

BROWNFIELDS ASSESSMENT REPORT

H&H JOB NO. TCH.009

APRIL 28, 2025



CHAPEL HILL POLICE PROPERTY

Brownfields Project No. 23022-19-068

828 Martin Luther King Jr. Boulevard

Chapel Hill, North Carolina



4/28/25



SMARTER ENVIRONMENTAL SOLUTIONS

#C-1269 Engineering / #C-245 Geology

**Brownfields Assessment Report
Chapel Hill Police Property
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1.0 Introduction and Background

On behalf of the Town of Chapel Hill (Town), Hart & Hickman, P.C. (H&H) has prepared this report to document the methods and results of environmental assessment activities completed from July through August 2024, and in February 2025 at the Chapel Hill Police Property (Brownfields Project No. 23022-19-068) located at 828 Martin Luther King Jr. Boulevard in Chapel Hill, Orange County, North Carolina (subject Site or Site). The Site is comprised of one land parcel that is approximately 10.24 acres in size and is developed with a two-story approximately 35,000-square foot building located in the north-central portion of the Site. The building (referred to as the Municipal Services Center) and two associated asphalt parking lots are currently used for police department operations by the Town. The Bolin Creek Trail traverses the southern portion of the Site as further discussed below.

Previous assessment activities indicated that the Site was initially used as a borrow pit from the late 1950s to early 1960s and was then used as a fill site by a previous owner for construction debris and coal combustion products (CCPs) from the mid-1960s to the mid-1970s. Fill materials which have been observed at the Site during surface and subsurface assessment activities are generally comprised of construction debris, soil, and CCPs, and the primary compounds of concern which have been identified in environmental media are metals associated with CCPs. In the early 1980s, the Town acquired the property and constructed the building which is currently used for police department operations. The Site consists of an upper level where the borrow pit was located and which is now occupied by the police department building and associated parking areas, and a lower level adjacent to Bolin Creek where the Bolin Creek Trail (hereinafter also referred to as the greenway) is located. The upper and lower levels are separated by a steep embankment. A Site location map which depicts topography and surface water bodies in the vicinity of the Site is provided as Figure 1. The Site layout, topography, and

estimated areas where CCPs are present are depicted in the Site map provided as Figure 2.

The Town is currently evaluating potential redevelopment options that may include repurposing the Site for office, retail, recreational, and/or transit uses. As part of the evaluation process, the Town applied for entry into the North Carolina Department of Environmental Quality (DEQ) Brownfields Redevelopment Section program (Brownfields Program) and received eligibility (Brownfields Project No. 23022-19-068) via a Letter of Eligibility dated October 1, 2019.

This report documents environmental sampling activities which were completed at the Site from July through August 2024, and February 2025 in general accordance with a DEQ Brownfields approved Environmental Management Plan (EMP) dated March 19, 2024, and a *Notification of Monitoring Activities (Notification)* dated January 29, 2025. The *Notification* was submitted to the Brownfields Program as a courtesy and does not require DEQ approval.

The sampling activities were completed to 1) evaluate the effectiveness of silt fencing installed along and south of portions of the embankment as part of 2020 interim remedial measures (IRMs) and 2024 IRM maintenance activities to limit transport and deposition of CCPs outside of the fence, and 2) evaluate current Site groundwater and surface water conditions. In addition, this report documents additional IRM maintenance activities which were completed during July through October 2024 to address damage to the silt fencing which resulted in apparent transport and deposition of CCPs downgradient of the fence.

Previous environmental assessment activities and IRMs are summarized in Section 2.0, the additional 2024 IRM maintenance and assessment activities are summarized in Section 3.0, the February 2025 Brownfields Assessment activities are summarized in Section 4.0, and conclusions and recommendations are presented in Section 5.0.

2.0 Previous Environmental Assessment Activities and IRMs

Evidence of subsurface impacts associated with CCPs was first identified at the Site during a *Phase I & Limited Phase II Environmental Site Assessment* completed by Falcon Engineering, Inc. in 2013. Investigation activities were then performed by Falcon and H&H under the direction of the DEQ Inactive Hazardous Sites Branch (IHSB) between 2013 and 2016, and culminated in a *Phase II Remedial Investigation (RI) Report* prepared by H&H dated August 14, 2017. The investigation activities included collection and laboratory analysis of CCP, groundwater, soil, stream sediment, and surface water samples.

In 2019, the Town contracted Duncklee & Dunham (D&D, now part of SynTerra Corporation) and Dr. Ken Rudo of Rudo Toxicological Consultants (Rudo) to complete a preliminary human health and ecological risk assessment for the Site. The risk assessment focused on the area of Bolin Creek and the Bolin Creek Trail and included an evaluation of IRMs to better control potential risks associated with the Site. Prior to performing the risk assessment, D&D and Rudo identified certain data gaps and requested that additional assessment be completed to support the risk assessment activities. In response, H&H completed additional soil, CCP, groundwater, sediment, and surface water assessment, and completed indoor air (radon) sampling of the Site building during April 2019. The data gap assessment activities are documented in the *Results of Data Gap Sampling* report dated May 23, 2019. At the Town's request, H&H completed "post-data gap" assessment activities which included additional drainage pathway soil/CCP sampling, and installation and sampling of additional monitoring wells during August and September 2019 and February 2020. These assessment activities and a fill material evaluation are documented in the *Results of Post-Data Gap Assessment Report* dated December 1, 2020.

Results of Site assessment activities completed through 2020 identified concentrations of certain metals in soil and CCP samples and in perched water zones present within the fill material. However, groundwater assessment activities identified limited to no impacts in the underlying unconfined aquifer downgradient of the fill area. Assessment activities also identified no significant impacts to stream sediment or surface water in Bolin Creek. Results of analysis of

samples of CCPs indicate that arsenic, barium, manganese, mercury, and selenium were detected above soil background levels and DEQ Preliminary Soil Remediation Goals (PSRGs). The most prevalent compound detected above soil background levels and PSRGs in CCPs is arsenic. In addition, the assessment activities identified areas where CCPs were potentially exposed at the ground surface.

Based on the results of the 2019 preliminary risk assessment and assessment activities, IRMs were implemented in 2020. The IRMs included excavation and off-Site disposal of soil and exposed CCPs along Bolin Creek Trail, stabilization and cover of exposed CCPs along the embankment between the upper and lower portions of the Site, and temporary measures to address stormwater and erosion control in the area of the embankment. Specifically, approximately 1,000 tons of soil/CCPs at the base of the embankment and along Bolin Creek Trail were excavated and transported off-Site for disposal. In addition, super-silt fencing and hydroseed were placed along the embankment, and a new storm water diversion channel was installed in the upper portion of the Site to minimize potential erosion of the embankment. The interim measures are documented in an *Interim Remedial Measures Report* dated April 19, 2021.

Following completion of the 2020 IRMs, D&D completed a risk assessment which focused on potential risks in the area of Bolin Creek and the greenway trail. With regard to human health risk, the report concluded that the greenway trail is safe for users. With regard to ecological risk, the report concluded that ecological risk was likely minimal, but recommended additional evaluation for certain constituents. The risk assessment is documented in the *Human Health and Ecological Risk Assessment Report* dated May 6, 2021.

At the Town's request, H&H performed additional risk assessment activities with the intent of defining the final measures recommended to address CCP impacts, both under the current land use scenario and possible future redevelopment scenarios. The risk assessment performed by H&H covered the Site as a whole, including the area of the current municipal operations, the embankment, and the Bolin Creek Trail area. Based on the results of the additional risk assessment and in consideration of potential redevelopment plans which have changed following

the risk assessment, H&H's recommendations to address potential human-health and ecological risks at the Site included the following:

- implementation of permanent measures to address exposed CCPs along the embankment;
- potentially addressing isolated areas of soil and drainage pathway soil impacts to reduce potential ecological risks (or, completing further ecological risk evaluation);
- implementation of a land use restriction (LUR) that includes use of a DEQ-approved Environmental Management Plan (EMP) for redevelopment activities;
- implementation of a LUR preventing the future installation of water supply wells or other use of/exposure to groundwater at the Site; and,
- additional risk evaluation if soil or CCPs are anticipated to be exposed during Site redevelopment at deeper depths than those used in the additional risk assessment completed by H&H.

In addition, Site-specific Background Screening Values (BSVs) were developed for Site soil as part of the additional risk assessment. The BSVs are shown in Table 1. Details associated with the additional risk assessment activities are provided in the *Risk Assessment Report* dated October 7, 2021, submitted to DEQ.

As mentioned in Section 1.0, the Site has been accepted into the DEQ Brownfields Program, and redevelopment may include repurposing the Site for office, retail, recreational, and/or transit uses. The Brownfields Program implements standard measures designed to address human-health risks for all projects and did not request that the Town prepare the October 7, 2021, *Risk Assessment Report*. However, the Town voluntarily elected to contract H&H to complete the risk assessment to provide better explanation and transparency to the public regarding how risks may be addressed for the Site. Should the Town Council decide to move forward with redevelopment of the Site, future remediation, risk management, and/or redevelopment activities will be performed under the oversight of the Brownfields Program.

At the Brownfields Program request, H&H completed Brownfields assessment activities to

further evaluate potential impacts at the Site and potential risks associated with conceptual Site redevelopment plans during August and September 2022. These assessment activities included limited soil sampling in the area of a potential stormwater pond and at an existing diesel fuel above ground storage tank (AST) for the Site building, perched water/groundwater sampling, and sub-slab vapor and soil gas sampling for the Site building (for volatile organic compounds, mercury, and methane). In addition, H&H performed a receptor survey to update information about land use, water supply, basements, underground utilities, and surface water bodies in the vicinity of the Site. Based on the results of the 2022 assessment activities, H&H concluded that additional Brownfields assessment does not appear warranted, risks to current potential receptors appear acceptable, and impacted media or media disturbed during future redevelopment activities can be managed in accordance with a DEQ Brownfields approved EMP and/or implementation of LURs on the Site. The 2022 assessment activities are documented in the *Brownfields Assessment Report* dated December 13, 2022.

As previously discussed, IRMs were implemented in 2020 to remove soil and CCPs along Bolin Creek Trail, stabilize and cover exposed CCPs along the embankment, and to address stormwater and erosion control in the area of the embankment. The Town and H&H have proactively monitored the IRMs since completion. Monitoring activities have included monthly (minimum) inspection of on-Site stormwater controls and silt fencing, including completion of post-storm event inspections. During an inspection completed by the Town in January 2024, personnel observed erosion to the storm diversion channel that captures surface water runoff from the Site parking lot and suspect shallow (0-6 inches) depositional CCPs at the base of the embankment. Based on the January 2024 inspection, H&H implemented IRM maintenance activities which included collection of suspect soil/CCP samples, repairs to the storm diversion channel, limited excavation of soil/CCPs at the base of the embankment and placement behind (upgradient of) silt fence, installation of additional silt fencing, hydroseeding, and post-IRM soil sampling. The IRM maintenance activities were conducted in accordance with a DEQ Brownfields approved EMP dated March 19, 2024, and are documented in the *Interim Remedial Measures Report* dated June 5, 2024.

3.0 Additional IRM Maintenance Activities

During an IRM inspection in July 2024, H&H observed a small area of suspect soil potentially impacted with CCPs outside of the silt fencing located to the south of an area of depositional CCPs which was hydroseeded as part of the IRMs discussed in Section 2.0. Further investigation indicated damage to the geotextile fabric of Standard Silt Fence F-1 at a location west of its intersection with Standard Silt Fence F-3. The damage resulted in potential transport and deposition of CCPs outside of the fence. The damaged portion of the fence was repaired by H&H personnel on July 29, 2024. The hydroseeded area and the locations of the soil samples (discussed below) which were collected outside of the damaged portion of the fence are identified in Figure 3.

On July 29, 2024, H&H collected shallow soil sample HH-19 (2-4" below ground surface – bgs) in a location outside of the damaged portion of the silt fence to assess for potential impacts from depositional CCPs. The soil sample was submitted to a NC-certified laboratory, Con-Test (a Pace Analytical Laboratory) of East Longmeadow, MA, under standard chain-of-custody protocols for analysis of strontium by EPA Method 6010D, arsenic, barium, beryllium, cadmium, chromium, cobalt, copper, manganese, nickel, and selenium by EPA Method 6020B, hexavalent chromium by EPA Method 7199, and mercury by EPA Method 7471B. Results of analysis of the sample indicated concentrations of arsenic and manganese detected above BSVs and Industrial/Commercial PSRGs, and evaluation of the sample data using the DEQ Risk Calculator indicated potential unacceptable calculated risk to a hypothetical recreator receptor. Note that data are not compared to Residential PSRGs because the Town has indicated that future use of the Site will not be for residential purposes. Analytical results of the HH-19 sample are summarized in Table 1.

Based on the results of the HH-19 sample, H&H personnel removed the area of suspect shallow soil to a depth of approximately 6" bgs using a shovel and placed the soil behind (upgradient of) super silt fence F-2 (Figure 3). On August 26, 2024, prior to backfilling the soil removal area, H&H collected soil sample HH-19A (6-8" bgs) from the base of the soil removal area (at the

approximate location of previous sample HH-19), soil sample HH-20 (2-6" bgs) approximately 10 ft to the southwest (topographically cross-gradient) of HH-19/19A, and soil sample HH-21 (2-6" bgs) approximately 10 ft to the southeast (topographically downgradient) of HH-19/19A to confirm adequate removal of impacted soil in the area of HH-19. The samples were submitted to a NC-certified laboratory, Pace Analytical Services, LLC of Huntersville, NC (Pace), under standard chain-of-custody protocols for the same analyses as HH-19 (discussed above).

As shown in Table 1, results of analysis of HH-19A indicated concentrations of arsenic and manganese above BSVs (and which were similar to the concentrations detected in HH-19), and evaluation of the sample data using the DEQ Risk Calculator indicated potential unacceptable calculated risk to a hypothetical recreator receptor. Results of analysis of the HH-20 and HH-21 samples indicated detections of metals at concentrations generally consistent with BSVs and below PSRGs, except for relatively low arsenic detections of 3.3 milligrams per kilogram (mg/kg) (HH-20) and 3.4 mg/kg (HH-21) which are slightly above the BSV and Industrial/Commercial PSRG (3.015 and 3.0 mg/kg, respectively).

Based on the results of the HH-19A sample, H&H personnel removed additional soil from the area (to a depth of approximately 2 ft bgs) and placed the soil behind (upgradient of) super silt fence F-2. On October 18, 2024, prior to backfilling the soil removal area, H&H collected soil sample HH-19B (2 ft bgs) from the base of the soil removal area (at the approximate location of previous samples HH-19 and HH-19A). The sample was submitted to Pace under standard chain-of-custody protocols for the same analyses as HH-19B (discussed above). As shown in Table 1, results of analysis of HH-19B indicate detections of metals at concentrations lower than BSVs and PSRGs.

Based on the HH-19B, HH-20, and HH-21 sample data, H&H concludes that the limited IRM activities completed in the area of HH-19 have adequately addressed the apparent transport and deposition of suspect soil/CCPs outside of the silt fence which resulted from damage to the fence. The IRM maintenance activities discussed above were conducted in accordance with a DEQ Brownfields approved EMP dated March 19, 2024. Note that the soil removal in the area

of HH-19 was backfilled with native soil obtained from a non-impacted area east of the embankment.

Laboratory analytical reports and chain-of-custody records for the samples discussed above are provided in Appendix B.

4.0 Assessment Activities

During February 2025, H&H completed Brownfields assessment activities at the Site to 1) evaluate the effectiveness of silt fencing installed along and south of portions of the embankment as part of the 2020 IRMs and 2024 IRM maintenance activities to limit transport and deposition of CCPs outside of the fence, and 2) evaluate updated Site groundwater and surface water conditions. The assessment activities included installation and sampling of five soil borings, sampling of 10 existing monitoring wells, and collection of seven surface water samples. The sampling activities were completed in general accordance with the January 2025 *Notification* submitted to DEQ and the most recent versions of applicable U.S. EPA Region IV Laboratory Services and Applied Science Division Field Branches Quality System and Technical Procedures. The methods and results of the sampling activities are summarized in the sections below. Laboratory analytical reports and chain-of-custody records for the February 2025 samples are provided in Appendix B.

4.1 Soil Sampling

On February 6, 2025, H&H installed and sampled five soil borings (identified as HH-22 through HH-26) in the area between the outermost super-silt fence F-4 and the greenway along a runoff path located within a mulched area downgradient of the silt fence repairs discussed in Section 3.0. The soil boring locations are shown in Figure 3. The soil sampling activities were conducted in accordance with a DEQ Brownfields approved EMP dated March 19, 2024. The methods and results of the soil sampling activities are presented below.

4.1.1 Sampling Methods

H&H used a decontaminated, stainless steel hand auger to advance each boring to a depth of 2 ft bgs. Sampling personnel observed soil cuttings from each boring for indication of potential impacts (e.g., unusual color/odor, apparent presence of CCPs, etc.) and soil lithological description. Evidence of impacts was not observed by sampling personnel in the soil borings.

Following collection of samples from the boring (discussed below), the soil borings were abandoned by placing soil cuttings back into the boring from which they were generated. Boring logs are provided in Appendix A.

Two soil samples (one from the 0 to 1 ft bgs interval and one from the 1 to 2 ft bgs interval) were collected from each boring for laboratory analysis. Soil samples collected from the 0 to 1 ft bgs interval are designated with an “A” at the end of the sample identifier (e.g., HH-22A), and soil samples collected from the 1 to 2 ft bgs interval are designated with a “B” at the end of the sample identifier (e.g., HH-22B). Soil samples were placed in dedicated laboratory-supplied sample containers, labeled with the sample identification, date, and requested analysis, and placed in a laboratory-supplied cooler with ice. The soil samples were then submitted to Pace under standard chain-of-custody protocols for analysis of strontium by EPA Method 6010D, arsenic, barium, beryllium, cadmium, total chromium, cobalt, copper, manganese, nickel, and selenium by EPA Method 6020B, hexavalent chromium by EPA Method 7199, and mercury by EPA Method 7471B.

4.1.2 Sample Results

Results of analysis of the February 2025 soil samples are summarized along with previous soil and CCP sample data in Table 1. As shown in Table 1, soil and CCP analytical results are compared to the Site-specific BSVs developed as part of the risk assessment completed by H&H during 2021 and to Protection of Groundwater (POG) and Industrial/Commercial PSRGs.

As shown in Table 1, results of analysis of the soil samples indicate concentrations of the analyzed metals consistent with BSVs except for one detection above BSVs and PSRGs. Arsenic was detected above the BSV (3.015 mg/kg), POG PSRG (5.8 mg/kg), and Industrial/Commercial PSRG (3.0 mg/kg) in HH-22A (12.0 mg/kg). Concentrations of other metals detected in the samples are generally lower than or consistent with BSVs, and lower than PSRGs.

4.1.3 Risk Evaluation

The DEQ PSRGs used for comparison to the laboratory analytical results are conservative and based upon a target Lifetime Incremental Cancer Risk (LICR) of 1.0×10^{-6} for potential carcinogenic effects and a Hazard Quotient (HQ) of 0.2 for potential non-carcinogenic effects. The DEQ and EPA acceptable level for potential carcinogenic risks is a cumulative LICR of 1.0×10^{-4} or less, and the acceptable level for non-carcinogenic risks is a cumulative Hazard Index (HI; which is the sum of the individual compound HQs) of 1.0 or less.

To further evaluate the elevated arsenic detection in HH-22A and risks posed to potential receptors in areas located outside (topographically downgradient) of the silt-fenced area of the Site, H&H utilized the DEQ Risk Calculator (January 2025 version) to evaluate soil direct contact risks under hypothetical “worst-case” non-residential worker and recreator use scenarios. The recreator use scenario is considered complete for this area of the Site due to potential exposure of greenway users to impacted soil. For the hypothetical “worst case” scenario, the maximum concentration of each metal detected in samples located outside of the silt fenced area (i.e., HH-16A, and samples from borings HH-19 through HH-26) was input into the calculator. Although EPA and DEQ do not require remediation of concentrations below naturally-occurring background levels, H&H performed the risk calculations using detected metals concentrations which are below or consistent with background levels as a conservative measure. In addition, note that conservative default exposure parameters were used in the Risk Calculator evaluations. Cumulative risk results calculated for these scenarios are presented below.

Non-Residential Worker (“Worst Case”)

Potential “worst case” cumulative risk levels calculated for the non-residential worker exposure scenario are a LICR of 4.0×10^{-6} and a HI of 0.16. These risk levels are lower than the levels DEQ and EPA consider unacceptable.

Recreator (“Worst Case”)

Potential “worst case” cumulative risk levels calculated for the recreator exposure scenario are a

LICR of 7.9×10^{-6} and a HI of 0.99. The calculated LICR and HI are lower than the level DEQ and EPA considers unacceptable. However, the calculated HI is only slightly lower than the level DEQ and EPA considers unacceptable (i.e., $HI > 1.0$).

To further evaluate the risks to a recreator, H&H performed a less conservative “surface soil” exposure evaluation which is more representative of a recreator user exposure scenario to surface soil than the “worst case” scenario presented above. For this evaluation, the maximum concentration of each metal detected in the shallowest sample collected from each of the sample locations (i.e., less than 1 ft) was used. Cumulative risk results calculated for this scenario are presented below.

Recreator (“Surface Soil”)

Potential cumulative risk levels calculated for the recreator “surface soil” exposure scenario are a LICR of 7.9×10^{-6} and a HI of 0.70. These risk levels are considered lower than the levels DEQ and EPA consider unacceptable, and this scenario is more representative of realistic exposure risks to recreators (i.e., surface soil) on the Bolin Creek Trail compared to the “worst case” scenario which involved deeper soil sample data.

DEQ Risk Calculator forms for the evaluation are provided in Appendix D.

4.2 Monitoring Well Sampling

On February 4 and 5, 2025, H&H sampled the existing Site monitoring wells. These include an upgradient well (MW-5), wells installed in perched water zones present within the fill material (MW-1, MW-1A, MW-8 and MW-9), wells downgradient and cross-gradient of the fill area (MW-3A, MW-4A, MW-6, and MW-7), and a deep well installed in bedrock below the fill material (MW-11D). Well construction details are summarized in Table 1, and locations of existing Site monitoring wells are depicted in Figure 2. The methods and results of the groundwater sampling activities are presented below.

4.2.1 Perched Water/Groundwater Elevations

Prior to collection of samples, H&H gauged depth-to-water in the Site monitoring wells. The February 2025 depth-to-water measurements are summarized along with November 2016 through August 2022 data in Table 2. The February 2025 water elevations are generally consistent with the ranges of elevations measured during November 2016 through August 2022.

A perched water zone is a layer of water that is separated from the underlying main aquifer zone by a zone which does not contain groundwater. A zone of perched water is typically underlain by a layer of soil or rock which has a lower permeability than the surrounding area which limits downward percolation of water. As further discussed in the December 2020 *Results of Post-Data Gap Assessment Report*, rainwater that infiltrates the ground and moves downward may get trapped by low permeability zones in the fill material above the unconfined aquifer and form perched water zones. These zones are typically laterally discontinuous and only contain thin layers of water. Some of the perched water may seep from the edges of the perched water zone to the underlying aquifer, although the volume of seepage is typically small, especially in comparison to the volume of water in the underlying aquifer.

Because of the apparent presence of perched water zones in the fill materials, H&H prepared an inferred groundwater potentiometric map for the February 2025 gauging event using only the groundwater elevation data from wells MW-3A, MW-4A, MW-5, MW-6, and MW-7 which are not screened in the fill materials, and which are installed in the underlying unconfined aquifer. The potentiometric map is provided in Figure 4 and indicates that groundwater flow beneath the Site is to the southeast, which is consistent with previous gauging events.

4.2.2 Sampling Methods

After gauging water levels, H&H personnel purged and sampled each of the Site monitoring wells using standard low-flow sampling techniques. Monitoring wells MW-3A, MW-4A, MW-5, and MW-6 were purged and sampled using a peristaltic pump, and monitoring wells MW-1,

MW-1A, MW-7, MW-8, MW-9, and MW-11D were purged and sampled using a decontaminated bladder pump because depth-to-water levels in these six wells exceeded peristaltic pumping limits.

During well purging, geochemical parameters that included conductivity, temperature, pH, dissolved oxygen (DO), oxidation-reduction potential (ORP), and turbidity were measured in the field at 3 to 5-minute intervals prior to sample collection. After these parameters (except turbidity which is discussed below) stabilized during purging, water from each well was poured directly into laboratory-supplied containers, which were then sealed, labeled with sample identification, date, and requested analysis, placed into laboratory-supplied sample coolers, and covered with ice. Geochemical parameters are summarized with previous data for the wells in Table 3, and turbidity data is also summarized along with analytical data in Table 4. Low flow groundwater sampling records are provided in Appendix C.

Turbidity levels measured in purge water from the majority of the wells during the February 2025 sampling event were generally higher than turbidity levels measured during previous sampling events. When possible, especially when sampling for metals that may be biased by the presence of elevated turbidity due to suspended solids, turbidity is desired to stabilize at a value below 10 Nephelometric Turbidity Units (NTUs) before sampling. Because turbidity levels remained elevated (above 10 NTUs) in wells MW-4A, MW-5, MW-7, MW-8, and MW-9 for relatively long purge durations, H&H collected a field-filtered and an unfiltered sample from each of these wells to assist with evaluating the effect of elevated turbidity on the analytical results. The field-filtered samples were designated with “(FF)” at the end of the sample identifier. When turbidity levels decreased below 10 NTUs (and other geochemical parameters were stable) in the other wells, only unfiltered samples were collected from the well.

The monitoring well samples were delivered to Pace under standard chain-of-custody protocols for analysis of barium, boron, manganese, strontium, and zinc by EPA Method 6010D, antimony, arsenic, beryllium, cadmium, chromium, copper, lithium, molybdenum, nickel, selenium, thallium, and vanadium by EPA Method 6020B, hexavalent chromium by EPA

Method 7199, mercury by EPA Method 7470A, total dissolved solids (TDS) by Standard Method 2540C, and the anions chloride, fluoride, nitrate, and sulfate by EPA Method 9056A. Consistent with the 2022 groundwater monitoring activities requested by DEQ Brownfields, the above referenced analytes and associated analytical methods (i.e., the DEQ Analyte List from the *Brownfields Assessment Report* dated December 13, 2022) were derived from a modified version of Duke Energy's monitoring plan for an industrial landfill at the Marshall Steam Station facility in Catawba County, North Carolina that is permitted to receive CCPs as well as other materials.

4.2.3 Sample Results

Analytical results of the February 2025 monitoring well samples are summarized along with previous sample data for the wells in Table 4. As indicated in the table, the data are compared to background (MW-5 data) and to 15A NCAC 02L.0202 Groundwater Standards (2L Standards). Note that the only analyte which has been detected above 2L Standards in MW-5 since 2016 is manganese (2L Standard of 50 micrograms per liter – µg/L). Results of analysis of the February 2025 monitoring well samples are summarized below.

Background Monitoring Well MW-5

Manganese is the only compound which was detected above 2L Standards in background well MW-5. Total manganese was detected at 654 µg/L in the unfiltered sample from MW-5, and dissolved manganese was detected at 398 µg/L in the field-filtered sample collected from the well. The February 2025 total manganese concentration is consistent with previous total manganese concentrations detected in the well. As shown in Figure 2, MW-5 is located in the northwestern (topographically upgradient) corner of the Site property to the north (outside) of areas where fill material has been identified.

Perched Water Monitoring Wells

Total arsenic was detected above the 2L Standard of 10 µg/L in perched water well MW-1A (37.0 µg/L). This detection is similar to arsenic concentrations detected in previous samples collected from MW-1A and nearby well MW-1. A field-filtered sample was not collected from

MW-1A.

Total barium was detected above the 2L Standard of 700 µg/L in perched water wells MW-1 (1,200 µg/L), MW-1A (11,200 µg/L), MW-8 (1,720 µg/L), and MW-9 (1,220 µg/L). Dissolved barium was detected at a significantly lower concentration (below the 2L Standard) in the filtered sample collected from MW-8 (293 µg/L), indicating that suspended solids in the unfiltered sample contributed to the elevated total barium detection in MW-8. The total barium detection in MW-1 and the dissolved barium detection in MW-8 are generally similar to previous barium concentrations detected in the wells. The total barium concentrations detected in MW-1A and MW-9 are higher than previous barium concentrations detected in the wells.

Total boron was detected above the 2L Standard of 700 µg/L in perched water wells MW-1 (1,090 µg/L) and MW-1A (952 µg/L). Total boron was detected at 332 µg/L during August 2022 in MW-1A, but no other samples previously collected from these two wells have been analyzed for boron. A field-filtered sample was not collected from MW-1 or MW-1A.

Total cobalt was detected above the 2L Standard of 1 µg/L in perched water wells MW-1 (9.8 µg/L), MW-8 (3.7 µg/L), and MW-9 (1.4 µg/L). These detections are generally similar to cobalt concentrations previously detected in these three well.

Total manganese was detected above background (up to 654 µg/L) in perched water wells MW-1 (10,400 µg/L), MW-1A (8,330 µg/L), MW-8 (16,900 µg/L), and MW-9 (4,540 µg/L). Dissolved manganese was detected at a significantly lower concentration in the filtered sample collected from MW-8 (2,950 µg/L), indicating that suspended solids in the unfiltered sample contributed to the elevated total manganese detection in the well. The total manganese detections in MW-1 and MW-9 and the dissolved manganese detection in MW-8 are generally similar to previous manganese concentrations and fluctuations in the wells. The total manganese concentration detected in MW-1A is higher than previous manganese concentrations detected in the well but is similar to manganese concentrations which have been detected in nearby MW-1.

Total strontium was detected above the 2L Standard of 2,000 µg/L in perched water wells MW-1 (13,900 µg/L), MW-1A (18,700 µg/L), MW-8 (4,360 µg/L), and MW-9 (3,860 µg/L). Dissolved strontium was detected at a significantly lower concentration (below the 2L Standard) in the filtered sample collected from MW-8 (761 µg/L), indicating that suspended solids in the unfiltered sample contributed to the elevated total strontium detection in the well. The total strontium detection in MW-9 and the dissolved strontium detection in MW-8 are generally similar to previous strontium concentrations and fluctuations in the wells. The total strontium concentrations detected in MW-1 and MW-1A are higher than previous strontium concentrations detected in the wells.

TDS was detected above the 2L Standard of 500,000 µg/L in perched water wells MW-1 (634,000 µg/L), MW-1A (706,000 µg/L), and MW-9 (692,000 µg/L). The TDS concentrations detected in wells MW-1A and MW-9 are generally similar to TDS concentrations previously detected in these wells. TDS has not previously been analyzed in MW-1, but the February 2025 TDS detection in the well is generally similar to TDS concentrations previously detected in nearby well MW-1A.

There were no other analytes detected above 2L Standards in the February 2025 perched water samples. As shown in Figure 2, perched water wells MW-1, MW-1A, and MW-9 are located in the central to western portion of the Site within the extent of fill materials, and MW-8 is located in the central portion of the Site within the extent of fill materials.

Groundwater Monitoring Wells

Total concentrations of the metals boron (1,920 µg/L) and strontium (13,100 µg/L) were detected above 2L Standards (700 and 2,000 µg/L, respectively), and a total concentration of manganese (1,710 µg/L) was detected above background (up to 654 µg/L) in the groundwater sample collected from well MW-3A. A field-filtered sample was not collected from MW-3A. TDS was also detected above the 2L Standard of 500,000 µg/L in MW-3A (926,000 µg/L). The February 2025 boron, manganese, and strontium concentrations detected in MW-3A are higher than previous detections of these metals in the well, and the TDS concentration is generally

similar to the TDS detection in the only previous sample from the well which was analyzed for TDS. The selenium concentration in MW-3A was lower than previous detections and below the 2L Standard. As shown in Figure 2, MW-3A is located in the south-central portion of the Site immediately north of Bolin Creek Trail, and approximately 100 ft north of Bolin Creek.

Total concentrations of the metals barium (706 µg/L) and manganese (4,580 µg/L) were detected above the 2L Standard for barium (700 µg/L) and background for manganese (up to 654 µg/L) in the groundwater sample collected from well MW-6. A field-filtered sample was collected from MW-6, and the dissolved barium and manganese concentrations detected in the field-filtered sample (704 µg/L and 4,560 µg/L, respectively) are similar to the total concentrations detected in the unfiltered sample. The February 2025 barium and manganese concentrations detected in MW-6 are higher than previous concentrations of these metals detected in the well. As shown in Figure 2, MW-6 is located in the southwestern portion of the Site immediately north of Bolin Creek Trail, and approximately 100 ft north of Bolin Creek.

There were no other metals detected above 2L Standards (and background for manganese) in the February 2025 groundwater monitoring well samples, including in bedrock well MW-11D which is screened below the fill materials in the central to western portion of the Site (immediately north of perched water well MW-9). TDS was detected slightly above the 2L Standard of 500,000 µg/L in bedrock well MW-11D (526,000 µg/L).

Geochemical Parameters

The solubility of metals in groundwater and surface water systems is strongly influenced by pH and redox (i.e., reduction-oxidation) conditions. Redox conditions can be approximated by ORP measurements, where ORP levels below zero are indicative of reducing conditions and ORP levels above zero are indicative of oxidizing conditions. The majority of metals of environmental concern in groundwater systems are generally relatively more soluble under low pH and/or low redox (reducing) conditions and typically become less soluble as pH levels increase to (or, slightly above) generally neutral levels and/or redox conditions increase. A pH of 7.0 standard units (s.u.) is considered neutral; however, for this discussion, slightly lower

(acidic) and slightly higher (alkaline) pH levels within a range of 6.5 to 7.5 s.u. are considered generally neutral. As these dissolved metals of concern migrate within the aquifer from areas of relatively lower pH and/or redox conditions to areas of relatively higher (generally neutral) pH and/or redox conditions, the dissolved metals undergo redox reactions to form relatively insoluble and immobile complexes. A notable exception is arsenic (which typically becomes more soluble under relatively higher redox conditions).

As shown in Table 3, the February 2025 geochemical field data indicate generally neutral overall pH conditions in the perched water wells (average pH of approximately 7.1 s.u.) and slightly lower (but, generally neutral overall) pH conditions in the downgradient monitoring wells (average pH of approximately 6.5 s.u.), and relatively low (reducing) redox conditions in the perched water wells (average ORP of approximately -55 millivolts – mV) and relatively higher redox conditions in the downgradient monitoring wells (average ORP of approximately 60 mV). The ORP level measured in downgradient well MW-6 (-29.9 mV) is indicative of slightly reducing conditions in the well, and the ORP level measured in downgradient well MW-3A (8.9 mV) is only slightly oxidizing, whereas the ORP levels measured in downgradient wells MW-4A and MW-7 (99.1 and 160 mV, respectively) are indicative of relatively stronger oxidizing conditions. As shown in Table 4, the February 2025 sample data indicate concentrations of metals above 2L Standards were generally detected at greater frequency and at relatively higher concentrations in the perched water wells (where relatively lower ORP levels were measured) than in the downgradient groundwater monitoring wells. Further, there were no detections of metals above 2L Standards in the downgradient monitoring wells with the highest measured ORP levels (i.e., MW-4A and MW-7).

Based on the information presented above, it is likely that aquifer conditions furthest downgradient of the fill area are generally favorable for limiting the migration of several metals of concern associated with the Site, and the likelihood for metals impacts associated with the Site to migrate to and adversely impact Bolin Creek appears low, which is consistent with the surface water sampling results discussed below.

4.3 Surface Water Sampling

On February 6, 2025, H&H collected seven surface water samples from previous sample locations in Bolin Creek. Surface water samples were collected from two upstream (background) locations (SW-1 and SW-2) to the west of Martin Luther King Jr. Blvd, two locations adjacent to the site (SW-3 and SW-4), and three downstream locations (SW-5, SW-6, and SW-7). Surface water sample locations are depicted in Figure 5.

4.3.1 Sampling Methods

The surface water samples were collected sequentially from the most downstream location (SW-7) to the most upstream location (SW-1). Each sample was collected by placing the sample bottles directly into the flowing stream and allowing the bottles to fill with water. The sample bottles were then sealed, labeled with sample identification, date, and requested analysis, placed into laboratory-supplied sample coolers, and covered with ice. Geochemical parameters that included conductivity, temperature, pH, DO, ORP, and turbidity were also measured in the field at each sample location. Geochemical parameters measured during the sampling event are provided in the Surface Water Sampling Records provided in Appendix C. The surface water samples were submitted to Pace under standard chain-of-custody protocols for the same analyses as the monitoring well samples, except the surface water samples were also submitted for analysis of total hardness by Standard Method 2340B.

4.3.2 Sample Results

Analytical results of the February 2025 surface water samples are summarized along with previous surface water sample data in Table 5. Bolin Creek and its tributaries are classified by DEQ as Class WS-V, Nutrient Sensitive Waters (NSW) surface water bodies, and are part of the Cape Fear River Basin. Class WS-V surface waters are protected as upstream water supplies draining to waters used as drinking water supplies. These waters are also protected for Class C

uses. Surface water sample data were compared to Background Screening Values (BSVs) (see Table 5) and then to applicable DEQ 15A NCAC 02B Surface Water Quality Standards (2B Standards), to EPA National Recommended Water Quality Criteria (NRWQC) for analytes with no established 2B Standard, and to North Carolina In-Stream Target Values (NCISTVs) for analytes with no established 2B Standard or NRWQC. NCISTVs are screening levels only from a table dated July 26, 2021, and were not published on DEQ's website at the time of this report because they are under review, but are included in Table 5 for reference.

As shown in Table 5, no analytes were detected in the February 2025 surface water samples above BSVs and surface water criteria (i.e., 2B Standards, NRWQC, and NCISTVs).

Field Geochemical Parameters

The averages of the February 2025 pH and ORP measurements at surface water sample locations located in the section of Bolin Creek adjacent to the Site (i.e., SW-3 through SW-6A) were 8.24 s.u. and 123 mV, respectively. Although the average pH level is slightly higher than generally neutral levels (as discussed in Section 4.2.3), it is lower than pH levels under which several metals become relatively soluble (note that several metals are also relatively soluble at pH levels which are higher than generally neutral levels). The ORP measurements are indicative of oxidizing conditions which are favorable for converting dissolved metals (if introduced into the surface water) into relatively insoluble and immobile complexes, and for limiting the potential for dissolution of metals from sediments into the surface water. Surface water geochemical parameters are summarized in the Surface Water Sampling Records provided in Appendix C.

4.4 Quality Assurance/Quality Control

For quality assurance and quality control purposes (QA/QC), and to evaluate the reproducibility of the sample results, H&H collected the following field QA/QC samples during the February 2025 Brownfields assessment activities: one duplicate soil sample (from HH-23A) and one duplicate perched water sample (from MW-6). The duplicate samples were submitted for the same laboratory analyses as their respective parent samples. Analytical results for the

duplicate samples collected from HH-23A and MW-6 are summarized in Tables 1 and 4, respectively. As shown in the tables, results of analysis of the parent and duplicate samples generally indicate good analytical repeatability.

Laboratory QA/QC procedures were employed to ensure appropriate sample handling and analysis and to aid in the review and validation of the analytical data. QA/QC procedures were conducted in accordance with the method protocols and included regular equipment maintenance, equipment calibrations, and adherence to specific sample custody and data management procedures. Samples were analyzed in conjunction with appropriate blanks, laboratory duplicates, continuing calibration standards, surrogate standards, and matrix spiking standards in accordance with approved methodologies to monitor both instrument and analyst performance. Laboratory reporting limits for each analyte were at or below appropriate screening criteria, where possible. Additionally, H&H requested that the laboratory include estimated concentrations for compounds that were detected at levels above the laboratory method detection limit, but below the laboratory reporting limit (i.e., J flags).

As shown in Tables 4 and 5, multiple perched water, groundwater, and surface water samples were analyzed for hexavalent chromium outside of the 24-hour hold time for EPA Method 7199 aqueous samples. However, based on previous sample data, Site soil/CCPs are not a significant source of hexavalent chromium in perched water/groundwater at the Site. In addition, hexavalent chromium concentrations detected in the February 2025 samples (and, in previous samples collected from the wells/surface water locations sampled during February 2025) were significantly lower than the total chromium 2L Standard and the 2B Standard established for hexavalent chromium. Therefore, exceeding the hexavalent chromium hold time for aqueous sample does not appear to present a significant concern for evaluation of groundwater and surface water conditions at the Site.

The laboratory analytical data report and QA package for each group of samples submitted to and analyzed by the subcontracted laboratory are provided in Appendix B. Laboratory QA data consistent with Level II documentation was requested for this project. A copy of the completed

chain-of-custody record and shipping receipt are appended to the corresponding laboratory analytical report included with the final report. Based upon our review of the data reports and QA packages, the field and laboratory data documented in this report generally meet QA objectives and are usable for the intended purpose of evaluating updated surface water and groundwater conditions of the Site.

5.0 Conclusions and Recommendations

H&H completed environmental assessment activities in July through August 2024, and in February 2025 at the Chapel Hill Police Property (Brownfields Project No. 23022-19-068) located at 828 Martin Luther King Jr. Boulevard in Chapel Hill, North Carolina. The assessment activities were conducted in general accordance with the DEQ Brownfields approved EMP dated March 19, 2024, and the *Notification* dated January 29, 2025

The assessment activities included 1) soil sampling to evaluate the effectiveness of silt fencing installed along and south of portions of the embankment between the upper and lower levels of the Site as part of 2020 IRMs and 2024 IRM maintenance activities to limit potential transport and deposition of CCPs, and 2) sampling of monitoring wells and surface water to evaluate updated conditions. In addition, this report documents additional IRM maintenance activities which were completed during July through October 2024 to address damage to the silt fencing which resulted in apparent transport and deposition of CCPs outside of the fence. Brief summaries of these activities are presented along with conclusions and recommendations below.

Additional IRM Maintenance Activities

During an IRM inspection July 2024, H&H observed a small area of suspect soil potentially impacted with CCPs outside of the silt fencing located to the south of an area of depositional CCPs which was hydroseeded as part of IRMs completed at the Site. Further investigation indicated damage to the geotextile fabric of Standard Silt Fence F-1 at a location west of its intersection with Standard Silt Fence F-3. The damage resulted in potential transport and deposition of CCPs outside of the fence. H&H personnel completed limited IRM activities to address the impacted soil. These activities included repair of the silt fence, removal of soil/CCPs, and collection of soil samples from three locations to confirm that impacted soil was adequately removed. Based on the results of the soil samples, H&H concludes that the limited IRM activities completed in this area have adequately addressed the apparent transport and deposition of impacted soil/CCPs outside of the silt fence. H&H recommends that IRM inspections continue to be completed on a monthly basis and after significant storm events, and

additional IRM maintenance be completed as needed.

Soil Assessment and Risk Evaluation

During February 2025, H&H installed and sampled five soil borings (identified as HH-22 through HH-26) in the area between the outermost super-silt fence and the Bolin Creek Trail along a runoff path located downgradient of the damage in the silt fence discussed above. Results of analysis of the soil samples indicate metals concentrations consistent with BSVs in each soil sample; except a detection of arsenic in one sample. Arsenic was detected above the BSV, POG PSRG, and Industrial/Commercial PSRG in HH-22A.

H&H utilized the DEQ Risk Calculator and soil data from samples located outside (topographically downgradient) of the silt-fenced area to evaluate soil direct contact risks under hypothetical “worst-case” non-residential worker and recreator exposure scenarios. Results of the “worst case” non-residential worker exposure scenario indicate calculated cumulative LICR and HI levels lower than the levels DEQ and EPA consider unacceptable. Results of the “worst case” recreator exposure scenario also indicate a calculated LICR and HI lower than the level DEQ and EPA considers unacceptable. Because the calculated HI (0.99) was only slightly lower than the level DEQ and EPA considers unacceptable (i.e., $HI > 1.0$), H&H performed a less conservative “surface soil” exposure risk evaluation which includes data from shallow soil only (less than 1 ft). Results of the evaluation of the “surface soil” recreator scenario indicate a calculated HI of 0.70 which is lower than the level DEQ and EPA consider unacceptable.

Based on the results of the soil sampling and conservative evaluation of the sample results, risks to non-residential workers and recreators from potential exposure to soil outside (topographically downgradient) of silt fencing at the Site is considered within DEQ and EPA acceptable risk levels. H&H does not recommend additional assessment or implementation of IRMs outside of the silt fence area at this time except for replacing the mulch with warm and cool-season grass to provide erosion resistance. Impacted media and soil disturbed as part of future redevelopment activities (if any) in this area of the Site can be managed in accordance with a DEQ Brownfields-approved EMP and/or LURs.

Perched Water/Groundwater and Surface Water Assessment

Based on previous assessment activities and evaluation of environmental investigation data and observations, there are perched water zones in the fill material, and water samples collected from shallow wells installed in the fill area are monitoring these perched zones. Some of the perched water may seep from the edges of the perched water zone to the underlying aquifer, although the volume of seepage is typically small, especially in comparison to the volume of water in the underlying aquifer. During February 2025, H&H collected perched water samples from four monitoring wells (MW-1, MW-1A, MW-8, and MW-9). In addition, groundwater samples were collected from six monitoring wells which are not screened in the fill materials, and which are installed in the underlying unconfined aquifer. These wells include background well MW-5 (located in the northwestern portion of the Site upgradient of fill material), bedrock well MW-11D (located beneath the fill material), and downgradient wells MW-3A, MW-4A, MW-6, and MW-7 (located between the fill material and Bolin Creek).

Results of analysis of perched water samples collected during February 2025 from wells installed in the fill indicate concentrations which are generally similar to previous concentrations and fluctuations detected in the wells, with the exception of relatively higher total barium concentrations in MW-1A and MW-9 than previously detected in these wells, and relatively higher total strontium concentrations in MW-1 and MW-1A than previously detected in these wells.

Results of analysis of groundwater samples collected during February 2025 indicate no concentrations above 2L Standards (and background for manganese) were detected in the wells installed in the underlying aquifer, except MW-3A and MW-6. Manganese was detected above background in both MW-3A and MW-6, total boron and strontium were detected above 2L Standards in MW-3A, and barium was detected above the 2L Standard in MW-6. The concentrations of these metals were higher than previous detections in the wells. There were no other metals detected above 2L Standards (and background for manganese) in the February 2025 groundwater monitoring well samples, including in bedrock well MW-11D which is screened below the fill materials in the central to western portion of the Site.

Results of analysis of seven surface water samples collected during February 2025 from previous sample locations in Bolin Creek indicate no analytes were detected above BSVs and surface water criteria (i.e., 2B Standards, NRWQC, and NCISTVs).

Based upon the results of the February 2025 perched water/groundwater and surface water results, although there have been some increases in concentrations in several metals in perched water/groundwater, consistent with previous data, compounds in groundwater are not impacting surface water quality above standards and screening levels in Bolin Creek adjacent to the Site. The barium concentration detected above the 2L Standard in downgradient well MW-6 is lower than the surface water 2B Standard for barium, and the boron and strontium concentrations which were detected above 2L Standards in downgradient wells MW-3A and/or MW-6 are lower than surface water NCISTVs. There are no 2B Standards or NRWQCs established for boron and strontium. The manganese concentrations detected above background in MW-3A and MW-6 are higher than the NRWQC but the NRWQC is not being exceeded in surface water. There is not a 2B Standard established for manganese. Therefore, concentrations of metals detected in groundwater which migrate toward Bolin Creek do not appear to pose unacceptable risk to surface water receptors.

Table 1 (Page 1 of 2)
Summary of Soil and CCP Metals Analytical Data
Chapel Hill Police Property
Brownfields Project No. 23022-19-068
Chapel Hill, North Carolina
H&H Job No. TCH-009

Sample ID	Sample Date	Material Sampled (Soil or CCPs)	Sample Depth (ft or in bgs)	aluminum	antimony	arsenic	barium	beryllium	cadmium	calcium	hexavalent chromium	trivalent chromium	total chromium	cobalt	copper	iron	lead	magnesium	manganese	mercury	molybdenum	nickel	potassium	selenium	silver	sodium	strontium	thallium	vanadium	zinc	
Site-Specific BSV ⁽¹⁾				--	--	3.015	87.86	0.929	0.313	--	5.725	70.2	70.2	36.31	77.3	--	59.11	--	1,149	0.256	--	19.49	--	2.503	--	--	43.19	0.981*	227	230	
PSRG - Protection of Groundwater ⁽²⁾				110,000	0.90	5.8	580	63	3.0	NS	3.8	360,000	NS	0.90	700	150	270	NS	65	1.0	7.1	130	NS	2.1	3.4	NS	1,400	2.8	140	1,200	
PSRG - Industrial/Commercial Health-Based ⁽²⁾				230,000	93	3.0	47,000	470	20	NS	20	350,000	NS	70	9,300	160,000	800	NS	5,600	6.4	1,200	4,600	NS	1,200	1,200	NS	140,000	2.3	1,200	70,000	
Upper Level Samples																															
S-4	04/29/13	CCPs	1 ft	23,000	ND	14	24	ND	1.5	9,900	NA	NA	22	30	65	59,000	20	9,000	1,500	0.011	NA	43	680	ND	ND	150	NA	ND	21	120	
S-5	01/31/14	CCPs	0-4 ft	NA	NA	37	2,800	NA	ND	NA	1.3	19.7	21	NA	NA	NA	10	NA	NA	0.30	NA	NA	NA	3.2	ND	NA	NA	NA	NA	NA	
S-6	01/31/14	CCPs	0-4 ft	NA	NA	43	3,200	NA	ND	NA	2.7	19.3	22	NA	NA	NA	12	NA	NA	0.42	NA	NA	NA	6.1	ND	NA	NA	NA	NA	NA	
GP-1	02/03/14	CCPs	8-12 ft	NA	NA	3.5	86	NA	ND	NA	ND	8.8	8.8	NA	NA	NA	26	NA	NA	0.083	NA	NA	NA	ND	ND	NA	NA	NA	NA	NA	
GP-2	02/03/14	CCPs	26-28 ft	NA	NA	41	1,100	NA	ND	NA	ND	19	19	NA	NA	NA	11	NA	NA	0.24	NA	NA	NA	4.0	ND	NA	NA	NA	NA	NA	
GP-3	02/03/14	CCPs	10-12 ft	NA	NA	48	1,200	NA	ND	NA	0.53	22.47	23	NA	NA	NA	39	NA	NA	0.42	NA	NA	NA	ND	ND	NA	NA	NA	NA	NA	
GP-4	02/04/14	CCPs	10-12 ft	NA	NA	59	2,900	NA	ND	NA	ND	20	20	NA	NA	NA	11	NA	NA	0.51	NA	NA	NA	5.8	ND	NA	NA	NA	NA	NA	
GP-5	02/04/14	CCPs	4-6 ft	NA	NA	72	2,800	NA	ND	NA	ND	19	19	NA	NA	NA	9.5	NA	NA	0.33	NA	NA	NA	2.6	ND	NA	NA	NA	NA	NA	
	04/03/19	CCPs	4-6 ft	NA	NA	95.9	2,350	5.46	<0.956	NA	0.836 J	12.3	13.1	7.05	50.9	NA	NA	NA	34.7	1.2	NA	11.1	NA	12	NA	NA	325	NA	NA	NA	
GP-6	04/03/19 (DUP)	CCPs	4-6 ft	NA	NA	95.9	2,630	6.99	<0.931	NA	0.712 J	16.2	16.9	10.3	62.5	NA	NA	NA	53.4	0.39	NA	17.1	NA	13	NA	NA	308	NA	NA	NA	
	02/04/14	CCPs	9-11 ft	NA	NA	65	850	NA	ND	NA	ND	19	19	NA	NA	NA	27	NA	NA	11	NA	NA	NA	4.1	ND	NA	NA	NA	NA	NA	
GP-7	04/04/19	CCPs	9-10 ft	NA	NA	6.73	178	0.758	0.118 J	NA	<1.11	10.0	10	5.18	11	NA	NA	NA	687	0.050	NA	6.24	NA	0.88	NA	NA	21.7	NA	NA	NA	
	02/04/14	CCPs	10-12 ft	NA	NA	55	1,700	NA	ND	NA	ND	19	19	NA	NA	NA	11	NA	NA	0.26	NA	NA	NA	4.3	ND	NA	NA	NA	NA	NA	
GP-8	02/04/14	CCPs	11-15 ft	NA	NA	54	4,100	NA	ND	NA	ND	20	20	NA	NA	NA	9.2	NA	NA	0.29	NA	NA	NA	4.5	ND	NA	NA	NA	NA	NA	
GP-11	02/04/14	CCPs	4-6 ft	NA	NA	16	450	NA	ND	NA	ND	16	16	NA	NA	NA	23	NA	NA	0.35	NA	NA	NA	ND	ND	NA	NA	NA	NA	NA	
GP-12	02/04/14	CCPs	2-4 ft	NA	NA	52	2,000	NA	ND	NA	ND	19	19	NA	NA	NA	14	NA	NA	0.28	NA	NA	NA	2.1	ND	NA	NA	NA	NA	NA	
HH-1	11/03/16	Soil	0-1 ft	NA	<0.29	5.9	120	1.00	<0.29	NA	0.45	20.55	21	7.9	25	NA	27	NA	350	0.052	NA	8.8	NA	0.69	NA	NA	31	<0.58	48	50	
	11/03/16 (DUP)	Soil	0-1 ft	NA	<0.35	3.4	110	0.79	<0.35	NA	0.54	19.46	20	8.4	17	NA	18	NA	360	0.067	NA	12	NA	<0.71	NA	NA	30	<0.71	41	35	
HH-2	11/03/16	Soil	0-1 ft	NA	<0.29	4.9	140	0.93	<0.29	NA	0.43	13.57	14	12	21	NA	30	NA	260	0.085	NA	5.9	NA	1.0	NA	NA	25	<0.58	48	43	
HH-3	11/03/16	Soil	0-1 ft	NA	<0.33	9.9	200	1.30	<0.33	NA	0.46 J	17.54	18	7.8	31	NA	24	NA	350	0.076	NA	8.9	NA	2.4	NA	NA	36	<0.65	53	100	
HH-4	11/03/16	Soil	0-1 ft	NA	<0.28	2.4	72	1.00	<0.28	NA	0.50	44.5	45	16	37	NA	2.3	NA	630	<0.023	NA	33	NA	<0.56	NA	NA	42	0.60	73	70	
HH-5	11/03/16	Soil	0-1 ft	NA	<0.30	2.4	73	0.75	<0.30	NA	<0.14	23	23	8.4	19	NA	9.3	NA	410	<0.025	NA	14	NA	1.2	NA	NA	23	<0.60	39	51	
HH-6	10/27/16	Soil	0-1 ft	NA	NA	NA	NA	NA	NA	NA	<0.33	20	20	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
HH-7	10/27/16	Soil	0-1 ft	NA	NA	NA	NA	NA	NA	NA	<0.61	22	22	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
MW-7	11/01/16	Soil	0-1 ft	NA	<0.30	2.6	67	0.87	<0.30	NA	0.89	9.11	10	3.9	180	NA	7.6	NA	100	0.030	NA	2.9	NA	<0.59	NA	NA	6.7	<0.59	61	46	
HH-12	09/06/22	Soil	4-5 ft	NA	NA	1.6	65.6	0.72	0.045 J	NA	0.583 J	10.3	10.9	13.1	26.6	NA	NA	NA	94.8	<0.0041	NA	17.1	NA	0.28 J	NA	NA	21.8	<0.044	59.3	NA	
HH-13	09/06/22	Soil	0-2 ft	NA	NA	1.0	19.8	0.37	<0.030	NA	<0.280	15.4	15.4	3.9	13.8	NA	NA	NA	368	0.025	NA	4.1	NA	0.19 J	NA	NA	15.2	<0.039	32.6	NA	
	09/06/22	Soil	0-2 ft	NA	NA	2.0	51.6	0.42	<0.035	NA	0.356 J	7.1	7.5	2.3	9.5	NA	NA	NA	32.9	0.041	NA	2.1	NA	0.64	NA	NA	2.5	0.096 J	22.2	NA	
HH-14	09/06/22 (DUP)	Soil	0-2 ft	NA	NA	1.4	38.7	0.34	<0.032	NA	0.537 J	3.9	4.4	1.6	5.3	NA	NA	NA	48.3	0.016	NA	1.2	NA	0.33 J	NA	NA	2.0	0.056 J	14.7	NA	
HH-15	09/06/22	Soil	0-2 ft	NA	NA	0.76	31.0	0.27	<0.031	NA	<0.313	1.6 J	1.6 J	1.6	6.6	NA	NA	NA	105	0.021	NA	1.0	NA	0.20 J	NA	NA	9.1	0.043 J	15.9	NA	
Embankment Samples																															
S-7	01/31/14	CCPs	0-4 ft	NA	NA	44	2,500	NA	ND	NA	1.4	27.6	29	NA	NA	NA	11	NA	NA	0.44	NA	NA	NA	4.5	ND	NA	NA	NA	NA	NA	
HH-9	04/03/19	CCPs	0-1 ft	NA	NA	3.37	131	0.398 J	0.178 J	NA	<1.29	12.7	12.7	5.97	14.5	NA	NA	NA	260	0.31	NA	3.59	NA	0.722	NA	NA	33.2	NA	NA	NA	
HH-10	04/03/19	CCPs	0-1 ft	NA	NA	60.3	2,970	5.14	0.162 J	NA	<1.60	13.8	13.8	9.84	51.3	NA	NA	NA	73.3	0.22	NA	17.1	NA	5.04	NA	NA	269	NA	NA	NA	
HH-11	04/03/19	CCPs	0-1 ft	NA	NA	42.5	3,260	5.9	0.220 J	NA	0.467 J	18.7	19.2	13.4	55.3	NA	NA	NA	113	0.43	NA	23.5	NA	9.05	NA	NA	234	NA	NA	NA	
Lower Level Samples																															
SS-7	02/18/16	Soil	2-12 in	NA	ND	3.1	84	0.60	ND	NA	NA	NA	14	6.9	15	NA	13	NA	500	0.038	ND	5.9	NA	ND	ND	NA	31	ND	37	37	
HH-8	10/27/16	So																													

Table 1 (Page 2 of 2)
Summary of Soil and CCP Metals Analytical Data
Chapel Hill Police Property
Brownfields Project No. 23022-19-068
Chapel Hill, North Carolina
H&H Job No. TCH-009

