4	% of unrefined materials from recycled or reused material	%	100.0%			100.0%		100.0%
	M&W-5	On-site hazardous waste disposed of off-site	Tons	0.0	0.0	0.0	0.0	0.0	0.0
	M&W-6	On-site non-hazardous waste disposed of off-site	Tons	0.0	0.0	7,848.4	0.0	0.0	7,848.4
	M&W-7	Recycled or reused waste	Tons	0.0	0.0	0.0	0.0	0.0	0.0
	M&W-8	% of total potential waste recycled or reused	%			0.0%			0.0%
Water (used on-site)	W-1	Public water use	MG	0.2	0.0	0.0	0.0	0.0	0.2
	W-2	Groundwater use	MG	0.0	0.0	0.0	0.0	0.0	0.0
	W-3	Surface water use	MG	0.0	0.0	0.0	0.0	0.0	0.0
	W-4	Reclaimed water use	MG	0.0	0.0	0.0	0.0	0.0	0.0
	W-5	Storm water use	MG	0.0	0.0	0.0	0.0	0.0	0.0
	W-6	User-defined water resource #1	MG	0.0	0.0	0.0	0.0	0.0	0.0
	W-7	User-defined water resource #2	MG	0.0	0.0	0.0	0.0	0.0	0.0
	W-8	Wastewater generated	MG	0.0	0.0	0.0	0.0	0.0	0.0
Energy	E-1	Total energy used (on-site and off-site)	MMBtu	305.7	1,939.1	1,387.9	659.4	35.4	4,327.4
	E-2	Energy voluntarily derived from renewable resources							
	E-2A	On-site renewable energy generation or use + on-site biodiesel use + biodiesel and other renewable resource use for transportation	MMBtu	0.0	0.0	0.0	0.0	0.0	0.0
	E-2B	Voluntary purchase of renewable electricity	MWh	0.0	0.0	0.0	0.0	0.0	0.0
	E-3	Voluntary purchase of RECs	MWh	0.0	0.0	0.0	0.0	0.0	0.0
	E-4	On-site grid electricity use	MWh	0.000	0.000	0.000	0.000	0.000	0.0
Air	A-1	On-site NOx, SOx, and PM emissions	Pounds	0.0	1,367.4	0.0	0.0	0.0	1,367.4
	A-2	On-site HAP emissions	Pounds	0.0	0.5	0.0	0.0	0.0	0.5
	A-3	Total NOx, SOx, and PM emissions	Pounds	101.7	1,531.4	1,706.4	810.7	75.0	4,225.2
	A-3A	Total NOx emissions	Pounds	77.5	1,319.7	1,557.8	740.1	24.0	3,719.2
	A-3B	Total SOx emissions	Pounds	12.2	78.8	103.2	49.0	43.7	286.9
	A-3C	Total PM emissions	Pounds	12.0	132.9	45.4	21.6	7.2	219.1
	A-4	Total HAP emissions	Pounds	14.3	14.2	9.8	4.7	6.0	48.9
	A-5	Total greenhouse gas emissions	Tons CO2e*	22.5	157.0	113.5	53.9	2.5	349.4
Land & Ecosystems	Soil disturbance, land redevelopment for residential use								

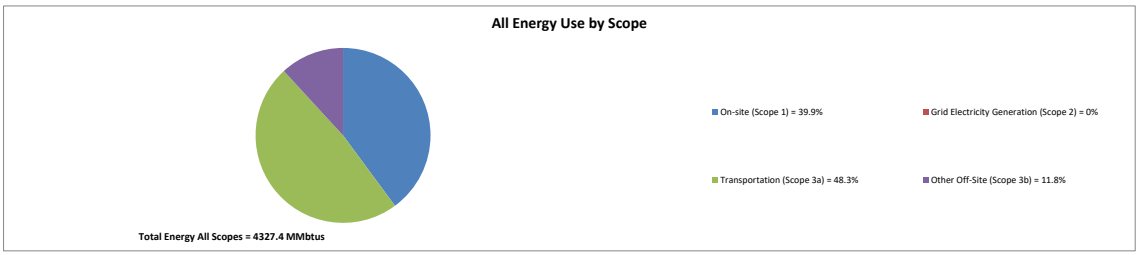
** Total greenhouse gases emissions (in CO2e) include consideration of CO2, CH4, and N2O (Nitrous oxide) emissions.*
"MMBtu" = millions of Btus
"MG" = millions of gallons
"CO2e" = carbon dioxide equivalents of global warming potential
"MWh" = megawatt hours (i.e., thousands of kilowatt-hours or millions of Watt-hours)
"Tons" = short tons (2,000 pounds)

The above metrics are consistent with EPA's Methodology for Understanding and Reducing a Project's Environmental Footprint (EPA 542-R-12-002), February 2012

Notes:







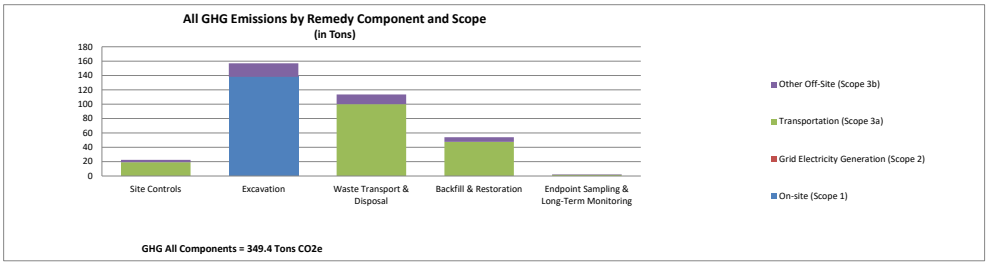
Total Energy MMbtus	Site Controls	Excavation	Waste Transport & Disposal	Backfill & Restoration	Endpoint Sampling & Long-Term Monitoring	Total
On-site (Scope 1)	0.0	1,725.9	0.0	0.0	0.0	1,725.9
Grid Electricity Generation (Scope 2)	0.0	0.0	0.0	0.0	0.0	0.0
Transportation (Scope 3a)	241.6	1.9	1,236.6	587.5	21.8	2,089.4
Other Off-Site (Scope 3b)	64.2	211.3	151.2	71.9	13.6	512.1
Total	305.7	1,939.1	1,387.9	659.4	35.4	4,327.4

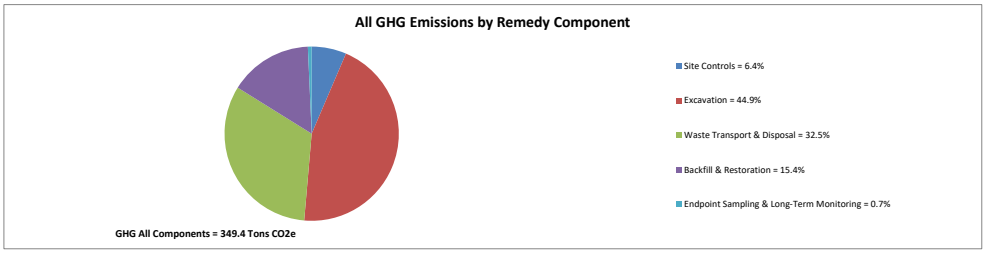
Site Controls = 7.1%
Excavation = 44.8%
Waste Transport & Disposal = 32.1%
Backfill & Restoration = 15.2%
Endpoint Sampling & Long-Term Monitoring = 0.8%

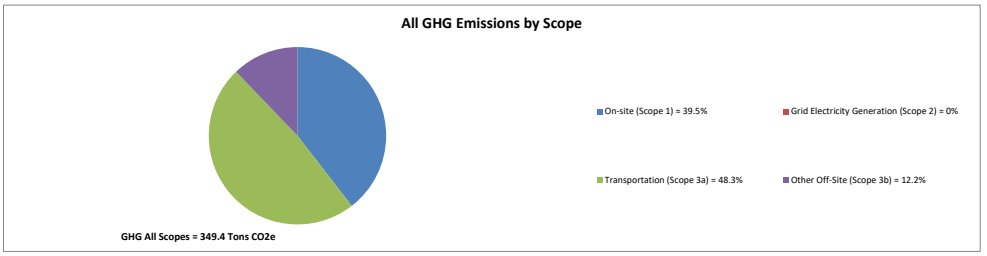
Total Energy All Components = 4327.4 MMbtus
Total Energy All Scopes = 4327.4 MMbtus

On-site (Scope 1) = 39.9%
Grid Electricity Generation (Scope 2) = 0%
Transportation (Scope 3a) = 48.3%
Other Off-Site (Scope 3b) = 11.8%

Total Fuel Footprints		Site Controls	Excavation	Waste Transport & Disposal	Backfill & Restoration	Endpoint Sampling & Long-Term Monitoring	Total
Diesel (gal)	Transportation	100	13.4	8896.6	4226.666	0	13236.67
	On-site equipment	0	12416.53846	0	0	0	12416.54
Gasoline (gal)	Transportation	1836	0	0	0	176.2	2012.2
	On-site equipment	0	0	0	0	0	0







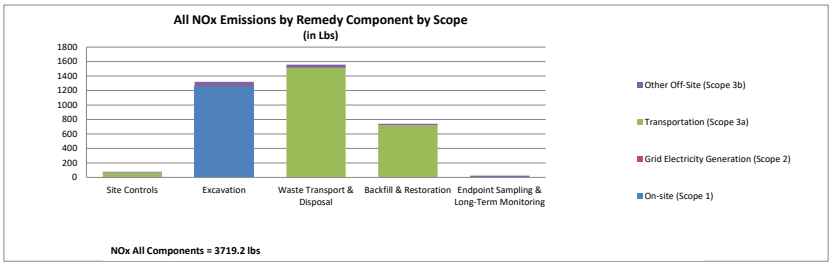
GHG
Tons CO2e

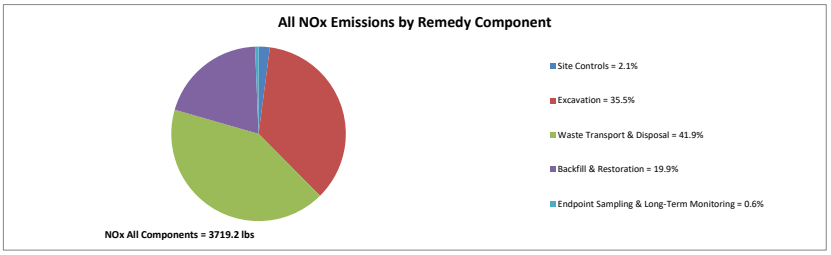
	Site Controls	Excavation	Waste Transport & Disposal	Backfill & Restoration	Endpoint Sampling & Long-Term Monitoring	Total
On-site (Scope 1)	0.0	138.1	0.0	0.0	0.0	138.1
Grid Electricity Generation (Scope 2)	0.0	0.0	0.0	0.0	0.0	0.0
Transportation (Scope 3a)	19.3	0.2	100.1	47.5	1.7	168.8
Other Off-Site (Scope 3b)	3.2	18.8	13.4	6.4	0.7	42.5
Total	22.5	157.0	113.5	53.9	2.5	349.4

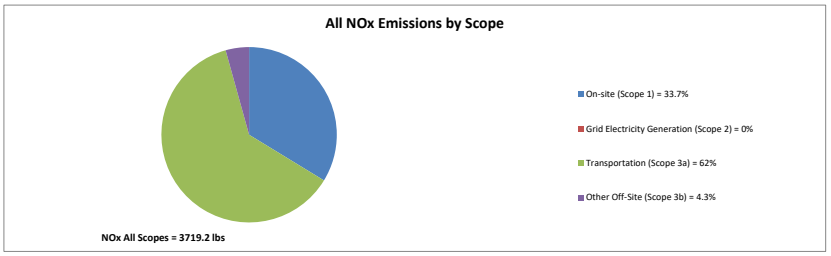
Site Controls = 6.4%
Excavation = 44.9%
Waste Transport & Disposal = 32.5%
Backfill & Restoration = 15.4%
Endpoint Sampling & Long-Term Monitoring = 0.7%

GHG All Components = 349.4 Tons CO2e
GHG All Scopes = 349.4 Tons CO2e

On-site (Scope 1) = 39.5%
Grid Electricity Generation (Scope 2) = 0%
Transportation (Scope 3a) = 48.3%
Other Off-Site (Scope 3b) = 12.2%







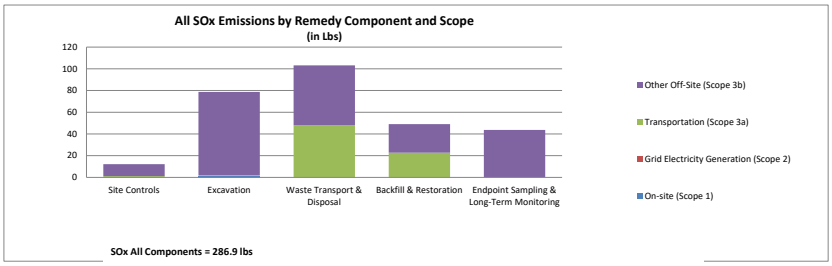
NOx lbs

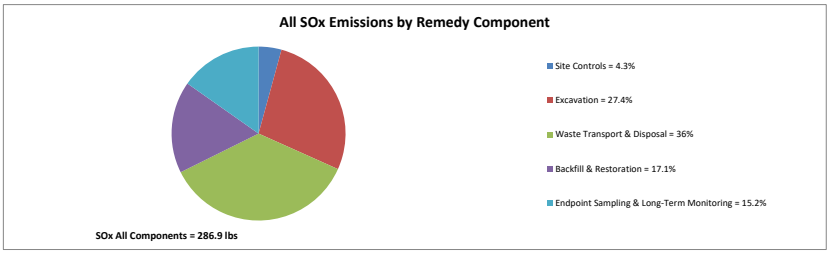
	Site Controls	Excavation	Waste Transport & Disposal	Backfill & Restoration	Endpoint Sampling & Long-Term Monitoring	Total
On-site (Scope 1)	0.0	1,254.1	0.0	0.0	0.0	1,254.1
Grid Electricity Generation (Scope 2)	0.0	0.0	0.0	0.0	0.0	0.0
Transportation (Scope 3a)	66.6	2.3	1,512.4	718.5	4.8	2,304.6
Other Off-Site (Scope 3b)	10.9	63.4	45.4	21.6	19.3	160.5
Total	77.5	1,319.7	1,557.8	740.1	24.0	3,719.2

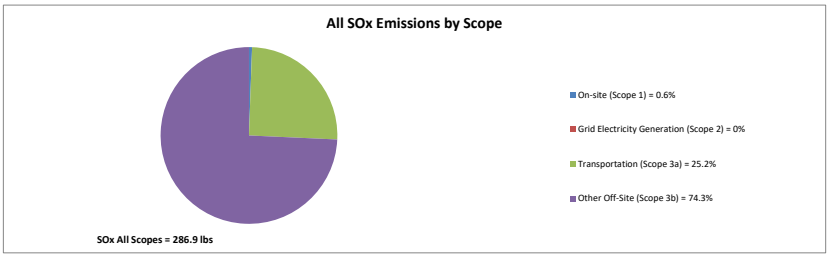
Site Controls = 2.1%
Excavation = 35.5%
Waste Transport & Disposal = 41.9%
Backfill & Restoration = 19.9%
Endpoint Sampling & Long-Term Monitoring = 0.6%

NOx All Components = 3719.2 lbs
NOx All Scopes = 3719.2 lbs

On-site (Scope 1) = 33.7%
Grid Electricity Generation (Scope 2) = 0%
Transportation (Scope 3a) = 62%
Other Off-Site (Scope 3b) = 4.3%







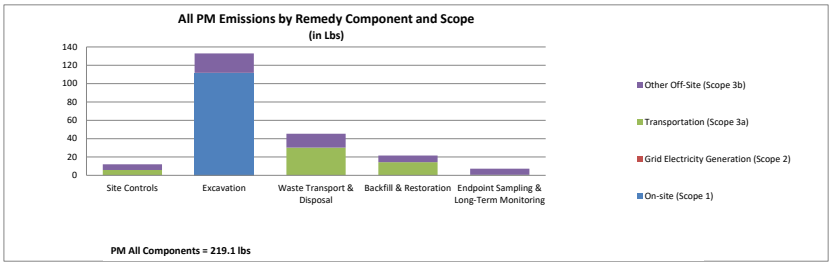
SOx lbs

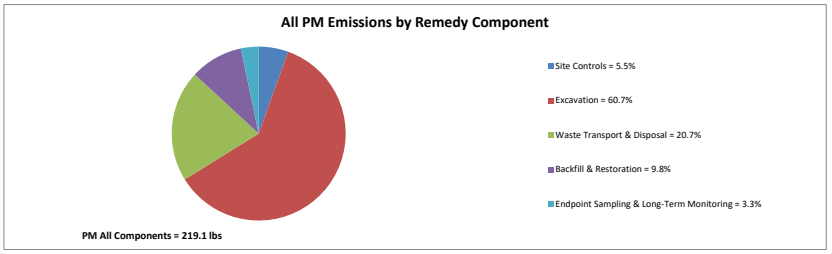
	Site Controls	Excavation	Waste Transport & Disposal	Backfill & Restoration	Endpoint Sampling & Long-Term Monitoring	Total
On-site (Scope 1)	0.0	1.6	0.0	0.0	0.0	1.6
Grid Electricity Generation (Scope 2)	0.0	0.0	0.0	0.0	0.0	0.0
Transportation (Scope 3a)	1.2	0.1	48.0	22.8	0.1	72.2
Other Off-Site (Scope 3b)	11.0	77.1	55.2	26.2	43.7	213.1
Total	12.2	78.8	103.2	49.0	43.7	286.9

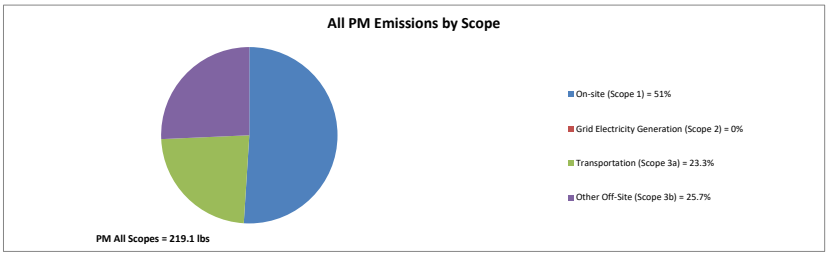
Site Controls = 4.3%
Excavation = 27.4%
Waste Transport & Disposal = 36%
Backfill & Restoration = 17.1%
Endpoint Sampling & Long-Term Monitoring = 15.2%

SOx All Components = 286.9 lbs
SOx All Scopes = 286.9 lbs

On-site (Scope 1) = 0.6%
Grid Electricity Generation (Scope 2) = 0%
Transportation (Scope 3a) = 25.2%
Other Off-Site (Scope 3b) = 74.3%







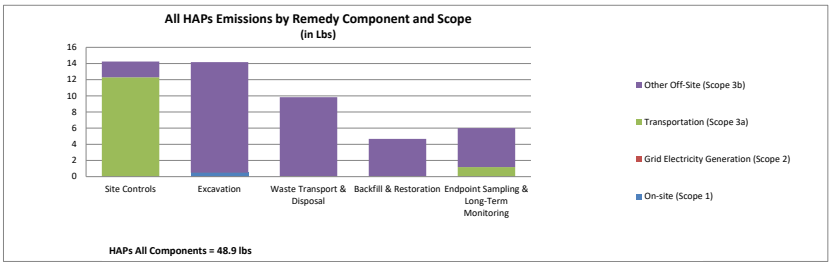
PM lbs

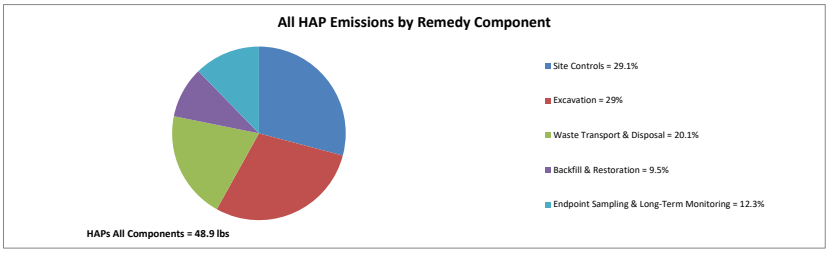
	Site Controls	Excavation	Waste Transport & Disposal	Backfill & Restoration	Endpoint Sampling & Long-Term Monitoring	Total
On-site (Scope 1)	0.0	111.7	0.0	0.0	0.0	111.7
Grid Electricity Generation (Scope 2)	0.0	0.0	0.0	0.0	0.0	0.0
Transportation (Scope 3a)	5.8	0.0	30.2	14.4	0.5	51.0
Other Off-Site (Scope 3b)	6.2	21.1	15.1	7.2	6.7	56.3
Total	12.0	132.9	45.4	21.6	7.2	219.1

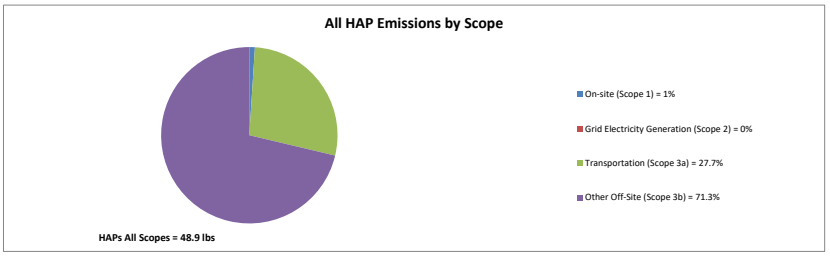
Site Controls = 5.5%
Excavation = 60.7%
Waste Transport & Disposal = 20.7%
Backfill & Restoration = 9.8%
Endpoint Sampling & Long-Term Monitoring = 3.3%

PM All Components = 219.1 lbs
PM All Scopes = 219.1 lbs

On-site (Scope 1) = 51%
Grid Electricity Generation (Scope 2) = 0%
Transportation (Scope 3a) = 23.3%
Other Off-Site (Scope 3b) = 25.7%







HAPs
lbs

	Site Controls	Excavation	Waste Transport & Disposal	Backfill & Restoration	Endpoint Sampling & Long-Term Monitoring	Total
On-site (Scope 1)	0.0	0.5	0.0	0.0	0.0	0.5
Grid Electricity Generation (Scope 2)	0.0	0.0	0.0	0.0	0.0	0.0
Transportation (Scope 3a)	12.3	0.0	0.0	0.0	1.2	13.6
Other Off-Site (Scope 3b)	1.9	13.7	9.8	4.6	4.8	34.9
Total	14.3	14.2	9.8	4.7	6.0	48.9

Site Controls = 29.1%
Excavation = 29%
Waste Transport & Disposal = 20.1%
Backfill & Restoration = 9.5%
Endpoint Sampling & Long-Term Monitoring = 12.3%

HAPs All Components = 48.9 lbs
HAPs All Scopes = 48.9 lbs

On-site (Scope 1) = 1%
Grid Electricity Generation (Scope 2) = 0%
Transportation (Scope 3a) = 27.7%
Other Off-Site (Scope 3b) = 71.3%

Site Controls - Energy & Air Compiled Results

Category	Total Energy	GHG	NOx	SOx	PM	NOx + SOx + PM	HAPs
	MMbtus	lbs CO2e	lbs	lbs	lbs	lbs	lbs
On-site (Scope 1)	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Grid Electricity Generation (Scope 2)	**0.000**	**0**	**0**	**0**	**0**	**0**	**0**
Transportation (Scope 3a)	**242**	**38,548**	**67**	**1**	**6**	**74**	**12**
Other Off-Site (Scope 3b)	**64**	**6,463**	**11**	**11**	**6**	**28**	**2**
Remedy Totals	**306**	**45,011**	**78**	**12**	**12**	**102**	**14**

Values that are forwarded to the "Summary" tab are indicated in orange.

Voluntary Renewable Energy Use	Unit	Quantity	
On-site renewable energy generation or use	MMBtu	**0**	
On-site biodiesel use	MMBtu	**0**	
Biodiesel and other renewable resource use for transportation	MMBtu	**0**	
On-site renewable energy generation or use + on-site biodiesel use + biodiesel and other renewable resource use for transportation	MMBtu	**0**	*(This value is the sum of the three rows above)*
Voluntary purchase of renewable electricity	MWh	**0**	
Voluntary purchase of RECs	MWh	**0**	

This worksheet is not intended for user input. Values on this worksheet are obtained from the following file:
The Green - Track 2 SEFA_calculations.xlsx

Excavation - Energy & Air Compiled Results

Category	Total Energy	GHG	NOx	SOx	PM	NOx + SOx + PM	HAPs
	MMbtus	lbs CO2e	lbs	lbs	lbs	lbs	lbs
On-site (Scope 1)	**1,726**	**276,144**	**1,254**	**2**	**112**	**1,367**	**0**
Grid Electricity Generation (Scope 2)	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Transportation (Scope 3a)	**2**	**302**	**2**	**0**	**0**	**2**	**0**
Other Off-Site (Scope 3b)	**211**	**37,538**	**63**	**77**	**21**	**162**	**14**
Remedy Totals	**1,939**	**313,984**	**1,320**	**79**	**133**	**1,531**	**14**

Values that are forwarded to the "Summary" tab are indicated in orange.

Voluntary Renewable Energy Use	Unit	Quantity	
On-site renewable energy generation or use	MMBtu	**0**	
On-site biodiesel use	MMBtu	**0**	
Biodiesel and other renewable resource use for transportation	MMBtu	**0**	
On-site renewable energy generation or use + on-site biodiesel use + biodiesel and other renewable resource use for transportation	MMBtu	**0**	*(This value is the sum of the three rows above)*
Voluntary purchase of renewable electricity	MWh	**0**	
Voluntary purchase of RECs	MWh	**0**	

This worksheet is not intended for user input. Values on this worksheet are obtained from the following file:
The Green - Track 2 SEFA_calculations.xlsx

Waste Transport & Disposal - Energy & Air Compiled Results

Category	Total Energy	GHG	NOx	SOx	PM	NOx + SOx + PM	HAPs
	MMbtus	lbs CO2e	lbs	lbs	lbs	lbs	lbs
On-site (Scope 1)	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Grid Electricity Generation (Scope 2)	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Transportation (Scope 3a)	**1,237**	**200,174**	**1,512**	**48**	**30**	**1,591**	**0**
Other Off-Site (Scope 3b)	**151**	**26,868**	**45**	**55**	**15**	**116**	**10**
Remedy Totals	**1,388**	**227,041**	**1,558**	**103**	**45**	**1,706**	**10**

Values that are forwarded to the "Summary" tab are indicated in orange.

Voluntary Renewable Energy Use	Unit	Quantity	
On-site renewable energy generation or use	MMBtu	**0**	
On-site biodiesel use	MMBtu	**0**	
Biodiesel and other renewable resource use for transportation	MMBtu	**0**	
On-site renewable energy generation or use + on-site biodiesel use + biodiesel and other renewable resource use for transportation	MMBtu	**0**	*(This value is the sum of the three rows above)*
Voluntary purchase of renewable electricity	MWh	**0**	
Voluntary purchase of RECs	MWh	**0**	

This worksheet is not intended for user input. Values on this worksheet are obtained from the following file:
The Green - Track 2 SEFA_calculations.xlsx

Backfill & Restoration - Energy & Air Compiled Results

Category	Total Energy	GHG	NOx	SOx	PM	NOx + SOx + PM	HAPs
	MMbtus	lbs CO2e	lbs	lbs	lbs	lbs	lbs
On-site (Scope 1)	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Grid Electricity Generation (Scope 2)	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Transportation (Scope 3a)	**588**	**95,100**	**719**	**23**	**14**	**756**	**0**
Other Off-Site (Scope 3b)	**72**	**12,765**	**22**	**26**	**7**	**55**	**5**
Remedy Totals	**659**	**107,865**	**740**	**49**	**22**	**811**	**5**

Values that are forwarded to the "Summary" tab are indicated in orange.

Voluntary Renewable Energy Use	Unit	Quantity	
On-site renewable energy generation or use	MMBtu	**0**	
On-site biodiesel use	MMBtu	**0**	
Biodiesel and other renewable resource use for transportation	MMBtu	**0**	
On-site renewable energy generation or use + on-site biodiesel use + biodiesel and other renewable resource use for transportation	MMBtu	**0**	*(This value is the sum of the three rows above)*
Voluntary purchase of renewable electricity	MWh	**0**	
Voluntary purchase of RECs	MWh	**0**	

This worksheet is not intended for user input. Values on this worksheet are obtained from the following file:
The Green - Track 2 SEFA_calculations.xlsx

Endpoint Sampling & Long-Term Monitoring - Energy & Air Compiled Results

Category	Total Energy	GHG	NOx	SOx	PM	NOx + SOx + PM	HAPs
	MMbtus	lbs CO2e	lbs	lbs	lbs	lbs	lbs
On-site (Scope 1)	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Grid Electricity Generation (Scope 2)	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Transportation (Scope 3a)	**22**	**3,483**	**5**	**0**	**1**	**5**	**1**
Other Off-Site (Scope 3b)	**14**	**1,425**	**19**	**44**	**7**	**70**	**5**
Remedy Totals	**35**	**4,909**	**24**	**44**	**7**	**75**	**6**

Values that are forwarded to the "Summary" tab are indicated in orange.

Voluntary Renewable Energy Use	Unit	Quantity	
On-site renewable energy generation or use	MMBtu	**0**	
On-site biodiesel use	MMBtu	**0**	
Biodiesel and other renewable resource use for transportation	MMBtu	**0**	
On-site renewable energy generation or use + on-site biodiesel use + biodiesel and other renewable resource use for transportation	MMBtu	**0**	*(This value is the sum of the three rows above)*
Voluntary purchase of renewable electricity	MWh	**0**	
Voluntary purchase of RECs	MWh	**0**	

This worksheet is not intended for user input. Values on this worksheet are obtained from the following file:
The Green - Track 2 SEFA_calculations.xlsx

All - Energy & Air Compiled Results

Category	Total Energy	GHG	NOx	SOx	PM	NOx + SOx + PM	HAPs
	MMbtus	lbs CO2e	lbs	lbs	lbs	lbs	lbs
On-site (Scope 1)	**1,726**	**276,144**	**1,254**	**2**	**112**	**1,367**	**0**
Grid Electricity Generation (Scope 2)	**0.000**	**0**	**0**	**0**	**0**	**0**	**0**
Transportation (Scope 3a)	**2,089**	**337,606**	**2,305**	**72**	**51**	**2,428**	**14**
Other Off-Site (Scope 3b)	**512**	**85,059**	**161**	**213**	**56**	**430**	**35**
Remedy Totals	**4,327**	**698,809**	**3,719**	**287**	**219**	**4,225**	**49**

Values that are forwarded to the "Summary" tab are indicated in orange.