Sample ID	Sample Date	Material Sampled (Soil or CCPs)	Sample Depth (ft or in bgs)	aluminum	antimony	arsenic	barium	beryllium	cadmium	calcium	hexavalent chromium	trivalent chromium	total chromium	cobalt	copper	iron	lead	magnesium	manganese	mercury	molybdenum	nickel	potassium	selenium	silver	sodium	strontium	thallium	vanadium	zinc		
Site-Specific BSV ⁽¹⁾				--	--	3.015	87.86	0.929	0.313	--	5.725	70.2	70.2	36.31	77.3	--	59.11	--	1,149	0.256	--	19.49	--	2.503	--	--	43.19	0.981*	227	230		
PSRG - Protection of Groundwater ⁽²⁾				110,000	0.90	5.8	580	63	3.0	NS	3.8	360,000	NS	0.90	700	150	270	NS	65	1.0	7.1	130	NS	2.1	3.4	NS	1,400	2.8	140	1,200		
PSRG - Industrial/Commercial Health-Based ⁽²⁾				230,000	93	3.0	47,000	470	20	NS	20	350,000	NS	70	9,300	160,000	800	NS	5,600	6.4	1,200	4,600	NS	1,200	1,200	NS	140,000	2.3	1,200	70,000		
Excavation G-1	04/16/20	Soil	2-3 ft	NA	NA	3.68	58.8	<3.08	<1.23	NA	0.478 J	20.0	20.5	5.73	14.5	NA	NA	NA	193	0.052	NA	6.94	NA	<3.08	NA	NA	6.2	NA	NA	NA		
Excavation H-1	05/11/20	Soil	1-2 ft	NA	NA	1.16	37.2	<2.76	<1.10	NA	<1.10	20.1	20.1	10.7	15.3	NA	NA	NA	412	<0.0442	NA	5.80	NA	<2.76	NA	NA	29.3	NA	NA	NA		
Excavation H-2	05/11/20	Soil	1-2 ft	NA	NA	1.93	100	<3.25	<1.30	NA	0.578 J	43.8	44.4	19.1	59.2	NA	NA	NA	265	0.0494 J	NA	16.2	NA	1.58 J	NA	NA	56.8	NA	NA	NA		
Excavation H-3	05/11/20	Soil	1-2 ft	NA	NA	2.41	71.0	<3.28	<1.31	NA	0.410 J	40.2	40.6	14.1	43.4	NA	NA	NA	251	0.0485 J	NA	12.5	NA	1.46 J	NA	NA	58.1	NA	NA	NA		
Excavation H-4	05/11/20	Soil	2-3 ft	NA	NA	2.03	67.1	<3.04	<1.22	NA	0.388 J	25.8	26.2	20.8	24.0	NA	NA	NA	1,480	0.0237 J	NA	7.81	NA	<3.04	NA	NA	38.1	NA	NA	NA		
Excavation H-5	05/11/20	Soil	1-2 ft	NA	NA	1.10 J	74.5	<3.04	<1.22	NA	0.497 J	21.1	21.6	8.25	16.9	NA	NA	NA	558	<0.0486	NA	6.77	NA	<3.04	NA	NA	32.2	NA	NA	NA		
Excavation H-6	05/11/20	Soil	1-2 ft	NA	NA	1.02 J	96.0	<2.97	<1.19	NA	<1.19	14.9	14.9	7.57	10.7	NA	NA	NA	557	0.0222 J	NA	4.03	NA	<2.97	NA	NA	20.5	NA	NA	NA		
Excavation H-7	11/09/20	Soil	0-1 ft	NA	NA	1.10 J	73.7	0.767 J	<1.22	NA	<1.22	8.04	8.04	3.68	15.0	NA	NA	NA	233	0.022	NA	4.63	NA	0.479 J	NA	NA	9.6	NA	NA	NA		
Excavation I-1	04/08/20	Soil	1-2 ft	NA	NA	2.91	67.2	<2.77	<1.11	NA	0.457 J	26.2	26.7	13.0	18.3	NA	NA	NA	594	0.042	NA	8.25	NA	<2.77	NA	NA	26.3	NA	NA	NA		
Excavation I-2	04/08/20	Soil	1-2 ft	NA	NA	3.65	74.1	<2.85	<1.14	NA	0.313 J	23.3	23.6	12.0	21.4	NA	NA	NA	544	0.022	NA	8.70	NA	<2.85	NA	NA	17.2	NA	NA	NA		
Excavation I-3	04/08/20	Soil	1-2 ft	NA	NA	2.18	61.5	<2.88	<1.15	NA	0.387 J	13.1	13.5	9.23	19.5	NA	NA	NA	419	0.019	NA	6.02	NA	<2.88	NA	NA	13.3	NA	NA	NA		
HH-16A	04/05/24	Soil	2-6 in	NA	NA	1.32	57.5	0.462 J	<1.21	NA	<1.3	17.4	17.4	15.1	19.9	NA	NA	NA	680	<0.0482	NA	14.8	NA	0.557 J	NA	NA	15.4	NA	NA	NA		
HH-18	01/19/24	Soil/CCPs	2-6 in	NA	NA	34.2	3,330	3.59 J	0.189 J	NA	0.77 J	13.9	14.7	8.84	39.3	NA	NA	NA	100	0.13	NA	16.6	NA	1.46 J	NA	NA	226	NA	NA	NA		
HH-19B	10/18/24	Soil	2 ft	NA	NA	1.3 J	86.0	0.18	<0.090	NA	0.14 J	39.4	39.5	5.7	18	NA	NA	NA	593	0.014 J	NA	5.5	NA	<0.90	NA	NA	33.5	NA	NA	NA		
HH-20	08/26/24	Soil	2-6 in	NA	NA	3.3	180	0.77	0.13 J	NA	<1.5	11	11	3.8	16	NA	NA	NA	570	0.030 J	NA	6.1	NA	0.62 J	NA	NA	65.4	NA	NA	NA		
HH-21	08/26/24	Soil	2-6 in	NA	NA	3.4	180	0.78	0.12 J	NA	0.020 J	13	13	4.0	15	NA	NA	NA	720	0.024 J	NA	5.8 J	NA	<2.1	NA	NA	53.8	NA	NA	NA		
HH-22A	02/06/25	Soil	0-1 ft	NA	NA	12.0	361	1.57 J	0.198 J	NA	<1.4	29.0	29.0	17.1	42.8	NA	37.3	NA	872	0.102	NA	17.6	NA	1.58 J	<0.682	NA	76.2	NA	NA	NA		
HH-22B	02/06/25	Soil	1-2 ft	NA	NA	1.53	96.0	0.472 J	<1.19	NA	0.51 J	20.3	20.8	15.6	20.9	NA	10.0	NA	692	0.0256 J	NA	7.87	NA	0.402 J	<0.596	NA	32.9	NA	NA	NA		
	02/06/25	Soil	0-1 ft	NA	NA	1.38	73.1	0.601 J	<1.19	NA	<1.2	14.4	14.4	5.16	16.3	NA	9.71	NA	269	<0.0475	NA	7.65	NA	0.389 J	<0.594	NA	10.3	NA	NA	NA		
	02/06/25 (DUP)	Soil	0-1 ft	NA	NA	0.911 J	63.0	0.617 J	<1.19	NA	0.016 J	10.6	10.6	4.67	18.8	NA	6.98	NA	282	<0.0474	NA	5.92	NA	0.318 J	<0.593	NA	11.4	NA	NA	NA		
HH-23B	02/06/25	Soil	1-2 ft	NA	NA	2.04	75.3	0.396 J	<1.19	NA	0.33 J	20.5	20.8	17.4	19.8	NA	7.63	NA	940	0.0274 J	NA	7.65	NA	0.841 J	<0.596	NA	31.8	NA	NA	NA		
HH-24A	02/06/25	Soil	0-1 ft	NA	NA	0.592 J	48.4	0.535 J	<1.20	NA	<1.1	7.45	7.45	3.81	15.9	NA	3.19	NA	251	<0.0478	NA	4.68	NA	<2.99	<0.598	NA	11.4	NA	NA	NA		
HH-24B	02/06/25	Soil	1-2 ft	NA	NA	1.68	72.8	0.408 J	0.287 J	NA	0.61 J	46.7	47.3	28.7	92.7	NA	18.1	NA	1,150	<0.0510	NA	22.7	NA	0.545 J	<0.638	NA	62.9	NA	NA	NA		
HH-25A	02/06/25	Soil	0-1 ft	NA	NA	0.524 J	47.3	0.548 J	<1.18	NA	0.022 J	6.26	6.28	4.32	21.5	NA	2.92	NA	289	<0.0471	NA	3.83	NA	0.258 J	<0.588	NA	17.2	NA	NA	NA		
HH-25B	02/06/25	Soil	1-2 ft	NA	NA	1.91	75.5	0.467 J	<1.28	NA	0.20 J	32.9	33.1	25.6	38.2	NA	7.68	NA	931	<0.0510	NA	11.9	NA	1.01 J	<0.638	NA	27.2	NA	NA	NA		
HH-26A	02/06/25	Soil	0-1 ft	NA	NA	0.648 J	53.8	0.510 J	<1.19	NA	<1.1	9.71	9.71	5.09	29.1	NA	3.45	NA	311	<0.0474	NA	6.14	NA	0.258 J	<0.593	NA	8.2	NA	NA	NA		
HH-26B	02/06/25	Soil	1-2 ft	NA	NA	2.12	53.0	0.414 J	<1.24	NA	0.18 J	52.0	52.2	15.4	22.9	NA	4.48	NA	674	<0.0495	NA	8.00	NA	0.493 J	<0.619	NA	32.1	NA	NA	NA		
Background Samples																																
MW-5 (background)	11/02/16	Soil	0-1 ft	NA	<0.30	2.1	76	0.99	<0.30	NA	0.43 J	17.57	18	27	49	NA	4.0	NA	710	<0.023	NA	5.0	NA	<0.59	NA	NA	25	<0.59	190	47		
	11/02/16	Soil	6-7 ft	NA	<0.27	1.4	61	0.60	<0.27	NA	0.81	38.19	39	19	18	NA	0.55	NA	940	<0.020	NA	20	NA	<0.53	NA	NA	29	2.3	67	75		
BG-1 (background)	11/03/16	Soil	0-1 ft	NA	<0.28	1.9	36	0.39	<0.28	NA	0.87	17.13	18	6.3	16	NA	25	NA	310	0.033	NA	5.4	NA	1.6	NA	NA	15	<0.57	34	43		
	11/03/16	Soil	2-3 ft	NA	<0.29	2.3	45	0.48	<0.29	NA	<0.12	19	19	7.3	18	NA	43	NA	440	0.280	NA	6.2	NA	1.6	NA	NA	15	<0.57	35	49		
BG-2 (background)	11/03/16	Soil	0-1 ft	NA	<0.28	1.9	45	0.50	<0.28	NA	0.84	16.16	17	7.4	18	NA	32	NA	410	0.045	NA	4.9	NA	1.1	NA	NA	14	<0.56	35	44		
	11/03/16	Soil	2-3 ft	NA	<0.27	1.9	52	0.53	<0.27	NA	0.70	23.3	24	7.5	20	NA	26	NA	450	0.038	NA	7.9	NA	1.7	NA	NA	19	<0.55	37	45		
BG-3 (background)	11/03/16	Soil	0-																													

Table 2 (Page 1 of 1)
Summary of Well Construction Details and Potentiometric Surface Elevations
Chapel Hill Police Property
Brownfields Project No. 23022-19-068
Chapel Hill, North Carolina
H&H Job No. TCH-009

Well ID	Date Installed	Total Depth (ft bls)	Screened Interval (ft bls)	TOC Elevation (ft AMSL)	November 9, 2016		April 3, 2019		September 26, 2019		February 12, 2020		August 29, 2022		February 4, 2025	
					Depth to Water (ft BTOC)	Elevation (ft ASML)	Depth to Water (ft BTOC)	Elevation (ft ASML)	Depth to Water (ft BTOC)	Elevation (ft ASML)	Depth to Water (ft BTOC)	Elevation (ft ASML)	Depth to Water (ft BTOC)	Elevation (ft ASML)	Depth to Water (ft BTOC)	Elevation (ft ASML)
MW-1*	04/29/13	40	30-40	346.12	35.48	310.64	30.90	315.22	35.67	310.45	35.22	310.90	37.65	308.47	36.75	309.37
MW-1A*	09/24/19	40	25-40	345.96	NI		NI		31.43	314.53	30.27	315.69	32.29	313.67	31.08	314.88
MW-3A	05/12/15	16	1-16	298.10	5.91	292.19	2.79	295.31	7.14	290.96	1.34	296.76	4.83	293.27	3.78	294.32
MW-4A	05/14/15	19	4-19	298.00	6.72	291.28	3.20	294.80	7.83	290.17	2.22	295.78	6.48	291.52	4.00	294.00
MW-5	11/02/16	27.5	17.5 - 27.5	369.33	9.27	360.06	7.03	362.30	10.24	359.09	9.67	359.66	9.83	359.50	8.11	361.22
MW-6	11/02/16	17.5	7.5 - 17.5	315.39	9.92	305.47	7.42	307.97	10.54	304.85	6.87	308.52	8.21	307.18	7.09	308.30
MW-7	11/02/16	69.5	59.5 - 69.5	339.54	46.97	292.57	43.58	295.96	47.05	292.49	45.09	294.45	47.64	291.90	46.52	293.02
MW-8*	09/24/19	44.5	29.5-44.5	343.89	NI		NI		40.16	303.73	38.21	305.68	40.73	303.16	39.75	304.14
MW-9*	09/24/19	45	30-45	339.04	NI		NI		26.92	312.12	25.47	313.57	28.32	310.72	27.21	311.83
MW-11D	02/11/20	56	46-56	339.29	NI		NI		NI		31.85	307.44	33.96	305.33	33.12	306.17
Abandoned Wells																
TMW-10	09/24/19	40	25-40	349.35	NI		NI		27.23*	322.12*	Abandoned (09/24/19)					
MW-2	06/20/13	8	Unknown	--	Abandoned (06/20/13)											
MW-3	01/27/14	11	6-11	--	Abandoned (01/07/15)											
MW-4	01/27/14	9.2	4.2-9.2	--	Abandoned (01/06/15)											

Notes:
*Well installed within perched water zones present in fill material.
MW-1, MW-3A, MW-4A, MW-5, MW-6, and MW-7 were surveyed by CE Group on December 8, 2016.
MW-1A, MW-8, MW-9, and TMW-10 were surveyed by H&H on September 26, 2019.
MW-11D was surveyed by H&H on March 3, 2020.
ft = feet; bls = below land surface; TOC = Top of Casing; BTOC = below TOC; AMSL = above mean sea level; NI = Not Installed.
pre-November 2016 data not summarized in table (refer to previous reports).

Table 3 (Page 1 of 1)
Summary of Perched Water and Groundwater Geochemical Parameters
Chapel Hill Police Property
Brownfields Project No. 23022-19-068
Chapel Hill, North Carolina
H&H Job No. TCH-009

Monitoring Well ID	Sample Date	DO (mg/L)	Temperature (°C)	Conductivity (µS/cm)	pH (s.u.)	ORP (mV)	Turbidity (NTU)
MW-5 (background)	11/09/16	0.27	20.3	569	6.96	39.2	3.8
	04/03/17	0.21	17.8	750	6.98	-280	8.2
	08/30/22	0.69	22.2	790	6.97	-16.4	7.3
	02/04/25	0.22	17.7	552	6.64	6.7	102
MW-1*	11/10/16	6.87	17.1	767	6.89	79.0	475
	04/03/19	1.35	17.9	1,269	6.03	-36.0	7.8
	02/05/25	0.80	11.9	1,000	7.48	-12.6	9.9
MW-1A*	09/29/19	0.11	20.9	1,082	6.15	-17.7	6.6
	08/31/22	1.27	20.5	1,275	6.72	43.9	9.0
	02/05/25	0.33	15.6	1,110	7.52	-125	9.7
MW-2	06/20/13	NA	NA	NA	NA	NA	NA
MW-3	02/05/14	NA	NA	NA	NA	NA	NA
	08/15/14	NA	NA	NA	NA	NA	1,500
	08/20/14	NA	NA	NA	NA	NA	13
MW-3A	07/21/15	NA	15.8	2,321	6.50	NA	5.7
	02/17/16	NA	NA	NA	NA	NA	1.3
	11/09/16	2.51	18.1	1,231	6.63	289	1.2
	04/04/19	0.14	12.8	1,536	6.40	274	0.0
	08/30/22	0.24	23.5	1,325	6.52	53.2	2.5
	02/05/25	1.10	13.9	1,056	6.71	8.9	9.9
MW-4	02/05/14	NA	NA	NA	NA	NA	NA
	08/20/14	NA	NA	NA	NA	NA	<10
MW-4A	07/21/15	NA	15.6	831	6.25	NA	24.7
	02/18/16	NA	NA	NA	NA	NA	189
	11/09/16	1.41	16.9	241	5.43	301	4.8
	04/04/19	2.15	13.3	134	5.11	278	9.4
	08/31/22	0.40	19.6	432	5.90	61.5	8.6
	02/05/25	4.30	12.2	120	5.72	99.1	46.9
MW-6	11/09/16	0.61	20.5	607	6.19	12.2	2.5
	04/03/17	0.23	16.0	452	6.10	-270	7.6
	04/04/19	0.10	13.8	786	6.30	-23.3	4.5
	08/30/22	0.32	21.8	538	6.38	-30.4	1.0
	02/05/25	1.91	14.0	377	6.47	-29.9	6.3
MW-7	11/14/16	1.79	15.7	112	5.28	61.2	8.9
	04/03/19	1.35	15.1	107	5.40	215	9.0
	08/31/22	2.59	17.8	108	5.95	94.0	9.8
	02/05/25	1.43	13.6	165	6.93	160	565
	09/26/19	0.40	21.3	632	5.77	6.6	8.0
MW-8*	08/31/22	1.08	21.8	669	6.31	-11.6	4.1
	02/05/25	0.20	15.4	650	7.24	-36.6	29.6
	09/26/19	0.58	22.0	885	6.50	-49.1	1.7
MW-9*	02/12/20	0.22	18.4	858	6.83	-102	1.1
	08/31/22	0.28	22.0	906	6.68	-64.3	0.11
	02/04/25	0.17	17.8	899	6.10	-45.0	29.2
	02/13/20	2.08	18.9	984	9.68	15.9	8.6
MW-11D	08/30/22	5.84	21.1	709	7.76	-11.4	3.6
	02/04/25	0.19	17.5	697	6.69	-28.1	3.8

Notes:

*Well installed within perched water zones present in fill material.

DO = dissolved oxygen; µS/cm = microsiemens per centimeter; s.u. = standard unit;
mV = millivolt; NA = Not Analyzed/Available

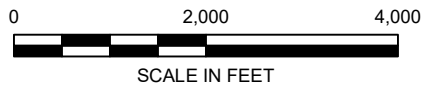
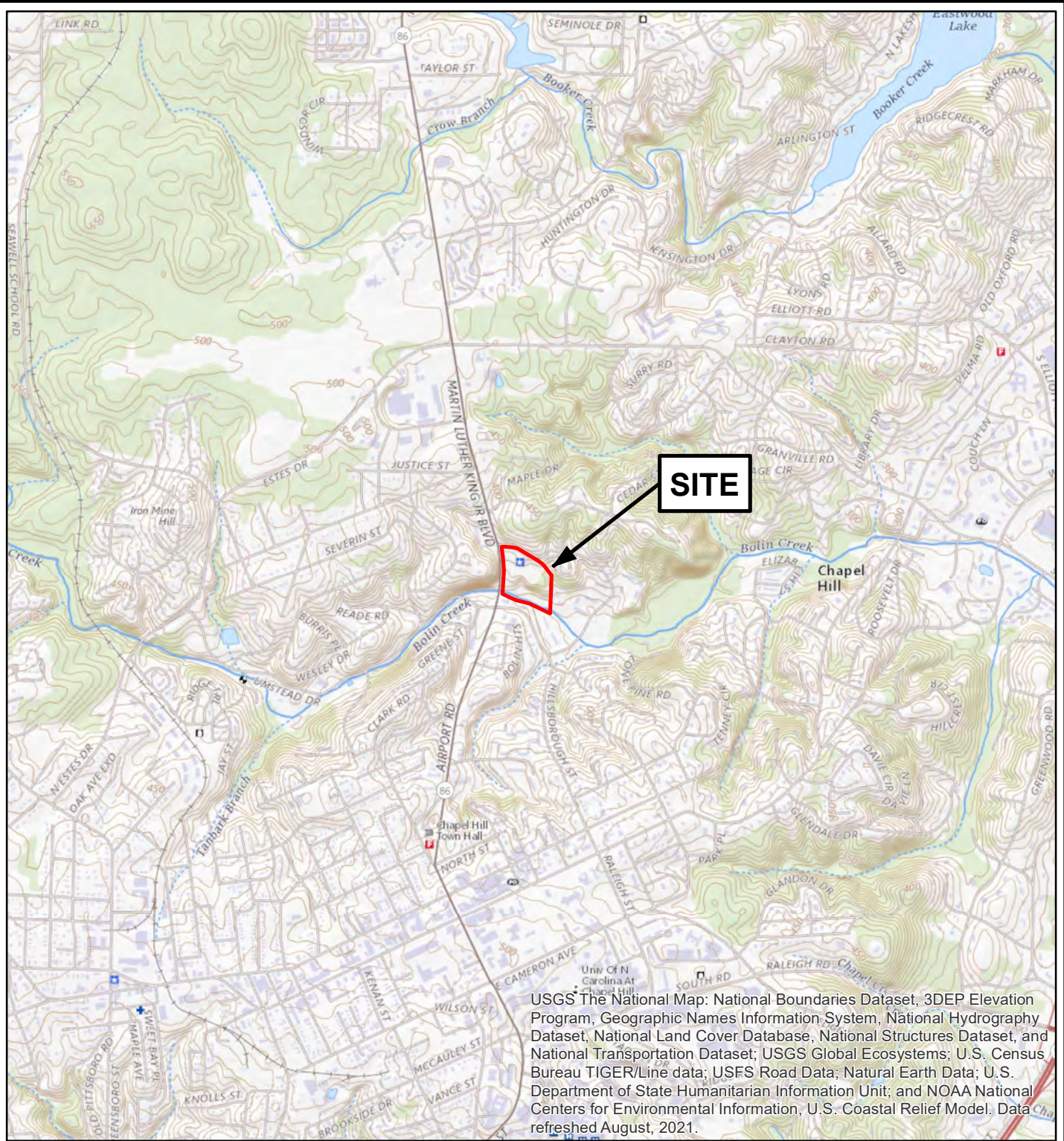
Table 4 (Page 1 of 1)
Summary of Perched Water and Groundwater Analytical Data
Chapel Hill Police Property
Brownfields Project No. 23022-19-068
Chapel Hill, North Carolina
H&H Job No. TCH-009

Monitoring Well ID	Sample Date	turbidity	aluminum	antimony	arsenic	barium	beryllium	boron	cadmium	calcium	hexavalent chromium	trivalent chromium "	Total chromium	cobalt	copper	iron	lead	lithium	magnesium	manganese	mercury	molybdenum	nickel	potassium	selenium	silver	sodium	strontium	thallium	vanadium	zinc	TDS	chloride	fluoride	nitrate	sulfate	VOCs	SVOCs				
2L Standard		NS	NS	1	10	700	4	700	2	NS	NS	NS	10	1	1,000	300	15	NS	NS	50	1	NS	100	NS	20	20	NS	2,000	2	7	1,000	500,000	250,000	2,000	10,000	250,000	--	--				
MW-5 (Background)	11/09/16	3.8	NA	<0.5	<10	51	<2.0	NA	<1.0	NA	NA	NA	<5.0	0.27 J	<10	NA	<5.0	NA	NA	580	<0.2	NA	<10	NA	23	NA	NA	190	<2.5	0.39 J	<30	NA	NA	NA	NA	NA	NA	NA				
	04/03/17	8.2	NA	NA	NA	NA	NA	NA	NA	NA	<4.8	NA	<10.0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA			
	08/30/22	7.3	NA	<1.0	0.25 J	80.2	<0.10	<50.0	<0.20	NA	<0.100	NA	<1.0	0.49 J	<2.0	NA	NA	2.0 J	NA	614	<0.20	0.18 J	<1.0	NA	<2.0	NA	NA	273	<0.47	<1.0	<10.0	482,000	89,000	100	<100	43,900	All BDL	All BDL				
	02/04/25	102	NA	0.10 J	1.4	85.5	0.17	<290	<0.10	NA	0.028 J, H1	0.44	0.47 J	0.64 J	0.62 J	NA	NA	2.0 J	NA	654	<0.20	0.17 J	<1.0	NA	<2.0	NA	NA	267	<0.20	0.065 J	<50.0	454,000	82,700	120	<20	39,900	NA	NA				
	02/04/25 (FF)	NM	NA	<1.0	0.20 J	64.8	<0.10	5.5 J	<0.10	NA	0.036 H1	0.44	0.48 J	0.43 J	0.85 J	NA	NA	2.5	NA	398	<0.20	0.19 J	0.27 J	NA	<2.0	NA	NA	230	<0.20	<1.0	<10.0	444,000	82,600	<100	4,700	39,800	NA	NA				
MW-1*	05/03/13	NM	5,600	5.4	85	1,100	1.6	NA	0.17	110,000	NA	NA	15	15	25	6,500	5.8	NA	25,000	7,600	ND	NA	12	7,600	2.5	ND	34,000	NA	1.0	38	52	NA	NA	NA	NA	NA	NA	NA	NA			
	02/18/16	NM	NA	ND	67	1,300	11.0	ND	ND	NA	NA	NA	100	78	170	NA	36	NA	NA	9,600	0.26	ND	58	NA	ND	ND	NA	2,900	ND	260	330	NA	NA	NA	NA	NA	NA	NA	NA			
	02/18/16 (FF)	NM	NA	ND	52	1,100	8.8	ND	ND	NA	NA	NA	86	61	130	NA	29	NA	NA	9,000	0.21	ND	46	NA	ND	ND	NA	2,700	ND	200	260	NA	NA	NA	NA	NA	NA	NA	NA			
	11/10/16	475	NA	<0.5	19	470	4.1	NA	0.15 J	NA	NA	NA	31	32	57	NA	10	NA	NA	8,600	<0.2	NA	21	NA	23	NA	NA	2,200	<2.5	92	99	NA	NA	NA	NA	NA	NA	NA	NA			
	11/10/16 (FF)	NM	NA	<0.5	<10	160	0.53 J	NA	<1.0	NA	NA	NA	<5.0	6.0	<10	NA	<5.0	NA	NA	8,000	<0.2	NA	2.3 J	NA	<20	NA	NA	2,100	<2.5	1.2 J	<30	NA	NA	NA	NA	NA	NA	NA	NA			
MW-1A*	04/03/19	7.8	NA	NA	22.9	1,730	<0.10	NA	<0.080	NA	NA	NA	<0.50	1.8	0.33 J	NA	NA	NA	NA	3,090	<0.20	NA	0.60	NA	<0.50	NA	NA	4,710	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		
	02/05/25	9.9	NA	<5.0	4.0 J	1,200	<0.50	1,090	<0.50	NA	<0.025 H1	<5.0	<5.0	9.8	<10.0	NA	NA	2.1 J	NA	10,400	<0.20	0.84 J	1.8 J	NA	<10.0	NA	NA	13,900	<1.0	2.8 J	43.6 J	634,000	60,800	200	<20	12,400	NA	NA	NA	NA		
	09/26/19	6.8	NA	NA	10	1,040	<0.50	NA	<0.40	NA	NA	NA	<2.5	1.2	<2.5	NA	NA	NA	NA	2,420	<0.20	NA	0.82 J	NA	<2.5	NA	NA	6,360	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		
	08/31/22	9.0	NA	<1.0	37.0	852	<0.10	332	<0.20	NA	<0.500	0.97	0.97 J	0.40 J	<2.0	NA	110	NA	NA	1,380	0.14 J	0.79 J	<1.0	NA	0.12 J	NA	2,560	<0.47	1.7	<10.0	774,000	74,000	210	<100	55,000	All BDL	All BDL					
	02/05/25	9.7	NA	<5.0	37.0	11,200	<0.50	952	<0.50	NA	<0.025 H1	<5.0	<5.0	<5.0	<10.0	NA	NA	80.2	NA	8,330	<0.20	1.2 J	<5.0	NA	<10.0	NA	NA	18,700	<1.0	2.5 J	<50.0	706,000	17,900	220	<20	9,600	NA	NA				
MW-2	06/20/13	NM	16,000	0.61	8.3	1,100	5.5	NA	0.93	260,000	NA	NA	8.4	23	1,200	13,000	27	NA	NA	47,000	1,200	0.18	NA	70	42,000	18	0.27	52,000	NA	0.48	71	2,200	NA	NA	NA	NA	NA	NA	NA	NA		
MW-3	02/05/14	NM	NA	NA	ND	160	NA	NA	ND	NA	ND	NA	ND	NA	NA	NA	ND	NA	NA	NA	NA	NA	NA	NA	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
	02/05/14 (DUP)	NM	NA	NA	ND	250	NA	NA	ND	NA	ND	NA	ND	24	NA	NA	ND	NA	NA	NA	NA	NA	NA	NA	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		
	08/15/14	1,500	NA	NA	51	830	NA	NA	ND	NA	30	NA	78	NA	NA	NA	30	NA	NA	NA	ND	NA	NA	NA	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
MW-3A	08/20/14 (FF)	13.0	NA	NA	ND	220	NA	NA	ND	NA	23	NA	ND	NA	NA	NA	ND	NA	NA	NA	NA	NA	NA	NA	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	07/21/15	5.7	NA	NA	ND	67	NA	520	ND	NA	ND	NA	ND	NA	NA	NA	ND	NA	NA	NA	ND	NA	NA	NA	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
	02/17/16	1.3	NA	ND	ND	89	ND	ND	ND	NA	NA	NA	ND	ND	ND	NA	ND	NA	NA	ND	ND	ND	NA	23	ND	ND	NA	2,400	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	02/17/16 (DUP)	1.3	NA	ND	ND	80	ND	ND	ND	NA	NA	NA	ND	ND	ND	NA	ND	NA	NA	23	ND	ND	ND	NA	26	ND	ND	NA	2,100	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA
	11/09/16	1.2	NA	<0.5	<10	53	<2.0	NA	<1.0	NA	NA	NA	<5.0	<0.11	<10	NA	<5.0	NA	NA	14	<0.2	NA	<10	NA	50	NA	NA	2,400	5.4 J	0.94 J	12 J	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
	11/09/16 (DUP)	1.2	NA	<0.5	<10	53	<2.0	NA	<1.0	NA	NA	NA	<5.0	<0.11	<10	NA	<5.0	NA	NA	15	<0.2	NA	<10	NA	52	NA	NA	2,400	5.3 J	0.95 J	<30	NA	NA	NA	NA	NA	NA	NA	NA	NA		
	04/04/19	0.0	NA	NA	0.15	68.2	<0.10	NA	<0.080	NA	NA	NA	<0.50	0.21	0.55	NA	NA	NA	NA	5.8	<0.20	NA	0.50 J	NA	34.2	NA	NA	2,950	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
MW-4	08/30/22	2.5	NA	<1.0	0.38 J	67.5	<0.10	625	<0.20	NA	<0.100	NA	<1.0	0.38 J	<2.0	NA	NA	20.3	NA	664	<0.20	0.83 J	0.77 J	NA	7.0	NA	NA	2,630	<0.47	2.5	<10.0	952,000	42,300	130	<100	290,000	All BDL	All BDL				
	02/05/25	9.9	NA	<5.0	<5.0	428	<0.50	1,920	<0.50	NA	0.082 H1	<5.0	<5.0	<5.0	<10.0	NA	NA	25.8	NA	1,710	<0.20	<5.0	1.4 J	NA	3.2 J	NA	NA	13,100	<1.0	2.3 J	<50.0	926,000	51,300	130	75	234,000	NA	NA	NA	NA	NA	
	02/05/14	NM	NA	NA	140	6,500	NA	NA	1.7	NA	ND	NA	930	NA	NA	NA	250	NA	NA	NA	1.4	NA	NA	NA	99	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	08/20/14 (FF)*	<1																																								


Table 5 (page 1 of 1)
Summary of Surface Water Analytical Data
Chapel Hill Police Property
Brownfields Project No. 23022-19-068
Chapel Hill, North Carolina
H&H Job No. TCH-009

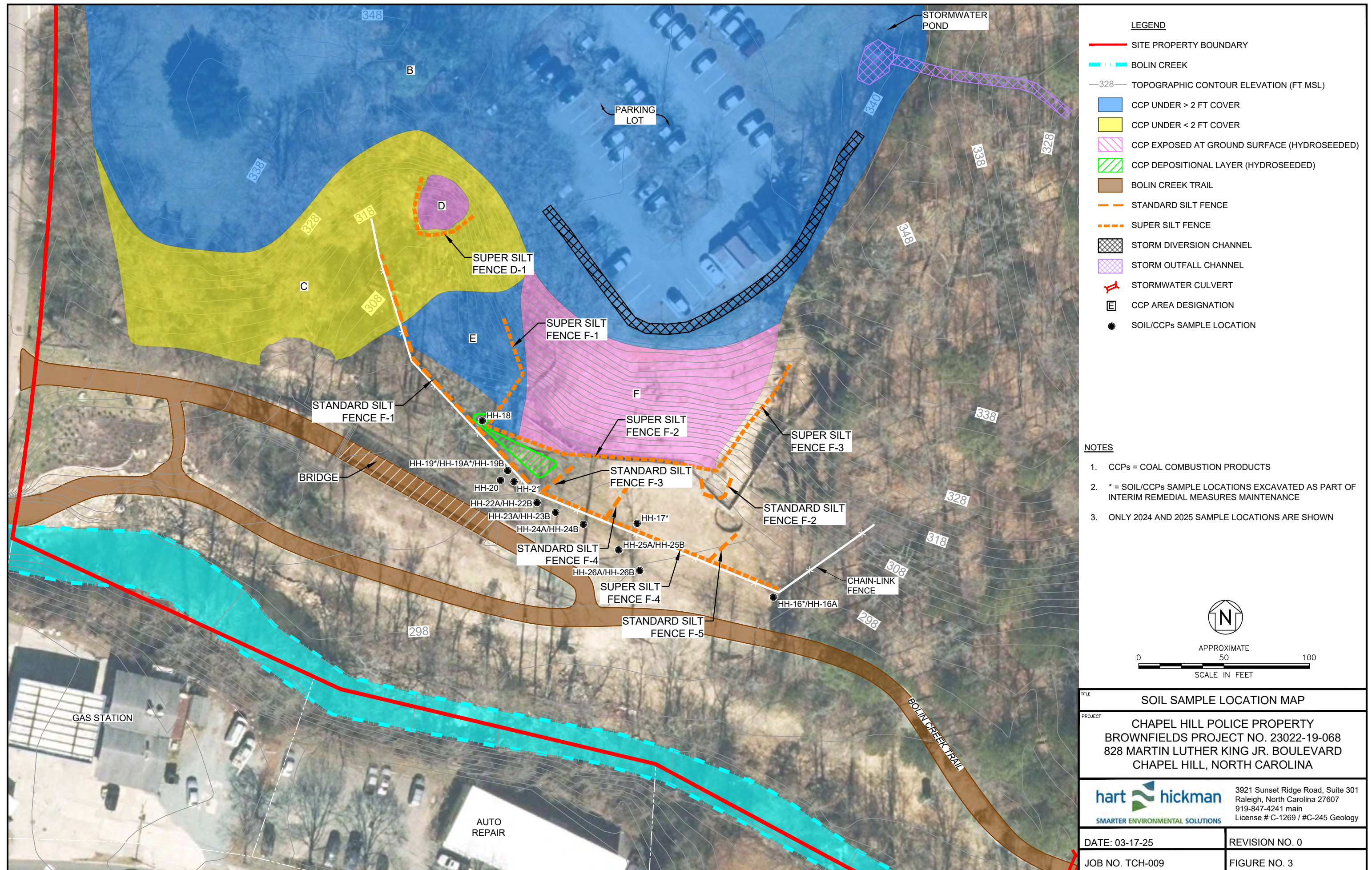
Surface Water Sampling Point ID	Sample Date	aluminum	antimony	arsenic	barium	beryllium	boron	cadmium ⁽³⁾	calcium	hexavalent chromium	trivalent chromium ⁽³⁾	total chromium	cobalt	copper ⁽³⁾	iron	lead ⁽³⁾	magnesium	manganese	mercury	nickel	potassium	selenium	strontium	silver ⁽³⁾	sodium	thallium	vanadium	zinc ⁽³⁾	Hardness	chloride	fluoride	nitrate	sulfate	
Site-Specific BSV ⁽¹⁾		NA	ND	0.44	27	ND	10.8	ND	NA	0.083	0.39	0.53	0.16	1.2	ND	ND	NA	22.2	ND	0.33	NA	0.11	100	ND	NA	ND	0.61	ND	56,300	13,700	ND	150	8,800	
Surface Water Criteria ⁽²⁾		NE	5.6*	10	1,000	6.5	7,300^	0.46	NE	11	46	NE	1.6^	5.5	1,000*	1.3	NE	50*	0.012	25	NE	3.1	14,000^	1.2	NE	2^	NE	72	NE	230,000	1,800	10,000	250,000	
Background Samples																																		
BC-1 (Upstream)	02/05/14	NA	NA	ND	24	NA	NA	ND	NA	ND	ND	ND	NA	NA	NA	ND	NA	NA	ND	NA	NA	ND	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SW-1 (Upstream)	11/03/16	NA	<5.0	<10	27	<2.0	NA	<1.0	NA	<0.74	NA	<5.0	<5.0	<10	<0.2	<5.0	NA	<10	<0.2	<10	NA	<20	100	NA	NA	<10	<5.0	<30	NA	NA	NA	NA	NA	NA
	04/05/19	NA	NA	0.44	23.1	<0.10	NA	<0.080	NA	NA	NA	0.53	0.16	1.2	NA	NA	NA	22.2	<0.20	0.29 J	NA	0.096 J	85.3	NA	NA	NA	NA	NA	54,000	NA	NA	NA	NA	NA
	02/06/25	NA	<1.0	<1.0	21.3	<0.10	10.4 J	<0.10	NA	0.065 H1	<1.0	<1.0	<1.0	0.80 J	NA	NA	NA	10.1	<0.20	<1.0	NA	<2.0	96.5	NA	NA	<0.20	0.60 J	<10.0	56,200	13,700	<100	150	8,800	
SW-2 (Upstream)	11/03/16	NA	<5.0	<10	27	<2.0	NA	<1.0	NA	<0.74	NA	<5.0	<5.0	<10	<0.2	<5.0	NA	11	<0.2	<10	NA	<20	100	NA	NA	<10	<5.0	<30	NA	NA	NA	NA	NA	NA
	04/05/19	NA	NA	0.42	23.2	<0.10	NA	<0.080	NA	NA	NA	0.45 J	0.16	1.1	NA	NA	NA	21.2	<0.20	0.33 J	NA	0.11 J	85.5	NA	NA	NA	NA	NA	53,600	NA	NA	NA	NA	NA
	02/06/25	NA	<1.0	<1.0	21.3	<0.10	10.8 J	<0.10	NA	0.083 H1	0.39	0.47 J	<1.0	0.82 J	NA	NA	NA	10.8	<0.20	<1.0	NA	<2.0	96.7	NA	NA	<0.20	0.61 J	<10.0	56,300	13,700	<100	150	8,800	
Downstream Samples																																		
BC-2 (Bolin Creek at Site)	06/20/13	290	ND	0.90	27	ND	NA	ND	16,000	NA	ND	ND	0.37	2.6	860	0.50	5,300	100	ND	1.2	2,300	ND	NA	ND	7,800	ND	ND	45	NA	NA	NA	NA	NA	NA
	02/05/14	NA	NA	ND	24	NA	NA	ND	NA	ND	ND	NA	NA	NA	NA	ND	NA	NA	ND	NA	NA	ND	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SW-3 (Adjacent)	11/03/16	NA	<5.0	<10	27	<2.0	NA	<1.0	NA	<0.74	NA	<5.0	<5.0	<10	<0.2	<5.0	NA	34	<0.2	<10	NA	<20	100	NA	NA	<10	<5.0	<30	NA	NA	NA	NA	NA	NA
	11/03/16 (DUP)	NA	<5.0	<10	27	<2.0	NA	<1.0	NA	<0.74	NA	<5.0	<5.0	<10	<0.2	<5.0	NA	33	<0.2	<10	NA	<20	110	NA	NA	<10	<5.0	<30	NA	NA	NA	NA	NA	NA
	04/05/19	NA	NA	0.45	25.7	<0.10	NA	<0.080	NA	NA	NA	0.62	0.26	2.8	NA	NA	NA	37.4	<0.20	0.50	NA	0.11 J	88.8	NA	NA	NA	NA	NA	55,900	NA	NA	NA	NA	NA
	02/06/25	NA	<1.0	<1.0	21.1	<0.10	10.6 J	<0.10	NA	<0.025	<1.0	<1.0	<1.0	0.78 J	NA	NA	NA	16.1	<0.20	<1.0	NA	<2.0	96.2	NA	NA	<0.20	0.56 J	<10.0	55,900	14,100	57 J	150	10,700	
SW-4 (Adjacent)	11/03/16	NA	<5.0	<10	27	<2.0	NA	<1.0	NA	<0.74	NA	<5.0	<5.0	<10	<0.2	<5.0	NA	25	<0.2	<10	NA	<20	110	NA	NA	<10	<5.0	<30	NA	NA	NA	NA	NA	NA
	04/05/19	NA	NA	0.42	23.6	<0.10	NA	<0.080	NA	NA	NA	<0.50	0.14	1.0	NA	NA	NA	24.6	<0.20	0.26 J	NA	0.10 J	89.1	NA	NA	NA	NA	NA	57,100	NA	NA	NA	NA	NA
	04/05/19 (DUP)	NA	NA	0.41	23.7	<0.10	NA	<0.080	NA	NA	NA	<0.50	0.14	0.98	NA	NA	NA	24.8	<0.20	0.26 J	NA	0.088 J	87.7	NA	NA	NA	NA	NA	54,300	NA	NA	NA	NA	NA
	02/06/25	NA	<1.0	<1.0	22.4	<0.10	10.7 J	<0.10	NA	0.11 H1	0.31	0.42 J	<1.0	0.82 J	NA	NA	NA	15.7	<0.20	<1.0	NA	<2.0	101	NA	NA	<0.20	0.56 J	<10.0	59,200	14,200	56 J	150	10,000	
SW-5 (Downstream)	11/03/16	NA	<5.0	<10	26	<2.0	NA	<1.0	NA	<0.74U	NA	<5.0	<5.0	<10	<0.2	<5.0	NA	24	<0.2	<10	NA	<20	100	NA	NA	<10	<5.0	<30	NA	NA	NA	NA	NA	NA
	04/04/19	NA	NA	0.40	16.9	<0.10	NA	<0.080	NA	NA	NA	<0.50	0.14	0.88	NA	NA	NA	19.5	<0.20	0.21 J	NA	0.12 J	81.8	NA	NA	NA	NA	NA	53,400	NA	NA	NA	NA	NA
	02/06/25	NA	<1.0	<1.0	20.8	<0.10	10.4 J	<0.10	NA	0.085 H1	0.32	0.43 J	<1.0	0.79 J	NA	NA	NA	16.8	<0.20	<1.0	NA	<2.0	94.9	NA	NA	<0.20	0.60 J	<10.0	57,100	14,200	53 J	150	10,100	
SW-6 (Downstream)	04/04/19	NA	NA	0.40	16.9	<0.10	NA	<0.080	NA	NA	NA	<0.50	0.14	0.84	NA	NA	NA	18.7	<0.20	0.21 J	NA	0.11 J	81.3	NA	NA	NA	NA	NA	53,400	NA	NA	NA	NA	NA
	02/06/25	NA	<1.0	<1.0	20.6	<0.10	10.1 J	<0.10	NA	0.072 H1	0.36	0.43 J	<1.0	0.84 J	NA	NA	NA	17.0	<0.20	<1.0	NA	<2.0	93.1	NA	NA	<0.20	0.56 J	<10.0	56,000	14,200	54 J	140	10,000	
SW-7 (Downstream)	04/04/19	NA	NA	0.42	18.4	<0.10	NA	<0.080	NA	NA	NA	<0.50	0.16	1.1	NA	NA	NA	23.1	<0.20	0.23 J	NA	0.10 J	86.7	NA	NA	NA	NA	NA	54,400	NA	NA	NA	NA	NA
	02/06/25	NA	<1.0	<1.0	24.1	<0.10	10.4 J	<0.10	NA	0.097	<1.0	<1.0	0.25 J	0.76 J	NA	NA	NA	38.2	<0.20	<1.0	NA	<2.0	101	NA	NA	<0.20	0.54 J	<10.0	58,300	14,300	68 J	140	10,200	
	02/06/25 (DUP)	NA	<1.0	<1.0	23.9	<0.10	11.1 J	<0.10	NA	0.064	0.36	0.42 J	0.28 J	0.81 J	NA	NA	NA	42.5	<0.20	0.32 J	NA	<2.0	100	NA	NA	<0.20	0.54 J	<10.0	56,900	14,400	55 J	140	10,400	
SW-21 (Drainage Pathway)	04/05/19	NA	NA	0.40	32.1	<0.10	NA	<0.080	NA	NA	NA	0.73	0.36	3.2	NA	NA	NA	29.5	<0.20	0.62	NA	0.11 J	69.9	NA	NA	NA	NA	NA	31,400	NA	NA	NA	NA	NA
	4/5/2019 (FF)	NA	NA	0.15	18.3	<0.10	NA	<0.080	NA	NA	NA	<0.50	0.094 J	3.1	NA	NA	NA	9.3	<0.20	0.43 J	NA	<0.50	43.5	NA	NA	NA	NA	NA	22,200	NA	NA	NA	NA	NA

Notes:
Concentrations reported in micrograms per liter (µg/L).
1) Site-Specific Background Screening Value (BSV) is the lower of two times the mean of detected concentrations in the background samples and the maximum detected concentration in the background samples.
2) Applicable 15A NCAC 02B Water Quality Standard for Surface Waters (2B Standard) shown for those analytes with an established 2B Standard. Criteria marked with "^" or "*" are:
^ NC In-Stream Target Value for Surface Water (NCISTV) from NC DEQ DWR table dated July 26, 2021. NCISTVs are screening levels only and were not published on DEQ's website at the time of this report because they are under review, but are included herein for reference.
* EPA National Recommended Water Quality Criteria
3) Hardness-dependent freshwater metal. 2B Standard derived using the equations specified in 15A NCAC 02B .0211(11)(e) Table A using a hardness of 56 mg/L (approximate average of the 2019 and 2025 hardness sample data from SW-1 through SW-7).
ND = Not Detected; NA = Not Analyzed; NE = No Criteria Established
FF = field-filtered sample; DUP = field duplicate sample
Analytical Methods
Metals by 6010 or 6020
Mercury by 7470
Hexavalent chromium by 7199
Total Dissolved Solids (TDS) by SM 2540C
Anions by EPA Method 9056A
Total hardness by Standard Method 2340B
Laboratory Qualifiers
J = Detected above method detection limit but below laboratory reporting limit; therefore, result is an estimated concentration
H1 = Analysis conducted outside the EPA method holding time
Other laboratory qualifiers not shown in table (see analytical report).



U.S.G.S. QUADRANGLE MAP
CHAPEL HILL, NORTH CAROLINA 2022
QUADRANGLE
7.5 MINUTE SERIES (TOPOGRAPHIC)

TITLE	
SITE LOCATION MAP	
PROJECT	
CHAPEL HILL POLICE DEPARTMENT BROWNFIELDS PROJECT NO. 23022-19-068 828 MARTIN LUTHER KING JR. BOULEVARD CHAPEL HILL, NORTH CAROLINA	
 <div> 3921 Sunset Ridge Road, Suite 301 Raleigh, North Carolina 27607 919-847-4241 (p) 919-847-4261 (f) License # C-1269 / # C-245 Geology </div>	
DATE: 03-17-25	REVISION NO: 0
JOB NO: TCH-009	FIGURE NO: 1



Appendix A

Boring Logs

NOTES:



Client: Town of Chapel Hill
Project: TCH-009
Address: 828 MLK Jr Drive, Chapel Hill, NC

BORING LOG
Boring No. HH-22
Page: 1 of 1

Drilling Start Date: 02/6/2025
Drilling End Date: 02/6/2025
Drilling Company: NA
Drilling Method: Hand Auger
Drilling Equipment: NA
Driller: NA
Logged By: Chelsea Parra

Boring Depth (ft): 2.0
Boring Diameter (in): 3.25
Sampling Method(s): NA
DTW During Drilling (ft): NA
DTW After Drilling (ft): NA
Ground Surface Elev. (ft): NA
Location (X,Y):

DEPTH (ft)	LITHOLOGY	WATER LEVEL	BORING COMPLETION	COLLECT				SOIL/ROCK VISUAL DESCRIPTION	MEASURE		DEPTH (ft)
				Sample Type	Time	Blow Counts	Recovery (ft)		PID (ppm)	Lab Sample	
0								(0') SILT (ML); trace coarse gravel, soft, moist, dark brown			0
1								(1') As Above: orange brown			1
2								(2') Boring terminated			2
3											3
4											4
5											5

NOTES:

Client: Town of Chapel Hill
 Project: TCH-009
 Address: 828 MLK Jr Drive, Chapel Hill, NC

BORING LOG
 Boring No. HH-23
 Page: 1 of 1

Drilling Start Date: 02/6/2025
 Drilling End Date: 02/6/2025
 Drilling Company: NA
 Drilling Method: Hand Auger
 Drilling Equipment: NA
 Driller: NA
 Logged By: Chelsea Parra

Boring Depth (ft): 2.0
 Boring Diameter (in): 3.25
 Sampling Method(s): NA
 DTW During Drilling (ft): NA
 DTW After Drilling (ft): NA
 Ground Surface Elev. (ft): NA
 Location (X,Y):

DEPTH (ft)	LITHOLOGY	WATER LEVEL	BORING COMPLETION	COLLECT				SOIL/ROCK VISUAL DESCRIPTION	MEASURE		DEPTH (ft)
				Sample Type	Time	Blow Counts	Recovery (ft)		PID (ppm)	Lab Sample	
0								(0') Silty SAND (SM); mostly medium-coarse grained sand, trace clay, poorly graded, very loose, moist, greyish brown			0
1								(1') As Above: orange brown			1
2								(2') Boring terminated			2
3											3
4											4
5											5

NOTES:

Client: Town of Chapel Hill
 Project: TCH-009
 Address: 828 MLK Jr Drive, Chapel Hill, NC

BORING LOG
 Boring No. HH-24
 Page: 1 of 1

Drilling Start Date: 02/6/2025
 Drilling End Date: 02/6/2025
 Drilling Company: NA
 Drilling Method: Hand Auger
 Drilling Equipment: NA
 Driller: NA
 Logged By: Chelsea Parra

Boring Depth (ft): 2.0
 Boring Diameter (in): 3.25
 Sampling Method(s): NA
 DTW During Drilling (ft): NA
 DTW After Drilling (ft): NA
 Ground Surface Elev. (ft): NA
 Location (X,Y):

DEPTH (ft)	LITHOLOGY	WATER LEVEL	BORING COMPLETION	COLLECT				SOIL/ROCK VISUAL DESCRIPTION	MEASURE		DEPTH (ft)
				Sample Type	Time	Blow Counts	Recovery (ft)		PID (ppm)	Lab Sample	
0								(0') Silty SAND with gravel (SM); mostly medium-coarse grained sand, some coarse gravel, poorly graded, loose, moist, greyish brown			0
1								(1') Silty SAND (SM); mostly fine-medium grained sand, trace clay, poorly graded, loose, moist, orange brown			1
2								(2') Boring terminated			2
3											3
4											4
5											5

NOTES:

Client: Town of Chapel Hill
 Project: TCH-009
 Address: 828 MLK Jr Drive, Chapel Hill, NC

BORING LOG
 Boring No. HH-25
 Page: 1 of 1

Drilling Start Date: 02/6/2025
 Drilling End Date: 02/6/2025
 Drilling Company: NA
 Drilling Method: Hand Auger
 Drilling Equipment: NA
 Driller: NA
 Logged By: Chelsea Parra

Boring Depth (ft): 2.0
 Boring Diameter (in): 3.25
 Sampling Method(s): NA
 DTW During Drilling (ft): NA
 DTW After Drilling (ft): NA
 Ground Surface Elev. (ft): NA
 Location (X,Y):

DEPTH (ft)	LITHOLOGY	WATER LEVEL	BORING COMPLETION	COLLECT				SOIL/ROCK VISUAL DESCRIPTION	MEASURE		DEPTH (ft)
				Sample Type	Time	Blow Counts	Recovery (ft)		PID (ppm)	Lab Sample	
0								(0') Silty SAND with gravel (SM); mostly medium-coarse grained sand, some coarse gravel, poorly graded, loose, moist, greyish brown			0
1								(1') Silty SAND (SM); mostly fine-medium grained sand, trace coarse gravel, poorly graded, loose, moist, orange brown			1
2								(2') Boring terminated			2
3											3
4											4
5											5

NOTES:



Client: Town of Chapel Hill
Project: TCH-009
Address: 828 MLK Jr Drive, Chapel Hill, NC

BORING LOG
Boring No. HH-26
Page: 1 of 1

Drilling Start Date: 02/6/2025
Drilling End Date: 02/6/2025
Drilling Company: NA
Drilling Method: Hand Auger
Drilling Equipment: NA
Driller: NA
Logged By: Chelsea Parra

Boring Depth (ft): 2.0
Boring Diameter (in): 3.25
Sampling Method(s): NA
DTW During Drilling (ft): NA
DTW After Drilling (ft): NA
Ground Surface Elev. (ft): NA
Location (X,Y):

DEPTH (ft)	LITHOLOGY	WATER LEVEL	BORING COMPLETION	COLLECT				SOIL/ROCK VISUAL DESCRIPTION	MEASURE		DEPTH (ft)
				Sample Type	Time	Blow Counts	Recovery (ft)		PID (ppm)	Lab Sample	
0								(0') Silty SAND with gravel (SM); mostly medium-coarse grained sand, some coarse gravel, poorly graded, loose, moist, brown			0
1								(1') As Above: Orange brown			1
2								(2') Boring terminated			2
3											3
4											4
5											5

NOTES:

Appendix B

Laboratory Analytical Reports



February 26, 2025

Justin Ballard
Hart & Hickman
3921 Sunset Ridge Rd.
Suite 301
Raleigh, NC 27607

RE: Project: TCH.009-3
Pace Project No.: 92778444

Dear Justin Ballard:

Enclosed are the analytical results for sample(s) received by the laboratory on February 07, 2025. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

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

- Pace National - Mt. Juliet
- Pace Analytical Services - Asheville
- Pace Analytical Services - Charlotte

A revised report is being issued on 2/26/25 to include results for additional metals.