Voluntary Renewable Energy Use	Unit	Quantity	
On-site renewable energy generation or use	MMBtu	**0**	
On-site biodiesel use	MMBtu	**0**	
Biodiesel and other renewable resource use for transportation	MMBtu	**0**	
On-site renewable energy generation or use + on-site biodiesel use + biodiesel and other renewable resource use for transportation	MMBtu	**0**	*(This value is the sum of the three rows above)*
Voluntary purchase of renewable electricity	MWh	**0**	
Voluntary purchase of RECs	MWh	**0**	

This worksheet is not intended for user input. Values on this worksheet are obtained from the following file:
The Green - Track 2 SEFA_calculations.xlsx

Spreadsheets for Environmental Footprint Analysis (SEFA) Version 3.0, November 2019
The Green (C336099) - Track 2 Alternative

Input Summary

Remedy Component Number →		1	2	3	4	5	Remedy Component Subtotals					
		Column headings in Row 6 must match the name of "Input" tabs in this workbook for Columns C - P in this										
Item		Site Controls	Excavation	Waste T&D	B&R	EPS & LTM	1	2	3	4	5	Total
On-Site												
On-site Renewable Energy												
Renewable electricity generated on-site	MWh	0	0	0	0	0	0	0	0	0	0	0
Landfill gas combusted on-site for energy use	ccf CH_4	0	0	0	0	0	0	0	0	0	0	0
On-site biodiesel use	gal	0	0	0	0	0	0	0	0	0	0	0
On-site biodiesel use - Other	gal	0	0	0	0	0	0	0	0	0	0	0
User-defined on-site renewable energy use #1	TBD	0	0	0	0	0	0	0	0	0	0	0
User-defined on-site renewable energy use #2	TBD	0	0	0	0	0	0	0	0	0	0	0
On-Site Conventional Energy												
Grid electricity	MWh	0	0	0	0	0	0	0	0	0	0	0
On-site diesel use - Other	Gal	0	0	0	0	0	0	0	0	0	0	0
On-site diesel use <75 hp	Gal	0	0	0	0	0	0	0	0	0	0	0
On-site diesel use 75<hp<750	Gal	0	12416.538	0	0	0	0	12416.538	0	0	0	12416.538
On-site diesel use >750 hp	Gal	0	0	0	0	0	0	0	0	0	0	0
On-site gasoline use - Other	Gal	0	0	0	0	0	0	0	0	0	0	0
On-site gasoline use <25 hp	Gal	0	0	0	0	0	0	0	0	0	0	0
On-site gasoline use >25 hp	Gal	0	0	0	0	0	0	0	0	0	0	0
On-site natural gas use	ccf	0	0	0	0	0	0	0	0	0	0	0
On-site compressed natural gas use - Other	ccf	0	0	0	0	0	0	0	0	0	0	0
On-site compressed natural gas use	ccf	0	0	0	0	0	0	0	0	0	0	0
On-site liquified petroleum gas use - Other	gal	0	0	0	0	0	0	0	0	0	0	0
On-site liquified petroleum gas use	gal	0	0	0	0	0	0	0	0	0	0	0
Other forms of on-site conventional energy use #1	TBD	0	0	0	0	0	0	0	0	0	0	0
Other forms of on-site conventional energy use #2	TBD	0	0	0	0	0	0	0	0	0	0	0
Other On-site Emissions												
On-site HAP process emissions	Lbs	0	0	0	0	0	0	0	0	0	0	0
On-site GHG emissions	Lbs CO2e	0	0	0	0	0	0	0	0	0	0	0
On-site carbon storage	Lbs CO2e	0	0	0	0	0	0	0	0	0	0	0
GHG avoided by flaring on-site landfill methane	ccf CH4	0	0	0	0	0	0	0	0	0	0	0
Other on-site NOx emissions or reductions	Lbs	0	0	0	0	0	0	0	0	0	0	0
Other on-site SOx emissions or reductions	Lbs	0	0	0	0	0	0	0	0	0	0	0
Other on-site PM emissions or reductions	Lbs	0	0	0	0	0	0	0	0	0	0	0
Electricity Generation												
Grid electricity	MWh	0	0	0	0	0	0	0	0	0	0	0
Voluntary purchase of renewable electricity	MWh	0	0	0	0	0	0	0	0	0	0	0
Voluntary purchase of RECs	MWh	0	0	0	0	0	0	0	0	0	0	0
Transportation												
Transportation Fuel Use Breakdown												
Biodiesel use - Personnel Transport	gal	0	0	0	0	0	0	0	0	0	0	0
Biodiesel use - Personnel Transport - User Defined	gal	0	0	0	0	0	0	0	0	0	0	0
Biodiesel use - Equipment Transport	gal	0	0	0	0	0	0	0	0	0	0	0
Biodiesel use - Equipment Transport - User Defined	gal	0	0	0	0	0	0	0	0	0	0	0
Biodiesel use - Material Transport	gal	0	0	0	0	0	0	0	0	0	0	0
Biodiesel use - Material Transport - User Defined	gal	0	0	0	0	0	0	0	0	0	0	0
Biodiesel use - Waste Transport	gal	0	0	0	0	0	0	0	0	0	0	0
Biodiesel use - Waste Transport - User Defined	gal	0	0	0	0	0	0	0	0	0	0	0
Diesel use - Personnel Transport - other vehicles	gal	0	0	0	0	0	0	0	0	0	0	0
Diesel use - Personnel Transport - car	gal	0	0	0	0	0	0	0	0	0	0	0
Diesel use - Personnel Transport - passenger truck	gal	0	0	0	0	0	0	0	0	0	0	0
Diesel use - Personnel Transport - User Defined	gal	0	0	0	0	0	0	0	0	0	0	0
Diesel use - Equipment Transport	gal	0	13.4	0	0	0	0	13.4	0	0	0	13.4
Diesel use - Equipment Transport - User Defined	gal	0	0	0	0	0	0	0	0	0	0	0
Diesel use - Material Transport	gal	100	0	0	4226.666	0	100	0	0	4226.666	0	4326.666
Diesel use - Material Transport - User Defined	gal	0	0	0	0	0	0	0	0	0	0	0
Diesel use - Waste Transport	gal	0	0	8896.6	0	0	0	0	8896.6	0	0	8896.6
Diesel use - Waste Transport - User Defined	gal	0	0	0	0	0	0	0	0	0	0	0
Gasoline use - Personnel Transport - other vehicles	gal	0	0	0	0	0	0	0	0	0	0	0
Gasoline use - Personnel Transport - car	gal	1836	0	0	0	176.2	1836	0	0	0	176.2	2012.2
Gasoline use - Personnel Transport - passenger truck	gal	0	0	0	0	0	0	0	0	0	0	0
Gasoline use - Personnel Transport - User Defined	gal	0	0	0	0	0	0	0	0	0	0	0
Gasoline use - Equipment Transport	gal	0	0	0	0	0	0	0	0	0	0	0
Gasoline use - Equipment Transport - User Defined	gal	0	0	0	0	0	0	0	0	0	0	0
Natural Gas use - Personnel Transport	ccf	0	0	0	0	0	0	0	0	0	0	0
Natural Gas use - Personnel Transport - User Defined	ccf	0	0	0	0	0	0	0	0	0	0	0
Natural Gas use - Equipment Transport	ccf	0	0	0	0	0	0	0	0	0	0	0

Input Summary

Remedy Component Number →		1	2	3	4	5	Remedy Component Subtotals					
		Column headings in Row 6 must match the name of "Input" tabs in this workbook for Columns C - P in this										
Item		Site Controls	Excavation	Waste T&D	B&R	EPS & LTM	1	2	3	4	5	Total
Conventional Energy												
Transportation diesel use	gal	100	13.4	8896.6	4226.666	0	100	13.4	8896.6	4226.666	0	13236.666
Transportation gasoline use	gal	1836	0	0	0	176.2	1836	0	0	0	176.2	2012.2
Transportation natural gas use	ccf	0	0	0	0	0	0	0	0	0	0	0
User-defined conventional energy transportation #1	TBD	10	10	10	10	10	10	10	10	10	10	50
User-defined conventional energy transportation #2	TBD	0	0	0	0	0	0	0	0	0	0	0
Renewable Energy												
Transportation biodiesel use	gal	0	0	0	0	0	0	0	0	0	0	0
User-defined renewable energy transportation #1	TBD	0	0	0	0	0	0	0	0	0	0	0
User-defined renewable energy transportation #2	TBD	0	0	0	0	0	0	0	0	0	0	0
Off-Site												
Construction Materials												
Aluminum, Rolled Sheet	lb	0	0	0	0	0	0	0	0	0	0	0
Asphalt, mastic	lb	0	0	0	0	0	0	0	0	0	0	0
Asphalt, paving-grade	lb	0	0	0	0	0	0	0	0	0	0	0
Ethanol, Corn, 95%	lb	0	0	0	0	0	0	0	0	0	0	0
Ethanol, Corn, 99.7%	lb	0	0	0	0	0	0	0	0	0	0	0
Ethanol, Petroleum, 99.7%	lb	0	0	0	0	0	0	0	0	0	0	0
Gravel/Sand Mix, 65% Gravel	lb	0	0	0	0	0	0	0	0	0	0	0
Gravel/sand/clay	lb	0	0	0	0	0	0	0	0	0	0	0
HDPE	lb	0	0	0	0	0	0	0	0	0	0	0
Photovoltaic system (installed)	W	0	0	0	0	0	0	0	0	0	0	0
PVC	lb	0	0	0	0	0	0	0	0	0	0	0
Portland cement, US average	lb	0	0	0	0	0						
Ready-mixed concrete, 20 MPa	ft3	0	0	0	0	0	0	0	0	0	0	0
Round Gravel	lb	0	0	0	0	0	0	0	0	0	0	0
Sand	lb	0	0	0	0	0	0	0	0	0	0	0
Stainless Steel	lb	0	0	0	0	0	0	0	0	0	0	0
Steel	lb	0	0	0	0	0	0	0	0	0	0	0
Other refined construction materials	lb	0	0	0	0	0	0	0	0	0	0	0
Other unrefined construction materials	lb	0	0	0	0	0	0	0	0	0	0	0
Treatment Materials & Chemicals												
Cheese Whey	lbs	0	0	0	0	0	0	0	0	0	0	0
Emulsified vegetable oil	lbs	0	0	0	0	0	0	0	0	0	0	0
Granular activated carbon, primary	lbs	0	0	0	0	0	0	0	0	0	0	0
Granular activated carbon, regenerated	lbs	0	0	0	0	0	0	0	0	0	0	0
Hydrogen Peroxide, 50% in H2O	lbs	0	0	0	0	0	0	0	0	0	0	0
Iron (II) Sulfate	lbs	0	0	0	0	0	0	0	0	0	0	0
Lime, Hydrated, Packed	lbs	0	0	0	0	0	0	0	0	0	0	0
Molasses	lbs	0	0	0	0	0	0	0	0	0	0	0
Phosphoric Acid, 70% in H2O	lbs	0	0	0	0	0	0	0	0	0	0	0
Potassium Permanganate	lbs	0	0	0	0	0	0	0	0	0	0	0
Sodium Hydroxide, 50% in H2O	lbs	0	0	0	0	0	0	0	0	0	0	0
Other Treatment Chemicals & Materials	lbs	0	0	0	0	0	0	0	0	0	0	0
Material Type												
Total Virgin Refined Materials	tons	12.1465	0	0	10.219176	0	12.1465	0	0	10.219176	0	22.365676
Total Recycled Refined Materials	tons	0	0	0	0	0	0	0	0	0	0	0
Total Reused Refined Materials	tons	0	0	0	0	0	0	0	0	0	0	0
Total Refined Material	tons	12.1465	0	0	10.219176	0	12.1465	0	0	10.219176	0	22.365676
Total Virgin Unrefined Materials	tons	0	0	0	0	0	0	0	0	0	0	0
Total Recycled Unrefined Materials	tons	60	0	0	7848.4259	0	60	0	0	7848.4259	0	7908.4259
Total Reused Unrefined Materials	tons	0	0	0	0	0	0	0	0	0	0	0
Total Unrefined Material	tons	60	0	0	7848.4259	0	60	0	0	7848.4259	0	7908.4259
Fuel Processing												
Biodiesel produced	gal	0	0	0	0	0	0	0	0	0	0	0
Diesel produced	gal	100	12429.938	8896.6	4226.666	0	100	12429.938	8896.6	4226.666	0	25653.204
Gasoline produced	gal	1836	0	0	0	176.2	1836	0	0	0	176.2	2012.2
Compressed natural gas produced	ccf	0	0	0	0	0	0	0	0	0	0	0
Liquified petroleum gas produced	gal	0	0	0	0	0	0	0	0	0	0	0
Natural gas produced	ccf	0	0	0	0	0	0	0	0	0	0	0
Water Use												
Public Water Supply	gal x 1000	204	0	0	0	0	204	0	0	0	0	204
Extracted Groundwater	gal x 1000	0	0	0	0	0	0	0	0	0	0	0
Surface Water	gal x 1000	0	0	0	0	0	0	0	0	0	0	0
Reclaimed Water	gal x 1000	0	0	0	0	0	0	0	0	0	0	0
Collected/Diverted Storm Water	gal x 1000	0	0	0	0	0	0	0	0	0	0	0
User-defined water resource #1	gal x 1000	0	0	0	0	0	0	0	0	0	0	0
User-defined water resource #2	gal x 1000	0	0	0	0	0	0	0	0	0	0	0

Input Summary

Remedy Component Number →		1	2	3	4	5	Remedy Component Subtotals					
		Column headings in Row 6 must match the name of "Input" tabs in this workbook for Columns C - P in this										
Item		Site Controls	Excavation	Waste T&D	B&R	EPS & LTM	1	2	3	4	5	Total
Waste/Recycle Handling												
Hazardous waste incineration	lbs	0	0	0	0	0	0	0	0	0	0	0
Off-site waste water treatment (POTW)	gal x 1000	0	0	0	0	0	0	0	0	0	0	0
Off-site non-hazardous waste landfill	tons	0	0	0	0	0	0	0	0	0	0	0
Off-site hazardous waste landfill	tons	0	0	0	0	0	0	0	0	0	0	0
Recycled/Reused On-Site	tons	0	0	0	0	0	0	0	0	0	0	0
Recycled/Reused Off-Site	tons	0	0	0	0	0	0	0	0	0	0	0
Solid Waste Totals												
Total Non-Hazardous Waste	tons	0	0	7848.4259	0	0	0	0	7848.4259	0	0	7848.4259
Total Hazardous Waste	tons	0	0	0	0	0	0	0	0	0	0	0
Total Recycled/Reused	tons	0	0	0	0	0	0	0	0	0	0	0
Total Waste (all types)	tons	0	0	7848.4259	0	0	0	0	7848.4259	0	0	7848.4259
Lab Services												
Off-site Laboratory Analysis - Other	sample	0	0	0	0	50	0	0	0	0	50	50
Off-site Laboratory Analysis - Metals	sample	0	0	0	0	10	0	0	0	0	10	10
Off-site Laboratory Analysis - Mercury	sample	0	0	0	0	10	0	0	0	0	10	10
Off-site Laboratory Analysis - Inorganic Anions	sample	0	0	0	0	0	0	0	0	0	0	0
Off-site Laboratory Analysis - Alkalinity	sample	0	0	0	0	0	0	0	0	0	0	0
Off-site Laboratory Analysis - Perchlorate	sample	0	0	0	0	0	0	0	0	0	0	0
Off-site Laboratory Analysis - Nitrogen/Nitrate	sample	0	0	0	0	0	0	0	0	0	0	0
Off-site Laboratory Analysis - Sulfate	sample	0	0	0	0	0	0	0	0	0	0	0
Off-site Laboratory Analysis - PCBs	sample	0	0	0	0	10	0	0	0	0	10	10
Off-site Laboratory Analysis - VOCs	sample	0	0	0	0	10	0	0	0	0	10	10
Off-site Laboratory Analysis - SVOCs	sample	0	0	0	0	10	0	0	0	0	10	10
Resource Extraction for Electricity												
Coal extraction and processing	MWh	0	0	0	0	0	0	0	0	0	0	0
Natural gas extraction and processing	MWh	0	0	0	0	0	0	0	0	0	0	0
Nuclear fuel extraction and processing	MWh	0	0	0	0	0	0	0	0	0	0	0
Oil extraction and processing	MWh	0	0	0	0	0	0	0	0	0	0	0
Other fuel extraction and processing	MWh	0	0	0	0	0	0	0	0	0	0	0
Electricity Transmission												
Transmission and distribution losses	MWh	0	0	0	0	0	0	0	0	0	0	0

Input Summary

Remedy Component Number →		1	2	3	4	5						
		Column headings in Row 6 must match the name of "Input" tabs in this workbook for Columns C - P in this					Remedy Component Subtotals					
Item		Site Controls	Excavation	Waste T&D	B&R	EPS & LTM	1	2	3	4	5	Total
Other												
BENSEAL (Sodium Bentonite)	50 lb bag	0	0	0	0	0	0	0	0	0	0	0
orange mesh fencing	ft	600	0	0	0	0	600	0	0	0	0	600
absorbent composite socks	ft	600	0	0	0	0	600	0	0	0	0	600
6-mil 40' x 100' polyurethane sheeting	rolls	7	0	0	0	0	7	0	0	0	0	7
aggregate 2" stone	ton	60	0	0	0	0	60	0	0	0	0	60
filter cloth	lb	60	0	0	0	0	60	0	0	0	0	60
20-mil vapor barrier	sqft	0	0	0	74052	0	0	0	0	74052	0	74052
4" Perforated SDR 35 Radon Vent Pipe	ft	0	0	0	0	0	0	0	0	0	0	0
Clean Fill	ton	0	0	0	4785.9259	0	0	0	0	4785.9259	0	4785.9259
Recycled Stone	ton	0	0	0	3062.5	0	0	0	0	3062.5	0	3062.5
User-defined material #11	TBD	0	0	0	0	0	0	0	0	0	0	0
User-defined material #12	TBD	0	0	0	0	0	0	0	0	0	0	0
User-defined material #13	TBD	0	0	0	0	0	0	0	0	0	0	0
User-defined material #14	TBD	0	0	0	0	0	0	0	0	0	0	0
User-defined material #15	TBD	0	0	0	0	0	0	0	0	0	0	0
User-defined material #16	TBD	0	0	0	0	0	0	0	0	0	0	0
User-defined material #17	TBD	0	0	0	0	0	0	0	0	0	0	0
User-defined material #18	TBD	0	0	0	0	0	0	0	0	0	0	0
User-defined material #19	TBD	0	0	0	0	0	0	0	0	0	0	0
User-defined material #20	TBD	0	0	0	0	0	0	0	0	0	0	0
User-defined Waste Destinations												
User-defined recycled/reused on-site #1	TBD	0	0	0	0	0	0	0	0	0	0	0
User-defined recycled/reused on-site #2	TBD	0	0	0	0	0	0	0	0	0	0	0
User-defined recycled/reused on-site #3	TBD	0	0	0	0	0	0	0	0	0	0	0
User-defined recycled/reused off-site #1	ton	0	0	0	0	0	0	0	0	0	0	0
User-defined recycled/reused off-site #2	ton	0	0	0	0	0	0	0	0	0	0	0
User-defined recycled/reused off-site #3	TBD	0	0	0	0	0	0	0	0	0	0	0
User-defined non-hazardous waste destination #1	ton	0	0	7848.4259	0	0	0	0	7848.4259	0	0	7848.4259
User-defined non-hazardous waste destination #2	ton	0	0	0	0	0	0	0	0	0	0	0
User-defined non-hazardous waste destination #3	TBD	0	0	0	0	0	0	0	0	0	0	0
User-defined hazardous waste destination #1	TBD	0	0	0	0	0	0	0	0	0	0	0
User-defined hazardous waste destination #2	TBD	0	0	0	0	0	0	0	0	0	0	0
User-defined hazardous waste destination #3	TBD	0	0	0	0	0	0	0	0	0	0	0

Input Worksheet for Site Controls

Please specify which Remedy Component this Input worksheet is part of: (Select "Off" to exclude this Input worksheet from calculations and results)	**Component 1**	**Site Controls**

General Scope

Crew mobilization and the establishment and maintenance of SESC measures, Storm Water Pollution Control, Dust Control, etc. for the duration of the remediation remedy implementation. Estimated Project duration is **102 days.** Note: 1. All "Personnel Transportation" for the duration of the work has been captured in this Component as the same personnel will be onsite for each Component (2-5). 2. Remediation equipment mobilization is outlined in Component 3.

Example Items Eliminated through Screening Process

Other Notes and References

Assume 102 days

Personnel Transportation

Participant	Number of Roundtrips to Site	Roundtrip Distance to Site (miles)	Mode of Transportation*	Transport Fuel Type*	Total Distance Transported (miles)	Default Fuel Usage Rate**	Fuel Usage Rate Override**	Fuel Used for Personnel Transport**	Activity or Notes
Gallagher Bassett Technical Services Technician	102	30	Car	Gasoline	3060	25		122.4	Environmental Monitoring summarized in Comp 6
Contractor (7 empl.)	714	60	Car	Gasoline	42840	25		1713.6	

**** See the "Detailed Notes and Explanations" tab for explanation of transport and fuel options.***

***** for biodiesel, B20, diesel, and gasoline, units are gallons for Fuel Used and miles/gallon for Fuel Usage Rate; for natural gas, units are hundreds of cubic feet (ccf) for Fuel Used and ccf/miles for Fuel Usage Rate; for electricity, units are miles/kWh for Fuel Usage Rate and the kWh (Fuel Used) are added to total grid electricity used (cell G69).***

On-Site Equipment Use and Transportation

Equipment Type*	HP*	Load Factor (%)*	Equipment Fuel Type**	Equipment Fuel Usage Rate	Equipment Hours Operated	Fuel Used for On-site Equipment	Equipment weight (tons)	Number of Equipment Roundtrips to Site	Roundtrip Distance to Site (miles)	Total Distance Transported (miles)	Mode of Transportation	Transport Fuel Type***	Default Transport Fuel Usage Rate (gptm or mpg)	Transport Fuel Usage Rate Override (gptm or mpg)	Fuel Used for Equipment Transport (gallons)	Activity or Notes

**** HP and Load Factor must be entered by user in Columns C and D. Please see the "Detailed Notes and Explanations" tab for further explanation.***

***** For biodiesel, B20, diesel, gasoline, and liquified petroleum gas, units are gallons for Fuel Used for On-site Equipment and gallons/hr for Equipment Fuel Usage Rate; for compressed natural gas units are ccf (hundreds of cubic feet) for Fuel Used for On-site Equipment and ccf/hr for Equipment Fuel Usage Rate.***

****** Please see the "Detailed Notes and Explanations" tab for instructions on selecting mode of transportation and other aspects of data entry in Columns M, N, and P. Units are gallons for Fuel Used for Equipment Transport and miles/gallon (mpg) or gallons per ton-mile (gptm) for Transport Fuel Usage Rate.***

Input Worksheet for Site Controls

Remedy Component that this Input worksheet is part of:	Component 1	Site Controls

On-Site Electricity Use

Equipment Type	HP	Load Factor (%)	Efficiency (%)	Electrical Rating (kW)	Hours Used	Energy Used (kWh)	Notes
<Equip. with HP, Efficiency, and Hours>							
<Equip. with HP, Efficiency, and Hours>							
<Equip. with HP, Efficiency, and Hours>							
<Equip. with HP, Efficiency, and Hours>							
<Equip. with known kW rating>							DustTrak II (ASM - 1)
<Equip. with known kW rating>							DustTrak II (ASM - 2)
<Equip. with known kW rating>							
<Equip. with known kW rating>							
<Equip. with known total Energy Used>							
<Equip. with known total Energy Used>							
<Equip. with known total Energy Used>							
<Equip. with known total Energy Used>							
Estimated Total Electricity Usage Based on Above						0	
Renewable Electricity Generated On-Site*							
Total Electricity Usage Based on Personnel Transportation						0	
Total Grid Electricity Used						0	

**** Electricity generated on-site from renewable resources, for which the facility retains the rights to the renewable energy (i.e., does not sell renewable energy certificates associated with the renewable energy generation).***

On-Site Natural Gas Use

Equipment Type	Power Rating (Btu/hr)	Efficiency (%)	Hours Used	Energy Required (Btu)	Natural Gas Used (ccf)	Notes
					0	
				0		
Totals			0	0	0	

Landfill Gas Combusted On-Site for Energy Use

Equipment Type	Landfill Gas (ccf)	% Methane by volume	Used for electricity?	Landfill Gas Methane Used (ccf)	Notes
				0	
				0	
				0	
			Total	0	

Please see the "Detailed Notes and Explanations" tab for instructions on using the two tables above ("On-site Natural Gas Use" and "Landfill Gas Combusted On-Site for Energy Use"). In the two tables above, ccf = hundreds of cubic feet.

Materials Use and Transportation

Material Type*	Unit	Quantity	Tons	Is the Material Refined or Unrefined?**	Material Source: Virgin, Recycled, or Reused?**	Calculate Item Footprint?**	Default One-way Distance to Site (miles)	One-way Distance to Site Override (miles)	Number of One-way Trips to Site	Include Return Trip in Calculations?	Total Distance Transported (miles)	Mode of Transportation***	Transport Fuel Type	Default Transport Fuel Usage Rate (gptm or mpg)	Transport Fuel Usage Rate Override (gptm or mpg)	Fuel Used for Materials Transport (gallons)	Notes and Description of Materials
orange mesh fencing	ft	600	7.8	Refined	Virgin	Yes	500	60	1	No	60	Truck (mpg)	Diesel	6		10.000	
			0					60	1	No	60	Truck (mpg)	Diesel	6		10.000	
absorbent composite socks	ft	600	3.9	Refined	Virgin	Yes	500	60	1	No	60	Truck (mpg)	Diesel	6		10.000	erosion control
			0					60	1	No	60	Truck (mpg)	Diesel	6		10.000	
6-mil 40' x 100' polyurethane sheeting	rolls	7	0.4165	Refined	Virgin	Yes	500	60	1	No	60	Truck (mpg)	Diesel	6		10.000	used for soil stockpiles & USTs
			0					60	1	No	60	Truck (mpg)	Diesel	6		10.000	
aggregate 2" stone	ton	60	60	Unrefined	Recycled	Yes	500	60	1	No	60	Truck (mpg)	Diesel	6		10.000	construction entrance pad
			0					60	1	No	60	Truck (mpg)	Diesel	6		10.000	
filter cloth	lb	60	0.03	Refined	Virgin	Yes	500	60	1	No	60	Truck (mpg)	Diesel	6		10.000	construction entrance pad (based on Mirari 100x
			0					60	1	No	60	Truck (mpg)	Diesel	6		10.000	
			0														
			0														
			0														
			0														
			0														
			0														
			0														
			0														

**** Please see the "Detailed Notes and Explanations" tab for instructions on specifying "User-Defined Materials" in the dropdown menu.***

***** Selections must be made in Columns F - H in order for the footprint calculations to be performed. Please see the "Detailed Notes and Explanations" tab for further information.***

****** Please see the "Detailed Notes and Explanations" tab for instructions on selecting mode of transportation, accounting for empty return trips, and other aspects of data entry in Columns L, N, O, and Q. Units are gallons for Fuel Used for Materials Transport and miles/gallon (mpg) or gallons per ton-mile (gptm) for Transport Fuel Usage Rate.***

Input Worksheet for Site Controls

Remedy Component that this Input worksheet is part of:	Component 1	Site Controls

Waste Disposal and Transportation

Waste Destination*	Unit	Quantity	Tons	Default One-way Distance to Site (miles)	One-way Distance to Site Override (miles)	Number of One-way Trips to Site	Include Return Trip in Calculations?	Total Distance Transported (miles)	Mode of Transportation **	Transport Fuel Type	Default Transport Fuel Usage Rate (gptm or mpg)	Transport Fuel Usage Rate Override (gptm or mpg)	Fuel Used for Waste Transport (gallons)	Notes and Description of Waste
			0											
			0											
			0											
			0											
			0											
			0											
			0											
			0											
			0											
			0											
			0											
			0											

**** No footprint is calculated for the Recycled/Reused On-Site and Off-Site selections. Please see the "Detailed Notes and Explanations" tab for instructions on specifying "User-Defined" selections in the dropdown menu.***

***** Please see the "Detailed Notes and Explanations" tab for instructions on selecting mode of transportation, accounting for empty return trips, and other aspects of data entry in Columns I, K, L, and N. Units are gallons for Fuel Used for Waste Transport and miles/gallon (mpg) or gallons per ton-mile (gptm) for Transport Fuel Usage Rate.***

Type of Water Used

Source of Water Used*	Unit	Quantity	Tons	Source Location/Aquifer (optional)	Quality of Water Used (optional)	Water Uses (optional)	Fate of Used Water (optional)
Public Water	gal x 1000	204	850.68			Assuming 2,000 gal/day for tire washing, dust mitigation/control	
			0				
			0				
			0				
			0				
			0				
			0				
			0				
			0				
			0				
			0				
			0				

**** Only the "Public Water" selection has an associated footprint. No footprint is calculated for the other water source selections.***

Note: Information entered in Columns F - V (Source/Quality/Use/Fate) is not compiled or reported by SEFA.

Input Worksheet for Site Controls

Remedy Component that this Input worksheet is part of:	Component 1	Site Controls

Other Energy Use and Air Emissions

Item		Units	Quantity	Notes
On-Site				
User-defined on-site conventional energy use #1	*User-Defined	TBD		
User-defined on-site conventional energy use #2	*User-Defined	TBD		
On-site HAP process emissions**		lbs		
On-site GHG emissions**		lbs CO2e		
On-site carbon storage**		lbs CO2e		
Landfill gas flared on-site		ccf CH4		
Other on-site NOx emissions or reductions**		lbs		
Other on-site SOx emissions or reductions**		lbs		
Other on-site PM emissions or reductions**		lbs		
Transportation		**Units**	**Quantity**	**Notes**
User-defined conventional energy transportation #1	*User-Defined	TBD	10	
User-defined conventional energy transportation #2	*User-Defined	TBD		

**** Enter units and conversion factors on "User Defined Factors" tab***
***** Enter a positive number for emissions and a negative number for reductions, avoidances, or storage***
See the "Detailed Notes and Explanations" tab for use of this table.

Off-Site Laboratory Analysis

Parameter and Notes	Number of Samples	Comments
Totals	**0**	

Other Voluntary Renewable Energy Use

Item		Units	Quantity	Notes
User-defined on-site renewable energy use #1	*User-Defined	TBD		
User-defined on-site renewable energy use #2	*User-Defined	TBD		
User-defined renewable energy transportation #1	*User-Defined	TBD		
User-defined renewable energy transportation #2	*User-Defined	TBD		
Voluntary purchase of renewable electricity**		MWh		
Voluntary purchase of RECs**		MWh		

**** Enter units and conversion factors on "User Defined Factors" tab***
***** Complete information on provider in the table to the right. No footprint reductions are associated with the voluntary purchases.***
See the "Detailed Notes and Explanations" tab for use of this table

Description of purchased renewable electricity (green pricing product or green marketing product)	Provider:	
	Type of product:	
	Type of renewable energy source:	
	Date of renewable system installation:	
Description of purchased RECs	Provider:	
	Type of renewable energy source:	
	Date of renewable system installation:	
	Location of renewable system installation:	

Input Worksheet for Excavation

Please specify which Remedy Component this Input worksheet is part of: (Select "Off" to exclude this Input worksheet from calculations and results)	**Component 2**	**Excavation**

General Scope

Excavation and drilling of insitu soils located at the site, loading into tri-axle trucks for off-site disposal. Estimated Project duration is 102 days. Note: 1. All "Personnel Transportation" for the duration of the work has been captured in Component 2 as the same personnel will be on-site for each Component (2-5).

Example Items Eliminated through Screening Process

Other Notes and References

Assume only soil exceeding RRU SCOs is removed

Personnel Transportation

Participant	Number of Roundtrips to Site	Roundtrip Distance to Site (miles)	Mode of Transportation*	Transport Fuel Type*	Total Distance Transported (miles)	Default Fuel Usage Rate**	Fuel Usage Rate Override**	Fuel Used for Personnel Transport**	Activity or Notes
Gallagher Bassett Technical Services Technician									
Contractor (7 empl.)									

**** See the "Detailed Notes and Explanations" tab for explanation of transport and fuel options.***

***** for biodiesel, B20, diesel, and gasoline, units are gallons for Fuel Used and miles/gallon for Fuel Usage Rate; for natural gas, units are hundreds of cubic feet (ccf) for Fuel Used and ccf/miles for Fuel Usage Rate; for electricity, units are miles/kWh for Fuel Usage Rate and the kWh (Fuel Used) are added to total grid electricity used (cell G69).***

On-Site Equipment Use and Transportation

Equipment Type*	HP*	Load Factor (%)*	Equipment Fuel Type**	Equipment Fuel Usage Rate	Equipment Hours Operated	Fuel Used for On-site Equipment	Equipment weight (tons)	Number of Equipment Roundtrips to Site	Roundtrip Distance to Site (miles)	Total Distance Transported (miles)	Mode of Transportation	Transport Fuel Type***	Default Transport Fuel Usage Rate (gptm or mpg)	Transport Fuel Usage Rate Override (gptm or mpg)	Fuel Used for Equipment Transport (gallons)	Activity or Notes
Excavator - medium (175 HP)	165	75%	Diesel between 75 and 750 hp	6.799450549	714	4854.807692	27.83	1	40	40	Truck (mpg)	Diesel	6		6.7	PC238 Excavator Specs (example)
Excavator - large (250 HP)	257	75%	Diesel between 75 and 750 hp	10.59065934	714	7561.730769	40.2735	1	40	40	Truck (mpg)	Diesel	6		6.7	PC360 Excavator Specs (example)

**** HP and Load Factor must be entered by user in Columns C and D. Please see the "Detailed Notes and Explanations" tab for further explanation.***

***** For biodiesel, B20, diesel, gasoline, and liquified petroleum gas, units are gallons for Fuel Used for On-site Equipment and gallons/hr for Equipment Fuel Usage Rate; for compressed natural gas units are ccf (hundreds of cubic feet) for Fuel Used for On-site Equipment and ccf/hr for Equipment Fuel Usage Rate.***

****** Please see the "Detailed Notes and Explanations" tab for instructions on selecting mode of transportation and other aspects of data entry in Columns M, N, and P. Units are gallons for Fuel Used for Equipment Transport and miles/gallon (mpg) or gallons per ton-mile (gptm) for Transport Fuel Usage Rate.***

Input Worksheet for Excavation

Remedy Component that this Input worksheet is part of:	Component 2	Excavation

On-Site Electricity Use

Equipment Type	HP	Load Factor (%)	Efficiency (%)	Electrical Rating (kW)	Hours Used	Energy Used (kWh)	Notes
<Equip. with HP, Efficiency, and Hours>							
<Equip. with HP, Efficiency, and Hours>							
<Equip. with HP, Efficiency, and Hours>							
<Equip. with HP, Efficiency, and Hours>							
<Equip. with known kW rating>							
<Equip. with known kW rating>							
<Equip. with known kW rating>							
<Equip. with known kW rating>							
<Equip. with known total Energy Used>							
<Equip. with known total Energy Used>							
<Equip. with known total Energy Used>							
<Equip. with known total Energy Used>							
						Estimated Total Electricity Usage Based on Above	0
						Renewable Electricity Generated On-Site*	
						Total Electricity Usage Based on Personnel Transportation	0
						Total Grid Electricity Used	0

** Electricity generated on-site from renewable resources, for which the facility retains the rights to the renewable energy (i.e., does not sell renewable energy certificates associated with the renewable energy generation).*

On-Site Natural Gas Use

Equipment Type	Power Rating (Btu/hr)	Efficiency (%)	Hours Used	Energy Required (Btu)	Natural Gas Used (ccf)	Notes
					0	
				0		
			Totals	0	0	0

Landfill Gas Combusted On-Site for Energy Use

Equipment Type	Landfill Gas (ccf)	% Methane by volume	Used for electricity?	Landfill Gas Methane Used (ccf)	Notes
				0	
				0	
				0	
			Total	0	

Please see the "Detailed Notes and Explanations" tab for instructions on using the two tables above ("On-site Natural Gas Use" and "Landfill Gas Combusted On-Site for Energy Use"). In the two tables above, ccf = hundreds of cubic feet.

Materials Use and Transportation

Material Type*	Unit	Quantity	Tons	Is the Material Refined or Unrefined?**	Material Source: Virgin, Recycled, or Reused?**	Calculate Item Footprint?**	Default One-way Distance to Site (miles)	One-way Distance to Site Override (miles)	Number of One-way Trips to Site	Include Return Trip in Calculations?	Total Distance Transported (miles)	Mode of Transportation***	Transport Fuel Type	Default Transport Fuel Usage Rate (gptm or mpg)	Transport Fuel Usage Rate Override (gptm or mpg)	Fuel Used for Materials Transport (gallons)	Notes and Description of Materials
			0														
			0														
			0														
			0														
			0														
			0														
			0														
			0														
			0														
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			0														
			0														
			0														
			0														
			0														
			0														

** Please see the "Detailed Notes and Explanations" tab for instructions on specifying "User-Defined Materials" in the dropdown menu.*

*** Selections must be made in Columns F - H in order for the footprint calculations to be performed. Please see the "Detailed Notes and Explanations" tab for further information.*

**** Please see the "Detailed Notes and Explanations" tab for instructions on selecting mode of transportation, accounting for empty return trips, and other aspects of data entry in Columns L, N, O, and Q. Units are gallons for Fuel Used for Materials Transport and miles/gallon (mpg) or gallons per ton-mile (gptm) for Transport Fuel Usage Rate.*

Input Worksheet for Excavation

Remedy Component that this Input worksheet is part of:	Component 2	Excavation

Waste Disposal and Transportation

Waste Destination*	Unit	Quantity	Tons	Default One-way Distance to Site (miles)	One-way Distance to Site Override (miles)	Number of One-way Trips to Site	Include Return Trip in Calculations?	Total Distance Transported (miles)	Mode of Transportation **	Transport Fuel Type	Default Transport Fuel Usage Rate (gptm or mpg)	Transport Fuel Usage Rate Override (gptm or mpg)	Fuel Used for Waste Transport (gallons)	Notes and Description of Waste
			0											
			0											
			0											
			0											
			0											
			0											
			0											
			0											
			0											
			0											
			0											
			0											

** No footprint is calculated for the Recycled/Reused On-Site and Off-Site selections. Please see the "Detailed Notes and Explanations" tab for instructions on specifying "User-Defined" selections in the dropdown menu.*

*** Please see the "Detailed Notes and Explanations" tab for instructions on selecting mode of transportation, accounting for empty return trips, and other aspects of data entry in Columns I, K, L, and N. Units are gallons for Fuel Used for Waste Transport and miles/gallon (mpg) or gallons per ton-mile (gptm) for Transport Fuel Usage Rate.*

Type of Water Used

Source of Water Used*	Unit	Quantity	Tons	Source Location/Aquifer (optional)	Quality of Water Used (optional)	Water Uses (optional)	Fate of Used Water (optional)
			0				
			0				
			0				
			0				
			0				
			0				
			0				
			0				
			0				
			0				
			0				

** Only the "Public Water" selection has an associated footprint. No footprint is calculated for the other water source selections.*

Note: Information entered in Columns F - V (Source/Quality/Use/Fate) is not compiled or reported by SEFA.

Input Worksheet for Excavation

Remedy Component that this Input worksheet is part of:	Component 2	Excavation

Other Energy Use and Air Emissions

Item		Units	Quantity	Notes
On-Site				
User-defined on-site conventional energy use #1	*User-Defined	TBD		
User-defined on-site conventional energy use #2	*User-Defined	TBD		
On-site HAP process emissions**		lbs		
On-site GHG emissions**		lbs CO2e		
On-site carbon storage**		lbs CO2e		
Landfill gas flared on-site		ccf CH4		
Other on-site NOx emissions or reductions**		lbs		
Other on-site SOx emissions or reductions**		lbs		
Other on-site PM emissions or reductions**		lbs		
Transportation		**Units**	**Quantity**	**Notes**
User-defined conventional energy transportation #1	*User-Defined	TBD	10	
User-defined conventional energy transportation #2	*User-Defined	TBD		

**** Enter units and conversion factors on "User Defined Factors" tab***
***** Enter a positive number for emissions and a negative number for reductions, avoidances, or storage***
See the "Detailed Notes and Explanations" tab for use of this table.