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

Sincerely,

Taylor M Cannon
taylor.cannon@pacelabs.com
704-977-0943
Project Manager

Enclosures



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: TCH.009-3
Pace Project No.: 92778444

Pace Analytical Services National

12065 Lebanon Road, Mt. Juliet, TN 37122
Alabama Certification #: 40660
Alaska Certification #: 17-026
Arizona Certification #: AZ0612
Arkansas Certification #: 88-0469
California Certification #: 2932
Canada Certification #: 1461.01
Colorado Certification #: TN00003
Connecticut Certification #: PH-0197
DOD Certification #: #1461.01
EPA# TN00003
Florida Certification #: E87487
Georgia DW Certification #: 923
Georgia Certification: NELAP
Idaho Certification #: TN00003
Illinois Certification #: 200008
Indiana Certification #: C-TN-01
Iowa Certification #: 364
Kansas Certification #: E-10277
Kentucky UST Certification #: 16
Kentucky Certification #: 90010
Louisiana Certification #: AI30792
Louisiana DW Certification #: LA180010
Maine Certification #: TN0002
Maryland Certification #: 324
Massachusetts Certification #: M-TN003
Michigan Certification #: 9958
Minnesota Certification #: 047-999-395
Mississippi Certification #: TN00003
Missouri Certification #: 340
Montana Certification #: CERT0086
Nebraska Certification #: NE-OS-15-05

Nevada Certification #: TN-03-2002-34
New Hampshire Certification #: 2975
New Jersey Certification #: TN002
New Mexico DW Certification
New York Certification #: 11742
North Carolina Aquatic Toxicity Certification #: 41
North Carolina Drinking Water Certification #: 21704
North Carolina Environmental Certificate #: 375
North Dakota Certification #: R-140
Ohio VAP Certification #: CL0069
Oklahoma Certification #: 9915
Oregon Certification #: TN200002
Pennsylvania Certification #: 68-02979
Rhode Island Certification #: LA000356
South Carolina Certification #: 84004
South Dakota Certification
Tennessee DW/Chem/Micro Certification #: 2006
Texas Mold Certification #: LAB0152
Texas Certification #: T 104704245-17-14
USDA Soil Permit #: P330-15-00234
Utah Certification #: TN00003
Virginia Certification #: VT2006
Vermont Dept. of Health: ID# VT-2006
Virginia Certification #: 460132
Washington Certification #: C847
West Virginia Certification #: 233
Wisconsin Certification #: 998093910
Wyoming UST Certification #: via A2LA 2926.01
A2LA-ISO 17025 Certification #: 1461.01
A2LA-ISO 17025 Certification #: 1461.02
AIHA-LAP/LLC EMLAP Certification #: 100789

Pace Analytical Services Charlotte

South Carolina Laboratory ID: 99006
9800 Kinney Ave. Ste 100, Huntersville, NC 28078
North Carolina Drinking Water Certification #: 37706
North Carolina Field Services Certification #: 5342
North Carolina Wastewater Certification #: 12
South Carolina Laboratory ID: 99006

South Carolina Certification #: 99006001
South Carolina Drinking Water Cert. #: 99006003
Florida/NELAP Certification #: E87627
Kentucky UST Certification #: 84
Louisiana DoH Drinking Water #: LA029
Virginia/VELAP Certification #: 460221

Pace Analytical Services Asheville

2225 Riverside Drive, Asheville, NC 28804
Florida/NELAP Certification #: E87648
North Carolina Drinking Water Certification #: 37712
North Carolina Wastewater Certification #: 40

South Carolina Laboratory ID: 99030
South Carolina Certification #: 99030001
Virginia/VELAP Certification #: 460222

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: TCH.009-3

Pace Project No.: 92778444

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92778444001	HH-22A	Solid	02/06/25 10:00	02/07/25 10:20
92778444002	HH-22B	Solid	02/06/25 10:05	02/07/25 10:20
92778444003	HH-23A	Solid	02/06/25 10:10	02/07/25 10:20
92778444004	HH-23B	Solid	02/06/25 10:15	02/07/25 10:20
92778444005	HH-24A	Solid	02/06/25 10:20	02/07/25 10:20
92778444006	HH-24B	Solid	02/06/25 10:25	02/07/25 10:20
92778444007	HH-25A	Solid	02/06/25 10:30	02/07/25 10:20
92778444008	HH-25B	Solid	02/06/25 10:35	02/07/25 10:20
92778444009	HH-26A	Solid	02/06/25 10:40	02/07/25 10:20
92778444010	HH-26B	Solid	02/06/25 10:45	02/07/25 10:20
92778444011	HH-DUP	Solid	02/06/25 00:00	02/07/25 10:20

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: TCH.009-3
Pace Project No.: 92778444

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92778444001	HH-22A	EPA 7199	VJM	1	PASI-C
		EPA 6010D	DBB1	1	PASI-A
		EPA 6020B	JPD	12	PAN
		EPA 7471B	LAS	1	PAN
		SW-846	MCR1	1	PASI-C
		SM 2540G	CMB	1	PAN
92778444002	HH-22B	EPA 7199	VJM	1	PASI-C
		EPA 6010D	DBB1	1	PASI-A
		EPA 6020B	JPD	12	PAN
		EPA 7471B	LAS	1	PAN
		SW-846	MCR1	1	PASI-C
		SM 2540G	CMB	1	PAN
92778444003	HH-23A	EPA 7199	VJM	1	PASI-C
		EPA 6010D	DBB1	1	PASI-A
		EPA 6020B	JPD	12	PAN
		EPA 7471B	LAS	1	PAN
		SW-846	MCR1	1	PASI-C
		SM 2540G	CMB	1	PAN
92778444004	HH-23B	EPA 7199	VJM	1	PASI-C
		EPA 6010D	DBB1	1	PASI-A
		EPA 6020B	JPD	12	PAN
		EPA 7471B	LAS	1	PAN
		SW-846	MCR1	1	PASI-C
		SM 2540G	CMB	1	PAN
92778444005	HH-24A	EPA 7199	VJM	1	PASI-C
		EPA 6010D	DBB1	1	PASI-A
		EPA 6020B	JPD	12	PAN
		EPA 7471B	LAS	1	PAN
		SW-846	MCR1	1	PASI-C
		SM 2540G	CMB	1	PAN
92778444006	HH-24B	EPA 7199	VJM	1	PASI-C
		EPA 6010D	DBB1	1	PASI-A
		EPA 6020B	JPD	12	PAN
		EPA 7471B	LAS	1	PAN
		SW-846	MCR1	1	PASI-C
		SM 2540G	CMB	1	PAN
92778444007	HH-25A	EPA 7199	VJM	1	PASI-C

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SAMPLE ANALYTE COUNT

Project: TCH.009-3
Pace Project No.: 92778444

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92778444008	HH-25B	EPA 6010D	DBB1	1	PASI-A
		EPA 6020B	JPD	12	PAN
		EPA 7471B	LAS	1	PAN
		SW-846	MCR1	1	PASI-C
		SM 2540G	CMB	1	PAN
		EPA 7199	VJM	1	PASI-C
		EPA 6010D	DBB1	1	PASI-A
		EPA 6020B	JPD	12	PAN
		EPA 7471B	LAS	1	PAN
		SW-846	MCR1	1	PASI-C
92778444009	HH-26A	SM 2540G	CMB	1	PAN
		EPA 7199	VJM	1	PASI-C
		EPA 6010D	DBB1	1	PASI-A
		EPA 6020B	JPD	12	PAN
		EPA 7471B	LAS	1	PAN
		SW-846	MCR1	1	PASI-C
92778444010	HH-26B	SM 2540G	CMB	1	PAN
		EPA 7199	VJM	1	PASI-C
		EPA 6010D	DBB1	1	PASI-A
		EPA 6020B	JPD	12	PAN
		EPA 7471B	LAS	1	PAN
		SW-846	MCR1	1	PASI-C
92778444011	HH-DUP	SM 2540G	CMB	1	PAN
		EPA 7199	VJM	1	PASI-C
		EPA 6010D	DBB1	1	PASI-A
		EPA 6020B	JPD	12	PAN
		EPA 7471B	LAS	1	PAN
		SW-846	MCR1	1	PASI-C
		SM 2540G	CMB	1	PAN

PAN = Pace National - Mt. Juliet
PASI-A = Pace Analytical Services - Asheville
PASI-C = Pace Analytical Services - Charlotte

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: TCH.009-3
Pace Project No.: 92778444

Sample: HH-22A Lab ID: 92778444001 Collected: 02/06/25 10:00 Received: 02/07/25 10:20 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
7199 Chromium, Hexavalent Analytical Method: EPA 7199 Preparation Method: EPA 7199 Pace Analytical Services - Charlotte									
Chromium, Hexavalent	ND	mg/kg	1.4	0.0014	1	02/10/25 11:41	02/12/25 04:47	18540-29-9	M1,R1
6010 MET ICP Analytical Method: EPA 6010D Preparation Method: EPA 3050B Pace Analytical Services - Asheville									
Strontium	76.2	mg/kg	0.61	0.095	1	02/13/25 14:13	02/17/25 21:51	7440-24-6	
Metals (ICPMS) 6020B Analytical Method: EPA 6020B Preparation Method: 3050B Pace National - Mt. Juliet									
Arsenic	12.0	mg/kg	1.36	0.136	5	02/12/25 16:30	02/13/25 00:11	7440-38-2	
Barium	361	mg/kg	6.82	0.415	10	02/12/25 16:30	02/13/25 11:32	7440-39-3	
Beryllium	1.57J	mg/kg	3.41	0.188	5	02/12/25 16:30	02/13/25 00:11	7440-41-7	J
Cadmium	0.198J	mg/kg	1.36	0.117	5	02/12/25 16:30	02/13/25 00:11	7440-43-9	J
Chromium	29.0	mg/kg	6.82	0.404	5	02/12/25 16:30	02/13/25 00:11	7440-47-3	
Cobalt	17.1	mg/kg	1.36	0.0630	5	02/12/25 16:30	02/13/25 00:11	7440-48-4	
Copper	42.8	mg/kg	6.82	0.180	5	02/12/25 16:30	02/13/25 00:11	7440-50-8	
Lead	37.3	mg/kg	2.73	0.135	5	02/12/25 16:30	02/13/25 00:11	7439-92-1	
Manganese	872	mg/kg	3.41	0.366	5	02/12/25 16:30	02/13/25 00:11	7439-96-5	
Nickel	17.6	mg/kg	3.41	0.269	5	02/12/25 16:30	02/13/25 00:11	7440-02-0	
Selenium	1.58J	mg/kg	3.41	0.246	5	02/12/25 16:30	02/13/25 00:11	7782-49-2	J
Silver	ND	mg/kg	0.682	0.118	5	02/12/25 16:30	02/13/25 00:11	7440-22-4	
Mercury 7471B Analytical Method: EPA 7471B Preparation Method: 7471A Pace National - Mt. Juliet									
Mercury	0.102	mg/kg	0.0546	0.0281	1	02/13/25 10:41	02/14/25 12:02	7439-97-6	
Percent Moisture Analytical Method: SW-846 Pace Analytical Services - Charlotte									
Percent Moisture	23.1	%	0.10	0.10	1		02/07/25 14:15		N2
Total Solids 2540 G-2011 Analytical Method: SM 2540G Preparation Method: SM 2540 G Pace National - Mt. Juliet									
Total Solids	73.3	%			1	02/12/25 08:48	02/12/25 08:55		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: TCH.009-3
Pace Project No.: 92778444

Sample: HH-22B Lab ID: 92778444002 Collected: 02/06/25 10:05 Received: 02/07/25 10:20 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
7199 Chromium, Hexavalent Analytical Method: EPA 7199 Preparation Method: EPA 7199 Pace Analytical Services - Charlotte									
Chromium, Hexavalent	0.51J	mg/kg	1.2	0.0012	1	02/10/25 11:41	02/12/25 05:40	18540-29-9	B
6010 MET ICP Analytical Method: EPA 6010D Preparation Method: EPA 3050B Pace Analytical Services - Asheville									
Strontium	32.9	mg/kg	0.34	0.053	1	02/13/25 14:13	02/17/25 22:12	7440-24-6	
Metals (ICPMS) 6020B Analytical Method: EPA 6020B Preparation Method: 3050B Pace National - Mt. Juliet									
Arsenic	1.53	mg/kg	1.19	0.119	5	02/12/25 16:30	02/13/25 00:14	7440-38-2	
Barium	96.0	mg/kg	2.98	0.181	5	02/12/25 16:30	02/13/25 00:14	7440-39-3	
Beryllium	0.472J	mg/kg	2.98	0.164	5	02/12/25 16:30	02/13/25 00:14	7440-41-7	J
Cadmium	ND	mg/kg	1.19	0.102	5	02/12/25 16:30	02/13/25 00:14	7440-43-9	
Chromium	20.8	mg/kg	5.96	0.353	5	02/12/25 16:30	02/13/25 00:14	7440-47-3	
Cobalt	15.6	mg/kg	1.19	0.0551	5	02/12/25 16:30	02/13/25 00:14	7440-48-4	
Copper	20.9	mg/kg	5.96	0.157	5	02/12/25 16:30	02/13/25 00:14	7440-50-8	
Lead	10.0	mg/kg	2.38	0.118	5	02/12/25 16:30	02/13/25 00:14	7439-92-1	
Manganese	692	mg/kg	2.98	0.319	5	02/12/25 16:30	02/13/25 00:14	7439-96-5	
Nickel	7.87	mg/kg	2.98	0.235	5	02/12/25 16:30	02/13/25 00:14	7440-02-0	
Selenium	0.402J	mg/kg	2.98	0.215	5	02/12/25 16:30	02/13/25 00:14	7782-49-2	J
Silver	ND	mg/kg	0.596	0.103	5	02/12/25 16:30	02/13/25 00:14	7440-22-4	
Mercury 7471B Analytical Method: EPA 7471B Preparation Method: 7471A Pace National - Mt. Juliet									
Mercury	0.0256J	mg/kg	0.0477	0.0246	1	02/13/25 10:41	02/14/25 12:05	7439-97-6	J
Percent Moisture Analytical Method: SW-846 Pace Analytical Services - Charlotte									
Percent Moisture	16.4	%	0.10	0.10	1		02/07/25 14:15		N2
Total Solids 2540 G-2011 Analytical Method: SM 2540G Preparation Method: SM 2540 G Pace National - Mt. Juliet									
Total Solids	83.9	%			1	02/12/25 08:48	02/12/25 08:55		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: TCH.009-3
Pace Project No.: 92778444

Sample: HH-23A Lab ID: 92778444003 Collected: 02/06/25 10:10 Received: 02/07/25 10:20 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
7199 Chromium, Hexavalent Analytical Method: EPA 7199 Preparation Method: EPA 7199 Pace Analytical Services - Charlotte									
Chromium, Hexavalent	ND	mg/kg	1.2	0.0012	1	02/10/25 11:41	02/12/25 06:15	18540-29-9	
6010 MET ICP Analytical Method: EPA 6010D Preparation Method: EPA 3050B Pace Analytical Services - Asheville									
Strontium	10.3	mg/kg	0.40	0.062	1	02/13/25 14:13	02/17/25 22:15	7440-24-6	
Metals (ICPMS) 6020B Analytical Method: EPA 6020B Preparation Method: 3050B Pace National - Mt. Juliet									
Arsenic	1.38	mg/kg	1.19	0.119	5	02/12/25 16:30	02/13/25 11:35	7440-38-2	
Barium	73.1	mg/kg	2.97	0.181	5	02/12/25 16:30	02/13/25 11:35	7440-39-3	
Beryllium	0.601J	mg/kg	2.97	0.164	5	02/12/25 16:30	02/13/25 11:35	7440-41-7	J
Cadmium	ND	mg/kg	1.19	0.102	5	02/12/25 16:30	02/13/25 11:35	7440-43-9	
Chromium	14.4	mg/kg	5.94	0.352	5	02/12/25 16:30	02/13/25 11:35	7440-47-3	
Cobalt	5.16	mg/kg	1.19	0.0549	5	02/12/25 16:30	02/13/25 11:35	7440-48-4	
Copper	16.3	mg/kg	5.94	0.157	5	02/12/25 16:30	02/13/25 11:35	7440-50-8	
Lead	9.71	mg/kg	2.38	0.118	5	02/12/25 16:30	02/13/25 11:35	7439-92-1	
Manganese	269	mg/kg	2.97	0.318	5	02/12/25 16:30	02/13/25 11:35	7439-96-5	
Nickel	7.65	mg/kg	2.97	0.234	5	02/12/25 16:30	02/13/25 11:35	7440-02-0	
Selenium	0.389J	mg/kg	2.97	0.214	5	02/12/25 16:30	02/13/25 11:35	7782-49-2	J
Silver	ND	mg/kg	0.594	0.103	5	02/12/25 16:30	02/13/25 11:35	7440-22-4	
Mercury 7471B Analytical Method: EPA 7471B Preparation Method: 7471A Pace National - Mt. Juliet									
Mercury	ND	mg/kg	0.0475	0.0245	1	02/13/25 10:41	02/14/25 12:08	7439-97-6	
Percent Moisture Analytical Method: SW-846 Pace Analytical Services - Charlotte									
Percent Moisture	14.1	%	0.10	0.10	1		02/07/25 14:15		N2
Total Solids 2540 G-2011 Analytical Method: SM 2540G Preparation Method: SM 2540 G Pace National - Mt. Juliet									
Total Solids	84.2	%			1	02/12/25 08:48	02/12/25 08:55		

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ANALYTICAL RESULTS

Project: TCH.009-3
Pace Project No.: 92778444

Sample: HH-23B Lab ID: 92778444004 Collected: 02/06/25 10:15 Received: 02/07/25 10:20 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
7199 Chromium, Hexavalent Analytical Method: EPA 7199 Preparation Method: EPA 7199 Pace Analytical Services - Charlotte									
Chromium, Hexavalent	0.33J	mg/kg	1.2	0.0012	1	02/10/25 11:41	02/12/25 06:51	18540-29-9	B
6010 MET ICP Analytical Method: EPA 6010D Preparation Method: EPA 3050B Pace Analytical Services - Asheville									
Strontium	31.8	mg/kg	0.46	0.071	1	02/13/25 14:13	02/17/25 22:19	7440-24-6	
Metals (ICPMS) 6020B Analytical Method: EPA 6020B Preparation Method: 3050B Pace National - Mt. Juliet									
Arsenic	2.04	mg/kg	1.19	0.119	5	02/12/25 16:30	02/12/25 23:51	7440-38-2	PH
Barium	75.3	mg/kg	2.98	0.181	5	02/12/25 16:30	02/12/25 23:51	7440-39-3	MH,R1
Beryllium	0.396J	mg/kg	2.98	0.164	5	02/12/25 16:30	02/12/25 23:51	7440-41-7	J
Cadmium	ND	mg/kg	1.19	0.102	5	02/12/25 16:30	02/12/25 23:51	7440-43-9	
Chromium	20.8	mg/kg	5.96	0.353	5	02/12/25 16:30	02/12/25 23:51	7440-47-3	
Cobalt	17.4	mg/kg	1.19	0.0550	5	02/12/25 16:30	02/12/25 23:51	7440-48-4	MH,R1
Copper	19.8	mg/kg	5.96	0.157	5	02/12/25 16:30	02/12/25 23:51	7440-50-8	
Lead	7.63	mg/kg	2.38	0.118	5	02/12/25 16:30	02/12/25 23:51	7439-92-1	
Manganese	940	mg/kg	2.98	0.319	5	02/12/25 16:30	02/12/25 23:51	7439-96-5	P6,R1
Nickel	7.65	mg/kg	2.98	0.235	5	02/12/25 16:30	02/12/25 23:51	7440-02-0	
Selenium	0.841J	mg/kg	2.98	0.214	5	02/12/25 16:30	02/12/25 23:51	7782-49-2	J
Silver	ND	mg/kg	0.596	0.103	5	02/12/25 16:30	02/12/25 23:51	7440-22-4	
Mercury 7471B Analytical Method: EPA 7471B Preparation Method: 7471A Pace National - Mt. Juliet									
Mercury	0.0274J	mg/kg	0.0476	0.0245	1	02/11/25 23:39	02/12/25 15:45	7439-97-6	J
Percent Moisture Analytical Method: SW-846 Pace Analytical Services - Charlotte									
Percent Moisture	15.5	%	0.10	0.10	1		02/07/25 14:15		N2
Total Solids 2540 G-2011 Analytical Method: SM 2540G Preparation Method: SM 2540 G Pace National - Mt. Juliet									
Total Solids	83.9	%			1	02/12/25 08:48	02/12/25 08:55		

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ANALYTICAL RESULTS

Project: TCH.009-3
Pace Project No.: 92778444

Sample: HH-24A Lab ID: 92778444005 Collected: 02/06/25 10:20 Received: 02/07/25 10:20 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
7199 Chromium, Hexavalent Analytical Method: EPA 7199 Preparation Method: EPA 7199 Pace Analytical Services - Charlotte									
Chromium, Hexavalent	ND	mg/kg	1.1	0.0011	1	02/10/25 11:41	02/12/25 15:49	18540-29-9	
6010 MET ICP Analytical Method: EPA 6010D Preparation Method: EPA 3050B Pace Analytical Services - Asheville									
Strontium	11.4	mg/kg	0.49	0.076	1	02/13/25 14:13	02/17/25 22:23	7440-24-6	
Metals (ICPMS) 6020B Analytical Method: EPA 6020B Preparation Method: 3050B Pace National - Mt. Juliet									
Arsenic	0.592J	mg/kg	1.20	0.120	5	02/12/25 16:30	02/13/25 00:31	7440-38-2	J
Barium	48.4	mg/kg	2.99	0.182	5	02/12/25 16:30	02/13/25 00:31	7440-39-3	
Beryllium	0.535J	mg/kg	2.99	0.165	5	02/12/25 16:30	02/13/25 00:31	7440-41-7	J
Cadmium	ND	mg/kg	1.20	0.102	5	02/12/25 16:30	02/13/25 00:31	7440-43-9	
Chromium	7.45	mg/kg	5.98	0.354	5	02/12/25 16:30	02/13/25 00:31	7440-47-3	
Cobalt	3.81	mg/kg	1.20	0.0553	5	02/12/25 16:30	02/13/25 00:31	7440-48-4	
Copper	15.9	mg/kg	5.98	0.158	5	02/12/25 16:30	02/13/25 00:31	7440-50-8	
Lead	3.19	mg/kg	2.39	0.118	5	02/12/25 16:30	02/13/25 00:31	7439-92-1	
Manganese	251	mg/kg	2.99	0.321	5	02/12/25 16:30	02/13/25 00:31	7439-96-5	
Nickel	4.68	mg/kg	2.99	0.236	5	02/12/25 16:30	02/13/25 00:31	7440-02-0	
Selenium	ND	mg/kg	2.99	0.215	5	02/12/25 16:30	02/13/25 00:31	7782-49-2	
Silver	ND	mg/kg	0.598	0.103	5	02/12/25 16:30	02/13/25 00:31	7440-22-4	
Mercury 7471B Analytical Method: EPA 7471B Preparation Method: 7471A Pace National - Mt. Juliet									
Mercury	ND	mg/kg	0.0478	0.0246	1	02/11/25 23:39	02/12/25 15:47	7439-97-6	
Percent Moisture Analytical Method: SW-846 Pace Analytical Services - Charlotte									
Percent Moisture	14.5	%	0.10	0.10	1		02/07/25 14:16		N2
Total Solids 2540 G-2011 Analytical Method: SM 2540G Preparation Method: SM 2540 G Pace National - Mt. Juliet									
Total Solids	83.6	%			1	02/12/25 08:48	02/12/25 08:55		

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ANALYTICAL RESULTS

Project: TCH.009-3
Pace Project No.: 92778444

Sample: HH-24B Lab ID: 92778444006 Collected: 02/06/25 10:25 Received: 02/07/25 10:20 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
7199 Chromium, Hexavalent Analytical Method: EPA 7199 Preparation Method: EPA 7199 Pace Analytical Services - Charlotte									
Chromium, Hexavalent	0.61J	mg/kg	1.2	0.0012	1	02/10/25 11:41	02/12/25 16:07	18540-29-9	B
6010 MET ICP Analytical Method: EPA 6010D Preparation Method: EPA 3050B Pace Analytical Services - Asheville									
Strontium	62.9	mg/kg	0.52	0.081	1	02/13/25 14:13	02/17/25 22:26	7440-24-6	
Metals (ICPMS) 6020B Analytical Method: EPA 6020B Preparation Method: 3050B Pace National - Mt. Juliet									
Arsenic	1.68	mg/kg	1.28	0.128	5	02/12/25 16:30	02/13/25 00:35	7440-38-2	
Barium	72.8	mg/kg	3.19	0.194	5	02/12/25 16:30	02/13/25 00:35	7440-39-3	
Beryllium	0.408J	mg/kg	3.19	0.176	5	02/12/25 16:30	02/13/25 00:35	7440-41-7	J
Cadmium	0.287J	mg/kg	1.28	0.109	5	02/12/25 16:30	02/13/25 00:35	7440-43-9	J
Chromium	47.3	mg/kg	6.38	0.378	5	02/12/25 16:30	02/13/25 00:35	7440-47-3	
Cobalt	28.7	mg/kg	1.28	0.0590	5	02/12/25 16:30	02/13/25 00:35	7440-48-4	
Copper	92.7	mg/kg	6.38	0.168	5	02/12/25 16:30	02/13/25 00:35	7440-50-8	
Lead	18.1	mg/kg	2.55	0.126	5	02/12/25 16:30	02/13/25 00:35	7439-92-1	
Manganese	1150	mg/kg	3.19	0.342	5	02/12/25 16:30	02/13/25 00:35	7439-96-5	
Nickel	22.7	mg/kg	3.19	0.251	5	02/12/25 16:30	02/13/25 00:35	7440-02-0	
Selenium	0.545J	mg/kg	3.19	0.230	5	02/12/25 16:30	02/13/25 00:35	7782-49-2	J
Silver	ND	mg/kg	0.638	0.110	5	02/12/25 16:30	02/13/25 00:35	7440-22-4	
Mercury 7471B Analytical Method: EPA 7471B Preparation Method: 7471A Pace National - Mt. Juliet									
Mercury	ND	mg/kg	0.0510	0.0263	1	02/11/25 23:39	02/12/25 15:50	7439-97-6	
Percent Moisture Analytical Method: SW-846 Pace Analytical Services - Charlotte									
Percent Moisture	17.3	%	0.10	0.10	1		02/07/25 14:16		N2
Total Solids 2540 G-2011 Analytical Method: SM 2540G Preparation Method: SM 2540 G Pace National - Mt. Juliet									
Total Solids	78.4	%			1	02/12/25 08:09	02/12/25 08:15		

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ANALYTICAL RESULTS

Project: TCH.009-3
Pace Project No.: 92778444

Sample: HH-25A Lab ID: 92778444007 Collected: 02/06/25 10:30 Received: 02/07/25 10:20 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
7199 Chromium, Hexavalent Analytical Method: EPA 7199 Preparation Method: EPA 7199 Pace Analytical Services - Charlotte									
Chromium, Hexavalent	0.022J	mg/kg	1.1	0.0011	1	02/10/25 11:41	02/12/25 16:25	18540-29-9	B
6010 MET ICP Analytical Method: EPA 6010D Preparation Method: EPA 3050B Pace Analytical Services - Asheville									
Strontium	17.2	mg/kg	0.41	0.063	1	02/13/25 14:13	02/17/25 22:30	7440-24-6	
Metals (ICPMS) 6020B Analytical Method: EPA 6020B Preparation Method: 3050B Pace National - Mt. Juliet									
Arsenic	0.524J	mg/kg	1.18	0.118	5	02/12/25 08:18	02/12/25 17:37	7440-38-2	J
Barium	47.3	mg/kg	2.94	0.179	5	02/12/25 08:18	02/12/25 17:37	7440-39-3	
Beryllium	0.548J	mg/kg	2.94	0.162	5	02/12/25 08:18	02/12/25 17:37	7440-41-7	J
Cadmium	ND	mg/kg	1.18	0.101	5	02/12/25 08:18	02/12/25 17:37	7440-43-9	
Chromium	6.28	mg/kg	5.88	0.348	5	02/12/25 08:18	02/12/25 17:37	7440-47-3	
Cobalt	4.32	mg/kg	1.18	0.0543	5	02/12/25 08:18	02/12/25 17:37	7440-48-4	
Copper	21.5	mg/kg	5.88	0.155	5	02/12/25 08:18	02/12/25 17:37	7440-50-8	
Lead	2.92	mg/kg	2.35	0.116	5	02/12/25 08:18	02/12/25 17:37	7439-92-1	
Manganese	289	mg/kg	2.94	0.315	5	02/12/25 08:18	02/12/25 17:37	7439-96-5	
Nickel	3.83	mg/kg	2.94	0.232	5	02/12/25 08:18	02/12/25 17:37	7440-02-0	B
Selenium	0.258J	mg/kg	2.94	0.212	5	02/12/25 08:18	02/12/25 17:37	7782-49-2	J
Silver	ND	mg/kg	0.588	0.102	5	02/12/25 08:18	02/12/25 17:37	7440-22-4	
Mercury 7471B Analytical Method: EPA 7471B Preparation Method: 7471A Pace National - Mt. Juliet									
Mercury	ND	mg/kg	0.0471	0.0242	1	02/11/25 23:39	02/12/25 15:57	7439-97-6	
Percent Moisture Analytical Method: SW-846 Pace Analytical Services - Charlotte									
Percent Moisture	9.8	%	0.10	0.10	1		02/07/25 14:16		N2
Total Solids 2540 G-2011 Analytical Method: SM 2540G Preparation Method: SM 2540 G Pace National - Mt. Juliet									
Total Solids	85.0	%			1	02/12/25 08:09	02/12/25 08:15		

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ANALYTICAL RESULTS

Project: TCH.009-3
Pace Project No.: 92778444

Sample: HH-25B Lab ID: 92778444008 Collected: 02/06/25 10:35 Received: 02/07/25 10:20 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
7199 Chromium, Hexavalent Analytical Method: EPA 7199 Preparation Method: EPA 7199 Pace Analytical Services - Charlotte									
Chromium, Hexavalent	0.20J	mg/kg	1.2	0.0012	1	02/10/25 11:41	02/12/25 16:42	18540-29-9	B
6010 MET ICP Analytical Method: EPA 6010D Preparation Method: EPA 3050B Pace Analytical Services - Asheville									
Strontium	27.2	mg/kg	0.44	0.067	1	02/13/25 14:13	02/17/25 22:33	7440-24-6	
Metals (ICPMS) 6020B Analytical Method: EPA 6020B Preparation Method: 3050B Pace National - Mt. Juliet									
Arsenic	1.91	mg/kg	1.28	0.128	5	02/12/25 08:18	02/12/25 17:40	7440-38-2	
Barium	75.5	mg/kg	3.19	0.194	5	02/12/25 08:18	02/12/25 17:40	7440-39-3	
Beryllium	0.467J	mg/kg	3.19	0.176	5	02/12/25 08:18	02/12/25 17:40	7440-41-7	J
Cadmium	ND	mg/kg	1.28	0.109	5	02/12/25 08:18	02/12/25 17:40	7440-43-9	
Chromium	33.1	mg/kg	6.38	0.378	5	02/12/25 08:18	02/12/25 17:40	7440-47-3	
Cobalt	25.6	mg/kg	1.28	0.0589	5	02/12/25 08:18	02/12/25 17:40	7440-48-4	
Copper	38.2	mg/kg	6.38	0.168	5	02/12/25 08:18	02/12/25 17:40	7440-50-8	
Lead	7.68	mg/kg	2.55	0.126	5	02/12/25 08:18	02/12/25 17:40	7439-92-1	
Manganese	931	mg/kg	3.19	0.342	5	02/12/25 08:18	02/12/25 17:40	7439-96-5	E
Nickel	11.9	mg/kg	3.19	0.251	5	02/12/25 08:18	02/12/25 17:40	7440-02-0	
Selenium	1.01J	mg/kg	3.19	0.230	5	02/12/25 08:18	02/12/25 17:40	7782-49-2	J
Silver	ND	mg/kg	0.638	0.110	5	02/12/25 08:18	02/12/25 17:40	7440-22-4	
Mercury 7471B Analytical Method: EPA 7471B Preparation Method: 7471A Pace National - Mt. Juliet									
Mercury	ND	mg/kg	0.0510	0.0263	1	02/11/25 23:39	02/12/25 16:00	7439-97-6	
Percent Moisture Analytical Method: SW-846 Pace Analytical Services - Charlotte									
Percent Moisture	14.4	%	0.10	0.10	1		02/07/25 14:16		N2
Total Solids 2540 G-2011 Analytical Method: SM 2540G Preparation Method: SM 2540 G Pace National - Mt. Juliet									
Total Solids	78.4	%			1	02/12/25 08:09	02/12/25 08:15		

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ANALYTICAL RESULTS

Project: TCH.009-3
Pace Project No.: 92778444

Sample: HH-26A Lab ID: 92778444009 Collected: 02/06/25 10:40 Received: 02/07/25 10:20 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
7199 Chromium, Hexavalent Analytical Method: EPA 7199 Preparation Method: EPA 7199 Pace Analytical Services - Charlotte									
Chromium, Hexavalent	ND	mg/kg	1.1	0.0011	1	02/10/25 11:41	02/12/25 17:00	18540-29-9	
6010 MET ICP Analytical Method: EPA 6010D Preparation Method: EPA 3050B Pace Analytical Services - Asheville									
Strontium	8.2	mg/kg	0.33	0.051	1	02/13/25 14:13	02/17/25 22:37	7440-24-6	
Metals (ICPMS) 6020B Analytical Method: EPA 6020B Preparation Method: 3050B Pace National - Mt. Juliet									
Arsenic	0.648J	mg/kg	1.19	0.119	5	02/12/25 08:18	02/12/25 17:44	7440-38-2	J
Barium	53.8	mg/kg	2.96	0.180	5	02/12/25 08:18	02/12/25 17:44	7440-39-3	
Beryllium	0.510J	mg/kg	2.96	0.164	5	02/12/25 08:18	02/12/25 17:44	7440-41-7	J
Cadmium	ND	mg/kg	1.19	0.101	5	02/12/25 08:18	02/12/25 17:44	7440-43-9	
Chromium	9.71	mg/kg	5.93	0.351	5	02/12/25 08:18	02/12/25 17:44	7440-47-3	
Cobalt	5.09	mg/kg	1.19	0.0548	5	02/12/25 08:18	02/12/25 17:44	7440-48-4	
Copper	29.1	mg/kg	5.93	0.156	5	02/12/25 08:18	02/12/25 17:44	7440-50-8	
Lead	3.45	mg/kg	2.37	0.117	5	02/12/25 08:18	02/12/25 17:44	7439-92-1	
Manganese	311	mg/kg	2.96	0.318	5	02/12/25 08:18	02/12/25 17:44	7439-96-5	
Nickel	6.14	mg/kg	2.96	0.233	5	02/12/25 08:18	02/12/25 17:44	7440-02-0	B
Selenium	0.258J	mg/kg	2.96	0.213	5	02/12/25 08:18	02/12/25 17:44	7782-49-2	J
Silver	ND	mg/kg	0.593	0.103	5	02/12/25 08:18	02/12/25 17:44	7440-22-4	
Mercury 7471B Analytical Method: EPA 7471B Preparation Method: 7471A Pace National - Mt. Juliet									
Mercury	ND	mg/kg	0.0474	0.0244	1	02/11/25 23:39	02/12/25 16:03	7439-97-6	
Percent Moisture Analytical Method: SW-846 Pace Analytical Services - Charlotte									
Percent Moisture	8.7	%	0.10	0.10	1		02/07/25 14:16		N2
Total Solids 2540 G-2011 Analytical Method: SM 2540G Preparation Method: SM 2540 G Pace National - Mt. Juliet									
Total Solids	84.4	%			1	02/12/25 08:09	02/12/25 08:15		

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ANALYTICAL RESULTS

Project: TCH.009-3
Pace Project No.: 92778444

Sample: HH-26B Lab ID: 92778444010 Collected: 02/06/25 10:45 Received: 02/07/25 10:20 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
7199 Chromium, Hexavalent Analytical Method: EPA 7199 Preparation Method: EPA 7199 Pace Analytical Services - Charlotte									
Chromium, Hexavalent	0.18J	mg/kg	1.1	0.0011	1	02/10/25 11:41	02/12/25 17:18	18540-29-9	B
6010 MET ICP Analytical Method: EPA 6010D Preparation Method: EPA 3050B Pace Analytical Services - Asheville									
Strontium	32.1	mg/kg	0.49	0.075	1	02/13/25 14:13	02/17/25 22:40	7440-24-6	
Metals (ICPMS) 6020B Analytical Method: EPA 6020B Preparation Method: 3050B Pace National - Mt. Juliet									
Arsenic	2.12	mg/kg	1.24	0.124	5	02/12/25 08:18	02/12/25 17:54	7440-38-2	
Barium	53.0	mg/kg	3.09	0.188	5	02/12/25 08:18	02/12/25 17:54	7440-39-3	
Beryllium	0.414J	mg/kg	3.09	0.171	5	02/12/25 08:18	02/12/25 17:54	7440-41-7	J
Cadmium	ND	mg/kg	1.24	0.106	5	02/12/25 08:18	02/12/25 17:54	7440-43-9	
Chromium	52.2	mg/kg	6.19	0.366	5	02/12/25 08:18	02/12/25 17:54	7440-47-3	
Cobalt	15.4	mg/kg	1.24	0.0572	5	02/12/25 08:18	02/12/25 17:54	7440-48-4	
Copper	22.9	mg/kg	6.19	0.163	5	02/12/25 08:18	02/12/25 17:54	7440-50-8	
Lead	4.48	mg/kg	2.47	0.122	5	02/12/25 08:18	02/12/25 17:54	7439-92-1	
Manganese	674	mg/kg	3.09	0.332	5	02/12/25 08:18	02/12/25 17:54	7439-96-5	E
Nickel	8.00	mg/kg	3.09	0.244	5	02/12/25 08:18	02/12/25 17:54	7440-02-0	
Selenium	0.493J	mg/kg	3.09	0.223	5	02/12/25 08:18	02/12/25 17:54	7782-49-2	J
Silver	ND	mg/kg	0.619	0.107	5	02/12/25 08:18	02/12/25 17:54	7440-22-4	
Mercury 7471B Analytical Method: EPA 7471B Preparation Method: 7471A Pace National - Mt. Juliet									
Mercury	ND	mg/kg	0.0495	0.0255	1	02/11/25 23:39	02/12/25 16:05	7439-97-6	
Percent Moisture Analytical Method: SW-846 Pace Analytical Services - Charlotte									
Percent Moisture	15.1	%	0.10	0.10	1		02/07/25 14:17		N2
Total Solids 2540 G-2011 Analytical Method: SM 2540G Preparation Method: SM 2540 G Pace National - Mt. Juliet									
Total Solids	80.8	%			1	02/12/25 08:09	02/12/25 08:15		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: TCH.009-3
Pace Project No.: 92778444

Sample: HH-DUP Lab ID: 92778444011 Collected: 02/06/25 00:00 Received: 02/07/25 10:20 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
7199 Chromium, Hexavalent Analytical Method: EPA 7199 Preparation Method: EPA 7199 Pace Analytical Services - Charlotte									
Chromium, Hexavalent	0.016J	mg/kg	1.1	0.0011	1	02/10/25 11:41	02/12/25 17:36	18540-29-9	B
6010 MET ICP Analytical Method: EPA 6010D Preparation Method: EPA 3050B Pace Analytical Services - Asheville									
Strontium	11.4	mg/kg	0.41	0.064	1	02/13/25 14:13	02/17/25 22:44	7440-24-6	
Metals (ICPMS) 6020B Analytical Method: EPA 6020B Preparation Method: 3050B Pace National - Mt. Juliet									
Arsenic	0.911J	mg/kg	1.19	0.119	5	02/12/25 08:18	02/12/25 17:57	7440-38-2	J
Barium	63.0	mg/kg	2.96	0.180	5	02/12/25 08:18	02/12/25 17:57	7440-39-3	
Beryllium	0.617J	mg/kg	2.96	0.164	5	02/12/25 08:18	02/12/25 17:57	7440-41-7	J
Cadmium	ND	mg/kg	1.19	0.101	5	02/12/25 08:18	02/12/25 17:57	7440-43-9	
Chromium	10.6	mg/kg	5.93	0.351	5	02/12/25 08:18	02/12/25 17:57	7440-47-3	
Cobalt	4.67	mg/kg	1.19	0.0548	5	02/12/25 08:18	02/12/25 17:57	7440-48-4	
Copper	18.8	mg/kg	5.93	0.156	5	02/12/25 08:18	02/12/25 17:57	7440-50-8	
Lead	6.98	mg/kg	2.37	0.117	5	02/12/25 08:18	02/12/25 17:57	7439-92-1	
Manganese	282	mg/kg	2.96	0.318	5	02/12/25 08:18	02/12/25 17:57	7439-96-5	
Nickel	5.92	mg/kg	2.96	0.234	5	02/12/25 08:18	02/12/25 17:57	7440-02-0	B
Selenium	0.318J	mg/kg	2.96	0.213	5	02/12/25 08:18	02/12/25 17:57	7782-49-2	J
Silver	ND	mg/kg	0.593	0.103	5	02/12/25 08:18	02/12/25 17:57	7440-22-4	
Mercury 7471B Analytical Method: EPA 7471B Preparation Method: 7471A Pace National - Mt. Juliet									
Mercury	ND	mg/kg	0.0474	0.0244	1	02/11/25 23:39	02/12/25 16:08	7439-97-6	
Percent Moisture Analytical Method: SW-846 Pace Analytical Services - Charlotte									
Percent Moisture	13.7	%	0.10	0.10	1		02/07/25 14:17		N2
Total Solids 2540 G-2011 Analytical Method: SM 2540G Preparation Method: SM 2540 G Pace National - Mt. Juliet									
Total Solids	84.4	%			1	02/12/25 08:09	02/12/25 08:15		

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: TCH.009-3
Pace Project No.: 92778444

QC Batch: 2450211 Analysis Method: EPA 6020B
QC Batch Method: 3050B Analysis Description: Metals (ICPMS) 6020B
Laboratory: Pace National - Mt. Juliet
Associated Lab Samples: 92778444007, 92778444008, 92778444009, 92778444010, 92778444011

METHOD BLANK: R4176071-1 Matrix: Solid
Associated Lab Samples: 92778444007, 92778444008, 92778444009, 92778444010, 92778444011

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Arsenic	mg/kg	ND	1.00	0.100	02/12/25 17:15	
Barium	mg/kg	ND	2.50	0.152	02/12/25 17:15	
Beryllium	mg/kg	ND	2.50	0.138	02/12/25 17:15	
Cadmium	mg/kg	ND	1.00	0.0855	02/12/25 17:15	
Chromium	mg/kg	ND	5.00	0.297	02/12/25 17:15	
Cobalt	mg/kg	ND	1.00	0.0463	02/12/25 17:15	
Copper	mg/kg	ND	5.00	0.133	02/12/25 17:15	
Lead	mg/kg	ND	2.00	0.0990	02/12/25 17:15	
Manganese	mg/kg	ND	2.50	0.269	02/12/25 17:15	
Nickel	mg/kg	0.556J	2.50	0.197	02/12/25 17:15	J
Selenium	mg/kg	ND	2.50	0.180	02/12/25 17:15	
Silver	mg/kg	ND	0.500	0.0865	02/12/25 17:15	

LABORATORY CONTROL SAMPLE: R4176071-2

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic	mg/kg	100	107	107	80.0-120	
Barium	mg/kg	100	105	105	80.0-120	
Beryllium	mg/kg	100	107	107	80.0-120	
Cadmium	mg/kg	100	110	110	80.0-120	
Chromium	mg/kg	100	110	110	80.0-120	
Cobalt	mg/kg	100	109	109	80.0-120	
Copper	mg/kg	100	107	107	80.0-120	
Lead	mg/kg	100	105	105	80.0-120	
Manganese	mg/kg	100	110	110	80.0-120	
Nickel	mg/kg	100	110	110	80.0-120	
Selenium	mg/kg	100	109	109	80.0-120	
Silver	mg/kg	20.0	22.5	113	80.0-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: R4176071-5 R4176071-6

Parameter	Units	L1825354-03 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Arsenic	mg/kg	10.4	119	119	131	122	102	93.8	75.0-125	7.38	20	
Barium	mg/kg	53.9	119	119	171	171	98.8	98.8	75.0-125	0.003	20	
Beryllium	mg/kg	0.646	119	119	120	113	100	94.7	75.0-125	5.77	20	
Cadmium	mg/kg	ND	119	119	120	116	101	98.1	75.0-125	2.81	20	

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QUALITY CONTROL DATA

Project: TCH.009-3

Pace Project No.: 92778444

MATRIX SPIKE & MATRIX SPIKE DUPLICATE:													
R4176071-5					R4176071-6								
Parameter	Units	L1825354-03	MS	MSD	MS	MSD	MS	MSD	% Rec	Limits	RPD	Max	Qual
		Result	Spike	Spike									
Chromium	mg/kg	18.5	119	119	148	137	109	99.6	75.0-125	7.77	20		
Cobalt	mg/kg	5.74	119	119	130	121	105	97.3	75.0-125	7.41	20		
Copper	mg/kg	16.4	119	119	140	132	104	97.4	75.0-125	6.05	20		
Lead	mg/kg	10.9	119	119	129	123	99.8	95.0	75.0-125	4.49	20		
Manganese	mg/kg	225	119	119	329	316	88.3	77.0	75.0-125	4.14	20		
Nickel	mg/kg	12.6	119	119	196	132	155	100	75.0-125	39.3	20	MH,R1	
Selenium	mg/kg	0.712	119	119	121	118	102	98.9	75.0-125	2.87	20		
Silver	mg/kg	ND	23.7	23.7	24.1	23.8	102	100	75.0-125	1.55	20		

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QUALITY CONTROL DATA

Project: TCH.009-3
Pace Project No.: 92778444

QC Batch: 2450216 Analysis Method: EPA 6020B
QC Batch Method: 3050B Analysis Description: Metals (ICPMS) 6020B
Laboratory: Pace National - Mt. Juliet
Associated Lab Samples: 92778444001, 92778444002, 92778444003, 92778444004, 92778444005, 92778444006

METHOD BLANK: R4176190-1 Matrix: Solid
Associated Lab Samples: 92778444001, 92778444002, 92778444003, 92778444004, 92778444005, 92778444006

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Arsenic	mg/kg	ND	1.00	0.100	02/12/25 23:45	
Barium	mg/kg	ND	2.50	0.152	02/12/25 23:45	
Beryllium	mg/kg	ND	2.50	0.138	02/12/25 23:45	
Cadmium	mg/kg	ND	1.00	0.0855	02/12/25 23:45	
Chromium	mg/kg	ND	5.00	0.297	02/12/25 23:45	
Cobalt	mg/kg	ND	1.00	0.0463	02/12/25 23:45	
Copper	mg/kg	ND	5.00	0.133	02/12/25 23:45	
Lead	mg/kg	ND	2.00	0.0990	02/12/25 23:45	
Manganese	mg/kg	ND	2.50	0.269	02/12/25 23:45	
Nickel	mg/kg	ND	2.50	0.197	02/12/25 23:45	
Selenium	mg/kg	ND	2.50	0.180	02/12/25 23:45	
Silver	mg/kg	ND	0.500	0.0865	02/12/25 23:45	

LABORATORY CONTROL SAMPLE: R4176190-2

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic	mg/kg	100	90.6	90.6	80.0-120	
Barium	mg/kg	100	88.7	88.7	80.0-120	
Beryllium	mg/kg	100	90.2	90.2	80.0-120	
Cadmium	mg/kg	100	93.2	93.2	80.0-120	
Chromium	mg/kg	100	92.2	92.2	80.0-120	
Cobalt	mg/kg	100	94.2	94.2	80.0-120	
Copper	mg/kg	100	92.5	92.5	80.0-120	
Lead	mg/kg	100	87.7	87.7	80.0-120	
Manganese	mg/kg	100	91.6	91.6	80.0-120	
Nickel	mg/kg	100	94.9	94.9	80.0-120	
Selenium	mg/kg	100	88.8	88.8	80.0-120	
Silver	mg/kg	20.0	18.7	93.7	80.0-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: R4176190-5 R4176190-6

Parameter	Units	92778444004 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Arsenic	mg/kg	2.04	119	119	92.9	94.3	76.3	77.4	75.0-125	1.50	20	
Barium	mg/kg	75.3	119	119	172	360	81.1	239	75.0-125	70.8	20	MH,R1
Beryllium	mg/kg	0.396	119	119	98.8	96.9	82.6	81.0	75.0-125	1.99	20	
Cadmium	mg/kg	ND	119	119	101	100	84.5	83.9	75.0-125	0.626	20	

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QUALITY CONTROL DATA

Project: TCH.009-3

Pace Project No.: 92778444

MATRIX SPIKE & MATRIX SPIKE DUPLICATE:											
R4176190-5					R4176190-6						
Parameter	Units	92778444004	MS	MSD	MS	MSD	MS	MSD	% Rec	Max	Qual
		Result	Spike	Spike							
Chromium	mg/kg	20.8	119	119	122	119	85.2	82.6	75.0-125	2.55	20
Cobalt	mg/kg	17.4	119	119	121	208	86.8	160	75.0-125	52.9	20 MH,R1
Copper	mg/kg	19.8	119	119	122	120	85.5	84.0	75.0-125	1.47	20
Lead	mg/kg	7.63	119	119	103	112	80.0	87.4	75.0-125	8.27	20
Manganese	mg/kg	940	119	119	1060	6080	102	4310	75.0-125	141	20 E,P6, R1
Nickel	mg/kg	7.65	119	119	111	114	86.9	89.2	75.0-125	2.47	20
Selenium	mg/kg	0.841	119	119	95.1	94.3	79.1	78.5	75.0-125	0.839	20
Silver	mg/kg	ND	23.8	23.8	20.3	20.0	85.1	84.1	75.0-125	1.19	20

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QUALITY CONTROL DATA

Project: TCH.009-3
Pace Project No.: 92778444

QC Batch: 2450032 Analysis Method: EPA 7471B
QC Batch Method: 7471A Analysis Description: Mercury 7471B
Laboratory: Pace National - Mt. Juliet
Associated Lab Samples: 92778444001, 92778444002, 92778444003

METHOD BLANK: R4176737-1 Matrix: Solid
Associated Lab Samples: 92778444001, 92778444002, 92778444003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury	mg/kg	ND	0.0400	0.0206	02/14/25 11:20	

LABORATORY CONTROL SAMPLE: R4176737-2

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	mg/kg	0.500	0.507	101	80.0-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: R4176737-4 R4176737-5

Parameter	Units	L1825354-03 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury	mg/kg	ND	0.593	0.593	0.550	0.583	92.8	98.3	75.0-125	5.82	20	

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QUALITY CONTROL DATA

Project: TCH.009-3

Pace Project No.: 92778444

QC Batch: 2450049

Analysis Method: EPA 7471B

QC Batch Method: 7471A

Analysis Description: Mercury 7471B

Laboratory: Pace National - Mt. Juliet

Associated Lab Samples: 92778444004, 92778444005, 92778444006, 92778444007, 92778444008, 92778444009, 92778444010, 92778444011

METHOD BLANK: R4176062-1

Matrix: Solid

Associated Lab Samples: 92778444004, 92778444005, 92778444006, 92778444007, 92778444008, 92778444009, 92778444010, 92778444011

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury	mg/kg	ND	0.0400	0.0206	02/12/25 15:30	

LABORATORY CONTROL SAMPLE: R4176062-2

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	mg/kg	0.500	0.516	103	80.0-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: R4176062-4 R4176062-5

Parameter	Units	L1825511-04 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury	mg/kg	0.0680	0.511	0.511	0.717	0.703	127	124	75.0-125	2.05	20	MH

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QUALITY CONTROL DATA

Project: TCH.009-3

Pace Project No.: 92778444

QC Batch: 916042

Analysis Method: EPA 6010D

QC Batch Method: EPA 3050B

Analysis Description: 6010 MET

Laboratory: Pace Analytical Services - Asheville

Associated Lab Samples: 92778444001, 92778444002, 92778444003, 92778444004, 92778444005, 92778444006, 92778444007, 92778444008, 92778444009, 92778444010, 92778444011

METHOD BLANK: 4708097

Matrix: Solid

Associated Lab Samples: 92778444001, 92778444002, 92778444003, 92778444004, 92778444005, 92778444006, 92778444007, 92778444008, 92778444009, 92778444010, 92778444011

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Strontium	mg/kg	ND	0.50	0.077	02/17/25 21:44	

LABORATORY CONTROL SAMPLE: 4708098

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Strontium	mg/kg	50	48.2	96	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 4708099 4708100

Parameter	Units	92778444001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Strontium	mg/kg	76.2	62.1	61.7	139	125	101	79	75-125	10	20	

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QUALITY CONTROL DATA

Project: TCH.009-3
Pace Project No.: 92778444

QC Batch:	914933	Analysis Method:	EPA 7199
QC Batch Method:	EPA 7199	Analysis Description:	7199 Chromium, Hexavalent
		Laboratory:	Pace Analytical Services - Charlotte

Associated Lab Samples: 92778444001, 92778444002, 92778444003, 92778444004, 92778444005, 92778444006, 92778444007, 92778444008, 92778444009, 92778444010, 92778444011

METHOD BLANK: 4702653 Matrix: Solid

Associated Lab Samples: 92778444001, 92778444002, 92778444003, 92778444004, 92778444005, 92778444006, 92778444007, 92778444008, 92778444009, 92778444010, 92778444011

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chromium, Hexavalent	mg/kg	0.16J	1.0	0.0010	02/12/25 04:11	

LABORATORY CONTROL SAMPLE: 4702654

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chromium, Hexavalent	mg/kg	10	10.5	105	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 4702655 4702656

Parameter	Units	92778444001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chromium, Hexavalent	mg/kg	ND	13.5	13.5	3.2	7.8	24	57	75-125	83	20	M1,R1

MATRIX SPIKE SAMPLE: 4702657

Parameter	Units	92778444002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chromium, Hexavalent	mg/kg	0.51J	1320	1610	122	75-125	

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QUALITY CONTROL DATA

Project: TCH.009-3

Pace Project No.: 92778444

QC Batch: 914626

Analysis Method: SW-846

QC Batch Method: SW-846

Analysis Description: Dry Weight/Percent Moisture

Laboratory: Pace Analytical Services - Charlotte

Associated Lab Samples: 92778444001, 92778444002, 92778444003, 92778444004, 92778444005, 92778444006, 92778444007, 92778444008, 92778444009, 92778444010, 92778444011

SAMPLE DUPLICATE: 4701336

Parameter	Units	92778444002 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	16.4	15.8	4	25	N2

SAMPLE DUPLICATE: 4701337

Parameter	Units	92778444001 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	34.7	34.5	0	25	N2

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QUALITY CONTROL DATA

Project: TCH.009-3

Pace Project No.: 92778444

QC Batch: 2450147

Analysis Method: SM 2540G

QC Batch Method: SM 2540 G

Analysis Description: Total Solids 2540 G-2011

Laboratory: Pace National - Mt. Juliet

Associated Lab Samples: 92778444001, 92778444002, 92778444003, 92778444004, 92778444005

METHOD BLANK: R4175982-1

Matrix: Solid

Associated Lab Samples: 92778444001, 92778444002, 92778444003, 92778444004, 92778444005

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Solids	%	0.00200			02/12/25 08:55	

LABORATORY CONTROL SAMPLE: R4175982-2

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Solids	%	50.0	50.0	99.9	90.0-110	

SAMPLE DUPLICATE: R4175982-3

Parameter	Units	92778444004 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Solids	%	83.9	83.5	0.492	10	

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QUALITY CONTROL DATA

Project: TCH.009-3

Pace Project No.: 92778444

QC Batch: 2450148

Analysis Method: SM 2540G

QC Batch Method: SM 2540 G

Analysis Description: Total Solids 2540 G-2011

Laboratory: Pace National - Mt. Juliet

Associated Lab Samples: 92778444006, 92778444007, 92778444008, 92778444009, 92778444010, 92778444011

METHOD BLANK: R4175953-1

Matrix: Solid

Associated Lab Samples: 92778444006, 92778444007, 92778444008, 92778444009, 92778444010, 92778444011

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Solids	%	0.00100			02/12/25 08:15	

LABORATORY CONTROL SAMPLE: R4175953-2

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Solids	%	50.0	50.0	99.9	90.0-110	

SAMPLE DUPLICATE: R4175953-3

Parameter	Units	L1825333-03 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Solids	%	90.9	87.5	3.83	10	

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

REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: TCH.009-3
Pace Project No.: 92778444

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.
ND - Not Detected at or above adjusted reporting limit.
TNTC - Too Numerous To Count
J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.
MDL - Adjusted Method Detection Limit.
PQL - Practical Quantitation Limit.
RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.
S - Surrogate
1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.
Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.
LCS(D) - Laboratory Control Sample (Duplicate)
MS(D) - Matrix Spike (Duplicate)
DUP - Sample Duplicate
RPD - Relative Percent Difference
NC - Not Calculable.
SG - Silica Gel - Clean-Up
U - Indicates the compound was analyzed for, but not detected.
Acid preservation may not be appropriate for 2 Chloroethylvinyl ether.
A separate vial preserved to a pH of 4-5 is recommended in SW846 Chapter 4 for the analysis of Acrolein and Acrylonitrile by EPA Method 8260.
N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.
Reported results are not rounded until the final step prior to reporting. Therefore, calculated parameters that are typically reported as "Total" may vary slightly from the sum of the reported component parameters.
Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.
TNI - The NELAC Institute.

WORKORDER QUALIFIERS

WO: 92778444
[1] Mn is above calibration.

ANALYTE QUALIFIERS

B	Analyte was detected in the associated method blank.
E	Analyte concentration exceeded the calibration range. The reported result is estimated.
J	Analyte detected below the reporting limit, therefore result is an estimate. This qualifier is also used for all TICs.
M1	Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.
MH	Matrix spike recovery and/or matrix spike duplicate recovery was above laboratory control limits. Result may be biased high.
N2	The lab does not hold NELAC/TNI accreditation for this parameter but other accreditations/certifications may apply. A complete list of accreditations/certifications is available upon request.
P6	Matrix spike recovery was outside laboratory control limits due to a parent sample concentration notably higher than the spike level.
PH	The analyte failed the method required serial dilution test and/or subsequent post-spike criteria. These failures indicate matrix interference.
R1	RPD value was outside control limits.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: TCH.009-3
Pace Project No.: 92778444

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92778444001	HH-22A	EPA 7199	914933	EPA 7199	915271
92778444002	HH-22B	EPA 7199	914933	EPA 7199	915271
92778444003	HH-23A	EPA 7199	914933	EPA 7199	915271
92778444004	HH-23B	EPA 7199	914933	EPA 7199	915271
92778444005	HH-24A	EPA 7199	914933	EPA 7199	915271
92778444006	HH-24B	EPA 7199	914933	EPA 7199	915271
92778444007	HH-25A	EPA 7199	914933	EPA 7199	915271
92778444008	HH-25B	EPA 7199	914933	EPA 7199	915271
92778444009	HH-26A	EPA 7199	914933	EPA 7199	915271
92778444010	HH-26B	EPA 7199	914933	EPA 7199	915271
92778444011	HH-DUP	EPA 7199	914933	EPA 7199	915271
92778444001	HH-22A	EPA 3050B	916042	EPA 6010D	916147
92778444002	HH-22B	EPA 3050B	916042	EPA 6010D	916147
92778444003	HH-23A	EPA 3050B	916042	EPA 6010D	916147
92778444004	HH-23B	EPA 3050B	916042	EPA 6010D	916147
92778444005	HH-24A	EPA 3050B	916042	EPA 6010D	916147
92778444006	HH-24B	EPA 3050B	916042	EPA 6010D	916147
92778444007	HH-25A	EPA 3050B	916042	EPA 6010D	916147
92778444008	HH-25B	EPA 3050B	916042	EPA 6010D	916147
92778444009	HH-26A	EPA 3050B	916042	EPA 6010D	916147
92778444010	HH-26B	EPA 3050B	916042	EPA 6010D	916147
92778444011	HH-DUP	EPA 3050B	916042	EPA 6010D	916147
92778444001	HH-22A	3050B	2450216	EPA 6020B	2450216
92778444002	HH-22B	3050B	2450216	EPA 6020B	2450216
92778444003	HH-23A	3050B	2450216	EPA 6020B	2450216
92778444004	HH-23B	3050B	2450216	EPA 6020B	2450216
92778444005	HH-24A	3050B	2450216	EPA 6020B	2450216
92778444006	HH-24B	3050B	2450216	EPA 6020B	2450216
92778444007	HH-25A	3050B	2450211	EPA 6020B	2450211
92778444008	HH-25B	3050B	2450211	EPA 6020B	2450211
92778444009	HH-26A	3050B	2450211	EPA 6020B	2450211
92778444010	HH-26B	3050B	2450211	EPA 6020B	2450211
92778444011	HH-DUP	3050B	2450211	EPA 6020B	2450211
92778444001	HH-22A	7471A	2450032	EPA 7471B	2450032
92778444002	HH-22B	7471A	2450032	EPA 7471B	2450032
92778444003	HH-23A	7471A	2450032	EPA 7471B	2450032
92778444004	HH-23B	7471A	2450049	EPA 7471B	2450049
92778444005	HH-24A	7471A	2450049	EPA 7471B	2450049
92778444006	HH-24B	7471A	2450049	EPA 7471B	2450049
92778444007	HH-25A	7471A	2450049	EPA 7471B	2450049
92778444008	HH-25B	7471A	2450049	EPA 7471B	2450049
92778444009	HH-26A	7471A	2450049	EPA 7471B	2450049
92778444010	HH-26B	7471A	2450049	EPA 7471B	2450049
92778444011	HH-DUP	7471A	2450049	EPA 7471B	2450049
92778444001	HH-22A	SW-846	914626		
92778444002	HH-22B	SW-846	914626		

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: TCH.009-3

Pace Project No.: 92778444

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92778444003	HH-23A	SW-846	914626		
92778444004	HH-23B	SW-846	914626		
92778444005	HH-24A	SW-846	914626		
92778444006	HH-24B	SW-846	914626		
92778444007	HH-25A	SW-846	914626		
92778444008	HH-25B	SW-846	914626		
92778444009	HH-26A	SW-846	914626		
92778444010	HH-26B	SW-846	914626		
92778444011	HH-DUP	SW-846	914626		
92778444001	HH-22A	SM 2540 G	2450147	SM 2540G	2450147
92778444002	HH-22B	SM 2540 G	2450147	SM 2540G	2450147
92778444003	HH-23A	SM 2540 G	2450147	SM 2540G	2450147
92778444004	HH-23B	SM 2540 G	2450147	SM 2540G	2450147
92778444005	HH-24A	SM 2540 G	2450147	SM 2540G	2450147
92778444006	HH-24B	SM 2540 G	2450148	SM 2540G	2450148
92778444007	HH-25A	SM 2540 G	2450148	SM 2540G	2450148
92778444008	HH-25B	SM 2540 G	2450148	SM 2540G	2450148
92778444009	HH-26A	SM 2540 G	2450148	SM 2540G	2450148
92778444010	HH-26B	SM 2540 G	2450148	SM 2540G	2450148
92778444011	HH-DUP	SM 2540 G	2450148	SM 2540G	2450148

REPORT OF LABORATORY ANALYSIS

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Pace

DC#_Title: ENV-FRM-HUN1-0083 v05_Sample Condition Upon Receipt

Effective Date: 05/24/2024

Laboratory receiving samples:

Asheville ☐ Eden ☐ Greenwood ☐ Huntersville ☒ Raleigh ☐

Mechanicsville ☐ Atlanta ☐ Kernersville ☐

Sample Condition
Upon Receipt

Client Name:

Hart & Hickman Raleigh

Project #:

WO#: 92778444



92778444

Courier: ☐ Fed Ex ☐ UPS ☐ USPS ☐ Client ☐ Other: _____

☐ Commercial

Custody Seal Present? ☒ Yes ☐ No Seals Intact? ☒ Yes ☐ No ☐ N/A

Date/Initials Person Examining Contents: UNA

Packing Material: ☒ Bubble Wrap ☒ Bubble Bags ☐ None ☐ Other

Thermometer: ☐ IR Gun ID: 927882 Type of Ice: ☒ Wet ☐ Blue

Cooler Temp: 1.7 Correction Factor: Add/Subtract (°C) 0

Cooler Temp Corrected (°C): 1.7

USDA Regulated Soil (☐ N/A, water sample)

Temp should be above freezing to 6°C
☐ Samples out of temp criteria. Samples on ice, cooling process has begun

Did samples originate from a foreign source (internationally, including Hawaii and Puerto Rico)? ☐ Yes ☒ No

Comments/Discrepancy:

Chain of Custody Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> N/A	1.
Samples Arrived within Hold Time?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> N/A	2.
Short Hold Time Analysis (<72 hr.)?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> N/A	3.
Rush Turn Around Time Requested?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> N/A	4.
Sufficient Volume?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> N/A	5.
Correct Containers Used?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> N/A	6.
-Pace Containers Used?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> N/A	7.
Containers Intact?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> N/A	8.
Dissolved analysis: Samples Field Filtered?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> N/A	9.
Sample Labels Match COC?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> N/A	10.
-Includes Date/Time/ID/Analysis Matrix: <u>SL</u>			11.

Headspace in VOA Vials (>5.6mm)?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> N/A
Trip Blank Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> N/A
Trip Blank Custody Seals Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> N/A

COMMENTS/SAMPLE DISCREPANCY

Field Data Required? ☐ Yes ☐ No

CLIENT NOTIFICATION/RESOLUTION

Lot ID of split containers:

Person contacted: _____

Date/Time: _____

Project Manager SCURF Review: _____

Date: _____

Project Manager SRF Review: _____

Date: _____

Qualtrax ID: 69614

Page 1 of 2

Effective Date: 05/24/2024

Pace

*Check mark top half of box if pH and/or dechlorination is verified and within the acceptance range for preservation samples.

Exceptions: VOA, Coliform, TOC, Oil and Grease, DRO/8015 (water) DOC, LUHg

**Bottom half of box is to list number of bottles

***Check all unpreserved Nitrates for chlorine

Laboratory Receiving Location: Asheville ☐ Eden ☐ Greenwood ☐ Huntersville ☒ Raleigh ☐ Mechanicsville ☐ Atlanta ☐ Kernersville ☐

Client Hart & McKinnon Profile 219669 Notes

Project #

PM: TMC Due Date: 02/14/25

CLIENT: 92-Hart_Ra1

WO#: 92778444

Item#	BP4U-125 mL Plastic Unpreserved (N/A) (Cl-)	BP3U-250 mL Plastic Unpreserved (N/A)	BP2U-500 mL Plastic Unpreserved (N/A)	BP1U-1 liter Plastic Unpreserved (N/A)		BP4S-125 mL Plastic H2SO4 (pH < 2) (Cl-)	BP3N-250 mL plastic HNO3 (pH < 2)	BP4Z-125 mL Plastic 2N Acetate & NaOH (>9)	BP4B-125 mL Plastic NaOH (pH > 12) (Cl-)	WGFU-Wide-mouthed Glass jar Unpreserved	AG1U-1 liter Amber Unpreserved (N/A) (Cl-)	AG1H-1 liter Amber HCl (pH < 2)	AG3U-250 mL Amber Unpreserved (N/A) (Cl-)	AG1S-1 liter Amber H2SO4 (pH < 2)	AG3S-250 mL Amber H2SO4 (pH < 2)	DG94-40 mL Amber NH4Cl (N/A)(Cl-)	DG9H-40 mL VOA HCl(N/A)	VG9T-40 mL VOA Na2S2O3 (N/A)	VG9U-40 mL VOA Unpreserved (N/A)	DG9V-40 mL VOA H3PO4 (N/A)	KP7U-50 mL Plastic Unpreserved (N/A)	V/GK (3 vials per kit)-VPH/Gas kit (N/A)	SP5T-125 mL Sterile Plastic (N/A – lab)	SP2T-250 mL Sterile Plastic (N/A – lab)		BP3R-250 mL Plastic (NH2)2SO4 (9.3-9.7)	AG0U-100 mL Amber Unpreserved (N/A) (Cl-)	VSGU-20 mL Scintillation vials (N/A)	DG9U-40 mL Amber Unpreserved vials (N/A)	
CC										CM																				
1										3																				
2										3																				
3										3																				
4										3																				
5										3																				
6										3																				
7										3																				
8										3																				
9										3																				
10										3																				
11										3																				
12										3																				

pH Adjustment Log for Preserved Samples

Sample ID	Type of Preservative	pH upon receipt	Date preservation adjusted	Time preservation adjusted	Amount of Preservative added	Lot #

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DENR Certification Office (i.e. Out of hold, incorrect preservative, out of temp, incorrect containers.

Qualtrax ID: 69614

Pace® Location Requested (City/State): Pace Analytical Charlotte 9800 Kinney Ave. Suite 100, Huntersville, NC 28078		CHAIN-OF-CUSTODY Analytical Request Document Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevant fields		LAB USE ONLY- Affix Workorder/Login Label Here																	
Company Name: Hart & Hickman_Raleigh Street Address: 3921 Sunset Ridge Rd. Suite 301 Raleigh, NC 27607 Customer Project #: TCH.009-3 Project Name: TCH.009-3 Site Collection Info/Facility ID (as applicable):		Contact/Report To: Justin Ballard Phone #: (919)723-2507 E-Mail: jballard@harthickman.com Cc E-Mail: awright@harthickman.com Invoice To: Accounts Payable Invoice E-Mail: accountspayable@harthickman.com Purchase Order # (if applicable): TCH.009-3 Quote #:		Scan QR Code for instructions																	
Time Zone Collected: [] AK [] PT [] MT [] CT [] ET		County / State origin of sample(s): North Carolina		Specify Container Size **																	
Data Deliverables: [] Level II [] Level III [] Level IV [] EQUIS [] Other		Regulatory Program (DW, RCRA, etc.) as applicable: Reportable [] Yes [] No Rush (Pre-approval required): [] Same Day [] 1 Day [] 2 Day [] 3 Day [] Other Date Results Requested: standard TAT Field Filtered (if applicable): [] Yes [] No Analysis:		Identify Container Preservative Type ***																	
* Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Waste Water (WW), Product (P), Soil/Solid (SS), Oil (OL), Wipe (WP), Tissue (TS), Bioassay (B), Vapor (V), Surface Water (SW), Sediment (SED), Sludge (SL), Caulk (CK), Leachate (LL), Biosolid (BS), Other (OT)				Analysis Requested																	
Customer Sample ID		Matrix *	Comp / Grab	Composite Start		Collected or Composite End		#	Res. Chlorine	Lab Use Only											
				Date	Time	Date	Time	Cont.	Results	Units	6010 Strontium	6020/7471 Metals	7199 Chromium, Hexavalent								
HH-22AHH-26		SS	G	2-6-25	1000			3			X	X	X								
HH-22B		SS	G	2-6-25	1005			3			X	X	X								
HH-23A		SS	G	2-6-25	1010			3			X	X	X								
HH-23B		SS	G	2-6-25	1015			3			X	X	X								
HH-24A		SS	G	2-6-25	1020			3			X	X	X								
HH-24B		SS	G	2-6-25	1025			3			X	X	X								
HH-25A		SS	G	2-6-25	1030			3			X	X	X								
HH-25B		SS	G	2-6-25	1035			3			X	X	X								
HH-26A		SS	G	2-6-25	1040			3			X	X	X								
HH-26B		SS	G	2-6-25	1045			3			X	X	X								
Additional Instructions from Pace: HH-DUP		SS	G	2-6-25				3			X	X	X	Special Conditions / Possible Hazards:							
6020: arsenic, barium, beryllium, cadmium, chromium, cobalt, copper, manganese, nickel, selenium 7471: Mercury														# Coolers: Thermometer ID: Correction Factor (°C): Obs. Temp. (°C) Corrected Temp. (°C) On Ice:							
Relinquished by/Company: (Signature) [Signature] Date/Time: 2-6-25 1500		Received by/Company: (Signature) [Signature] Date/Time: 2/7/25 1020		Tracking Number:																	
Relinquished by/Company: (Signature) [Signature] Date/Time:		Received by/Company: (Signature) Date/Time:		Delivered by: [] In-Person [] Courier																	
Relinquished by/Company: (Signature) Date/Time:		Received by/Company: (Signature) Date/Time:		[] FedEx [] UPS [] Other																	
Relinquished by/Company: (Signature) Date/Time:		Received by/Company: (Signature) Date/Time:		Page: 2 of 2																	

Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace® Terms and Conditions found at <https://www.pacelabs.com/resource-library/resource/pace-terms-and-conditions/>

ENV-FRM-CORQ-0019_v02_110123 ©



October 30, 2024

Justin Ballard
Hart & Hickman
3921 Sunset Ridge Rd.
Suite 301
Raleigh, NC 27607

RE: Project: TCH-009
Pace Project No.: 92759306

Dear Justin Ballard:

Enclosed are the analytical results for sample(s) received by the laboratory on October 21, 2024. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

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

- Pace Analytical Services - Asheville
- Pace Analytical Services - Charlotte
- Pace Analytical Services - Peachtree Corners, GA

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

Sincerely,

A handwritten signature in black ink, appearing to read "T Cannon".

Taylor M Cannon
taylor.cannon@pacelabs.com
704-977-0943
Project Manager

Enclosures



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: TCH-009

Pace Project No.: 92759306

Pace Analytical Services Charlotte

South Carolina Laboratory ID: 99006
9800 Kinsey Ave. Ste 100, Huntersville, NC 28078
North Carolina Drinking Water Certification #: 37706
North Carolina Field Services Certification #: 5342
North Carolina Wastewater Certification #: 12
South Carolina Laboratory ID: 99006

South Carolina Certification #: 99006001
South Carolina Drinking Water Cert. #: 99006003
Florida/NELAP Certification #: E87627
Kentucky UST Certification #: 84
Louisiana DoH Drinking Water #: LA029
Virginia/VELAP Certification #: 460221

Pace Analytical Services Asheville

2225 Riverside Drive, Asheville, NC 28804
Florida/NELAP Certification #: E87648
North Carolina Drinking Water Certification #: 37712
North Carolina Wastewater Certification #: 40

South Carolina Laboratory ID: 99030
South Carolina Certification #: 99030001
Virginia/VELAP Certification #: 460222

Pace Analytical Services Peachtree Corners

110 Technology Pkwy, Peachtree Corners, GA 30092
Florida DOH Certification #: E87315
Georgia DW Inorganics Certification #: 812

North Carolina Certification #: 381
South Carolina Certification #: 98011001
Virginia Certification #: 460204

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: TCH-009

Pace Project No.: 92759306

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92759306001	HH-19B	Solid	10/18/24 14:00	10/21/24 11:35

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: TCH-009
Pace Project No.: 92759306

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92759306001	HH-19B	EPA 7199	VJM	1	PASI-C
		EPA 7471B	VB	1	PASI-GA
		EPA 6010D	DBB1	11	PASI-A
		SW-846	KDF	1	PASI-C

PASI-A = Pace Analytical Services - Asheville

PASI-C = Pace Analytical Services - Charlotte

PASI-GA = Pace Analytical Services - Peachtree Corners, GA

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: TCH-009
Pace Project No.: 92759306

Sample: HH-19B Lab ID: 92759306001 Collected: 10/18/24 14:00 Received: 10/21/24 11:35 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
7199 Chromium, Hexavalent Analytical Method: EPA 7199 Preparation Method: EPA 7199 Pace Analytical Services - Charlotte									
Chromium, Hexavalent	0.14J	mg/kg	1.2	0.0012	1	10/27/24 14:06	10/28/24 15:10	18540-29-9	B
7471 Mercury Analytical Method: EPA 7471B Preparation Method: EPA 7471B Pace Analytical Services - Peachtree Corners, GA									
Mercury	0.014J	mg/kg	0.038	0.013	1	10/25/24 08:00	10/25/24 12:24	7439-97-6	
6010 MET ICP Analytical Method: EPA 6010D Preparation Method: EPA 3050B Pace Analytical Services - Asheville									
Arsenic	1.3J	mg/kg	2.3	0.37	1	10/23/24 15:35	10/28/24 16:55	7440-38-2	
Barium	86.0	mg/kg	0.90	0.10	1	10/23/24 15:35	10/28/24 16:55	7440-39-3	
Beryllium	0.18	mg/kg	0.090	0.012	1	10/23/24 15:35	10/28/24 16:55	7440-41-7	
Cadmium	ND	mg/kg	0.090	0.023	1	10/23/24 15:35	10/28/24 16:55	7440-43-9	
Chromium	39.5	mg/kg	0.45	0.068	1	10/23/24 15:35	10/28/24 16:55	7440-47-3	M1
Cobalt	5.7	mg/kg	0.45	0.30	1	10/23/24 15:35	10/28/24 16:55	7440-48-4	
Copper	17.7	mg/kg	4.5	0.086	1	10/23/24 15:35	10/28/24 16:55	7440-50-8	
Manganese	593	mg/kg	0.45	0.091	1	10/23/24 15:35	10/28/24 16:55	7439-96-5	M1
Nickel	5.5	mg/kg	0.45	0.077	1	10/23/24 15:35	10/28/24 16:55	7440-02-0	
Selenium	ND	mg/kg	0.90	0.69	1	10/23/24 15:35	10/28/24 16:55	7782-49-2	
Strontium	33.5	mg/kg	0.45	0.070	1	10/23/24 15:35	10/28/24 16:55	7440-24-6	
Percent Moisture Analytical Method: SW-846 Pace Analytical Services - Charlotte									
Percent Moisture	18.0	%	0.10	0.10	1		10/24/24 14:12		N2

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: TCH-009

Pace Project No.: 92759306

QC Batch: 891222

Analysis Method: EPA 7471B

QC Batch Method: EPA 7471B

Analysis Description: 7471 Mercury

Laboratory: Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92759306001

METHOD BLANK: 4588548

Matrix: Solid

Associated Lab Samples: 92759306001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury	mg/kg	ND	0.032	0.011	10/25/24 11:22	

LABORATORY CONTROL SAMPLE: 4588549

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	mg/kg	0.33	0.35	104	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 4588550 4588551

Parameter	Units	92757488129 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury	mg/kg	0.033	0.34	0.34	0.39	0.38	105	104	75-125	3	20	

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QUALITY CONTROL DATA

Project: TCH-009

Pace Project No.: 92759306

QC Batch: 890890

Analysis Method: EPA 6010D

QC Batch Method: EPA 3050B

Analysis Description: 6010 MET

Laboratory: Pace Analytical Services - Asheville

Associated Lab Samples: 92759306001

METHOD BLANK: 4586615

Matrix: Solid

Associated Lab Samples: 92759306001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Arsenic	mg/kg	ND	2.5	0.41	10/28/24 16:49	
Barium	mg/kg	ND	1.0	0.11	10/28/24 16:49	
Beryllium	mg/kg	ND	0.10	0.013	10/28/24 16:49	
Cadmium	mg/kg	ND	0.10	0.026	10/28/24 16:49	
Chromium	mg/kg	0.16J	0.50	0.075	10/28/24 16:49	
Cobalt	mg/kg	ND	0.50	0.33	10/28/24 16:49	
Copper	mg/kg	ND	5.0	0.095	10/28/24 16:49	
Manganese	mg/kg	ND	0.50	0.10	10/28/24 16:49	
Nickel	mg/kg	ND	0.50	0.085	10/28/24 16:49	
Selenium	mg/kg	ND	1.0	0.77	10/28/24 16:49	
Strontium	mg/kg	ND	0.50	0.077	10/28/24 16:49	

LABORATORY CONTROL SAMPLE: 4586616

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic	mg/kg	50	50.7	101	80-120	
Barium	mg/kg	50	50.0	100	80-120	
Beryllium	mg/kg	50	50.8	102	80-120	
Cadmium	mg/kg	50	51.3	103	80-120	
Chromium	mg/kg	50	51.6	103	80-120	
Cobalt	mg/kg	50	51.0	102	80-120	
Copper	mg/kg	50	52.5	105	80-120	
Manganese	mg/kg	50	50.3	101	80-120	
Nickel	mg/kg	50	52.1	104	80-120	
Selenium	mg/kg	50	47.1	94	80-120	
Strontium	mg/kg	50	49.7	99	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 4586617 4586618

Parameter	Units	92759306001	MS	MSD	MS	MSD	MS	MSD	% Rec	RPD	Max	Qual
		Result	Spike Conc.	Spike Conc.								
Arsenic	mg/kg	1.3J	45.6	45.2	36.9	36.6	78	78	75-125	1	20	
Barium	mg/kg	86.0	45.6	45.2	132	132	101	101	75-125	0	20	
Beryllium	mg/kg	0.18	45.6	45.2	40.3	40.1	88	88	75-125	0	20	
Cadmium	mg/kg	ND	45.6	45.2	40.2	40.1	88	89	75-125	0	20	
Chromium	mg/kg	39.5	45.6	45.2	58.8	59.3	42	44	75-125	1	20	M1
Cobalt	mg/kg	5.7	45.6	45.2	45.9	45.2	88	87	75-125	2	20	

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QUALITY CONTROL DATA

Project: TCH-009
Pace Project No.: 92759306

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 4586617 4586618												
Parameter	Units	92759306001	MS	MSD	MS	MSD	MS	MSD	% Rec	Max	RPD	Qual
		Result	Spike Conc.	Spike Conc.								
Copper	mg/kg	17.7	45.6	45.2	63.7	63.8	101	102	75-125	0	20	M1
Manganese	mg/kg	593	45.6	45.2	700	728	234	298	75-125	4	20	
Nickel	mg/kg	5.5	45.6	45.2	47.2	47.3	92	92	75-125	0	20	
Selenium	mg/kg	ND	45.6	45.2	34.7	34.5	76	76	75-125	1	20	
Strontium	mg/kg	33.5	45.6	45.2	78.2	77.2	98	96	75-125	1	20	

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

REPORT OF LABORATORY ANALYSIS



QUALITY CONTROL DATA

Project: TCH-009

Pace Project No.: 92759306

QC Batch: 891678

Analysis Method: EPA 7199

QC Batch Method: EPA 7199

Analysis Description: 7199 Chromium, Hexavalent

Laboratory: Pace Analytical Services - Charlotte

Associated Lab Samples: 92759306001

METHOD BLANK: 4590819

Matrix: Solid

Associated Lab Samples: 92759306001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chromium, Hexavalent	mg/kg	0.12J	1.0	0.0010	10/28/24 13:06	

LABORATORY CONTROL SAMPLE: 4590820

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chromium, Hexavalent	mg/kg	10	10.7	107	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 4590821 4590822

Parameter	Units	92759238001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chromium, Hexavalent	mg/kg	0.95J	10	10	11.3	10.3	103	93	75-125	9	20	

MATRIX SPIKE SAMPLE: 4590823

Parameter	Units	92759238002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chromium, Hexavalent	mg/kg	4.2	1120	1120	100	75-125	

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QUALITY CONTROL DATA

Project: TCH-009
Pace Project No.: 92759306

QC Batch:	891187	Analysis Method:	SW-846
QC Batch Method:	SW-846	Analysis Description:	Dry Weight/Percent Moisture
		Laboratory:	Pace Analytical Services - Charlotte

Associated Lab Samples: 92759306001

SAMPLE DUPLICATE: 4588268

Parameter	Units	92759321004 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	3.6	4.0	10	25	N2

SAMPLE DUPLICATE: 4588269

Parameter	Units	92759824001 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	7.2	7.7	6	25	N2

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QUALIFIERS

Project: TCH-009
Pace Project No.: 92759306

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.
ND - Not Detected at or above adjusted reporting limit.
TNTC - Too Numerous To Count
J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.
MDL - Adjusted Method Detection Limit.
PQL - Practical Quantitation Limit.
RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.
S - Surrogate
1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.
Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.
LCS(D) - Laboratory Control Sample (Duplicate)
MS(D) - Matrix Spike (Duplicate)
DUP - Sample Duplicate
RPD - Relative Percent Difference
NC - Not Calculable.
SG - Silica Gel - Clean-Up
U - Indicates the compound was analyzed for, but not detected.
Acid preservation may not be appropriate for 2 Chloroethylvinyl ether.
A separate vial preserved to a pH of 4-5 is recommended in SW846 Chapter 4 for the analysis of Acrolein and Acrylonitrile by EPA Method 8260.
N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.
Reported results are not rounded until the final step prior to reporting. Therefore, calculated parameters that are typically reported as "Total" may vary slightly from the sum of the reported component parameters.
Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.
TNI - The NELAC Institute.

ANALYTE QUALIFIERS

B	Analyte was detected in the associated method blank.
M1	Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.
N2	The lab does not hold NELAC/TNI accreditation for this parameter but other accreditations/certifications may apply. A complete list of accreditations/certifications is available upon request.

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: TCH-009
Pace Project No.: 92759306

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92759306001	HH-19B	EPA 7199	891678	EPA 7199	891744
92759306001	HH-19B	EPA 7471B	891222	EPA 7471B	891398
92759306001	HH-19B	EPA 3050B	890890	EPA 6010D	890977
92759306001	HH-19B	SW-846	891187		

REPORT OF LABORATORY ANALYSIS

TCH-009 Sample Analyte List (EPA Method ^{6010D}~~6020/7471~~) & 7199

Please report only the following compounds:

Arsenic

Beryllium

Chromium

Cobalt

Copper

Manganese


Mercury

Nickel

Selenium

Barium

Cadmium



DC#_Title: ENV-FRM-HUN1-0083 v05_Sample Condition Upon Receipt

Effective Date: 05/24/2024

Laboratory receiving samples:

Asheville ☐ Eden ☐ Greenwood ☐ Huntersville ☐ Raleigh ☒ Mechanicsville ☐ Atlanta ☐ Kernersville ☐

Sample Condition Upon Receipt

Client Name: Hart Hickman
Project #:

Courier: ☐ Fed Ex ☐ UPS ☐ USPS ☐ Client
☐ Commercial ☒ Pace ☐ Other: _____

Custody Seal Present? ☐ Yes ☒ No Seals Intact? ☐ Yes ☐ No ☒ N/A

Date/Initials Person Examining Contents: HG H 10/21/24

Packing Material: ☐ Bubble Wrap ☒ Bubble Bags ☐ None ☐ Other

Thermometer: ☐ IR Gun ID: 911005 Type of Ice: ☒ Wet ☐ Blue ☐ None

Cooler Temp: 5.4 Correction Factor: Add/Subtract (°C) 0.0

Temp should be above freezing to 6°C
☐ Samples out of temp criteria. Samples on ice, cooling process has begun

Cooler Temp Corrected (°C): 5.4

USDA Regulated Soil (☐ N/A, water sample)

Did samples originate in a quarantine zone within the United States: CA, NY, or SC (check maps)? ☐ Yes ☐ No

Did samples originate from a foreign source (internationally, including Hawaii and Puerto Rico)? ☐ Yes ☐ No

			Comments/Discrepancy:
Chain of Custody Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.	
Samples Arrived within Hold Time?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.	
Short Hold Time Analysis (<72 hr.)?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	3.	
Rush Turn Around Time Requested?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	4.	
Sufficient Volume?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.	
Correct Containers Used?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	6.	
-Pace Containers Used?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		
Containers Intact?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	7.	
Dissolved analysis: Samples Field Filtered?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	8.	
Sample Labels Match COC?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.	
-Includes Date/Time/ID/Analysis Matrix: <u>WT</u>			
Headspace in VOA Vials (>5-6mm)?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	10.	
Trip Blank Present?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.	
Trip Blank Custody Seals Present?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A		

COMMENTS/SAMPLE DISCREPANCY

Field Data Required? ☐ Yes ☐ No


Lot ID of split containers:

CLIENT NOTIFICATION/RESOLUTION

Person contacted: _____ Date/Time: _____

Project Manager SCURF Review: _____ Date: _____

Project Manager SRF Review: _____ Date: _____



DC#_Title: ENV-FRM-HUN1-0083 v05_Sample Condition Upon Receipt

Effective Date: 05/24/2024

*Check mark top half of box if pH and/or dechlorination is verified and within the acceptance range for preservation samples.
 Exceptions: VOA, Coliform, TOC, Oil and Grease, DRO/8015 (water) DOC, L/Hg
 **Bottom half of box is to list number of bottles
 ***Check all unpreserved Nitrates for chlorine

Project #

Laboratory Receiving Location: Asheville ☐ Eden ☐ Greenwood ☐ Huntersville ☐ Raleigh ☒ Mechanicsville ☐ Atlanta ☐ Kernersville ☐

Client: Outstanding Profile/EZ (Circle one) _____ Notes _____

Item#	BP40-125 mL Plastic Unpreserved (N/A) (Cl-)	BP30-150 mL Plastic Unpreserved (N/A)	BP20-500 mL Plastic Unpreserved (N/A)	BP10-1 liter Plastic Unpreserved (N/A)	BP45-125 mL Plastic H2SO4 (pH < 2) (Cl-)	BP30-250 mL plastic HNO3 (pH < 2)	BP42-125 mL Plastic 2N Acetate & NaOH (>8)	BP48-125 mL Plastic NaOH (pH > 12) (Cl-)	W6PU-Wide-mouthed Glass jar Unpreserved	AG1U-1 liter Amber Unpreserved (N/A) (Cl-)	AG1H-1 liter Amber HCl (pH < 2)	AG3U-250 mL Amber Unpreserved (N/A) (Cl-)	AG3S-1 liter Amber H2SO4 (pH < 2)	AG3S-250 mL Amber H2SO4 (pH < 2)	D69H-40 mL Amber NH4Cl (N/A)(Cl-)	D69H-40 mL VOA HCl (N/A)	V69T-40 mL VOA Na2S2O3 (N/A)	V69U-40 mL VOA Unpreserved (N/A)	D69V-40 mL VOA H3PO4 (N/A)	KP7U-50 mL Plastic Unpreserved (N/A)	V/6K (3 vials per KQ-VPH/Gas kit (N/A)	SP5T-125 mL Sterile Plastic (N/A - a b)	SP2T-250 mL Sterile Plastic (N/A - b b)		BP3R-250 mL Plastic (NH2)2SO4 (9.3-9.7)	AG6U-100 mL Amber Unpreserved (N/A) (Cl-)	V5GU-20 mL Scintillation vials (N/A)	D69U-40 mL Amber Unpreserved vials (N/A)
CC																												
1																												
2																												
3																												
4																												
5																												
6																												
7																												
8																												
9																												
10																												
11																												
12																												

pH Adjustment Log for Preserved Samples						
Sample ID	Type of Preservative	pH upon receipt	Date preservation adjusted	Time preservation adjusted	Amount of Preservative added	Lot #

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DENR Certification Office (i.e. Out of hold, incorrect preservative, out of temp, incorrect containers.



September 20, 2024

Justin Ballard
Hart & Hickman
3921 Sunset Ridge Rd.
Suite 301
Raleigh, NC 27607

RE: Project: TCH-009
Pace Project No.: 92749875

Dear Justin Ballard:

Enclosed are the analytical results for sample(s) received by the laboratory on August 27, 2024. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

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

- Pace Analytical Services - Asheville
- Pace Analytical Services - Charlotte

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

Sincerely,

A handwritten signature in black ink that reads "Angela M. Baioni".

Angela Baioni for
Taylor M Cannon
taylor.cannon@pacelabs.com
704-977-0943
Project Manager

Enclosures



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: TCH-009
Pace Project No.: 92749875

Pace Analytical Services Charlotte

South Carolina Laboratory ID: 99006
9800 Kincey Ave. Ste 100, Huntersville, NC 28078
North Carolina Drinking Water Certification #: 37706
North Carolina Field Services Certification #: 5342
North Carolina Wastewater Certification #: 12
South Carolina Laboratory ID: 99006

South Carolina Certification #: 99006001
South Carolina Drinking Water Cert. #: 99006003
Florida/NELAP Certification #: E87627
Kentucky UST Certification #: 84
Louisiana DoH Drinking Water #: LA029
Virginia/VELAP Certification #: 460221

Pace Analytical Services Asheville

2225 Riverside Drive, Asheville, NC 28804
Florida/NELAP Certification #: E87648
North Carolina Drinking Water Certification #: 37712
North Carolina Wastewater Certification #: 40

South Carolina Laboratory ID: 99030
South Carolina Certification #: 99030001
Virginia/VELAP Certification #: 460222

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SAMPLE SUMMARY

Project: TCH-009

Pace Project No.: 92749875

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92749875001	HH-19A	Solid	08/26/24 16:09	08/27/24 10:00
92749875002	HH-20	Solid	08/26/24 16:10	08/27/24 10:00
92749875003	HH-21	Solid	08/26/24 16:15	08/27/24 10:00

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SAMPLE ANALYTE COUNT

Project: TCH-009
Pace Project No.: 92749875

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92749875001	HH-19A	EPA 7199	SMS1	1	PASI-C
		EPA 6010D	DBB1	1	PASI-A
		SW-846	KDF	1	PASI-C
92749875002	HH-20	EPA 7199	SMS1	1	PASI-C
		EPA 6010D	DBB1	1	PASI-A
		SW-846	KDF	1	PASI-C
92749875003	HH-21	EPA 7199	SMS1	1	PASI-C
		EPA 6010D	DBB1	1	PASI-A
		SW-846	KDF	1	PASI-C

PASI-A = Pace Analytical Services - Asheville
PASI-C = Pace Analytical Services - Charlotte

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ANALYTICAL RESULTS

Project: TCH-009
Pace Project No.: 92749875

Sample: HH-19A Lab ID: 92749875001 Collected: 08/26/24 16:09 Received: 08/27/24 10:00 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
7199 Chromium, Hexavalent Analytical Method: EPA 7199 Preparation Method: EPA 7199 Pace Analytical Services - Charlotte									
Chromium, Hexavalent	0.22J	mg/kg	1.8	0.0018	1	09/16/24 10:28	09/17/24 19:26	18540-29-9	B
6010 MET ICP Analytical Method: EPA 6010D Preparation Method: EPA 3050B Pace Analytical Services - Asheville									
Strontium	160	mg/kg	0.72	0.11	1	09/15/24 12:25	09/16/24 16:28	7440-24-6	
Percent Moisture Analytical Method: SW-846 Pace Analytical Services - Charlotte									
Percent Moisture	43.7	%	0.10	0.10	1		09/19/24 14:24		N2

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: TCH-009
Pace Project No.: 92749875

Sample: HH-20 Lab ID: 92749875002 Collected: 08/26/24 16:10 Received: 08/27/24 10:00 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
7199 Chromium, Hexavalent									
Analytical Method: EPA 7199 Preparation Method: EPA 7199 Pace Analytical Services - Charlotte									
Chromium, Hexavalent	ND	mg/kg	1.5	0.0015	1	09/16/24 10:28	09/17/24 19:43	18540-29-9	
6010 MET ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3050B Pace Analytical Services - Asheville									
Strontium	65.4	mg/kg	0.59	0.091	1	09/15/24 12:25	09/16/24 16:39	7440-24-6	
Percent Moisture									
Analytical Method: SW-846 Pace Analytical Services - Charlotte									
Percent Moisture	33.5	%	0.10	0.10	1		09/19/24 14:24		N2

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ANALYTICAL RESULTS

Project: TCH-009
Pace Project No.: 92749875

Sample: HH-21 Lab ID: 92749875003 Collected: 08/26/24 16:15 Received: 08/27/24 10:00 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
7199 Chromium, Hexavalent									
Analytical Method: EPA 7199 Preparation Method: EPA 7199 Pace Analytical Services - Charlotte									
Chromium, Hexavalent	0.020J	mg/kg	1.6	0.0016	1	09/16/24 10:28	09/17/24 20:01	18540-29-9	B
6010 MET ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3050B Pace Analytical Services - Asheville									
Strontium	53.8	mg/kg	0.43	0.067	1	09/15/24 12:25	09/16/24 16:42	7440-24-6	
Percent Moisture									
Analytical Method: SW-846 Pace Analytical Services - Charlotte									
Percent Moisture	35.8	%	0.10	0.10	1		09/19/24 14:24		N2

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: TCH-009

Pace Project No.: 92749875

QC Batch: 882749

Analysis Method: EPA 6010D

QC Batch Method: EPA 3050B

Analysis Description: 6010 MET

Laboratory: Pace Analytical Services - Asheville

Associated Lab Samples: 92749875001, 92749875002, 92749875003

METHOD BLANK: 4546420

Matrix: Solid

Associated Lab Samples: 92749875001, 92749875002, 92749875003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Strontium	mg/kg	ND	0.50	0.077	09/16/24 16:22	

LABORATORY CONTROL SAMPLE: 4546421

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Strontium	mg/kg	50	49.0	98	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 4546422 4546423

Parameter	Units	92749875001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Strontium	mg/kg	160	72.1	72.8	226	229	90	94	75-125	1	20	

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

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: TCH-009
Pace Project No.: 92749875

QC Batch: 882773 Analysis Method: EPA 7199
QC Batch Method: EPA 7199 Analysis Description: 7199 Chromium, Hexavalent
Laboratory: Pace Analytical Services - Charlotte
Associated Lab Samples: 92749875001, 92749875002, 92749875003

METHOD BLANK: 4546519 Matrix: Solid
Associated Lab Samples: 92749875001, 92749875002, 92749875003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chromium, Hexavalent	mg/kg	0.13J	1.0	0.0010	09/17/24 18:50	

LABORATORY CONTROL SAMPLE: 4546520

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chromium, Hexavalent	mg/kg	10	10.1	101	80-120	

MATRIX SPIKE SAMPLE: 4546521

Parameter	Units	92752023003 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chromium, Hexavalent	mg/kg	0.14J	1290	1280	100	75-125	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 4546522 4546523

Parameter	Units	92752032003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chromium, Hexavalent	mg/kg	1.2J	12.2	12.2	11.1	12.0	82	89	75-125	8	20	

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

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: TCH-009

Pace Project No.: 92749875

QC Batch: 883954

Analysis Method: SW-846

QC Batch Method: SW-846

Analysis Description: Dry Weight/Percent Moisture

Laboratory: Pace Analytical Services - Charlotte

Associated Lab Samples: 92749875001, 92749875002, 92749875003

SAMPLE DUPLICATE: 4552124

Parameter	Units	92749875001 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	43.7	43.3	1	25	N2

SAMPLE DUPLICATE: 4552125

Parameter	Units	92754388011 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	20.2	20.1	0	25	N2

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REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: TCH-009
Pace Project No.: 92749875

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.
ND - Not Detected at or above adjusted reporting limit.
TNTC - Too Numerous To Count
J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.
MDL - Adjusted Method Detection Limit.
PQL - Practical Quantitation Limit.
RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.
S - Surrogate
1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.
Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.
LCS(D) - Laboratory Control Sample (Duplicate)
MS(D) - Matrix Spike (Duplicate)
DUP - Sample Duplicate
RPD - Relative Percent Difference
NC - Not Calculable.
SG - Silica Gel - Clean-Up
U - Indicates the compound was analyzed for, but not detected.
Acid preservation may not be appropriate for 2 Chloroethylvinyl ether.
A separate vial preserved to a pH of 4-5 is recommended in SW846 Chapter 4 for the analysis of Acrolein and Acrylonitrile by EPA Method 8260.
N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.
Reported results are not rounded until the final step prior to reporting. Therefore, calculated parameters that are typically reported as "Total" may vary slightly from the sum of the reported component parameters.
Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.
TNI - The NELAC Institute.

ANALYTE QUALIFIERS

B	Analyte was detected in the associated method blank.
N2	The lab does not hold NELAC/TNI accreditation for this parameter but other accreditations/certifications may apply. A complete list of accreditations/certifications is available upon request.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: TCH-009

Pace Project No.: 92749875

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92749875001	HH-19A	EPA 7199	882773	EPA 7199	882994
92749875002	HH-20	EPA 7199	882773	EPA 7199	882994
92749875003	HH-21	EPA 7199	882773	EPA 7199	882994
92749875001	HH-19A	EPA 3050B	882749	EPA 6010D	882768
92749875002	HH-20	EPA 3050B	882749	EPA 6010D	882768
92749875003	HH-21	EPA 3050B	882749	EPA 6010D	882768
92749875001	HH-19A	SW-846	883954		
92749875002	HH-20	SW-846	883954		
92749875003	HH-21	SW-846	883954		

REPORT OF LABORATORY ANALYSIS

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DC#_Title: ENV-FRM-HUN1-0083 v05_Sample Condition Upon Receipt

Effective Date: 05/24/2024

Laboratory receiving samples:

Asheville ☐ Eden ☐ Greenwood ☐ Huntersville ☐ Raleigh ☐ Mechanicsville ☐ Atlanta ☒Sample Condition
Upon Receipt

Client Name:

Hart & Hickman

Project #:

WO#: 92749875

Courier:

☐ Commercial☐ Fed Ex☐ Pace☐ UPS☐ USPS☐ Other:☒ Client

PM: TMC

Due Date: 09/04/24

CLIENT: 92-Hart_Ral

Custody Seal Present? ☐ Yes☒ No

Seals Intact?

☐ Yes☐ No☒ N/A

Packing Material:

☐ Bubble Wrap☒ Bubble Bags☐ None☐ Other

Thermometer:

☐ IR Gun ID: 97005

Type of Ice:

☒ Wet☐ Blue☐ NoneDate/Initials Person Examining Contents: SM8/27/24

Biological Tissue Frozen?

☐ Yes☐ No☒ N/A

Cooler Temp:

8.4

Correction Factor:

Add/Subtract (°C)

0.0

Temp should be above freezing to 6°C

☐ Samples out of temp criteria. Samples on ice, cooling process has begun

Cooler Temp Corrected (°C):

8.4USDA Regulated Soil (☐ N/A, water sample)Did samples originate in a quarantine zone within the United States: CA, NY, or SC (check maps)? ☐ Yes ☐ NoDid samples originate from a foreign source (internationally, including Hawaii and Puerto Rico)? ☐ Yes ☐ No

Chain of Custody Present?

☒ Yes☐ No☐ N/A

Samples Arrived within Hold Time?

☒ Yes☐ No☐ N/A

Short Hold Time Analysis (<72 hr.)?

☐ Yes☒ No☐ N/A

Rush Turn Around Time Requested?

☐ Yes☒ No☐ N/A

Sufficient Volume?

☒ Yes☐ No☐ N/A

Correct Containers Used?

☒ Yes☐ No☐ N/A

-Pace Containers Used?

☒ Yes☐ No☐ N/A

Containers Intact?

☒ Yes☐ No☐ N/A

Dissolved analysis: Samples Field Filtered?

☐ Yes☒ No☐ N/A

Sample Labels Match COC?

☒ Yes☐ No☐ N/A-Includes Date/Time/ID/Analysis Matrix: WT

Headspace in VOA Vials (>5-6mm)?

☐ Yes☐ No☒ N/A

Trip Blank Present?

☐ Yes☐ No☒ N/A

Trip Blank Custody Seals Present?

☐ Yes☐ No☒ N/A

Comments/Discrepancy:

COMMENTS/SAMPLE DISCREPANCY

Field Data Required? ☐ Yes ☐ No

CLIENT NOTIFICATION/RESOLUTION

Lot ID of split containers:

Person contacted:

Date/Time:

Project Manager SCURF Review:

Date:

Project Manager SRF Review:

Date:



DC#_Title: ENV-FRM-HUN1-0083 v05_Sample Condition Upon Receipt

Effective Date: 05/24/2024

*Check mark top half of box if pH and/or dechlorination is verified and within the acceptance range for preservation samples.

Exceptions: VOA, Coliform, TOC, Oil and Grease, DRO/8015 (water) DOC, LLHg

**Bottom half of box is to list number of bottles

***Check all unpreserved Nitrates for chlorine

Project #

WO#: 92749875

PM: TMC

Due Date: 09/04/24

CLIENT: 92-Hart_Ral

Laboratory Receiving Location: Asheville ☐ Eden ☐ Greenwood ☐ Huntersville ☐ Raleigh ☒ Mechanicsville ☐ Atlanta ☐ Kernersville ☐

Client: Hart's H. Chmura Profile/EZ (Circle one) 3092116 Notes

Item#	BP4U-125 mL Plastic Unpreserved (N/A) (Cl-)	BP3U-250 mL Plastic Unpreserved (N/A)	BP2U-500 mL Plastic Unpreserved (N/A)	BP1U-1 liter Plastic Unpreserved (N/A)		BP4S-125 mL Plastic H2SO4 (pH < 2) (Cl-)	BP3N-250 mL plastic HNO3 (pH < 2)	BP4Z-125 mL Plastic 2N Acetate & NaOH (>9)	BP4B-125 mL Plastic NaOH (pH > 12) (Cl-)	WGfU-Wide-mouthed Glass Jar Unpreserved	AG1U-1 liter Amber Unpreserved (N/A) (Cl-)	AG1H-1 liter Amber HCl (pH < 2)	AG3U-250 mL Amber Unpreserved (N/A) (Cl-)	AG1S-1 liter Amber H2SO4 (pH < 2)	AG3S-250 mL Amber H2SO4 (pH < 2)	DG94-40 mL Amber NH4Cl (N/A)(Cl-)	DG9H-40 mL VOA HCl (N/A)	VG9T-40 mL VOA Na2S2O3 (N/A)	VG9U-40 mL VOA Unpreserved (N/A)	DG9V-40 mL VOA H3PO4 (N/A)	KP7U-50 mL Plastic Unpreserved (N/A)	V/GK (3 Vials per kit)-VPH/Gas kit (N/A)	SP5T-125 mL Sterile Plastic (N/A - lab)	SP2T-250 mL Sterile Plastic (N/A - lab)		BP3R-250 mL Plastic (NH2)2SO4 (9.3-9.7)	AG0U-100 mL Amber Unpreserved (N/A) (Cl-)	VSGU-20 mL Scintillation vials (N/A)	DG9U-40 mL Amber Unpreserved vials (N/A)		
CC										SI																					
1										1																					
2										1																					
3										2																					
4																															
5																															
6																															
7																															
8																															
9																															
10																															
11																															
12																															

pH Adjustment Log for Preserved Samples

Sample ID	Type of Preservative	pH upon receipt	Date preservation adjusted	Time preservation adjusted	Amount of Preservative added	Lot #

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DENR Certification Office (i.e. Out of hold, incorrect preservative, out of temp, incorrect containers.

September 16, 2024

Taylor Cannon
Pace Analytical Services - NC
9800 Kinsey Avenue, Suite 100
Huntersville, NC 28078

Project Location: TCH-009
Client Job Number:
Project Number: 92749875
Laboratory Work Order Number: 24H4397

Enclosed are results of analyses for samples as received by the laboratory on August 30, 2024. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Rebecca Faust
Project Manager

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39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Pace Analytical Services - NC
9800 Kinsey Avenue, Suite 100
Huntersville, NC 28078
ATTN: Taylor Cannon

REPORT DATE: 9/16/2024

PURCHASE ORDER NUMBER:

PROJECT NUMBER: 92749875

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 24H4397

The results of analyses performed on the following samples submitted to CON-TEST, a Pace Analytical Laboratory, are found in this report.

PROJECT LOCATION: TCH-009

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
HH-19A	24H4397-01	Soil		SM 2540G	
				SW-846 6020B	
				SW-846 7471B	
HH-20	24H4397-02	Soil		SM 2540G	
				SW-846 6020B	
				SW-846 7471B	
HH-21	24H4397-03	Soil		SM 2540G	
				SW-846 6020B	
				SW-846 7471B	

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CASE NARRATIVE SUMMARY

All reported results are within defined laboratory quality control objectives unless listed below or otherwise qualified in this report.

REVISED REPORT: Metals list edited. 9/16/24

SM 2540G

Qualifications:

H-06

Sample was extracted past the recommended holding time.

Analyte & Samples(s) Qualified:

% Solids

24H4397-01[HH-19A], 24H4397-02[HH-20], 24H4397-03[HH-21]

SW-846 6020B

Qualifications:

L-07

Either laboratory fortified blank/laboratory control sample or duplicate recovery is outside of control limits, but the other is within limits. RPD between the two LFB/LCS results is within method specified criteria.

Analyte & Samples(s) Qualified:

Barium

B384764-BS1, B384764-BSD1

MS-19

Sample to spike ratio is greater than or equal to 4:1. Spiked amount is not representative of the native amount in the sample. Appropriate or meaningful recoveries cannot be calculated.

Analyte & Samples(s) Qualified:

Barium

B384764-MS2

Chromium

B384764-PS1

Manganese

24H4397-01[HH-19A], B384764-MS5

The results of analyses reported only relate to samples submitted to Con-Test, a Pace Analytical Laboratory, for testing.

I certify that the analyses listed above, unless specifically listed as subcontracted, if any, were performed under my direction according to the approved methodologies listed in this document, and that based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.



Meghan E. Kelley
Reporting Specialist

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: TCH-009

Sample Description:

Work Order: 24H4397

Date Received: 8/30/2024

Field Sample #: HH-19A

Sampled: 8/26/2024 16:09

Sample ID: 24H4397-01

Sample Matrix: Soil

Metals Analyses (Total)

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Arsenic	12	0.28	0.25	mg/Kg dry	5		SW-846 6020B	8/31/24	9/3/24 16:57	AAJ
Beryllium	1.4	0.43	0.077	mg/Kg dry	5		SW-846 6020B	8/31/24	9/3/24 14:10	AAJ
Chromium	22	7.1	2.5	mg/Kg dry	5		SW-846 6020B	8/31/24	9/3/24 14:10	AAJ
Cobalt	18	5.7	1.5	mg/Kg dry	10		SW-846 6020B	8/31/24	9/16/24 16:28	AAJ
Copper	36	7.1	1.8	mg/Kg dry	5		SW-846 6020B	8/31/24	9/3/24 14:10	AAJ
Manganese	10000	740	190	mg/Kg dry	500	MS-19	SW-846 6020B	8/31/24	9/13/24 15:58	AAJ
Mercury	0.12	0.044	0.020	mg/Kg dry	1		SW-846 7471B	9/3/24	9/3/24 19:55	AAJ
Nickel	14	7.1	2.3	mg/Kg dry	5		SW-846 6020B	8/31/24	9/3/24 14:10	AAJ
Selenium	1.7	2.3	0.64	mg/Kg dry	5	J	SW-846 6020B	8/31/24	9/3/24 14:10	AAJ
Barium	760	140	33	mg/Kg dry	50		SW-846 6020B	8/31/24	9/3/24 16:53	AAJ
Cadmium	0.29	0.57	0.10	mg/Kg dry	5	J	SW-846 6020B	8/31/24	9/3/24 14:10	AAJ

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: TCH-009

Date Received: 8/30/2024

Field Sample #: HH-19A

Sample ID: 24H4397-01

Sample Matrix: Soil

Sample Description:

Sampled: 8/26/2024 16:09

Work Order: 24H4397

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)									
Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	56.2		% Wt	1	H-06	SM 2540G	9/3/24	9/3/24 9:10	NEC

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: TCH-009

Sample Description:

Work Order: 24H4397

Date Received: 8/30/2024

Field Sample #: HH-20

Sampled: 8/26/2024 16:10

Sample ID: 24H4397-02

Sample Matrix: Soil

Metals Analyses (Total)

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Arsenic	3.3	0.24	0.21	mg/Kg dry	5		SW-846 6020B	8/31/24	9/3/24 16:59	AAJ
Beryllium	0.77	0.36	0.066	mg/Kg dry	5		SW-846 6020B	8/31/24	9/3/24 14:12	AAJ
Chromium	11	6.0	2.1	mg/Kg dry	5		SW-846 6020B	8/31/24	9/3/24 14:12	AAJ
Cobalt	3.8	2.4	0.63	mg/Kg dry	5		SW-846 6020B	8/31/24	9/16/24 16:11	AAJ
Copper	16	6.0	1.6	mg/Kg dry	5		SW-846 6020B	8/31/24	9/3/24 14:12	AAJ
Manganese	570	63	16	mg/Kg dry	50		SW-846 6020B	8/31/24	9/13/24 16:25	AAJ
Mercury	0.030	0.036	0.016	mg/Kg dry	1	J	SW-846 7471B	9/3/24	9/3/24 19:58	AAJ
Nickel	6.1	6.0	2.0	mg/Kg dry	5		SW-846 6020B	8/31/24	9/3/24 14:12	AAJ
Selenium	0.62	1.9	0.54	mg/Kg dry	5	J	SW-846 6020B	8/31/24	9/3/24 14:12	AAJ
Barium	180	12	2.8	mg/Kg dry	5		SW-846 6020B	8/31/24	9/3/24 14:12	AAJ
Cadmium	0.13	0.48	0.088	mg/Kg dry	5	J	SW-846 6020B	8/31/24	9/3/24 14:12	AAJ

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: TCH-009

Sample Description:

Work Order: 24H4397

Date Received: 8/30/2024

Field Sample #: HH-20

Sampled: 8/26/2024 16:10

Sample ID: 24H4397-02

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	67.8		% Wt	1	H-06	SM 2540G	9/3/24	9/3/24 9:10	NEC

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: TCH-009

Sample Description:

Work Order: 24H4397

Date Received: 8/30/2024

Field Sample #: HH-21

Sampled: 8/16/2024 16:00

Sample ID: 24H4397-03

Sample Matrix: Soil

Metals Analyses (Total)

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Arsenic	3.4	0.26	0.23	mg/Kg dry	5		SW-846 6020B	8/31/24	9/3/24 17:02	AAJ
Beryllium	0.78	0.39	0.071	mg/Kg dry	5		SW-846 6020B	8/31/24	9/3/24 14:15	AAJ
Chromium	13	6.5	2.3	mg/Kg dry	5		SW-846 6020B	8/31/24	9/3/24 14:15	AAJ
Cobalt	4.0	2.6	0.68	mg/Kg dry	5		SW-846 6020B	8/31/24	9/16/24 16:13	AAJ
Copper	15	6.5	1.7	mg/Kg dry	5		SW-846 6020B	8/31/24	9/3/24 14:15	AAJ
Manganese	720	68	17	mg/Kg dry	50		SW-846 6020B	8/31/24	9/13/24 16:30	AAJ
Mercury	0.024	0.041	0.018	mg/Kg dry	1	J	SW-846 7471B	9/3/24	9/3/24 20:00	AAJ
Nickel	5.8	6.5	2.1	mg/Kg dry	5	J	SW-846 6020B	8/31/24	9/3/24 14:15	AAJ
Selenium	ND	2.1	0.59	mg/Kg dry	5		SW-846 6020B	8/31/24	9/3/24 14:15	AAJ
Barium	180	13	3.0	mg/Kg dry	5		SW-846 6020B	8/31/24	9/3/24 14:15	AAJ
Cadmium	0.12	0.52	0.095	mg/Kg dry	5	J	SW-846 6020B	8/31/24	9/3/24 14:15	AAJ

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: TCH-009

Sample Description:

Work Order: 24H4397

Date Received: 8/30/2024

Sampled: 8/16/2024 16:00

Field Sample #: HH-21

Sample ID: 24H4397-03

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)									
Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	62.0		% Wt	1	H-06	SM 2540G	9/3/24	9/3/24 9:10	NEC

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Sample Extraction Data

Prep Method:% Solids **Analytical Method:**SM 2540G

Lab Number [Field ID]	Batch	Date
24H4397-01 [HH-19A]	B384806	09/03/24
24H4397-02 [HH-20]	B384806	09/03/24
24H4397-03 [HH-21]	B384806	09/03/24

Prep Method:SW-846 3050B **Analytical Method:**SW-846 6020B

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
24H4397-01 [HH-19A]	B384764	1.57	50.0	08/31/24
24H4397-02 [HH-20]	B384764	1.53	50.0	08/31/24
24H4397-03 [HH-21]	B384764	1.54	50.0	08/31/24

Prep Method:SW-846 7471 **Analytical Method:**SW-846 7471B

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
24H4397-01 [HH-19A]	B384794	0.608	50.0	09/03/24
24H4397-02 [HH-20]	B384794	0.612	50.0	09/03/24
24H4397-03 [HH-21]	B384794	0.594	50.0	09/03/24

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QUALITY CONTROL
Metals Analyses (Total) - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B384764 - SW-846 3050B										
Blank (B384764-BLK1)				Prepared: 08/31/24 Analyzed: 09/03/24						
Chromium	ND	4.1	mg/Kg wet							
Copper	ND	4.1	mg/Kg wet							
Selenium	ND	1.3	mg/Kg wet							
Barium	ND	8.1	mg/Kg wet							
Cadmium	ND	0.33	mg/Kg wet							
Blank (B384764-BLK2)				Prepared: 08/31/24 Analyzed: 09/03/24						
Arsenic	ND	0.16	mg/Kg wet							
Blank (B384764-BLK3)				Prepared: 08/31/24 Analyzed: 09/03/24						
Beryllium	ND	0.24	mg/Kg wet							
Nickel	ND	4.1	mg/Kg wet							
Blank (B384764-BLK4)				Prepared: 08/31/24 Analyzed: 09/13/24						
Manganese	ND	4.2	mg/Kg wet							
Blank (B384764-BLK5)				Prepared: 08/31/24 Analyzed: 09/16/24						
Cobalt	ND	1.6	mg/Kg wet							
LCS (B384764-BS1)				Prepared: 08/31/24 Analyzed: 09/03/24						
Chromium	183	50	mg/Kg wet	180		102	81.1-118.3			
Copper	212	50	mg/Kg wet	205		104	82.9-117.1			
Selenium	167	16	mg/Kg wet	165		101	80.6-119.4			
Barium	358	99	mg/Kg wet	304		118 *	82.8-117.2			L-07
Cadmium	231	4.0	mg/Kg wet	212		109	82.5-117.9			
LCS (B384764-BS2)				Prepared: 08/31/24 Analyzed: 09/03/24						
Arsenic	342	2.0	mg/Kg wet	311		110	81.7-118.3			
LCS (B384764-BS3)				Prepared: 08/31/24 Analyzed: 09/03/24						
Beryllium	148	3.0	mg/Kg wet	169		87.3	82.8-117.2			
Nickel	334	50	mg/Kg wet	313		107	82.4-117.6			
LCS (B384764-BS4)				Prepared: 08/31/24 Analyzed: 09/13/24						
Manganese	544	52	mg/Kg wet	531		102	80.8-119.2			
LCS (B384764-BS5)				Prepared: 08/31/24 Analyzed: 09/16/24						
Cobalt	84.5	20	mg/Kg wet	81.6		104	83.2-116.9			
LCS Dup (B384764-BSD1)				Prepared: 08/31/24 Analyzed: 09/03/24						
Chromium	191	49	mg/Kg wet	180		106	81.1-118.3	4.26	30	
Copper	217	49	mg/Kg wet	205		106	82.9-117.1	2.27	30	
Selenium	177	16	mg/Kg wet	165		107	80.6-119.4	5.60	30	
Barium	356	98	mg/Kg wet	304		117	82.8-117.2	0.649	20	L-07
Cadmium	236	3.9	mg/Kg wet	212		111	82.5-117.9	2.23	20	

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QUALITY CONTROL
Metals Analyses (Total) - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B384764 - SW-846 3050B										
LCS Dup (B384764-BSD2)					Prepared: 08/31/24 Analyzed: 09/03/24					
Arsenic	345	2.0	mg/Kg wet	311		111	81.7-118.3	0.806	30	
LCS Dup (B384764-BSD3)					Prepared: 08/31/24 Analyzed: 09/03/24					
Beryllium	170	3.0	mg/Kg wet	169		101	82.8-117.2	14.1	30	
Nickel	341	49	mg/Kg wet	313		109	82.4-117.6	1.99	30	
LCS Dup (B384764-BSD4)					Prepared: 08/31/24 Analyzed: 09/13/24					
Manganese	605	51	mg/Kg wet	531		114	80.8-119.2	10.7	30	
LCS Dup (B384764-BSD5)					Prepared: 08/31/24 Analyzed: 09/16/24					
Cobalt	83.9	20	mg/Kg wet	81.6		103	83.2-116.9	0.681	20	
Duplicate (B384764-DUP1)					Source: 24H4397-01		Prepared: 08/31/24 Analyzed: 09/03/24			
Chromium	21.5	7.3	mg/Kg dry			21.5		0.0242	35	
Copper	37.5	7.3	mg/Kg dry			35.8		4.81	35	
Selenium	1.80	2.3	mg/Kg dry			1.74		3.67	35	J
Cadmium	0.293	0.58	mg/Kg dry			0.286		2.47	35	J
Duplicate (B384764-DUP2)					Source: 24H4397-01		Prepared: 08/31/24 Analyzed: 09/03/24			
Arsenic	11.5	0.29	mg/Kg dry			11.5		0.419	35	
Barium	658	150	mg/Kg dry			758		14.2	35	
Duplicate (B384764-DUP4)					Source: 24H4397-01		Prepared: 08/31/24 Analyzed: 09/03/24			
Beryllium	1.50	0.44	mg/Kg dry			1.44		4.09	35	
Nickel	13.8	7.3	mg/Kg dry			13.7		0.500	35	
Duplicate (B384764-DUP5)					Source: 24H4397-01		Prepared: 08/31/24 Analyzed: 09/13/24			
Manganese	8340	760	mg/Kg dry			10100		18.6	35	
Duplicate (B384764-DUP6)					Source: 24H4397-01		Prepared: 08/31/24 Analyzed: 09/16/24			
Cobalt	16.9	5.8	mg/Kg dry			18.0		6.01	35	
Matrix Spike (B384764-MS1)					Source: 24H4397-01		Prepared: 08/31/24 Analyzed: 09/03/24			
Chromium	50.2	28	mg/Kg dry	28.2	21.5	102	75-125			
Copper	99.1	28	mg/Kg dry	56.3	35.8	112	75-125			
Selenium	22.2	9.0	mg/Kg dry	28.2	ND	78.9	75-125			
Cadmium	28.0	2.3	mg/Kg dry	28.2	ND	99.3	75-125			
Matrix Spike (B384764-MS2)					Source: 24H4397-01		Prepared: 08/31/24 Analyzed: 09/03/24			
Arsenic	39.0	1.1	mg/Kg dry	28.2	11.5	97.6	75-125			
Barium	704	140	mg/Kg dry	28.2	758	-194 *	75-125			MS-19
Matrix Spike (B384764-MS4)					Source: 24H4397-01		Prepared: 08/31/24 Analyzed: 09/03/24			
Beryllium	26.7	1.7	mg/Kg dry	28.2	1.44	89.8	75-125			
Nickel	42.6	28	mg/Kg dry	28.2	13.7	103	75-125			

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QUALITY CONTROL
Metals Analyses (Total) - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B384764 - SW-846 3050B										
Matrix Spike (B384764-MS5)		Source: 24H4397-01		Prepared: 08/31/24 Analyzed: 09/13/24						
Manganese	8360	730	mg/Kg dry	28.2	10100	-6020 *	75-125			MS-19
Matrix Spike (B384764-MS6)		Source: 24H4397-01		Prepared: 08/31/24 Analyzed: 09/16/24						
Cobalt	49.1	11	mg/Kg dry	28.2	18.0	110	75-125			
Post Spike (B384764-PS1)		Source: 24H4397-01		Prepared: 08/31/24 Analyzed: 09/03/24						
Chromium	309		µg/L	20.0	379	-349 *	75-125			MS-19
Cadmium	22.6		µg/L	20.0	5.03	87.8	75-125			
Dilution Check (B384764-SRL1)		Source: 24H4397-01		Prepared: 08/31/24 Analyzed: 09/03/24						
Chromium	22.9	35	mg/Kg dry		21.5			6.16	20	J
Cadmium	ND	2.8	mg/Kg dry		ND				20	
Dilution Check (B384764-SRL2)		Source: 24H4397-01		Prepared: 08/31/24 Analyzed: 09/03/24						
Beryllium	1.62	2.1	mg/Kg dry		1.44			11.8	20	J
Nickel	16.0	35	mg/Kg dry		13.7			15.7	20	J
Batch B384794 - SW-846 7471										
Blank (B384794-BLK1)		Prepared & Analyzed: 09/03/24								
Mercury	ND	0.025	mg/Kg wet							
LCS (B384794-BS1)		Prepared & Analyzed: 09/03/24								
Mercury	8.84	0.37	mg/Kg wet	11.9		74.3	67.1-131.9			
LCS Dup (B384794-BSD1)		Prepared & Analyzed: 09/03/24								
Mercury	8.33	0.37	mg/Kg wet	11.9		70.0	67.1-131.9	5.92	20	

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FLAG/QUALIFIER SUMMARY

*	QC result is outside of established limits.
†	Wide recovery limits established for difficult compound.
‡	Wide RPD limits established for difficult compound.
#	Data exceeded client recommended or regulatory level
ND	Not Detected
RL	Reporting Limit is at the level of quantitation (LOQ)
DL	Detection Limit is the lower limit of detection determined by the MDL study
MCL	Maximum Contaminant Level
	Percent recoveries and relative percent differences (RPDs) are determined by the software using values in the calculation which have not been rounded.
	No results have been blank subtracted unless specified in the case narrative section.
H-06	Sample was extracted past the recommended holding time.
J	Detected but below the Reporting Limit (lowest calibration standard); therefore, result is an estimated concentration (CLP J-Flag).
L-07	Either laboratory fortified blank/laboratory control sample or duplicate recovery is outside of control limits, but the other is within limits. RPD between the two LFB/LCS results is within method specified criteria.
MS-19	Sample to spike ratio is greater than or equal to 4:1. Spiked amount is not representative of the native amount in the sample. Appropriate or meaningful recoveries cannot be calculated.