Off-Site Laboratory Analysis

Parameter and Notes	Number of Samples	Comments
Totals	**0**	

Other Voluntary Renewable Energy Use

Item		Units	Quantity	Notes
User-defined on-site renewable energy use #1	*User-Defined	TBD		
User-defined on-site renewable energy use #2	*User-Defined	TBD		
User-defined renewable energy transportation #1	*User-Defined	TBD		
User-defined renewable energy transportation #2	*User-Defined	TBD		
Voluntary purchase of renewable electricity**		MWh		
Voluntary purchase of RECs**		MWh		

**** Enter units and conversion factors on "User Defined Factors" tab***
***** Complete information on provider in the table to the right. No footprint reductions are associated with the voluntary purchases.***
See the "Detailed Notes and Explanations" tab for use of this table

Description of purchased renewable electricity (green pricing product or green marketing product)	Provider:	
	Type of product:	
	Type of renewable energy source:	
	Date of renewable system installation:	
Description of purchased RECs	Provider:	
	Type of renewable energy source:	
	Date of renewable system installation:	
	Location of renewable system installation:	

Input Worksheet for Waste T&D

Please specify which Remedy Component this Input worksheet is part of: (Select "Off" to exclude this Input worksheet from calculations and results)	**Component 3**	**Waste Transport & Disposal**

General Scope

Transportation and disposal of contaminated soil at approved permitted off-site disposal facilities, for the duration of the remediation remedy implementation. Note: 1. All "Personnel Transportation" for the duration of the work has been captured in Component 2 as the same personnel will be on-site for each Component (2-5). Equipment is summarized in Component 3.

Example Items Eliminated through Screening Process

Other Notes and References

Personnel Transportation

Participant	Number of Roundtrips to Site	Roundtrip Distance to Site (miles)	Mode of Transportation*	Transport Fuel Type*	Total Distance Transported (miles)	Default Fuel Usage Rate**	Fuel Usage Rate Override**	Fuel Used for Personnel Transport**	Activity or Notes
Gallagher Bassett Technical Services Technician									
Contractor (7 empl.)									

**** See the "Detailed Notes and Explanations" tab for explanation of transport and fuel options.***

***** for biodiesel, B20, diesel, and gasoline, units are gallons for Fuel Used and miles/gallon for Fuel Usage Rate; for natural gas, units are hundreds of cubic feet (ccf) for Fuel Used and ccf/miles for Fuel Usage Rate; for electricity, units are miles/kWh for Fuel Usage Rate and the kWh (Fuel Used) are added to total grid electricity used (cell G69).***

On-Site Equipment Use and Transportation

Equipment Type*	HP*	Load Factor (%)*	Equipment Fuel Type**	Equipment Fuel Usage Rate	Equipment Hours Operated	Fuel Used for On-site Equipment	Equipment weight (tons)	Number of Equipment Roundtrips to Site	Roundtrip Distance to Site (miles)	Total Distance Transported (miles)	Mode of Transportation	Transport Fuel Type***	Default Transport Fuel Usage Rate (gptm or mpg)	Transport Fuel Usage Rate Override (gptm or mpg)	Fuel Used for Equipment Transport (gallons)	Activity or Notes

**** HP and Load Factor must be entered by user in Columns C and D. Please see the "Detailed Notes and Explanations" tab for further explanation.***

***** For biodiesel, B20, diesel, gasoline, and liquified petroleum gas, units are gallons for Fuel Used for On-site Equipment and gallons/hr for Equipment Fuel Usage Rate; for compressed natural gas units are ccf (hundreds of cubic feet) for Fuel Used for On-site Equipment and ccf/hr for Equipment Fuel Usage Rate.***

****** Please see the "Detailed Notes and Explanations" tab for instructions on selecting mode of transportation and other aspects of data entry in Columns M, N, and P. Units are gallons for Fuel Used for Equipment Transport and miles/gallon (mpg) or gallons per ton-mile (gptm) for Transport Fuel Usage Rate.***

Input Worksheet for Waste T&D

Remedy Component that this Input worksheet is part of:	Component 3	Waste Transport & Disposal

On-Site Electricity Use

Equipment Type	HP	Load Factor (%)	Efficiency (%)	Electrical Rating (kW)	Hours Used	Energy Used (kWh)	Notes
<Equip. with HP, Efficiency, and Hours>							
<Equip. with HP, Efficiency, and Hours>							
<Equip. with HP, Efficiency, and Hours>							
<Equip. with HP, Efficiency, and Hours>							
<Equip. with known kW rating>							
<Equip. with known kW rating>							
<Equip. with known kW rating>							
<Equip. with known kW rating>							
<Equip. with known total Energy Used>							
<Equip. with known total Energy Used>							
<Equip. with known total Energy Used>							
<Equip. with known total Energy Used>							
					Estimated Total Electricity Usage Based on Above	0	
					Renewable Electricity Generated On-Site*		
					Total Electricity Usage Based on Personnel Transportation	0	
					Total Grid Electricity Used	0	

**** Electricity generated on-site from renewable resources, for which the facility retains the rights to the renewable energy (i.e., does not sell renewable energy certificates associated with the renewable energy generation).***

On-Site Natural Gas Use

Equipment Type	Power Rating (Btu/hr)	Efficiency (%)	Hours Used	Energy Required (Btu)	Natural Gas Used (ccf)	Notes
					0	
				0		
			Totals	0	0	0

Landfill Gas Combusted On-Site for Energy Use

Equipment Type	Landfill Gas (ccf)	% Methane by volume	Used for electricity?	Landfill Gas Methane Used (ccf)	Notes
				0	
				0	
				0	
			Total	0	

Please see the "Detailed Notes and Explanations" tab for instructions on using the two tables above ("On-site Natural Gas Use" and "Landfill Gas Combusted On-Site for Energy Use"). In the two tables above, ccf = hundreds of cubic feet.

Materials Use and Transportation

Material Type*	Unit	Quantity	Tons	Is the Material Refined or Unrefined?**	Material Source: Virgin, Recycled, or Reused?**	Calculate Item Footprint?**	Default One-way Distance to Site (miles)	One-way Distance to Site Override (miles)	Number of One-way Trips to Site	Include Return Trip in Calculations?	Total Distance Transported (miles)	Mode of Transportation***	Transport Fuel Type	Default Transport Fuel Usage Rate (gptm or mpg)	Transport Fuel Usage Rate Override (gptm or mpg)	Fuel Used for Materials Transport (gallons)	Notes and Description of Materials
			0														
			0														
			0														
			0														
			0														
			0														
			0														
			0														
			0														
			0														
			0														
			0														
			0														
			0														
			0														
			0														
			0														
			0														
			0														

**** Please see the "Detailed Notes and Explanations" tab for instructions on specifying "User-Defined Materials" in the dropdown menu.***

***** Selections must be made in Columns F - H in order for the footprint calculations to be performed. Please see the "Detailed Notes and Explanations" tab for further information.***

****** Please see the "Detailed Notes and Explanations" tab for instructions on selecting mode of transportation, accounting for empty return trips, and other aspects of data entry in Columns L, N, O, and Q. Units are gallons for Fuel Used for Materials Transport and miles/gallon (mpg) or gallons per ton-mile (gptm) for Transport Fuel Usage Rate.***

Input Worksheet for Waste T&D

Remedy Component that this Input worksheet is part of:	Component 3	Waste Transport & Disposal

Waste Disposal and Transportation

Waste Destination*	Unit	Quantity	Tons	Default One-way Distance to Site (miles)	One-way Distance to Site Override (miles)	Number of One-way Trips to Site	Include Return Trip in Calculations?	Total Distance Transported (miles)	Mode of Transportation **	Transport Fuel Type	Default Transport Fuel Usage Rate (gptm or mpg)	Transport Fuel Usage Rate Override (gptm or mpg)	Fuel Used for Waste Transport (gallons)	Notes and Description of Waste
			0		85	314	No	26690	Truck (mpg)	Diesel	6		4448.3	
User-defined non-hazardous waste destination #1	ton	7848	7848.425926	25	85	314	No	26690	Truck (mpg)	Diesel	6		4448.3	
			0											
			0											
			0											
			0											
			0											
			0											
			0											
			0											
			0											
			0											

**** No footprint is calculated for the Recycled/Reused On-Site and Off-Site selections. Please see the "Detailed Notes and Explanations" tab for instructions on specifying "User-Defined" selections in the dropdown menu.***

***** Please see the "Detailed Notes and Explanations" tab for instructions on selecting mode of transportation, accounting for empty return trips, and other aspects of data entry in Columns I, K, L, and N. Units are gallons for Fuel Used for Waste Transport and miles/gallon (mpg) or gallons per ton-mile (gptm) for Transport Fuel Usage Rate.***

Type of Water Used

Source of Water Used*	Unit	Quantity	Tons	Source Location/Aquifer (optional)	Quality of Water Used (optional)	Water Uses (optional)	Fate of Used Water (optional)
			0				
			0				
			0				
			0				
			0				
			0				
			0				
			0				
			0				
			0				
			0				

**** Only the "Public Water" selection has an associated footprint. No footprint is calculated for the other water source selections.***

Note: Information entered in Columns F - V (Source/Quality/Use/Fate) is not compiled or reported by SEFA.

Input Worksheet for Waste T&D

Remedy Component that this Input worksheet is part of:	Component 3	Waste Transport & Disposal

Other Energy Use and Air Emissions

Item		Units	Quantity	Notes
On-Site				
User-defined on-site conventional energy use #1	*User-Defined	TBD		
User-defined on-site conventional energy use #2	*User-Defined	TBD		
On-site HAP process emissions**		lbs		
On-site GHG emissions**		lbs CO2e		
On-site carbon storage**		lbs CO2e		
Landfill gas flared on-site		ccf CH4		
Other on-site NOx emissions or reductions**		lbs		
Other on-site SOx emissions or reductions**		lbs		
Other on-site PM emissions or reductions**		lbs		
Transportation		Units	Quantity	Notes
User-defined conventional energy transportation #1	*User-Defined	TBD	10	
User-defined conventional energy transportation #2	*User-Defined	TBD		

**** Enter units and conversion factors on "User Defined Factors" tab***
***** Enter a positive number for emissions and a negative number for reductions, avoidances, or storage***
See the "Detailed Notes and Explanations" tab for use of this table.

Other Voluntary Renewable Energy Use

Item		Units	Quantity	Notes
User-defined on-site renewable energy use #1	*User-Defined	TBD		
User-defined on-site renewable energy use #2	*User-Defined	TBD		
User-defined renewable energy transportation #1	*User-Defined	TBD		
User-defined renewable energy transportation #2	*User-Defined	TBD		
Voluntary purchase of renewable electricity**		MWh		
Voluntary purchase of RECs**		MWh		

**** Enter units and conversion factors on "User Defined Factors" tab***
***** Complete information on provider in the table to the right. No footprint reductions are associated with the voluntary purchases.***
See the "Detailed Notes and Explanations" tab for use of this table

Off-Site Laboratory Analysis

Parameter and Notes	Number of Samples	Comments
Totals	**0**	

Description of purchased renewable electricity (green pricing product or green marketing product)	Provider:	
	Type of product:	
	Type of renewable energy source:	
	Date of renewable system installation:	
Description of purchased RECs	Provider:	
	Type of renewable energy source:	
	Date of renewable system installation:	
	Location of renewable system installation:	

Input Worksheet for B&R

Please specify which Remedy Component this Input worksheet is part of: (Select "Off" to exclude this Input worksheet from calculations and results)	Component 4	Backfill & Restoration

General Scope

Importation of clean fill and backfill, grading and compaction to grade, for the duration of the remedy. Note: 1. All "Personnel Transportation" for the duration of the work has been captured in Component 2 as the same personnel will be on-site for each Component (2-5). 2. Equipment is summarized in Component 3.

Example Items Eliminated through Screening Process

Other Notes and References

Personnel Transportation

Participant	Number of Roundtrips to Site	Roundtrip Distance to Site (miles)	Mode of Transportation*	Transport Fuel Type*	Total Distance Transported (miles)	Default Fuel Usage Rate**	Fuel Usage Rate Override**	Fuel Used for Personnel Transport**	Activity or Notes
Gallagher Bassett Technical Services Technician									
Contractor (7 empl.)									
Total Safety (1 empl.)									

**** See the "Detailed Notes and Explanations" tab for explanation of transport and fuel options.***

***** for biodiesel, B20, diesel, and gasoline, units are gallons for Fuel Used and miles/gallon for Fuel Usage Rate; for natural gas, units are hundreds of cubic feet (ccf) for Fuel Used and ccf/miles for Fuel Usage Rate; for electricity, units are miles/kWh for Fuel Usage Rate and the kWh (Fuel Used) are added to total grid electricity used (cell G69).***

On-Site Equipment Use and Transportation

Equipment Type*	HP*	Load Factor (%)*	Equipment Fuel Type**	Equipment Fuel Usage Rate	Equipment Hours Operated	Fuel Used for On-site Equipment	Equipment weight (tons)	Number of Equipment Roundtrips to Site	Roundtrip Distance to Site (miles)	Total Distance Transported (miles)	Mode of Transportation	Transport Fuel Type***	Default Transport Fuel Usage Rate (gptm or mpg)	Transport Fuel Usage Rate Override (gptm or mpg)	Fuel Used for Equipment Transport (gallons)	Activity or Notes

**** HP and Load Factor must be entered by user in Columns C and D. Please see the "Detailed Notes and Explanations" tab for further explanation.***

***** For biodiesel, B20, diesel, gasoline, and liquified petroleum gas, units are gallons for Fuel Used for On-site Equipment and gallons/hr for Equipment Fuel Usage Rate; for compressed natural gas units are ccf (hundreds of cubic feet) for Fuel Used for On-site Equipment and ccf/hr for Equipment Fuel Usage Rate.***

****** Please see the "Detailed Notes and Explanations" tab for instructions on selecting mode of transportation and other aspects of data entry in Columns M, N, and P. Units are gallons for Fuel Used for Equipment Transport and miles/gallon (mpg) or gallons per ton-mile (gptm) for Transport Fuel Usage Rate.***

Input Worksheet for B&R

Remedy Component that this Input worksheet is part of:	Component 4	Backfill & Restoration

On-Site Electricity Use

Equipment Type	HP	Load Factor (%)	Efficiency (%)	Electrical Rating (kW)	Hours Used	Energy Used (kWh)	Notes
<Equip. with HP, Efficiency, and Hours>							
<Equip. with HP, Efficiency, and Hours>							
<Equip. with HP, Efficiency, and Hours>							
<Equip. with HP, Efficiency, and Hours>							
<Equip. with known kW rating>							
<Equip. with known kW rating>							
<Equip. with known kW rating>							
<Equip. with known kW rating>							
<Equip. with known total Energy Used>							
<Equip. with known total Energy Used>							
<Equip. with known total Energy Used>							
<Equip. with known total Energy Used>							
						Estimated Total Electricity Usage Based on Above	0
						Renewable Electricity Generated On-Site*	
						Total Electricity Usage Based on Personnel Transportation	0
						Total Grid Electricity Used	0

**** Electricity generated on-site from renewable resources, for which the facility retains the rights to the renewable energy (i.e., does not sell renewable energy certificates associated with the renewable energy generation).***

On-Site Natural Gas Use

Equipment Type	Power Rating (Btu/hr)	Efficiency (%)	Hours Used	Energy Required (Btu)	Natural Gas Used (ccf)	Notes
					0	
				0		
			Totals	0	0	0

Landfill Gas Combusted On-Site for Energy Use

Equipment Type	Landfill Gas (ccf)	% Methane by volume	Used for electricity?	Landfill Gas Methane Used (ccf)	Notes
				0	
				0	
				0	
			Total	0	

Please see the "Detailed Notes and Explanations" tab for instructions on using the two tables above ("On-site Natural Gas Use" and "Landfill Gas Combusted On-Site for Energy Use"). In the two tables above, ccf = hundreds of cubic feet.

Materials Use and Transportation

Material Type*	Unit	Quantity	Tons	Is the Material Refined or Unrefined?**	Material Source: Virgin, Recycled, or Reused?**	Calculate Item Footprint?**	Default One-way Distance to Site (miles)	One-way Distance to Site Override (miles)	Number of One-way Trips to Site	Include Return Trip in Calculations?	Total Distance Transported (miles)	Mode of Transportation***	Transport Fuel Type	Default Transport Fuel Usage Rate (gptm or mpg)	Transport Fuel Usage Rate Override (gptm or mpg)	Fuel Used for Materials Transport (gallons)	Notes and Description of Materials
Clean Fill	ton	4786	4785.925926	Unrefined	Recycled	Yes	500	40	240	No	9600	Truck (mpg)	Diesel	6		1600.000	
			0					40	240	No	9600	Truck (mpg)	Diesel	6		1600.000	
Recycled Stone	ton	3063	3062.5	Unrefined	Recycled	Yes	500	20	153	No	3060	Truck (mpg)	Diesel	6		510.000	
			0					20	153	No	3060	Truck (mpg)	Diesel	6		510.000	
20-mil vapor barrier	sqft	74052	10.219176	Refined	Virgin	Yes	500	20	1	No	20	Truck (mpg)	Diesel	6		3.333	Construction measure (not an EC)
			0					20	1	No	20	Truck (mpg)	Diesel	6		3.333	
			0														
			0														
			0														
			0														
			0														
			0														
			0														
			0														
			0														
			0														
			0														
			0														

**** Please see the "Detailed Notes and Explanations" tab for instructions on specifying "User-Defined Materials" in the dropdown menu.***

***** Selections must be made in Columns F - H in order for the footprint calculations to be performed. Please see the "Detailed Notes and Explanations" tab for further information.***

****** Please see the "Detailed Notes and Explanations" tab for instructions on selecting mode of transportation, accounting for empty return trips, and other aspects of data entry in Columns L, N, O, and Q. Units are gallons for Fuel Used for Materials Transport and miles/gallon (mpg) or gallons per ton-mile (gptm) for Transport Fuel Usage Rate.***

Input Worksheet for B&R

Remedy Component that this Input worksheet is part of:	Component 4	Backfill & Restoration

Waste Disposal and Transportation

Waste Destination*	Unit	Quantity	Tons	Default One-way Distance to Site (miles)	One-way Distance to Site Override (miles)	Number of One-way Trips to Site	Include Return Trip in Calculations?	Total Distance Transported (miles)	Mode of Transportation **	Transport Fuel Type	Default Transport Fuel Usage Rate (gptm or mpg)	Transport Fuel Usage Rate Override (gptm or mpg)	Fuel Used for Waste Transport (gallons)	Notes and Description of Waste
			0											
			0											
			0											
			0											
			0											
			0											
			0											
			0											
			0											
			0											
			0											
			0											

**** No footprint is calculated for the Recycled/Reused On-Site and Off-Site selections. Please see the "Detailed Notes and Explanations" tab for instructions on specifying "User-Defined" selections in the dropdown menu.***

***** Please see the "Detailed Notes and Explanations" tab for instructions on selecting mode of transportation, accounting for empty return trips, and other aspects of data entry in Columns I, K, L, and N. Units are gallons for Fuel Used for Waste Transport and miles/gallon (mpg) or gallons per ton-mile (gptm) for Transport Fuel Usage Rate.***

Type of Water Used

Source of Water Used*	Unit	Quantity	Tons	Source Location/Aquifer (optional)	Quality of Water Used (optional)	Water Uses (optional)	Fate of Used Water (optional)
			0				
			0				
			0				
			0				
			0				
			0				
			0				
			0				
			0				
			0				
			0				

**** Only the "Public Water" selection has an associated footprint. No footprint is calculated for the other water source selections.***

Note: Information entered in Columns F - V (Source/Quality/Use/Fate) is not compiled or reported by SEFA.

Input Worksheet for B&R

Remedy Component that this Input worksheet is part of:	Component 4	Backfill & Restoration

Other Energy Use and Air Emissions

Item		Units	Quantity	Notes
On-Site				
User-defined on-site conventional energy use #1	*User-Defined	TBD		
User-defined on-site conventional energy use #2	*User-Defined	TBD		
On-site HAP process emissions**		lbs		
On-site GHG emissions**		lbs CO2e		
On-site carbon storage**		lbs CO2e		
Landfill gas flared on-site		ccf CH4		
Other on-site NOx emissions or reductions**		lbs		
Other on-site SOx emissions or reductions**		lbs		
Other on-site PM emissions or reductions**		lbs		
Transportation		**Units**	**Quantity**	**Notes**
User-defined conventional energy transportation #1	*User-Defined	TBD	10	
User-defined conventional energy transportation #2	*User-Defined	TBD		

**** Enter units and conversion factors on "User Defined Factors" tab***
***** Enter a positive number for emissions and a negative number for reductions, avoidances, or storage***
See the "Detailed Notes and Explanations" tab for use of this table.

Other Voluntary Renewable Energy Use

Item		Units	Quantity	Notes
User-defined on-site renewable energy use #1	*User-Defined	TBD		
User-defined on-site renewable energy use #2	*User-Defined	TBD		
User-defined renewable energy transportation #1	*User-Defined	TBD		
User-defined renewable energy transportation #2	*User-Defined	TBD		
Voluntary purchase of renewable electricity**		MWh		
Voluntary purchase of RECs**		MWh		

**** Enter units and conversion factors on "User Defined Factors" tab***
***** Complete information on provider in the table to the right. No footprint reductions are associated with the voluntary purchases.***
See the "Detailed Notes and Explanations" tab for use of this table

Off-Site Laboratory Analysis

Parameter and Notes	Number of Samples	Comments
Totals	**0**	

Description of purchased renewable electricity (green pricing product or green marketing product)	Provider:	
	Type of product:	
	Type of renewable energy source:	
	Date of renewable system installation:	
Description of purchased RECs	Provider:	
	Type of renewable energy source:	
	Date of renewable system installation:	
	Location of renewable system installation:	

Input Worksheet for EPS & LTM

Please specify which Remedy Component this Input worksheet is part of: (Select "Off" to exclude this Input worksheet from calculations and results)	Component 5	Endpoint Sampling & Long-Term Monitoring

General Scope

Scope of work includes endpoint sampling following site remediation, and the implementation of institutional controls

Example Items Eliminated through Screening Process

Other Notes and References

Assumptions: Long-Term Monitoring of Institutional Control Compliance for a duration of 25 years. Assume annual site visits in conformance with a NYSDEC-approved SMP. Endpoints will be analyzed for Full Part 375.

Personnel Transportation

Participant	Number of Roundtrips to Site	Roundtrip Distance to Site (miles)	Mode of Transportation*	Transport Fuel Type*	Total Distance Transported (miles)	Default Fuel Usage Rate**	Fuel Usage Rate Override**	Fuel Used for Personnel Transport**	Activity or Notes
Gallagher Bassett Technical Services									See Comp 1 for oversight & endpoints
Lab Courier - Phoenix	5	110	Car	Gasoline	550	25		22	Sample pick-up from GBTS Poughkeepsie office
Gallagher Bassett Technical Services	25	185	Car	Gasoline	4625	25	30	154.2	Long-Term Monitoring, SMP inspections

**** See the "Detailed Notes and Explanations" tab for explanation of transport and fuel options.***

***** for biodiesel, B20, diesel, and gasoline, units are gallons for Fuel Used and miles/gallon for Fuel Usage Rate; for natural gas, units are hundreds of cubic feet (ccf) for Fuel Used and ccf/miles for Fuel Usage Rate; for electricity, units are miles/kWh for Fuel Usage Rate and the kWh (Fuel Used) are added to total grid electricity used (cell G69).***

On-Site Equipment Use and Transportation

Equipment Type*	HP*	Load Factor (%)*	Equipment Fuel Type**	Equipment Fuel Usage Rate	Equipment Hours Operated	Fuel Used for On-site Equipment	Equipment weight (tons)	Number of Equipment Roundtrips to Site	Roundtrip Distance to Site (miles)	Total Distance Transported (miles)	Mode of Transportation	Transport Fuel Type***	Default Transport Fuel Usage Rate (gptm or mpg)	Transport Fuel Usage Rate Override (gptm or mpg)	Fuel Used for Equipment Transport (gallons)	Activity or Notes

**** HP and Load Factor must be entered by user in Columns C and D. Please see the "Detailed Notes and Explanations" tab for further explanation.***

***** For biodiesel, B20, diesel, gasoline, and liquified petroleum gas, units are gallons for Fuel Used for On-site Equipment and gallons/hr for Equipment Fuel Usage Rate; for compressed natural gas units are ccf (hundreds of cubic feet) for Fuel Used for On-site Equipment and ccf/hr for Equipment Fuel Usage Rate.***

****** Please see the "Detailed Notes and Explanations" tab for instructions on selecting mode of transportation and other aspects of data entry in Columns M, N, and P. Units are gallons for Fuel Used for Equipment Transport and miles/gallon (mpg) or gallons per ton-mile (gptm) for Transport Fuel Usage Rate.***

Input Worksheet for EPS & LTM

Remedy Component that this Input worksheet is part of:	Component 5	Endpoint Sampling & Long-Term Monitoring

On-Site Electricity Use

Equipment Type	HP	Load Factor (%)	Efficiency (%)	Electrical Rating (kW)	Hours Used	Energy Used (kWh)	Notes
<Equip. with HP, Efficiency, and Hours>							
<Equip. with HP, Efficiency, and Hours>							
<Equip. with HP, Efficiency, and Hours>							
<Equip. with HP, Efficiency, and Hours>							
<Equip. with known kW rating>							
<Equip. with known kW rating>							
<Equip. with known kW rating>							
<Equip. with known kW rating>							
<Equip. with known total Energy Used>							
<Equip. with known total Energy Used>							
<Equip. with known total Energy Used>							
<Equip. with known total Energy Used>							
						Estimated Total Electricity Usage Based on Above	0	
						Renewable Electricity Generated On-Site*		
						Total Electricity Usage Based on Personnel Transportation	0	
						Total Grid Electricity Used	0	

**** Electricity generated on-site from renewable resources, for which the facility retains the rights to the renewable energy (i.e., does not sell renewable energy certificates associated with the renewable energy generation).***

On-Site Natural Gas Use

Equipment Type	Power Rating (Btu/hr)	Efficiency (%)	Hours Used	Energy Required (Btu)	Natural Gas Used (ccf)	Notes
					0	
				0		
			Totals	0	0	0	

Landfill Gas Combusted On-Site for Energy Use

Equipment Type	Landfill Gas (ccf)	% Methane by volume	Used for electricity?	Landfill Gas Methane Used (ccf)	Notes
				0	
				0	
				0	
			Total	0	

Please see the "Detailed Notes and Explanations" tab for instructions on using the two tables above ("On-site Natural Gas Use" and "Landfill Gas Combusted On-Site for Energy Use"). In the two tables above, ccf = hundreds of cubic feet.

Materials Use and Transportation

Material Type*	Unit	Quantity	Tons	Is the Material Refined or Unrefined?**	Material Source: Virgin, Recycled, or Reused?**	Calculate Item Footprint?**	Default One-way Distance to Site (miles)	One-way Distance to Site Override (miles)	Number of One-way Trips to Site	Include Return Trip in Calculations?	Total Distance Transported (miles)	Mode of Transportation***	Transport Fuel Type	Default Transport Fuel Usage Rate (gptm or mpg)	Transport Fuel Usage Rate Override (gptm or mpg)	Fuel Used for Materials Transport (gallons)	Notes and Description of Materials
			0														
			0														
			0														
			0														
			0														
			0														
			0														
			0														
			0														
			0														
			0														
			0														
			0														
			0														
			0														
			0														
			0														
			0														
			0														

**** Please see the "Detailed Notes and Explanations" tab for instructions on specifying "User-Defined Materials" in the dropdown menu.***

***** Selections must be made in Columns F - H in order for the footprint calculations to be performed. Please see the "Detailed Notes and Explanations" tab for further information.***

****** Please see the "Detailed Notes and Explanations" tab for instructions on selecting mode of transportation, accounting for empty return trips, and other aspects of data entry in Columns L, N, O, and Q. Units are gallons for Fuel Used for Materials Transport and miles/gallon (mpg) or gallons per ton-mile (gptm) for Transport Fuel Usage Rate.***

Input Worksheet for EPS & LTM

Remedy Component that this Input worksheet is part of:	Component 5	Endpoint Sampling & Long-Term Monitoring

Waste Disposal and Transportation

Waste Destination*	Unit	Quantity	Tons	Default One-way Distance to Site (miles)	One-way Distance to Site Override (miles)	Number of One-way Trips to Site	Include Return Trip in Calculations?	Total Distance Transported (miles)	Mode of Transportation **	Transport Fuel Type	Default Transport Fuel Usage Rate (gptm or mpg)	Transport Fuel Usage Rate Override (gptm or mpg)	Fuel Used for Waste Transport (gallons)	Notes and Description of Waste
			0											
			0											
			0											
			0											
			0											
			0											
			0											
			0											
			0											
			0											
			0											
			0											

** No footprint is calculated for the Recycled/Reused On-Site and Off-Site selections. Please see the "Detailed Notes and Explanations" tab for instructions on specifying "User-Defined" selections in the dropdown menu.*

*** Please see the "Detailed Notes and Explanations" tab for instructions on selecting mode of transportation, accounting for empty return trips, and other aspects of data entry in Columns I, K, L, and N. Units are gallons for Fuel Used for Waste Transport and miles/gallon (mpg) or gallons per ton-mile (gptm) for Transport Fuel Usage Rate.*

Type of Water Used

Source of Water Used*	Unit	Quantity	Tons	Source Location/Aquifer (optional)	Quality of Water Used (optional)	Water Uses (optional)	Fate of Used Water (optional)
			0				
			0				
			0				
			0				
			0				
			0				
			0				
			0				
			0				
			0				
			0				

** Only the "Public Water" selection has an associated footprint. No footprint is calculated for the other water source selections.*

Note: Information entered in Columns F - V (Source/Quality/Use/Fate) is not compiled or reported by SEFA.

Input Worksheet for EPS & LTM

Remedy Component that this Input worksheet is part of:	Component 5	Endpoint Sampling & Long-Term Monitoring

Other Energy Use and Air Emissions

Item		Units	Quantity	Notes
On-Site				
User-defined on-site conventional energy use #1	*User-Defined	TBD		
User-defined on-site conventional energy use #2	*User-Defined	TBD		
On-site HAP process emissions**		lbs		
On-site GHG emissions**		lbs CO2e		
On-site carbon storage**		lbs CO2e		
Landfill gas flared on-site		ccf CH4		
Other on-site NOx emissions or reductions**		lbs		
Other on-site SOx emissions or reductions**		lbs		
Other on-site PM emissions or reductions**		lbs		
Transportation		**Units**	**Quantity**	**Notes**
User-defined conventional energy transportation #1	*User-Defined	TBD	10	
User-defined conventional energy transportation #2	*User-Defined	TBD		

**** Enter units and conversion factors on "User Defined Factors" tab***
***** Enter a positive number for emissions and a negative number for reductions, avoidances, or storage***
See the "Detailed Notes and Explanations" tab for use of this table.

Off-Site Laboratory Analysis

Parameter and Notes	Number of Samples	Comments
Off-site Laboratory Analysis - VOCs	10	
Off-site Laboratory Analysis - SVOCs	10	
Off-site Laboratory Analysis - Metals	10	
Off-site Laboratory Analysis - Mercury	10	
Off-site Laboratory Analysis - PCBs	10	
Off-site Laboratory Analysis - Other	10	
Off-site Laboratory Analysis - Other	10	
Off-site Laboratory Analysis - Other	10	
Off-site Laboratory Analysis - Other	10	
Off-site Laboratory Analysis - Other	10	
Totals	**100**	

Other Voluntary Renewable Energy Use

Item		Units	Quantity	Notes
User-defined on-site renewable energy use #1	*User-Defined	TBD		
User-defined on-site renewable energy use #2	*User-Defined	TBD		
User-defined renewable energy transportation #1	*User-Defined	TBD		
User-defined renewable energy transportation #2	*User-Defined	TBD		
Voluntary purchase of renewable electricity**		MWh		
Voluntary purchase of RECs**		MWh		

**** Enter units and conversion factors on "User Defined Factors" tab***
***** Complete information on provider in the table to the right. No footprint reductions are associated with the voluntary purchases.***
See the "Detailed Notes and Explanations" tab for use of this table

Description of purchased renewable electricity (green pricing product or green marketing product)	Provider:	
	Type of product:	
	Type of renewable energy source:	
	Date of renewable system installation:	
Description of purchased RECs	Provider:	
	Type of renewable energy source:	
	Date of renewable system installation:	
	Location of renewable system installation:	

For use of this worksheet, please see instructions at the end of the worksheet

User Defined Activity, Material, or Service	Unit	Tons per Unit*	User Defined Conversion Factors — Parameters Used, Extracted, Emitted, or Generated: Energy (MMBtu/unit)	GHG (lbs CO2e/unit)	NOx (lbs NOx/unit)	SOx (lbs SOx/unit)	PM (lbs PM/unit)	HAPs (lbs HAPs/unit)	Ref.	Use this row only for:
User-defined emissions for biodiesel on-site equipment	gal									**User-defined emissions for biodiesel on-site equipment**
User-defined emissions for diesel on-site equipment	gal									**User-defined emissions for diesel on-site equipment**
User-defined emissions for gasoline on-site equipment	gal									**User-defined emissions for gasoline on-site equipment**
User-defined emissions for compressed natural gas on-site equ	ccf									**User-defined emissions for compressed natural gas on-site e**
User-defined emissions for liquified petroleum gas on-site equ	gal									**User-defined emissions for liquified petroleum gas on-site eq**
User-defined emissions for natural gas on-site equipment	ccf									**User-defined emissions for natural gas on-site equipment**
User-defined emissions for biodiesel transportation	gal									**User-defined emissions for biodiesel transportation**
User-defined emissions for diesel transportation	gal									**User-defined emissions for diesel transportation**
User-defined emissions for gasoline transportation	gal									**User-defined emissions for gasoline transportation**
User-defined emissions for natural gas transportation	ccf									**User-defined emissions for natural gas transportation**

Note: Entering user-defined emission conversion factors in Rows 7 - 16 will override default conversion factors for all emissions calculations of the same fuel/use throughout the SEFA workbooks.