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CERTIFICATIONS
Certified Analyses included in this Report

Analyte	Certifications
<i>SW-846 6020B in Soil</i>	
Arsenic	NY,VA,NH,NC,ME,CT
Beryllium	VA,NY,NH,NC,ME,CT
Chromium	NY,NC,ME,VA,NH,CT
Cobalt	NY,NC,ME,VA,NH,CT
Copper	NY,NC,ME,VA,NH,CT
Manganese	NY,NC,ME,VA,NH,CT
Nickel	NY,NC,ME,VA,NH,CT
Selenium	NY,VA,NH,NC,ME,CT
Barium	NY,NC,CT,NH,ME,VA
Cadmium	NY,NC,ME,CT,VA,NH

SW-846 7471B in Soil

Mercury	CT,NH,NY,NC,ME,VA
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Con-Test, a Pace Environmental Laboratory, operates under the following certifications and accreditations:

Code	Description	Number	Expires
CT	Connecticut Department of Public Health	PH-0821	12/31/2024
NY	New York State Department of Health	10899 NELAP	04/1/2025
NH	New Hampshire Environmental Lab	2516 NELAP	02/5/2025
NC	North Carolina Div. of Water Quality	652	12/31/2024
ME	State of Maine	MA00100	06/9/2025
VA	Commonwealth of Virginia	460217	12/14/2024

24111397 RF

Internal Transfer Chain of Custody



☐ Rush Multiplier ☒ X
☐ Samples Pre-Logged into eCOC
Workorder: 92749875 Workorder Name: TCH-009


State Of Origin: NC
Cert. Needed: ☐ Yes ☐ No
Owner Received Date: 8/27/2024 Results Requested By: 9/4/2024

Report To				Subcontract To				Requested Analysis													
Taylor M Cannon Pace Analytical Charlotte 9800 Kinney Ave. Suite 100 Huntersville, NC 28078 Phone 704-977-0943				Pace New England 39 Spruce St East Longmeadow, MA 01028 Phone (413)525-2332																	
Item	Sample ID	Sample Type	Collect Date/Time	Lab ID	Matrix	Preserved Containers				6020/7471 Metals								LAB USE ONLY			
						Unpreserved															
1	HH-19A	PS	8/26/2024 16:09	92749875001	Solid	1															
2	HH-20	PS	8/26/2024 16:10	92749875002	Solid	1															
3	HH-21	PS	8/16/2024 16:15	92749875003	Solid	1															
4																					
5																					

Transfers	Released By	Date/Time	Received By	Date/Time	Select metals list, see #WO 24G4180	Comments
1	<i>[Signature]</i>		<i>[Signature]</i>			
2	<i>[Signature]</i>		<i>[Signature]</i>			
3						

Cooler Temperature on Receipt *26* °C Custody Seal Y or N Received on Ice Y or N Samples Intact Y or N

***In order to maintain client confidentiality, location/name of the sampling site, sampler's name and signature may not be provided on this COC document.
This chain of custody is considered complete as is since this information is available in the owner laboratory.

	DC#_Title: ENV-FRM-ELON-0001 v08_Sample Receiving Checklist
	Effective Date: 06/11/2024

Log In Back-Sheet

Login Sample Receipt Checklist – (Rejection Criteria Listing – Using Acceptance Policy) Any False statement will be brought to the attention of the Client – True or False

Client Pace NC
 Project + 90149875
 MCP/RCP Required no
 Deliverable Package Requirement none
 Location NC
 PWSID# (When Applicable) no
 Arrival Method:
 Courier ☐ Fed Ex ☒ Walk In ☐ Other ☐
 Received By / Date / Time Mon 8/20/24 0856
 Back-Sheet By / Date / Time Mon 8/20/24 1703
 Temperature Method Gun # 6
 WV samples: Yes (see note*) / No (follow normal procedure)
 Temp < 6° C Actual Temperature 36
 Rush Samples: Yes / No Notify Yes Metals Trans
 Short Hold: Yes / No Notify No

Notes regarding Samples/COC outside of SOP:

	True	False
Received on Ice	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Received in Cooler	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Custody Seal: DATE TIME	<input type="checkbox"/>	<input checked="" type="checkbox"/>
COC Relinquished	<input checked="" type="checkbox"/>	<input type="checkbox"/>
COC/Samples Labels Agree	<input checked="" type="checkbox"/>	<input type="checkbox"/>
All Samples in Good Condition	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Samples Received within Holding Time	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Is there enough Volume	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Proper Media/Container Used	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Splitting Samples Required	<input type="checkbox"/>	<input checked="" type="checkbox"/>
MS/MSD	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Trip Blanks	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Lab to Filters	<input type="checkbox"/>	<input checked="" type="checkbox"/>
COC Legible	<input checked="" type="checkbox"/>	<input type="checkbox"/>
COC Included: (Check all included)		
Client <input checked="" type="checkbox"/>	Analysis <input checked="" type="checkbox"/>	Sampler Name <input type="checkbox"/>
Project <input checked="" type="checkbox"/>	IDs <input checked="" type="checkbox"/>	Collection Date/Time <input checked="" type="checkbox"/>
All Samples Proper pH: <u>N/A</u> <input type="checkbox"/> <input type="checkbox"/>		

Additional Container Notes

**Note: West Virginia requires all samples to have their temperature taken. Note any outliers.*

[illegible]



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Friday

8/30/24 at 9:56 AM

Signed for by: L.ARROYO

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DELIVERY STATUS

Delivered ✓

Report missing package

TRACKING ID

744232880947

FROM

Huntersville, NC US

Label Created

8/29/24 4:22 PM

WE HAVE YOUR PACKAGE

CONCORD, NC

8/29/24 5:32 PM

ON THE WAY

WINDSOR LOCKS, CT

8/30/24 8:26 AM

OUT FOR DELIVERY

WINDSOR LOCKS, CT

8/30/24 8:43 AM

DELIVERED

EAST LONGMEADOW, MA US

Delivered

8/30/24 at 9:56 AM

View travel history

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SUBMIT

MORE OPTIONS

August 14, 2024

Justin Ballard
Hart & Hickman - Raleigh, NC
3921 Sunset Ridge Rd., Suite 301
Raleigh, NC 27607

Project Location: Chapel Hill, NC
Client Job Number:
Project Number: TCH-009
Laboratory Work Order Number: 24G4180

Enclosed are results of analyses for samples as received by the laboratory on July 31, 2024. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Rebecca Faust
Project Manager

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Hart & Hickman - Raleigh, NC
3921 Sunset Ridge Rd., Suite 301
Raleigh, NC 27607
ATTN: Justin Ballard

REPORT DATE: 8/14/2024

PURCHASE ORDER NUMBER: TCH-009

PROJECT NUMBER: TCH-009

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 24G4180

The results of analyses performed on the following samples submitted to CON-TEST, a Pace Analytical Laboratory, are found in this report.

PROJECT LOCATION: Chapel Hill, NC

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
HH-19	24G4180-01	Soil		SM 2540G	
				SW-846	NC DW37706, WW12/ FL NELAPE87627 +Additional
				SW-846 6010D	NC DW37706, WW12/ FL NELAPE87627 +Additional
				SW-846 6020B	
				SW-846 7471B	

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CASE NARRATIVE SUMMARY

All reported results are within defined laboratory quality control objectives unless listed below or otherwise qualified in this report.

SW-846 6020B

Qualifications:

DL-05

Sample required a dilution due to high internal standard recovery of the lesser diluted digestion, reporting limit is elevated.

Analyte & Samples(s) Qualified:

Selenium

24G4180-01[HH-19]

L-07

Either laboratory fortified blank/laboratory control sample or duplicate recovery is outside of control limits, but the other is within limits. RPD between the two LFB/LCS results is within method specified criteria.

Analyte & Samples(s) Qualified:

Arsenic

B381673-BS1, B381673-BSD1

Cadmium

B381673-BS1, B381673-BSD1

Selenium

B381673-BS2, B381673-BSD2

L-07A

Either laboratory fortified blank/laboratory control sample or duplicate recovery is outside of control limits, but the other is within limits. RPD outside of control limits. Reduced precision anticipated for any reported result for this compound.

Analyte & Samples(s) Qualified:

Barium

B381673-BS2, B381673-BSD2

V-20

Continuing calibration verification (CCV) did not meet method specifications and was biased on the high side. Data validation is not affected since sample result was "not detected" for this compound.

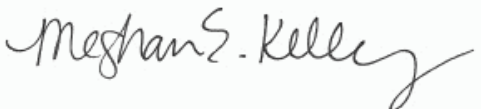
Analyte & Samples(s) Qualified:

Beryllium

S108555-CCV2

The results of analyses reported only relate to samples submitted to Con-Test, a Pace Analytical Laboratory, for testing.

I certify that the analyses listed above, unless specifically listed as subcontracted, if any, were performed under my direction according to the approved methodologies listed in this document, and that based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.



Meghan E. Kelley
Reporting Specialist

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Chapel Hill, NC

Sample Description:

Work Order: 24G4180

Date Received: 7/31/2024

Field Sample #: HH-19

Sampled: 7/29/2024 15:50

Sample ID: 24G4180-01

Sample Matrix: Soil

Metals Analyses (Total)

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Arsenic	9.2	0.24	0.21	mg/Kg dry	5		SW-846 6020B	7/31/24	8/5/24 10:52	AAJ
Beryllium	1.3	0.36	0.066	mg/Kg dry	5		SW-846 6020B	7/31/24	8/5/24 10:52	AAJ
Chromium	31	6.0	2.1	mg/Kg dry	5		SW-846 6020B	7/31/24	8/5/24 10:52	AAJ
Cobalt	24	9.7	2.5	mg/Kg dry	20		SW-846 6020B	7/31/24	8/6/24 16:07	AAJ
Copper	37	6.0	1.6	mg/Kg dry	5		SW-846 6020B	7/31/24	8/5/24 10:52	AAJ
Manganese	8600	630	160	mg/Kg dry	500		SW-846 6020B	7/31/24	8/6/24 16:09	AAJ
Mercury	0.10	0.036	0.016	mg/Kg dry	1		SW-846 7471B	8/5/24	8/6/24 10:57	AV
Nickel	13	6.0	2.0	mg/Kg dry	5		SW-846 6020B	7/31/24	8/5/24 10:52	AAJ
Selenium	ND	7.7	2.2	mg/Kg dry	20	DL-05	SW-846 6020B	7/31/24	8/6/24 16:07	AAJ
Barium	560	48	11	mg/Kg dry	20		SW-846 6020B	7/31/24	8/6/24 16:07	AAJ
Cadmium	0.22	0.48	0.088	mg/Kg dry	5	J	SW-846 6020B	7/31/24	8/5/24 10:52	AAJ

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Project Location: Chapel Hill, NC

Date Received: 7/31/2024

Field Sample #: HH-19

Sample ID: 24G4180-01

Sample Matrix: Soil

Sample Description:

Sampled: 7/29/2024 15:50

Work Order: 24G4180

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)										
Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	64.7			% Wt	1		SM 2540G	7/31/24	7/31/24 11:34	ANR

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Sample Extraction Data

Prep Method:% Solids Analytical Method:SM 2540G

Lab Number [Field ID]	Batch	Date
24G4180-01 [HH-19]	B381641	07/31/24

Prep Method:SW-846 3050B Analytical Method:SW-846 6020B

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
24G4180-01 [HH-19]	B381673	1.60	50.0	07/31/24

Prep Method:SW-846 7471 Analytical Method:SW-846 7471B

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
24G4180-01 [HH-19]	B381989	0.636	50.0	08/05/24

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

QUALITY CONTROL
Metals Analyses (Total) - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B381673 - SW-846 3050B										
Blank (B381673-BLK1)				Prepared: 07/31/24 Analyzed: 08/05/24						
Arsenic	ND	0.16	mg/Kg wet							
Beryllium	ND	0.25	mg/Kg wet							
Chromium	ND	4.1	mg/Kg wet							
Copper	ND	4.1	mg/Kg wet							
Nickel	ND	4.1	mg/Kg wet							
Cadmium	ND	0.33	mg/Kg wet							
Blank (B381673-BLK2)				Prepared: 07/31/24 Analyzed: 08/06/24						
Cobalt	ND	1.6	mg/Kg wet							
Manganese	ND	4.3	mg/Kg wet							
Selenium	ND	1.3	mg/Kg wet							
Barium	ND	8.2	mg/Kg wet							
LCS (B381673-BS1)				Prepared: 07/31/24 Analyzed: 08/05/24						
Arsenic	256	2.0	mg/Kg wet	311		82.3	81.7-118.3			L-07
Beryllium	164	3.0	mg/Kg wet	169		97.0	82.8-117.2			
Chromium	183	50	mg/Kg wet	180		102	81.1-118.3			
Copper	197	50	mg/Kg wet	205		96.0	82.9-117.1			
Nickel	300	50	mg/Kg wet	313		95.9	82.4-117.6			
Cadmium	189	4.0	mg/Kg wet	212		89.1	82.5-117.9			L-07
LCS (B381673-BS2)				Prepared: 07/31/24 Analyzed: 08/06/24						
Cobalt	81.3	20	mg/Kg wet	81.6		99.6	83.2-116.9			
Manganese	495	52	mg/Kg wet	531		93.3	80.8-119.2			
Selenium	135	16	mg/Kg wet	165		81.9	80.6-119.4			L-07
Barium	299	100	mg/Kg wet	304		98.2	82.8-117.2			L-07A
LCS Dup (B381673-BSD1)				Prepared: 07/31/24 Analyzed: 08/05/24						
Arsenic	237	2.0	mg/Kg wet	311		76.4	* 81.7-118.3	7.43	30	L-07
Beryllium	153	3.0	mg/Kg wet	169		90.8	82.8-117.2	6.68	30	
Chromium	170	50	mg/Kg wet	180		94.5	81.1-118.3	7.53	30	
Copper	183	50	mg/Kg wet	205		89.3	82.9-117.1	7.28	30	
Nickel	274	50	mg/Kg wet	313		87.5	82.4-117.6	9.20	30	
Cadmium	173	4.0	mg/Kg wet	212		81.6	* 82.5-117.9	8.81	20	L-07
LCS Dup (B381673-BSD2)				Prepared: 07/31/24 Analyzed: 08/06/24						
Cobalt	73.1	20	mg/Kg wet	81.6		89.6	83.2-116.9	10.5	20	
Manganese	449	52	mg/Kg wet	531		84.5	80.8-119.2	9.86	30	
Selenium	124	16	mg/Kg wet	165		75.3	* 80.6-119.4	8.40	30	L-07
Barium	243	100	mg/Kg wet	304		80.0	* 82.8-117.2	20.5	* 20	L-07A
Dilution Check (B381673-SRL1)				Source: 24G4203-01 Prepared: 07/31/24 Analyzed: 08/05/24						
Chromium	17.8	22	mg/Kg dry		16.2			9.45	20	J
Copper	38.2	22	mg/Kg dry		34.2			11.0	20	
Nickel	17.4	22	mg/Kg dry		14.6			17.7	20	J
Selenium	ND	7.0	mg/Kg dry		ND				20	
Cadmium	ND	1.7	mg/Kg dry		ND				20	

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

QUALITY CONTROL
Metals Analyses (Total) - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	--------------------	-------	----------------	------------------	------	----------------	-----	--------------	-------

Batch B381989 - SW-846 7471
Blank (B381989-BLK1)

Prepared: 08/05/24 Analyzed: 08/06/24

Mercury ND 0.024 mg/Kg wet

LCS (B381989-BS1)

Prepared: 08/05/24 Analyzed: 08/06/24

Mercury 9.89 1.8 mg/Kg wet 11.9 83.1 67.1-131.9

LCS Dup (B381989-BSD1)

Prepared: 08/05/24 Analyzed: 08/06/24

Mercury 9.68 1.7 mg/Kg wet 11.9 81.3 67.1-131.9 2.21 20

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

FLAG/QUALIFIER SUMMARY

*	QC result is outside of established limits.
†	Wide recovery limits established for difficult compound.
‡	Wide RPD limits established for difficult compound.
#	Data exceeded client recommended or regulatory level
ND	Not Detected
RL	Reporting Limit is at the level of quantitation (LOQ)
DL	Detection Limit is the lower limit of detection determined by the MDL study
MCL	Maximum Contaminant Level
	Percent recoveries and relative percent differences (RPDs) are determined by the software using values in the calculation which have not been rounded.
	No results have been blank subtracted unless specified in the case narrative section.
DL-05	Sample required a dilution due to high internal standard recovery of the lesser diluted digestion, reporting limit is elevated.
J	Detected but below the Reporting Limit (lowest calibration standard); therefore, result is an estimated concentration (CLP J-Flag).
L-07	Either laboratory fortified blank/laboratory control sample or duplicate recovery is outside of control limits, but the other is within limits. RPD between the two LFB/LCS results is within method specified criteria.
L-07A	Either laboratory fortified blank/laboratory control sample or duplicate recovery is outside of control limits, but the other is within limits. RPD outside of control limits. Reduced precision anticipated for any reported result for this compound.
V-20	Continuing calibration verification (CCV) did not meet method specifications and was biased on the high side. Data validation is not affected since sample result was "not detected" for this compound.

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

CERTIFICATIONS
Certified Analyses included in this Report

Analyte	Certifications
<i>SW-846 6020B in Soil</i>	
Arsenic	NY,VA,NH,NC,ME,CT
Beryllium	VA,NY,NH,NC,ME,CT
Chromium	NY,NC,ME,VA,NH,CT
Cobalt	NY,NC,ME,VA,NH,CT
Copper	NY,NC,ME,VA,NH,CT
Manganese	NY,NC,ME,VA,NH,CT
Nickel	NY,NC,ME,VA,NH,CT
Selenium	NY,VA,NH,NC,ME,CT
Barium	NY,NC,CT,NH,ME,VA
Cadmium	NY,NC,ME,CT,VA,NH
<i>SW-846 6020B in Water</i>	
Arsenic	CT,NH,NY,ME,VA,NC
Barium	NH,NY,ME,VA,NC
Beryllium	CT,NH,NY,ME,VA,NC
Cadmium	CT,NH,NY,RI,ME,VA,NC
Chromium	CT,NH,NY,ME,VA,NC
Cobalt	CT,NH,NY,ME,VA,NC
Copper	CT,NH,NY,ME,VA,NC
Manganese	CT,NH,NY,ME,VA,NC
Nickel	CT,NH,NY,ME,VA,NC
Selenium	CT,NH,NY,ME,VA,NC

SW-846 7471B in Soil

Mercury	CT,NH,NY,NC,ME,VA
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Con-Test, a Pace Environmental Laboratory, operates under the following certifications and accreditations:

Code	Description	Number	Expires
CT	Connecticut Department of Public Health	PH-0821	12/31/2024
NY	New York State Department of Health	10899 NELAP	04/1/2025
NH	New Hampshire Environmental Lab	2516 NELAP	02/5/2025
RI	Rhode Island Department of Health	LAO00373	12/30/2024
NC	North Carolina Div. of Water Quality	652	12/31/2024
ME	State of Maine	MA00100	06/9/2025
VA	Commonwealth of Virginia	460217	12/14/2024



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Delivered

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777692123067

FROM
RALEIGH, NC US*Label Created*
7/30/24 1:24 PM**WE HAVE YOUR PACKAGE**
RALEIGH, NC
7/30/24 5:03 PM**ON THE WAY**
WINDSOR LOCKS, CT
7/31/24 7:54 AM**OUT FOR DELIVERY**
WINDSOR LOCKS, CT
7/31/24 8:05 AM**DELIVERED**
EAST LONGMEADOW, MA US
Delivered
7/31/24 at 9:47 AM [View travel history](#)

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Your email

SUBMIT

	DC#_Title: ENV-FRM-ELON-0001 v08_Sample Receiving Checklist
	Effective Date: 06/11/2024

Log In Back-Sheet

Login Sample Receipt Checklist – (Rejection Criteria Listing
– Using Acceptance Policy) Any False statement will be
brought to the attention of the Client – True or False

Client Hurt des Hindman
 Project TCN
 MCP/RCP Required NA
 Deliverable Package Requirement N/A
 Location Chapel Hill
 PWSID# (When Applicable) NA
 Arrival Method:
 Courier ☒ Fed Ex ☒ Walk In ☐ Other ☐
 Received By / Date / Time LA 1/31/24 947
 Back-Sheet By / Date / Time LA 1/31/24 114
 Temperature Method gus #6
 WV samples: Yes (see note*) / No (follow normal procedure) No
 Temp U < 6° C Actual Temperature 3.9
 Rush Samples: Yes / No / Notify No
 Short Hold: Yes / No / Notify Trans

Notes regarding Samples/COC outside of SOP:

	True	False
Received on Ice	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Received in Cooler	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Custody Seal: DATE TIME	<input type="checkbox"/>	<input checked="" type="checkbox"/>
COC Relinquished	<input checked="" type="checkbox"/>	<input type="checkbox"/>
COC/Samples Labels Agree	<input checked="" type="checkbox"/>	<input type="checkbox"/>
All Samples in Good Condition	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Samples Received within Holding Time	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Is there enough Volume	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Proper Media/Container Used	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Splitting Samples Required	<input type="checkbox"/>	<input checked="" type="checkbox"/>
MS/MSD	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Trip Blanks	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Lab to Filters	<input type="checkbox"/>	<input checked="" type="checkbox"/>
COC Legible	<input checked="" type="checkbox"/>	<input type="checkbox"/>
COC Included: (Check all included)		
Client <input checked="" type="checkbox"/>	Analysis <input checked="" type="checkbox"/>	Sampler Name <input checked="" type="checkbox"/>
Project <input checked="" type="checkbox"/>	IDs <input checked="" type="checkbox"/>	Collection Date/Time <input checked="" type="checkbox"/>
All Samples Proper pH: <u>N/A</u> <input type="checkbox"/> <input type="checkbox"/>		

Additional Container Notes

**Note: West Virginia requires all samples to have their temperature taken. Note any outliers.*

Effective Date: 06/11/2024



August 14, 2024

Rebecca Faust
Pace New England
39 Spruce St.
East Longmeadow, MA 01028

RE: Project: TCH-009
Pace Project No.: 92745478

Dear Rebecca Faust:

Enclosed are the analytical results for sample(s) received by the laboratory on August 02, 2024. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

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

- Pace Analytical Services - Asheville
- Pace Analytical Services - Charlotte

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

Sincerely,

Taylor M Cannon
taylor.cannon@pacelabs.com
704-977-0943
Project Manager

Enclosures



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: TCH-009

Pace Project No.: 92745478

Pace Analytical Services Charlotte

South Carolina Laboratory ID: 99006

9800 Kinsey Ave. Ste 100, Huntersville, NC 28078

North Carolina Drinking Water Certification #: 37706

North Carolina Field Services Certification #: 5342

North Carolina Wastewater Certification #: 12

South Carolina Laboratory ID: 99006

South Carolina Certification #: 99006001

South Carolina Drinking Water Cert. #: 99006003

Florida/NELAP Certification #: E87627

Kentucky UST Certification #: 84

Louisiana DoH Drinking Water #: LA029

Virginia/VELAP Certification #: 460221

Pace Analytical Services Asheville

2225 Riverside Drive, Asheville, NC 28804

Florida/NELAP Certification #: E87648

North Carolina Drinking Water Certification #: 37712

North Carolina Wastewater Certification #: 40

South Carolina Laboratory ID: 99030

South Carolina Certification #: 99030001

Virginia/VELAP Certification #: 460222

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: TCH-009
Pace Project No.: 92745478

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92745478001	HH-19	Solid	07/29/24 15:50	08/02/24 09:55

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: TCH-009
Pace Project No.: 92745478

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92745478001	HH-19	EPA 7199	SMS1	1	PASI-C
		EPA 6010D	CRW	1	PASI-A
		SW-846	CHC	1	PASI-C

PASI-A = Pace Analytical Services - Asheville
PASI-C = Pace Analytical Services - Charlotte

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: TCH-009
Pace Project No.: 92745478

Sample: HH-19 Lab ID: 92745478001 Collected: 07/29/24 15:50 Received: 08/02/24 09:55 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
7199 Chromium, Hexavalent Analytical Method: EPA 7199 Preparation Method: EPA 7199 Pace Analytical Services - Charlotte									
Chromium, Hexavalent	0.35J	mg/kg	1.7	0.0017	1	08/04/24 13:55	08/05/24 22:04	18540-29-9	B
6010 MET ICP Analytical Method: EPA 6010D Preparation Method: EPA 3050B Pace Analytical Services - Asheville									
Strontium	144	mg/kg	0.75	0.12	1	08/08/24 15:30	08/09/24 15:10	7440-24-6	
Percent Moisture Analytical Method: SW-846 Pace Analytical Services - Charlotte									
Percent Moisture	42.3	%	0.10	0.10	1		08/05/24 16:07		N2

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: TCH-009

Pace Project No.: 92745478

QC Batch: 874271

Analysis Method: EPA 6010D

QC Batch Method: EPA 3050B

Analysis Description: 6010 MET

Laboratory: Pace Analytical Services - Asheville

Associated Lab Samples: 92745478001

METHOD BLANK: 4503797

Matrix: Solid

Associated Lab Samples: 92745478001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Strontium	mg/kg	ND	0.50	0.077	08/09/24 14:25	

LABORATORY CONTROL SAMPLE: 4503798

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Strontium	mg/kg	50	51.9	104	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 4503799 4503800

Parameter	Units	92745677021 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Strontium	mg/kg	27.2	31.2	30.9	56.4	56.3	94	94	75-125	0	20	

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

REPORT OF LABORATORY ANALYSIS

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Date: 08/14/2024 04:04 PM



QUALITY CONTROL DATA

Project: TCH-009

Pace Project No.: 92745478

QC Batch: 873276

Analysis Method: EPA 7199

QC Batch Method: EPA 7199

Analysis Description: 7199 Chromium, Hexavalent

Laboratory: Pace Analytical Services - Charlotte

Associated Lab Samples: 92745478001

METHOD BLANK: 4498703

Matrix: Solid

Associated Lab Samples: 92745478001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chromium, Hexavalent	mg/kg	0.10J	1.0	0.0010	08/05/24 16:16	

LABORATORY CONTROL SAMPLE: 4498704

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chromium, Hexavalent	mg/kg	10	10.9	109	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 4498705 4498706

Parameter	Units	92745336001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chromium, Hexavalent	mg/kg	1.5	11	11	13.0	12.5	104	99	75-125	4	20	

MATRIX SPIKE SAMPLE: 4498707

Parameter	Units	92745517004 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chromium, Hexavalent	mg/kg	ND	1440	1780	124	75-125	

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

REPORT OF LABORATORY ANALYSIS

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Date: 08/14/2024 04:04 PM



QUALITY CONTROL DATA

Project: TCH-009
Pace Project No.: 92745478

QC Batch:	873409	Analysis Method:	SW-846
QC Batch Method:	SW-846	Analysis Description:	Dry Weight/Percent Moisture
		Laboratory:	Pace Analytical Services - Charlotte

Associated Lab Samples: 92745478001

SAMPLE DUPLICATE: 4499115

Parameter	Units	92745517001 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	20.6	20.7	0	25	N2

SAMPLE DUPLICATE: 4499119

Parameter	Units	92745432001 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	23.3	24.1	3	25	N2

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

REPORT OF LABORATORY ANALYSIS

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Date: 08/14/2024 04:04 PM



QUALIFIERS

Project: TCH-009

Pace Project No.: 92745478

DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

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

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

Acid preservation may not be appropriate for 2 Chloroethylvinyl ether.

A separate vial preserved to a pH of 4-5 is recommended in SW846 Chapter 4 for the analysis of Acrolein and Acrylonitrile by EPA Method 8260.

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

Reported results are not rounded until the final step prior to reporting. Therefore, calculated parameters that are typically reported as "Total" may vary slightly from the sum of the reported component parameters.

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

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

B Analyte was detected in the associated method blank.

N2 The lab does not hold NELAC/TNI accreditation for this parameter but other accreditations/certifications may apply. A complete list of accreditations/certifications is available upon request.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: TCH-009
Pace Project No.: 92745478

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92745478001	HH-19	EPA 7199	873276	EPA 7199	873424
92745478001	HH-19	EPA 3050B	874271	EPA 6010D	874415
92745478001	HH-19	SW-846	873409		

REPORT OF LABORATORY ANALYSIS



Effective Date: 05/24/2024

Laboratory receiving samples:

Asheville ☐ Eden ☐ Greenwood ☐ Huntersville ☒ Raleigh ☐ Mechanicsville ☐ Atlanta ☐ Kernersville ☐Sample Condition
Upon Receipt

Client Name:

Hart & Hickman

Project #:

WO#: 92745478



Courier:

☐ Commercial☐ Fed Ex☐ UPS☐ USPS☐ Client☒ Pace☐ Other: _____Custody Seal Present? ☐ Yes☒ NoSeals Intact? ☐ Yes☐ No☒ N/A

Date/Initials Person Examining Contents:

HSB 8/2

Packing Material: ☐ Bubble Wrap ☒ Bubble Bags ☐ None ☐ Other

Biological Tissue Frozen?

☐ Yes ☐ No ☒ N/A

Thermometer:

☒ IR Gun ID:

92T078

Type of Ice:

☒ Wet☐ Blue☐ None

Cooler Temp:

4.4

Correction Factor:

Add/Subtract (°C)

0

Temp should be above freezing to 6°C

☐ Samples out of temp criteria. Samples on ice, cooling process has begun

Cooler Temp Corrected (°C):

4.4

USDA Regulated Soil (☐ N/A, water sample)Did samples originate in a quarantine zone within the United States: CA, NY, or SC (check maps)? ☐ Yes ☐ NoDid samples originate from a foreign source (internationally, including Hawaii and Puerto Rico)? ☐ Yes ☐ No

			Comments/Discrepancy:
Chain of Custody Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.	
Samples Arrived within Hold Time?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.	
Short Hold Time Analysis (<72 hr.)?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	3.	
Rush Turn Around Time Requested?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	4.	
Sufficient Volume?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.	
Correct Containers Used?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	6.	
-Pace Containers Used?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		
Containers Intact?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	7.	
Dissolved analysis: Samples Field Filtered?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	8.	
Sample Labels Match COC?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.	
-Includes Date/Time/ID/Analysis Matrix: <u>SI</u>			
Headspace in VOA Vials (>5-6mm)?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	10.	
Trip Blank Present?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.	
Trip Blank Custody Seals Present?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A		

COMMENTS/SAMPLE DISCREPANCY

Field Data Required? ☐ Yes ☐ No

Lot ID of split containers:

CLIENT NOTIFICATION/RESOLUTION

Person contacted: _____

Date/Time: _____

Project Manager SCURF Review: _____

Date: _____

Project Manager SRF Review: _____

Date: _____



Effective Date: 05/24/2024

*Check mark top half of box if pH and/or dechlorination is verified and within the acceptance range for preservation samples.

Exceptions: VOA, Coliform, TOC, Oil and Grease, DRO/8015 (water) DOC, LLHg

**Bottom half of box is to list number of bottles

***Check all unpreserved Nitrates for chlorine

Project # **W0# : 92745478**

PM: TMC

Due Date: 08/09/24

CLIENT: 92-Hart_Ral

Laboratory Receiving Location: Asheville ☐ Eden ☐ Greenwood ☐ Huntersville ☐ Raleigh ☐ Mechanicsville ☐ Atlanta ☐ Kernersville ☐

Client _____ Profile/EZ (Circle one) _____ Notes _____

Item#	BP4U-125 mL Plastic Unpreserved (N/A) (Cl-)	BP3U-250 mL Plastic Unpreserved (N/A)	BP2U-500 mL Plastic Unpreserved (N/A)	BP1U-1 liter Plastic Unpreserved (N/A)	BP4S-125 mL Plastic H2SO4 (pH < 2) (Cl-)	BP3N-250 mL plastic HNO3 (pH < 2)	BP4Z-125 mL Plastic 2N Acetate & NaOH (>9)	BP4B-125 mL Plastic NaOH (pH > 12) (Cl-)	WGfU-Wide-mouthed Glass jar Unpreserved	AG1U-1 liter Amber Unpreserved (N/A) (Cl-)	AG1H-1 liter Amber HCl (pH < 2)	AG3U-250 mL Amber Unpreserved (N/A) (Cl-)	AG1S-1 liter Amber H2SO4 (pH < 2)	AG3S-250 mL Amber H2SO4 (pH < 2)	DG9A-40 mL Amber NH4Cl (N/A)(Cl-)	DG9H-40 mL VOA HCl (N/A)	VG9T-40 mL VOA Na2S2O3 (N/A)	VG9U-40 mL VOA Unpreserved (N/A)	DG9V-40 mL VOA H3PO4 (N/A)	KP7U-50 mL Plastic Unpreserved (N/A)	V/GK (3 vials per kit)-VPH/Gas kit (N/A)	SP5T-125 mL Sterile Plastic (N/A – lab)	SP2T-250 mL Sterile Plastic (N/A – lab)	BP3R-250 mL Plastic (NH2)2SO4 (9.3-9.7)	AG0U-100 mL Amber Unpreserved (N/A) (Cl-)	VSGU-20 mL Scintillation vials (N/A)	DG9U-40 mL Amber Unpreserved vials (N/A)
CC																											
1																											
2																											
3																											
4																											
5																											
6																											
7																											
8																											
9																											
10																											
11																											
12																											

pH Adjustment Log for Preserved Samples

Sample ID	Type of Preservative	pH upon receipt	Date preservation adjusted	Time preservation adjusted	Amount of Preservative added	Lot #

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DENR Certification Office (i.e. Out of hold, incorrect preservative, out of temp, incorrect containers.

[illegible]



March 10, 2025

Justin Ballard
Hart & Hickman
3921 Sunset Ridge Rd.
Suite 301
Raleigh, NC 27607

RE: Project: TCH.009-3
Pace Project No.: 92778057

Dear Justin Ballard:

Enclosed are the analytical results for sample(s) received by the laboratory on February 06, 2025. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

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

- Pace Analytical Services - Asheville
- Pace Analytical Services - Charlotte

A revised report is being issued on 3/10/25 to include Zinc results for filtered samples.

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

Sincerely,

A handwritten signature in black ink, appearing to read "T Cannon".

Taylor M Cannon
taylor.cannon@pacelabs.com
704-977-0943
Project Manager

Enclosures



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: TCH.009-3
Pace Project No.: 92778057

Pace Analytical Services Charlotte

South Carolina Laboratory ID: 99006
9800 Kincey Ave. Ste 100, Huntersville, NC 28078
North Carolina Drinking Water Certification #: 37706
North Carolina Field Services Certification #: 5342
North Carolina Wastewater Certification #: 12
South Carolina Laboratory ID: 99006

South Carolina Certification #: 99006001
South Carolina Drinking Water Cert. #: 99006003
Florida/NELAP Certification #: E87627
Kentucky UST Certification #: 84
Louisiana DoH Drinking Water #: LA029
Virginia/VELAP Certification #: 460221

Pace Analytical Services Asheville

2225 Riverside Drive, Asheville, NC 28804
Florida/NELAP Certification #: E87648
North Carolina Drinking Water Certification #: 37712
North Carolina Wastewater Certification #: 40

South Carolina Laboratory ID: 99030
South Carolina Certification #: 99030001
Virginia/VELAP Certification #: 460222

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: TCH.009-3

Pace Project No.: 92778057

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92778057001	MW-1	Water	02/05/25 12:25	02/06/25 09:15
92778057002	MW-1A	Water	02/05/25 11:00	02/06/25 09:15
92778057003	MW-3A	Water	02/05/25 13:15	02/06/25 09:15
92778057004	MW-4A	Water	02/05/25 15:40	02/06/25 09:15
92778057005	MW-4A (FILTERED)	Water	02/05/25 15:40	02/06/25 09:15
92778057006	MW-6	Water	02/05/25 11:55	02/06/25 09:15
92778057007	MW-7	Water	02/05/25 16:55	02/06/25 09:15
92778057008	MW-7 (FILTERED)	Water	02/05/25 16:55	02/06/25 09:15
92778057009	MW-8 (FILTERED)	Water	02/05/25 14:50	02/06/25 09:15
92778057010	MW-8	Water	02/05/25 14:50	02/06/25 09:15
92778057011	DUP-1	Water	02/05/25 12:00	02/06/25 09:15

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SAMPLE ANALYTE COUNT

Project: TCH.009-3
Pace Project No.: 92778057

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92778057001	MW-1	EPA 7199	VJM	1	PASI-C
		EPA 6010D	DBB1, MGW	5	PASI-A
		EPA 6020B	DBB1	13	PASI-A
		EPA 7470A	MAB2	1	PASI-A
		SM 2540C-2015	YEG	1	PASI-A
92778057002	MW-1A	EPA 7199	VJM	1	PASI-C
		EPA 6010D	DBB1	5	PASI-A
		EPA 6020B	DBB1	13	PASI-A
		EPA 7470A	MAB2	1	PASI-A
		SM 2540C-2015	YEG	1	PASI-A
92778057003	MW-3A	EPA 7199	VJM	1	PASI-C
		EPA 6010D	DBB1	5	PASI-A
		EPA 6020B	DBB1	13	PASI-A
		EPA 7470A	MAB2	1	PASI-A
		SM 2540C-2015	YEG	1	PASI-A
92778057004	MW-4A	EPA 7199	VJM	1	PASI-C
		EPA 6010D	DBB1	5	PASI-A
		EPA 6020B	DBB1	13	PASI-A
		EPA 7470A	MAB2	1	PASI-A
		SM 2540C-2015	YEG	1	PASI-A
92778057005	MW-4A (FILTERED)	EPA 7199	VJM	1	PASI-C
		EPA 6010D	DBB1	5	PASI-A
		EPA 6020B	KML	13	PASI-A
		EPA 7470A	MAB2	1	PASI-A
		SM 2540C-2015	YEG	1	PASI-A
92778057006	MW-6	EPA 7199	VJM	1	PASI-C
		EPA 6010D	DBB1	5	PASI-A
		EPA 6020B	KRL	13	PASI-A
		EPA 7470A	MAB2	1	PASI-A
		SM 2540C-2015	YEG	1	PASI-A
92778057007	MW-7	EPA 7199	VJM	1	PASI-C
		EPA 6010D	DBB1	5	PASI-A
		EPA 6020B	KRL	13	PASI-A
		EPA 7470A	MAB2	1	PASI-A
		SM 2540C-2015	YEG	1	PASI-A
92778057008	MW-7 (FILTERED)	EPA 7199	VJM	1	PASI-C
		EPA 6010D	DBB1	5	PASI-A

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SAMPLE ANALYTE COUNT

Project: TCH.009-3

Pace Project No.: 92778057

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92778057009	MW-8 (FILTERED)	EPA 6020B	KML	13	PASI-A
		EPA 7470A	MAB2	1	PASI-A
		SM 2540C-2015	YEG	1	PASI-A
		EPA 7199	VJM	1	PASI-C
		EPA 6010D	DBB1	5	PASI-A
		EPA 6020B	KML	13	PASI-A
92778057010	MW-8	EPA 7470A	MAB2	1	PASI-A
		SM 2540C-2015	YEG	1	PASI-A
		EPA 7199	VJM	1	PASI-C
		EPA 6010D	DBB1	5	PASI-A
		EPA 6020B	KRL	13	PASI-A
		EPA 7470A	MAB2	1	PASI-A
92778057011	DUP-1	SM 2540C-2015	YEG	1	PASI-A
		EPA 7199	VJM	1	PASI-C
		EPA 6010D	DBB1	5	PASI-A
		EPA 6020B	KRL	13	PASI-A
		EPA 7470A	MAB2	1	PASI-A
		SM 2540C-2015	YEG	1	PASI-A

PASI-A = Pace Analytical Services - Asheville

PASI-C = Pace Analytical Services - Charlotte

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: TCH.009-3
Pace Project No.: 92778057

Sample: MW-1		Lab ID: 92778057001		Collected: 02/05/25 12:25		Received: 02/06/25 09:15		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
7199 Chromium, Hexavalent									
Analytical Method: EPA 7199 Pace Analytical Services - Charlotte									
Chromium, Hexavalent	ND	ug/L	0.025	0.0043	1		02/06/25 18:22	18540-29-9	H1,M1
6010 MET ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Asheville									
Barium	1200	ug/L	25.0	4.0	5	02/07/25 01:00	02/09/25 20:25	7440-39-3	M1
Boron	1090	ug/L	250	20.2	5	02/07/25 01:00	02/09/25 20:25	7440-42-8	M1
Manganese	10400	ug/L	100	17.2	20	02/07/25 01:00	02/10/25 17:26	7439-96-5	M1
Strontium	13900	ug/L	25.0	3.3	5	02/07/25 01:00	02/09/25 20:25	7440-24-6	M1
Zinc	43.6J	ug/L	50.0	15.2	5	02/07/25 01:00	02/09/25 20:25	7440-66-6	M1
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3010A Pace Analytical Services - Asheville									
Antimony	ND	ug/L	5.0	0.52	5	02/24/25 15:49	02/25/25 22:19	7440-36-0	D3
Arsenic	4.0J	ug/L	5.0	0.84	5	02/24/25 15:49	02/25/25 22:19	7440-38-2	
Beryllium	ND	ug/L	0.50	0.22	5	02/24/25 15:49	02/25/25 22:19	7440-41-7	D3
Cadmium	ND	ug/L	0.50	0.19	5	02/24/25 15:49	02/25/25 22:19	7440-43-9	D3
Chromium	ND	ug/L	5.0	2.0	5	02/24/25 15:49	02/25/25 22:19	7440-47-3	D3
Cobalt	9.8	ug/L	5.0	0.71	5	02/24/25 15:49	02/25/25 22:19	7440-48-4	
Copper	ND	ug/L	10.0	2.8	5	02/24/25 15:49	02/25/25 22:19	7440-50-8	D3
Lithium	2.1J	ug/L	12.5	1.7	5	02/24/25 15:49	02/25/25 22:19	7439-93-2	
Molybdenum	0.84J	ug/L	5.0	0.38	5	02/24/25 15:49	02/25/25 22:19	7439-98-7	
Nickel	1.8J	ug/L	5.0	1.3	5	02/24/25 15:49	02/25/25 22:19	7440-02-0	B
Selenium	ND	ug/L	10.0	1.1	5	02/24/25 15:49	02/25/25 22:19	7782-49-2	D3
Thallium	ND	ug/L	1.0	0.14	5	02/24/25 15:49	02/25/25 22:19	7440-28-0	D3
Vanadium	2.8J	ug/L	5.0	0.32	5	02/24/25 15:49	02/25/25 22:19	7440-62-2	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Asheville									
Mercury	ND	ug/L	0.20	0.12	1	02/07/25 20:50	02/09/25 12:50	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2540C-2015 Pace Analytical Services - Asheville									
Total Dissolved Solids	634	mg/L	50.0	50.0	1		02/11/25 11:50		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: TCH.009-3
Pace Project No.: 92778057

Sample: MW-1A		Lab ID: 92778057002		Collected: 02/05/25 11:00		Received: 02/06/25 09:15		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
7199 Chromium, Hexavalent		Analytical Method: EPA 7199 Pace Analytical Services - Charlotte							
Chromium, Hexavalent	ND	ug/L	0.025	0.0043	1		02/06/25 18:40	18540-29-9	H1,P4
6010 MET ICP		Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Asheville							
Barium	11200	ug/L	25.0	4.0	5	02/07/25 01:00	02/09/25 20:39	7440-39-3	
Boron	952	ug/L	250	20.2	5	02/07/25 01:00	02/09/25 20:39	7440-42-8	
Manganese	8330	ug/L	25.0	4.3	5	02/07/25 01:00	02/09/25 20:39	7439-96-5	
Strontium	18700	ug/L	25.0	3.3	5	02/07/25 01:00	02/09/25 20:39	7440-24-6	
Zinc	ND	ug/L	50.0	15.2	5	02/07/25 01:00	02/09/25 20:39	7440-66-6	
6020 MET ICPMS		Analytical Method: EPA 6020B Preparation Method: EPA 3010A Pace Analytical Services - Asheville							
Antimony	ND	ug/L	5.0	0.52	5	02/24/25 15:49	02/25/25 22:37	7440-36-0	D3
Arsenic	37.0	ug/L	5.0	0.84	5	02/24/25 15:49	02/25/25 22:37	7440-38-2	
Beryllium	ND	ug/L	0.50	0.22	5	02/24/25 15:49	02/25/25 22:37	7440-41-7	D3
Cadmium	ND	ug/L	0.50	0.19	5	02/24/25 15:49	02/25/25 22:37	7440-43-9	D3
Chromium	ND	ug/L	5.0	2.0	5	02/24/25 15:49	02/25/25 22:37	7440-47-3	D3
Cobalt	ND	ug/L	5.0	0.71	5	02/24/25 15:49	02/25/25 22:37	7440-48-4	D3
Copper	ND	ug/L	10.0	2.8	5	02/24/25 15:49	02/25/25 22:37	7440-50-8	D3
Lithium	80.2	ug/L	12.5	1.7	5	02/24/25 15:49	02/25/25 22:37	7439-93-2	
Molybdenum	1.2J	ug/L	5.0	0.38	5	02/24/25 15:49	02/25/25 22:37	7439-98-7	
Nickel	ND	ug/L	5.0	1.3	5	02/24/25 15:49	02/25/25 22:37	7440-02-0	D3
Selenium	ND	ug/L	10.0	1.1	5	02/24/25 15:49	02/25/25 22:37	7782-49-2	D3
Thallium	ND	ug/L	1.0	0.14	5	02/24/25 15:49	02/25/25 22:37	7440-28-0	D3
Vanadium	2.5J	ug/L	5.0	0.32	5	02/24/25 15:49	02/25/25 22:37	7440-62-2	
7470 Mercury		Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Asheville							
Mercury	ND	ug/L	0.20	0.12	1	02/07/25 20:50	02/09/25 12:56	7439-97-6	
2540C Total Dissolved Solids		Analytical Method: SM 2540C-2015 Pace Analytical Services - Asheville							
Total Dissolved Solids	706	mg/L	50.0	50.0	1		02/11/25 11:56		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: TCH.009-3
Pace Project No.: 92778057

Sample: MW-3A		Lab ID: 92778057003		Collected: 02/05/25 13:15		Received: 02/06/25 09:15		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
7199 Chromium, Hexavalent		Analytical Method: EPA 7199 Pace Analytical Services - Charlotte							
Chromium, Hexavalent	0.082	ug/L	0.025	0.0043	1		02/06/25 19:51	18540-29-9	H1
6010 MET ICP		Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Asheville							
Barium	428	ug/L	25.0	4.0	5	02/07/25 01:00	02/09/25 20:43	7440-39-3	
Boron	1920	ug/L	250	20.2	5	02/07/25 01:00	02/09/25 20:43	7440-42-8	
Manganese	1710	ug/L	25.0	4.3	5	02/07/25 01:00	02/09/25 20:43	7439-96-5	
Strontium	13100	ug/L	25.0	3.3	5	02/07/25 01:00	02/09/25 20:43	7440-24-6	
Zinc	ND	ug/L	50.0	15.2	5	02/07/25 01:00	02/09/25 20:43	7440-66-6	
6020 MET ICPMS		Analytical Method: EPA 6020B Preparation Method: EPA 3010A Pace Analytical Services - Asheville							
Antimony	ND	ug/L	5.0	0.52	5	02/24/25 15:49	02/25/25 22:41	7440-36-0	D3
Arsenic	ND	ug/L	5.0	0.84	5	02/24/25 15:49	02/25/25 22:41	7440-38-2	D3
Beryllium	ND	ug/L	0.50	0.22	5	02/24/25 15:49	02/25/25 22:41	7440-41-7	D3
Cadmium	ND	ug/L	0.50	0.19	5	02/24/25 15:49	02/25/25 22:41	7440-43-9	D3
Chromium	ND	ug/L	5.0	2.0	5	02/24/25 15:49	02/25/25 22:41	7440-47-3	D3
Cobalt	ND	ug/L	5.0	0.71	5	02/24/25 15:49	02/25/25 22:41	7440-48-4	D3
Copper	ND	ug/L	10.0	2.8	5	02/24/25 15:49	02/25/25 22:41	7440-50-8	D3
Lithium	25.8	ug/L	12.5	1.7	5	02/24/25 15:49	02/25/25 22:41	7439-93-2	
Molybdenum	ND	ug/L	5.0	0.38	5	02/24/25 15:49	02/25/25 22:41	7439-98-7	D3
Nickel	1.4J	ug/L	5.0	1.3	5	02/24/25 15:49	02/25/25 22:41	7440-02-0	B
Selenium	3.2J	ug/L	10.0	1.1	5	02/24/25 15:49	02/25/25 22:41	7782-49-2	
Thallium	ND	ug/L	1.0	0.14	5	02/24/25 15:49	02/25/25 22:41	7440-28-0	D3
Vanadium	2.3J	ug/L	5.0	0.32	5	02/24/25 15:49	02/25/25 22:41	7440-62-2	
7470 Mercury		Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Asheville							
Mercury	ND	ug/L	0.20	0.12	1	02/07/25 20:50	02/09/25 13:02	7439-97-6	
2540C Total Dissolved Solids		Analytical Method: SM 2540C-2015 Pace Analytical Services - Asheville							
Total Dissolved Solids	926	mg/L	50.0	50.0	1		02/11/25 11:56		

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ANALYTICAL RESULTS

Project: TCH.009-3
Pace Project No.: 92778057

Sample: MW-4A		Lab ID: 92778057004		Collected: 02/05/25 15:40		Received: 02/06/25 09:15		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
7199 Chromium, Hexavalent									
Analytical Method: EPA 7199 Pace Analytical Services - Charlotte									
Chromium, Hexavalent	0.17	ug/L	0.025	0.0043	1		02/06/25 15:14	18540-29-9	P4
6010 MET ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Asheville									
Barium	129	ug/L	25.0	4.0	5	02/07/25 01:00	02/09/25 20:46	7440-39-3	
Boron	86.1J	ug/L	250	20.2	5	02/07/25 01:00	02/09/25 20:46	7440-42-8	
Manganese	333	ug/L	25.0	4.3	5	02/07/25 01:00	02/09/25 20:46	7439-96-5	
Strontium	502	ug/L	25.0	3.3	5	02/07/25 01:00	02/09/25 20:46	7440-24-6	
Zinc	25.0J	ug/L	50.0	15.2	5	02/07/25 01:00	02/09/25 20:46	7440-66-6	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3010A Pace Analytical Services - Asheville									
Antimony	ND	ug/L	5.0	0.52	5	02/24/25 15:49	02/25/25 22:45	7440-36-0	D3
Arsenic	ND	ug/L	5.0	0.84	5	02/24/25 15:49	02/25/25 22:45	7440-38-2	D3
Beryllium	ND	ug/L	0.50	0.22	5	02/24/25 15:49	02/25/25 22:45	7440-41-7	D3
Cadmium	ND	ug/L	0.50	0.19	5	02/24/25 15:49	02/25/25 22:45	7440-43-9	D3
Chromium	ND	ug/L	5.0	2.0	5	02/24/25 15:49	02/25/25 22:45	7440-47-3	D3
Cobalt	ND	ug/L	5.0	0.71	5	02/24/25 15:49	02/25/25 22:45	7440-48-4	D3
Copper	3.1J	ug/L	10.0	2.8	5	02/24/25 15:49	02/25/25 22:45	7440-50-8	B
Lithium	ND	ug/L	12.5	1.7	5	02/24/25 15:49	02/25/25 22:45	7439-93-2	D3
Molybdenum	ND	ug/L	5.0	0.38	5	02/24/25 15:49	02/25/25 22:45	7439-98-7	D3
Nickel	ND	ug/L	5.0	1.3	5	02/24/25 15:49	02/25/25 22:45	7440-02-0	D3
Selenium	ND	ug/L	10.0	1.1	5	02/24/25 15:49	02/25/25 22:45	7782-49-2	D3
Thallium	ND	ug/L	1.0	0.14	5	02/24/25 15:49	02/25/25 22:45	7440-28-0	D3
Vanadium	2.9J	ug/L	5.0	0.32	5	02/24/25 15:49	02/25/25 22:45	7440-62-2	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Asheville									
Mercury	ND	ug/L	0.20	0.12	1	02/07/25 20:50	02/09/25 13:04	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2540C-2015 Pace Analytical Services - Asheville									
Total Dissolved Solids	127	mg/L	25.0	25.0	1		02/11/25 11:56		