BENSEAL (Sodium Bentonite)	50 lb bag	0.025								**User-defined material #1**
orange mesh fencing	ft	0.013								**User-defined material #2**
absorbent composite socks	ft	0.0065								**User-defined material #3**
6-mil 40' x 100' polyurethane sheeting	rolls	0.0595								**User-defined material #4**
aggregate 2" stone	ton	1								**User-defined material #5**
filter cloth	lb	0.0005								**User-defined material #6**
20-mil vapor barrier	sqft	0.000138								**User-defined material #7**
4" Perforated SDR 35 Radon Vent Pipe	ft	1.014								**User-defined material #8**
Clean Fill	ton	1								**User-defined material #9**
Recycled Stone	ton	1								**User-defined material #10**
User-defined material #11	TBD	TBD								**User-defined material #11**
User-defined material #12	TBD	TBD								**User-defined material #12**
User-defined material #13	TBD	TBD								**User-defined material #13**
User-defined material #14	TBD	TBD								**User-defined material #14**
User-defined material #15	TBD	TBD								**User-defined material #15**
User-defined material #16	TBD	TBD								**User-defined material #16**
User-defined material #17	TBD	TBD								**User-defined material #17**
User-defined material #18	TBD	TBD								**User-defined material #18**
User-defined material #19	TBD	TBD								**User-defined material #19**
User-defined material #20	TBD	TBD								**User-defined material #20**

Item or Service Used	Unit	Tons per Unit*	Energy (MMBtu/unit)	GHG (lbs CO2e/unit)	NOx (lbs NOx/unit)	SOx (lbs SOx/unit)	PM (lbs PM/unit)	HAPs (lbs HAPs/unit)	Ref.	Use this row only for:
User-defined recycled/reused on-site #1	TBD	TBD								User-defined recycled/reused on-site #1
User-defined recycled/reused on-site #2	TBD	TBD								User-defined recycled/reused on-site #2
User-defined recycled/reused on-site #3	TBD	TBD								User-defined recycled/reused on-site #3
User-defined recycled/reused off-site #1	ton	1								User-defined recycled/reused off-site #1
User-defined recycled/reused off-site #2	ton	1								User-defined recycled/reused off-site #2
User-defined recycled/reused off-site #3	TBD	TBD								User-defined recycled/reused off-site #3
User-defined non-hazardous waste destination #1	ton	1								User-defined non-hazardous waste destination #1
User-defined non-hazardous waste destination #2	ton	1								User-defined non-hazardous waste destination #2
User-defined non-hazardous waste destination #3	TBD	TBD								User-defined non-hazardous waste destination #3
User-defined hazardous waste destination #1	TBD	TBD								User-defined hazardous waste destination #1
User-defined hazardous waste destination #2	TBD	TBD								User-defined hazardous waste destination #2
User-defined hazardous waste destination #3	TBD	TBD								User-defined hazardous waste destination #3

Item or Service Used	Unit	Tons per Unit*	Energy (MMBtu/unit)	GHG (lbs CO2e/unit)	NOx (lbs/unit)	SOx (lbs/unit)	PM (lbs/unit)	HAPs (lbs/unit)	Ref.	Use this row only for:
User-defined on-site conventional energy use #1	TBD									User-defined on-site conventional energy use #1
User-defined on-site conventional energy use #2	TBD									User-defined on-site conventional energy use #2
User-defined conventional energy transportation #1	TBD									User-defined conventional energy transportation #1
User-defined conventional energy transportation #2	TBD									User-defined conventional energy transportation #2
User-defined on-site renewable energy use #1	TBD									User-defined on-site renewable energy use #1
User-defined on-site renewable energy use #2	TBD									User-defined on-site renewable energy use #2
User-defined renewable energy transportation #1	TBD									User-defined renewable energy transportation #1
User-defined renewable energy transportation #2	TBD									User-defined renewable energy transportation #2
User-defined water resource #1	gal x 1000									User-defined water resource #1
User-defined water resource #2	gal x 1000									User-defined water resource #2

** "Tons per unit" refers to how many tons there are per unit of the material (e.g., 1 pound is 1/2000 of a ton or 0.0005 tons per unit)*

"MMBtu" = millions of Btus

Fuel Usage Rate								
User Defined Vehicles in Mode of Personnel Transportation	B20 mpg or pmpg	Biodiesel mpg or pmpg	Diesel mpg or pmpg	Electricity mpkWh	Gasoline mpg	Natural Gas mpccf	Ref.	
User Defined Vehicle #1								User Defined Vehicle #1
User Defined Vehicle #2								User Defined Vehicle #2
User Defined Vehicle #3								User Defined Vehicle #3
User Defined Vehicle #4								User Defined Vehicle #4
User Defined Vehicle #5								User Defined Vehicle #5

"mpg" = miles per gallon; "pmpg" = passenger miles per gallon; "mpkWh" = miles per kilowatt hour; "mpccf" = miles per 100 cubic feet"

Fuel Usage Rate					
User Defined Vehicles in Mode of Transportation for Equipment, Materials, and Waste	B20 mpg or gptm	Biodiesel mpg or gptm	Diesel mpg or gptm	Ref.	
User Defined Vehicle #1					User Defined Vehicle #1
User Defined Vehicle #2					User Defined Vehicle #2
User Defined Vehicle #3					User Defined Vehicle #3
User Defined Vehicle #4					User Defined Vehicle #4
User Defined Vehicle #5					User Defined Vehicle #5

Site Controls - On-Site Footprint (Scope 1)

Contributors to Footprints	Units	Usage	Energy		GHG		NOx		SOx		PM		HAPs	
			Conv. Factor	MMBtus	Conv. Factor	lbs CO2e	Conv. Factor	lbs	Conv. Factor	lbs	Conv. Factor	lbs	Conv. Factor	lbs
On-Site														
On-site Renewable Energy														
Renewable electricity generated on-site	MWh	0	3.413	0										
Landfill gas combusted on-site for energy use	ccf CH4	0	0.103	0	13.1	0	0.01	0	6.3E-06	0	0.00076	0	8.4E-06	0
On-site biodiesel use	gal	0	0.127	0	22.3	0	0.2	0	0	0	0.00099	0	NP	
On-site biodiesel use - User Defined	gal	0	0.127	0	22.3	0	0.2	0	0	0	0.00099	0	NP	
User-defined on-site renewable energy use #1	gal	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined on-site renewable energy use #2	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
On-site Renewable Energy Subtotals				**0**		**0**		**0**		**0**		**0**		**0**
Notes:														
On-site Conventional Energy														
On-site grid electricity	MWh	0	3.413	0										
On-site diesel use - Other	Gal	0	0.139	0	22.5	0	0.17	0	0.0054	0	0.0034	0	5.2E-06	0
On-site diesel use <75 hp	Gal	0	0.139	0	22.21	0	0.1565	0	0.000145	0	0.0145	0	0.00004	0
On-site diesel use 75<hp<750	Gal	0	0.139	0	22.24	0	0.101	0	0.00013	0	0.009	0	0.00004	0
On-site diesel use >750 hp	Gal	0	0.139	0	22.24	0	0.149	0	0.00013	0	0.006	0	0.00004	0
On-site gasoline use - Other	Gal	0	0.124	0	19.6	0	0.11	0	0.0045	0	0.00054	0	0.000039	0
On-site gasoline use <25 hp	Gal	0	0.124	0	17.48	0	0.037	0	0.00025	0	0.165	0	0.00008	0
On-site gasoline use >25 hp	Gal	0	0.124	0	19.93	0	0.032	0	0.00029	0	0.002	0	0.00009	0
On-site natural gas use	ccf	0	0.103	0	13.1	0	0.01	0	6.3E-06	0	0.00076	0	8.4E-06	0
On-site compressed natural gas use - Other	ccf	0	NP		1957.835	0	16.0325	0	0.023045	0	0.2775	0	0	0
On-site compressed natural gas use	ccf	0	NP		1957.835	0	16.0325	0	0.023045	0	0.2775	0	0	0
On-site liquified petroleum gas use - Other	gal	0	NP		12.69	0	0.021	0	0.00013	0	0.001	0	0	0
On-site liquified petroleum gas use	gal	0	NP		12.69	0	0.021	0	0.00013	0	0.001	0	0	0
Other forms of on-site conventional energy use #1	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
Other forms of on-site conventional energy use #2	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
On-site Conventional Energy Subtotals				**0**		**0**		**0**		**0**		**0**		**0**
Notes:														
Other On-site Emissions														
On-site HAP process emissions	lbs	0											1	0
On-site GHG emissions	lbs CO2e	0			1	0								
On-site carbon storage	lbs CO2e	0			1	0								
GHG avoided by flaring on-site landfill methane	Lbs	0			-262	0	0.01	0	6.3E-06	0	0.00076	0	8.4E-06	0
Other on-site NOx emissions or reductions	lbs	0					1	0						
Other on-site SOx emissions or reductions	lbs	0							1	0				
Other on-site PM emissions or reductions	lbs	0									1	0		
User-defined recycled/reused on-site #2	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined recycled/reused on-site #3	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined recycled/reused off-site #1	ton	0	0	0	0	0	0	0	0	0	0	0	0	0
Notes:														
On-site Totals				**0.00**		**0**		**0**		**0**		**0**		**0**

Site Controls - Electricity Generation Footprint (Scope 2)

Contributors to Footprints	Units	Usage	Energy		GHG		NOx		SOx		PM		HAPs	
			Conv. Factor	MMBtus	Conv. Factor	lbs CO2e	Conv. Factor	lbs	Conv. Factor	lbs	Conv. Factor	lbs	Conv. Factor	lbs
Electricity Generation														
Grid electricity	MWh	0	6.929	0	1124.3	0	2.2421	0	4.607887	0	0.057518	0	0.210237	0
Voluntary purchase of renewable electricity	MWh	0												
Voluntary purchase of RECs	MWh	0												
Notes:														

Site Controls - Transportation Footprint (Scope 3a)

Category	Units	Usage	Energy		Greenhouse Gas		NOx		SOx		PM		HAPs	
			Conv. Factor	MMBtus	Conv. Factor	lbs CO2e	Conv. Factor	lbs	Conv. Factor	lbs	Conv. Factor	lbs	Conv. Factor	lbs
Conventional Energy														
Transportation diesel use	gal	100	0.139	13.9	22.5	2250	0.17	17	0.0054	0.54	0.0034	0.34	5.2E-06	0.00052
Transportation diesel use - car	gal	0	0.139	0	22.57	0	0.015	0	0.0002	0	0.003	0	0.00252	0
Transportation diesel use - passenger truck	gal	0	0.139	0	22.545	0	0.0585	0	0.0002	0	0.007	0	0.002605	0
Transportation diesel use - User Defined	gal	0	0.139	0	22.5	0	0.17	0	0.0054	0	0.0034	0	5.2E-06	0
Transportation gasoline use	gal	0	0.124	0	19.6	0	0.11	0	0.0045	0	0.00054	0	0.000039	0
Transportation gasoline use - car	gal	1836	0.124	227.664	19.77	36297.72	0.027	49.572	0.00036	0.66096	0.003	5.508	0.0067	12.3012
Transportation gasoline use - passenger truck	gal	0	0.124	0	19.79	0	0.035	0	0.00036	0	0.003	0	0.00661	0
Transportation gasoline use - User Defined	gal	0	0.124	0	19.6	0	0.11	0	0.0045	0	0.00054	0	0.000039	0
Transportation natural gas use	ccf	0	0.103	0	13.1	0	0.01	0	6.3E-06	0	0.00076	0	8.4E-06	0
Transportation natural gas use - User Defined	ccf	0	0.103	0	13.1	0	0.01	0	6.3E-06	0	0.00076	0	8.4E-06	0
User-defined conventional energy transportation #1	TBD	10	0	0	0	0	0	0	0	0	0	0	0	0
User-defined conventional energy transportation #2	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
Conventional Energy Subtotals				**242**		**38,548**		**67**		**1**		**6**		**12**
Notes:														
Renewable Energy														
Transportation biodiesel use	gal	0	0.127	0	22.3	0	0.2	0	0	0	0.00099	0	NP	
Transportation biodiesel use - User Defined	gal	0	0.127	0	22.3	0	0.2	0	0	0	0.00099	0	NP	
User-defined renewable energy transportation #1	TBD	0	Biodiesel		0	0	0	0	0	0	0	0	Ref.	
User-defined renewable energy transportation #2	TBD	0	mpg or pmp		0	0	0	0	0	0	0	0	0	0
Renewable Energy Subtotals				**0**		**0**		**0**		**0**		**0**		**0**
Notes:														
Transportation Totals				**242**		**38548**		**67**		**1**		**6**		**12**

Site Controls - Off-Site Footprint (Scope 3b)

Category	Units	Usage	Energy		Greenhouse Gas		NOx		SOx		PM		HAPs	
			Conv. Factor	MMBtus	Conv. Factor	lbs CO2e	Conv. Factor	lbs	Conv. Factor	lbs	Conv. Factor	lbs	Conv. Factor	lbs
Construction Materials														
Aluminum, Rolled Sheet	lb	0	0.0633	0	9.15	0	0.0148	0	0.0283	0	0.0088	0	0.00102	0
Asphalt, mastic	lb	0	0.0412	0	0.85	0	0.00271	0	0.00798	0	0.000766	0	0.00107	0
Asphalt, paving-grade	lb	0	0.5	0	8.58	0	0.0299	0	0.0969	0	0.0091	0	0.0133	0
Ethanol, Corn, 95%	lb	0	0.0318	0	-0.0199	0	0.00425	0	0.00303	0	0.000469	0	8.46E-05	0
Ethanol, Corn, 99.7%	lb	0	0.0324	0	0.0591	0	0.00431	0	0.0031	0	0.000472	0	0.000087	0
Ethanol, Petroleum, 99.7%	lb	0	0.0205	0	1.25	0	0.00199	0	0.00214	0	0.000277	0	5.89E-05	0
Gravel/Sand Mix, 65% Gravel	lb	0	2.48E-05	0	0.0024	0	0.000018	0	4.52E-06	0	2.61E-06	0	3.08E-07	0
Gravel/sand/clay	lb	0	0.000028	0	0.00335	0	1.65E-05	0	0.000015	0	0.000002	0	2.05E-10	0
HDPE	lb	0	0.0332	0	1.94	0	0.00325	0	0.00409	0	0.000439	0	6.41E-05	0
Photovoltaic system (installed)	W	0	0.0336	0	4.47	0	0.015	0	0.032	0	0.00063	0	2.9E-06	0
PVC	lb	0	0.0262	0	2.02	0	0.004	0	0.00274	0	0.000372	0	0.000375	0
Portland cement, US average	lb	0	0.0139	0	1.34	0	0.00654	0	0.0104	0	0.00378	0	0.00097	0
Ready-mixed concrete, 20 MPa	ft3	0	0.217	0	19.5	0	0.0975	0	0.154	0	0.057	0	0.0141	0
Round Gravel	lb	0	2.48E-05	0	0.0024	0	0.000018	0	4.52E-06	0	2.61E-06	0	3.08E-07	0
Sand	lb	0	2.48E-05	0	0.0024	0	0.000018	0	4.52E-06	0	2.61E-06	0	3.08E-07	0
Stainless Steel	lb	0	0.0116	0	3.4	0	0.0075	0	0.012	0	0.0044	0	0.000144	0
Steel	lb	0	0.0044	0	1.1	0	0.0014	0	0.0017	0	0.00056	0	0.000067	0
Other refined construction materials	lb	0	0.01885	0	2.115	0	0.004038	0	0.005133	0	0.001443	0	0.000163	0
Other unrefined construction materials	lb	0	0.000028	0	0.00335	0	1.65E-05	0	0.000015	0	0.000002	0	2.05E-10	0

Notes:

Site Controls - Off-Site Footprint (Scope 3b)

Category	Units	Usage	Energy		Greenhouse Gas		NOx		SOx		PM		HAPs	
			Conv. Factor	MMBtus	Conv. Factor	lbs CO2e	Conv. Factor	lbs	Conv. Factor	lbs	Conv. Factor	lbs	Conv. Factor	lbs
Treatment Materials & Chemicals														
Cheese Whey	lbs	0	0.0025	0	0.031	0	0.000062	0	0.000033	0	0.000002	0	NP	
Emulsified vegetable oil	lbs	0	0.0077	0	3.44	0	0.0066	0	0.0019	0	0.000033	0	NP	
Granular activated carbon, primary	lbs	0	0.0356	0	4.82	0	0.0793	0	0.128	0	0.000987	0	0.000657	0
Granular activated carbon, regenerated	lbs	0	0.00873	0	1.7	0	0.00733	0	0.0129	0	0.000886	0	0.000671	0
Hydrogen Peroxide, 50% in H2O	lbs	0	0.00979	0	1.19	0	0.00142	0	0.0024	0	0.000308	0	6.29E-05	0
Iron (II) Sulfate	lbs	0	0.00147	0	0.167	0	0.000316	0	0.000589	0	0.000103	0	0.000023	0
Lime, Hydrated, Packed	lbs	0	0.00206	0	0.762	0	0.000513	0	0.000358	0	0.00013	0	6.57E-06	0
Molasses	lbs	0	0.0044	0	0.48	0	0.0011	0	0.00024	0	4.1E-06	0	NP	
Phosphoric Acid, 70% in H2O	lbs	0	0.0067	0	0.882	0	0.00282	0	0.0294	0	0.00171	0	0.000163	0
Potassium Permanganate	lbs	0	0.00981	0	1.16	0	0.00234	0	0.0032	0	0.000422	0	0.000122	0
Sodium Hydroxide, 50% in H2O	lbs	0	0.00977	0	1.09	0	0.00194	0	0.00352	0	0.000403	0	0.000129	0
Other Treatment Chemicals & Materials	lbs	0	0.015	0	1.67	0	0.003	0	0.0065	0	0.00061	0	0.000016	0
Notes:														
Fuel Processing														
Biodiesel produced	gal	0	0.029	0	-16.8	0	0.018	0	0.033	0	0.00082	0	NP	
Diesel produced	gal	100	0.017	1.7	3.02	302	0.0051	0.51	0.0062	0.62	0.0017	0.17	0.0011	0.11
Gasoline produced	gal	1836	0.033	60.588	2.8	5140.8	0.0046	8.4456	0.005	9.18	0.0015	2.754	0.001	1.836
Liquefied Petroleum Gas Produced	gal	0	0.088	0	1.47	0	0.0016	0	0.0024	0	0.0007	0	0.0003	0
Natural Gas - Compressed Produced	ccf	0	19.983	0	343.92	0	0.4732	0	2.1651	0	0.1846	0	0.2895	0
Natural Gas Produced	ccf	0	0.0052	0	2.2	0	0.0037	0	0.0046	0	0.000072	0	6.1E-06	0
Fuel Processing Subtotals				**62.288**		**5442.8**		**8.9556**		**9.8**		**2.924**		**1.946**
Notes:														
Public water	gal x 1000	204	0.0092	1.8768	5	1020	0.0097	1.9788	0.0059	1.2036	0.016	3.264	0.000015	0.00306
User-defined water resource #1	gal x 1000	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined water resource #2	gal x 1000	0	0	0	0	0	0	0	0	0	0	0	0	0
Notes:														

Site Controls - Off-Site Footprint (Scope 3b)

			Energy		Greenhouse Gas		NOx		SOx		PM		HAPs	
Category	Units	Usage	Conv. Factor	MMBtus	Conv. Factor	lbs CO2e	Conv. Factor	lbs	Conv. Factor	lbs	Conv. Factor	lbs	Conv. Factor	lbs
Off-Site Services														
Hazardous waste incineration	lb	0	0.00609	0	2.43	0	0.0016	0	0.00167	0	0.000209	0	0.000087	0
Off-site waste water treatment (POTW)	gal x 1000	0	0.015	0	4.4	0	0.016	0	0.015	0	NP		NP	
Off-site non-hazardous waste landfill	ton	0	0.16	0	25	0	0.14	0	0.075	0	0.4	0	0.0014	0
Off-site hazardous waste landfill	ton	0	0.18	0	27.5	0	0.154	0	0.0825	0	0.44	0	0.00154	0
Off-site Laboratory Analysis - Other	sample	0	0.058071	0	6.853438	0	0.131402	0	0.303876	0	0.04557	0	0.033017	0
Off-site Laboratory Analysis - Metals	sample	0	0.212	0	27.4693	0	0.6423	0	1.5072	0	0.2264	0	0.1643	0
Off-site Laboratory Analysis - Mercury	sample	0	0.073171	0	9.325458	0	0.212744	0	0.49824	0	0.074736	0	0.054233	0
Off-site Laboratory Analysis - Inorganic Anions	sample	0	0.007402	0	0.645948	0	0.006768	0	0.014793	0	0.002202	0	0.001554	0
Off-site Laboratory Analysis - Alkalinity	sample	0	0.01744	0	1.338192	0	0.007011	0	0.01325	0	0.00194	0	0.001283	0
Off-site Laboratory Analysis - Perchlorate	sample	0	0.023885	0	1.871705	0	0.007981	0	0.014154	0	0.002055	0	0.001287	0
Off-site Laboratory Analysis - Nitrogen/Nitrate	sample	0	0.033648	0	4.29897	0	0.095459	0	0.222665	0	0.03351	0	0.024251	0
Off-site Laboratory Analysis - Sulfate	sample	0	0.014122	0	1.472673	0	0.007981	0	0.013602	0	0.00198	0	0.001202	0
Off-site Laboratory Analysis - PCBs	sample	0	0.051277	0	5.224902	0	0.083334	0	0.190477	0	0.028439	0	0.021208	0
Off-site Laboratory Analysis - VOCs	sample	0	0.076204	0	9.016814	0	0.104498	0	0.227074	0	0.033951	0	0.023589	0
Off-site Laboratory Analysis - SVOCs	sample	0	0.07156	0	7.870422	0	0.145945	0	0.337304	0	0.050485	0	0.037258	0
Notes:														
Resource Extraction for Electricity														
Coal extraction and processing	MWh	0	3.1	0	180.0	0	0.8	0	0.2	0	0.0	0	NP	
Natural gas extraction and processing	MWh	0	1.6	0	270.0	0	0.2	0	13.0	0	0.0	0	NP	
Nuclear fuel extraction and processing	MWh	0	0.2	0	25.0	0	0.2	0	0.5	0	0.0	0	NP	
Oil extraction and processing	MWh	0	2.3	0	270.0	0	1.7	0	0.1	0	0.0	0	NP	
Other fuel extraction and processing	MWh	0	0	0	0	0	0	0	0	0	0	0	0	0
Resource Extraction Subtotals				**0**		**0**		**0**		**0**		**0**		**0**
Notes:														
Electricity Transmission														
Transmission and distribution losses	MWh	0	1.0342	0	112.43	0	0.22421	0	0.460789	0	0.005752	0	0.021024	0
Notes:														

Site Controls - Off-Site Footprint (Scope 3b)

			Energy		Greenhouse Gas		NOx		SOx		PM		HAPs	
Category	Units	Usage	Conv. Factor	MMBtus	Conv. Factor	lbs CO2e	Conv. Factor	lbs	Conv. Factor	lbs	Conv. Factor	lbs	Conv. Factor	lbs
User-defined Materials														
BENSEAL (Sodium Bentonite)	50 lb bag	0	0	0	0	0	0	0	0	0	0	0	0	0
orange mesh fencing	ft	600	0	0	0	0	0	0	0	0	0	0	0	0
absorbent composite socks	ft	600	0	0	0	0	0	0	0	0	0	0	0	0
6-mil 40' x 100' polyurethane sheeting	rolls	7	0	0	0	0	0	0	0	0	0	0	0	0
aggregate 2" stone	ton	60	0	0	0	0	0	0	0	0	0	0	0	0
filter cloth	lb	60	0	0	0	0	0	0	0	0	0	0	0	0
20-mil vapor barrier	sqft	0	0	0	0	0	0	0	0	0	0	0	0	0
4" Perforated SDR 35 Radon Vent Pipe	ft	0	0	0	0	0	0	0	0	0	0	0	0	0
Clean Fill	ton	0	0	0	0	0	0	0	0	0	0	0	0	0
Recycled Stone	ton	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined material #11	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined material #12	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined material #13	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined material #14	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined material #15	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined material #16	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined material #17	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined material #18	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined material #19	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined material #20	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
Notes:														
User-defined Waste Destinations														
User-defined recycled/reused off-site #1	ton	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined recycled/reused off-site #2	ton	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined recycled/reused off-site #3	TBD	0	y(MMBtu/U		lbs CO2e/U		Ox(lbs/unit		Ox(lbs/unit		M(lbs/unit)		APs(lbs/unit	
User-defined non-hazardous waste destination #1	ton	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined non-hazardous waste destination #2	ton	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined non-hazardous waste destination #3	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined hazardous waste destination #1	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined hazardous waste destination #2	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined hazardous waste destination #3	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
Notes:														
Off-site Totals				**64.1648**		**6462.8**		**10.9344**		**11.0036**		**6.188**		**1.94906**

Site Controls - Intermediate Totals

Category	Units	Usage	Energy		Greenhouse Gas		NOx		SOx		PM		HAPs	
			Conv. Factor	MMBtus	Conv. Factor	lbs CO2e	Conv. Factor	lbs	Conv. Factor	lbs	Conv. Factor	lbs	Conv. Factor	lbs
Total Grid Electricity Footprint														
On-site grid electricity	MWh	0	3.413	0										
Electricity Generation														
Grid electricity	MWh	0	6.929	0	1124.3	0	2.2421	0	4.607887	0	0.057518	0	0.210237	0
Resource Extraction for Electricity														
Coal extraction and processing	MWh	0	3.1	0	180.0	0	0.8	0	0.2	0	0.0	0	NP	
Natural gas extraction and processing	MWh	0	1.6	0	270.0	0	0.2	0	13.0	0	0.0	0	NP	
Nuclear fuel extraction and processing	MWh	0	0.2	0	25.0	0	0.2	0	0.5	0	0.0	0	NP	
Oil extraction and processing	MWh	0	2.3	0	270.0	0	1.7	0	0.1	0	0.0	0	NP	
Other fuel extraction and processing	MWh	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0
Electricity Transmission														
Transmission and distribution losses	MWh	0	1.0342	0	112.43	0	0.22421	0	0.460789	0	0.005752	0	0.021024	0
Total Grid Electricity Footprint				**0**		**0**		**0**		**0**		**0**		**0**
Total Fuel Footprints														
Total Gasoline Footprint														
On-site gasoline use - Other	gal	0	0.124	0	19.6	0	0.11	0	0.0045	0	0.00054	0	0.000039	0
On-site gasoline use <25 hp	gal	0	0.124	0	17.48	0	0.037	0	0.00025	0	0.165	0	0.00008	0
On-site gasoline use >25 hp	gal	0	0.124	0	19.93	0	0.032	0	0.00029	0	0.002	0	0.00009	0
Transportation gasoline use	gal	0	0.124	0	19.6	0	0.11	0	0.0045	0	0.00054	0	0.000039	0
Transportation gasoline use - car	gal	1836	0.124	227.664	19.77	36297.72	0.027	49.572	0.00036	0.66096	0.003	5.508	0.0067	12.3012
Transportation gasoline use - passenger truck	gal	0	0.124	0	19.79	0	0.035	0	0.00036	0	0.003	0	0.00661	0
Transportation gasoline use - User Defined	gal	0	0.124	0	19.6	0	0.11	0	0.0045	0	0.00054	0	0.000039	0
Gasoline produced	gal	1836	0.033	60.588	2.8	5140.8	0.0046	8.4456	0.005	9.18	0.0015	2.754	0.001	1.836
Total Gasoline Footprint		**1836**		**288.252**		**41438.52**		**58.0176**		**9.84096**		**8.262**		**14.1372**
Total Diesel Footprint														
On-site diesel use - Other	gal	0	0.139	0	22.5	0	0.17	0	0.0054	0	0.0034	0	5.2E-06	0
On-site diesel use <75 hp	gal	0	0.139	0	22.21	0	0.1565	0	0.000145	0	0.0145	0	0.00004	0
On-site diesel use 75<hp<750	gal	0	0.139	0	22.24	0	0.101	0	0.00013	0	0.009	0	0.00004	0
On-site diesel use >750 hp	gal	0	0.139	0	22.24	0	0.149	0	0.00013	0	0.006	0	0.00004	0
Transportation diesel use	gal	100	0.139	13.9	22.5	2250	0.17	17	0.0054	0.54	0.0034	0.34	5.2E-06	0.00052
Transportation diesel use - car	gal	0	0.139	0	22.57	0	0.015	0	0.0002	0	0.003	0	0.00252	0
Transportation diesel use - passenger truck	gal	0	0.139	0	22.545	0	0.0585	0	0.0002	0	0.007	0	0.002605	0
Transportation diesel use - User Defined	gal	0	0.139	0	22.5	0	0.17	0	0.0054	0	0.0034	0	5.2E-06	0
Diesel produced	gal	100	0.017	1.7	3.02	302	0.0051	0.51	0.0062	0.62	0.0017	0.17	0.0011	0.11
Total Diesel Footprint		**100**		**15.6**		**2552**		**17.51**		**1.16**		**0.51**		**0.11052**
Total Biodiesel Footprint														
On-site biodiesel use	gal	0	0.127	0	22.3	0	0.2	0	0	0	0.00099	0	NP	
On-site biodiesel use - User Defined	gal	0	0.127	0	22.3	0	0.2	0	0	0	0.00099	0	NP	
Transportation biodiesel use	gal	0	0.127	0	22.3	0	0.2	0	0	0	0.00099	0	NP	
Transportation biodiesel use - User Defined	gal	0	0.127	0	22.3	0	0.2	0	0	0	0.00099	0	NP	
Biodiesel produced	gal	0	0.029	0	-16.8	0	0.018	0	0.033	0	0.00082	0	NP	
Total Biodiesel Footprint		**0**		**0**		**0**		**0**		**0**		**0**		**0**
Total Natural Gas Footprint														
On-site natural gas use	ccf	0	0.103	0	13.1	0	0.01	0	6.3E-06	0	0.00076	0	8.4E-06	0
Transportation natural gas use	ccf	0	0.103	0	13.1	0	0.01	0	6.3E-06	0	0.00076	0	8.4E-06	0
Transportation natural gas use - User Defined	ccf	0	0.103	0	13.1	0	0.01	0	6.3E-06	0	0.00076	0	8.4E-06	0
Natural gas produced	ccf	0	0.0052	0	2.2	0	0.0037	0	0.0046	0	0.000072	0	6.1E-06	0
Total Natural Gas Footprint		**0**		**0**		**0**		**0**		**0**		**0**		**0**
Total Liquified Petroleum Gas Footprint														
On-site liquified petroleum gas use - Other	ccf	0	NP		12.69	0	0.021	0	0.00013	0	0.001	0	0	0
On-site liquified petroleum gas use	ccf	0	NP		12.69	0	0.021	0	0.00013	0	0.001	0	0	0
Liquified petroleum gas produced	ccf	0	0.088	0	1.47	0	0.0016	0	0.0024	0	0.0007	0	0.0003	0
Total Natural Gas Footprint		**0**		**0**		**0**		**0**		**0**		**0**		**0**
Total Compressed Gas Footprint														
On-site compressed gas use - Other	ccf	0	NP		1957.835	0	16.0325	0	0.023045	0	0.2775	0	0	0
On-site compressed gas use	ccf	0	NP		1957.835	0	16.0325	0	0.023045	0	0.2775	0	0	0
Compressed gas produced	ccf	0	19.983	0	343.92	0	0.4732	0	2.1651	0	0.1846	0	0.2895	0
Total Natural Gas Footprint		**0**		**0**		**0**		**0**		**0**		**0**		**0**

Notes:

Note: Please refer to the "Default Conversions" tab for references for the default conversion factors used on this calculation sheet.

Excavation - On-Site Footprint (Scope 1)

Contributors to Footprints	Units	Usage	Energy		GHG		NOx		SOx		PM		HAPs	
			Conv. Factor	MMBtus	Conv. Factor	lbs CO2e	Conv. Factor	lbs	Conv. Factor	lbs	Conv. Factor	lbs	Conv. Factor	lbs
On-Site														
On-site Renewable Energy														
Renewable electricity generated on-site	MWh	0	3.413	0										
Landfill gas combusted on-site for energy use	ccf CH4	0	0.103	0	13.1	0	0.01	0	6.3E-06	0	0.00076	0	8.4E-06	0
On-site biodiesel use	gal	0	0.127	0	22.3	0	0.2	0	0	0	0.00099	0	NP	
On-site biodiesel use - User Defined	gal	0	0.127	0	22.3	0	0.2	0	0	0	0.00099	0	NP	
User-defined on-site renewable energy use #1	gal	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined on-site renewable energy use #2	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
On-site Renewable Energy Subtotals				**0**		**0**		**0**		**0**		**0**		**0**
Notes:														
On-site Conventional Energy														
On-site grid electricity	MWh	0	3.413	0										
On-site diesel use - Other	Gal	0	0.139	0	22.5	0	0.17	0	0.0054	0	0.0034	0	5.2E-06	0
On-site diesel use <75 hp	Gal	0	0.139	0	22.21	0	0.1565	0	0.000145	0	0.0145	0	0.00004	0
On-site diesel use 75<hp<750	Gal	12416.54	0.139	1725.899	22.24	276143.8	0.101	1254.07	0.00013	1.61415	0.009	111.7488	0.00004	0.496662
On-site diesel use >750 hp	Gal	0	0.139	0	22.24	0	0.149	0	0.00013	0	0.006	0	0.00004	0
On-site gasoline use - Other	Gal	0	0.124	0	19.6	0	0.11	0	0.0045	0	0.00054	0	0.000039	0
On-site gasoline use <25 hp	Gal	0	0.124	0	17.48	0	0.037	0	0.00025	0	0.165	0	0.00008	0
On-site gasoline use >25 hp	Gal	0	0.124	0	19.93	0	0.032	0	0.00029	0	0.002	0	0.00009	0
On-site natural gas use	ccf	0	0.103	0	13.1	0	0.01	0	6.3E-06	0	0.00076	0	8.4E-06	0
On-site compressed natural gas use - Other	ccf	0	NP		1957.835	0	16.0325	0	0.023045	0	0.2775	0	0	0
On-site compressed natural gas use	ccf	0	NP		1957.835	0	16.0325	0	0.023045	0	0.2775	0	0	0
On-site liquified petroleum gas use - Other	gal	0	NP		12.69	0	0.021	0	0.00013	0	0.001	0	0	0
On-site liquified petroleum gas use	gal	0	NP		12.69	0	0.021	0	0.00013	0	0.001	0	0	0
Other forms of on-site conventional energy use #1	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
Other forms of on-site conventional energy use #2	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
On-site Conventional Energy Subtotals				**1,726**		**276,144**		**1,254**		**2**		**112**		**0**
Notes:														
Other On-site Emissions														
On-site HAP process emissions	lbs	0											1	0
On-site GHG emissions	lbs CO2e	0			1	0								
On-site carbon storage	lbs CO2e	0			1	0								
GHG avoided by flaring on-site landfill methane	Lbs	0			-262	0	0.01	0	6.3E-06	0	0.00076	0	8.4E-06	0
Other on-site NOx emissions or reductions	lbs	0					1	0						
Other on-site SOx emissions or reductions	lbs	0							1	0				
Other on-site PM emissions or reductions	lbs	0									1	0		
User-defined recycled/reused on-site #2	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined recycled/reused on-site #3	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined recycled/reused off-site #1	ton	0	0	0	0	0	0	0	0	0	0	0	0	0
Notes:														
On-site Totals				**1,725.90**		**276,144**		**1,254**		**2**		**112**		**0**

Excavation - Electricity Generation Footprint (Scope 2)

Contributors to Footprints	Units	Usage	Energy		GHG		NOx		SOx		PM		HAPs	
			Conv. Factor	MMBtus	Conv. Factor	lbs CO2e	Conv. Factor	lbs	Conv. Factor	lbs	Conv. Factor	lbs	Conv. Factor	lbs
Electricity Generation														
Grid electricity	MWh	0	6.929	0	352	0	1.504	0	1.46966	0	0.07546	0	0.045403	0
Voluntary purchase of renewable electricity	MWh	0												
Voluntary purchase of RECs	MWh	0												
Notes:														

Excavation - Transportation Footprint (Scope 3a)

Category	Units	Usage	Energy		Greenhouse Gas		NOx		SOx		PM		HAPs	
			Conv. Factor	MMBtus	Conv. Factor	lbs CO2e	Conv. Factor	lbs	Conv. Factor	lbs	Conv. Factor	lbs	Conv. Factor	lbs
Conventional Energy														
Transportation diesel use	gal	13.4	0.139	1.8626	22.5	301.5	0.17	2.278	0.0054	0.07236	0.0034	0.04556	5.2E-06	6.97E-05
Transportation diesel use - car	gal	0	0.139	0	22.57	0	0.015	0	0.0002	0	0.003	0	0.00252	0
Transportation diesel use - passenger truck	gal	0	0.139	0	22.545	0	0.0585	0	0.0002	0	0.007	0	0.002605	0
Transportation diesel use - User Defined	gal	0	0.139	0	22.5	0	0.17	0	0.0054	0	0.0034	0	5.2E-06	0
Transportation gasoline use	gal	0	0.124	0	19.6	0	0.11	0	0.0045	0	0.00054	0	0.000039	0
Transportation gasoline use - car	gal	0	0.124	0	19.77	0	0.027	0	0.00036	0	0.003	0	0.0067	0
Transportation gasoline use - passenger truck	gal	0	0.124	0	19.79	0	0.035	0	0.00036	0	0.003	0	0.00661	0
Transportation gasoline use - User Defined	gal	0	0.124	0	19.6	0	0.11	0	0.0045	0	0.00054	0	0.000039	0
Transportation natural gas use	ccf	0	0.103	0	13.1	0	0.01	0	6.3E-06	0	0.00076	0	8.4E-06	0
Transportation natural gas use - User Defined	ccf	0	0.103	0	13.1	0	0.01	0	6.3E-06	0	0.00076	0	8.4E-06	0
User-defined conventional energy transportation #1	TBD	10	0	0	0	0	0	0	0	0	0	0	0	0
User-defined conventional energy transportation #2	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
Conventional Energy Subtotals				**2**		**302**		**2**		**0**		**0**		**0**
Notes:														
Renewable Energy														
Transportation biodiesel use	gal	0	0.127	0	22.3	0	0.2	0	0	0	0.00099	0	NP	
Transportation biodiesel use - User Defined	gal	0	0.127	0	22.3	0	0.2	0	0	0	0.00099	0	NP	
User-defined renewable energy transportation #1	TBD	0	Biodiesel		0	0	0	0	0	0	0	0	Ref.	
User-defined renewable energy transportation #2	TBD	0	mpg or pmp		0	0	0	0	0	0	0	0	0	0
Renewable Energy Subtotals				**0**		**0**		**0**		**0**		**0**		**0**
Notes:														
Transportation Totals				**2**		**302**		**2**		**0**		**0**		**0**

Excavation - Off-Site Footprint (Scope 3b)

Category	Units	Usage	Energy		Greenhouse Gas		NOx		SOx		PM		HAPs	
			Conv. Factor	MMBtus	Conv. Factor	lbs CO2e	Conv. Factor	lbs	Conv. Factor	lbs	Conv. Factor	lbs	Conv. Factor	lbs
Construction Materials														
Aluminum, Rolled Sheet	lb	0	0.0633	0	9.15	0	0.0148	0	0.0283	0	0.0088	0	0.00102	0
Asphalt, mastic	lb	0	0.0412	0	0.85	0	0.00271	0	0.00798	0	0.000766	0	0.00107	0
Asphalt, paving-grade	lb	0	0.5	0	8.58	0	0.0299	0	0.0969	0	0.0091	0	0.0133	0
Ethanol, Corn, 95%	lb	0	0.0318	0	-0.0199	0	0.00425	0	0.00303	0	0.000469	0	8.46E-05	0
Ethanol, Corn, 99.7%	lb	0	0.0324	0	0.0591	0	0.00431	0	0.0031	0	0.000472	0	0.000087	0
Ethanol, Petroleum, 99.7%	lb	0	0.0205	0	1.25	0	0.00199	0	0.00214	0	0.000277	0	5.89E-05	0
Gravel/Sand Mix, 65% Gravel	lb	0	2.48E-05	0	0.0024	0	0.000018	0	4.52E-06	0	2.61E-06	0	3.08E-07	0
Gravel/sand/clay	lb	0	0.000028	0	0.00335	0	1.65E-05	0	0.000015	0	0.000002	0	2.05E-10	0
HDPE	lb	0	0.0332	0	1.94	0	0.00325	0	0.00409	0	0.000439	0	6.41E-05	0
Photovoltaic system (installed)	W	0	0.0336	0	4.47	0	0.015	0	0.032	0	0.00063	0	2.9E-06	0
PVC	lb	0	0.0262	0	2.02	0	0.004	0	0.00274	0	0.000372	0	0.000375	0
Portland cement, US average	lb	0	0.0139	0	1.34	0	0.00654	0	0.0104	0	0.00378	0	0.00097	0
Ready-mixed concrete, 20 MPa	ft3	0	0.217	0	19.5	0	0.0975	0	0.154	0	0.057	0	0.0141	0
Round Gravel	lb	0	2.48E-05	0	0.0024	0	0.000018	0	4.52E-06	0	2.61E-06	0	3.08E-07	0
Sand	lb	0	2.48E-05	0	0.0024	0	0.000018	0	4.52E-06	0	2.61E-06	0	3.08E-07	0
Stainless Steel	lb	0	0.0116	0	3.4	0	0.0075	0	0.012	0	0.0044	0	0.000144	0
Steel	lb	0	0.0044	0	1.1	0	0.0014	0	0.0017	0	0.00056	0	0.000067	0
Other refined construction materials	lb	0	0.01885	0	2.115	0	0.004038	0	0.005133	0	0.001443	0	0.000163	0
Other unrefined construction materials	lb	0	0.000028	0	0.00335	0	1.65E-05	0	0.000015	0	0.000002	0	2.05E-10	0

Notes:

Excavation - Off-Site Footprint (Scope 3b)

Category	Units	Usage	Energy		Greenhouse Gas		NOx		SOx		PM		HAPs	
			Conv. Factor	MMBtus	Conv. Factor	lbs CO2e	Conv. Factor	lbs	Conv. Factor	lbs	Conv. Factor	lbs	Conv. Factor	lbs
Treatment Materials & Chemicals														
Cheese Whey	lbs	0	0.0025	0	0.031	0	0.000062	0	0.000033	0	0.000002	0	NP	
Emulsified vegetable oil	lbs	0	0.0077	0	3.44	0	0.0066	0	0.0019	0	0.000033	0	NP	
Granular activated carbon, primary	lbs	0	0.0356	0	4.82	0	0.0793	0	0.128	0	0.000987	0	0.000657	0
Granular activated carbon, regenerated	lbs	0	0.00873	0	1.7	0	0.00733	0	0.0129	0	0.000886	0	0.000671	0
Hydrogen Peroxide, 50% in H2O	lbs	0	0.00979	0	1.19	0	0.00142	0	0.0024	0	0.000308	0	6.29E-05	0
Iron (II) Sulfate	lbs	0	0.00147	0	0.167	0	0.000316	0	0.000589	0	0.000103	0	0.000023	0
Lime, Hydrated, Packed	lbs	0	0.00206	0	0.762	0	0.000513	0	0.000358	0	0.00013	0	6.57E-06	0
Molasses	lbs	0	0.0044	0	0.48	0	0.0011	0	0.00024	0	4.1E-06	0	NP	
Phosphoric Acid, 70% in H2O	lbs	0	0.0067	0	0.882	0	0.00282	0	0.0294	0	0.00171	0	0.000163	0
Potassium Permanganate	lbs	0	0.00981	0	1.16	0	0.00234	0	0.0032	0	0.000422	0	0.000122	0
Sodium Hydroxide, 50% in H2O	lbs	0	0.00977	0	1.09	0	0.00194	0	0.00352	0	0.000403	0	0.000129	0
Other Treatment Chemicals & Materials	lbs	0	0.015	0	1.67	0	0.003	0	0.0065	0	0.00061	0	0.000016	0
Notes:														
Fuel Processing														
Biodiesel produced	gal	0	0.029	0	-16.8	0	0.018	0	0.033	0	0.00082	0	NP	
Diesel produced	gal	12429.94	0.017	211.309	3.02	37538.41	0.0051	63.39269	0.0062	77.06562	0.0017	21.1309	0.0011	13.67293
Gasoline produced	gal	0	0.033	0	2.8	0	0.0046	0	0.005	0	0.0015	0	0.001	0
Liquefied Petroleum Gas Produced	gal	0	0.088	0	1.47	0	0.0016	0	0.0024	0	0.0007	0	0.0003	0
Natural Gas - Compressed Produced	ccf	0	19.983	0	343.92	0	0.4732	0	2.1651	0	0.1846	0	0.2895	0
Natural Gas Produced	ccf	0	0.0052	0	2.2	0	0.0037	0	0.0046	0	0.000072	0	6.1E-06	0
Fuel Processing Subtotals				**211.309**		**37538.41**		**63.39269**		**77.06562**		**21.1309**		**13.67293**
Notes:														
Public water	gal x 1000	0	0.0092	0	5	0	0.0097	0	0.0059	0	0.016	0	0.000015	0
User-defined water resource #1	gal x 1000	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined water resource #2	gal x 1000	0	0	0	0	0	0	0	0	0	0	0	0	0
Notes:														

Excavation - Off-Site Footprint (Scope 3b)

			Energy		Greenhouse Gas		NOx		SOx		PM		HAPs	
Category	Units	Usage	Conv. Factor	MMBtus	Conv. Factor	lbs CO2e	Conv. Factor	lbs	Conv. Factor	lbs	Conv. Factor	lbs	Conv. Factor	lbs
Off-Site Services														
Hazardous waste incineration	lb	0	0.00609	0	2.43	0	0.0016	0	0.00167	0	0.000209	0	0.000087	0
Off-site waste water treatment (POTW)	gal x 1000	0	0.015	0	4.4	0	0.016	0	0.015	0	NP		NP	
Off-site non-hazardous waste landfill	ton	0	0.16	0	25	0	0.14	0	0.075	0	0.4	0	0.0014	0
Off-site hazardous waste landfill	ton	0	0.18	0	27.5	0	0.154	0	0.0825	0	0.44	0	0.00154	0
Off-site Laboratory Analysis - Other	sample	0	0.058071	0	6.853438	0	0.131402	0	0.303876	0	0.04557	0	0.033017	0
Off-site Laboratory Analysis - Metals	sample	0	0.212	0	27.4693	0	0.6423	0	1.5072	0	0.2264	0	0.1643	0
Off-site Laboratory Analysis - Mercury	sample	0	0.073171	0	9.325458	0	0.212744	0	0.49824	0	0.074736	0	0.054233	0
Off-site Laboratory Analysis - Inorganic Anions	sample	0	0.007402	0	0.645948	0	0.006768	0	0.014793	0	0.002202	0	0.001554	0
Off-site Laboratory Analysis - Alkalinity	sample	0	0.01744	0	1.338192	0	0.007011	0	0.01325	0	0.00194	0	0.001283	0
Off-site Laboratory Analysis - Perchlorate	sample	0	0.023885	0	1.871705	0	0.007981	0	0.014154	0	0.002055	0	0.001287	0
Off-site Laboratory Analysis - Nitrogen/Nitrate	sample	0	0.033648	0	4.29897	0	0.095459	0	0.222665	0	0.03351	0	0.024251	0
Off-site Laboratory Analysis - Sulfate	sample	0	0.014122	0	1.472673	0	0.007981	0	0.013602	0	0.00198	0	0.001202	0
Off-site Laboratory Analysis - PCBs	sample	0	0.051277	0	5.224902	0	0.083334	0	0.190477	0	0.028439	0	0.021208	0
Off-site Laboratory Analysis - VOCs	sample	0	0.076204	0	9.016814	0	0.104498	0	0.227074	0	0.033951	0	0.023589	0
Off-site Laboratory Analysis - SVOCs	sample	0	0.07156	0	7.870422	0	0.145945	0	0.337304	0	0.050485	0	0.037258	0
Notes:														
Resource Extraction for Electricity														
Coal extraction and processing	MWh	0	3.1	0	180.0	0	0.8	0	0.2	0	0.0	0	NP	
Natural gas extraction and processing	MWh	0	1.6	0	270.0	0	0.2	0	13.0	0	0.0	0	NP	
Nuclear fuel extraction and processing	MWh	0	0.2	0	25.0	0	0.2	0	0.5	0	0.0	0	NP	
Oil extraction and processing	MWh	0	2.3	0	270.0	0	1.7	0	0.1	0	0.0	0	NP	
Other fuel extraction and processing	MWh	0	0	0	0	0	0	0	0	0	0	0	0	0
Resource Extraction Subtotals				**0**		**0**		**0**		**0**		**0**		**0**
Notes:														
Electricity Transmission														
Transmission and distribution losses	MWh	0	1.0342	0	35.2	0	0.1504	0	0.146966	0	0.007546	0	0.00454	0
Notes:														

Excavation - Off-Site Footprint (Scope 3b)

			Energy		Greenhouse Gas		NOx		SOx		PM		HAPs	
Category	Units	Usage	Conv. Factor	MMBtus	Conv. Factor	lbs CO2e	Conv. Factor	lbs	Conv. Factor	lbs	Conv. Factor	lbs	Conv. Factor	lbs
User-defined Materials														
BENSEAL (Sodium Bentonite)	50 lb bag	0	0	0	0	0	0	0	0	0	0	0	0	0
orange mesh fencing	ft	0	0	0	0	0	0	0	0	0	0	0	0	0
absorbent composite socks	ft	0	0	0	0	0	0	0	0	0	0	0	0	0
6-mil 40' x 100' polyurethane sheeting	rolls	0	0	0	0	0	0	0	0	0	0	0	0	0
aggregate 2" stone	ton	0	0	0	0	0	0	0	0	0	0	0	0	0
filter cloth	lb	0	0	0	0	0	0	0	0	0	0	0	0	0
20-mil vapor barrier	sqft	0	0	0	0	0	0	0	0	0	0	0	0	0
4" Perforated SDR 35 Radon Vent Pipe	ft	0	0	0	0	0	0	0	0	0	0	0	0	0
Clean Fill	ton	0	0	0	0	0	0	0	0	0	0	0	0	0
Recycled Stone	ton	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined material #11	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined material #12	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined material #13	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined material #14	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined material #15	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined material #16	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined material #17	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined material #18	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined material #19	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Notes:														
User-defined Waste Destinations														
User-defined recycled/reused off-site #1	ton	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined recycled/reused off-site #2	ton	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined recycled/reused off-site #3	TBD	0	y(MMBtu/l		lbs CO2e/l		Ox(lbs/unit		Ox(lbs/unit		M(lbs/unit)		APs(lbs/unit	
User-defined non-hazardous waste destination #1	ton	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined non-hazardous waste destination #2	ton	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined non-hazardous waste destination #3	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined hazardous waste destination #1	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined hazardous waste destination #2	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined hazardous waste destination #3	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
Notes:														
Off-site Totals				**211.309**		**37538.41**		**63.39269**		**77.06562**		**21.1309**		**13.67293**

Excavation - Intermediate Totals

Category	Units	Usage	Energy		Greenhouse Gas		NOx		SOx		PM		HAPs	
			Conv. Factor	MMBtus	Conv. Factor	lbs CO2e	Conv. Factor	lbs	Conv. Factor	lbs	Conv. Factor	lbs	Conv. Factor	lbs
Total Grid Electricity Footprint														
On-site grid electricity	MWh	0	3.413	0										
Electricity Generation														
Grid electricity	MWh	0	6.929	0	1124.3	0	2.2421	0	4.607887	0	0.057518	0	0.210237	0
Resource Extraction for Electricity														
Coal extraction and processing	MWh	0	3.1	0	180.0	0	0.8	0	0.2	0	0.0	0	NP	
Natural gas extraction and processing	MWh	0	1.6	0	270.0	0	0.2	0	13.0	0	0.0	0	NP	
Nuclear fuel extraction and processing	MWh	0	0.2	0	25.0	0	0.2	0	0.5	0	0.0	0	NP	
Oil extraction and processing	MWh	0	2.3	0	270.0	0	1.7	0	0.1	0	0.0	0	NP	
Other fuel extraction and processing	MWh	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0
Electricity Transmission														
Transmission and distribution losses	MWh	0	1.0342	0	112.43	0	0.22421	0	0.460789	0	0.005752	0	0.021024	0
Total Grid Electricity Footprint				**0**		**0**		**0**		**0**		**0**		**0**
Total Fuel Footprints														
Total Gasoline Footprint														
On-site gasoline use - Other	gal	0	0.124	0	19.6	0	0.11	0	0.0045	0	0.00054	0	0.000039	0
On-site gasoline use <25 hp	gal	0	0.124	0	17.48	0	0.037	0	0.00025	0	0.165	0	0.00008	0
On-site gasoline use >25 hp	gal	0	0.124	0	19.93	0	0.032	0	0.00029	0	0.002	0	0.00009	0
Transportation gasoline use	gal	0	0.124	0	19.6	0	0.11	0	0.0045	0	0.00054	0	0.000039	0
Transportation gasoline use - car	gal	0	0.124	0	19.77	0	0.027	0	0.00036	0	0.003	0	0.0067	0
Transportation gasoline use - passenger truck	gal	0	0.124	0	19.79	0	0.035	0	0.00036	0	0.003	0	0.00661	0
Transportation gasoline use - User Defined	gal	0	0.124	0	19.6	0	0.11	0	0.0045	0	0.00054	0	0.000039	0
Gasoline produced	gal	0	0.033	0	2.8	0	0.0046	0	0.005	0	0.0015	0	0.001	0
Total Gasoline Footprint		**0**		**0**		**0**		**0**		**0**		**0**		**0**
Total Diesel Footprint														
On-site diesel use - Other	gal	0	0.139	0	22.5	0	0.17	0	0.0054	0	0.0034	0	5.2E-06	0
On-site diesel use <75 hp	gal	0	0.139	0	22.21	0	0.1565	0	0.000145	0	0.0145	0	0.00004	0
On-site diesel use 75<hp<750	gal	12416.54	0.139	1725.899	22.24	276143.8	0.101	1254.07	0.00013	1.61415	0.009	111.7488	0.00004	0.496662
On-site diesel use >750 hp	gal	0	0.139	0	22.24	0	0.149	0	0.00013	0	0.006	0	0.00004	0
Transportation diesel use	gal	13.4	0.139	1.8626	22.5	301.5	0.17	2.278	0.0054	0.07236	0.0034	0.04556	5.2E-06	6.97E-05
Transportation diesel use - car	gal	0	0.139	0	22.57	0	0.015	0	0.0002	0	0.003	0	0.00252	0
Transportation diesel use - passenger truck	gal	0	0.139	0	22.545	0	0.0585	0	0.0002	0	0.007	0	0.002605	0
Transportation diesel use - User Defined	gal	0	0.139	0	22.5	0	0.17	0	0.0054	0	0.0034	0	5.2E-06	0
Diesel produced	gal	12429.94	0.017	211.309	3.02	37538.41	0.0051	63.39269	0.0062	77.06562	0.0017	21.1309	0.0011	13.67293
Total Diesel Footprint		**12429.94**		**1939.07**		**313983.7**		**1319.741**		**78.75213**		**132.9253**		**14.16966**
Total Biodiesel Footprint														
On-site biodiesel use	gal	0	0.127	0	22.3	0	0.2	0	0	0	0.00099	0	NP	
On-site biodiesel use - User Defined	gal	0	0.127	0	22.3	0	0.2	0	0	0	0.00099	0	NP	
Transportation biodiesel use	gal	0	0.127	0	22.3	0	0.2	0	0	0	0.00099	0	NP	
Transportation biodiesel use - User Defined	gal	0	0.127	0	22.3	0	0.2	0	0	0	0.00099	0	NP	
Biodiesel produced	gal	0	0.029	0	-16.8	0	0.018	0	0.033	0	0.00082	0	NP	
Total Biodiesel Footprint		**0**		**0**		**0**		**0**		**0**		**0**		**0**
Total Natural Gas Footprint														
On-site natural gas use	ccf	0	0.103	0	13.1	0	0.01	0	6.3E-06	0	0.00076	0	8.4E-06	0
Transportation natural gas use	ccf	0	0.103	0	13.1	0	0.01	0	6.3E-06	0	0.00076	0	8.4E-06	0
Transportation natural gas use - User Defined	ccf	0	0.103	0	13.1	0	0.01	0	6.3E-06	0	0.00076	0	8.4E-06	0
Natural gas produced	ccf	0	0.0052	0	2.2	0	0.0037	0	0.0046	0	0.000072	0	6.1E-06	0
Total Natural Gas Footprint		**0**		**0**		**0**		**0**		**0**		**0**		**0**
Total Liquified Petroleum Gas Footprint														
On-site liquified petroleum gas use - Other	ccf	0	NP		12.69	0	0.021	0	0.00013	0	0.001	0	0	0
On-site liquified petroleum gas use	ccf	0	NP		12.69	0	0.021	0	0.00013	0	0.001	0	0	0
Liquified petroleum gas produced	ccf	0	0.088	0	1.47	0	0.0016	0	0.0024	0	0.0007	0	0.0003	0
Total Natural Gas Footprint		**0**		**0**		**0**		**0**		**0**		**0**		**0**
Total Compressed Gas Footprint														
On-site compressed gas use - Other	ccf	0	NP		1957.835	0	16.0325	0	0.023045	0	0.2775	0	0	0
On-site compressed gas use	ccf	0	NP		1957.835	0	16.0325	0	0.023045	0	0.2775	0	0	0
Compressed gas produced	ccf	0	19.983	0	343.92	0	0.4732	0	2.1651	0	0.1846	0	0.2895	0
Total Natural Gas Footprint		**0**		**0**		**0**		**0**		**0**		**0**		**0**

Notes:

Note: Please refer to the "Default Conversions" tab for references for the default conversion factors used on this calculation sheet.

Waste Transport & Disposal - On-Site Footprint (Scope 1)

Contributors to Footprints	Units	Usage	Energy		GHG		NOx		SOx		PM		HAPs	
			Conv. Factor	MMBtus	Conv. Factor	lbs CO2e	Conv. Factor	lbs	Conv. Factor	lbs	Conv. Factor	lbs	Conv. Factor	lbs
On-Site														
On-site Renewable Energy														
Renewable electricity generated on-site	MWh	0	3.413	0										
Landfill gas combusted on-site for energy use	ccf CH4	0	0.103	0	13.1	0	0.01	0	6.3E-06	0	0.00076	0	8.4E-06	0
On-site biodiesel use	gal	0	0.127	0	22.3	0	0.2	0	0	0	0.00099	0	NP	
On-site biodiesel use - User Defined	gal	0	0.127	0	22.3	0	0.2	0	0	0	0.00099	0	NP	
User-defined on-site renewable energy use #1	gal	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined on-site renewable energy use #2	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
On-site Renewable Energy Subtotals				**0**		**0**		**0**		**0**		**0**		**0**
Notes:														
On-site Conventional Energy														
On-site grid electricity	MWh	0	3.413	0										
On-site diesel use - Other	Gal	0	0.139	0	22.5	0	0.17	0	0.0054	0	0.0034	0	5.2E-06	0
On-site diesel use <75 hp	Gal	0	0.139	0	22.21	0	0.1565	0	0.000145	0	0.0145	0	0.00004	0
On-site diesel use 75<hp<750	Gal	0	0.139	0	22.24	0	0.101	0	0.00013	0	0.009	0	0.00004	0
On-site diesel use >750 hp	Gal	0	0.139	0	22.24	0	0.149	0	0.00013	0	0.006	0	0.00004	0
On-site gasoline use - Other	Gal	0	0.124	0	19.6	0	0.11	0	0.0045	0	0.00054	0	0.000039	0
On-site gasoline use <25 hp	Gal	0	0.124	0	17.48	0	0.037	0	0.00025	0	0.165	0	0.00008	0
On-site gasoline use >25 hp	Gal	0	0.124	0	19.93	0	0.032	0	0.00029	0	0.002	0	0.00009	0
On-site natural gas use	ccf	0	0.103	0	13.1	0	0.01	0	6.3E-06	0	0.00076	0	8.4E-06	0
On-site compressed natural gas use - Other	ccf	0	NP		1957.835	0	16.0325	0	0.023045	0	0.2775	0	0	0
On-site compressed natural gas use	ccf	0	NP		1957.835	0	16.0325	0	0.023045	0	0.2775	0	0	0
On-site liquified petroleum gas use - Other	gal	0	NP		12.69	0	0.021	0	0.00013	0	0.001	0	0	0
On-site liquified petroleum gas use	gal	0	NP		12.69	0	0.021	0	0.00013	0	0.001	0	0	0
Other forms of on-site conventional energy use #1	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
Other forms of on-site conventional energy use #2	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
On-site Conventional Energy Subtotals				**0**		**0**		**0**		**0**		**0**		**0**
Notes:														
Other On-site Emissions														
On-site HAP process emissions	lbs	0											1	0
On-site GHG emissions	lbs CO2e	0			1	0								
On-site carbon storage	lbs CO2e	0			1	0								
GHG avoided by flaring on-site landfill methane	Lbs	0			-262	0	0.01	0	6.3E-06	0	0.00076	0	8.4E-06	0
Other on-site NOx emissions or reductions	lbs	0					1	0						
Other on-site SOx emissions or reductions	lbs	0							1	0				
Other on-site PM emissions or reductions	lbs	0									1	0		
User-defined recycled/reused on-site #2	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined recycled/reused on-site #3	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined recycled/reused off-site #1	ton	0	0	0	0	0	0	0	0	0	0	0	0	0
Notes:														
On-site Totals				**0.00**		**0**		**0**		**0**		**0**		**0**

Waste Transport & Disposal - Electricity Generation Footprint (Scope 2)

Contributors to Footprints	Units	Usage	Energy		GHG		NOx		SOx		PM		HAPs	
			Conv. Factor	MMBtus	Conv. Factor	lbs CO2e	Conv. Factor	lbs	Conv. Factor	lbs	Conv. Factor	lbs	Conv. Factor	lbs
Electricity Generation														
Grid electricity	MWh	0	6.929	0	352	0	1.504	0	1.46966	0	0.07546	0	0.045403	0
Voluntary purchase of renewable electricity	MWh	0												
Voluntary purchase of RECs	MWh	0												
Notes:														

Waste Transport & Disposal - Transportation Footprint (Scope 3a)

Category	Units	Usage	Energy		Greenhouse Gas		NOx		SOx		PM		HAPs	
			Conv. Factor	MMBtus	Conv. Factor	lbs CO2e	Conv. Factor	lbs	Conv. Factor	lbs	Conv. Factor	lbs	Conv. Factor	lbs
Conventional Energy														
Transportation diesel use	gal	8896.6	0.139	1236.627	22.5	200173.5	0.17	1512.422	0.0054	48.04164	0.0034	30.24844	5.2E-06	0.046262
Transportation diesel use - car	gal	0	0.139	0	22.57	0	0.015	0	0.0002	0	0.003	0	0.00252	0
Transportation diesel use - passenger truck	gal	0	0.139	0	22.545	0	0.0585	0	0.0002	0	0.007	0	0.002605	0
Transportation diesel use - User Defined	gal	0	0.139	0	22.5	0	0.17	0	0.0054	0	0.0034	0	5.2E-06	0
Transportation gasoline use	gal	0	0.124	0	19.6	0	0.11	0	0.0045	0	0.00054	0	0.000039	0
Transportation gasoline use - car	gal	0	0.124	0	19.77	0	0.027	0	0.00036	0	0.003	0	0.0067	0
Transportation gasoline use - passenger truck	gal	0	0.124	0	19.79	0	0.035	0	0.00036	0	0.003	0	0.00661	0
Transportation gasoline use - User Defined	gal	0	0.124	0	19.6	0	0.11	0	0.0045	0	0.00054	0	0.000039	0
Transportation natural gas use	ccf	0	0.103	0	13.1	0	0.01	0	6.3E-06	0	0.00076	0	8.4E-06	0
Transportation natural gas use - User Defined	ccf	0	0.103	0	13.1	0	0.01	0	6.3E-06	0	0.00076	0	8.4E-06	0
User-defined conventional energy transportation #1	TBD	10	0	0	0	0	0	0	0	0	0	0	0	0
User-defined conventional energy transportation #2	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
Conventional Energy Subtotals				**1,237**		**200,174**		**1,512**		**48**		**30**		**0**
Notes:														
Renewable Energy														
Transportation biodiesel use	gal	0	0.127	0	22.3	0	0.2	0	0	0	0.00099	0	NP	
Transportation biodiesel use - User Defined	gal	0	0.127	0	22.3	0	0.2	0	0	0	0.00099	0	NP	
User-defined renewable energy transportation #1	TBD	0	Biodiesel		0	0	0	0	0	0	0	0	Ref.	
User-defined renewable energy transportation #2	TBD	0	mpg or pmp		0	0	0	0	0	0	0	0	0	0
Renewable Energy Subtotals				**0**		**0**		**0**		**0**		**0**		**0**
Notes:														
Transportation Totals				**1237**		**200174**		**1512**		**48**		**30**		**0**

Waste Transport & Disposal - Off-Site Footprint (Scope 3b)

Category	Units	Usage	Energy		Greenhouse Gas		NOx		SOx		PM		HAPs	
			Conv. Factor	MMBtus	Conv. Factor	lbs CO2e	Conv. Factor	lbs	Conv. Factor	lbs	Conv. Factor	lbs	Conv. Factor	lbs
Construction Materials														
Aluminum, Rolled Sheet	lb	0	0.0633	0	9.15	0	0.0148	0	0.0283	0	0.0088	0	0.00102	0
Asphalt, mastic	lb	0	0.0412	0	0.85	0	0.00271	0	0.00798	0	0.000766	0	0.00107	0
Asphalt, paving-grade	lb	0	0.5	0	8.58	0	0.0299	0	0.0969	0	0.0091	0	0.0133	0
Ethanol, Corn, 95%	lb	0	0.0318	0	-0.0199	0	0.00425	0	0.00303	0	0.000469	0	8.46E-05	0
Ethanol, Corn, 99.7%	lb	0	0.0324	0	0.0591	0	0.00431	0	0.0031	0	0.000472	0	0.000087	0
Ethanol, Petroleum, 99.7%	lb	0	0.0205	0	1.25	0	0.00199	0	0.00214	0	0.000277	0	5.89E-05	0
Gravel/Sand Mix, 65% Gravel	lb	0	2.48E-05	0	0.0024	0	0.000018	0	4.52E-06	0	2.61E-06	0	3.08E-07	0
Gravel/sand/clay	lb	0	0.000028	0	0.00335	0	1.65E-05	0	0.000015	0	0.000002	0	2.05E-10	0
HDPE	lb	0	0.0332	0	1.94	0	0.00325	0	0.00409	0	0.000439	0	6.41E-05	0
Photovoltaic system (installed)	W	0	0.0336	0	4.47	0	0.015	0	0.032	0	0.00063	0	2.9E-06	0
PVC	lb	0	0.0262	0	2.02	0	0.004	0	0.00274	0	0.000372	0	0.000375	0
Portland cement, US average	lb	0	0.0139	0	1.34	0	0.00654	0	0.0104	0	0.00378	0	0.00097	0
Ready-mixed concrete, 20 MPa	ft3	0	0.217	0	19.5	0	0.0975	0	0.154	0	0.057	0	0.0141	0
Round Gravel	lb	0	2.48E-05	0	0.0024	0	0.000018	0	4.52E-06	0	2.61E-06	0	3.08E-07	0
Sand	lb	0	2.48E-05	0	0.0024	0	0.000018	0	4.52E-06	0	2.61E-06	0	3.08E-07	0
Stainless Steel	lb	0	0.0116	0	3.4	0	0.0075	0	0.012	0	0.0044	0	0.000144	0
Steel	lb	0	0.0044	0	1.1	0	0.0014	0	0.0017	0	0.00056	0	0.000067	0
Other refined construction materials	lb	0	0.01885	0	2.115	0	0.004038	0	0.005133	0	0.001443	0	0.000163	0
Other unrefined construction materials	lb	0	0.000028	0	0.00335	0	1.65E-05	0	0.000015	0	0.000002	0	2.05E-10	0

Notes:

Waste Transport & Disposal - Off-Site Footprint (Scope 3b)

			Energy		Greenhouse Gas		NOx		SOx		PM		HAPs	
Category	Units	Usage	Conv. Factor	MMBtus	Conv. Factor	lbs CO2e	Conv. Factor	lbs	Conv. Factor	lbs	Conv. Factor	lbs	Conv. Factor	lbs
Treatment Materials & Chemicals														
Cheese Whey	lbs	0	0.0025	0	0.031	0	0.000062	0	0.000033	0	0.000002	0	NP	
Emulsified vegetable oil	lbs	0	0.0077	0	3.44	0	0.0066	0	0.0019	0	0.000033	0	NP	
Granular activated carbon, primary	lbs	0	0.0356	0	4.82	0	0.0793	0	0.128	0	0.000987	0	0.000657	0
Granular activated carbon, regenerated	lbs	0	0.00873	0	1.7	0	0.00733	0	0.0129	0	0.000886	0	0.000671	0
Hydrogen Peroxide, 50% in H2O	lbs	0	0.00979	0	1.19	0	0.00142	0	0.0024	0	0.000308	0	6.29E-05	0
Iron (II) Sulfate	lbs	0	0.00147	0	0.167	0	0.000316	0	0.000589	0	0.000103	0	0.000023	0
Lime, Hydrated, Packed	lbs	0	0.00206	0	0.762	0	0.000513	0	0.000358	0	0.00013	0	6.57E-06	0
Molasses	lbs	0	0.0044	0	0.48	0	0.0011	0	0.00024	0	4.1E-06	0	NP	
Phosphoric Acid, 70% in H2O	lbs	0	0.0067	0	0.882	0	0.00282	0	0.0294	0	0.00171	0	0.000163	0
Potassium Permanganate	lbs	0	0.00981	0	1.16	0	0.00234	0	0.0032	0	0.000422	0	0.000122	0
Sodium Hydroxide, 50% in H2O	lbs	0	0.00977	0	1.09	0	0.00194	0	0.00352	0	0.000403	0	0.000129	0
Other Treatment Chemicals & Materials	lbs	0	0.015	0	1.67	0	0.003	0	0.0065	0	0.00061	0	0.000016	0
Notes:														
Fuel Processing														
Biodiesel produced	gal	0	0.029	0	-16.8	0	0.018	0	0.033	0	0.00082	0	NP	
Diesel produced	gal	8896.6	0.017	151.2422	3.02	26867.73	0.0051	45.37266	0.0062	55.15892	0.0017	15.12422	0.0011	9.78626
Gasoline produced	gal	0	0.033	0	2.8	0	0.0046	0	0.005	0	0.0015	0	0.001	0
Liquefied Petroleum Gas Produced	gal	0	0.088	0	1.47	0	0.0016	0	0.0024	0	0.0007	0	0.0003	0
Natural Gas - Compressed Produced	ccf	0	19.983	0	343.92	0	0.4732	0	2.1651	0	0.1846	0	0.2895	0
Natural Gas Produced	ccf	0	0.0052	0	2.2	0	0.0037	0	0.0046	0	0.000072	0	6.1E-06	0
Fuel Processing Subtotals				**151.2422**		**26867.73**		**45.37266**		**55.15892**		**15.12422**		**9.78626**
Notes:														
Public water	gal x 1000	0	0.0092	0	5	0	0.0097	0	0.0059	0	0.016	0	0.000015	0
User-defined water resource #1	gal x 1000	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined water resource #2	gal x 1000	0	0	0	0	0	0	0	0	0	0	0	0	0
Notes:														

Waste Transport & Disposal - Off-Site Footprint (Scope 3b)

			Energy		Greenhouse Gas		NOx		SOx		PM		HAPs	
Category	Units	Usage	Conv. Factor	MMBtus	Conv. Factor	lbs CO2e	Conv. Factor	lbs	Conv. Factor	lbs	Conv. Factor	lbs	Conv. Factor	lbs
Off-Site Services														
Hazardous waste incineration	lb	0	0.00609	0	2.43	0	0.0016	0	0.00167	0	0.000209	0	0.000087	0
Off-site waste water treatment (POTW)	gal x 1000	0	0.015	0	4.4	0	0.016	0	0.015	0	NP		NP	
Off-site non-hazardous waste landfill	ton	0	0.16	0	25	0	0.14	0	0.075	0	0.4	0	0.0014	0
Off-site hazardous waste landfill	ton	0	0.18	0	27.5	0	0.154	0	0.0825	0	0.44	0	0.00154	0
Off-site Laboratory Analysis - Other	sample	0	0.058071	0	6.853438	0	0.131402	0	0.303876	0	0.04557	0	0.033017	0
Off-site Laboratory Analysis - Metals	sample	0	0.212	0	27.4693	0	0.6423	0	1.5072	0	0.2264	0	0.1643	0
Off-site Laboratory Analysis - Mercury	sample	0	0.073171	0	9.325458	0	0.212744	0	0.49824	0	0.074736	0	0.054233	0
Off-site Laboratory Analysis - Inorganic Anions	sample	0	0.007402	0	0.645948	0	0.006768	0	0.014793	0	0.002202	0	0.001554	0
Off-site Laboratory Analysis - Alkalinity	sample	0	0.01744	0	1.338192	0	0.007011	0	0.01325	0	0.00194	0	0.001283	0
Off-site Laboratory Analysis - Perchlorate	sample	0	0.023885	0	1.871705	0	0.007981	0	0.014154	0	0.002055	0	0.001287	0
Off-site Laboratory Analysis - Nitrogen/Nitrate	sample	0	0.033648	0	4.29897	0	0.095459	0	0.222665	0	0.03351	0	0.024251	0
Off-site Laboratory Analysis - Sulfate	sample	0	0.014122	0	1.472673	0	0.007981	0	0.013602	0	0.00198	0	0.001202	0
Off-site Laboratory Analysis - PCBs	sample	0	0.051277	0	5.224902	0	0.083334	0	0.190477	0	0.028439	0	0.021208	0
Off-site Laboratory Analysis - VOCs	sample	0	0.076204	0	9.016814	0	0.104498	0	0.227074	0	0.033951	0	0.023589	0
Off-site Laboratory Analysis - SVOCs	sample	0	0.07156	0	7.870422	0	0.145945	0	0.337304	0	0.050485	0	0.037258	0
Notes:														
Resource Extraction for Electricity														
Coal extraction and processing	MWh	0	3.1	0	180.0	0	0.8	0	0.2	0	0.0	0	NP	
Natural gas extraction and processing	MWh	0	1.6	0	270.0	0	0.2	0	13.0	0	0.0	0	NP	
Nuclear fuel extraction and processing	MWh	0	0.2	0	25.0	0	0.2	0	0.5	0	0.0	0	NP	
Oil extraction and processing	MWh	0	2.3	0	270.0	0	1.7	0	0.1	0	0.0	0	NP	
Other fuel extraction and processing	MWh	0	0	0	0	0	0	0	0	0	0	0	0	0
Resource Extraction Subtotals				**0**		**0**		**0**		**0**		**0**		**0**
Notes:														
Electricity Transmission														
Transmission and distribution losses	MWh	0	1.0342	0	35.2	0	0.1504	0	0.146966	0	0.007546	0	0.00454	0
Notes:														