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ANALYTICAL RESULTS

Project: TCH.009-3
Pace Project No.: 92778057

Sample: MW-4A (FILTERED) Lab ID: 92778057005 Collected: 02/05/25 15:40 Received: 02/06/25 09:15 Matrix: Water									
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
7199 Chromium, Hexavalent Analytical Method: EPA 7199 Pace Analytical Services - Charlotte									
Chromium, Hexavalent	0.19	ug/L	0.025	0.0043	1		02/06/25 15:33	18540-29-9	P4
6010 MET ICP, Dissolved Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Asheville									
Barium, Dissolved	18.2	ug/L	5.0	0.79	1	02/11/25 16:30	02/11/25 21:59	7440-39-3	
Boron, Dissolved	14.6J	ug/L	50.0	4.0	1	02/11/25 16:30	02/11/25 21:59	7440-42-8	
Manganese, Dissolved	0.99J	ug/L	5.0	0.86	1	02/11/25 16:30	02/11/25 21:59	7439-96-5	
Strontium, Dissolved	86.2	ug/L	5.0	0.66	1	02/11/25 16:30	02/11/25 21:59	7440-24-6	
Zinc, Dissolved	ND	ug/L	10.0	3.0	1	02/11/25 16:30	02/11/25 21:59	7440-66-6	
6020 MET ICPMS, Dissolved Analytical Method: EPA 6020B Preparation Method: EPA 3010A Pace Analytical Services - Asheville									
Antimony, Dissolved	ND	ug/L	1.0	0.10	1	02/11/25 16:30	02/25/25 14:29	7440-36-0	
Arsenic, Dissolved	ND	ug/L	1.0	0.17	1	02/11/25 16:30	02/25/25 14:29	7440-38-2	
Beryllium, Dissolved	ND	ug/L	0.10	0.045	1	02/11/25 16:30	02/25/25 14:29	7440-41-7	
Cadmium, Dissolved	ND	ug/L	0.10	0.037	1	02/11/25 16:30	02/25/25 14:29	7440-43-9	
Chromium, Dissolved	0.47J	ug/L	1.0	0.39	1	02/11/25 16:30	02/25/25 14:29	7440-47-3	
Cobalt, Dissolved	ND	ug/L	1.0	0.14	1	02/11/25 16:30	02/25/25 14:29	7440-48-4	
Copper, Dissolved	ND	ug/L	2.0	0.55	1	02/11/25 16:30	02/25/25 14:29	7440-50-8	
Lithium, Dissolved	0.47J	ug/L	2.5	0.33	1	02/11/25 16:30	02/25/25 14:29	7439-93-2	
Molybdenum, Dissolved	ND	ug/L	1.0	0.075	1	02/11/25 16:30	02/25/25 14:29	7439-98-7	
Nickel, Dissolved	0.34J	ug/L	1.0	0.26	1	02/11/25 16:30	02/25/25 14:29	7440-02-0	
Selenium, Dissolved	ND	ug/L	2.0	0.22	1	02/11/25 16:30	02/25/25 14:29	7782-49-2	
Thallium, Dissolved	ND	ug/L	0.20	0.028	1	02/11/25 16:30	02/25/25 14:29	7440-28-0	
Vanadium, Dissolved	0.065J	ug/L	1.0	0.064	1	02/11/25 16:30	02/25/25 14:29	7440-62-2	
7470 Mercury, Dissolved Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Asheville									
Mercury, Dissolved	ND	ug/L	0.20	0.12	1	02/10/25 17:03	02/11/25 13:52	7439-97-6	
2540C Total Dissolved Solids Analytical Method: SM 2540C-2015 Pace Analytical Services - Asheville									
Total Dissolved Solids	105	mg/L	25.0	25.0	1		02/11/25 11:57		

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ANALYTICAL RESULTS

Project: TCH.009-3
Pace Project No.: 92778057

Sample: MW-6		Lab ID: 92778057006		Collected: 02/05/25 11:55		Received: 02/06/25 09:15		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
7199 Chromium, Hexavalent									
Analytical Method: EPA 7199 Pace Analytical Services - Charlotte									
Chromium, Hexavalent	0.015J	ug/L	0.025	0.0043	1		02/06/25 19:33	18540-29-9	H1
6010 MET ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Asheville									
Barium	706	ug/L	25.0	4.0	5	02/07/25 01:00	02/09/25 20:50	7440-39-3	
Boron	109J	ug/L	250	20.2	5	02/07/25 01:00	02/09/25 20:50	7440-42-8	
Manganese	4580	ug/L	25.0	4.3	5	02/07/25 01:00	02/09/25 20:50	7439-96-5	
Strontium	1420	ug/L	25.0	3.3	5	02/07/25 01:00	02/09/25 20:50	7440-24-6	
Zinc	18.2J	ug/L	50.0	15.2	5	02/07/25 01:00	02/09/25 20:50	7440-66-6	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3010A Pace Analytical Services - Asheville									
Antimony	ND	ug/L	1.0	0.10	1	02/24/25 15:49	02/26/25 14:24	7440-36-0	
Arsenic	ND	ug/L	1.0	0.17	1	02/24/25 15:49	02/26/25 14:24	7440-38-2	
Beryllium	ND	ug/L	0.10	0.045	1	02/24/25 15:49	02/26/25 14:24	7440-41-7	
Cadmium	ND	ug/L	0.10	0.037	1	02/24/25 15:49	02/26/25 14:24	7440-43-9	
Chromium	1.1	ug/L	1.0	0.39	1	02/24/25 15:49	02/26/25 14:24	7440-47-3	
Cobalt	ND	ug/L	1.0	0.14	1	02/24/25 15:49	02/26/25 14:24	7440-48-4	
Copper	ND	ug/L	2.0	0.55	1	02/24/25 15:49	02/26/25 14:24	7440-50-8	
Lithium	1.5J	ug/L	2.5	0.33	1	02/24/25 15:49	02/26/25 14:24	7439-93-2	
Molybdenum	0.14J	ug/L	1.0	0.075	1	02/24/25 15:49	02/26/25 14:24	7439-98-7	
Nickel	0.54J	ug/L	1.0	0.26	1	02/24/25 15:49	02/26/25 14:24	7440-02-0	B
Selenium	ND	ug/L	2.0	0.22	1	02/24/25 15:49	02/26/25 14:24	7782-49-2	
Thallium	ND	ug/L	0.20	0.028	1	02/24/25 15:49	02/26/25 14:24	7440-28-0	
Vanadium	0.96J	ug/L	1.0	0.064	1	02/24/25 15:49	02/26/25 14:24	7440-62-2	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Asheville									
Mercury	ND	ug/L	0.20	0.12	1	02/07/25 20:50	02/09/25 13:06	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2540C-2015 Pace Analytical Services - Asheville									
Total Dissolved Solids	247	mg/L	25.0	25.0	1		02/11/25 11:57		

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ANALYTICAL RESULTS

Project: TCH.009-3
Pace Project No.: 92778057

Sample: MW-7		Lab ID: 92778057007		Collected: 02/05/25 16:55		Received: 02/06/25 09:15		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
7199 Chromium, Hexavalent									
Analytical Method: EPA 7199 Pace Analytical Services - Charlotte									
Chromium, Hexavalent	0.22	ug/L	0.12	0.022	5		02/06/25 22:13	18540-29-9	H1
6010 MET ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Asheville									
Barium	90.6	ug/L	25.0	4.0	5	02/07/25 01:00	02/09/25 20:53	7440-39-3	
Boron	39.6J	ug/L	250	20.2	5	02/07/25 01:00	02/09/25 20:53	7440-42-8	
Manganese	553	ug/L	25.0	4.3	5	02/07/25 01:00	02/09/25 20:53	7439-96-5	
Strontium	476	ug/L	25.0	3.3	5	02/07/25 01:00	02/09/25 20:53	7440-24-6	
Zinc	115	ug/L	50.0	15.2	5	02/07/25 01:00	02/09/25 20:53	7440-66-6	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3010A Pace Analytical Services - Asheville									
Antimony	0.17J	ug/L	1.0	0.10	1	02/24/25 15:49	02/26/25 14:28	7440-36-0	
Arsenic	1.4	ug/L	1.0	0.17	1	02/24/25 15:49	02/26/25 14:28	7440-38-2	
Beryllium	0.41	ug/L	0.10	0.045	1	02/24/25 15:49	02/26/25 14:28	7440-41-7	
Cadmium	ND	ug/L	0.10	0.037	1	02/24/25 15:49	02/26/25 14:28	7440-43-9	
Chromium	5.7	ug/L	1.0	0.39	1	02/24/25 15:49	02/26/25 14:28	7440-47-3	
Cobalt	0.93J	ug/L	1.0	0.14	1	02/24/25 15:49	02/26/25 14:28	7440-48-4	
Copper	13.6	ug/L	2.0	0.55	1	02/24/25 15:49	02/26/25 14:28	7440-50-8	
Lithium	5.8	ug/L	2.5	0.33	1	02/24/25 15:49	02/26/25 14:28	7439-93-2	
Molybdenum	0.39J	ug/L	1.0	0.075	1	02/24/25 15:49	02/26/25 14:28	7439-98-7	
Nickel	1.4	ug/L	1.0	0.26	1	02/24/25 15:49	02/26/25 14:28	7440-02-0	B
Selenium	0.62J	ug/L	2.0	0.22	1	02/24/25 15:49	02/26/25 14:28	7782-49-2	
Thallium	ND	ug/L	0.20	0.028	1	02/24/25 15:49	02/26/25 14:28	7440-28-0	
Vanadium	10.9	ug/L	1.0	0.064	1	02/24/25 15:49	02/26/25 14:28	7440-62-2	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Asheville									
Mercury	ND	ug/L	0.20	0.12	1	02/07/25 20:50	02/09/25 13:09	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2540C-2015 Pace Analytical Services - Asheville									
Total Dissolved Solids	196	mg/L	25.0	25.0	1		02/11/25 11:57		

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ANALYTICAL RESULTS

Project: TCH.009-3
Pace Project No.: 92778057

Sample: MW-7 (FILTERED) Lab ID: 92778057008 Collected: 02/05/25 16:55 Received: 02/06/25 09:15 Matrix: Water									
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
7199 Chromium, Hexavalent Analytical Method: EPA 7199 Pace Analytical Services - Charlotte									
Chromium, Hexavalent	0.23	ug/L	0.025	0.0043	1		02/06/25 22:31	18540-29-9	H1
6010 MET ICP, Dissolved Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Asheville									
Barium, Dissolved	2.9J	ug/L	5.0	0.79	1	02/11/25 16:30	02/11/25 22:03	7440-39-3	
Boron, Dissolved	ND	ug/L	50.0	4.0	1	02/11/25 16:30	02/11/25 22:03	7440-42-8	
Manganese, Dissolved	2.4J	ug/L	5.0	0.86	1	02/11/25 16:30	02/11/25 22:03	7439-96-5	
Strontium, Dissolved	64.4	ug/L	5.0	0.66	1	02/11/25 16:30	02/11/25 22:03	7440-24-6	
Zinc, Dissolved	4.3J	ug/L	10.0	3.0	1	02/11/25 16:30	02/11/25 22:03	7440-66-6	
6020 MET ICPMS, Dissolved Analytical Method: EPA 6020B Preparation Method: EPA 3010A Pace Analytical Services - Asheville									
Antimony, Dissolved	ND	ug/L	1.0	0.10	1	02/11/25 16:30	02/25/25 14:36	7440-36-0	
Arsenic, Dissolved	ND	ug/L	1.0	0.17	1	02/11/25 16:30	02/25/25 14:36	7440-38-2	
Beryllium, Dissolved	ND	ug/L	0.10	0.045	1	02/11/25 16:30	02/25/25 14:36	7440-41-7	
Cadmium, Dissolved	ND	ug/L	0.10	0.037	1	02/11/25 16:30	02/25/25 14:36	7440-43-9	
Chromium, Dissolved	0.44J	ug/L	1.0	0.39	1	02/11/25 16:30	02/25/25 14:36	7440-47-3	
Cobalt, Dissolved	ND	ug/L	1.0	0.14	1	02/11/25 16:30	02/25/25 14:36	7440-48-4	
Copper, Dissolved	0.88J	ug/L	2.0	0.55	1	02/11/25 16:30	02/25/25 14:36	7440-50-8	
Lithium, Dissolved	3.4	ug/L	2.5	0.33	1	02/11/25 16:30	02/25/25 14:36	7439-93-2	
Molybdenum, Dissolved	0.16J	ug/L	1.0	0.075	1	02/11/25 16:30	02/25/25 14:36	7439-98-7	
Nickel, Dissolved	0.40J	ug/L	1.0	0.26	1	02/11/25 16:30	02/25/25 14:36	7440-02-0	
Selenium, Dissolved	ND	ug/L	2.0	0.22	1	02/11/25 16:30	02/25/25 14:36	7782-49-2	
Thallium, Dissolved	ND	ug/L	0.20	0.028	1	02/11/25 16:30	02/25/25 14:36	7440-28-0	
Vanadium, Dissolved	0.33J	ug/L	1.0	0.064	1	02/11/25 16:30	02/25/25 14:36	7440-62-2	
7470 Mercury, Dissolved Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Asheville									
Mercury, Dissolved	ND	ug/L	0.20	0.12	1	02/10/25 17:03	02/11/25 13:59	7439-97-6	
2540C Total Dissolved Solids Analytical Method: SM 2540C-2015 Pace Analytical Services - Asheville									
Total Dissolved Solids	115	mg/L	25.0	25.0	1		02/11/25 11:57		

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ANALYTICAL RESULTS

Project: TCH.009-3
Pace Project No.: 92778057

Sample: MW-8 (FILTERED) Lab ID: 92778057009 Collected: 02/05/25 14:50 Received: 02/06/25 09:15 Matrix: Water									
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
7199 Chromium, Hexavalent Analytical Method: EPA 7199 Pace Analytical Services - Charlotte									
Chromium, Hexavalent	ND	ug/L	0.050	0.0086	2		02/06/25 14:47	18540-29-9	D3
6010 MET ICP, Dissolved Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Asheville									
Barium, Dissolved	293	ug/L	5.0	0.79	1	02/11/25 16:30	02/11/25 22:06	7440-39-3	
Boron, Dissolved	42.0J	ug/L	50.0	4.0	1	02/11/25 16:30	02/11/25 22:06	7440-42-8	
Manganese, Dissolved	2950	ug/L	5.0	0.86	1	02/11/25 16:30	02/11/25 22:06	7439-96-5	
Strontium, Dissolved	761	ug/L	5.0	0.66	1	02/11/25 16:30	02/11/25 22:06	7440-24-6	
Zinc, Dissolved	ND	ug/L	10.0	3.0	1	02/11/25 16:30	02/11/25 22:06	7440-66-6	
6020 MET ICPMS, Dissolved Analytical Method: EPA 6020B Preparation Method: EPA 3010A Pace Analytical Services - Asheville									
Antimony, Dissolved	ND	ug/L	1.0	0.10	1	02/11/25 16:30	02/25/25 14:44	7440-36-0	
Arsenic, Dissolved	7.4	ug/L	1.0	0.17	1	02/11/25 16:30	02/25/25 14:44	7440-38-2	
Beryllium, Dissolved	ND	ug/L	0.10	0.045	1	02/11/25 16:30	02/25/25 14:44	7440-41-7	
Cadmium, Dissolved	ND	ug/L	0.10	0.037	1	02/11/25 16:30	02/25/25 14:44	7440-43-9	
Chromium, Dissolved	0.46J	ug/L	1.0	0.39	1	02/11/25 16:30	02/25/25 14:44	7440-47-3	
Cobalt, Dissolved	3.7	ug/L	1.0	0.14	1	02/11/25 16:30	02/25/25 14:44	7440-48-4	
Copper, Dissolved	ND	ug/L	2.0	0.55	1	02/11/25 16:30	02/25/25 14:44	7440-50-8	
Lithium, Dissolved	3.6	ug/L	2.5	0.33	1	02/11/25 16:30	02/25/25 14:44	7439-93-2	
Molybdenum, Dissolved	1.1	ug/L	1.0	0.075	1	02/11/25 16:30	02/25/25 14:44	7439-98-7	
Nickel, Dissolved	1.4	ug/L	1.0	0.26	1	02/11/25 16:30	02/25/25 14:44	7440-02-0	
Selenium, Dissolved	ND	ug/L	2.0	0.22	1	02/11/25 16:30	02/25/25 14:44	7782-49-2	
Thallium, Dissolved	ND	ug/L	0.20	0.028	1	02/11/25 16:30	02/25/25 14:44	7440-28-0	
Vanadium, Dissolved	0.44J	ug/L	1.0	0.064	1	02/11/25 16:30	02/25/25 14:44	7440-62-2	
7470 Mercury, Dissolved Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Asheville									
Mercury, Dissolved	ND	ug/L	0.20	0.12	1	02/10/25 17:03	02/11/25 14:01	7439-97-6	
2540C Total Dissolved Solids Analytical Method: SM 2540C-2015 Pace Analytical Services - Asheville									
Total Dissolved Solids	366	mg/L	25.0	25.0	1		02/11/25 11:57		

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ANALYTICAL RESULTS

Project: TCH.009-3
Pace Project No.: 92778057

Sample: MW-8		Lab ID: 92778057010		Collected: 02/05/25 14:50		Received: 02/06/25 09:15		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
7199 Chromium, Hexavalent									
Analytical Method: EPA 7199 Pace Analytical Services - Charlotte									
Chromium, Hexavalent	ND	ug/L	0.025	0.0043	1		02/06/25 18:58	18540-29-9	H1
6010 MET ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Asheville									
Barium	1720	ug/L	25.0	4.0	5	02/07/25 01:00	02/09/25 20:57	7440-39-3	
Boron	242J	ug/L	250	20.2	5	02/07/25 01:00	02/09/25 20:57	7440-42-8	
Manganese	16900	ug/L	25.0	4.3	5	02/07/25 01:00	02/09/25 20:57	7439-96-5	
Strontium	4360	ug/L	25.0	3.3	5	02/07/25 01:00	02/09/25 20:57	7440-24-6	
Zinc	21.8J	ug/L	50.0	15.2	5	02/07/25 01:00	02/09/25 20:57	7440-66-6	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3010A Pace Analytical Services - Asheville									
Antimony	0.11J	ug/L	1.0	0.10	1	02/24/25 15:49	02/26/25 14:32	7440-36-0	
Arsenic	7.1	ug/L	1.0	0.17	1	02/24/25 15:49	02/26/25 14:32	7440-38-2	
Beryllium	ND	ug/L	0.10	0.045	1	02/24/25 15:49	02/26/25 14:32	7440-41-7	
Cadmium	0.12	ug/L	0.10	0.037	1	02/24/25 15:49	02/26/25 14:32	7440-43-9	
Chromium	1.8	ug/L	1.0	0.39	1	02/24/25 15:49	02/26/25 14:32	7440-47-3	
Cobalt	4.1	ug/L	1.0	0.14	1	02/24/25 15:49	02/26/25 14:32	7440-48-4	
Copper	3.2	ug/L	2.0	0.55	1	02/24/25 15:49	02/26/25 14:32	7440-50-8	B
Lithium	3.5	ug/L	2.5	0.33	1	02/24/25 15:49	02/26/25 14:32	7439-93-2	
Molybdenum	1.5	ug/L	1.0	0.075	1	02/24/25 15:49	02/26/25 14:32	7439-98-7	
Nickel	2.1	ug/L	1.0	0.26	1	02/24/25 15:49	02/26/25 14:32	7440-02-0	B
Selenium	ND	ug/L	2.0	0.22	1	02/24/25 15:49	02/26/25 14:32	7782-49-2	
Thallium	ND	ug/L	0.20	0.028	1	02/24/25 15:49	02/26/25 14:32	7440-28-0	
Vanadium	1.3	ug/L	1.0	0.064	1	02/24/25 15:49	02/26/25 14:32	7440-62-2	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Asheville									
Mercury	ND	ug/L	0.20	0.12	1	02/07/25 20:50	02/09/25 13:11	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2540C-2015 Pace Analytical Services - Asheville									
Total Dissolved Solids	366	mg/L	25.0	25.0	1		02/11/25 11:57		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: TCH.009-3
Pace Project No.: 92778057

Sample: DUP-1		Lab ID: 92778057011		Collected: 02/05/25 12:00		Received: 02/06/25 09:15		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
7199 Chromium, Hexavalent									
Analytical Method: EPA 7199 Pace Analytical Services - Charlotte									
Chromium, Hexavalent	0.015J	ug/L	0.025	0.0043	1		02/06/25 19:15	18540-29-9	H1
6010 MET ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Asheville									
Barium	704	ug/L	25.0	4.0	5	02/07/25 01:00	02/09/25 21:07	7440-39-3	
Boron	109J	ug/L	250	20.2	5	02/07/25 01:00	02/09/25 21:07	7440-42-8	
Manganese	4560	ug/L	25.0	4.3	5	02/07/25 01:00	02/09/25 21:07	7439-96-5	
Strontium	1410	ug/L	25.0	3.3	5	02/07/25 01:00	02/09/25 21:07	7440-24-6	
Zinc	21.1J	ug/L	50.0	15.2	5	02/07/25 01:00	02/09/25 21:07	7440-66-6	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3010A Pace Analytical Services - Asheville									
Antimony	ND	ug/L	1.0	0.10	1	02/25/25 15:50	02/26/25 13:44	7440-36-0	
Arsenic	ND	ug/L	1.0	0.17	1	02/25/25 15:50	02/26/25 13:44	7440-38-2	
Beryllium	ND	ug/L	0.10	0.045	1	02/25/25 15:50	02/26/25 13:44	7440-41-7	
Cadmium	ND	ug/L	0.10	0.037	1	02/25/25 15:50	02/26/25 13:44	7440-43-9	
Chromium	0.95J	ug/L	1.0	0.39	1	02/25/25 15:50	02/26/25 13:44	7440-47-3	
Cobalt	ND	ug/L	1.0	0.14	1	02/25/25 15:50	02/26/25 13:44	7440-48-4	
Copper	ND	ug/L	2.0	0.55	1	02/25/25 15:50	02/26/25 13:44	7440-50-8	
Lithium	1.5J	ug/L	2.5	0.33	1	02/25/25 15:50	02/26/25 13:44	7439-93-2	
Molybdenum	0.12J	ug/L	1.0	0.075	1	02/25/25 15:50	02/26/25 13:44	7439-98-7	
Nickel	0.50J	ug/L	1.0	0.26	1	02/25/25 15:50	02/26/25 13:44	7440-02-0	
Selenium	ND	ug/L	2.0	0.22	1	02/25/25 15:50	02/26/25 13:44	7782-49-2	
Thallium	ND	ug/L	0.20	0.028	1	02/25/25 15:50	02/26/25 13:44	7440-28-0	
Vanadium	1.0	ug/L	1.0	0.064	1	02/25/25 15:50	02/26/25 13:44	7440-62-2	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Asheville									
Mercury	ND	ug/L	0.20	0.12	1	02/07/25 20:50	02/09/25 13:13	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2540C-2015 Pace Analytical Services - Asheville									
Total Dissolved Solids	245	mg/L	25.0	25.0	1		02/11/25 11:58		

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QUALITY CONTROL DATA

Project: TCH.009-3
Pace Project No.: 92778057

QC Batch:	914269	Analysis Method:	EPA 7199
QC Batch Method:	EPA 7199	Analysis Description:	7199 Chromium, Hexavalent
		Laboratory:	Pace Analytical Services - Charlotte
Associated Lab Samples:	92778057001, 92778057002, 92778057003, 92778057004, 92778057005, 92778057006, 92778057007, 92778057008, 92778057009, 92778057010, 92778057011		

METHOD BLANK: 4699321 Matrix: Water
Associated Lab Samples: 92778057001, 92778057002, 92778057003, 92778057004, 92778057005, 92778057006, 92778057007, 92778057008, 92778057009, 92778057010, 92778057011

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chromium, Hexavalent	ug/L	ND	0.025	0.0043	02/06/25 21:55	

LABORATORY CONTROL SAMPLE: 4699322						
Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chromium, Hexavalent	ug/L	0.1	0.11	106	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 4699324 4699323												
Parameter	Units	92778057001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chromium, Hexavalent	ug/L	ND	0.1	0.1	0.11	0.11	113	111	90-110	2	20	H3,M1

SAMPLE DUPLICATE: 4699326						
Parameter	Units	92778057002 Result	Dup Result	RPD	Max RPD	Qualifiers
Chromium, Hexavalent	ug/L	ND	ND		20	H3,P4

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QUALITY CONTROL DATA

Project: TCH.009-3

Pace Project No.: 92778057

QC Batch: 914688

Analysis Method: EPA 7470A

QC Batch Method: EPA 7470A

Analysis Description: 7470 Mercury

Laboratory: Pace Analytical Services - Asheville

Associated Lab Samples: 92778057001, 92778057002, 92778057003, 92778057004, 92778057006, 92778057007, 92778057010, 92778057011

METHOD BLANK: 4701661

Matrix: Water

Associated Lab Samples: 92778057001, 92778057002, 92778057003, 92778057004, 92778057006, 92778057007, 92778057010, 92778057011

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury	ug/L	ND	0.20	0.12	02/09/25 12:37	

LABORATORY CONTROL SAMPLE: 4701662

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	2.5	2.5	99	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 4701663 4701664

Parameter	Units	92778057001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury	ug/L	ND	2.5	2.5	2.4	2.4	98	97	75-125	0	25	

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QUALITY CONTROL DATA

Project: TCH.009-3

Pace Project No.: 92778057

QC Batch: 915007

Analysis Method: EPA 7470A

QC Batch Method: EPA 7470A

Analysis Description: 7470 Mercury Dissolved

Laboratory: Pace Analytical Services - Asheville

Associated Lab Samples: 92778057005, 92778057008, 92778057009

METHOD BLANK: 4703057

Matrix: Water

Associated Lab Samples: 92778057005, 92778057008, 92778057009

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury, Dissolved	ug/L	ND	0.20	0.12	02/11/25 13:48	

LABORATORY CONTROL SAMPLE: 4703058

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury, Dissolved	ug/L	2.5	2.4	95	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 4703059 4703060

Parameter	Units	92778057005 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury, Dissolved	ug/L	ND	2.5	2.5	2.4	2.5	96	99	75-125	4	25	

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QUALITY CONTROL DATA

Project: TCH.009-3

Pace Project No.: 92778057

QC Batch: 914463

Analysis Method: EPA 6010D

QC Batch Method: EPA 3010A

Analysis Description: 6010 MET

Laboratory: Pace Analytical Services - Asheville

Associated Lab Samples: 92778057001, 92778057002, 92778057003, 92778057004, 92778057006, 92778057007, 92778057010, 92778057011

METHOD BLANK: 4700524

Matrix: Water

Associated Lab Samples: 92778057001, 92778057002, 92778057003, 92778057004, 92778057006, 92778057007, 92778057010, 92778057011

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Barium	ug/L	ND	5.0	0.79	02/09/25 20:04	
Boron	ug/L	ND	50.0	4.0	02/09/25 20:04	
Manganese	ug/L	ND	5.0	0.86	02/09/25 20:04	
Strontium	ug/L	ND	5.0	0.66	02/09/25 20:04	
Zinc	ug/L	ND	10.0	3.0	02/09/25 20:04	

LABORATORY CONTROL SAMPLE: 4700525

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Barium	ug/L	500	501	100	80-120	
Boron	ug/L	500	501	100	80-120	
Manganese	ug/L	500	504	101	80-120	
Strontium	ug/L	500	501	100	80-120	
Zinc	ug/L	500	491	98	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 4700526 4700527

Parameter	Units	92778057001	MS	MSD	MS	MSD	MS	MSD	% Rec	RPD	Max	Qual
		Result	Spike Conc.	Spike Conc.								
Barium	ug/L	1200	500	500	3790	3700	519	501	75-125	2	20	M1
Boron	ug/L	1090	500	500	3860	3780	554	538	75-125	2	20	M1
Manganese	ug/L	10400	500	500	10800	10800	88	80	75-125	0	20	M1
Strontium	ug/L	13900	500	500	16300	16400	490	510	75-125	1	20	M1
Zinc	ug/L	43.6J	500	500	2570	2480	506	488	75-125	4	20	M1

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QUALITY CONTROL DATA

Project: TCH.009-3
Pace Project No.: 92778057

QC Batch: 915246 Analysis Method: EPA 6010D
QC Batch Method: EPA 3010A Analysis Description: 6010 MET Filtered Diss.
Laboratory: Pace Analytical Services - Asheville
Associated Lab Samples: 92778057005, 92778057008, 92778057009

METHOD BLANK: 4704062 Matrix: Water
Associated Lab Samples: 92778057005, 92778057008, 92778057009

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Barium, Dissolved	ug/L	ND	5.0	0.79	02/11/25 21:24	
Boron, Dissolved	ug/L	ND	50.0	4.0	02/11/25 21:24	
Manganese, Dissolved	ug/L	ND	5.0	0.86	02/11/25 21:24	
Strontium, Dissolved	ug/L	ND	5.0	0.66	02/11/25 21:24	
Zinc, Dissolved	ug/L	ND	10.0	3.0	02/11/25 21:24	

LABORATORY CONTROL SAMPLE: 4704063

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Barium, Dissolved	ug/L	500	439	88	80-120	
Boron, Dissolved	ug/L	500	456	91	80-120	
Manganese, Dissolved	ug/L	500	443	89	80-120	
Strontium, Dissolved	ug/L	500	442	88	80-120	
Zinc, Dissolved	ug/L	500	451	90	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 4704064 4704065

Parameter	Units	92777615002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Barium, Dissolved	ug/L	64.8	500	500	518	518	91	91	75-125	0	20	
Boron, Dissolved	ug/L	5.5J	500	500	479	481	95	95	75-125	0	20	
Manganese, Dissolved	ug/L	398	500	500	840	836	88	87	75-125	0	20	
Strontium, Dissolved	ug/L	230	500	500	685	680	91	90	75-125	1	20	
Zinc, Dissolved	ug/L	ND	500	500	442	446	88	89	75-125	1	20	

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QUALITY CONTROL DATA

Project: TCH.009-3
Pace Project No.: 92778057

QC Batch: 918168 Analysis Method: EPA 6020B
QC Batch Method: EPA 3010A Analysis Description: 6020 MET
Laboratory: Pace Analytical Services - Asheville
Associated Lab Samples: 92778057001, 92778057002, 92778057003, 92778057004, 92778057006, 92778057007, 92778057010

METHOD BLANK: 4718867 Matrix: Water
Associated Lab Samples: 92778057001, 92778057002, 92778057003, 92778057004, 92778057006, 92778057007, 92778057010

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	ug/L	ND	1.0	0.10	02/25/25 22:11	
Arsenic	ug/L	ND	1.0	0.17	02/25/25 22:11	
Beryllium	ug/L	ND	0.10	0.045	02/25/25 22:11	
Cadmium	ug/L	ND	0.10	0.037	02/25/25 22:11	
Chromium	ug/L	ND	1.0	0.39	02/25/25 22:11	
Cobalt	ug/L	ND	1.0	0.14	02/25/25 22:11	
Copper	ug/L	0.56J	2.0	0.55	02/25/25 22:11	
Lithium	ug/L	ND	2.5	0.33	02/25/25 22:11	
Molybdenum	ug/L	ND	1.0	0.075	02/25/25 22:11	
Nickel	ug/L	0.41J	1.0	0.26	02/25/25 22:11	
Selenium	ug/L	ND	2.0	0.22	02/25/25 22:11	
Thallium	ug/L	ND	0.20	0.028	02/25/25 22:11	
Vanadium	ug/L	ND	1.0	0.064	02/25/25 22:11	

LABORATORY CONTROL SAMPLE: 4718868

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	ug/L	50	50.5	101	80-120	
Arsenic	ug/L	50	54.3	109	80-120	
Beryllium	ug/L	50	51.9	104	80-120	
Cadmium	ug/L	50	52.7	105	80-120	
Chromium	ug/L	50	51.6	103	80-120	
Cobalt	ug/L	50	50.9	102	80-120	
Copper	ug/L	50	51.1	102	80-120	
Lithium	ug/L	50	50.5	101	80-120	
Molybdenum	ug/L	50	51.9	104	80-120	
Nickel	ug/L	50	51.7	103	80-120	
Selenium	ug/L	50	54.8	110	80-120	
Thallium	ug/L	25	25.4	102	80-120	
Vanadium	ug/L	50	50.8	102	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 4718869 4718870

Parameter	Units	92778057001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Antimony	ug/L	ND	50	50	50.0	50.7	100	101	75-125	1	20	
Arsenic	ug/L	4.0J	50	50	57.9	56.7	108	105	75-125	2	20	

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QUALITY CONTROL DATA

Project: TCH.009-3

Pace Project No.: 92778057

MATRIX SPIKE & MATRIX SPIKE DUPLICATE:												
4718869					4718870							
Parameter	Units	92778057001	MS	MSD	MS	MSD	MS	MSD	% Rec	RPD	Max	Qual
		Result	Spike Conc.	Spike Conc.								
Beryllium	ug/L	ND	50	50	52.4	52.8	105	105	75-125	1	20	
Cadmium	ug/L	ND	50	50	52.9	51.8	106	103	75-125	2	20	
Chromium	ug/L	ND	50	50	54.1	53.8	106	105	75-125	1	20	
Cobalt	ug/L	9.8	50	50	61.1	60.2	102	101	75-125	1	20	
Copper	ug/L	ND	50	50	58.8	52.7	114	102	75-125	11	20	
Lithium	ug/L	2.1J	50	50	52.7	52.9	101	102	75-125	0	20	
Molybdenum	ug/L	0.84J	50	50	53.0	53.0	104	104	75-125	0	20	
Nickel	ug/L	1.8J	50	50	53.9	53.8	104	104	75-125	0	20	
Selenium	ug/L	ND	50	50	54.6	52.7	109	105	75-125	3	20	
Thallium	ug/L	ND	25	25	26.1	25.5	104	102	75-125	2	20	
Vanadium	ug/L	2.8J	50	50	55.8	54.9	106	104	75-125	2	20	

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QUALITY CONTROL DATA

Project: TCH.009-3

Pace Project No.: 92778057

QC Batch: 918319

Analysis Method: EPA 6020B

QC Batch Method: EPA 3010A

Analysis Description: 6020 MET

Laboratory: Pace Analytical Services - Asheville

Associated Lab Samples: 92778057011

METHOD BLANK: 4719388

Matrix: Water

Associated Lab Samples: 92778057011

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	ug/L	ND	1.0	0.10	02/26/25 13:37	
Arsenic	ug/L	ND	1.0	0.17	02/26/25 13:37	
Beryllium	ug/L	ND	0.10	0.045	02/26/25 13:37	
Cadmium	ug/L	ND	0.10	0.037	02/26/25 13:37	
Chromium	ug/L	ND	1.0	0.39	02/26/25 13:37	
Cobalt	ug/L	ND	1.0	0.14	02/26/25 13:37	
Copper	ug/L	ND	2.0	0.55	02/26/25 13:37	
Lithium	ug/L	ND	2.5	0.33	02/26/25 13:37	
Molybdenum	ug/L	ND	1.0	0.075	02/26/25 13:37	
Nickel	ug/L	ND	1.0	0.26	02/26/25 13:37	
Selenium	ug/L	ND	2.0	0.22	02/26/25 13:37	
Thallium	ug/L	ND	0.20	0.028	02/26/25 13:37	
Vanadium	ug/L	ND	1.0	0.064	02/26/25 13:37	

LABORATORY CONTROL SAMPLE: 4719389

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	ug/L	50	50.0	100	80-120	
Arsenic	ug/L	50	50.5	101	80-120	
Beryllium	ug/L	50	53.7	107	80-120	
Cadmium	ug/L	50	50.5	101	80-120	
Chromium	ug/L	50	52.3	105	80-120	
Cobalt	ug/L	50	50.2	100	80-120	
Copper	ug/L	50	51.8	104	80-120	
Lithium	ug/L	50	52.8	106	80-120	
Molybdenum	ug/L	50	51.1	102	80-120	
Nickel	ug/L	50	52.5	105	80-120	
Selenium	ug/L	50	50.9	102	80-120	
Thallium	ug/L	25	25.1	101	80-120	
Vanadium	ug/L	50	52.0	104	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 4719390

4719391

Parameter	Units	92778057011 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Antimony	ug/L	ND	50	50	48.6	48.8	97	98	75-125	0	20	
Arsenic	ug/L	ND	50	50	50.1	51.3	100	102	75-125	2	20	

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QUALITY CONTROL DATA

Project: TCH.009-3

Pace Project No.: 92778057

MATRIX SPIKE & MATRIX SPIKE DUPLICATE:											
4719390				4719391							
		92778057011	MS	MSD							
Parameter	Units	Result	Spike	Spike	MS	MSD	MS	MSD	% Rec		Max
			Conc.	Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD
Qual											
Beryllium	ug/L	ND	50	50	51.9	53.1	104	106	75-125	2	20
Cadmium	ug/L	ND	50	50	48.7	49.9	97	100	75-125	2	20
Chromium	ug/L	0.95J	50	50	52.6	53.3	103	105	75-125	1	20
Cobalt	ug/L	ND	50	50	49.1	49.8	98	99	75-125	1	20
Copper	ug/L	ND	50	50	50.2	53.0	100	105	75-125	5	20
Lithium	ug/L	1.5J	50	50	51.6	52.4	100	102	75-125	2	20
Molybdenum	ug/L	0.12J	50	50	50.1	50.5	100	101	75-125	1	20
Nickel	ug/L	0.50J	50	50	51.1	51.6	101	102	75-125	1	20
Selenium	ug/L	ND	50	50	49.5	50.1	99	100	75-125	1	20
Thallium	ug/L	ND	25	25	25.5	25.6	102	102	75-125	0	20
Vanadium	ug/L	1.0	50	50	53.0	53.4	104	105	75-125	1	20

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: TCH.009-3

Pace Project No.: 92778057

QC Batch: 915418

Analysis Method: EPA 6020B

QC Batch Method: EPA 3010A

Analysis Description: 6020 MET Dissolved

Laboratory: Pace Analytical Services - Asheville

Associated Lab Samples: 92778057005, 92778057008, 92778057009

METHOD BLANK: 4705016

Matrix: Water

Associated Lab Samples: 92778057005, 92778057008, 92778057009

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony, Dissolved	ug/L	ND	1.0	0.10	02/25/25 13:29	
Arsenic, Dissolved	ug/L	ND	1.0	0.17	02/25/25 13:29	
Beryllium, Dissolved	ug/L	ND	0.10	0.045	02/25/25 13:29	
Cadmium, Dissolved	ug/L	ND	0.10	0.037	02/25/25 13:29	
Chromium, Dissolved	ug/L	ND	1.0	0.39	02/25/25 13:29	
Cobalt, Dissolved	ug/L	ND	1.0	0.14	02/25/25 13:29	
Copper, Dissolved	ug/L	ND	2.0	0.55	02/25/25 13:29	
Lithium, Dissolved	ug/L	ND	2.5	0.33	02/25/25 13:29	
Molybdenum, Dissolved	ug/L	ND	1.0	0.075	02/25/25 13:29	
Nickel, Dissolved	ug/L	ND	1.0	0.26	02/25/25 13:29	
Selenium, Dissolved	ug/L	ND	2.0	0.22	02/25/25 13:29	
Thallium, Dissolved	ug/L	ND	0.20	0.028	02/25/25 13:29	
Vanadium, Dissolved	ug/L	ND	1.0	0.064	02/25/25 13:29	

LABORATORY CONTROL SAMPLE: 4705017

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony, Dissolved	ug/L	50	50.5	101	80-120	
Arsenic, Dissolved	ug/L	50	51.7	103	80-120	
Beryllium, Dissolved	ug/L	50	53.2	106	80-120	
Cadmium, Dissolved	ug/L	50	51.9	104	80-120	
Chromium, Dissolved	ug/L	50	50.3	101	80-120	
Cobalt, Dissolved	ug/L	50	50.5	101	80-120	
Copper, Dissolved	ug/L	50	49.9	100	80-120	
Lithium, Dissolved	ug/L	50	52.9	106	80-120	
Molybdenum, Dissolved	ug/L	50	50.7	101	80-120	
Nickel, Dissolved	ug/L	50	51.3	103	80-120	
Selenium, Dissolved	ug/L	50	51.0	102	80-120	
Thallium, Dissolved	ug/L	25	24.5	98	80-120	
Vanadium, Dissolved	ug/L	50	50.3	101	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 4705018

4705019

Parameter	Units	92777615002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Antimony, Dissolved	ug/L	ND	50	50	55.8	56.7	112	113	75-125	2	20	
Arsenic, Dissolved	ug/L	0.20J	50	50	57.3	58.0	114	116	75-125	1	20	

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QUALITY CONTROL DATA

Project: TCH.009-3

Pace Project No.: 92778057

MATRIX SPIKE & MATRIX SPIKE DUPLICATE:												
4705018					4705019							
Parameter	Units	92777615002	MS	MSD	MS	MSD	MS	MSD	% Rec	RPD	Max	Qual
		Result	Spike Conc.	Spike Conc.								
Beryllium, Dissolved	ug/L	ND	50	50	57.3	57.6	115	115	75-125	1	20	
Cadmium, Dissolved	ug/L	ND	50	50	56.1	56.8	112	114	75-125	1	20	
Chromium, Dissolved	ug/L	0.48J	50	50	55.9	55.6	111	110	75-125	1	20	
Cobalt, Dissolved	ug/L	0.43J	50	50	54.5	55.2	108	109	75-125	1	20	
Copper, Dissolved	ug/L	0.85J	50	50	53.2	53.7	105	106	75-125	1	20	
Lithium, Dissolved	ug/L	2.5	50	50	59.3	59.8	114	115	75-125	1	20	
Molybdenum, Dissolved	ug/L	0.19J	50	50	57.4	57.9	114	115	75-125	1	20	
Nickel, Dissolved	ug/L	0.27J	50	50	54.1	54.7	108	109	75-125	1	20	
Selenium, Dissolved	ug/L	ND	50	50	54.3	54.5	109	109	75-125	0	20	
Thallium, Dissolved	ug/L	ND	25	25	26.9	27.2	108	109	75-125	1	20	
Vanadium, Dissolved	ug/L	ND	50	50	54.8	54.9	110	110	75-125	0	20	

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QUALITY CONTROL DATA

Project: TCH.009-3

Pace Project No.: 92778057

QC Batch: 915070

Analysis Method: SM 2540C-2015

QC Batch Method: SM 2540C-2015

Analysis Description: 2540C Total Dissolved Solids

Laboratory: Pace Analytical Services - Asheville

Associated Lab Samples: 92778057001

METHOD BLANK: 4703457

Matrix: Water

Associated Lab Samples: 92778057001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	25.0	25.0	02/11/25 11:42	

LABORATORY CONTROL SAMPLE: 4703458

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	250	258	103	90-110	

SAMPLE DUPLICATE: 4703459

Parameter	Units	92777222002 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	264	269	2	25	

SAMPLE DUPLICATE: 4703460

Parameter	Units	92777986002 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	427	407	5	25	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: TCH.009-3

Pace Project No.: 92778057

QC Batch: 915071 Analysis Method: SM 2540C-2015
QC Batch Method: SM 2540C-2015 Analysis Description: 2540C Total Dissolved Solids
Laboratory: Pace Analytical Services - Asheville
Associated Lab Samples: 92778057002, 92778057003, 92778057004, 92778057005, 92778057006, 92778057007, 92778057008, 92778057009, 92778057010, 92778057011

METHOD BLANK: 4703463 Matrix: Water
Associated Lab Samples: 92778057002, 92778057003, 92778057004, 92778057005, 92778057006, 92778057007, 92778057008, 92778057009, 92778057010, 92778057011

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	25.0	25.0	02/11/25 11:56	

LABORATORY CONTROL SAMPLE: 4703464

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	250	254	101	90-110	

SAMPLE DUPLICATE: 4703465

Parameter	Units	92778057002 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	706	700	1	25	

SAMPLE DUPLICATE: 4703466

Parameter	Units	92777632005 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	1180	1250	5	25	

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REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: TCH.009-3
Pace Project No.: 92778057

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.
ND - Not Detected at or above adjusted reporting limit.
TNTC - Too Numerous To Count
J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.
MDL - Adjusted Method Detection Limit.
PQL - Practical Quantitation Limit.
RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.
S - Surrogate
1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.
Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.
LCS(D) - Laboratory Control Sample (Duplicate)
MS(D) - Matrix Spike (Duplicate)
DUP - Sample Duplicate
RPD - Relative Percent Difference
NC - Not Calculable.
SG - Silica Gel - Clean-Up
U - Indicates the compound was analyzed for, but not detected.
Acid preservation may not be appropriate for 2 Chloroethylvinyl ether.
A separate vial preserved to a pH of 4-5 is recommended in SW846 Chapter 4 for the analysis of Acrolein and Acrylonitrile by EPA Method 8260.
N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.
Reported results are not rounded until the final step prior to reporting. Therefore, calculated parameters that are typically reported as "Total" may vary slightly from the sum of the reported component parameters.
Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.
TNI - The NELAC Institute.

ANALYTE QUALIFIERS

B	Analyte was detected in the associated method blank.
D3	Sample was diluted due to the presence of high levels of non-target analytes or other matrix interference.
H1	Analysis conducted outside the EPA method holding time.
H3	Sample was received or analysis requested beyond the recognized method holding time.
M1	Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.
P4	Sample field preservation does not meet EPA or method recommendations for this analysis.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: TCH.009-3
Pace Project No.: 92778057

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92778057001	MW-1	EPA 7199	914269		
92778057002	MW-1A	EPA 7199	914269		
92778057003	MW-3A	EPA 7199	914269		
92778057004	MW-4A	EPA 7199	914269		
92778057005	MW-4A (FILTERED)	EPA 7199	914269		
92778057006	MW-6	EPA 7199	914269		
92778057007	MW-7	EPA 7199	914269		
92778057008	MW-7 (FILTERED)	EPA 7199	914269		
92778057009	MW-8 (FILTERED)	EPA 7199	914269		
92778057010	MW-8	EPA 7199	914269		
92778057011	DUP-1	EPA 7199	914269		
92778057001	MW-1	EPA 3010A	914463	EPA 6010D	914471
92778057002	MW-1A	EPA 3010A	914463	EPA 6010D	914471
92778057003	MW-3A	EPA 3010A	914463	EPA 6010D	914471
92778057004	MW-4A	EPA 3010A	914463	EPA 6010D	914471
92778057006	MW-6	EPA 3010A	914463	EPA 6010D	914471
92778057007	MW-7	EPA 3010A	914463	EPA 6010D	914471
92778057010	MW-8	EPA 3010A	914463	EPA 6010D	914471
92778057011	DUP-1	EPA 3010A	914463	EPA 6010D	914471
92778057005	MW-4A (FILTERED)	EPA 3010A	915246	EPA 6010D	915446
92778057008	MW-7 (FILTERED)	EPA 3010A	915246	EPA 6010D	915446
92778057009	MW-8 (FILTERED)	EPA 3010A	915246	EPA 6010D	915446
92778057001	MW-1	EPA 3010A	918168	EPA 6020B	918180
92778057002	MW-1A	EPA 3010A	918168	EPA 6020B	918180
92778057003	MW-3A	EPA 3010A	918168	EPA 6020B	918180
92778057004	MW-4A	EPA 3010A	918168	EPA 6020B	918180
92778057006	MW-6	EPA 3010A	918168	EPA 6020B	918180
92778057007	MW-7	EPA 3010A	918168	EPA 6020B	918180
92778057010	MW-8	EPA 3010A	918168	EPA 6020B	918180
92778057011	DUP-1	EPA 3010A	918319	EPA 6020B	918481
92778057005	MW-4A (FILTERED)	EPA 3010A	915418	EPA 6020B	915452
92778057008	MW-7 (FILTERED)	EPA 3010A	915418	EPA 6020B	915452
92778057009	MW-8 (FILTERED)	EPA 3010A	915418	EPA 6020B	915452
92778057001	MW-1	EPA 7470A	914688	EPA 7470A	914859
92778057002	MW-1A	EPA 7470A	914688	EPA 7470A	914859
92778057003	MW-3A	EPA 7470A	914688	EPA 7470A	914859
92778057004	MW-4A	EPA 7470A	914688	EPA 7470A	914859
92778057006	MW-6	EPA 7470A	914688	EPA 7470A	914859
92778057007	MW-7	EPA 7470A	914688	EPA 7470A	914859
92778057010	MW-8	EPA 7470A	914688	EPA 7470A	914859
92778057011	DUP-1	EPA 7470A	914688	EPA 7470A	914859
92778057005	MW-4A (FILTERED)	EPA 7470A	915007	EPA 7470A	915314
92778057008	MW-7 (FILTERED)	EPA 7470A	915007	EPA 7470A	915314
92778057009	MW-8 (FILTERED)	EPA 7470A	915007	EPA 7470A	915314
92778057001	MW-1	SM 2540C-2015	915070		

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: TCH.009-3

Pace Project No.: 92778057

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92778057002	MW-1A	SM 2540C-2015	915071		
92778057003	MW-3A	SM 2540C-2015	915071		
92778057004	MW-4A	SM 2540C-2015	915071		
92778057005	MW-4A (FILTERED)	SM 2540C-2015	915071		
92778057006	MW-6	SM 2540C-2015	915071		
92778057007	MW-7	SM 2540C-2015	915071		
92778057008	MW-7 (FILTERED)	SM 2540C-2015	915071		
92778057009	MW-8 (FILTERED)	SM 2540C-2015	915071		
92778057010	MW-8	SM 2540C-2015	915071		
92778057011	DUP-1	SM 2540C-2015	915071		

REPORT OF LABORATORY ANALYSIS

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Effective Date: 05/24/2024

Laboratory receiving samples:

Asheville ☐ Eden ☐ Greenwood ☐ Huntersville ☒ Raleigh ☐ Mechanicsville ☐ Atlanta ☐ Kernersville ☐Sample Condition
Upon Receipt

Client Name:

Project #:

WO#: 92778057

Courier:

☐ Commercial☒ Fed Ex☐ UPS☐ USPS☐ Client☐ Pace☐ Other: _____

92778057

Custody Seal Present?

☐ Yes☒ No

Seals Intact?

☐ Yes☐ No☒ N/ADate/Initials Person Examining Contents: ms

Packing Material:

☐ Bubble Wrap☐ Bubble Bags☒ None☐ Other

Biological Tissue Frozen?

☐ Yes☐ No☒ N/A

Thermometer:

☒ IR Gun ID:

92778057

Type of Ice:

☒ Wet☐ Blue☐ None

Cooler Temp:

1.2

Correction Factor:

Add/Subtract (°C)

0

Temp should be above freezing to 6°C

☐ Samples out of temp criteria. Samples on ice, cooling process has begun

Cooler Temp Corrected (°C):

1.2

USDA Regulated Soil (☒ N/A, water sample)Did samples originate in a quarantine zone within the United States: CA, NY, or SC (check maps)? ☐ Yes ☐ NoDid samples originate from a foreign source (internationally, including Hawaii and Puerto Rico)? ☐ Yes ☐ No

Comments/Discrepancy:

Chain of Custody Present?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A	1.
Samples Arrived within Hold Time?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A	2.
Short Hold Time Analysis (<72 hr.)?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A	3.
Rush Turn Around Time Requested?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<input type="checkbox"/> N/A	4.
Sufficient Volume?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A	5.
Correct Containers Used?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A	6.
-Pace Containers Used?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A	
Containers Intact?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A	7.
Dissolved analysis: Samples Field Filtered?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A	8.
Sample Labels Match COC?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A	9.
-Includes Date/Time/ID/Analysis Matrix: <u>WT</u>				
Headspace in VOA Vials (>5-6mm)?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> N/A	10.
Trip Blank Present?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> N/A	11.
Trip Blank Custody Seals Present?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> N/A	

COMMENTS/SAMPLE DISCREPANCY

Field Data Required? ☐ Yes ☐ No

Lot ID of split containers:

CLIENT NOTIFICATION/RESOLUTION

Person contacted: _____

Date/Time: _____

Project Manager SCURF Review: _____

Date: _____

Project Manager SRF Review: _____

Date: _____



DC#_Title: ENV-FRM-HUN1-0083 v05_Sample Condition Upon Receipt

Effective Date: 05/24/2024

*Check mark top half of box if pH and/or dechlorination is verified and within the acceptance range for preservation samples.

Exceptions: VOA, Coliform, TOC, Oil and Grease, DRO/8015 (water) DOC, LLHg

**Bottom half of box is to list number of bottles

***Check all unpreserved Nitrates for chlorine

Project #

WO#: 92778057

PM: TMC

Due Date: 02/13/25

CLIENT: 92-Hart_Ral

Laboratory Receiving Location: Asheville ☐ Eden ☐ Greenwood ☐ Huntersville ☒ Raleigh ☐ Mechanicsville ☐ Atlanta ☐ Kernersville ☐Client Hart Hickman Profile EZ (Circle one) 3219192 Notes

Item#	CC	1	2	3	4	5	6	7	8	9	10	11	12	BP4U-125 mL Plastic Unpreserved (N/A) (Cl-)	BP3U-250 mL Plastic Unpreserved (N/A)	BP2U-500 mL Plastic Unpreserved (N/A)	BP1U-1 liter Plastic Unpreserved (N/A)	BP3F	BP4S-125 mL Plastic H2SO4 (pH < 2) (Cl-)	BP3N-250 mL plastic HNO3 (pH < 2)	BP4Z-125 mL Plastic Zn Acetate & NaOH (>9)	BP4B-125 mL Plastic NaOH (pH > 12) (Cl-)	WGFU-Wide-mouthed Glass jar Unpreserved	AG1U-1 liter Amber Unpreserved (N/A) (Cl-)	AG1H-1 liter Amber HCl (pH < 2)	AG3U-250 mL Amber Unpreserved (N/A) (Cl-)	AG1S-1 liter Amber H2SO4 (pH < 2)	AG3S-250 mL Amber H2SO4 (pH < 2)	DG9H-40 mL Amber Ni4Cl (N/A)(Cl-)	DG9H-40 mL VOA HCl (N/A)	VG9T-40 mL VOA Na2S2O3 (N/A)	VG9U-40 mL VOA Unpreserved (N/A)	DG9V-40 mL VOA H3PO4 (N/A)	KP7U-50 mL Plastic Unpreserved (N/A)	V/GK (3 vials per kit)-VPH/Gas kit (N/A)	SP5T-125 mL Sterile Plastic (N/A - lab)	SP2T-250 mL Sterile Plastic (N/A - lab)		BP3R-250 mL Plastic (NH2)2SO4 (9.3-9.7)	AG0U-100 mL Amber Unpreserved (N/A) (Cl-)	VSGU-20 mL Scintillation vials (N/A)	DG9U-40 mL Amber Unpreserved vials (N/A)																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																												

pH Adjustment Log for Preserved Samples

Sample ID	Type of Preservative	pH upon receipt	Date preservation adjusted	Time preservation adjusted	Amount of Preservative added	Lot #

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DENR Certification Office (i.e. Out of hold, incorrect preservative, out of temp, incorrect containers.

CHAIN-OF-CUSTODY Analytical Request Document

Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevant fields

Company Name: Hart & Hickman, Raleigh		Contact/Report To: Justin Ballard
Street Address: 3921 Sunset Ridge Rd. Suite 301 Raleigh, NC 27607		Phone #: (919)723-2507
Customer Project #: TCH-0093		E-Mail: jballard@hartickman.com
Project Name: TCH-0093		Cc E-Mail:
Site Collection Info/Facility ID (as applicable): 		
Time Zone Collected: [] AK [] PT [] MT [] CT [X] ET		
Data Deliverables:	Regulatory Program (DW, RCRA, etc.) as applicable:	County / State origin of sample(s): North Carolina
[] Level II [] Level III [] Level IV [] EQUIS Excited High Strength Other	Rush (Pre-approval required): [] Same Day [] 1 Day [] 2 Day [] 3 Day [] Other _____	DW PWSID # or WW Permit # as applicable:
Date Results Requested: Saturday TAT	Field Filtered (if applicable): Yes [X] No []	Analysis: See Service Contract
(Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Waste Water (WW), Product (P), Soil/Solid (SS), Oil (OL), Wipe (WP), Tissue (TS), Bioassay (B), Vapor (V), Surface Water (SW), Sediment (SD), Sludge (SL), Leachate (LL), Biosolid (BS), Other (OT))		
Customer Sample ID	Matrix *	Comp / Grab
MW-1	GW	G
MW-1A		
MW-3A		
MW-4A		
MW-4A (Filtered)		
MW-6 (Filtered)		
MW-7 (Filtered)		
MW-8 (Filtered)		
MW-8		
Additional Instructions from Pass#: _____		
6010: Ba, B, Mn, Sr, Sn 6020: Sb, As, Be, Cd, Cr, Co, Cu, U, Mo, Ni, Se, Ti, V 9056: Chloride, Fluoride, Nitrate, Sulfate	Collected By: C. J. Parker	Signature: CP
Relinquished by/Company (Signature) CP (H+H)	Date/Time: 2/15/25 1500	Received by/Company (Signature) JBC HVL
Relinquished by/Company (Signature)	Date/Time:	Received by/Company (Signature)
Relinquished by/Company (Signature)	Date/Time:	Received by/Company (Signature)
Relinquished by/Company (Signature)	Date/Time:	Received by/Company (Signature)
Scan QR Code for instructions		
Specify Container Size **		
Identify Container Preservative Type ***		
Analysis Requested		
*** Container Size: (1) 1L, (2) 500mL, (3) 250mL, (4) 125mL, (5) 100mL, (6) 40mL vial, (7) Encore, (8) Triscore, (9) 90mL, (10) Other		
*** Preservative Types: (1) None, (2) HNO3, (3) H2SO4, (4) HCl, (5) NaOH, (6) Zn Acetate, (7) KHSO4, (8) Sod. Thiosulfate, (9) Ascorbic Acid, (10) NaOH, (11) Other		
Proj. Mfr.: Taylor Cannon		
AccNum / Client ID:		
Table #:		
Profile / Template: 9481		
Prelog / Bottle Ord. ID: EZ 3219192		
Sample Comment		
Preservation non-conformance identified for sample.		



February 09, 2025

Justin Ballard
Hart & Hickman
3921 Sunset Ridge Rd.
Suite 301
Raleigh, NC 27607

RE: Project: TCH.009-3
Pace Project No.: 92778043

Dear Justin Ballard:

Enclosed are the analytical results for sample(s) received by the laboratory on February 06, 2025. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

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

- Pace Analytical Services - Asheville

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

Sincerely,

A handwritten signature in black ink, appearing to read "T Cannon".