Waste Transport & Disposal - Off-Site Footprint (Scope 3b)

			Energy		Greenhouse Gas		NOx		SOx		PM		HAPs	
Category	Units	Usage	Conv. Factor	MMBtus	Conv. Factor	lbs CO2e	Conv. Factor	lbs	Conv. Factor	lbs	Conv. Factor	lbs	Conv. Factor	lbs
User-defined Materials														
BENSEAL (Sodium Bentonite)	50 lb bag	0	0	0	0	0	0	0	0	0	0	0	0	0
orange mesh fencing	ft	0	0	0	0	0	0	0	0	0	0	0	0	0
absorbent composite socks	ft	0	0	0	0	0	0	0	0	0	0	0	0	0
6-mil 40' x 100' polyurethane sheeting	rolls	0	0	0	0	0	0	0	0	0	0	0	0	0
aggregate 2" stone	ton	0	0	0	0	0	0	0	0	0	0	0	0	0
filter cloth	lb	0	0	0	0	0	0	0	0	0	0	0	0	0
20-mil vapor barrier	sqft	0	0	0	0	0	0	0	0	0	0	0	0	0
4" Perforated SDR 35 Radon Vent Pipe	ft	0	0	0	0	0	0	0	0	0	0	0	0	0
Clean Fill	ton	0	0	0	0	0	0	0	0	0	0	0	0	0
Recycled Stone	ton	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined material #11	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined material #12	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined material #13	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined material #14	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined material #15	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined material #16	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined material #17	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined material #18	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined material #19	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined material #20	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
Notes:														
User-defined Waste Destinations														
User-defined recycled/reused off-site #1	ton	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined recycled/reused off-site #2	ton	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined recycled/reused off-site #3	TBD	0	y(MMBtu/U		lbs CO2e/U		Ox(lbs/unit		Ox(lbs/unit		M(lbs/unit)		APs(lbs/unit	
User-defined non-hazardous waste destination #1	ton	7848.426	0	0	0	0	0	0	0	0	0	0	0	0
User-defined non-hazardous waste destination #2	ton	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined non-hazardous waste destination #3	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined hazardous waste destination #1	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined hazardous waste destination #2	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined hazardous waste destination #3	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
Notes:														
Off-site Totals				**151.2422**		**26867.73**		**45.37266**		**55.15892**		**15.12422**		**9.78626**

Waste Transport & Disposal - Intermediate Totals

Category	Units	Usage	Energy		Greenhouse Gas		NOx		SOx		PM		HAPs	
			Conv. Factor	MMBtus	Conv. Factor	lbs CO2e	Conv. Factor	lbs	Conv. Factor	lbs	Conv. Factor	lbs	Conv. Factor	lbs
Total Grid Electricity Footprint														
On-site grid electricity	MWh	0	3.413	0										
Electricity Generation														
Grid electricity	MWh	0	6.929	0	1124.3	0	2.2421	0	4.607887	0	0.057518	0	0.210237	0
Resource Extraction for Electricity														
Coal extraction and processing	MWh	0	3.1	0	180.0	0	0.8	0	0.2	0	0.0	0	NP	
Natural gas extraction and processing	MWh	0	1.6	0	270.0	0	0.2	0	13.0	0	0.0	0	NP	
Nuclear fuel extraction and processing	MWh	0	0.2	0	25.0	0	0.2	0	0.5	0	0.0	0	NP	
Oil extraction and processing	MWh	0	2.3	0	270.0	0	1.7	0	0.1	0	0.0	0	NP	
Other fuel extraction and processing	MWh	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0
Electricity Transmission														
Transmission and distribution losses	MWh	0	1.0342	0	112.43	0	0.22421	0	0.460789	0	0.005752	0	0.021024	0
Total Grid Electricity Footprint				**0**		**0**		**0**		**0**		**0**		**0**
Total Fuel Footprints														
Total Gasoline Footprint														
On-site gasoline use - Other	gal	0	0.124	0	19.6	0	0.11	0	0.0045	0	0.00054	0	0.000039	0
On-site gasoline use <25 hp	gal	0	0.124	0	17.48	0	0.037	0	0.00025	0	0.165	0	0.00008	0
On-site gasoline use >25 hp	gal	0	0.124	0	19.93	0	0.032	0	0.00029	0	0.002	0	0.00009	0
Transportation gasoline use	gal	0	0.124	0	19.6	0	0.11	0	0.0045	0	0.00054	0	0.000039	0
Transportation gasoline use - car	gal	0	0.124	0	19.77	0	0.027	0	0.00036	0	0.003	0	0.0067	0
Transportation gasoline use - passenger truck	gal	0	0.124	0	19.79	0	0.035	0	0.00036	0	0.003	0	0.00661	0
Transportation gasoline use - User Defined	gal	0	0.124	0	19.6	0	0.11	0	0.0045	0	0.00054	0	0.000039	0
Gasoline produced	gal	0	0.033	0	2.8	0	0.0046	0	0.005	0	0.0015	0	0.001	0
Total Gasoline Footprint		**0**		**0**		**0**		**0**		**0**		**0**		**0**
Total Diesel Footprint														
On-site diesel use - Other	gal	0	0.139	0	22.5	0	0.17	0	0.0054	0	0.0034	0	5.2E-06	0
On-site diesel use <75 hp	gal	0	0.139	0	22.21	0	0.1565	0	0.000145	0	0.0145	0	0.00004	0
On-site diesel use 75<hp<750	gal	0	0.139	0	22.24	0	0.101	0	0.00013	0	0.009	0	0.00004	0
On-site diesel use >750 hp	gal	0	0.139	0	22.24	0	0.149	0	0.00013	0	0.006	0	0.00004	0
Transportation diesel use	gal	8896.6	0.139	1236.627	22.5	200173.5	0.17	1512.422	0.0054	48.04164	0.0034	30.24844	5.2E-06	0.046262
Transportation diesel use - car	gal	0	0.139	0	22.57	0	0.015	0	0.0002	0	0.003	0	0.00252	0
Transportation diesel use - passenger truck	gal	0	0.139	0	22.545	0	0.0585	0	0.0002	0	0.007	0	0.002605	0
Transportation diesel use - User Defined	gal	0	0.139	0	22.5	0	0.17	0	0.0054	0	0.0034	0	5.2E-06	0
Diesel produced	gal	8896.6	0.017	151.2422	3.02	26867.73	0.0051	45.37266	0.0062	55.15892	0.0017	15.12422	0.0011	9.78626
Total Diesel Footprint		**8896.6**		**1387.87**		**227041.2**		**1557.795**		**103.2006**		**45.37266**		**9.832522**
Total Biodiesel Footprint														
On-site biodiesel use	gal	0	0.127	0	22.3	0	0.2	0	0	0	0.00099	0	NP	
On-site biodiesel use - User Defined	gal	0	0.127	0	22.3	0	0.2	0	0	0	0.00099	0	NP	
Transportation biodiesel use	gal	0	0.127	0	22.3	0	0.2	0	0	0	0.00099	0	NP	
Transportation biodiesel use - User Defined	gal	0	0.127	0	22.3	0	0.2	0	0	0	0.00099	0	NP	
Biodiesel produced	gal	0	0.029	0	-16.8	0	0.018	0	0.033	0	0.00082	0	NP	
Total Biodiesel Footprint		**0**		**0**		**0**		**0**		**0**		**0**		**0**
Total Natural Gas Footprint														
On-site natural gas use	ccf	0	0.103	0	13.1	0	0.01	0	6.3E-06	0	0.00076	0	8.4E-06	0
Transportation natural gas use	ccf	0	0.103	0	13.1	0	0.01	0	6.3E-06	0	0.00076	0	8.4E-06	0
Transportation natural gas use - User Defined	ccf	0	0.103	0	13.1	0	0.01	0	6.3E-06	0	0.00076	0	8.4E-06	0
Natural gas produced	ccf	0	0.0052	0	2.2	0	0.0037	0	0.0046	0	0.000072	0	6.1E-06	0
Total Natural Gas Footprint		**0**		**0**		**0**		**0**		**0**		**0**		**0**
Total Liquified Petroleum Gas Footprint														
On-site liquified petroleum gas use - Other	ccf	0	NP		12.69	0	0.021	0	0.00013	0	0.001	0	0	0
On-site liquified petroleum gas use	ccf	0	NP		12.69	0	0.021	0	0.00013	0	0.001	0	0	0
Liquified petroleum gas produced	ccf	0	0.088	0	1.47	0	0.0016	0	0.0024	0	0.0007	0	0.0003	0
Total Natural Gas Footprint		**0**		**0**		**0**		**0**		**0**		**0**		**0**
Total Compressed Gas Footprint														
On-site compressed gas use - Other	ccf	0	NP		1957.835	0	16.0325	0	0.023045	0	0.2775	0	0	0
On-site compressed gas use	ccf	0	NP		1957.835	0	16.0325	0	0.023045	0	0.2775	0	0	0
Compressed gas produced	ccf	0	19.983	0	343.92	0	0.4732	0	2.1651	0	0.1846	0	0.2895	0
Total Natural Gas Footprint		**0**		**0**		**0**		**0**		**0**		**0**		**0**

Notes:

Note: Please refer to the "Default Conversions" tab for references for the default conversion factors used on this calculation sheet.

Backfill & Restoration - On-Site Footprint (Scope 1)

Contributors to Footprints	Units	Usage	Energy		GHG		NOx		SOx		PM		HAPs	
			Conv. Factor	MMBtus	Conv. Factor	lbs CO2e	Conv. Factor	lbs	Conv. Factor	lbs	Conv. Factor	lbs	Conv. Factor	lbs
On-Site														
On-site Renewable Energy														
Renewable electricity generated on-site	MWh	0	3.413	0										
Landfill gas combusted on-site for energy use	ccf CH4	0	0.103	0	13.1	0	0.01	0	6.3E-06	0	0.00076	0	8.4E-06	0
On-site biodiesel use	gal	0	0.127	0	22.3	0	0.2	0	0	0	0.00099	0	NP	
On-site biodiesel use - User Defined	gal	0	0.127	0	22.3	0	0.2	0	0	0	0.00099	0	NP	
User-defined on-site renewable energy use #1	gal	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined on-site renewable energy use #2	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
On-site Renewable Energy Subtotals				**0**		**0**		**0**		**0**		**0**		**0**
Notes:														
On-site Conventional Energy														
On-site grid electricity	MWh	0	3.413	0										
On-site diesel use - Other	Gal	0	0.139	0	22.5	0	0.17	0	0.0054	0	0.0034	0	5.2E-06	0
On-site diesel use <75 hp	Gal	0	0.139	0	22.21	0	0.1565	0	0.000145	0	0.0145	0	0.00004	0
On-site diesel use 75<hp<750	Gal	0	0.139	0	22.24	0	0.101	0	0.00013	0	0.009	0	0.00004	0
On-site diesel use >750 hp	Gal	0	0.139	0	22.24	0	0.149	0	0.00013	0	0.006	0	0.00004	0
On-site gasoline use - Other	Gal	0	0.124	0	19.6	0	0.11	0	0.0045	0	0.00054	0	0.000039	0
On-site gasoline use <25 hp	Gal	0	0.124	0	17.48	0	0.037	0	0.00025	0	0.165	0	0.00008	0
On-site gasoline use >25 hp	Gal	0	0.124	0	19.93	0	0.032	0	0.00029	0	0.002	0	0.00009	0
On-site natural gas use	ccf	0	0.103	0	13.1	0	0.01	0	6.3E-06	0	0.00076	0	8.4E-06	0
On-site compressed natural gas use - Other	ccf	0	NP		1957.835	0	16.0325	0	0.023045	0	0.2775	0	0	0
On-site compressed natural gas use	ccf	0	NP		1957.835	0	16.0325	0	0.023045	0	0.2775	0	0	0
On-site liquified petroleum gas use - Other	gal	0	NP		12.69	0	0.021	0	0.00013	0	0.001	0	0	0
On-site liquified petroleum gas use	gal	0	NP		12.69	0	0.021	0	0.00013	0	0.001	0	0	0
Other forms of on-site conventional energy use #1	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
Other forms of on-site conventional energy use #2	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
On-site Conventional Energy Subtotals				**0**		**0**		**0**		**0**		**0**		**0**
Notes:														
Other On-site Emissions														
On-site HAP process emissions	lbs	0											1	0
On-site GHG emissions	lbs CO2e	0			1	0								
On-site carbon storage	lbs CO2e	0			1	0								
GHG avoided by flaring on-site landfill methane	Lbs	0			-262	0	0.01	0	6.3E-06	0	0.00076	0	8.4E-06	0
Other on-site NOx emissions or reductions	lbs	0					1	0						
Other on-site SOx emissions or reductions	lbs	0							1	0				
Other on-site PM emissions or reductions	lbs	0									1	0		
User-defined recycled/reused on-site #2	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined recycled/reused on-site #3	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined recycled/reused off-site #1	ton	0	0	0	0	0	0	0	0	0	0	0	0	0
Notes:														
On-site Totals				**0.00**		**0**		**0**		**0**		**0**		**0**

Backfill & Restoration - Electricity Generation Footprint (Scope 2)

Contributors to Footprints	Units	Usage	Energy		GHG		NOx		SOx		PM		HAPs	
			Conv. Factor	MMBtus	Conv. Factor	lbs CO2e	Conv. Factor	lbs	Conv. Factor	lbs	Conv. Factor	lbs	Conv. Factor	lbs
Electricity Generation														
Grid electricity	MWh	0	6.929	0	352	0	1.504	0	1.46966	0	0.07546	0	0.045403	0
Voluntary purchase of renewable electricity	MWh	0												
Voluntary purchase of RECs	MWh	0												
Notes:														

Backfill & Restoration - Transportation Footprint (Scope 3a)

Category	Units	Usage	Energy		Greenhouse Gas		NOx		SOx		PM		HAPs	
			Conv. Factor	MMBtus	Conv. Factor	lbs CO2e	Conv. Factor	lbs	Conv. Factor	lbs	Conv. Factor	lbs	Conv. Factor	lbs
Conventional Energy														
Transportation diesel use	gal	4226.666	0.139	587.5066	22.5	95099.99	0.17	718.5332	0.0054	22.824	0.0034	14.37066	5.2E-06	0.021979
Transportation diesel use - car	gal	0	0.139	0	22.57	0	0.015	0	0.0002	0	0.003	0	0.00252	0
Transportation diesel use - passenger truck	gal	0	0.139	0	22.545	0	0.0585	0	0.0002	0	0.007	0	0.002605	0
Transportation diesel use - User Defined	gal	0	0.139	0	22.5	0	0.17	0	0.0054	0	0.0034	0	5.2E-06	0
Transportation gasoline use	gal	0	0.124	0	19.6	0	0.11	0	0.0045	0	0.00054	0	0.000039	0
Transportation gasoline use - car	gal	0	0.124	0	19.77	0	0.027	0	0.00036	0	0.003	0	0.0067	0
Transportation gasoline use - passenger truck	gal	0	0.124	0	19.79	0	0.035	0	0.00036	0	0.003	0	0.00661	0
Transportation gasoline use - User Defined	gal	0	0.124	0	19.6	0	0.11	0	0.0045	0	0.00054	0	0.000039	0
Transportation natural gas use	ccf	0	0.103	0	13.1	0	0.01	0	6.3E-06	0	0.00076	0	8.4E-06	0
Transportation natural gas use - User Defined	ccf	0	0.103	0	13.1	0	0.01	0	6.3E-06	0	0.00076	0	8.4E-06	0
User-defined conventional energy transportation #1	TBD	10	0	0	0	0	0	0	0	0	0	0	0	0
User-defined conventional energy transportation #2	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
Conventional Energy Subtotals				**588**		**95,100**		**719**		**23**		**14**		**0**
Notes:														
Renewable Energy														
Transportation biodiesel use	gal	0	0.127	0	22.3	0	0.2	0	0	0	0.00099	0	NP	
Transportation biodiesel use - User Defined	gal	0	0.127	0	22.3	0	0.2	0	0	0	0.00099	0	NP	
User-defined renewable energy transportation #1	TBD	0	Biodiesel		0	0	0	0	0	0	0	0	Ref.	
User-defined renewable energy transportation #2	TBD	0	mpg or pmp		0	0	0	0	0	0	0	0	0	0
Renewable Energy Subtotals				**0**		**0**		**0**		**0**		**0**		**0**
Notes:														
Transportation Totals				**588**		**95100**		**719**		**23**		**14**		**0**

Backfill & Restoration - Off-Site Footprint (Scope 3b)

Category	Units	Usage	Energy		Greenhouse Gas		NOx		SOx		PM		HAPs	
			Conv. Factor	MMBtus	Conv. Factor	lbs CO2e	Conv. Factor	lbs	Conv. Factor	lbs	Conv. Factor	lbs	Conv. Factor	lbs
Construction Materials														
Aluminum, Rolled Sheet	lb	0	0.0633	0	9.15	0	0.0148	0	0.0283	0	0.0088	0	0.00102	0
Asphalt, mastic	lb	0	0.0412	0	0.85	0	0.00271	0	0.00798	0	0.000766	0	0.00107	0
Asphalt, paving-grade	lb	0	0.5	0	8.58	0	0.0299	0	0.0969	0	0.0091	0	0.0133	0
Ethanol, Corn, 95%	lb	0	0.0318	0	-0.0199	0	0.00425	0	0.00303	0	0.000469	0	8.46E-05	0
Ethanol, Corn, 99.7%	lb	0	0.0324	0	0.0591	0	0.00431	0	0.0031	0	0.000472	0	0.000087	0
Ethanol, Petroleum, 99.7%	lb	0	0.0205	0	1.25	0	0.00199	0	0.00214	0	0.000277	0	5.89E-05	0
Gravel/Sand Mix, 65% Gravel	lb	0	2.48E-05	0	0.0024	0	0.000018	0	4.52E-06	0	2.61E-06	0	3.08E-07	0
Gravel/sand/clay	lb	0	0.000028	0	0.00335	0	1.65E-05	0	0.000015	0	0.000002	0	2.05E-10	0
HDPE	lb	0	0.0332	0	1.94	0	0.00325	0	0.00409	0	0.000439	0	6.41E-05	0
Photovoltaic system (installed)	W	0	0.0336	0	4.47	0	0.015	0	0.032	0	0.00063	0	2.9E-06	0
PVC	lb	0	0.0262	0	2.02	0	0.004	0	0.00274	0	0.000372	0	0.000375	0
Portland cement, US average	lb	0	0.0139	0	1.34	0	0.00654	0	0.0104	0	0.00378	0	0.00097	0
Ready-mixed concrete, 20 MPa	ft3	0	0.217	0	19.5	0	0.0975	0	0.154	0	0.057	0	0.0141	0
Round Gravel	lb	0	2.48E-05	0	0.0024	0	0.000018	0	4.52E-06	0	2.61E-06	0	3.08E-07	0
Sand	lb	0	2.48E-05	0	0.0024	0	0.000018	0	4.52E-06	0	2.61E-06	0	3.08E-07	0
Stainless Steel	lb	0	0.0116	0	3.4	0	0.0075	0	0.012	0	0.0044	0	0.000144	0
Steel	lb	0	0.0044	0	1.1	0	0.0014	0	0.0017	0	0.00056	0	0.000067	0
Other refined construction materials	lb	0	0.01885	0	2.115	0	0.004038	0	0.005133	0	0.001443	0	0.000163	0
Other unrefined construction materials	lb	0	0.000028	0	0.00335	0	1.65E-05	0	0.000015	0	0.000002	0	2.05E-10	0

Notes:

Backfill & Restoration - Off-Site Footprint (Scope 3b)

Category	Units	Usage	Energy		Greenhouse Gas		NOx		SOx		PM		HAPs	
			Conv. Factor	MMBtus	Conv. Factor	lbs CO2e	Conv. Factor	lbs	Conv. Factor	lbs	Conv. Factor	lbs	Conv. Factor	lbs
Treatment Materials & Chemicals														
Cheese Whey	lbs	0	0.0025	0	0.031	0	0.000062	0	0.000033	0	0.000002	0	NP	
Emulsified vegetable oil	lbs	0	0.0077	0	3.44	0	0.0066	0	0.0019	0	0.000033	0	NP	
Granular activated carbon, primary	lbs	0	0.0356	0	4.82	0	0.0793	0	0.128	0	0.000987	0	0.000657	0
Granular activated carbon, regenerated	lbs	0	0.00873	0	1.7	0	0.00733	0	0.0129	0	0.000886	0	0.000671	0
Hydrogen Peroxide, 50% in H2O	lbs	0	0.00979	0	1.19	0	0.00142	0	0.0024	0	0.000308	0	6.29E-05	0
Iron (II) Sulfate	lbs	0	0.00147	0	0.167	0	0.000316	0	0.000589	0	0.000103	0	0.000023	0
Lime, Hydrated, Packed	lbs	0	0.00206	0	0.762	0	0.000513	0	0.000358	0	0.00013	0	6.57E-06	0
Molasses	lbs	0	0.0044	0	0.48	0	0.0011	0	0.00024	0	4.1E-06	0	NP	
Phosphoric Acid, 70% in H2O	lbs	0	0.0067	0	0.882	0	0.00282	0	0.0294	0	0.00171	0	0.000163	0
Potassium Permanganate	lbs	0	0.00981	0	1.16	0	0.00234	0	0.0032	0	0.000422	0	0.000122	0
Sodium Hydroxide, 50% in H2O	lbs	0	0.00977	0	1.09	0	0.00194	0	0.00352	0	0.000403	0	0.000129	0
Other Treatment Chemicals & Materials	lbs	0	0.015	0	1.67	0	0.003	0	0.0065	0	0.00061	0	0.000016	0
Notes:														
Fuel Processing														
Biodiesel produced	gal	0	0.029	0	-16.8	0	0.018	0	0.033	0	0.00082	0	NP	
Diesel produced	gal	4226.666	0.017	71.85332	3.02	12764.53	0.0051	21.556	0.0062	26.20533	0.0017	7.185332	0.0011	4.649333
Gasoline produced	gal	0	0.033	0	2.8	0	0.0046	0	0.005	0	0.0015	0	0.001	0
Liquefied Petroleum Gas Produced	gal	0	0.088	0	1.47	0	0.0016	0	0.0024	0	0.0007	0	0.0003	0
Natural Gas - Compressed Produced	ccf	0	19.983	0	343.92	0	0.4732	0	2.1651	0	0.1846	0	0.2895	0
Natural Gas Produced	ccf	0	0.0052	0	2.2	0	0.0037	0	0.0046	0	0.000072	0	6.1E-06	0
Fuel Processing Subtotals				**71.85332**		**12764.53**		**21.556**		**26.20533**		**7.185332**		**4.649333**
Notes:														
Public water	gal x 1000	0	0.0092	0	5	0	0.0097	0	0.0059	0	0.016	0	0.000015	0
User-defined water resource #1	gal x 1000	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined water resource #2	gal x 1000	0	0	0	0	0	0	0	0	0	0	0	0	0
Notes:														

Backfill & Restoration - Off-Site Footprint (Scope 3b)

Category	Units	Usage	Energy		Greenhouse Gas		NOx		SOx		PM		HAPs	
			Conv. Factor	MMBtus	Conv. Factor	lbs CO2e	Conv. Factor	lbs	Conv. Factor	lbs	Conv. Factor	lbs	Conv. Factor	lbs
Off-Site Services														
Hazardous waste incineration	lb	0	0.00609	0	2.43	0	0.0016	0	0.00167	0	0.000209	0	0.000087	0
Off-site waste water treatment (POTW)	gal x 1000	0	0.015	0	4.4	0	0.016	0	0.015	0	NP		NP	
Off-site non-hazardous waste landfill	ton	0	0.16	0	25	0	0.14	0	0.075	0	0.4	0	0.0014	0
Off-site hazardous waste landfill	ton	0	0.18	0	27.5	0	0.154	0	0.0825	0	0.44	0	0.00154	0
Off-site Laboratory Analysis - Other	sample	0	0.058071	0	6.853438	0	0.131402	0	0.303876	0	0.04557	0	0.033017	0
Off-site Laboratory Analysis - Metals	sample	0	0.212	0	27.4693	0	0.6423	0	1.5072	0	0.2264	0	0.1643	0
Off-site Laboratory Analysis - Mercury	sample	0	0.073171	0	9.325458	0	0.212744	0	0.49824	0	0.074736	0	0.054233	0
Off-site Laboratory Analysis - Inorganic Anions	sample	0	0.007402	0	0.645948	0	0.006768	0	0.014793	0	0.002202	0	0.001554	0
Off-site Laboratory Analysis - Alkalinity	sample	0	0.01744	0	1.338192	0	0.007011	0	0.01325	0	0.00194	0	0.001283	0
Off-site Laboratory Analysis - Perchlorate	sample	0	0.023885	0	1.871705	0	0.007981	0	0.014154	0	0.002055	0	0.001287	0
Off-site Laboratory Analysis - Nitrogen/Nitrate	sample	0	0.033648	0	4.29897	0	0.095459	0	0.222665	0	0.03351	0	0.024251	0
Off-site Laboratory Analysis - Sulfate	sample	0	0.014122	0	1.472673	0	0.007981	0	0.013602	0	0.00198	0	0.001202	0
Off-site Laboratory Analysis - PCBs	sample	0	0.051277	0	5.224902	0	0.083334	0	0.190477	0	0.028439	0	0.021208	0
Off-site Laboratory Analysis - VOCs	sample	0	0.076204	0	9.016814	0	0.104498	0	0.227074	0	0.033951	0	0.023589	0
Off-site Laboratory Analysis - SVOCs	sample	0	0.07156	0	7.870422	0	0.145945	0	0.337304	0	0.050485	0	0.037258	0
Notes:														
Resource Extraction for Electricity														
Coal extraction and processing	MWh	0	3.1	0	180.0	0	0.8	0	0.2	0	0.0	0	NP	
Natural gas extraction and processing	MWh	0	1.6	0	270.0	0	0.2	0	13.0	0	0.0	0	NP	
Nuclear fuel extraction and processing	MWh	0	0.2	0	25.0	0	0.2	0	0.5	0	0.0	0	NP	
Oil extraction and processing	MWh	0	2.3	0	270.0	0	1.7	0	0.1	0	0.0	0	NP	
Other fuel extraction and processing	MWh	0	0	0	0	0	0	0	0	0	0	0	0	0
Resource Extraction Subtotals				**0**		**0**		**0**		**0**		**0**		**0**
Notes:														
Electricity Transmission														
Transmission and distribution losses	MWh	0	1.0342	0	35.2	0	0.1504	0	0.146966	0	0.007546	0	0.00454	0
Notes:														

Backfill & Restoration - Off-Site Footprint (Scope 3b)

			Energy		Greenhouse Gas		NOx		SOx		PM		HAPs	
Category	Units	Usage	Conv. Factor	MMBtus	Conv. Factor	lbs CO2e	Conv. Factor	lbs	Conv. Factor	lbs	Conv. Factor	lbs	Conv. Factor	lbs
User-defined Materials														
BENSEAL (Sodium Bentonite)	50 lb bag	0	0	0	0	0	0	0	0	0	0	0	0	0
orange mesh fencing	ft	0	0	0	0	0	0	0	0	0	0	0	0	0
absorbent composite socks	ft	0	0	0	0	0	0	0	0	0	0	0	0	0
6-mil 40' x 100' polyurethane sheeting	rolls	0	0	0	0	0	0	0	0	0	0	0	0	0
aggregate 2" stone	ton	0	0	0	0	0	0	0	0	0	0	0	0	0
filter cloth	lb	0	0	0	0	0	0	0	0	0	0	0	0	0
20-mil vapor barrier	sqft	74052	0	0	0	0	0	0	0	0	0	0	0	0
4" Perforated SDR 35 Radon Vent Pipe	ft	0	0	0	0	0	0	0	0	0	0	0	0	0
Clean Fill	ton	4785.926	0	0	0	0	0	0	0	0	0	0	0	0
Recycled Stone	ton	3062.5	0	0	0	0	0	0	0	0	0	0	0	0
User-defined material #11	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined material #12	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined material #13	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined material #14	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined material #15	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined material #16	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined material #17	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined material #18	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined material #19	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined material #20	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
Notes:														
User-defined Waste Destinations														
User-defined recycled/reused off-site #1	ton	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined recycled/reused off-site #2	ton	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined recycled/reused off-site #3	TBD	0	y(MMBtu/l		lbs CO2e/l		Ox(lbs/unit		Ox(lbs/unit		M(lbs/unit)		APs(lbs/unit	
User-defined non-hazardous waste destination #1	ton	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined non-hazardous waste destination #2	ton	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined non-hazardous waste destination #3	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined hazardous waste destination #1	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined hazardous waste destination #2	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined hazardous waste destination #3	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
Notes:														
Off-site Totals				**71.85332**		**12764.53**		**21.556**		**26.20533**		**7.185332**		**4.649333**

Backfill & Restoration - Intermediate Totals

Category	Units	Usage	Energy		Greenhouse Gas		NOx		SOx		PM		HAPs	
			Conv. Factor	MMBtus	Conv. Factor	lbs CO2e	Conv. Factor	lbs	Conv. Factor	lbs	Conv. Factor	lbs	Conv. Factor	lbs
Total Grid Electricity Footprint														
On-site grid electricity	MWh	0	3.413	0										
Electricity Generation														
Grid electricity	MWh	0	6.929	0	1124.3	0	2.2421	0	4.607887	0	0.057518	0	0.210237	0
Resource Extraction for Electricity														
Coal extraction and processing	MWh	0	3.1	0	180.0	0	0.8	0	0.2	0	0.0	0	NP	
Natural gas extraction and processing	MWh	0	1.6	0	270.0	0	0.2	0	13.0	0	0.0	0	NP	
Nuclear fuel extraction and processing	MWh	0	0.2	0	25.0	0	0.2	0	0.5	0	0.0	0	NP	
Oil extraction and processing	MWh	0	2.3	0	270.0	0	1.7	0	0.1	0	0.0	0	NP	
Other fuel extraction and processing	MWh	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0
Electricity Transmission														
Transmission and distribution losses	MWh	0	1.0342	0	112.43	0	0.22421	0	0.460789	0	0.005752	0	0.021024	0
Total Grid Electricity Footprint				**0**		**0**		**0**		**0**		**0**		**0**
Total Fuel Footprints														
Total Gasoline Footprint														
On-site gasoline use - Other	gal	0	0.124	0	19.6	0	0.11	0	0.0045	0	0.00054	0	0.000039	0
On-site gasoline use <25 hp	gal	0	0.124	0	17.48	0	0.037	0	0.00025	0	0.165	0	0.00008	0
On-site gasoline use >25 hp	gal	0	0.124	0	19.93	0	0.032	0	0.00029	0	0.002	0	0.00009	0
Transportation gasoline use	gal	0	0.124	0	19.6	0	0.11	0	0.0045	0	0.00054	0	0.000039	0
Transportation gasoline use - car	gal	0	0.124	0	19.77	0	0.027	0	0.00036	0	0.003	0	0.0067	0
Transportation gasoline use - passenger truck	gal	0	0.124	0	19.79	0	0.035	0	0.00036	0	0.003	0	0.00661	0
Transportation gasoline use - User Defined	gal	0	0.124	0	19.6	0	0.11	0	0.0045	0	0.00054	0	0.000039	0
Gasoline produced	gal	0	0.033	0	2.8	0	0.0046	0	0.005	0	0.0015	0	0.001	0
Total Gasoline Footprint		**0**		**0**		**0**		**0**		**0**		**0**		**0**
Total Diesel Footprint														
On-site diesel use - Other	gal	0	0.139	0	22.5	0	0.17	0	0.0054	0	0.0034	0	5.2E-06	0
On-site diesel use <75 hp	gal	0	0.139	0	22.21	0	0.1565	0	0.000145	0	0.0145	0	0.00004	0
On-site diesel use 75<hp<750	gal	0	0.139	0	22.24	0	0.101	0	0.00013	0	0.009	0	0.00004	0
On-site diesel use >750 hp	gal	0	0.139	0	22.24	0	0.149	0	0.00013	0	0.006	0	0.00004	0
Transportation diesel use	gal	4226.666	0.139	587.5066	22.5	95099.99	0.17	718.5332	0.0054	22.824	0.0034	14.37066	5.2E-06	0.021979
Transportation diesel use - car	gal	0	0.139	0	22.57	0	0.015	0	0.0002	0	0.003	0	0.00252	0
Transportation diesel use - passenger truck	gal	0	0.139	0	22.545	0	0.0585	0	0.0002	0	0.007	0	0.002605	0
Transportation diesel use - User Defined	gal	0	0.139	0	22.5	0	0.17	0	0.0054	0	0.0034	0	5.2E-06	0
Diesel produced	gal	4226.666	0.017	71.85332	3.02	12764.53	0.0051	21.556	0.0062	26.20533	0.0017	7.185332	0.0011	4.649333
Total Diesel Footprint		**4226.666**		**659.3599**		**107864.5**		**740.0892**		**49.02933**		**21.556**		**4.671311**
Total Biodiesel Footprint														
On-site biodiesel use	gal	0	0.127	0	22.3	0	0.2	0	0	0	0.00099	0	NP	
On-site biodiesel use - User Defined	gal	0	0.127	0	22.3	0	0.2	0	0	0	0.00099	0	NP	
Transportation biodiesel use	gal	0	0.127	0	22.3	0	0.2	0	0	0	0.00099	0	NP	
Transportation biodiesel use - User Defined	gal	0	0.127	0	22.3	0	0.2	0	0	0	0.00099	0	NP	
Biodiesel produced	gal	0	0.029	0	-16.8	0	0.018	0	0.033	0	0.00082	0	NP	
Total Biodiesel Footprint		**0**		**0**		**0**		**0**		**0**		**0**		**0**
Total Natural Gas Footprint														
On-site natural gas use	ccf	0	0.103	0	13.1	0	0.01	0	6.3E-06	0	0.00076	0	8.4E-06	0
Transportation natural gas use	ccf	0	0.103	0	13.1	0	0.01	0	6.3E-06	0	0.00076	0	8.4E-06	0
Transportation natural gas use - User Defined	ccf	0	0.103	0	13.1	0	0.01	0	6.3E-06	0	0.00076	0	8.4E-06	0
Natural gas produced	ccf	0	0.0052	0	2.2	0	0.0037	0	0.0046	0	0.000072	0	6.1E-06	0
Total Natural Gas Footprint		**0**		**0**		**0**		**0**		**0**		**0**		**0**
Total Liquified Petroleum Gas Footprint														
On-site liquified petroleum gas use - Other	ccf	0	NP		12.69	0	0.021	0	0.00013	0	0.001	0	0	0
On-site liquified petroleum gas use	ccf	0	NP		12.69	0	0.021	0	0.00013	0	0.001	0	0	0
Liquified petroleum gas produced	ccf	0	0.088	0	1.47	0	0.0016	0	0.0024	0	0.0007	0	0.0003	0
Total Natural Gas Footprint		**0**		**0**		**0**		**0**		**0**		**0**		**0**
Total Compressed Gas Footprint														
On-site compressed gas use - Other	ccf	0	NP		1957.835	0	16.0325	0	0.023045	0	0.2775	0	0	0
On-site compressed gas use	ccf	0	NP		1957.835	0	16.0325	0	0.023045	0	0.2775	0	0	0
Compressed gas produced	ccf	0	19.983	0	343.92	0	0.4732	0	2.1651	0	0.1846	0	0.2895	0
Total Natural Gas Footprint		**0**		**0**		**0**		**0**		**0**		**0**		**0**

Notes:

Note: Please refer to the "Default Conversions" tab for references for the default conversion factors used on this calculation sheet.

Endpoint Sampling & Long-Term Monitoring - On-Site Footprint (Scope 1)

			Energy		GHG		NOx		SOx		PM		HAPs	
Contributors to Footprints	**Units**	**Usage**	**Conv. Factor**	**MMBtus**	**Conv. Factor**	**lbs CO2e**	**Conv. Factor**	**lbs**	**Conv. Factor**	**lbs**	**Conv. Factor**	**lbs**	**Conv. Factor**	**lbs**
On-Site														
On-site Renewable Energy														
Renewable electricity generated on-site	MWh	0	3.413	0										
Landfill gas combusted on-site for energy use	ccf CH4	0	0.103	0	13.1	0	0.01	0	6.3E-06	0	0.00076	0	8.4E-06	0
On-site biodiesel use	gal	0	0.127	0	22.3	0	0.2	0	0	0	0.00099	0	NP	
On-site biodiesel use - User Defined	gal	0	0.127	0	22.3	0	0.2	0	0	0	0.00099	0	NP	
User-defined on-site renewable energy use #1	gal	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined on-site renewable energy use #2	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
On-site Renewable Energy Subtotals				**0**		**0**		**0**		**0**		**0**		**0**
Notes:														
On-site Conventional Energy														
On-site grid electricity	MWh	0	3.413	0										
On-site diesel use - Other	Gal	0	0.139	0	22.5	0	0.17	0	0.0054	0	0.0034	0	5.2E-06	0
On-site diesel use <75 hp	Gal	0	0.139	0	22.21	0	0.1565	0	0.000145	0	0.0145	0	0.00004	0
On-site diesel use 75<hp<750	Gal	0	0.139	0	22.24	0	0.101	0	0.00013	0	0.009	0	0.00004	0
On-site diesel use >750 hp	Gal	0	0.139	0	22.24	0	0.149	0	0.00013	0	0.006	0	0.00004	0
On-site gasoline use - Other	Gal	0	0.124	0	19.6	0	0.11	0	0.0045	0	0.00054	0	0.000039	0
On-site gasoline use <25 hp	Gal	0	0.124	0	17.48	0	0.037	0	0.00025	0	0.165	0	0.00008	0
On-site gasoline use >25 hp	Gal	0	0.124	0	19.93	0	0.032	0	0.00029	0	0.002	0	0.00009	0
On-site natural gas use	ccf	0	0.103	0	13.1	0	0.01	0	6.3E-06	0	0.00076	0	8.4E-06	0
On-site compressed natural gas use - Other	ccf	0	NP		1957.835	0	16.0325	0	0.023045	0	0.2775	0	0	0
On-site compressed natural gas use	ccf	0	NP		1957.835	0	16.0325	0	0.023045	0	0.2775	0	0	0
On-site liquified petroleum gas use - Other	gal	0	NP		12.69	0	0.021	0	0.00013	0	0.001	0	0	0
On-site liquified petroleum gas use	gal	0	NP		12.69	0	0.021	0	0.00013	0	0.001	0	0	0
Other forms of on-site conventional energy use #1	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
Other forms of on-site conventional energy use #2	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
On-site Conventional Energy Subtotals				**0**		**0**		**0**		**0**		**0**		**0**
Notes:														
Other On-site Emissions														
On-site HAP process emissions	lbs	0											1	0
On-site GHG emissions	lbs CO2e	0			1	0								
On-site carbon storage	lbs CO2e	0			1	0								
GHG avoided by flaring on-site landfill methane	Lbs	0			-262	0	0.01	0	6.3E-06	0	0.00076	0	8.4E-06	0
Other on-site NOx emissions or reductions	lbs	0					1	0						
Other on-site SOx emissions or reductions	lbs	0							1	0				
Other on-site PM emissions or reductions	lbs	0									1	0		
User-defined recycled/reused on-site #2	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined recycled/reused on-site #3	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined recycled/reused off-site #1	ton	0	0	0	0	0	0	0	0	0	0	0	0	0
Notes:														
On-site Totals				**0.00**		**0**		**0**		**0**		**0**		**0**

Endpoint Sampling & Long-Term Monitoring - Electricity Generation Footprint (Scope 2)

Contributors to Footprints	Units	Usage	Energy		GHG		NOx		SOx		PM		HAPs	
			Conv. Factor	MMBtus	Conv. Factor	lbs CO2e	Conv. Factor	lbs	Conv. Factor	lbs	Conv. Factor	lbs	Conv. Factor	lbs
Electricity Generation														
Grid electricity	MWh	0	6.929	0	352	0	1.504	0	1.46966	0	0.07546	0	0.045403	0
Voluntary purchase of renewable electricity	MWh	0												
Voluntary purchase of RECs	MWh	0												
Notes:														

Endpoint Sampling & Long-Term Monitoring - Transportation Footprint (Scope 3a)

Category	Units	Usage	Energy		Greenhouse Gas		NOx		SOx		PM		HAPs	
			Conv. Factor	MMBtus	Conv. Factor	lbs CO2e	Conv. Factor	lbs	Conv. Factor	lbs	Conv. Factor	lbs	Conv. Factor	lbs
Conventional Energy														
Transportation diesel use	gal	0	0.139	0	22.5	0	0.17	0	0.0054	0	0.0034	0	5.2E-06	0
Transportation diesel use - car	gal	0	0.139	0	22.57	0	0.015	0	0.0002	0	0.003	0	0.00252	0
Transportation diesel use - passenger truck	gal	0	0.139	0	22.545	0	0.0585	0	0.0002	0	0.007	0	0.002605	0
Transportation diesel use - User Defined	gal	0	0.139	0	22.5	0	0.17	0	0.0054	0	0.0034	0	5.2E-06	0
Transportation gasoline use	gal	0	0.124	0	19.6	0	0.11	0	0.0045	0	0.00054	0	0.000039	0
Transportation gasoline use - car	gal	176.2	0.124	21.8488	19.77	3483.474	0.027	4.7574	0.00036	0.063432	0.003	0.5286	0.0067	1.18054
Transportation gasoline use - passenger truck	gal	0	0.124	0	19.79	0	0.035	0	0.00036	0	0.003	0	0.00661	0
Transportation gasoline use - User Defined	gal	0	0.124	0	19.6	0	0.11	0	0.0045	0	0.00054	0	0.000039	0
Transportation natural gas use	ccf	0	0.103	0	13.1	0	0.01	0	6.3E-06	0	0.00076	0	8.4E-06	0
Transportation natural gas use - User Defined	ccf	0	0.103	0	13.1	0	0.01	0	6.3E-06	0	0.00076	0	8.4E-06	0
User-defined conventional energy transportation #1	TBD	10	0	0	0	0	0	0	0	0	0	0	0	0
User-defined conventional energy transportation #2	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
Conventional Energy Subtotals				**22**		**3,483**		**5**		**0**		**1**		**1**
Notes:														
Renewable Energy														
Transportation biodiesel use	gal	0	0.127	0	22.3	0	0.2	0	0	0	0.00099	0	NP	
Transportation biodiesel use - User Defined	gal	0	0.127	0	22.3	0	0.2	0	0	0	0.00099	0	NP	
User-defined renewable energy transportation #1	TBD	0	Biodiesel		0	0	0	0	0	0	0	0	Ref.	
User-defined renewable energy transportation #2	TBD	0	mpg or pmp		0	0	0	0	0	0	0	0	0	0
Renewable Energy Subtotals				**0**		**0**		**0**		**0**		**0**		**0**
Notes:														
Transportation Totals				**22**		**3483**		**5**		**0**		**1**		**1**

Endpoint Sampling & Long-Term Monitoring - Off-Site Footprint (Scope 3b)

Category	Units	Usage	Energy		Greenhouse Gas		NOx		SOx		PM		HAPs	
			Conv. Factor	MMBtus	Conv. Factor	lbs CO2e	Conv. Factor	lbs	Conv. Factor	lbs	Conv. Factor	lbs	Conv. Factor	lbs
Construction Materials														
Aluminum, Rolled Sheet	lb	0	0.0633	0	9.15	0	0.0148	0	0.0283	0	0.0088	0	0.00102	0
Asphalt, mastic	lb	0	0.0412	0	0.85	0	0.00271	0	0.00798	0	0.000766	0	0.00107	0
Asphalt, paving-grade	lb	0	0.5	0	8.58	0	0.0299	0	0.0969	0	0.0091	0	0.0133	0
Ethanol, Corn, 95%	lb	0	0.0318	0	-0.0199	0	0.00425	0	0.00303	0	0.000469	0	8.46E-05	0
Ethanol, Corn, 99.7%	lb	0	0.0324	0	0.0591	0	0.00431	0	0.0031	0	0.000472	0	0.000087	0
Ethanol, Petroleum, 99.7%	lb	0	0.0205	0	1.25	0	0.00199	0	0.00214	0	0.000277	0	5.89E-05	0
Gravel/Sand Mix, 65% Gravel	lb	0	2.48E-05	0	0.0024	0	0.000018	0	4.52E-06	0	2.61E-06	0	3.08E-07	0
Gravel/sand/clay	lb	0	0.000028	0	0.00335	0	1.65E-05	0	0.000015	0	0.000002	0	2.05E-10	0
HDPE	lb	0	0.0332	0	1.94	0	0.00325	0	0.00409	0	0.000439	0	6.41E-05	0
Photovoltaic system (installed)	W	0	0.0336	0	4.47	0	0.015	0	0.032	0	0.00063	0	2.9E-06	0
PVC	lb	0	0.0262	0	2.02	0	0.004	0	0.00274	0	0.000372	0	0.000375	0
Portland cement, US average	lb	0	0.0139	0	1.34	0	0.00654	0	0.0104	0	0.00378	0	0.00097	0
Ready-mixed concrete, 20 MPa	ft3	0	0.217	0	19.5	0	0.0975	0	0.154	0	0.057	0	0.0141	0
Round Gravel	lb	0	2.48E-05	0	0.0024	0	0.000018	0	4.52E-06	0	2.61E-06	0	3.08E-07	0
Sand	lb	0	2.48E-05	0	0.0024	0	0.000018	0	4.52E-06	0	2.61E-06	0	3.08E-07	0
Stainless Steel	lb	0	0.0116	0	3.4	0	0.0075	0	0.012	0	0.0044	0	0.000144	0
Steel	lb	0	0.0044	0	1.1	0	0.0014	0	0.0017	0	0.00056	0	0.000067	0
Other refined construction materials	lb	0	0.01885	0	2.115	0	0.004038	0	0.005133	0	0.001443	0	0.000163	0
Other unrefined construction materials	lb	0	0.000028	0	0.00335	0	1.65E-05	0	0.000015	0	0.000002	0	2.05E-10	0

Notes:

Endpoint Sampling & Long-Term Monitoring - Off-Site Footprint (Scope 3b)

Category	Units	Usage	Energy		Greenhouse Gas		NOx		SOx		PM		HAPs	
			Conv. Factor	MMBtus	Conv. Factor	lbs CO2e	Conv. Factor	lbs	Conv. Factor	lbs	Conv. Factor	lbs	Conv. Factor	lbs
Treatment Materials & Chemicals														
Cheese Whey	lbs	0	0.0025	0	0.031	0	0.000062	0	0.000033	0	0.000002	0	NP	
Emulsified vegetable oil	lbs	0	0.0077	0	3.44	0	0.0066	0	0.0019	0	0.000033	0	NP	
Granular activated carbon, primary	lbs	0	0.0356	0	4.82	0	0.0793	0	0.128	0	0.000987	0	0.000657	0
Granular activated carbon, regenerated	lbs	0	0.00873	0	1.7	0	0.00733	0	0.0129	0	0.000886	0	0.000671	0
Hydrogen Peroxide, 50% in H2O	lbs	0	0.00979	0	1.19	0	0.00142	0	0.0024	0	0.000308	0	6.29E-05	0
Iron (II) Sulfate	lbs	0	0.00147	0	0.167	0	0.000316	0	0.000589	0	0.000103	0	0.000023	0
Lime, Hydrated, Packed	lbs	0	0.00206	0	0.762	0	0.000513	0	0.000358	0	0.00013	0	6.57E-06	0
Molasses	lbs	0	0.0044	0	0.48	0	0.0011	0	0.00024	0	4.1E-06	0	NP	
Phosphoric Acid, 70% in H2O	lbs	0	0.0067	0	0.882	0	0.00282	0	0.0294	0	0.00171	0	0.000163	0
Potassium Permanganate	lbs	0	0.00981	0	1.16	0	0.00234	0	0.0032	0	0.000422	0	0.000122	0
Sodium Hydroxide, 50% in H2O	lbs	0	0.00977	0	1.09	0	0.00194	0	0.00352	0	0.000403	0	0.000129	0
Other Treatment Chemicals & Materials	lbs	0	0.015	0	1.67	0	0.003	0	0.0065	0	0.00061	0	0.000016	0
Notes:														
Fuel Processing														
Biodiesel produced	gal	0	0.029	0	-16.8	0	0.018	0	0.033	0	0.00082	0	NP	
Diesel produced	gal	0	0.017	0	3.02	0	0.0051	0	0.0062	0	0.0017	0	0.0011	0
Gasoline produced	gal	176.2	0.033	5.8146	2.8	493.36	0.0046	0.81052	0.005	0.881	0.0015	0.2643	0.001	0.1762
Liquefied Petroleum Gas Produced	gal	0	0.088	0	1.47	0	0.0016	0	0.0024	0	0.0007	0	0.0003	0
Natural Gas - Compressed Produced	ccf	0	19.983	0	343.92	0	0.4732	0	2.1651	0	0.1846	0	0.2895	0
Natural Gas Produced	ccf	0	0.0052	0	2.2	0	0.0037	0	0.0046	0	0.000072	0	6.1E-06	0
Fuel Processing Subtotals				**5.8146**		**493.36**		**0.81052**		**0.881**		**0.2643**		**0.1762**
Notes:														
Public water	gal x 1000	0	0.0092	0	5	0	0.0097	0	0.0059	0	0.016	0	0.000015	0
User-defined water resource #1	gal x 1000	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined water resource #2	gal x 1000	0	0	0	0	0	0	0	0	0	0	0	0	0
Notes:														

Endpoint Sampling & Long-Term Monitoring - Off-Site Footprint (Scope 3b)

			Energy		Greenhouse Gas		NOx		SOx		PM		HAPs	
Category	Units	Usage	Conv. Factor	MMBtus	Conv. Factor	lbs CO2e	Conv. Factor	lbs	Conv. Factor	lbs	Conv. Factor	lbs	Conv. Factor	lbs
Off-Site Services														
Hazardous waste incineration	lb	0	0.00609	0	2.43	0	0.0016	0	0.00167	0	0.000209	0	0.000087	0
Off-site waste water treatment (POTW)	gal x 1000	0	0.015	0	4.4	0	0.016	0	0.015	0	NP		NP	
Off-site non-hazardous waste landfill	ton	0	0.16	0	25	0	0.14	0	0.075	0	0.4	0	0.0014	0
Off-site hazardous waste landfill	ton	0	0.18	0	27.5	0	0.154	0	0.0825	0	0.44	0	0.00154	0
Off-site Laboratory Analysis - Other	sample	50	0.058071	2.903551	6.853438	342.6719	0.131402	6.570098	0.303876	15.19379	0.04557	2.278491	0.033017	1.650826
Off-site Laboratory Analysis - Metals	sample	10	0.212	2.12	27.4693	274.693	0.6423	6.423	1.5072	15.072	0.2264	2.264	0.1643	1.643
Off-site Laboratory Analysis - Mercury	sample	10	0.073171	0.731715	9.325458	93.25458	0.212744	2.127439	0.49824	4.982396	0.074736	0.747359	0.054233	0.542332
Off-site Laboratory Analysis - Inorganic Anions	sample	0	0.007402	0	0.645948	0	0.006768	0	0.014793	0	0.002202	0	0.001554	0
Off-site Laboratory Analysis - Alkalinity	sample	0	0.01744	0	1.338192	0	0.007011	0	0.01325	0	0.00194	0	0.001283	0
Off-site Laboratory Analysis - Perchlorate	sample	0	0.023885	0	1.871705	0	0.007981	0	0.014154	0	0.002055	0	0.001287	0
Off-site Laboratory Analysis - Nitrogen/Nitrate	sample	0	0.033648	0	4.29897	0	0.095459	0	0.222665	0	0.03351	0	0.024251	0
Off-site Laboratory Analysis - Sulfate	sample	0	0.014122	0	1.472673	0	0.007981	0	0.013602	0	0.00198	0	0.001202	0
Off-site Laboratory Analysis - PCBs	sample	10	0.051277	0.512769	5.224902	52.24902	0.083334	0.833339	0.190477	1.904774	0.028439	0.284393	0.021208	0.212083
Off-site Laboratory Analysis - VOCs	sample	10	0.076204	0.762045	9.016814	90.16814	0.104498	1.04498	0.227074	2.270738	0.033951	0.339508	0.023589	0.235892
Off-site Laboratory Analysis - SVOCs	sample	10	0.07156	0.715602	7.870422	78.70422	0.145945	1.459445	0.337304	3.373038	0.050485	0.504853	0.037258	0.372577
Notes:														
Resource Extraction for Electricity														
Coal extraction and processing	MWh	0	3.1	0	180.0	0	0.8	0	0.2	0	0.0	0	NP	
Natural gas extraction and processing	MWh	0	1.6	0	270.0	0	0.2	0	13.0	0	0.0	0	NP	
Nuclear fuel extraction and processing	MWh	0	0.2	0	25.0	0	0.2	0	0.5	0	0.0	0	NP	
Oil extraction and processing	MWh	0	2.3	0	270.0	0	1.7	0	0.1	0	0.0	0	NP	
Other fuel extraction and processing	MWh	0	0	0	0	0	0	0	0	0	0	0	0	0
Resource Extraction Subtotals				**0**		**0**		**0**		**0**		**0**		**0**
Notes:														
Electricity Transmission														
Transmission and distribution losses	MWh	0	1.0342	0	35.2	0	0.1504	0	0.146966	0	0.007546	0	0.00454	0
Notes:														

Endpoint Sampling & Long-Term Monitoring - Off-Site Footprint (Scope 3b)

			Energy		Greenhouse Gas		NOx		SOx		PM		HAPs	
Category	Units	Usage	Conv. Factor	MMBtus	Conv. Factor	lbs CO2e	Conv. Factor	lbs	Conv. Factor	lbs	Conv. Factor	lbs	Conv. Factor	lbs
User-defined Materials														
BENSEAL (Sodium Bentonite)	50 lb bag	0	0	0	0	0	0	0	0	0	0	0	0	0
orange mesh fencing	ft	0	0	0	0	0	0	0	0	0	0	0	0	0
absorbent composite socks	ft	0	0	0	0	0	0	0	0	0	0	0	0	0
6-mil 40' x 100' polyurethane sheeting	rolls	0	0	0	0	0	0	0	0	0	0	0	0	0
aggregate 2" stone	ton	0	0	0	0	0	0	0	0	0	0	0	0	0
filter cloth	lb	0	0	0	0	0	0	0	0	0	0	0	0	0
20-mil vapor barrier	sqft	0	0	0	0	0	0	0	0	0	0	0	0	0
4" Perforated SDR 35 Radon Vent Pipe	ft	0	0	0	0	0	0	0	0	0	0	0	0	0
Clean Fill	ton	0	0	0	0	0	0	0	0	0	0	0	0	0
Recycled Stone	ton	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined material #11	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined material #12	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined material #13	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined material #14	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined material #15	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined material #16	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined material #17	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined material #18	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined material #19	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined material #20	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
Notes:														
User-defined Waste Destinations														
User-defined recycled/reused off-site #1	ton	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined recycled/reused off-site #2	ton	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined recycled/reused off-site #3	TBD	0	y(MMBtu/U		lbs CO2e/U		Ox(lbs/unit		Ox(lbs/unit		M(lbs/unit)		APs(lbs/unit	
User-defined non-hazardous waste destination #1	ton	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined non-hazardous waste destination #2	ton	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined non-hazardous waste destination #3	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined hazardous waste destination #1	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined hazardous waste destination #2	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined hazardous waste destination #3	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
Notes:														
Off-site Totals				**13.56028**		**1425.101**		**19.26882**		**43.67773**		**6.682906**		**4.83291**

Endpoint Sampling & Long-Term Monitoring - Intermediate Totals

Category	Units	Usage	Energy		Greenhouse Gas		NOx		SOx		PM		HAPs	
			Conv. Factor	MMBtus	Conv. Factor	lbs CO2e	Conv. Factor	lbs	Conv. Factor	lbs	Conv. Factor	lbs	Conv. Factor	lbs
Total Grid Electricity Footprint														
On-site grid electricity	MWh	0	3.413	0										
Electricity Generation														
Grid electricity	MWh	0	6.929	0	1124.3	0	2.2421	0	4.607887	0	0.057518	0	0.210237	0
Resource Extraction for Electricity														
Coal extraction and processing	MWh	0	3.1	0	180.0	0	0.8	0	0.2	0	0.0	0	NP	
Natural gas extraction and processing	MWh	0	1.6	0	270.0	0	0.2	0	13.0	0	0.0	0	NP	
Nuclear fuel extraction and processing	MWh	0	0.2	0	25.0	0	0.2	0	0.5	0	0.0	0	NP	
Oil extraction and processing	MWh	0	2.3	0	270.0	0	1.7	0	0.1	0	0.0	0	NP	
Other fuel extraction and processing	MWh	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0
Electricity Transmission														
Transmission and distribution losses	MWh	0	1.0342	0	112.43	0	0.22421	0	0.460789	0	0.005752	0	0.021024	0
Total Grid Electricity Footprint				**0**		**0**		**0**		**0**		**0**		**0**
Total Fuel Footprints														
Total Gasoline Footprint														
On-site gasoline use - Other	gal	0	0.124	0	19.6	0	0.11	0	0.0045	0	0.00054	0	0.000039	0
On-site gasoline use <25 hp	gal	0	0.124	0	17.48	0	0.037	0	0.00025	0	0.165	0	0.00008	0
On-site gasoline use >25 hp	gal	0	0.124	0	19.93	0	0.032	0	0.00029	0	0.002	0	0.00009	0
Transportation gasoline use	gal	0	0.124	0	19.6	0	0.11	0	0.0045	0	0.00054	0	0.000039	0
Transportation gasoline use - car	gal	176.2	0.124	21.8488	19.77	3483.474	0.027	4.7574	0.00036	0.063432	0.003	0.5286	0.0067	1.18054
Transportation gasoline use - passenger truck	gal	0	0.124	0	19.79	0	0.035	0	0.00036	0	0.003	0	0.00661	0
Transportation gasoline use - User Defined	gal	0	0.124	0	19.6	0	0.11	0	0.0045	0	0.00054	0	0.000039	0
Gasoline produced	gal	176.2	0.033	5.8146	2.8	493.36	0.0046	0.81052	0.005	0.881	0.0015	0.2643	0.001	0.1762
Total Gasoline Footprint		**176.2**		**27.6634**		**3976.834**		**5.56792**		**0.944432**		**0.7929**		**1.35674**
Total Diesel Footprint														
On-site diesel use - Other	gal	0	0.139	0	22.5	0	0.17	0	0.0054	0	0.0034	0	5.2E-06	0
On-site diesel use <75 hp	gal	0	0.139	0	22.21	0	0.1565	0	0.000145	0	0.0145	0	0.00004	0
On-site diesel use 75<hp<750	gal	0	0.139	0	22.24	0	0.101	0	0.00013	0	0.009	0	0.00004	0
On-site diesel use >750 hp	gal	0	0.139	0	22.24	0	0.149	0	0.00013	0	0.006	0	0.00004	0
Transportation diesel use	gal	0	0.139	0	22.5	0	0.17	0	0.0054	0	0.0034	0	5.2E-06	0
Transportation diesel use - car	gal	0	0.139	0	22.57	0	0.015	0	0.0002	0	0.003	0	0.00252	0
Transportation diesel use - passenger truck	gal	0	0.139	0	22.545	0	0.0585	0	0.0002	0	0.007	0	0.002605	0
Transportation diesel use - User Defined	gal	0	0.139	0	22.5	0	0.17	0	0.0054	0	0.0034	0	5.2E-06	0
Diesel produced	gal	0	0.017	0	3.02	0	0.0051	0	0.0062	0	0.0017	0	0.0011	0
Total Diesel Footprint		**0**		**0**		**0**		**0**		**0**		**0**		**0**
Total Biodiesel Footprint														
On-site biodiesel use	gal	0	0.127	0	22.3	0	0.2	0	0	0	0.00099	0	NP	
On-site biodiesel use - User Defined	gal	0	0.127	0	22.3	0	0.2	0	0	0	0.00099	0	NP	
Transportation biodiesel use	gal	0	0.127	0	22.3	0	0.2	0	0	0	0.00099	0	NP	
Transportation biodiesel use - User Defined	gal	0	0.127	0	22.3	0	0.2	0	0	0	0.00099	0	NP	
Biodiesel produced	gal	0	0.029	0	-16.8	0	0.018	0	0.033	0	0.00082	0	NP	
Total Biodiesel Footprint		**0**		**0**		**0**		**0**		**0**		**0**		**0**
Total Natural Gas Footprint														
On-site natural gas use	ccf	0	0.103	0	13.1	0	0.01	0	6.3E-06	0	0.00076	0	8.4E-06	0
Transportation natural gas use	ccf	0	0.103	0	13.1	0	0.01	0	6.3E-06	0	0.00076	0	8.4E-06	0
Transportation natural gas use - User Defined	ccf	0	0.103	0	13.1	0	0.01	0	6.3E-06	0	0.00076	0	8.4E-06	0
Natural gas produced	ccf	0	0.0052	0	2.2	0	0.0037	0	0.0046	0	0.000072	0	6.1E-06	0
Total Natural Gas Footprint		**0**		**0**		**0**		**0**		**0**		**0**		**0**
Total Liquified Petroleum Gas Footprint														
On-site liquified petroleum gas use - Other	ccf	0	NP		12.69	0	0.021	0	0.00013	0	0.001	0	0	0
On-site liquified petroleum gas use	ccf	0	NP		12.69	0	0.021	0	0.00013	0	0.001	0	0	0
Liquified petroleum gas produced	ccf	0	0.088	0	1.47	0	0.0016	0	0.0024	0	0.0007	0	0.0003	0
Total Natural Gas Footprint		**0**		**0**		**0**		**0**		**0**		**0**		**0**
Total Compressed Gas Footprint														
On-site compressed gas use - Other	ccf	0	NP		1957.835	0	16.0325	0	0.023045	0	0.2775	0	0	0
On-site compressed gas use	ccf	0	NP		1957.835	0	16.0325	0	0.023045	0	0.2775	0	0	0
Compressed gas produced	ccf	0	19.983	0	343.92	0	0.4732	0	2.1651	0	0.1846	0	0.2895	0
Total Natural Gas Footprint		**0**		**0**		**0**		**0**		**0**		**0**		**0**

Notes:

Note: Please refer to the "Default Conversions" tab for references for the default conversion factors used on this calculation sheet.

All Components - On-Site Footprint (Scope 1)

Contributors to Footprints	Units	Usage	Energy		GHG		NOx		SOx		PM		HAPs	
			Conv. Factor	MMBtus	Conv. Factor	lbs CO2e	Conv. Factor	lbs	Conv. Factor	lbs	Conv. Factor	lbs	Conv. Factor	lbs
On-Site														
On-site Renewable Energy														
Renewable electricity generated on-site	MWh	0	3.413	0										
Landfill gas combusted on-site for energy use	ccf CH4	0	0.103	0	13.1	0	0.01	0	6.3E-06	0	0.00076	0	8.4E-06	0
On-site biodiesel use	gal	0	0.127	0	22.3	0	0.2	0	0	0	0.00099	0	NP	
On-site biodiesel use - User Defined	gal	0	0.127	0	22.3	0	0.2	0	0	0	0.00099	0	NP	
User-defined on-site renewable energy use #1	gal	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined on-site renewable energy use #2	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
On-site Renewable Energy Subtotals				**0**		**0**		**0**		**0**		**0**		**0**
Notes:														
On-site Conventional Energy														
On-site grid electricity	MWh	0	3.413	0										
On-site diesel use - Other	Gal	0	0.139	0	22.5	0	0.17	0	0.0054	0	0.0034	0	5.2E-06	0
On-site diesel use <75 hp	Gal	0	0.139	0	22.21	0	0.1565	0	0.000145	0	0.0145	0	0.00004	0
On-site diesel use 75<hp<750	Gal	12416.54	0.139	1725.899	22.24	276143.8	0.101	1254.07	0.00013	1.61415	0.009	111.7488	0.00004	0.496662
On-site diesel use >750 hp	Gal	0	0.139	0	22.24	0	0.149	0	0.00013	0	0.006	0	0.00004	0
On-site gasoline use - Other	Gal	0	0.124	0	19.6	0	0.11	0	0.0045	0	0.00054	0	0.000039	0
On-site gasoline use <25 hp	Gal	0	0.124	0	17.48	0	0.037	0	0.00025	0	0.165	0	0.00008	0
On-site gasoline use >25 hp	Gal	0	0.124	0	19.93	0	0.032	0	0.00029	0	0.002	0	0.00009	0
On-site natural gas use	ccf	0	0.103	0	13.1	0	0.01	0	6.3E-06	0	0.00076	0	8.4E-06	0
On-site compressed natural gas use - Other	ccf	0	NP		1957.835	0	16.0325	0	0.023045	0	0.2775	0	0	0
On-site compressed natural gas use	ccf	0	NP		1957.835	0	16.0325	0	0.023045	0	0.2775	0	0	0
On-site liquified petroleum gas use - Other	gal	0	NP		12.69	0	0.021	0	0.00013	0	0.001	0	0	0
On-site liquified petroleum gas use	gal	0	NP		12.69	0	0.021	0	0.00013	0	0.001	0	0	0
Other forms of on-site conventional energy use #1	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
Other forms of on-site conventional energy use #2	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
On-site Conventional Energy Subtotals				**1,726**		**276,144**		**1,254**		**2**		**112**		**0**
Notes:														
Other On-site Emissions														
On-site HAP process emissions	lbs	0											1	0
On-site GHG emissions	lbs CO2e	0			1	0								
On-site carbon storage	lbs CO2e	0			1	0								
GHG avoided by flaring on-site landfill methane	Lbs	0			-262	0	0.01	0	6.3E-06	0	0.00076	0	8.4E-06	0
Other on-site NOx emissions or reductions	lbs	0					1	0						
Other on-site SOx emissions or reductions	lbs	0							1	0				
Other on-site PM emissions or reductions	lbs	0									1	0		
User-defined recycled/reused on-site #2	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined recycled/reused on-site #3	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined recycled/reused off-site #1	ton	0	0	0	0	0	0	0	0	0	0	0	0	0
Notes:														
On-site Totals				**1,725.90**		**276,144**		**1,254**		**2**		**112**		**0**

All Components - Electricity Generation Footprint (Scope 2)

Contributors to Footprints	Units	Usage	Energy		GHG		NOx		SOx		PM		HAPs	
			Conv. Factor	MMBtus	Conv. Factor	lbs CO2e	Conv. Factor	lbs	Conv. Factor	lbs	Conv. Factor	lbs	Conv. Factor	lbs
Electricity Generation														
Grid electricity	MWh	0	6.929	0	N/A*	0	N/A*	0	N/A*	0	N/A*	0	N/A*	0
**** Conversion factors are not applied to grid electricity in the "All Components" tab since multiple fuel mixes may be used. The value for each cell shaded yellow in Row 51 is the sum of values from Components 1 - 6.***														
Voluntary purchase of renewable electricity	MWh	0												
Voluntary purchase of RECs	MWh	0												
Notes:														

All Components - Transportation Footprint (Scope 3a)

Category	Units	Usage	Energy		Greenhouse Gas		NOx		SOx		PM		HAPs	
			Conv. Factor	MMBtus	Conv. Factor	lbs CO2e	Conv. Factor	lbs	Conv. Factor	lbs	Conv. Factor	lbs	Conv. Factor	lbs
Conventional Energy														
Transportation diesel use	gal	13236.67	0.139	1839.897	22.5	297825	0.17	2250.233	0.0054	71.478	0.0034	45.00466	5.2E-06	0.068831
Transportation diesel use - car	gal	0	0.139	0	22.57	0	0.015	0	0.0002	0	0.003	0	0.00252	0
Transportation diesel use - passenger truck	gal	0	0.139	0	22.545	0	0.0585	0	0.0002	0	0.007	0	0.002605	0
Transportation diesel use - User Defined	gal	0	0.139	0	22.5	0	0.17	0	0.0054	0	0.0034	0	5.2E-06	0
Transportation gasoline use	gal	0	0.124	0	19.6	0	0.11	0	0.0045	0	0.00054	0	0.000039	0
Transportation gasoline use - car	gal	2012.2	0.124	249.5128	19.77	39781.19	0.027	54.3294	0.00036	0.724392	0.003	6.0366	0.0067	13.48174
Transportation gasoline use - passenger truck	gal	0	0.124	0	19.79	0	0.035	0	0.00036	0	0.003	0	0.00661	0
Transportation gasoline use - User Defined	gal	0	0.124	0	19.6	0	0.11	0	0.0045	0	0.00054	0	0.000039	0
Transportation natural gas use	ccf	0	0.103	0	13.1	0	0.01	0	6.3E-06	0	0.00076	0	8.4E-06	0
Transportation natural gas use - User Defined	ccf	0	0.103	0	13.1	0	0.01	0	6.3E-06	0	0.00076	0	8.4E-06	0
User-defined conventional energy transportation #1	TBD	50	0	0	0	0	0	0	0	0	0	0	0	0
User-defined conventional energy transportation #2	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
Conventional Energy Subtotals				**2,089**		**337,606**		**2,305**		**72**		**51**		**14**
Notes:														
Renewable Energy														
Transportation biodiesel use	gal	0	0.127	0	22.3	0	0.2	0	0	0	0.00099	0	NP	
Transportation biodiesel use - User Defined	gal	0	0.127	0	22.3	0	0.2	0	0	0	0.00099	0	NP	
User-defined renewable energy transportation #1	TBD	0	Biodiesel		0	0	0	0	0	0	0	0	Ref.	
User-defined renewable energy transportation #2	TBD	0	mpg or pmp		0	0	0	0	0	0	0	0	0	0
Renewable Energy Subtotals				**0**		**0**		**0**		**0**		**0**		**0**
Notes:														
Transportation Totals				**2089**		**337606**		**2305**		**72**		**51**		**14**

All Components - Off-Site Footprint (Scope 3b)