Taylor M Cannon
taylor.cannon@pacelabs.com
704-977-0943
Project Manager

Enclosures



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: TCH.009-3

Pace Project No.: 92778043

Pace Analytical Services Asheville

2225 Riverside Drive, Asheville, NC 28804

Florida/NELAP Certification #: E87648

North Carolina Drinking Water Certification #: 37712

North Carolina Wastewater Certification #: 40

South Carolina Laboratory ID: 99030

South Carolina Certification #: 99030001

Virginia/VELAP Certification #: 460222

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SAMPLE SUMMARY

Project: TCH.009-3

Pace Project No.: 92778043

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92778043001	MW-1	Water	02/05/25 12:45	02/06/25 11:13
92778043002	MW-1A	Water	02/05/25 11:45	02/06/25 11:13
92778043003	MW-3A	Water	02/05/25 13:45	02/06/25 11:13
92778043004	MW-4A	Water	02/05/25 15:45	02/06/25 11:13
92778043005	MW-4A (FILTERED)	Water	02/05/25 15:45	02/06/25 11:13
92778043006	MW-6	Water	02/05/25 11:45	02/06/25 11:13
92778043007	MW-7	Water	02/05/25 16:45	02/06/25 11:13
92778043008	MW-7 (FILTERED)	Water	02/05/25 16:45	02/06/25 11:13
92778043009	MW-8	Water	02/05/25 14:45	02/06/25 11:13
92778043010	MW-8 (FILTERED)	Water	02/05/25 14:45	02/06/25 11:13
92778043011	DUP-1	Water	02/06/25 00:00	02/06/25 11:13

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SAMPLE ANALYTE COUNT

Project: TCH.009-3

Pace Project No.: 92778043

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92778043001	MW-1	EPA 9056A	CDC	4	PASI-A
92778043002	MW-1A	EPA 9056A	CDC	4	PASI-A
92778043003	MW-3A	EPA 9056A	CDC	4	PASI-A
92778043004	MW-4A	EPA 9056A	CDC	4	PASI-A
92778043005	MW-4A (FILTERED)	EPA 9056A	CDC	4	PASI-A
92778043006	MW-6	EPA 9056A	CDC	4	PASI-A
92778043007	MW-7	EPA 9056A	CDC	4	PASI-A
92778043008	MW-7 (FILTERED)	EPA 9056A	CDC	4	PASI-A
92778043009	MW-8	EPA 9056A	CDC	4	PASI-A
92778043010	MW-8 (FILTERED)	EPA 9056A	CDC	4	PASI-A
92778043011	DUP-1	EPA 9056A	CDC	4	PASI-A

PASI-A = Pace Analytical Services - Asheville

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: TCH.009-3

Pace Project No.: 92778043

Sample: MW-1		Lab ID: 92778043001		Collected: 02/05/25 12:45		Received: 02/06/25 11:13		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
9056 IC Anions 48hr									
Analytical Method: EPA 9056A									
Pace Analytical Services - Asheville									
Chloride	60.8	mg/L	1.0	0.60	1		02/07/25 00:03	16887-00-6	
Fluoride	0.20	mg/L	0.10	0.050	1		02/07/25 00:03	16984-48-8	
Nitrate as N	ND	mg/L	0.020	0.0060	1		02/07/25 00:03	14797-55-8	
Sulfate	12.4	mg/L	1.0	0.50	1		02/07/25 00:03	14808-79-8	

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ANALYTICAL RESULTS

Project: TCH.009-3
Pace Project No.: 92778043

Sample: MW-1A		Lab ID: 92778043002		Collected: 02/05/25 11:45		Received: 02/06/25 11:13		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
9056 IC Anions 48hr									
Analytical Method: EPA 9056A									
Pace Analytical Services - Asheville									
Chloride	17.9	mg/L	1.0	0.60	1		02/06/25 22:59	16887-00-6	
Fluoride	0.22	mg/L	0.10	0.050	1		02/06/25 22:59	16984-48-8	
Nitrate as N	ND	mg/L	0.020	0.0060	1		02/06/25 22:59	14797-55-8	
Sulfate	9.6	mg/L	1.0	0.50	1		02/06/25 22:59	14808-79-8	

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ANALYTICAL RESULTS

Project: TCH.009-3
Pace Project No.: 92778043

Sample: MW-3A		Lab ID: 92778043003		Collected: 02/05/25 13:45		Received: 02/06/25 11:13		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
9056 IC Anions 48hr									
Analytical Method: EPA 9056A									
Pace Analytical Services - Asheville									
Chloride	51.3	mg/L	1.0	0.60	1		02/07/25 00:19	16887-00-6	
Fluoride	0.13	mg/L	0.10	0.050	1		02/07/25 00:19	16984-48-8	
Nitrate as N	0.075	mg/L	0.020	0.0060	1		02/07/25 00:19	14797-55-8	
Sulfate	234	mg/L	6.0	3.0	6		02/07/25 09:49	14808-79-8	

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ANALYTICAL RESULTS

Project: TCH.009-3
Pace Project No.: 92778043

Sample: MW-4A		Lab ID: 92778043004		Collected: 02/05/25 15:45		Received: 02/06/25 11:13		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
9056 IC Anions 48hr									
Analytical Method: EPA 9056A									
Pace Analytical Services - Asheville									
Chloride	26.4	mg/L	1.0	0.60	1		02/07/25 01:22	16887-00-6	
Fluoride	0.060J	mg/L	0.10	0.050	1		02/07/25 01:22	16984-48-8	
Nitrate as N	ND	mg/L	0.020	0.0060	1		02/07/25 01:22	14797-55-8	
Sulfate	16.6	mg/L	1.0	0.50	1		02/07/25 01:22	14808-79-8	

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ANALYTICAL RESULTS

Project: TCH.009-3
Pace Project No.: 92778043

Sample: MW-4A (FILTERED)		Lab ID: 92778043005		Collected: 02/05/25 15:45		Received: 02/06/25 11:13		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
9056 IC Anions 48hr		Analytical Method: EPA 9056A Pace Analytical Services - Asheville							
Chloride	26.5	mg/L	1.0	0.60	1		02/07/25 01:38	16887-00-6	
Fluoride	0.063J	mg/L	0.10	0.050	1		02/07/25 01:38	16984-48-8	
Nitrate as N	0.021	mg/L	0.020	0.0060	1		02/07/25 01:38	14797-55-8	
Sulfate	16.5	mg/L	1.0	0.50	1		02/07/25 01:38	14808-79-8	

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ANALYTICAL RESULTS

Project: TCH.009-3

Pace Project No.: 92778043

Sample: MW-6		Lab ID: 92778043006		Collected: 02/05/25 11:45		Received: 02/06/25 11:13		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
9056 IC Anions 48hr									
Analytical Method: EPA 9056A									
Pace Analytical Services - Asheville									
Chloride	52.6	mg/L	1.0	0.60	1		02/06/25 23:47	16887-00-6	
Fluoride	0.17	mg/L	0.10	0.050	1		02/06/25 23:47	16984-48-8	
Nitrate as N	ND	mg/L	0.020	0.0060	1		02/06/25 23:47	14797-55-8	
Sulfate	ND	mg/L	1.0	0.50	1		02/06/25 23:47	14808-79-8	

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ANALYTICAL RESULTS

Project: TCH.009-3

Pace Project No.: 92778043

Sample: MW-7		Lab ID: 92778043007		Collected: 02/05/25 16:45		Received: 02/06/25 11:13		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
9056 IC Anions 48hr									
Analytical Method: EPA 9056A									
Pace Analytical Services - Asheville									
Chloride	8.7	mg/L	1.0	0.60	1		02/07/25 01:54	16887-00-6	
Fluoride	0.16	mg/L	0.10	0.050	1		02/07/25 01:54	16984-48-8	M1
Nitrate as N	0.10	mg/L	0.020	0.0060	1		02/07/25 01:54	14797-55-8	
Sulfate	5.2	mg/L	1.0	0.50	1		02/07/25 01:54	14808-79-8	

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ANALYTICAL RESULTS

Project: TCH.009-3

Pace Project No.: 92778043

Sample: MW-7 (FILTERED)		Lab ID: 92778043008		Collected: 02/05/25 16:45		Received: 02/06/25 11:13		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
9056 IC Anions 48hr									
Analytical Method: EPA 9056A									
Pace Analytical Services - Asheville									
Chloride	8.9	mg/L	1.0	0.60	1		02/07/25 03:13	16887-00-6	
Fluoride	0.16	mg/L	0.10	0.050	1		02/07/25 03:13	16984-48-8	
Nitrate as N	0.10	mg/L	0.020	0.0060	1		02/07/25 03:13	14797-55-8	
Sulfate	5.2	mg/L	1.0	0.50	1		02/07/25 03:13	14808-79-8	

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ANALYTICAL RESULTS

Project: TCH.009-3
Pace Project No.: 92778043

Sample: MW-8		Lab ID: 92778043009		Collected: 02/05/25 14:45		Received: 02/06/25 11:13		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
9056 IC Anions 48hr									
Analytical Method: EPA 9056A									
Pace Analytical Services - Asheville									
Chloride	38.8	mg/L	1.0	0.60	1		02/07/25 00:50	16887-00-6	
Fluoride	0.18	mg/L	0.10	0.050	1		02/07/25 00:50	16984-48-8	
Nitrate as N	ND	mg/L	0.020	0.0060	1		02/07/25 00:50	14797-55-8	
Sulfate	16.2	mg/L	1.0	0.50	1		02/07/25 00:50	14808-79-8	

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ANALYTICAL RESULTS

Project: TCH.009-3

Pace Project No.: 92778043

Sample: MW-8 (FILTERED)		Lab ID: 92778043010		Collected: 02/05/25 14:45		Received: 02/06/25 11:13		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
9056 IC Anions 48hr									
Analytical Method: EPA 9056A									
Pace Analytical Services - Asheville									
Chloride	38.9	mg/L	1.0	0.60	1		02/07/25 01:06	16887-00-6	
Fluoride	0.20	mg/L	0.10	0.050	1		02/07/25 01:06	16984-48-8	
Nitrate as N	ND	mg/L	0.020	0.0060	1		02/07/25 01:06	14797-55-8	
Sulfate	16.2	mg/L	1.0	0.50	1		02/07/25 01:06	14808-79-8	

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ANALYTICAL RESULTS

Project: TCH.009-3

Pace Project No.: 92778043

Sample: DUP-1		Lab ID: 92778043011		Collected: 02/06/25 00:00		Received: 02/06/25 11:13		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
9056 IC Anions 48hr									
Analytical Method: EPA 9056A									
Pace Analytical Services - Asheville									
Chloride	52.6	mg/L	1.0	0.60	1		02/07/25 04:00	16887-00-6	
Fluoride	0.17	mg/L	0.10	0.050	1		02/07/25 04:00	16984-48-8	
Nitrate as N	ND	mg/L	0.020	0.0060	1		02/07/25 04:00	14797-55-8	
Sulfate	ND	mg/L	1.0	0.50	1		02/07/25 04:00	14808-79-8	

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QUALITY CONTROL DATA

Project: TCH.009-3
Pace Project No.: 92778043

QC Batch:	914368	Analysis Method:	EPA 9056A
QC Batch Method:	EPA 9056A	Analysis Description:	9056 IC Anions
		Laboratory:	Pace Analytical Services - Asheville
Associated Lab Samples:	92778043001, 92778043002, 92778043003, 92778043004, 92778043005, 92778043006, 92778043007, 92778043008, 92778043009, 92778043010, 92778043011		

METHOD BLANK: 4700137 Matrix: Water
Associated Lab Samples: 92778043001, 92778043002, 92778043003, 92778043004, 92778043005, 92778043006, 92778043007, 92778043008, 92778043009, 92778043010, 92778043011

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	0.60	02/06/25 20:37	
Fluoride	mg/L	ND	0.10	0.050	02/06/25 20:37	
Nitrate as N	mg/L	ND	0.020	0.0060	02/06/25 20:37	
Sulfate	mg/L	ND	1.0	0.50	02/06/25 20:37	

LABORATORY CONTROL SAMPLE: 4700138

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	50	50.4	101	90-110	
Fluoride	mg/L	2.5	2.5	100	90-110	
Nitrate as N	mg/L	2.5	2.5	100	90-110	
Sulfate	mg/L	50	50.8	102	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 4700139 4700140

Parameter	Units	92778043007 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	8.7	50	50	59.2	60.0	101	102	90-110	1	10	
Fluoride	mg/L	0.16	2.5	2.5	3.0	3.0	112	114	90-110	2	10 M1	
Nitrate as N	mg/L	0.10	2.5	2.5	2.7	2.7	103	105	90-110	2	10	
Sulfate	mg/L	5.2	50	50	56.2	57.0	102	103	90-110	1	10	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 4700141 4700142

Parameter	Units	92778043008 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	8.9	50	50	59.4	60.3	101	103	90-110	2	10	
Fluoride	mg/L	0.16	2.5	2.5	2.8	2.9	107	109	90-110	2	10	
Nitrate as N	mg/L	0.10	2.5	2.5	2.7	2.7	103	105	90-110	2	10	
Sulfate	mg/L	5.2	50	50	56.1	57.1	102	104	90-110	2	10	

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

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QUALIFIERS

Project: TCH.009-3
Pace Project No.: 92778043

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.
ND - Not Detected at or above adjusted reporting limit.
TNTC - Too Numerous To Count
J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.
MDL - Adjusted Method Detection Limit.
PQL - Practical Quantitation Limit.
RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.
S - Surrogate
1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.
Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.
LCS(D) - Laboratory Control Sample (Duplicate)
MS(D) - Matrix Spike (Duplicate)
DUP - Sample Duplicate
RPD - Relative Percent Difference
NC - Not Calculable.
SG - Silica Gel - Clean-Up
U - Indicates the compound was analyzed for, but not detected.
Acid preservation may not be appropriate for 2 Chloroethylvinyl ether.
A separate vial preserved to a pH of 4-5 is recommended in SW846 Chapter 4 for the analysis of Acrolein and Acrylonitrile by EPA Method 8260.
N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.
Reported results are not rounded until the final step prior to reporting. Therefore, calculated parameters that are typically reported as "Total" may vary slightly from the sum of the reported component parameters.
Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.
TNI - The NELAC Institute.

ANALYTE QUALIFIERS

M1 Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE


Project: TCH.009-3

Pace Project No.: 92778043

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92778043001	MW-1	EPA 9056A	914368		
92778043002	MW-1A	EPA 9056A	914368		
92778043003	MW-3A	EPA 9056A	914368		
92778043004	MW-4A	EPA 9056A	914368		
92778043005	MW-4A (FILTERED)	EPA 9056A	914368		
92778043006	MW-6	EPA 9056A	914368		
92778043007	MW-7	EPA 9056A	914368		
92778043008	MW-7 (FILTERED)	EPA 9056A	914368		
92778043009	MW-8	EPA 9056A	914368		
92778043010	MW-8 (FILTERED)	EPA 9056A	914368		
92778043011	DUP-1	EPA 9056A	914368		

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DC#_Title: ENV-FRM-HUN1-0083 v05_Sample Condition Upon Receipt


Effective Date: 05/24/2024

Laboratory receiving samples:
Asheville ☒ Eden ☐ Greenwood ☐ Huntersville ☐ Raleigh ☐ Mechanicsville ☐ Atlanta ☐ Kernersville ☐

Sample Condition Upon Receipt

Client Name: Hart & Hickman - Raleigh Project # **WO#: 92778043**

Courier: ☒ Fed Ex ☐ UPS ☐ USPS ☐ Client ☐ Commercial ☐ Pace ☐ Other: _____



Custody Seal Present? ☐ Yes ☒ No Seals Intact? ☐ Yes ☐ No ☒ N/A

Date/Initials Person Examining Contents: 2/6/25 AW

Packing Material: ☒ Bubble Wrap ☐ Bubble Bags ☐ None ☐ Other

Biological Tissue Frozen? ☐ Yes ☐ No ☒ N/A

Thermometer: ☐ IR Gun ID: 937090 Type of Ice: ☒ Wet ☐ Blue ☐ None

Cooler Temp: 0.4 Correction Factor: Add/Subtract (°C) +0.2 Temp should be above freezing to 6°C

Cooler Temp Corrected (°C): 0.6 ☐ Samples out of temp criteria. Samples on ice, cooling process has begun

USDA Regulated Soil (☒ N/A, water sample)

Did samples originate in a quarantine zone within the United States: CA, NY, or SC (check maps)? ☐ Yes ☐ No

Did samples originate from a foreign source (internationally, including Hawaii and Puerto Rico)? ☐ Yes ☐ No

	Comments/Discrepancy:
Chain of Custody Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Samples Arrived within Hold Time? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.
Short Hold Time Analysis (<72 hr.)? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	3.
Rush Turn Around Time Requested? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	4.
Sufficient Volume? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.
Correct Containers Used? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	6.
-Pace Containers Used? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Containers Intact? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	7.
Dissolved analysis: Samples Field Filtered? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	8.
Sample Labels Match COC? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.
-Includes Date/Time/ID/Analysis Matrix: <u>GW</u>	
Headspace in VOA Vials (>5-6mm)? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	10.
Trip Blank Present? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.
Trip Blank Custody Seals Present? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	

COMMENTS/SAMPLE DISCREPANCY

Field Data Required? ☐ Yes ☐ No

Lot ID of split containers:

CLIENT NOTIFICATION/RESOLUTION

Person contacted: _____ Date/Time: _____

Project Manager SCURF Review: _____ Date: _____

Project Manager SRF Review: _____ Date: _____

Pace® Location Requested (City/State): Pace Analytical Charlotte 9800 Kinney Ave. Suite 100, Huntersville, NC 28078										Chain-of-Custody Analytical Request Document Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevant fields										LAB USE ONLY- Affix Workorder/Login Label Here																													
Company Name: Hart & Hickman_Raleigh Street Address: 3921 Sunset Ridge Rd. Suite 301 Raleigh, NC 27607										Contact/Report To: Justin Ballard Phone #: (919)723-2507 E-Mail: jballard@hartthickman.com Cc E-Mail:										Specify Container Size ** 31																													
Customer Project #: TCH-009-3 Project Name: TCH-009-3										Invoice To: Accounts Payable Invoice E-Mail: accountspayable@hartthickman.com Purchase Order # (if applicable): Quote #:										Identify Container Preservative Type*** 2																													
Site Collection Info/Facility ID (as applicable):										County / State origin of sample(s): North Carolina County: [] State: []										Analysis Requested																													
Time Zone Collected: [] AK [] MT [] CT [] ET Data Deliverables: [] Level II [] Level III [] Level IV [] EQUIS [] Other: HTH Standards										Rush (Pre-approval required): [] Same Day [] 1 Day [] 2 Day [] 3 Day [] Other Date Results: Standards TAT Field Filtered (if applicable): [X] Yes [] No Analysis: See Sample Comment										Preservation non-conformance identified for																													
Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Waste Water (WW), Product (P), Soil/Solid (SS), Oil (OL), Wipe (WP), Tissue (TS), Bioassay (B), Vapor (V), Surface Water (SW), Sediment (SED), Sludge (SL), Caulk (CK), Leachate (LL), Biosolid (BS), Other (OT)										2540C Total Dissolved Solids										9056 IC Anions																													
Customer Sample ID										Matrix * Comp / Grab										Collected or Composite End										# Cont. Results Units																			
MW-1										GW G										2/15/25										1225										1									
MW-1A																														1100																			
MW-3A																														1315																			
MW-4A																														1540																			
MW-4A (Filtered)																														1540																			
MW-6																														1155																			
MW-7																														1655																			
MW-7 (Filtered)																														1655																			
MW-8																														1450																			
MW-8 (Filtered)																														1450																			
Additional Instructions from Pace: 6010: Ba, B, Mn, Sr, Sn 6020: Sb, As, Be, Cd, Cr, Co, Li, Mo, Ni, Se, Ti, V 9056: Chloride, Fluoride, Nitrate, Sulfate										Collected By: [Signature] Signature: CP Indicea Parva										Thermometer ID: 937090 Correction Factor (°C): 0.4 Obs. Temp. (°C): +0.2 Corrected Temp. (°C): 0.6										On Ice: 4																			
Relinquished by/Company: (Signature) CP (H+H)										Date/Time: 2/15/25 1500										Received by/Company: (Signature) Missy Masloger										Date/Time: 2/16/25 11:13										Tracking Number:									
Relinquished by/Company: (Signature)										Date/Time:										Received by/Company: (Signature)										Date/Time:										Delivered by: [] In-Person [] Courier									
Relinquished by/Company: (Signature)										Date/Time:										Received by/Company: (Signature)										Date/Time:										Delivered by: [X] FedEx [] UPS [] Other									
Relinquished by/Company: (Signature)										Date/Time:										Received by/Company: (Signature)										Date/Time:										Page: 3 of 3									
Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace® Terms and Conditions found at https://www.pacelabs.com/resource-library/resource/pace-terms-and-conditions/																														ENV-FRM-CORQ-0019_v02_110123 ©																			



March 10, 2025

Justin Ballard
Hart & Hickman
3921 Sunset Ridge Rd.
Suite 301
Raleigh, NC 27607

RE: Project: TCH.009-3
Pace Project No.: 92777615

Dear Justin Ballard:

Enclosed are the analytical results for sample(s) received by the laboratory on February 05, 2025. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

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

- Pace Analytical Services - Asheville
- Pace Analytical Services - Charlotte

A revised report is being issued on 3/10/25 to include Zinc results for filtered samples.

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

Sincerely,

Taylor M Cannon
taylor.cannon@pacelabs.com
704-977-0943
Project Manager

Enclosures



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: TCH.009-3
Pace Project No.: 92777615

Pace Analytical Services Charlotte

South Carolina Laboratory ID: 99006
9800 Kincey Ave. Ste 100, Huntersville, NC 28078
North Carolina Drinking Water Certification #: 37706
North Carolina Field Services Certification #: 5342
North Carolina Wastewater Certification #: 12
South Carolina Laboratory ID: 99006

South Carolina Certification #: 99006001
South Carolina Drinking Water Cert. #: 99006003
Florida/NELAP Certification #: E87627
Kentucky UST Certification #: 84
Louisiana DoH Drinking Water #: LA029
Virginia/VELAP Certification #: 460221

Pace Analytical Services Asheville

2225 Riverside Drive, Asheville, NC 28804
Florida/NELAP Certification #: E87648
North Carolina Drinking Water Certification #: 37712
North Carolina Wastewater Certification #: 40

South Carolina Laboratory ID: 99030
South Carolina Certification #: 99030001
Virginia/VELAP Certification #: 460222

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SAMPLE SUMMARY

Project: TCH.009-3

Pace Project No.: 92777615

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92777615001	MW-5	Water	02/04/25 14:55	02/05/25 09:30
92777615002	MW-5 (FILTERED)	Water	02/04/25 14:55	02/05/25 09:30
92777615003	MW-9	Water	02/04/25 15:55	02/05/25 09:30
92777615004	MW-9 (FILTERED)	Water	02/04/25 15:55	02/05/25 09:30
92777615005	MW-11D	Water	02/04/25 12:28	02/05/25 09:30

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SAMPLE ANALYTE COUNT

Project: TCH.009-3

Pace Project No.: 92777615

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92777615001	MW-5	EPA 7199	VJM	1	PASI-C
		EPA 6010D	DBB1	5	PASI-A
		EPA 6020B	KRL	13	PASI-A
		EPA 7470A	TMM	1	PASI-A
		SM 2540C-2015	CMW1	1	PASI-A
92777615002	MW-5 (FILTERED)	EPA 7199	VJM	1	PASI-C
		EPA 6010D	DBB1	5	PASI-A
		EPA 6020B	KML	13	PASI-A
		EPA 7470A	MAB	1	PASI-A
		SM 2540C-2015	CMW1	1	PASI-A
92777615003	MW-9	EPA 7199	VJM	1	PASI-C
		EPA 6010D	DBB1	5	PASI-A
		EPA 6020B	KRL	13	PASI-A
		EPA 7470A	TMM	1	PASI-A
		SM 2540C-2015	CMW1	1	PASI-A
92777615004	MW-9 (FILTERED)	EPA 7199	VJM	1	PASI-C
		EPA 6010D	DBB1	5	PASI-A
		EPA 6020B	KML	13	PASI-A
		EPA 7470A	MAB	1	PASI-A
		SM 2540C-2015	CMW1	1	PASI-A
92777615005	MW-11D	EPA 7199	VJM	1	PASI-C
		EPA 6010D	DBB1	5	PASI-A
		EPA 6020B	KRL	13	PASI-A
		EPA 7470A	TMM	1	PASI-A
		SM 2540C-2015	CMW1	1	PASI-A

PASI-A = Pace Analytical Services - Asheville

PASI-C = Pace Analytical Services - Charlotte

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: TCH.009-3
Pace Project No.: 92777615

Sample: MW-5		Lab ID: 92777615001		Collected: 02/04/25 14:55		Received: 02/05/25 09:30		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
7199 Chromium, Hexavalent									
Analytical Method: EPA 7199 Pace Analytical Services - Charlotte									
Chromium, Hexavalent	0.028J	ug/L	0.050	0.0086	2		02/05/25 17:39	18540-29-9	D3,H1
6010 MET ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Asheville									
Barium	85.5	ug/L	25.0	4.0	5	02/06/25 15:52	02/07/25 21:14	7440-39-3	
Boron	ND	ug/L	250	20.2	5	02/06/25 15:52	02/07/25 21:14	7440-42-8	D3
Manganese	654	ug/L	25.0	4.3	5	02/06/25 15:52	02/07/25 21:14	7439-96-5	
Strontium	267	ug/L	25.0	3.3	5	02/06/25 15:52	02/07/25 21:14	7440-24-6	
Zinc	ND	ug/L	50.0	15.2	5	02/06/25 15:52	02/07/25 21:14	7440-66-6	D3
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3010A Pace Analytical Services - Asheville									
Antimony	0.10J	ug/L	1.0	0.10	1	02/07/25 13:37	02/11/25 00:27	7440-36-0	
Arsenic	1.4	ug/L	1.0	0.17	1	02/07/25 13:37	02/11/25 00:27	7440-38-2	
Beryllium	0.17	ug/L	0.10	0.045	1	02/07/25 13:37	02/11/25 00:27	7440-41-7	
Cadmium	ND	ug/L	0.10	0.037	1	02/07/25 13:37	02/11/25 00:27	7440-43-9	
Chromium	0.47J	ug/L	1.0	0.39	1	02/07/25 13:37	02/11/25 00:27	7440-47-3	
Cobalt	0.64J	ug/L	1.0	0.14	1	02/07/25 13:37	02/11/25 00:27	7440-48-4	
Copper	0.62J	ug/L	2.0	0.55	1	02/07/25 13:37	02/11/25 00:27	7440-50-8	
Lithium	2.0J	ug/L	2.5	0.33	1	02/07/25 13:37	02/11/25 00:27	7439-93-2	
Molybdenum	0.17J	ug/L	1.0	0.075	1	02/07/25 13:37	02/11/25 00:27	7439-98-7	
Nickel	ND	ug/L	1.0	0.26	1	02/07/25 13:37	02/11/25 00:27	7440-02-0	
Selenium	ND	ug/L	2.0	0.22	1	02/07/25 13:37	02/11/25 00:27	7782-49-2	
Thallium	ND	ug/L	0.20	0.028	1	02/07/25 13:37	02/11/25 00:27	7440-28-0	
Vanadium	0.065J	ug/L	1.0	0.064	1	02/07/25 13:37	02/11/25 00:27	7440-62-2	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Asheville									
Mercury	ND	ug/L	0.20	0.12	1	02/06/25 20:43	02/08/25 19:13	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2540C-2015 Pace Analytical Services - Asheville									
Total Dissolved Solids	454	mg/L	25.0	25.0	1		02/07/25 18:17		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: TCH.009-3
Pace Project No.: 92777615

Sample: MW-5 (FILTERED) Lab ID: 92777615002 Collected: 02/04/25 14:55 Received: 02/05/25 09:30 Matrix: Water									
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
7199 Chromium, Hexavalent									
Analytical Method: EPA 7199 Pace Analytical Services - Charlotte									
Chromium, Hexavalent	0.036	ug/L	0.025	0.0043	1		02/05/25 17:57	18540-29-9	H1
6010 MET ICP, Dissolved									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Asheville									
Barium, Dissolved	64.8	ug/L	5.0	0.79	1	02/11/25 16:30	02/11/25 21:31	7440-39-3	
Boron, Dissolved	5.5J	ug/L	50.0	4.0	1	02/11/25 16:30	02/11/25 21:31	7440-42-8	
Manganese, Dissolved	398	ug/L	5.0	0.86	1	02/11/25 16:30	02/11/25 21:31	7439-96-5	
Strontium, Dissolved	230	ug/L	5.0	0.66	1	02/11/25 16:30	02/11/25 21:31	7440-24-6	
Zinc, Dissolved	ND	ug/L	10.0	3.0	1	02/11/25 16:30	02/11/25 21:31	7440-66-6	
6020 MET ICPMS, Dissolved									
Analytical Method: EPA 6020B Preparation Method: EPA 3010A Pace Analytical Services - Asheville									
Antimony, Dissolved	ND	ug/L	1.0	0.10	1	02/11/25 16:30	02/25/25 13:37	7440-36-0	
Arsenic, Dissolved	0.20J	ug/L	1.0	0.17	1	02/11/25 16:30	02/25/25 13:37	7440-38-2	
Beryllium, Dissolved	ND	ug/L	0.10	0.045	1	02/11/25 16:30	02/25/25 13:37	7440-41-7	
Cadmium, Dissolved	ND	ug/L	0.10	0.037	1	02/11/25 16:30	02/25/25 13:37	7440-43-9	
Chromium, Dissolved	0.48J	ug/L	1.0	0.39	1	02/11/25 16:30	02/25/25 13:37	7440-47-3	
Cobalt, Dissolved	0.43J	ug/L	1.0	0.14	1	02/11/25 16:30	02/25/25 13:37	7440-48-4	
Copper, Dissolved	0.85J	ug/L	2.0	0.55	1	02/11/25 16:30	02/25/25 13:37	7440-50-8	
Lithium, Dissolved	2.5	ug/L	2.5	0.33	1	02/11/25 16:30	02/25/25 13:37	7439-93-2	
Molybdenum, Dissolved	0.19J	ug/L	1.0	0.075	1	02/11/25 16:30	02/25/25 13:37	7439-98-7	
Nickel, Dissolved	0.27J	ug/L	1.0	0.26	1	02/11/25 16:30	02/25/25 13:37	7440-02-0	
Selenium, Dissolved	ND	ug/L	2.0	0.22	1	02/11/25 16:30	02/25/25 13:37	7782-49-2	
Thallium, Dissolved	ND	ug/L	0.20	0.028	1	02/11/25 16:30	02/25/25 13:37	7440-28-0	
Vanadium, Dissolved	ND	ug/L	1.0	0.064	1	02/11/25 16:30	02/25/25 13:37	7440-62-2	
7470 Mercury, Dissolved									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Asheville									
Mercury, Dissolved	ND	ug/L	0.20	0.12	1	02/06/25 11:54	02/06/25 15:40	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2540C-2015 Pace Analytical Services - Asheville									
Total Dissolved Solids	444	mg/L	25.0	25.0	1		02/07/25 18:17		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: TCH.009-3
Pace Project No.: 92777615

Sample: MW-9		Lab ID: 92777615003		Collected: 02/04/25 15:55		Received: 02/05/25 09:30		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
7199 Chromium, Hexavalent									
Analytical Method: EPA 7199 Pace Analytical Services - Charlotte									
Chromium, Hexavalent	ND	ug/L	0.050	0.0086	2		02/05/25 18:33	18540-29-9	D3,H1
6010 MET ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Asheville									
Barium	1220	ug/L	25.0	4.0	5	02/06/25 15:52	02/07/25 21:18	7440-39-3	
Boron	291	ug/L	250	20.2	5	02/06/25 15:52	02/07/25 21:18	7440-42-8	
Manganese	4540	ug/L	25.0	4.3	5	02/06/25 15:52	02/07/25 21:18	7439-96-5	
Strontium	3860	ug/L	25.0	3.3	5	02/06/25 15:52	02/07/25 21:18	7440-24-6	
Zinc	ND	ug/L	50.0	15.2	5	02/06/25 15:52	02/07/25 21:18	7440-66-6	D3
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3010A Pace Analytical Services - Asheville									
Antimony	ND	ug/L	1.0	0.10	1	02/07/25 13:37	02/11/25 00:31	7440-36-0	
Arsenic	2.9	ug/L	1.0	0.17	1	02/07/25 13:37	02/11/25 00:31	7440-38-2	
Beryllium	0.045J	ug/L	0.10	0.045	1	02/07/25 13:37	02/11/25 00:31	7440-41-7	
Cadmium	ND	ug/L	0.10	0.037	1	02/07/25 13:37	02/11/25 00:31	7440-43-9	
Chromium	1.3	ug/L	1.0	0.39	1	02/07/25 13:37	02/11/25 00:31	7440-47-3	
Cobalt	2.4	ug/L	1.0	0.14	1	02/07/25 13:37	02/11/25 00:31	7440-48-4	
Copper	1.2J	ug/L	2.0	0.55	1	02/07/25 13:37	02/11/25 00:31	7440-50-8	
Lithium	30.6	ug/L	2.5	0.33	1	02/07/25 13:37	02/11/25 00:31	7439-93-2	
Molybdenum	0.23J	ug/L	1.0	0.075	1	02/07/25 13:37	02/11/25 00:31	7439-98-7	
Nickel	0.55J	ug/L	1.0	0.26	1	02/07/25 13:37	02/11/25 00:31	7440-02-0	
Selenium	ND	ug/L	2.0	0.22	1	02/07/25 13:37	02/11/25 00:31	7782-49-2	
Thallium	ND	ug/L	0.20	0.028	1	02/07/25 13:37	02/11/25 00:31	7440-28-0	
Vanadium	2.9	ug/L	1.0	0.064	1	02/07/25 13:37	02/11/25 00:31	7440-62-2	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Asheville									
Mercury	ND	ug/L	0.20	0.12	1	02/06/25 20:43	02/08/25 19:15	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2540C-2015 Pace Analytical Services - Asheville									
Total Dissolved Solids	680	mg/L	50.0	50.0	1		02/07/25 20:39		

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ANALYTICAL RESULTS

Project: TCH.009-3
Pace Project No.: 92777615

Sample: MW-9 (FILTERED) Lab ID: 92777615004 Collected: 02/04/25 15:55 Received: 02/05/25 09:30 Matrix: Water									
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
7199 Chromium, Hexavalent Analytical Method: EPA 7199 Pace Analytical Services - Charlotte									
Chromium, Hexavalent	ND	ug/L	0.050	0.0086	2		02/05/25 18:50	18540-29-9	D3,H1
6010 MET ICP, Dissolved Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Asheville									
Barium, Dissolved	1080	ug/L	5.0	0.79	1	02/11/25 16:30	02/11/25 21:45	7440-39-3	
Boron, Dissolved	252	ug/L	50.0	4.0	1	02/11/25 16:30	02/11/25 21:45	7440-42-8	
Manganese, Dissolved	3900	ug/L	5.0	0.86	1	02/11/25 16:30	02/11/25 21:45	7439-96-5	
Strontium, Dissolved	3410	ug/L	5.0	0.66	1	02/11/25 16:30	02/11/25 21:45	7440-24-6	
Zinc, Dissolved	ND	ug/L	10.0	3.0	1	02/11/25 16:30	02/11/25 21:45	7440-66-6	
6020 MET ICPMS, Dissolved Analytical Method: EPA 6020B Preparation Method: EPA 3010A Pace Analytical Services - Asheville									
Antimony, Dissolved	ND	ug/L	1.0	0.10	1	02/11/25 16:30	02/25/25 14:22	7440-36-0	
Arsenic, Dissolved	2.8	ug/L	1.0	0.17	1	02/11/25 16:30	02/25/25 14:22	7440-38-2	
Beryllium, Dissolved	ND	ug/L	0.10	0.045	1	02/11/25 16:30	02/25/25 14:22	7440-41-7	
Cadmium, Dissolved	ND	ug/L	0.10	0.037	1	02/11/25 16:30	02/25/25 14:22	7440-43-9	
Chromium, Dissolved	0.53J	ug/L	1.0	0.39	1	02/11/25 16:30	02/25/25 14:22	7440-47-3	
Cobalt, Dissolved	1.4	ug/L	1.0	0.14	1	02/11/25 16:30	02/25/25 14:22	7440-48-4	
Copper, Dissolved	ND	ug/L	2.0	0.55	1	02/11/25 16:30	02/25/25 14:22	7440-50-8	
Lithium, Dissolved	39.4	ug/L	2.5	0.33	1	02/11/25 16:30	02/25/25 14:22	7439-93-2	
Molybdenum, Dissolved	0.18J	ug/L	1.0	0.075	1	02/11/25 16:30	02/25/25 14:22	7439-98-7	
Nickel, Dissolved	ND	ug/L	1.0	0.26	1	02/11/25 16:30	02/25/25 14:22	7440-02-0	
Selenium, Dissolved	ND	ug/L	2.0	0.22	1	02/11/25 16:30	02/25/25 14:22	7782-49-2	
Thallium, Dissolved	ND	ug/L	0.20	0.028	1	02/11/25 16:30	02/25/25 14:22	7440-28-0	
Vanadium, Dissolved	1.2	ug/L	1.0	0.064	1	02/11/25 16:30	02/25/25 14:22	7440-62-2	
7470 Mercury, Dissolved Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Asheville									
Mercury, Dissolved	ND	ug/L	0.20	0.12	1	02/06/25 11:54	02/06/25 15:46	7439-97-6	
2540C Total Dissolved Solids Analytical Method: SM 2540C-2015 Pace Analytical Services - Asheville									
Total Dissolved Solids	692	mg/L	50.0	50.0	1		02/07/25 20:39		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: TCH.009-3
Pace Project No.: 92777615

Sample: MW-11D		Lab ID: 92777615005		Collected: 02/04/25 12:28		Received: 02/05/25 09:30		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
7199 Chromium, Hexavalent									
Analytical Method: EPA 7199 Pace Analytical Services - Charlotte									
Chromium, Hexavalent	0.038	ug/L	0.025	0.0043	1		02/05/25 12:23	18540-29-9	
6010 MET ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Asheville									
Barium	19.2J	ug/L	25.0	4.0	5	02/06/25 15:52	02/07/25 21:21	7440-39-3	
Boron	221J	ug/L	250	20.2	5	02/06/25 15:52	02/07/25 21:21	7440-42-8	
Manganese	120	ug/L	25.0	4.3	5	02/06/25 15:52	02/07/25 21:21	7439-96-5	
Strontium	980	ug/L	25.0	3.3	5	02/06/25 15:52	02/07/25 21:21	7440-24-6	
Zinc	ND	ug/L	50.0	15.2	5	02/06/25 15:52	02/07/25 21:21	7440-66-6	D3
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3010A Pace Analytical Services - Asheville									
Antimony	ND	ug/L	1.0	0.10	1	02/07/25 13:37	02/11/25 00:34	7440-36-0	
Arsenic	ND	ug/L	1.0	0.17	1	02/07/25 13:37	02/11/25 00:34	7440-38-2	
Beryllium	ND	ug/L	0.10	0.045	1	02/07/25 13:37	02/11/25 00:34	7440-41-7	
Cadmium	ND	ug/L	0.10	0.037	1	02/07/25 13:37	02/11/25 00:34	7440-43-9	
Chromium	ND	ug/L	1.0	0.39	1	02/07/25 13:37	02/11/25 00:34	7440-47-3	
Cobalt	0.20J	ug/L	1.0	0.14	1	02/07/25 13:37	02/11/25 00:34	7440-48-4	
Copper	ND	ug/L	2.0	0.55	1	02/07/25 13:37	02/11/25 00:34	7440-50-8	
Lithium	7.4	ug/L	2.5	0.33	1	02/07/25 13:37	02/11/25 00:34	7439-93-2	
Molybdenum	0.75J	ug/L	1.0	0.075	1	02/07/25 13:37	02/11/25 00:34	7439-98-7	
Nickel	1.2	ug/L	1.0	0.26	1	02/07/25 13:37	02/11/25 00:34	7440-02-0	
Selenium	ND	ug/L	2.0	0.22	1	02/07/25 13:37	02/11/25 00:34	7782-49-2	
Thallium	ND	ug/L	0.20	0.028	1	02/07/25 13:37	02/11/25 00:34	7440-28-0	
Vanadium	0.98J	ug/L	1.0	0.064	1	02/07/25 13:37	02/11/25 00:34	7440-62-2	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Asheville									
Mercury	ND	ug/L	0.20	0.12	1	02/06/25 20:43	02/08/25 19:17	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2540C-2015 Pace Analytical Services - Asheville									
Total Dissolved Solids	526	mg/L	50.0	50.0	1		02/07/25 20:39		

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QUALITY CONTROL DATA

Project: TCH.009-3
Pace Project No.: 92777615

QC Batch: 913860 Analysis Method: EPA 7199
QC Batch Method: EPA 7199 Analysis Description: 7199 Chromium, Hexavalent
Laboratory: Pace Analytical Services - Charlotte
Associated Lab Samples: 92777615001, 92777615002, 92777615003, 92777615004, 92777615005

METHOD BLANK: 4697125 Matrix: Water
Associated Lab Samples: 92777615001, 92777615002, 92777615003, 92777615004, 92777615005

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chromium, Hexavalent	ug/L	ND	0.025	0.0043	02/06/25 01:38	

LABORATORY CONTROL SAMPLE: 4697126

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chromium, Hexavalent	ug/L	0.1	0.10	102	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 4697127 4697128

Parameter	Units	92777615001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chromium, Hexavalent	ug/L	0.028J	0.1	0.1	0.12	0.14	92	110	90-110	14	20	D3,H1

SAMPLE DUPLICATE: 4697129

Parameter	Units	92777615003 Result	Dup Result	RPD	Max RPD	Qualifiers
Chromium, Hexavalent	ug/L	ND	ND		20	D3,H1

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QUALITY CONTROL DATA

Project: TCH.009-3

Pace Project No.: 92777615

QC Batch: 914274

Analysis Method: EPA 7470A

QC Batch Method: EPA 7470A

Analysis Description: 7470 Mercury

Laboratory: Pace Analytical Services - Asheville

Associated Lab Samples: 92777615001, 92777615003, 92777615005

METHOD BLANK: 4699353

Matrix: Water

Associated Lab Samples: 92777615001, 92777615003, 92777615005

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury	ug/L	ND	0.20	0.12	02/08/25 18:48	

LABORATORY CONTROL SAMPLE: 4699354

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	2.5	2.3	92	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 4699355 4699356

Parameter	Units	92777517001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury	ug/L	ND	2.5	2.5	2.3	2.4	90	94	75-125	4	25	

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QUALITY CONTROL DATA

Project: TCH.009-3

Pace Project No.: 92777615

QC Batch: 914160

Analysis Method: EPA 7470A

QC Batch Method: EPA 7470A

Analysis Description: 7470 Mercury Dissolved

Laboratory: Pace Analytical Services - Asheville

Associated Lab Samples: 92777615002, 92777615004

METHOD BLANK: 4698680

Matrix: Water

Associated Lab Samples: 92777615002, 92777615004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury, Dissolved	ug/L	ND	0.20	0.12	02/06/25 15:36	

LABORATORY CONTROL SAMPLE: 4698681

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury, Dissolved	ug/L	2.5	2.5	101	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 4698682 4698683

Parameter	Units	92777615002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury, Dissolved	ug/L	ND	2.5	2.5	3.0	3.0	119	118	75-125	1	25	

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QUALITY CONTROL DATA

Project: TCH.009-3
Pace Project No.: 92777615

QC Batch: 914279 Analysis Method: EPA 6010D
QC Batch Method: EPA 3010A Analysis Description: 6010 MET
Laboratory: Pace Analytical Services - Asheville
Associated Lab Samples: 92777615001, 92777615003, 92777615005

METHOD BLANK: 4699392 Matrix: Water
Associated Lab Samples: 92777615001, 92777615003, 92777615005

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Barium	ug/L	ND	5.0	0.79	02/07/25 20:43	
Boron	ug/L	ND	50.0	4.0	02/07/25 20:43	
Manganese	ug/L	ND	5.0	0.86	02/07/25 20:43	
Strontium	ug/L	ND	5.0	0.66	02/07/25 20:43	
Zinc	ug/L	ND	10.0	3.0	02/07/25 20:43	

LABORATORY CONTROL SAMPLE: 4699393

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Barium	ug/L	500	487	97	80-120	
Boron	ug/L	500	510	102	80-120	
Manganese	ug/L	500	493	99	80-120	
Strontium	ug/L	500	490	98	80-120	
Zinc	ug/L	500	511	102	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 4699394 4699395

Parameter	Units	92777346001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Barium	ug/L	33.8	500	500	561	540	106	101	75-125	4	20	
Boron	ug/L	ND	500	500	516	499	100	97	75-125	3	20	
Manganese	ug/L	ND	500	500	533	517	104	101	75-125	3	20	
Strontium	ug/L	ND	500	500	514	499	102	99	75-125	3	20	
Zinc	ug/L	ND	500	500	551	530	109	105	75-125	4	20	

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QUALITY CONTROL DATA

Project: TCH.009-3

Pace Project No.: 92777615

QC Batch: 915246

Analysis Method: EPA 6010D

QC Batch Method: EPA 3010A

Analysis Description: 6010 MET Filtered Diss.

Laboratory: Pace Analytical Services - Asheville

Associated Lab Samples: 92777615002, 92777615004

METHOD BLANK: 4704062

Matrix: Water

Associated Lab Samples: 92777615002, 92777615004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Barium, Dissolved	ug/L	ND	5.0	0.79	02/11/25 21:24	
Boron, Dissolved	ug/L	ND	50.0	4.0	02/11/25 21:24	
Manganese, Dissolved	ug/L	ND	5.0	0.86	02/11/25 21:24	
Strontium, Dissolved	ug/L	ND	5.0	0.66	02/11/25 21:24	
Zinc, Dissolved	ug/L	ND	10.0	3.0	02/11/25 21:24	

LABORATORY CONTROL SAMPLE: 4704063

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Barium, Dissolved	ug/L	500	439	88	80-120	
Boron, Dissolved	ug/L	500	456	91	80-120	
Manganese, Dissolved	ug/L	500	443	89	80-120	
Strontium, Dissolved	ug/L	500	442	88	80-120	
Zinc, Dissolved	ug/L	500	451	90	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 4704064

4704065

Parameter	Units	92777615002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Barium, Dissolved	ug/L	64.8	500	500	518	518	91	91	75-125	0	20	
Boron, Dissolved	ug/L	5.5J	500	500	479	481	95	95	75-125	0	20	
Manganese, Dissolved	ug/L	398	500	500	840	836	88	87	75-125	0	20	
Strontium, Dissolved	ug/L	230	500	500	685	680	91	90	75-125	1	20	
Zinc, Dissolved	ug/L	ND	500	500	442	446	88	89	75-125	1	20	

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QUALITY CONTROL DATA

Project: TCH.009-3
Pace Project No.: 92777615

QC Batch: 914535 Analysis Method: EPA 6020B
QC Batch Method: EPA 3010A Analysis Description: 6020 MET
Laboratory: Pace Analytical Services - Asheville
Associated Lab Samples: 92777615001, 92777615003, 92777615005

METHOD BLANK: 4700695 Matrix: Water
Associated Lab Samples: 92777615001, 92777615003, 92777615005

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	ug/L	ND	1.0	0.10	02/11/25 00:15	
Arsenic	ug/L	ND	1.0	0.17	02/11/25 00:15	
Beryllium	ug/L	ND	0.10	0.045	02/11/25 00:15	
Cadmium	ug/L	ND	0.10	0.037	02/11/25 00:15	
Chromium	ug/L	ND	1.0	0.39	02/11/25 00:15	
Cobalt	ug/L	ND	1.0	0.14	02/11/25 00:15	
Copper	ug/L	ND	2.0	0.55	02/11/25 00:15	
Lithium	ug/L	ND	2.5	0.33	02/11/25 00:15	
Molybdenum	ug/L	ND	1.0	0.075	02/11/25 00:15	
Nickel	ug/L	ND	1.0	0.26	02/11/25 00:15	
Selenium	ug/L	ND	2.0	0.22	02/11/25 00:15	
Thallium	ug/L	ND	0.20	0.028	02/11/25 00:15	
Vanadium	ug/L	ND	1.0	0.064	02/11/25 00:15	

LABORATORY CONTROL SAMPLE: 4700696

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	ug/L	50	51.7	103	80-120	
Arsenic	ug/L	50	50.8	102	80-120	
Beryllium	ug/L	50	50.5	101	80-120	
Cadmium	ug/L	50	53.7	107	80-120	
Chromium	ug/L	50	53.7	107	80-120	
Cobalt	ug/L	50	53.4	107	80-120	
Copper	ug/L	50	53.5	107	80-120	
Lithium	ug/L	50	50.2	100	80-120	
Molybdenum	ug/L	50	52.0	104	80-120	
Nickel	ug/L	50	54.8	110	80-120	
Selenium	ug/L	50	52.0	104	80-120	
Thallium	ug/L	25	27.0	108	80-120	
Vanadium	ug/L	50	54.9	110	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 4701063 4701064

Parameter	Units	92778056004 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Antimony	ug/L	ND	50	50	52.1	52.3	104	105	75-125	0	20	
Arsenic	ug/L	ND	50	50	53.1	53.2	106	106	75-125	0	20	

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QUALITY CONTROL DATA

Project: TCH.009-3

Pace Project No.: 92777615

MATRIX SPIKE & MATRIX SPIKE DUPLICATE:												
4701063			4701064									
		92778056004	MS Spike	MSD Spike	MS	MSD	MS	MSD	% Rec		Max	
Parameter	Units	Result	Conc.	Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	Qual
Beryllium	ug/L	0.72	50	50	49.8	49.3	98	97	75-125	1	20	
Cadmium	ug/L	ND	50	50	53.7	54.0	107	108	75-125	1	20	
Chromium	ug/L	ND	50	50	54.5	53.9	108	107	75-125	1	20	
Cobalt	ug/L	ND	50	50	54.5	54.2	108	107	75-125	1	20	
Copper	ug/L	ND	50	50	53.0	52.7	106	105	75-125	1	20	
Lithium	ug/L	5.8	50	50	59.2	59.1	107	107	75-125	0	20	
Molybdenum	ug/L	ND	50	50	52.1	52.6	104	105	75-125	1	20	
Nickel	ug/L	ND	50	50	54.1	53.5	108	107	75-125	1	20	
Selenium	ug/L	ND	50	50	53.0	53.7	106	107	75-125	1	20	
Thallium	ug/L	ND	25	25	26.5	26.5	106	106	75-125	0	20	
Vanadium	ug/L	ND	50	50	55.2	54.7	110	109	75-125	1	20	

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QUALITY CONTROL DATA

Project: TCH.009-3

Pace Project No.: 92777615

QC Batch: 915418

Analysis Method: EPA 6020B

QC Batch Method: EPA 3010A

Analysis Description: 6020 MET Dissolved

Laboratory: Pace Analytical Services - Asheville

Associated Lab Samples: 92777615002, 92777615004

METHOD BLANK: 4705016

Matrix: Water

Associated Lab Samples: 92777615002, 92777615004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony, Dissolved	ug/L	ND	1.0	0.10	02/25/25 13:29	
Arsenic, Dissolved	ug/L	ND	1.0	0.17	02/25/25 13:29	
Beryllium, Dissolved	ug/L	ND	0.10	0.045	02/25/25 13:29	
Cadmium, Dissolved	ug/L	ND	0.10	0.037	02/25/25 13:29	
Chromium, Dissolved	ug/L	ND	1.0	0.39	02/25/25 13:29	
Cobalt, Dissolved	ug/L	ND	1.0	0.14	02/25/25 13:29	
Copper, Dissolved	ug/L	ND	2.0	0.55	02/25/25 13:29	
Lithium, Dissolved	ug/L	ND	2.5	0.33	02/25/25 13:29	
Molybdenum, Dissolved	ug/L	ND	1.0	0.075	02/25/25 13:29	
Nickel, Dissolved	ug/L	ND	1.0	0.26	02/25/25 13:29	
Selenium, Dissolved	ug/L	ND	2.0	0.22	02/25/25 13:29	
Thallium, Dissolved	ug/L	ND	0.20	0.028	02/25/25 13:29	
Vanadium, Dissolved	ug/L	ND	1.0	0.064	02/25/25 13:29	

LABORATORY CONTROL SAMPLE: 4705017

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony, Dissolved	ug/L	50	50.5	101	80-120	
Arsenic, Dissolved	ug/L	50	51.7	103	80-120	
Beryllium, Dissolved	ug/L	50	53.2	106	80-120	
Cadmium, Dissolved	ug/L	50	51.9	104	80-120	
Chromium, Dissolved	ug/L	50	50.3	101	80-120	
Cobalt, Dissolved	ug/L	50	50.5	101	80-120	
Copper, Dissolved	ug/L	50	49.9	100	80-120	
Lithium, Dissolved	ug/L	50	52.9	106	80-120	
Molybdenum, Dissolved	ug/L	50	50.7	101	80-120	
Nickel, Dissolved	ug/L	50	51.3	103	80-120	
Selenium, Dissolved	ug/L	50	51.0	102	80-120	
Thallium, Dissolved	ug/L	25	24.5	98	80-120	
Vanadium, Dissolved	ug/L	50	50.3	101	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 4705018

4705019

Parameter	Units	92777615002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Antimony, Dissolved	ug/L	ND	50	50	55.8	56.7	112	113	75-125	2	20	
Arsenic, Dissolved	ug/L	0.20J	50	50	57.3	58.0	114	116	75-125	1	20	

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QUALITY CONTROL DATA

Project: TCH.009-3

Pace Project No.: 92777615

MATRIX SPIKE & MATRIX SPIKE DUPLICATE:											
4705018					4705019						
		92777615002	MS	MSD							
Parameter	Units	Result	Spike	Spike	MS	MSD	MS	MSD	% Rec		Max
			Conc.	Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD
Qual											
Beryllium, Dissolved	ug/L	ND	50	50	57.3	57.6	115	115	75-125	1	20
Cadmium, Dissolved	ug/L	ND	50	50	56.1	56.8	112	114	75-125	1	20
Chromium, Dissolved	ug/L	0.48J	50	50	55.9	55.6	111	110	75-125	1	20
Cobalt, Dissolved	ug/L	0.43J	50	50	54.5	55.2	108	109	75-125	1	20
Copper, Dissolved	ug/L	0.85J	50	50	53.2	53.7	105	106	75-125	1	20
Lithium, Dissolved	ug/L	2.5	50	50	59.3	59.8	114	115	75-125	1	20
Molybdenum, Dissolved	ug/L	0.19J	50	50	57.4	57.9	114	115	75-125	1	20
Nickel, Dissolved	ug/L	0.27J	50	50	54.1	54.7	108	109	75-125	1	20
Selenium, Dissolved	ug/L	ND	50	50	54.3	54.5	109	109	75-125	0	20
Thallium, Dissolved	ug/L	ND	25	25	26.9	27.2	108	109	75-125	1	20
Vanadium, Dissolved	ug/L	ND	50	50	54.8	54.9	110	110	75-125	0	20

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

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: TCH.009-3

Pace Project No.: 92777615

QC Batch: 914397

Analysis Method: SM 2540C-2015

QC Batch Method: SM 2540C-2015

Analysis Description: 2540C Total Dissolved Solids

Laboratory: Pace Analytical Services - Asheville

Associated Lab Samples: 92777615001, 92777615002

METHOD BLANK: 4700324

Matrix: Water

Associated Lab Samples: 92777615001, 92777615002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	25.0	25.0	02/07/25 18:14	

LABORATORY CONTROL SAMPLE: 4700325

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	251	258	103	90-110	

SAMPLE DUPLICATE: 4700326

Parameter	Units	92777516001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	131	135	3	25	

SAMPLE DUPLICATE: 4700327

Parameter	Units	92777526003 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	92.0	93.0	1	25	

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QUALITY CONTROL DATA

Project: TCH.009-3

Pace Project No.: 92777615

QC Batch: 914717

Analysis Method: SM 2540C-2015

QC Batch Method: SM 2540C-2015

Analysis Description: 2540C Total Dissolved Solids

Laboratory: Pace Analytical Services - Asheville

Associated Lab Samples: 92777615003, 92777615004, 92777615005

METHOD BLANK: 4701918

Matrix: Water

Associated Lab Samples: 92777615003, 92777615004, 92777615005

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	25.0	25.0	02/07/25 20:39	

LABORATORY CONTROL SAMPLE: 4701919

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	251	254	101	90-110	

SAMPLE DUPLICATE: 4701920

Parameter	Units	92777615003 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	680	672	1	25	

SAMPLE DUPLICATE: 4701921

Parameter	Units	92778227001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	121	110	10	25	

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

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QUALIFIERS

Project: TCH.009-3
Pace Project No.: 92777615

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.
ND - Not Detected at or above adjusted reporting limit.
TNTC - Too Numerous To Count
J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.
MDL - Adjusted Method Detection Limit.
PQL - Practical Quantitation Limit.
RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.
S - Surrogate
1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.
Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.
LCS(D) - Laboratory Control Sample (Duplicate)
MS(D) - Matrix Spike (Duplicate)
DUP - Sample Duplicate
RPD - Relative Percent Difference
NC - Not Calculable.
SG - Silica Gel - Clean-Up
U - Indicates the compound was analyzed for, but not detected.
Acid preservation may not be appropriate for 2 Chloroethylvinyl ether.
A separate vial preserved to a pH of 4-5 is recommended in SW846 Chapter 4 for the analysis of Acrolein and Acrylonitrile by EPA Method 8260.
N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.
Reported results are not rounded until the final step prior to reporting. Therefore, calculated parameters that are typically reported as "Total" may vary slightly from the sum of the reported component parameters.
Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.
TNI - The NELAC Institute.

ANALYTE QUALIFIERS

D3 Sample was diluted due to the presence of high levels of non-target analytes or other matrix interference.
H1 Analysis conducted outside the EPA method holding time.

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: TCH.009-3
Pace Project No.: 92777615

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92777615001	MW-5	EPA 7199	913860		
92777615002	MW-5 (FILTERED)	EPA 7199	913860		
92777615003	MW-9	EPA 7199	913860		
92777615004	MW-9 (FILTERED)	EPA 7199	913860		
92777615005	MW-11D	EPA 7199	913860		
92777615001	MW-5	EPA 3010A	914279	EPA 6010D	914425
92777615003	MW-9	EPA 3010A	914279	EPA 6010D	914425
92777615005	MW-11D	EPA 3010A	914279	EPA 6010D	914425
92777615002	MW-5 (FILTERED)	EPA 3010A	915246	EPA 6010D	915446
92777615004	MW-9 (FILTERED)	EPA 3010A	915246	EPA 6010D	915446
92777615001	MW-5	EPA 3010A	914535	EPA 6020B	914713
92777615003	MW-9	EPA 3010A	914535	EPA 6020B	914713
92777615005	MW-11D	EPA 3010A	914535	EPA 6020B	914713
92777615002	MW-5 (FILTERED)	EPA 3010A	915418	EPA 6020B	915452
92777615004	MW-9 (FILTERED)	EPA 3010A	915418	EPA 6020B	915452
92777615001	MW-5	EPA 7470A	914274	EPA 7470A	914686
92777615003	MW-9	EPA 7470A	914274	EPA 7470A	914686
92777615005	MW-11D	EPA 7470A	914274	EPA 7470A	914686
92777615002	MW-5 (FILTERED)	EPA 7470A	914160	EPA 7470A	914281
92777615004	MW-9 (FILTERED)	EPA 7470A	914160	EPA 7470A	914281
92777615001	MW-5	SM 2540C-2015	914397		
92777615002	MW-5 (FILTERED)	SM 2540C-2015	914397		
92777615003	MW-9	SM 2540C-2015	914717		
92777615004	MW-9 (FILTERED)	SM 2540C-2015	914717		
92777615005	MW-11D	SM 2540C-2015	914717		

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DC#_Title: ENV-FRM-HUN1-0083 v05_Sample Condition Upon Receipt

Effective Date: 05/24/2024

Laboratory receiving samples:

Asheville ☐ Eden ☐ Greenwood ☐ Huntersville ☒ Raleigh ☐ Mechanicsville ☐ Atlanta ☐ Kernersville ☐Sample Condition
Upon Receipt

Client Name:

Hart and Hickman

Project #:

WO#: 92777615

Courier: ☒ Fed Ex ☐ UPS ☐ USPS ☐ Client
☐ Commercial ☐ Pace ☐ Other: _____Custody Seal Present? ☒ Yes ☐ No Seals Intact? ☒ Yes ☐ No ☐ N/ADate/Initials Person Examining Contents: LS 2/5/25Packing Material: ☐ Bubble Wrap ☒ Bubble Bags ☐ None ☒ Other

Biological Tissue Frozen?