Category	Units	Usage	Energy		Greenhouse Gas		NOx		SOx		PM		HAPs	
			Conv. Factor	MMBtus	Conv. Factor	lbs CO2e	Conv. Factor	lbs	Conv. Factor	lbs	Conv. Factor	lbs	Conv. Factor	lbs
Construction Materials														
Aluminum, Rolled Sheet	lb	0	0.0633	0	9.15	0	0.0148	0	0.0283	0	0.0088	0	0.00102	0
Asphalt, mastic	lb	0	0.0412	0	0.85	0	0.00271	0	0.00798	0	0.000766	0	0.00107	0
Asphalt, paving-grade	lb	0	0.5	0	8.58	0	0.0299	0	0.0969	0	0.0091	0	0.0133	0
Ethanol, Corn, 95%	lb	0	0.0318	0	-0.0199	0	0.00425	0	0.00303	0	0.000469	0	8.46E-05	0
Ethanol, Corn, 99.7%	lb	0	0.0324	0	0.0591	0	0.00431	0	0.0031	0	0.000472	0	0.000087	0
Ethanol, Petroleum, 99.7%	lb	0	0.0205	0	1.25	0	0.00199	0	0.00214	0	0.000277	0	5.89E-05	0
Gravel/Sand Mix, 65% Gravel	lb	0	2.48E-05	0	0.0024	0	0.000018	0	4.52E-06	0	2.61E-06	0	3.08E-07	0
Gravel/sand/clay	lb	0	0.000028	0	0.00335	0	1.65E-05	0	0.000015	0	0.000002	0	2.05E-10	0
HDPE	lb	0	0.0332	0	1.94	0	0.00325	0	0.00409	0	0.000439	0	6.41E-05	0
Photovoltaic system (installed)	W	0	0.0336	0	4.47	0	0.015	0	0.032	0	0.00063	0	2.9E-06	0
PVC	lb	0	0.0262	0	2.02	0	0.004	0	0.00274	0	0.000372	0	0.000375	0
Portland cement, US average	lb	0	0.0139	0	1.34	0	0.00654	0	0.0104	0	0.00378	0	0.00097	0
Ready-mixed concrete, 20 MPa	ft3	0	0.217	0	19.5	0	0.0975	0	0.154	0	0.057	0	0.0141	0
Round Gravel	lb	0	2.48E-05	0	0.0024	0	0.000018	0	4.52E-06	0	2.61E-06	0	3.08E-07	0
Sand	lb	0	2.48E-05	0	0.0024	0	0.000018	0	4.52E-06	0	2.61E-06	0	3.08E-07	0
Stainless Steel	lb	0	0.0116	0	3.4	0	0.0075	0	0.012	0	0.0044	0	0.000144	0
Steel	lb	0	0.0044	0	1.1	0	0.0014	0	0.0017	0	0.00056	0	0.000067	0
Other refined construction materials	lb	0	0.01885	0	2.115	0	0.004038	0	0.005133	0	0.001443	0	0.000163	0
Other unrefined construction materials	lb	0	0.000028	0	0.00335	0	1.65E-05	0	0.000015	0	0.000002	0	2.05E-10	0

Notes:

All Components - Off-Site Footprint (Scope 3b)

Category	Units	Usage	Energy		Greenhouse Gas		NOx		SOx		PM		HAPs	
			Conv. Factor	MMBtus	Conv. Factor	lbs CO2e	Conv. Factor	lbs	Conv. Factor	lbs	Conv. Factor	lbs	Conv. Factor	lbs
Treatment Materials & Chemicals														
Cheese Whey	lbs	0	0.0025	0	0.031	0	0.000062	0	0.000033	0	0.000002	0	NP	
Emulsified vegetable oil	lbs	0	0.0077	0	3.44	0	0.0066	0	0.0019	0	0.000033	0	NP	
Granular activated carbon, primary	lbs	0	0.0356	0	4.82	0	0.0793	0	0.128	0	0.000987	0	0.000657	0
Granular activated carbon, regenerated	lbs	0	0.00873	0	1.7	0	0.00733	0	0.0129	0	0.000886	0	0.000671	0
Hydrogen Peroxide, 50% in H2O	lbs	0	0.00979	0	1.19	0	0.00142	0	0.0024	0	0.000308	0	6.29E-05	0
Iron (II) Sulfate	lbs	0	0.00147	0	0.167	0	0.000316	0	0.000589	0	0.000103	0	0.000023	0
Lime, Hydrated, Packed	lbs	0	0.00206	0	0.762	0	0.000513	0	0.000358	0	0.00013	0	6.57E-06	0
Molasses	lbs	0	0.0044	0	0.48	0	0.0011	0	0.00024	0	4.1E-06	0	NP	
Phosphoric Acid, 70% in H2O	lbs	0	0.0067	0	0.882	0	0.00282	0	0.0294	0	0.00171	0	0.000163	0
Potassium Permanganate	lbs	0	0.00981	0	1.16	0	0.00234	0	0.0032	0	0.000422	0	0.000122	0
Sodium Hydroxide, 50% in H2O	lbs	0	0.00977	0	1.09	0	0.00194	0	0.00352	0	0.000403	0	0.000129	0
Other Treatment Chemicals & Materials	lbs	0	0.015	0	1.67	0	0.003	0	0.0065	0	0.00061	0	0.000016	0
Notes:														
Fuel Processing														
Biodiesel produced	gal	0	0.029	0	-16.8	0	0.018	0	0.033	0	0.00082	0	NP	
Diesel produced	gal	25653.2	0.017	436.1045	3.02	77472.68	0.0051	130.8313	0.0062	159.0499	0.0017	43.61045	0.0011	28.21852
Gasoline produced	gal	2012.2	0.033	66.4026	2.8	5634.16	0.0046	9.25612	0.005	10.061	0.0015	3.0183	0.001	2.0122
Liquefied Petroleum Gas Produced	gal	0	0.088	0	1.47	0	0.0016	0	0.0024	0	0.0007	0	0.0003	0
Natural Gas - Compressed Produced	ccf	0	19.983	0	343.92	0	0.4732	0	2.1651	0	0.1846	0	0.2895	0
Natural Gas Produced	ccf	0	0.0052	0	2.2	0	0.0037	0	0.0046	0	0.000072	0	6.1E-06	0
Fuel Processing Subtotals				**502.5071**		**83106.84**		**140.0875**		**169.1109**		**46.62875**		**30.23072**
Notes:														
Public water	gal x 1000	204	0.0092	1.8768	5	1020	0.0097	1.9788	0.0059	1.2036	0.016	3.264	0.000015	0.00306
User-defined water resource #1	gal x 1000	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined water resource #2	gal x 1000	0	0	0	0	0	0	0	0	0	0	0	0	0
Notes:														

All Components - Off-Site Footprint (Scope 3b)

Category	Units	Usage	Energy		Greenhouse Gas		NOx		SOx		PM		HAPs	
			Conv. Factor	MMBtus	Conv. Factor	lbs CO2e	Conv. Factor	lbs	Conv. Factor	lbs	Conv. Factor	lbs	Conv. Factor	lbs
Off-Site Services														
Hazardous waste incineration	lb	0	0.00609	0	2.43	0	0.0016	0	0.00167	0	0.000209	0	0.000087	0
Off-site waste water treatment (POTW)	gal x 1000	0	0.015	0	4.4	0	0.016	0	0.015	0	NP		NP	
Off-site non-hazardous waste landfill	ton	0	0.16	0	25	0	0.14	0	0.075	0	0.4	0	0.0014	0
Off-site hazardous waste landfill	ton	0	0.18	0	27.5	0	0.154	0	0.0825	0	0.44	0	0.00154	0
Off-site Laboratory Analysis - Other	sample	50	0.058071	2.903551	6.853438	342.6719	0.131402	6.570098	0.303876	15.19379	0.04557	2.278491	0.033017	1.650826
Off-site Laboratory Analysis - Metals	sample	10	0.212	2.12	27.4693	274.693	0.6423	6.423	1.5072	15.072	0.2264	2.264	0.1643	1.643
Off-site Laboratory Analysis - Mercury	sample	10	0.073171	0.731715	9.325458	93.25458	0.212744	2.127439	0.49824	4.982396	0.074736	0.747359	0.054233	0.542332
Off-site Laboratory Analysis - Inorganic Anions	sample	0	0.007402	0	0.645948	0	0.006768	0	0.014793	0	0.002202	0	0.001554	0
Off-site Laboratory Analysis - Alkalinity	sample	0	0.01744	0	1.338192	0	0.007011	0	0.01325	0	0.00194	0	0.001283	0
Off-site Laboratory Analysis - Perchlorate	sample	0	0.023885	0	1.871705	0	0.007981	0	0.014154	0	0.002055	0	0.001287	0
Off-site Laboratory Analysis - Nitrogen/Nitrate	sample	0	0.033648	0	4.29897	0	0.095459	0	0.222665	0	0.03351	0	0.024251	0
Off-site Laboratory Analysis - Sulfate	sample	0	0.014122	0	1.472673	0	0.007981	0	0.013602	0	0.00198	0	0.001202	0
Off-site Laboratory Analysis - PCBs	sample	10	0.051277	0.512769	5.224902	52.24902	0.083334	0.833339	0.190477	1.904774	0.028439	0.284393	0.021208	0.212083
Off-site Laboratory Analysis - VOCs	sample	10	0.076204	0.762045	9.016814	90.16814	0.104498	1.04498	0.227074	2.270738	0.033951	0.339508	0.023589	0.235892
Off-site Laboratory Analysis - SVOCs	sample	10	0.07156	0.715602	7.870422	78.70422	0.145945	1.459445	0.337304	3.373038	0.050485	0.504853	0.037258	0.372577
Notes:														
Resource Extraction for Electricity														
Coal extraction and processing	MWh	0	3.1	0	180.0	0	0.8	0	0.2	0	0.0	0	NP	
Natural gas extraction and processing	MWh	0	1.6	0	270.0	0	0.2	0	13.0	0	0.0	0	NP	
Nuclear fuel extraction and processing	MWh	0	0.2	0	25.0	0	0.2	0	0.5	0	0.0	0	NP	
Oil extraction and processing	MWh	0	2.3	0	270.0	0	1.7	0	0.1	0	0.0	0	NP	
Other fuel extraction and processing	MWh	0	0	0	0	0	0	0	0	0	0	0	0	0
Resource Extraction Subtotals				**0**		**0**		**0**		**0**		**0**		**0**
Notes:														
Electricity Transmission														
Transmission and distribution losses	MWh	0	1.0342	0										
Notes:														

All Components - Off-Site Footprint (Scope 3b)

			Energy		Greenhouse Gas		NOx		SOx		PM		HAPs	
Category	Units	Usage	Conv. Factor	MMBtus	Conv. Factor	lbs CO2e	Conv. Factor	lbs	Conv. Factor	lbs	Conv. Factor	lbs	Conv. Factor	lbs
User-defined Materials														
BENSEAL (Sodium Bentonite)	50 lb bag	0	0	0	0	0	0	0	0	0	0	0	0	0
orange mesh fencing	ft	600	0	0	0	0	0	0	0	0	0	0	0	0
absorbent composite socks	ft	600	0	0	0	0	0	0	0	0	0	0	0	0
6-mil 40' x 100' polyurethane sheeting	rolls	7	0	0	0	0	0	0	0	0	0	0	0	0
aggregate 2" stone	ton	60	0	0	0	0	0	0	0	0	0	0	0	0
filter cloth	lb	60	0	0	0	0	0	0	0	0	0	0	0	0
20-mil vapor barrier	sqft	74052	0	0	0	0	0	0	0	0	0	0	0	0
4" Perforated SDR 35 Radon Vent Pipe	ft	0	0	0	0	0	0	0	0	0	0	0	0	0
Clean Fill	ton	4785.926	0	0	0	0	0	0	0	0	0	0	0	0
Recycled Stone	ton	3062.5	0	0	0	0	0	0	0	0	0	0	0	0
User-defined material #11	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined material #12	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined material #13	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined material #14	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined material #15	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined material #16	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined material #17	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined material #18	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined material #19	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined material #20	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
Notes:														
User-defined Waste Destinations														
User-defined recycled/reused off-site #1	ton	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined recycled/reused off-site #2	ton	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined recycled/reused off-site #3	TBD	0	y(MMBtu/U		lbs CO2e/U		Ox(lbs/unit		Ox(lbs/unit		M(lbs/unit)		APs(lbs/unit	
User-defined non-hazardous waste destination #1	ton	7848.426	0	0	0	0	0	0	0	0	0	0	0	0
User-defined non-hazardous waste destination #2	ton	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined non-hazardous waste destination #3	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined hazardous waste destination #1	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined hazardous waste destination #2	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined hazardous waste destination #3	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
Notes:														
Off-site Totals				**512.1296**		**85058.58**		**160.5246**		**213.1112**		**56.31135**		**34.8905**

All Components - Intermediate Totals

Category	Units	Usage	Energy		Greenhouse Gas		NOx		SOx		PM		HAPs	
			Conv. Factor	MMBtus	Conv. Factor	lbs CO2e	Conv. Factor	lbs	Conv. Factor	lbs	Conv. Factor	lbs	Conv. Factor	lbs
Total Grid Electricity Footprint														
On-site grid electricity	MWh	0	3.413	0										
Electricity Generation														
Grid electricity	MWh	0	6.929	0	1124.3	0	2.2421	0	4.607887	0	0.057518	0	0.210237	0
Resource Extraction for Electricity														
Coal extraction and processing	MWh	0	3.1	0	180.0	0	0.8	0	0.2	0	0.0	0	NP	
Natural gas extraction and processing	MWh	0	1.6	0	270.0	0	0.2	0	13.0	0	0.0	0	NP	
Nuclear fuel extraction and processing	MWh	0	0.2	0	25.0	0	0.2	0	0.5	0	0.0	0	NP	
Oil extraction and processing	MWh	0	2.3	0	270.0	0	1.7	0	0.1	0	0.0	0	NP	
Other fuel extraction and processing	MWh	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0
Electricity Transmission														
Transmission and distribution losses	MWh	0	1.0342	0	112.43	0	0.22421	0	0.460789	0	0.005752	0	0.021024	0
Total Grid Electricity Footprint				**0**		**0**		**0**		**0**		**0**		**0**
Total Fuel Footprints														
Total Gasoline Footprint														
On-site gasoline use - Other	gal	0	0.124	0	19.6	0	0.11	0	0.0045	0	0.00054	0	0.000039	0
On-site gasoline use <25 hp	gal	0	0.124	0	17.48	0	0.037	0	0.00025	0	0.165	0	0.00008	0
On-site gasoline use >25 hp	gal	0	0.124	0	19.93	0	0.032	0	0.00029	0	0.002	0	0.00009	0
Transportation gasoline use	gal	0	0.124	0	19.6	0	0.11	0	0.0045	0	0.00054	0	0.000039	0
Transportation gasoline use - car	gal	2012.2	0.124	249.5128	19.77	39781.19	0.027	54.3294	0.00036	0.724392	0.003	6.0366	0.0067	13.48174
Transportation gasoline use - passenger truck	gal	0	0.124	0	19.79	0	0.035	0	0.00036	0	0.003	0	0.00661	0
Transportation gasoline use - User Defined	gal	0	0.124	0	19.6	0	0.11	0	0.0045	0	0.00054	0	0.000039	0
Gasoline produced	gal	2012.2	0.033	66.4026	2.8	5634.16	0.0046	9.25612	0.005	10.061	0.0015	3.0183	0.001	2.0122
Total Gasoline Footprint		**2012.2**		**315.9154**		**45415.35**		**63.58552**		**10.78539**		**9.0549**		**15.49394**
Total Diesel Footprint														
On-site diesel use - Other	gal	0	0.139	0	22.5	0	0.17	0	0.0054	0	0.0034	0	5.2E-06	0
On-site diesel use <75 hp	gal	0	0.139	0	22.21	0	0.1565	0	0.000145	0	0.0145	0	0.00004	0
On-site diesel use 75<hp<750	gal	12416.54	0.139	1725.899	22.24	276143.8	0.101	1254.07	0.00013	1.61415	0.009	111.7488	0.00004	0.496662
On-site diesel use >750 hp	gal	0	0.139	0	22.24	0	0.149	0	0.00013	0	0.006	0	0.00004	0
Transportation diesel use	gal	13236.67	0.139	1839.897	22.5	297825	0.17	2250.233	0.0054	71.478	0.0034	45.00466	5.2E-06	0.068831
Transportation diesel use - car	gal	0	0.139	0	22.57	0	0.015	0	0.0002	0	0.003	0	0.00252	0
Transportation diesel use - passenger truck	gal	0	0.139	0	22.545	0	0.0585	0	0.0002	0	0.007	0	0.002605	0
Transportation diesel use - User Defined	gal	0	0.139	0	22.5	0	0.17	0	0.0054	0	0.0034	0	5.2E-06	0
Diesel produced	gal	25653.2	0.017	436.1045	3.02	77472.68	0.0051	130.8313	0.0062	159.0499	0.0017	43.61045	0.0011	28.21852
Total Diesel Footprint		**25653.2**		**4001.9**		**651441.5**		**3635.135**		**232.142**		**200.364**		**28.78402**
Total Biodiesel Footprint														
On-site biodiesel use	gal	0	0.127	0	22.3	0	0.2	0	0	0	0.00099	0	NP	
On-site biodiesel use - User Defined	gal	0	0.127	0	22.3	0	0.2	0	0	0	0.00099	0	NP	
Transportation biodiesel use	gal	0	0.127	0	22.3	0	0.2	0	0	0	0.00099	0	NP	
Transportation biodiesel use - User Defined	gal	0	0.127	0	22.3	0	0.2	0	0	0	0.00099	0	NP	
Biodiesel produced	gal	0	0.029	0	-16.8	0	0.018	0	0.033	0	0.00082	0	NP	
Total Biodiesel Footprint		**0**		**0**		**0**		**0**		**0**		**0**		**0**
Total Natural Gas Footprint														
On-site natural gas use	ccf	0	0.103	0	13.1	0	0.01	0	6.3E-06	0	0.00076	0	8.4E-06	0
Transportation natural gas use	ccf	0	0.103	0	13.1	0	0.01	0	6.3E-06	0	0.00076	0	8.4E-06	0
Transportation natural gas use - User Defined	ccf	0	0.103	0	13.1	0	0.01	0	6.3E-06	0	0.00076	0	8.4E-06	0
Natural gas produced	ccf	0	0.0052	0	2.2	0	0.0037	0	0.0046	0	0.000072	0	6.1E-06	0
Total Natural Gas Footprint		**0**		**0**		**0**		**0**		**0**		**0**		**0**
Total Liquified Petroleum Gas Footprint														
On-site liquified petroleum gas use - Other	ccf	0	NP		12.69	0	0.021	0	0.00013	0	0.001	0	0	0
On-site liquified petroleum gas use	ccf	0	NP		12.69	0	0.021	0	0.00013	0	0.001	0	0	0
Liquified petroleum gas produced	ccf	0	0.088	0	1.47	0	0.0016	0	0.0024	0	0.0007	0	0.0003	0
Total Natural Gas Footprint		**0**		**0**		**0**		**0**		**0**		**0**		**0**
Total Compressed Gas Footprint														
On-site compressed gas use - Other	ccf	0	NP		1957.835	0	16.0325	0	0.023045	0	0.2775	0	0	0
On-site compressed gas use	ccf	0	NP		1957.835	0	16.0325	0	0.023045	0	0.2775	0	0	0
Compressed gas produced	ccf	0	19.983	0	343.92	0	0.4732	0	2.1651	0	0.1846	0	0.2895	0
Total Natural Gas Footprint		**0**		**0**		**0**		**0**		**0**		**0**		**0**

Notes:

Note: Please refer to the "Default Conversions" tab for references for the default conversion factors used on this calculation sheet.

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		Default Conversion Factors						
		Parameters Used, Extracted, Emitted, or Generated						
		Energy	GHG*	NOx	SOx	PM	HAPs	REFERENCE #
Item or Activity		Used	Emitted	Emitted	Emitted	Emitted	Emitted	(Corresponds to list of references below)
	Unit	MMBtu	lbs CO2e	lbs	lbs	lbs	lbs	
Fuel Combustion								
Biodiesel use	gal	0.127	22.3	0.20	0	0.00099	NP	1
Diesel use	gal	0.139	22.5	0.17	0.0054	0.0034	5.2E-06	2
Diesel use - equipment <75 hp	gal	0.139	22.21	0.1565	0.000145	0.0145	4.0E-05	3
Diesel use - equipment >75 hp and <750 hp	gal	0.139	22.24	0.101	0.00013	0.009	4.0E-05	3
Diesel use - equipment >750 hp	gal	0.139	22.24	0.149	0.00013	0.006	4.0E-05	3
Diesel use - passenger car	gal	0.139	22.57	0.015	0.0002	0.003	2.5E-03	3
Diesel use - passenger truck	gal	0.139	22.545	0.0585	0.0002	0.007	2.6E-03	3
Diesel use - transport with combination truck	gal	0.139	22.53	0.122	0.0002	0.011	2.1E-03	3
Diesel use - transport with freight train	gal	0.139	25.26	0.307	0.00634	0.009	4.4E-03	3
Diesel use - transport with single unit truck	gal	0.139	22.52	0.088	0.0002	0.012	2.0E-03	3
Gasoline use	gal	0.124	19.6	0.11	0.0045	0.00054	3.9E-05	4
Gasoline use - equipment <25 hp	gal	0.124	17.48	0.037	0.00025	0.165	8.0E-05	3
Gasoline use - equipment >25 hp	gal	0.124	19.93	0.032	0.00029	0.002	9.0E-05	3
Gasoline use - passenger car	gal	0.124	19.77	0.027	0.00036	0.003	6.7E-03	3
Gasoline use - passenger truck	gal	0.124	19.79	0.035	0.00036	0.003	6.6E-03	3
Liquified petroleum gas use	gal	NP	12.69	0.021	0.00013	0.001	0.0E+00	3
Natural gas use	ccf	0.103	13.1	0.01	0.0000063	0.00076	8.4E-06	5
Natural gas use - compressed	ccf	NP	1957.835	16.0325	0.023045	0.2775	0.0E+00	3
Landfill gas use	ccf CH4	0.103	13.1	0.01	0.0000063	0.00076	8.4E-06	5
Construction Materials								
Aluminum, Rolled Sheet	lb	0.0633	9.15	0.0148	0.0283	0.0088	0.00102	3
Asphalt, mastic	lb	0.0412	0.85	0.0027	0.00798	0.0008	0.00107	3
Asphalt, paving-grade	lb	0.5000	8.58	0.0299	0.0969	0.0091	0.0133	3
Ethanol, Corn, 95%	lb	0.0318	-0.0199	0.00425	0.00303	0.000469	8.46E-05	3
Ethanol, Corn, 99.7%	lb	0.0324	0.0591	0.00431	0.0031	0.000472	8.70E-05	3
Ethanol, Petroleum, 99.7%	lb	0.0205	1.25	0.00199	0.00214	0.000277	5.89E-05	3
Gravel/Sand Mix, 65% Gravel	lb	2.48E-05	0.0024	0.00002	4.52E-06	0.000003	3.08E-07	3
Gravel/sand/clay	lb	0.000028	0.0034	0.000017	0.000015	0.0000020	2.1E-10	6
HDPE	lb	3.32E-02	1.9400	0.003250	0.00409	0.000439	6.4E-05	7
Photovoltaic system (installed)	W	0.034	4.5	0.015	0.032	0.00063	2.9E-06	8
PVC	lb	0.0262	2.02	0.004	0.00274	0.000372	3.8E-04	3
Portland cement, US average	lb	0.0139	1.34	* 0.00654	0.0104	0.00378	9.7E-04	3
Ready-mixed concrete, 20 MPa	ft^3	0.217	19.5	0.0975	0.154	0.057	0.0141	3
Round Gravel	lb	0.0000248	0.0024	0.000018	4.52E-06	2.61E-06	3.1E-07	3
Sand	lb	0.0000248	0.0024	0.000018	4.52E-06	2.61E-06	3.1E-07	3
Stainless Steel	lb	0.012	3.4	0.0075	0.012	0.0044	1.4E-04	9
Steel	lb	0.0044	1.1	0.0014	0.0017	0.00056	6.7E-05	10
Other refined construction materials	lb	0.019	2.1150	0.0040	0.0051	0.0014	1.6E-04	11
Other unrefined construction materials	lb	0.000028	0.00335	0.000017	0.000015	0.000002	2.05E-10	12
Treatment Materials & Chemicals								
Cheese Whey	lb	0.0025	0.031	0.000062	0.000033	0.000002	NP	13
Emulsified vegetable oil	lb	0.0077	3.44	0.0066	0.0019	0.000033	NP	14
Granular activated carbon, primary	lb	0.0356	4.82	0.0793	0.128	0.000987	0.000657	3
Granular activated carbon, regenerated	lb	0.00873	1.7	0.00733	0.0129	0.000886	0.000671	3
Hydrogen Peroxide, 50% in H2O	lb	0.00979	1.19	0.00142	0.0024	0.000308	6.29E-05	3
Iron (II) Sulfate	lb	0.00147	0.167	0.000316	0.000589	0.000103	2.30E-05	3
Lime, Hydrated, Packed	lb	0.00206	0.762	0.000513	0.000358	0.00013	6.57E-06	3
Molasses	lb	0.0044	0.48	0.0011	0.00024	0.0000041	NP	15
Phosphoric Acid, 70% in H2O	lb	0.0067	0.882	0.00282	0.0294	0.00171	0.000163	3
Potassium Permanganate	lb	0.00981	1.16	0.00234	0.0032	0.000422	0.000122	3
Sodium Hydroxide, 50% in H2O	lb	0.00977	1.09	0.00194	0.00352	0.000403	0.000129	3
Other Treatment Chemicals & Materials*	lb	0.015	1.7	0.003	0.0065	0.00061	1.6E-05	16
Fuel Processing								
Biodiesel Produced	gal	0.029	-16.8	0.018	0.033	0.00082	NP	1
Diesel Produced	gal	0.017	3.02	0.0051	0.0062	0.0017	1.1E-03	17
Gasoline Produced	gal	0.033	2.8	0.0046	0.005	0.0015	1.0E-03	18
Liquefied Petroleum Gas	gal	0.088	1.47	0.0016	0.0024	0.0007	3.0E-04	3
Natural Gas - Compressed Produced	ccf	19.983	343.92	0.4732	2.1651	0.1846	2.9E-01	3
Natural Gas Produced	ccf	0.0052	2.2	0.0037	0.0046	0.000072	6.1E-06	19
Public water	gal x 1000	0.0092	5	0.0097	0.0059	0.016	1.50E-05	20
Off-Site Services								
Hazardous Waste Incineration	lb	0.00609	2.43	0.0016	0.00167	0.000209	0.000087	3
Off-site waste water treatment (POTW)	gal x 1000	0.015	4.4	0.016	0.015	NP	NP	21
Off-site non-hazardous waste landfill	ton	0.16	25	0.14	0.075	0.4	1.40E-03	22
Off-site hazardous waste landfill	ton	0.18	27.5	0.154	0.0825	0.44	1.54E-03	23
Off-site Laboratory Analysis - Other	sample	0.0581	6.8534	0.1314	0.3039	0.0456	0.0330	24
Off-site Laboratory Analysis - Metals	sample	0.2120	27.5	0.6423	1.5072	0.2264	1.64E-01	3
Off-site Laboratory Analysis - Mercury	sample	0.0732	9.3	0.2127	0.4982	0.0747	5.42E-02	3
Off-site Laboratory Analysis - Inorganic Anions	sample	0.0074	0.6	0.0068	0.0148	0.0022	1.55E-03	3

Off-site Laboratory Analysis - Alkalinity	sample	0.0174	1.3	0.0070	0.0132	0.0019	1.28E-03	3
Off-site Laboratory Analysis - Perchlorate	sample	0.0239	1.9	0.0080	0.0142	0.0021	1.29E-03	3
Off-site Laboratory Analysis - Nitrogen/Nitrate	sample	0.0336	4.3	0.0955	0.2227	0.0335	2.43E-02	3
Off-site Laboratory Analysis - Sulfate	sample	0.0141	1.5	0.0080	0.0136	0.0020	1.20E-03	3
Off-site Laboratory Analysis - PCBs	sample	0.0513	5.2	0.0833	0.1905	0.0284	2.12E-02	3
Off-site Laboratory Analysis - VOCs	sample	0.0762	9.0	0.1045	0.2271	0.0340	2.36E-02	3
Off-site Laboratory Analysis - SVOCs	sample	0.0716	7.9	0.1459	0.3373	0.0505	3.73E-02	3
Resource Extraction for Electricity								
Coal extraction and processing	MWh	3.1	180	0.77	0.15	0.018	NP	25
Natural gas extraction and processing	MWh	1.6	270	0.18	13	0.0071	NP	26
Nuclear fuel extraction and processing	MWh	0.16	25	0.15	0.5	0.0015	NP	27
Oil extraction and processing	MWh	2.3	270	1.7	0.069	0.042	NP	28
Grid renewable electricity	MWh	NP	NP	NP	NP	NP	NP	

**** Footprint conversion factors for greenhouse gases (CO2e) include consideration of CO2, CH4, and N2O (Nitrous oxide) emissions.***

REFERENCES:

Default Conversion Factors are from EPA's Methodology for Understanding and Reducing a Project's Environmental Footprint, February 2012

1. Life Cycle Inventory of Biodiesel and Petroleum Diesel for Use in an Urban Bus, NREL/SR-580-24089 UC Category 1503, U.S. Department of Agriculture and U.S. Department of Energy, May 1998. The CO2e emissions for "biodiesel produced" are negative because of the uptake of CO2 in the crops used to produce the fuels. This CO2 is emitted during fuel combustion and is reflected in the CO2e emissions for "biodiesel use".

2. Multiple sources

a. Energy and CO2e emissions from Direct Emissions from Mobile Combustion Sources, EPA430-K-08-004, U.S. EPA, May 2008.

b. NOx, SOx, PM, and HAPs from NREL: SS_Transport, single unit truck, diesel powered.xls

3. Randall, P., Meyer, D., Ingwersen, W., Vineyard, D., Bergmann, M., Unger, S., and Gonzalez, M., 2016. Life Cycle Inventory (LCI) Data- Treatment Chemicals, Construction Materials, Transportation, On-site Equipment, and Other Processes for Use in Spreadsheets for Environmental Footprint Analysis (SEFA): Revised Addition. U.S. Environmental Protection Agency, Office of Research and Development, Cincinnati, OH. EPA/600/R-16/176a.

4. Multiple sources

a. Energy and CO2e emissions from Direct Emissions from Mobile Combustion Sources, EPA430-K-08-004, U.S. EPA, May 2008.

b. NOx, SOx, PM, and HAPs from NREL: SS_Transport, single unit truck, gasoline powered.xls

5. Multiple sources and simplifying assumption that emissions of natural gas reasonably represent combustion of methane component of landfill gas

a. Energy and CO2e emissions for compressed natural gas in heavy vehicles from Direct Emissions from Mobile Combustion Sources, EPA430-K-08-004, U.S. EPA, May 2008.

b. NOx, SOx, PM, and HAPs from NREL: SS_Natural gas, combusted in industrial boiler.xls

6. EUROPA – Gravel 2/32

7. EUROPA – Polyethylene high density granulate (PE-HD)

8. Life-Cycle Assessment of the 33 kW Photovoltaic System on the Dana Building at the University of Michigan Thin Film Laminates, Multi-Crystalline Modules, and Balance of System Components Sergio Pacca, Deepak Sivaraman and Gregory A. Keoleian Center for Sustainable Systems, University of Michigan Report No. CSS05-09, June 1, 2006

9. EUROPA – Stainless steel

10. EUROPA – Average of Steel hot rolled section, Steel hot rolled coil, Steel rebar

11. Averages of conversion factors for cement, HDPE, PVC, stainless steel, and steel

12. Same as conversion factors for gravel/sand/clay

13. Offset values for cheese whey obtained from the module for yellow cheese from Nielsen PH, Nielsen AM, Weidema BP, Dalgaard R and Halberg N (2003). LCA food data base. www.lcafood.dk, Andersen M and Jensen JD (2003). Marginale producenter af udvalgte basislevnedsmidler (in Danish) Udkast d. 5. februar 2003.

14. Values for rapeseed oil from Nielsen PH, Nielsen AM, Weidema BP, Dalgaard R and Halberg N (2003). LCA food data base. www.lcafood.dk. Landbrugets rådgivningscenter (2000). Tal fra Fodermiddeltabellen, Raport nr. 91. In Danish. Weidema BP (1999). System expansions to handle co-products of renewable materials. Presentation Summaries of the 7th LCA Scenarios Symposium SETAC-Europe, 1999. Pp. 45-48. pdf. Weidema B (2003). Market information in life cycle assessments. Technical report, Danish Environmental Protection Agency (Environmental Project no. 863).

15. Offset values for molasses obtained from the module for sugar from Nielsen PH, Nielsen AM, Weidema BP, Dalgaard R and Halberg N (2003). LCA food data base. www.lcafood.dk, Sugar Production based on Danisco Sugar Author: Per H. Nielsen July 2003

16. Intended for any common treatment chemical in pure form including chemical oxidants and regenerated granular activated carbon. For chemical solutions, use only the mass of the chemical portion of the solution. Conversion factor is based on average value of conversion factors for the following seven common treatment chemicals as reported by Ecoinvent v2.1 from the Ecoinvent Centre for Life-Cycle Inventories, http://www.ecoinvent.ch/

- Hydrochloric Acid (30 percent) – normalized to pure hydrochloric acid by dividing by database results by 0.3.
- Sodium hydroxide (50 percent) – normalized to pure sodium hydroxide by dividing database results by 0.5.
- Ferric chloride (iron III chloride)
- Potassium permanganate
- Sodium persulfate
- Chlorine gas
- Hydrogen peroxide (50 percent) – normalized to pure hydrogen peroxide by dividing database result by 0.5.

This averaging approach adds an additional layer of uncertainty to the conversion factors provided. For example, the range for energy is approximately 0.007 MMBtu to 0.025 MMBtu. The average (0.015 MMBtu) may overestimate the energy use value for some of the chemicals below by more than 100 percent and underestimate the energy us value for other chemicals by 40 percent. Additionally, some common treatment chemicals (e.g., sulfuric acid and ferrous sulfate) have energy footprints that are substantially outside the presented range and would not be accurately represented by these values. If an additional level of accuracy is preferred, readers of this methodology are encouraged to seek and document well referenced conversion factors as part of footprint analysis submittals.

17. EUROPA – diesel at refinery

18. EUROPA – gasoline at refinery

19. EUROPA – natural gas at consumer

20. EUROPA - Drinking water from surface water and drinking water from groundwater

21. Calculated based on Life-Cycle Energy and Emissions for Municipal Water and Wastewater Services: Case-Studies of Treatment Plants in US Malavika Tripathi, Center for Sustainable Systems, University of Michigan Report No. CSS07-06, April 17, 2007

22. EUROPA – Inert waste disposal

23. Values from EUROPA inert waste disposal plus an arbitrary additional 10 percent to account additional practices required of a hazardous waste disposal facility

24. The default conversion factors for "Laboratory Analysis – Other" are averages of the default conversion factors for the 10 other laboratory analyses that are provided.

25. NREL – life cycle of electricity from bituminous coal minus the emissions from combusting coal

26. NREL – life cycle of electricity from natural gas minus the emissions from combusting natural gas

27. NREL – life cycle of electricity from nuclear

28. NREL – life cycle of electricity from residual oil minus the emissions from combusting residua oil

NREL = National Renewable Energy Laboratory, Life Cycle Inventory, provided by the National Renewable Energy Laboratory and operated by Alliance for Sustainable Energy, LLC under contract to the U.S. Department of Energy. www.nrel.gov/lci

EUROPA = European Reference Life Cycle Database (ELCD core database), version II compiled under contract on behalf of the European Commission - DG Joint Research Centre - Institute for Environment and Sustainability with technical and scientific support by JRC-IES from early 2008 to early 2009. (http://lca.jrc.ec.europa.eu/lcainfohub/datasetArea.vm)