☐ Yes ☐ No ☒ N/A

Thermometer:

☐ IR Gun ID:92T082

Type of Ice:

☒ Wet☐ Blue☐ None

Cooler Temp:

1.9

Correction Factor:

Add/Subtract (°C)

0

Temp should be above freezing to 6°C

☐ Samples out of temp criteria. Samples on ice, cooling process has begun

Cooler Temp Corrected (°C):

1.9USDA Regulated Soil (☒ N/A, water sample)Did samples originate in a quarantine zone within the United States: CA, NY, or SC (check maps)? ☐ Yes ☒ NoDid samples originate from a foreign source (internationally, including Hawaii and Puerto Rico)? ☐ Yes ☒ No

Comments/Discrepancy:

Chain of Custody Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Samples Arrived within Hold Time?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.
Short Hold Time Analysis (<72 hr.)?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	3.
Rush Turn Around Time Requested?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	4.
Sufficient Volume?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.
Correct Containers Used?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	6.
-Pace Containers Used?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Containers Intact?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	7.
Dissolved analysis: Samples Field Filtered?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	8.
Sample Labels Match COC?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.
-Includes Date/Time/ID/Analysis Matrix: <u>WT</u>		
Headspace in VOA Vials (>5-6mm)?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	10.
Trip Blank Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	11.
Trip Blank Custody Seals Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	

COMMENTS/SAMPLE DISCREPANCY

Field Data Required? ☐ Yes ☐ No

Lot ID of split containers:

CLIENT NOTIFICATION/RESOLUTION

Person contacted: _____

Date/Time: _____

Project Manager SCURF Review: _____

Date: _____

Project Manager SRF Review: _____

Date: _____



DC#_Title: ENV-FRM-HUN1-0083 v05_Sample Condition Upon Receipt

Effective Date: 05/24/2024

W0#: 92777615

Project #

PM: TMC

Due Date: 02/12/25

CLIENT: 92-Hart_Ral

*Check mark top half of box if pH and/or dechlorination is verified and within the acceptance range for preservation samples.

Exceptions: VOA, Coliform, TOC, Oil and Grease, DRO/8015 (water) DOC, LLHg

**Bottom half of box is to list number of bottles

***Check all unpreserved Nitrates for chlorine

Laboratory Receiving Location: Asheville ☐ Eden ☐ Greenwood ☐ Huntersville ☐ Raleigh ☐ Mechanicsville ☐ Atlanta ☐ Kernersville ☐

Client _____ Profile/EZ (Circle one) _____ Notes _____

Item#	BP4U-125 mL Plastic Unpreserved (N/A) (Cl-)	BP3U-250 mL Plastic Unpreserved (N/A)	BP2U-500 mL Plastic Unpreserved (N/A)	BP1U-1 liter Plastic Unpreserved (N/A)	BP3F	BP4S-125 mL Plastic H2SO4 (pH < 2) (Cl-)	BP3N-250 mL plastic HNO3 (pH < 2)	BP4Z-125 mL Plastic Zn Acetate & NaOH (>9)	BP4B-125 mL Plastic NaOH (pH > 12) (Cl-)	WGFU-Wide-mouthed Glass jar Unpreserved	AG1U-1 liter Amber Unpreserved (N/A) (Cl-)	AG1H-1 liter Amber HCl (pH < 2)	AG3U-250 mL Amber Unpreserved (N/A) (Cl-)	AG1S-1 liter Amber H2SO4 (pH < 2)	AG3S-250 mL Amber H2SO4 (pH < 2)	DG94-40 mL Amber NH4Cl (N/A)(Cl-)	DG9H-40 mL VOA HCl (N/A)	VG9T-40 mL VOA Na2S2O3 (N/A)	VG9U-40 mL VOA Unpreserved (N/A)	DG9V-40 mL VOA H3PO4 (N/A)	KP7U-50 mL Plastic Unpreserved (N/A)	V/GK (3 vials per kit)-VPH/Gas kit (N/A)	SP5T-125 mL Sterile Plastic (N/A – lab)	SP2T-250 mL Sterile Plastic (N/A – lab)	BP3R-250 mL Plastic (NH2)2SO4 (9.3-9.7)	AG0U-100 mL Amber Unpreserved (N/A) (Cl-)	V5GU-20 mL Scintillation vials (N/A)	DG9U-40 mL Amber Unpreserved vials (N/A)	
CC																													
1																													
2																													
3																													
4																													
5																													
6																													
7																													
8																													
9																													
10																													
11																													
12																													

pH Adjustment Log for Preserved Samples

Sample ID	Type of Preservative	pH upon receipt	Date preservation adjusted	Time preservation adjusted	Amount of Preservative added	Lot #

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DENR Certification Office (i.e. Out of hold, incorrect preservative, out of temp, incorrect containers.



February 06, 2025

Justin Ballard
Hart & Hickman
3921 Sunset Ridge Rd.
Suite 301
Raleigh, NC 27607

RE: Project: TCH.009-3
Pace Project No.: 92777688

Dear Justin Ballard:

Enclosed are the analytical results for sample(s) received by the laboratory on February 05, 2025. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

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

- Pace Analytical Services - Asheville

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

Sincerely,

A handwritten signature in black ink, appearing to read "T Cannon".

Taylor M Cannon
taylor.cannon@pacelabs.com
704-977-0943
Project Manager

Enclosures



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: TCH.009-3

Pace Project No.: 92777688

Pace Analytical Services Asheville

2225 Riverside Drive, Asheville, NC 28804

Florida/NELAP Certification #: E87648

North Carolina Drinking Water Certification #: 37712

North Carolina Wastewater Certification #: 40

South Carolina Laboratory ID: 99030

South Carolina Certification #: 99030001

Virginia/VELAP Certification #: 460222

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SAMPLE SUMMARY

Project: TCH.009-3

Pace Project No.: 92777688

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92777688001	MW-5	Water	02/04/25 14:55	02/05/25 10:40
92777688002	MW-5 (FILTERED)	Water	02/04/25 14:55	02/05/25 10:40
92777688003	MW-9	Water	02/04/25 15:55	02/05/25 10:40
92777688004	MW9 (FILTERED)	Water	02/04/25 15:55	02/05/25 10:40
92777688005	MW-11D	Water	02/04/25 12:28	02/05/25 10:40

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SAMPLE ANALYTE COUNT

Project: TCH.009-3

Pace Project No.: 92777688

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92777688001	MW-5	EPA 9056A	CDC	4	PASI-A
92777688002	MW-5 (FILTERED)	EPA 9056A	CDC	4	PASI-A
92777688003	MW-9	EPA 9056A	CDC	4	PASI-A
92777688004	MW9 (FILTERED)	EPA 9056A	CDC	4	PASI-A
92777688005	MW-11D	EPA 9056A	CDC	4	PASI-A

PASI-A = Pace Analytical Services - Asheville

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ANALYTICAL RESULTS

Project: TCH.009-3
Pace Project No.: 92777688

Sample: MW-5		Lab ID: 92777688001		Collected: 02/04/25 14:55		Received: 02/05/25 10:40		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
9056 IC Anions 48hr									
Analytical Method: EPA 9056A									
Pace Analytical Services - Asheville									
Chloride	82.7	mg/L	1.0	0.60	1		02/05/25 20:20	16887-00-6	
Fluoride	0.12	mg/L	0.10	0.050	1		02/05/25 20:20	16984-48-8	
Nitrate as N	ND	mg/L	0.020	0.0060	1		02/05/25 20:20	14797-55-8	
Sulfate	39.9	mg/L	1.0	0.50	1		02/05/25 20:20	14808-79-8	

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ANALYTICAL RESULTS

Project: TCH.009-3

Pace Project No.: 92777688

Sample: MW-5 (FILTERED)		Lab ID: 92777688002		Collected: 02/04/25 14:55		Received: 02/05/25 10:40		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
9056 IC Anions 48hr		Analytical Method: EPA 9056A Pace Analytical Services - Asheville							
Chloride	82.6	mg/L	1.0	0.60	1		02/05/25 20:36	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		02/05/25 20:36	16984-48-8	
Nitrate as N	4.7	mg/L	0.040	0.012	2		02/06/25 03:05	14797-55-8	
Sulfate	39.8	mg/L	1.0	0.50	1		02/05/25 20:36	14808-79-8	

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ANALYTICAL RESULTS

Project: TCH.009-3

Pace Project No.: 92777688

Sample: MW-9		Lab ID: 92777688003		Collected: 02/04/25 15:55		Received: 02/05/25 10:40		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
9056 IC Anions 48hr									
Analytical Method: EPA 9056A									
Pace Analytical Services - Asheville									
Chloride	62.9	mg/L	1.0	0.60	1		02/05/25 20:51	16887-00-6	
Fluoride	0.19	mg/L	0.10	0.050	1		02/05/25 20:51	16984-48-8	
Nitrate as N	0.027	mg/L	0.020	0.0060	1		02/05/25 20:51	14797-55-8	
Sulfate	0.71J	mg/L	1.0	0.50	1		02/05/25 20:51	14808-79-8	

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ANALYTICAL RESULTS

Project: TCH.009-3

Pace Project No.: 92777688

Sample: MW9 (FILTERED)		Lab ID: 92777688004		Collected: 02/04/25 15:55		Received: 02/05/25 10:40		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
9056 IC Anions 48hr									
Analytical Method: EPA 9056A									
Pace Analytical Services - Asheville									
Chloride	62.9	mg/L	1.0	0.60	1		02/05/25 21:49	16887-00-6	
Fluoride	0.22	mg/L	0.10	0.050	1		02/05/25 21:49	16984-48-8	
Nitrate as N	0.52	mg/L	0.020	0.0060	1		02/05/25 21:49	14797-55-8	
Sulfate	0.70J	mg/L	1.0	0.50	1		02/05/25 21:49	14808-79-8	

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ANALYTICAL RESULTS

Project: TCH.009-3

Pace Project No.: 92777688

Sample: MW-11D		Lab ID: 92777688005		Collected: 02/04/25 12:28		Received: 02/05/25 10:40		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
9056 IC Anions 48hr									
Analytical Method: EPA 9056A									
Pace Analytical Services - Asheville									
Chloride	53.3	mg/L	1.0	0.60	1		02/05/25 20:04	16887-00-6	
Fluoride	0.11	mg/L	0.10	0.050	1		02/05/25 20:04	16984-48-8	
Nitrate as N	0.044	mg/L	0.020	0.0060	1		02/05/25 20:04	14797-55-8	
Sulfate	2.9	mg/L	1.0	0.50	1		02/05/25 20:04	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: TCH.009-3
Pace Project No.: 92777688

QC Batch: 914010 Analysis Method: EPA 9056A
QC Batch Method: EPA 9056A Analysis Description: 9056 IC Anions
Laboratory: Pace Analytical Services - Asheville
Associated Lab Samples: 92777688001, 92777688002, 92777688003, 92777688004, 92777688005

METHOD BLANK: 4698120 Matrix: Water
Associated Lab Samples: 92777688001, 92777688002, 92777688003, 92777688004, 92777688005

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	0.60	02/05/25 19:32	
Fluoride	mg/L	ND	0.10	0.050	02/05/25 19:32	
Nitrate as N	mg/L	ND	0.020	0.0060	02/05/25 19:32	
Sulfate	mg/L	ND	1.0	0.50	02/05/25 19:32	

LABORATORY CONTROL SAMPLE: 4698121

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	50	51.6	103	90-110	
Fluoride	mg/L	2.5	2.5	101	90-110	
Nitrate as N	mg/L	2.5	2.6	102	90-110	
Sulfate	mg/L	50	51.7	103	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 4698122 4698123

Parameter	Units	92777577002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	7.0	50	50	57.9	61.3	102	109	90-110	6	10	
Fluoride	mg/L	0.095J	2.5	2.5	2.8	2.9	107	113	90-110	6	10	M1
Nitrate as N	mg/L	0.10	2.5	2.5	2.6	2.8	101	109	90-110	7	10	
Sulfate	mg/L	0.60J	50	50	51.1	54.8	101	108	90-110	7	10	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 4698124 4698125

Parameter	Units	92777578004 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	19.4	50	50	71.7	73.5	105	108	90-110	2	10	
Fluoride	mg/L	0.43	2.5	2.5	3.4	3.5	118	123	90-110	3	10	M1
Nitrate as N	mg/L	0.020	2.5	2.5	2.6	2.7	103	107	90-110	4	10	
Sulfate	mg/L	22.5	50	50	75.2	77.4	105	110	90-110	3	10	

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

REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: TCH.009-3
Pace Project No.: 92777688

DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

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

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

Acid preservation may not be appropriate for 2 Chloroethylvinyl ether.

A separate vial preserved to a pH of 4-5 is recommended in SW846 Chapter 4 for the analysis of Acrolein and Acrylonitrile by EPA Method 8260.

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

Reported results are not rounded until the final step prior to reporting. Therefore, calculated parameters that are typically reported as "Total" may vary slightly from the sum of the reported component parameters.

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

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

M1 Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: TCH.009-3

Pace Project No.: 92777688

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92777688001	MW-5	EPA 9056A	914010		
92777688002	MW-5 (FILTERED)	EPA 9056A	914010		
92777688003	MW-9	EPA 9056A	914010		
92777688004	MW9 (FILTERED)	EPA 9056A	914010		
92777688005	MW-11D	EPA 9056A	914010		

REPORT OF LABORATORY ANALYSIS

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DC#_Title: ENV-FRM-HUN1-0083 v05_Sample Condition Upon Receipt

Effective Date: 05/24/2024

Laboratory receiving samples:

Asheville ☒ Eden ☐ Greenwood ☐ Huntersville ☐ Raleigh ☐ Mechanicsville ☐ Atlanta ☐ Knoxville ☐Sample Condition
Upon Receipt

Client Name:

Project #:

WO#: 92777688

Courier:

☐ Commercial☒ Fed Ex☐ UPS☐ USPS☐ Client☐ Pace☐ Other: _____Custody Seal Present? ☒ Yes ☐ No Seals Intact? ☒ Yes ☐ No ☐ N/A

Date/Initials Person Examining Contents: 2-5-25 AR

Packing Material: ☐ Bubble Wrap ☐ Bubble Bags ☒ None ☐ Other

Biological Tissue Frozen?

☐ Yes ☐ No ☒ N/A

Thermometer:

☒ IR Gun ID:

937090

Type of Ice:

☒ Wet☐ Blue☐ None

Cooler Temp:

1.4

Correction Factor:

Add/Subtract (°C) +0.2

Temp should be above freezing to 6°C

☐ Samples out of temp criteria. Samples on ice, cooling process has begun

Cooler Temp Corrected (°C):

1.6

USDA Regulated Soil (☒ N/A, water sample)Did samples originate in a quarantine zone within the United States: CA, NY, or SC (check maps)? ☐ Yes ☒ NoDid samples originate from a foreign source (internationally, including Hawaii and Puerto Rico)? ☐ Yes ☒ No

Comments/Discrepancy:

Chain of Custody Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Samples Arrived within Hold Time?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.
Short Hold Time Analysis (<72 hr.)?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	3.
Rush Turn Around Time Requested?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	4.
Sufficient Volume?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.
Correct Containers Used?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	6.
-Pace Containers Used?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Containers Intact?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	7.
Dissolved analysis: Samples Field Filtered?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	8.
Sample Labels Match COC?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.
-Includes Date/Time/ID/Analysis Matrix: WT		
Headspace in VOA Vials (>5-6mm)?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	10.
Trip Blank Present?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.
Trip Blank Custody Seals Present?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	

COMMENTS/SAMPLE DISCREPANCY

Field Data Required? ☐ Yes ☐ No

Lot ID of split containers:

CLIENT NOTIFICATION/RESOLUTION

Person contacted:

Date/Time:

Project Manager SCURF Review:

Date:

Project Manager SRF Review:

Date:



DC#_Title: ENV-FRM-HUN1-0083 v05_Sample Condition Upon Receipt

Effective Date: 05/24/2024

*Check mark top half of box if pH and/or dechlorination is verified and within the acceptance range for preservation samples.

Exceptions: VOA, Coliform, TOC, Oil and Grease, DRO/8015 (water) DOC, LLHg

**Bottom half of box is to list number of bottles

***Check all unpreserved Nitrates for chlorine

Project #

WO#: 92777688

PM: TMC

Due Date: 02/12/25

CLIENT: 92-Hart_Ral

Laboratory Receiving Location: Asheville ☐ Eden ☐ Greenwood ☐ Huntersville ☐ Raleigh ☐ Mechanicsville ☐ Atlanta ☐ Kernersville ☐Client Harta Hickman Profile EZ (Circle one) 3219192 Notes

Item#	BP4U-125 mL Plastic Unpreserved (N/A) (Cl-)	BP3U-250 mL Plastic Unpreserved (N/A)	BP2U-500 mL Plastic Unpreserved (N/A)	BP1U-1 liter Plastic Unpreserved (N/A)		BP4S-125 mL Plastic H2SO4 (pH < 2) (Cl-)	BP3N-250 mL plastic HNO3 (pH < 2)	BP4Z-125 mL Plastic ZN Acetate & NaOH (>9)	BP4B-125 mL Plastic NaOH (pH > 12) (Cl-)	WGFU-wide-mouthed Glass jar Unpreserved	AG1U-1 liter Amber Unpreserved (N/A) (Cl-)	AG1H-1 liter Amber HCl (pH < 2)	AG3U-250 mL Amber Unpreserved (N/A) (Cl-)	AG1S-1 liter Amber H2SO4 (pH < 2)	AG3S-250 mL Amber H2SO4 (pH < 2)	DG94-40 mL Amber NH4Cl (N/A)(Cl-)	DG9H-40 mL VOA HCl (N/A)	VG9T-40 mL VOA Na2S2O3 (N/A)	VG9U-40 mL VOA Unpreserved (N/A)	DG9V-40 mL VOA H3PO4 (N/A)	KP7U-50 mL Plastic Unpreserved (N/A)	V/GK (3 vials per kit)-VPH/Gas kit (N/A)	SP5T-125 mL Sterile Plastic (N/A – lab)	SP2T-250 mL Sterile Plastic (N/A – lab)		BP3R-250 mL Plastic (NH2)2SO4 (9.3-9.7)	AG0U-100 mL Amber Unpreserved (N/A) (Cl-)	V5GU-20 mL Scintillation vials (N/A)	DG9U-40 mL Amber Unpreserved vials (N/A)	
CC		SH																												
1		/				/	/	/	/		/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
2		/				/	/	/	/		/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
3		/				/	/	/	/		/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
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7		/				/	/	/	/		/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
8		/				/	/	/	/		/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
9		/				/	/	/	/		/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
10		/				/	/	/	/		/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
11		/				/	/	/	/		/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
12		/				/	/	/	/		/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/

pH Adjustment Log for Preserved Samples

Sample ID	Type of Preservative	pH upon receipt	Date preservation adjusted	Time preservation adjusted	Amount of Preservative added	Lot #

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DENR Certification Office (i.e. Out of hold, incorrect preservative, out of temp, incorrect containers.

Pace® Location Requested (City/State):
Pace Analytical Charlotte
9800 Kinney Ave, Suite 100, Huntersville, NC 28078

CHAIN-OF-CUSTODY Analytical Request Document

Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevant fields

LAB USE ONLY - Affix Workorder/Login Label Here

Company Name: Hart & Hickman, Raleigh
Street Address: 3921 Sunset Ridge Rd,
Suite 301
Raleigh, NC 27607

Contact/Report To: Justin Ballard
Phone #: (919) 723-2507
E-Mail: jballard@hartickman.com
Cc E-Mail:

Customer Project #: TCH-009

Project Name: TCH-009-3

Site Collection Info/Facility ID (as applicable):

Invoice To: Accounts Payable
Invoice E-Mail: accounts payable@hartickman.com
Purchase Order # (if applicable):
Quote #:



Scan QR Code for instructions

Specify Container Size **
Identify Container Preservative Type***
Analysis Requested
** Container Size: (1) 1L, (2) 500mL, (3) 250mL, (4) 125mL, (5) 100mL, (6) 40mL, vial, (7) Encore, (8) TerraCore, (9) 90mL, (10) Other
*** Preservative Types: (1) None, (2) HNO3, (3) H2SO4, (4) HCl, (5) NaOH, (6) Zn Acetate, (7) H2SO4, (8) Sod. Thiosulfate, (9) Ascorbic Acid, (10) MeOH, (11) Other

Data Deliverables: [] AK [] PT [] MT [] CR [] X Net [] County / State origin of sample(s): North Carolina
Regulatory Program (DW, RCRA, etc.) as applicable: Reportable [] Yes [] No

[] Level II [] Level III [] Level IV
[] ECUS
Date Results Requested: 11/11/2019
Rush (Pre-approval required): [] Same Day [] 1 Day [] 2 Day [] 3 Day [] Other
Field Filtered (if applicable): [] Yes [] No
Analysis:

[] Other
Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Waste Water (WW), Product (P), Soil/Solid (SS), Oil (OL), Wipe (WP), Tissue (TS), Biosassay
[B] Vapor (V), Surface Water (SW), Sediment (SE), Sludge (SL), Leachate (LL), Biosolid (BS), Other (OT)

Customer Sample ID	Matrix *	Comp / Grab	Composite Start		Collected or Composite End		# Cont.	Res. Chlorine Results	Units	2540C Total Dissolved Solids	7199 Chromium, Hexavalent	9056 IC Anions	Metals 6010/6020/7470	Metals 6010/6020/7470+Hardness	Preservation non-conformance identified for sample.
			Date	Time	Date	Time									
MW-5	GW	G			2/14/25	1455	1								
MW-5 (Filtered)					2/14/25	1455	1								
MW-9					2/14/25	1555	1								
MW-9 (Filtered)					2/14/25	1555	1								
MW-11D					2/14/25	1228	1								

Pace
CUSTODY SEAL
SIGNATURE CP
DATE 2/14/25

Additional Instructions from Pace®:

6010: Ba, B, Mn, Sr, Sn

6020: Sb, As, Be, Cd, Cr, Co, Cu, U, Mo, Ni, Se, Ti, V

9056: Chloride, Fluoride, Nitrate, Sulfate

Collected By: Cheissa Parva
Signature: CP

Customer Remarks / Special Conditions / Possible Hazards:

Relinquished by/Company (Signature)

Date/Time: 2/14/25 1520

Received by/Company (Signature)

Received by/Company (Signature)

Coolers: 1

Date/Time: 2-5-25

Correction Factor (CF): 10.2

Obs. Temp. (°C): 1.4

Corrected Temp. (°C): 1.6

Relinquished by/Company (Signature)

Date/Time:

Received by/Company (Signature)

Received by/Company (Signature)

Coolers:

Date/Time:

Correction Factor (CF):

Obs. Temp. (°C):

Corrected Temp. (°C):

Relinquished by/Company (Signature)

Date/Time:

Received by/Company (Signature)

Received by/Company (Signature)

Coolers:

Date/Time:

Correction Factor (CF):

Obs. Temp. (°C):

Corrected Temp. (°C):

Relinquished by/Company (Signature)

Date/Time:

Received by/Company (Signature)

Received by/Company (Signature)

Coolers:

Date/Time:

Correction Factor (CF):

Obs. Temp. (°C):

Corrected Temp. (°C):

Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace® Terms and Conditions found at <https://www.pacelabs.com/resource-library/resource/pace-terms-and-conditions/>



March 10, 2025

Justin Ballard
Hart & Hickman
3921 Sunset Ridge Rd.
Suite 301
Raleigh, NC 27607

RE: Project: TCH.009-3
Pace Project No.: 92778353

Dear Justin Ballard:

Enclosed are the analytical results for sample(s) received by the laboratory on February 07, 2025. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

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

- Pace Analytical Services - Asheville
- Pace Analytical Services - Charlotte

A revised report is being issued on 3/10/25 to remove 7199 hold time qualifier applied to sample SW-7 in error.

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

Sincerely,

Taylor M Cannon
taylor.cannon@pacelabs.com
704-977-0943
Project Manager

Enclosures



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: TCH.009-3
Pace Project No.: 92778353

Pace Analytical Services Charlotte

South Carolina Laboratory ID: 99006
9800 Kincey Ave. Ste 100, Huntersville, NC 28078
North Carolina Drinking Water Certification #: 37706
North Carolina Field Services Certification #: 5342
North Carolina Wastewater Certification #: 12
South Carolina Laboratory ID: 99006

South Carolina Certification #: 99006001
South Carolina Drinking Water Cert. #: 99006003
Florida/NELAP Certification #: E87627
Kentucky UST Certification #: 84
Louisiana DoH Drinking Water #: LA029
Virginia/VELAP Certification #: 460221

Pace Analytical Services Asheville

2225 Riverside Drive, Asheville, NC 28804
Florida/NELAP Certification #: E87648
North Carolina Drinking Water Certification #: 37712
North Carolina Wastewater Certification #: 40

South Carolina Laboratory ID: 99030
South Carolina Certification #: 99030001
Virginia/VELAP Certification #: 460222

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: TCH.009-3

Pace Project No.: 92778353

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92778353001	SW-1	Water	02/06/25 13:10	02/07/25 07:40
92778353002	SW-2	Water	02/06/25 13:00	02/07/25 07:40
92778353003	SW-3	Water	02/06/25 12:50	02/07/25 07:40
92778353004	SW-4	Water	02/06/25 12:35	02/07/25 07:40
92778353005	SW-5	Water	02/06/25 12:20	02/07/25 07:40
92778353006	SW-6	Water	02/06/25 12:05	02/07/25 07:40
92778353007	SW-7	Water	02/06/25 11:50	02/07/25 07:40
92778353008	SW-DUP	Water	02/06/25 00:00	02/07/25 07:40

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: TCH.009-3
Pace Project No.: 92778353

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92778353001	SW-1	EPA 7199	VJM	1	PASI-C
		EPA 6010D	MGW	6	PASI-A
		EPA 6020B	KML, KRL	13	PASI-A
		EPA 7470A	MAB2	1	PASI-A
		SM 2540C-2015	YEG	1	PASI-A
92778353002	SW-2	EPA 7199	VJM	1	PASI-C
		EPA 6010D	DBB1, MGW	6	PASI-A
		EPA 6020B	KML, KRL	13	PASI-A
		EPA 7470A	MAB2	1	PASI-A
		SM 2540C-2015	YEG	1	PASI-A
92778353003	SW-3	EPA 7199	VJM	1	PASI-C
		EPA 6010D	DBB1, MGW	6	PASI-A
		EPA 6020B	KML, KRL	13	PASI-A
		EPA 7470A	MAB2	1	PASI-A
		SM 2540C-2015	YEG	1	PASI-A
92778353004	SW-4	EPA 7199	VJM	1	PASI-C
		EPA 6010D	DBB1, MGW	6	PASI-A
		EPA 6020B	KML, KRL	13	PASI-A
		EPA 7470A	MAB2	1	PASI-A
		SM 2540C-2015	YEG	1	PASI-A
92778353005	SW-5	EPA 7199	VJM	1	PASI-C
		EPA 6010D	DBB1, MGW	6	PASI-A
		EPA 6020B	KML, KRL	13	PASI-A
		EPA 7470A	MAB2	1	PASI-A
		SM 2540C-2015	YEG	1	PASI-A
92778353006	SW-6	EPA 7199	VJM	1	PASI-C
		EPA 6010D	DBB1, MGW	6	PASI-A
		EPA 6020B	KML, KRL	13	PASI-A
		EPA 7470A	MAB2	1	PASI-A
		SM 2540C-2015	YEG	1	PASI-A
92778353007	SW-7	EPA 7199	VJM	1	PASI-C
		EPA 6010D	DBB1, MGW	6	PASI-A
		EPA 6020B	KML, KRL	13	PASI-A
		EPA 7470A	MAB2	1	PASI-A
		SM 2540C-2015	YEG	1	PASI-A
92778353008	SW-DUP	EPA 7199	VJM	1	PASI-C
		EPA 6010D	DBB1, MGW	6	PASI-A

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: TCH.009-3

Pace Project No.: 92778353

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
		EPA 6020B	KML, KRL	13	PASI-A
		EPA 7470A	MAB2	1	PASI-A
		SM 2540C-2015	YEG	1	PASI-A

PASI-A = Pace Analytical Services - Asheville

PASI-C = Pace Analytical Services - Charlotte

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: TCH.009-3
Pace Project No.: 92778353

Sample: SW-1		Lab ID: 92778353001		Collected: 02/06/25 13:10		Received: 02/07/25 07:40		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
7199 Chromium, Hexavalent		Analytical Method: EPA 7199 Pace Analytical Services - Charlotte							
Chromium, Hexavalent	0.065	ug/L	0.025	0.0043	1		02/07/25 15:55	18540-29-9	H1
6010 MET ICP		Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Asheville							
Barium	21.3	ug/L	5.0	0.79	1	02/12/25 01:00	02/13/25 15:23	7440-39-3	
Boron	10.4J	ug/L	50.0	4.0	1	02/12/25 01:00	02/13/25 15:23	7440-42-8	
Manganese	10.1	ug/L	5.0	0.86	1	02/12/25 01:00	02/13/25 15:23	7439-96-5	
Strontium	96.5	ug/L	5.0	0.66	1	02/12/25 01:00	02/13/25 15:23	7440-24-6	
Hardness, Total(SM 2340B)	56200	ug/L	662	36.8	1	02/12/25 01:00	02/13/25 15:23		
Zinc	ND	ug/L	10.0	3.0	1	02/12/25 01:00	02/13/25 15:23	7440-66-6	
6020 MET ICPMS		Analytical Method: EPA 6020B Preparation Method: EPA 3010A Pace Analytical Services - Asheville							
Antimony	ND	ug/L	1.0	0.10	1	02/12/25 01:00	02/22/25 04:01	7440-36-0	
Arsenic	ND	ug/L	1.0	0.17	1	02/12/25 01:00	02/22/25 04:01	7440-38-2	
Beryllium	ND	ug/L	0.10	0.045	1	02/12/25 01:00	02/22/25 15:12	7440-41-7	
Cadmium	ND	ug/L	0.10	0.037	1	02/12/25 01:00	02/22/25 04:01	7440-43-9	
Chromium	ND	ug/L	1.0	0.39	1	02/12/25 01:00	02/22/25 04:01	7440-47-3	
Cobalt	ND	ug/L	1.0	0.14	1	02/12/25 01:00	02/22/25 04:01	7440-48-4	
Copper	0.80J	ug/L	2.0	0.55	1	02/12/25 01:00	02/22/25 04:01	7440-50-8	
Lithium	0.34J	ug/L	2.5	0.33	1	02/12/25 01:00	02/22/25 15:12	7439-93-2	
Molybdenum	0.16J	ug/L	1.0	0.075	1	02/12/25 01:00	02/22/25 04:01	7439-98-7	
Nickel	ND	ug/L	1.0	0.26	1	02/12/25 01:00	02/22/25 04:01	7440-02-0	
Selenium	ND	ug/L	2.0	0.22	1	02/12/25 01:00	02/22/25 04:01	7782-49-2	
Thallium	ND	ug/L	0.20	0.028	1	02/12/25 01:00	02/22/25 04:01	7440-28-0	
Vanadium	0.60J	ug/L	1.0	0.064	1	02/12/25 01:00	02/22/25 04:01	7440-62-2	
7470 Mercury		Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Asheville							
Mercury	ND	ug/L	0.20	0.12	1	02/08/25 20:16	02/09/25 14:54	7439-97-6	
2540C Total Dissolved Solids		Analytical Method: SM 2540C-2015 Pace Analytical Services - Asheville							
Total Dissolved Solids	105	mg/L	25.0	25.0	1		02/11/25 12:14		

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ANALYTICAL RESULTS

Project: TCH.009-3
Pace Project No.: 92778353

Sample: SW-2		Lab ID: 92778353002		Collected: 02/06/25 13:00		Received: 02/07/25 07:40		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
7199 Chromium, Hexavalent									
Analytical Method: EPA 7199 Pace Analytical Services - Charlotte									
Chromium, Hexavalent	0.083	ug/L	0.025	0.0043	1		02/07/25 15:38	18540-29-9	H1,P4
6010 MET ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Asheville									
Barium	21.3	ug/L	5.0	0.79	1	02/12/25 01:00	02/12/25 22:33	7440-39-3	
Boron	10.8J	ug/L	50.0	4.0	1	02/12/25 01:00	02/13/25 15:30	7440-42-8	
Manganese	10.8	ug/L	5.0	0.86	1	02/12/25 01:00	02/12/25 22:33	7439-96-5	
Strontium	96.7	ug/L	5.0	0.66	1	02/12/25 01:00	02/12/25 22:33	7440-24-6	
Hardness, Total(SM 2340B)	56300	ug/L	662	36.8	1	02/12/25 01:00	02/12/25 22:33		
Zinc	ND	ug/L	10.0	3.0	1	02/12/25 01:00	02/13/25 15:30	7440-66-6	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3010A Pace Analytical Services - Asheville									
Antimony	ND	ug/L	1.0	0.10	1	02/12/25 01:00	02/22/25 04:19	7440-36-0	
Arsenic	ND	ug/L	1.0	0.17	1	02/12/25 01:00	02/22/25 04:19	7440-38-2	
Beryllium	ND	ug/L	0.10	0.045	1	02/12/25 01:00	02/22/25 15:38	7440-41-7	
Cadmium	ND	ug/L	0.10	0.037	1	02/12/25 01:00	02/22/25 04:19	7440-43-9	
Chromium	0.47J	ug/L	1.0	0.39	1	02/12/25 01:00	02/22/25 04:19	7440-47-3	
Cobalt	ND	ug/L	1.0	0.14	1	02/12/25 01:00	02/22/25 04:19	7440-48-4	
Copper	0.82J	ug/L	2.0	0.55	1	02/12/25 01:00	02/22/25 04:19	7440-50-8	
Lithium	0.35J	ug/L	2.5	0.33	1	02/12/25 01:00	02/22/25 15:38	7439-93-2	
Molybdenum	0.10J	ug/L	1.0	0.075	1	02/12/25 01:00	02/22/25 04:19	7439-98-7	
Nickel	ND	ug/L	1.0	0.26	1	02/12/25 01:00	02/22/25 04:19	7440-02-0	
Selenium	ND	ug/L	2.0	0.22	1	02/12/25 01:00	02/22/25 04:19	7782-49-2	
Thallium	ND	ug/L	0.20	0.028	1	02/12/25 01:00	02/22/25 04:19	7440-28-0	
Vanadium	0.61J	ug/L	1.0	0.064	1	02/12/25 01:00	02/22/25 04:19	7440-62-2	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Asheville									
Mercury	ND	ug/L	0.20	0.12	1	02/08/25 20:16	02/09/25 14:56	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2540C-2015 Pace Analytical Services - Asheville									
Total Dissolved Solids	84.0	mg/L	25.0	25.0	1		02/11/25 12:15		

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ANALYTICAL RESULTS

Project: TCH.009-3
Pace Project No.: 92778353

Sample: SW-3		Lab ID: 92778353003		Collected: 02/06/25 12:50		Received: 02/07/25 07:40		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
7199 Chromium, Hexavalent		Analytical Method: EPA 7199 Pace Analytical Services - Charlotte							
Chromium, Hexavalent	ND	ug/L	0.025	0.0043	1		02/07/25 13:16	18540-29-9	H1,P4
6010 MET ICP		Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Asheville							
Barium	21.1	ug/L	5.0	0.79	1	02/12/25 01:00	02/12/25 22:37	7440-39-3	
Boron	10.6J	ug/L	50.0	4.0	1	02/12/25 01:00	02/13/25 15:34	7440-42-8	
Manganese	16.1	ug/L	5.0	0.86	1	02/12/25 01:00	02/12/25 22:37	7439-96-5	
Strontium	96.2	ug/L	5.0	0.66	1	02/12/25 01:00	02/12/25 22:37	7440-24-6	
Hardness, Total(SM 2340B)	55900	ug/L	662	36.8	1	02/12/25 01:00	02/12/25 22:37		
Zinc	ND	ug/L	10.0	3.0	1	02/12/25 01:00	02/13/25 15:34	7440-66-6	
6020 MET ICPMS		Analytical Method: EPA 6020B Preparation Method: EPA 3010A Pace Analytical Services - Asheville							
Antimony	ND	ug/L	1.0	0.10	1	02/12/25 01:00	02/22/25 04:23	7440-36-0	
Arsenic	ND	ug/L	1.0	0.17	1	02/12/25 01:00	02/22/25 04:23	7440-38-2	
Beryllium	ND	ug/L	0.10	0.045	1	02/12/25 01:00	02/22/25 15:42	7440-41-7	
Cadmium	ND	ug/L	0.10	0.037	1	02/12/25 01:00	02/22/25 04:23	7440-43-9	
Chromium	ND	ug/L	1.0	0.39	1	02/12/25 01:00	02/22/25 04:23	7440-47-3	
Cobalt	ND	ug/L	1.0	0.14	1	02/12/25 01:00	02/22/25 04:23	7440-48-4	
Copper	0.78J	ug/L	2.0	0.55	1	02/12/25 01:00	02/22/25 04:23	7440-50-8	
Lithium	0.33J	ug/L	2.5	0.33	1	02/12/25 01:00	02/22/25 15:42	7439-93-2	
Molybdenum	0.090J	ug/L	1.0	0.075	1	02/12/25 01:00	02/22/25 04:23	7439-98-7	
Nickel	ND	ug/L	1.0	0.26	1	02/12/25 01:00	02/22/25 04:23	7440-02-0	
Selenium	ND	ug/L	2.0	0.22	1	02/12/25 01:00	02/22/25 04:23	7782-49-2	
Thallium	ND	ug/L	0.20	0.028	1	02/12/25 01:00	02/22/25 04:23	7440-28-0	
Vanadium	0.56J	ug/L	1.0	0.064	1	02/12/25 01:00	02/22/25 04:23	7440-62-2	
7470 Mercury		Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Asheville							
Mercury	ND	ug/L	0.20	0.12	1	02/08/25 20:16	02/09/25 14:58	7439-97-6	
2540C Total Dissolved Solids		Analytical Method: SM 2540C-2015 Pace Analytical Services - Asheville							
Total Dissolved Solids	102	mg/L	25.0	25.0	1		02/11/25 12:15		

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ANALYTICAL RESULTS

Project: TCH.009-3
Pace Project No.: 92778353

Sample: SW-4		Lab ID: 92778353004		Collected: 02/06/25 12:35		Received: 02/07/25 07:40		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
7199 Chromium, Hexavalent		Analytical Method: EPA 7199 Pace Analytical Services - Charlotte							
Chromium, Hexavalent	0.11	ug/L	0.025	0.0043	1		02/07/25 12:58	18540-29-9	H1,P4
6010 MET ICP		Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Asheville							
Barium	22.4	ug/L	5.0	0.79	1	02/12/25 01:00	02/12/25 22:40	7440-39-3	
Boron	10.7J	ug/L	50.0	4.0	1	02/12/25 01:00	02/13/25 15:37	7440-42-8	
Manganese	15.7	ug/L	5.0	0.86	1	02/12/25 01:00	02/12/25 22:40	7439-96-5	
Strontium	101	ug/L	5.0	0.66	1	02/12/25 01:00	02/12/25 22:40	7440-24-6	
Hardness, Total(SM 2340B)	59200	ug/L	662	36.8	1	02/12/25 01:00	02/12/25 22:40		
Zinc	ND	ug/L	10.0	3.0	1	02/12/25 01:00	02/13/25 15:37	7440-66-6	
6020 MET ICPMS		Analytical Method: EPA 6020B Preparation Method: EPA 3010A Pace Analytical Services - Asheville							
Antimony	ND	ug/L	1.0	0.10	1	02/12/25 01:00	02/22/25 04:27	7440-36-0	
Arsenic	ND	ug/L	1.0	0.17	1	02/12/25 01:00	02/22/25 04:27	7440-38-2	
Beryllium	ND	ug/L	0.10	0.045	1	02/12/25 01:00	02/22/25 15:46	7440-41-7	
Cadmium	ND	ug/L	0.10	0.037	1	02/12/25 01:00	02/22/25 04:27	7440-43-9	
Chromium	0.42J	ug/L	1.0	0.39	1	02/12/25 01:00	02/22/25 04:27	7440-47-3	
Cobalt	ND	ug/L	1.0	0.14	1	02/12/25 01:00	02/22/25 04:27	7440-48-4	
Copper	0.82J	ug/L	2.0	0.55	1	02/12/25 01:00	02/22/25 04:27	7440-50-8	
Lithium	0.34J	ug/L	2.5	0.33	1	02/12/25 01:00	02/22/25 15:46	7439-93-2	
Molybdenum	0.10J	ug/L	1.0	0.075	1	02/12/25 01:00	02/22/25 04:27	7439-98-7	
Nickel	ND	ug/L	1.0	0.26	1	02/12/25 01:00	02/22/25 04:27	7440-02-0	
Selenium	ND	ug/L	2.0	0.22	1	02/12/25 01:00	02/22/25 04:27	7782-49-2	
Thallium	ND	ug/L	0.20	0.028	1	02/12/25 01:00	02/22/25 04:27	7440-28-0	
Vanadium	0.56J	ug/L	1.0	0.064	1	02/12/25 01:00	02/22/25 04:27	7440-62-2	
7470 Mercury		Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Asheville							
Mercury	ND	ug/L	0.20	0.12	1	02/08/25 20:16	02/09/25 15:00	7439-97-6	
2540C Total Dissolved Solids		Analytical Method: SM 2540C-2015 Pace Analytical Services - Asheville							
Total Dissolved Solids	111	mg/L	25.0	25.0	1		02/11/25 12:15		

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ANALYTICAL RESULTS

Project: TCH.009-3
Pace Project No.: 92778353

Sample: SW-5		Lab ID: 92778353005		Collected: 02/06/25 12:20		Received: 02/07/25 07:40		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
7199 Chromium, Hexavalent		Analytical Method: EPA 7199 Pace Analytical Services - Charlotte							
Chromium, Hexavalent	0.085	ug/L	0.025	0.0043	1		02/07/25 12:40	18540-29-9	H1,P4
6010 MET ICP		Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Asheville							
Barium	20.8	ug/L	5.0	0.79	1	02/12/25 01:00	02/12/25 22:44	7440-39-3	
Boron	10.4J	ug/L	50.0	4.0	1	02/12/25 01:00	02/13/25 15:41	7440-42-8	
Manganese	16.8	ug/L	5.0	0.86	1	02/12/25 01:00	02/12/25 22:44	7439-96-5	
Strontium	94.9	ug/L	5.0	0.66	1	02/12/25 01:00	02/12/25 22:44	7440-24-6	
Hardness, Total(SM 2340B)	57100	ug/L	662	36.8	1	02/12/25 01:00	02/12/25 22:44		
Zinc	ND	ug/L	10.0	3.0	1	02/12/25 01:00	02/13/25 15:41	7440-66-6	
6020 MET ICPMS		Analytical Method: EPA 6020B Preparation Method: EPA 3010A Pace Analytical Services - Asheville							
Antimony	ND	ug/L	1.0	0.10	1	02/12/25 01:00	02/24/25 19:05	7440-36-0	
Arsenic	ND	ug/L	1.0	0.17	1	02/12/25 01:00	02/22/25 04:38	7440-38-2	
Beryllium	ND	ug/L	0.10	0.045	1	02/12/25 01:00	02/22/25 15:50	7440-41-7	
Cadmium	ND	ug/L	0.10	0.037	1	02/12/25 01:00	02/22/25 04:38	7440-43-9	
Chromium	0.43J	ug/L	1.0	0.39	1	02/12/25 01:00	02/22/25 04:38	7440-47-3	
Cobalt	ND	ug/L	1.0	0.14	1	02/12/25 01:00	02/22/25 04:38	7440-48-4	
Copper	0.79J	ug/L	2.0	0.55	1	02/12/25 01:00	02/22/25 04:38	7440-50-8	
Lithium	0.35J	ug/L	2.5	0.33	1	02/12/25 01:00	02/22/25 15:50	7439-93-2	
Molybdenum	0.096J	ug/L	1.0	0.075	1	02/12/25 01:00	02/22/25 04:38	7439-98-7	
Nickel	ND	ug/L	1.0	0.26	1	02/12/25 01:00	02/22/25 04:38	7440-02-0	
Selenium	ND	ug/L	2.0	0.22	1	02/12/25 01:00	02/22/25 04:38	7782-49-2	
Thallium	ND	ug/L	0.20	0.028	1	02/12/25 01:00	02/22/25 04:38	7440-28-0	
Vanadium	0.60J	ug/L	1.0	0.064	1	02/12/25 01:00	02/22/25 04:38	7440-62-2	
7470 Mercury		Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Asheville							
Mercury	ND	ug/L	0.20	0.12	1	02/08/25 20:16	02/09/25 15:06	7439-97-6	
2540C Total Dissolved Solids		Analytical Method: SM 2540C-2015 Pace Analytical Services - Asheville							
Total Dissolved Solids	104	mg/L	25.0	25.0	1		02/11/25 12:15		

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ANALYTICAL RESULTS

Project: TCH.009-3
Pace Project No.: 92778353

Sample: SW-6		Lab ID: 92778353006		Collected: 02/06/25 12:05		Received: 02/07/25 07:40		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
7199 Chromium, Hexavalent		Analytical Method: EPA 7199 Pace Analytical Services - Charlotte							
Chromium, Hexavalent	0.072	ug/L	0.025	0.0043	1		02/07/25 12:05	18540-29-9	H1,P4
6010 MET ICP		Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Asheville							
Barium	20.6	ug/L	5.0	0.79	1	02/12/25 01:00	02/12/25 22:47	7440-39-3	
Boron	10.1J	ug/L	50.0	4.0	1	02/12/25 01:00	02/13/25 15:44	7440-42-8	
Manganese	17.0	ug/L	5.0	0.86	1	02/12/25 01:00	02/12/25 22:47	7439-96-5	
Strontium	93.1	ug/L	5.0	0.66	1	02/12/25 01:00	02/12/25 22:47	7440-24-6	
Hardness, Total(SM 2340B)	56000	ug/L	662	36.8	1	02/12/25 01:00	02/12/25 22:47		
Zinc	ND	ug/L	10.0	3.0	1	02/12/25 01:00	02/13/25 15:44	7440-66-6	
6020 MET ICPMS		Analytical Method: EPA 6020B Preparation Method: EPA 3010A Pace Analytical Services - Asheville							
Antimony	ND	ug/L	1.0	0.10	1	02/12/25 01:00	02/24/25 19:09	7440-36-0	
Arsenic	ND	ug/L	1.0	0.17	1	02/12/25 01:00	02/22/25 04:42	7440-38-2	
Beryllium	ND	ug/L	0.10	0.045	1	02/12/25 01:00	02/22/25 15:53	7440-41-7	
Cadmium	ND	ug/L	0.10	0.037	1	02/12/25 01:00	02/22/25 04:42	7440-43-9	
Chromium	0.43J	ug/L	1.0	0.39	1	02/12/25 01:00	02/22/25 04:42	7440-47-3	
Cobalt	ND	ug/L	1.0	0.14	1	02/12/25 01:00	02/22/25 04:42	7440-48-4	
Copper	0.84J	ug/L	2.0	0.55	1	02/12/25 01:00	02/22/25 04:42	7440-50-8	
Lithium	0.34J	ug/L	2.5	0.33	1	02/12/25 01:00	02/22/25 15:53	7439-93-2	
Molybdenum	0.098J	ug/L	1.0	0.075	1	02/12/25 01:00	02/22/25 04:42	7439-98-7	
Nickel	ND	ug/L	1.0	0.26	1	02/12/25 01:00	02/22/25 04:42	7440-02-0	
Selenium	ND	ug/L	2.0	0.22	1	02/12/25 01:00	02/22/25 04:42	7782-49-2	
Thallium	ND	ug/L	0.20	0.028	1	02/12/25 01:00	02/22/25 04:42	7440-28-0	
Vanadium	0.56J	ug/L	1.0	0.064	1	02/12/25 01:00	02/22/25 04:42	7440-62-2	
7470 Mercury		Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Asheville							
Mercury	ND	ug/L	0.20	0.12	1	02/08/25 20:16	02/09/25 15:08	7439-97-6	
2540C Total Dissolved Solids		Analytical Method: SM 2540C-2015 Pace Analytical Services - Asheville							
Total Dissolved Solids	97.0	mg/L	25.0	25.0	1		02/11/25 12:15		

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ANALYTICAL RESULTS

Project: TCH.009-3
Pace Project No.: 92778353

Sample: SW-7		Lab ID: 92778353007		Collected: 02/06/25 11:50		Received: 02/07/25 07:40		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
7199 Chromium, Hexavalent		Analytical Method: EPA 7199 Pace Analytical Services - Charlotte							
Chromium, Hexavalent	0.097	ug/L	0.025	0.0043	1		02/07/25 11:47	18540-29-9	P4
6010 MET ICP		Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Asheville							
Barium	24.1	ug/L	5.0	0.79	1	02/12/25 01:00	02/12/25 22:51	7440-39-3	
Boron	10.4J	ug/L	50.0	4.0	1	02/12/25 01:00	02/13/25 15:48	7440-42-8	
Manganese	38.2	ug/L	5.0	0.86	1	02/12/25 01:00	02/12/25 22:51	7439-96-5	
Strontium	101	ug/L	5.0	0.66	1	02/12/25 01:00	02/12/25 22:51	7440-24-6	
Hardness, Total(SM 2340B)	58300	ug/L	662	36.8	1	02/12/25 01:00	02/12/25 22:51		
Zinc	ND	ug/L	10.0	3.0	1	02/12/25 01:00	02/13/25 15:48	7440-66-6	
6020 MET ICPMS		Analytical Method: EPA 6020B Preparation Method: EPA 3010A Pace Analytical Services - Asheville							
Antimony	ND	ug/L	1.0	0.10	1	02/12/25 01:00	02/24/25 19:13	7440-36-0	
Arsenic	ND	ug/L	1.0	0.17	1	02/12/25 01:00	02/22/25 04:46	7440-38-2	
Beryllium	ND	ug/L	0.10	0.045	1	02/12/25 01:00	02/22/25 15:57	7440-41-7	
Cadmium	ND	ug/L	0.10	0.037	1	02/12/25 01:00	02/22/25 04:46	7440-43-9	
Chromium	ND	ug/L	1.0	0.39	1	02/12/25 01:00	02/22/25 04:46	7440-47-3	
Cobalt	0.25J	ug/L	1.0	0.14	1	02/12/25 01:00	02/22/25 04:46	7440-48-4	
Copper	0.76J	ug/L	2.0	0.55	1	02/12/25 01:00	02/22/25 04:46	7440-50-8	
Lithium	0.33J	ug/L	2.5	0.33	1	02/12/25 01:00	02/22/25 15:57	7439-93-2	
Molybdenum	0.092J	ug/L	1.0	0.075	1	02/12/25 01:00	02/22/25 04:46	7439-98-7	
Nickel	ND	ug/L	1.0	0.26	1	02/12/25 01:00	02/22/25 04:46	7440-02-0	
Selenium	ND	ug/L	2.0	0.22	1	02/12/25 01:00	02/22/25 04:46	7782-49-2	
Thallium	ND	ug/L	0.20	0.028	1	02/12/25 01:00	02/22/25 04:46	7440-28-0	
Vanadium	0.54J	ug/L	1.0	0.064	1	02/12/25 01:00	02/22/25 04:46	7440-62-2	
7470 Mercury		Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Asheville							
Mercury	ND	ug/L	0.20	0.12	1	02/08/25 20:16	02/09/25 15:10	7439-97-6	
2540C Total Dissolved Solids		Analytical Method: SM 2540C-2015 Pace Analytical Services - Asheville							
Total Dissolved Solids	102	mg/L	25.0	25.0	1		02/11/25 12:16		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: TCH.009-3
Pace Project No.: 92778353

Sample: SW-DUP		Lab ID: 92778353008		Collected: 02/06/25 00:00		Received: 02/07/25 07:40		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
7199 Chromium, Hexavalent		Analytical Method: EPA 7199 Pace Analytical Services - Charlotte							
Chromium, Hexavalent	0.064	ug/L	0.025	0.0043	1		02/07/25 11:26	18540-29-9	H3
6010 MET ICP		Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Asheville							
Barium	23.9	ug/L	5.0	0.79	1	02/12/25 01:00	02/13/25 16:06	7440-39-3	
Boron	11.1J	ug/L	50.0	4.0	1	02/12/25 01:00	02/13/25 16:06	7440-42-8	
Manganese	42.5	ug/L	5.0	0.86	1	02/12/25 01:00	02/12/25 23:08	7439-96-5	
Strontium	100	ug/L	5.0	0.66	1	02/12/25 01:00	02/13/25 16:06	7440-24-6	
Hardness, Total(SM 2340B)	56900	ug/L	662	36.8	1	02/12/25 01:00	02/12/25 23:08		
Zinc	ND	ug/L	10.0	3.0	1	02/12/25 01:00	02/13/25 16:06	7440-66-6	
6020 MET ICPMS		Analytical Method: EPA 6020B Preparation Method: EPA 3010A Pace Analytical Services - Asheville							
Antimony	ND	ug/L	1.0	0.10	1	02/12/25 01:00	02/24/25 19:17	7440-36-0	
Arsenic	ND	ug/L	1.0	0.17	1	02/12/25 01:00	02/22/25 04:49	7440-38-2	
Beryllium	ND	ug/L	0.10	0.045	1	02/12/25 01:00	02/22/25 16:01	7440-41-7	
Cadmium	ND	ug/L	0.10	0.037	1	02/12/25 01:00	02/22/25 04:49	7440-43-9	
Chromium	0.42J	ug/L	1.0	0.39	1	02/12/25 01:00	02/22/25 04:49	7440-47-3	
Cobalt	0.28J	ug/L	1.0	0.14	1	02/12/25 01:00	02/22/25 04:49	7440-48-4	
Copper	0.81J	ug/L	2.0	0.55	1	02/12/25 01:00	02/22/25 04:49	7440-50-8	
Lithium	0.34J	ug/L	2.5	0.33	1	02/12/25 01:00	02/22/25 16:01	7439-93-2	
Molybdenum	0.10J	ug/L	1.0	0.075	1	02/12/25 01:00	02/22/25 04:49	7439-98-7	
Nickel	0.32J	ug/L	1.0	0.26	1	02/12/25 01:00	02/22/25 04:49	7440-02-0	
Selenium	ND	ug/L	2.0	0.22	1	02/12/25 01:00	02/22/25 04:49	7782-49-2	
Thallium	ND	ug/L	0.20	0.028	1	02/12/25 01:00	02/22/25 04:49	7440-28-0	
Vanadium	0.54J	ug/L	1.0	0.064	1	02/12/25 01:00	02/22/25 04:49	7440-62-2	
7470 Mercury		Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Asheville							
Mercury	ND	ug/L	0.20	0.12	1	02/08/25 20:16	02/09/25 15:13	7439-97-6	
2540C Total Dissolved Solids		Analytical Method: SM 2540C-2015 Pace Analytical Services - Asheville							
Total Dissolved Solids	107	mg/L	25.0	25.0	1		02/11/25 12:16		

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: TCH.009-3

Pace Project No.: 92778353

QC Batch: 914556

Analysis Method: EPA 7199

QC Batch Method: EPA 7199

Analysis Description: 7199 Chromium, Hexavalent

Laboratory: Pace Analytical Services - Charlotte

Associated Lab Samples: 92778353001, 92778353002, 92778353003, 92778353004, 92778353005, 92778353006, 92778353007, 92778353008

METHOD BLANK: 4700813

Matrix: Water

Associated Lab Samples: 92778353001, 92778353002, 92778353003, 92778353004, 92778353005, 92778353006, 92778353007, 92778353008

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chromium, Hexavalent	ug/L	ND	0.025	0.0043	02/07/25 20:39	

LABORATORY CONTROL SAMPLE: 4700815

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chromium, Hexavalent	ug/L	0.1	0.11	106	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 4700817 4700818

Parameter	Units	92778353007 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chromium, Hexavalent	ug/L	0.097	0.1	0.1	0.19	0.19	97	96	90-110	1	20	H1,P4

SAMPLE DUPLICATE: 4700820

Parameter	Units	92778353006 Result	Dup Result	RPD	Max RPD	Qualifiers
Chromium, Hexavalent	ug/L	0.072	ND		20	H1,P4

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QUALITY CONTROL DATA

Project: TCH.009-3

Pace Project No.: 92778353

QC Batch: 914824

Analysis Method: EPA 7470A

QC Batch Method: EPA 7470A

Analysis Description: 7470 Mercury

Laboratory: Pace Analytical Services - Asheville

Associated Lab Samples: 92778353001, 92778353002, 92778353003, 92778353004, 92778353005, 92778353006, 92778353007, 92778353008

METHOD BLANK: 4702442

Matrix: Water

Associated Lab Samples: 92778353001, 92778353002, 92778353003, 92778353004, 92778353005, 92778353006, 92778353007, 92778353008

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury	ug/L	ND	0.20	0.12	02/09/25 14:41	

LABORATORY CONTROL SAMPLE: 4702443

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	2.5	2.4	95	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 4702444 4702445

Parameter	Units	92778499005 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury	ug/L	ND	2.5	2.5	2.5	2.4	99	95	75-125	4	25	

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QUALITY CONTROL DATA

Project: TCH.009-3

Pace Project No.: 92778353

QC Batch:	915523	Analysis Method:	EPA 6010D
QC Batch Method:	EPA 3010A	Analysis Description:	6010 MET
		Laboratory:	Pace Analytical Services - Asheville
Associated Lab Samples:	92778353001, 92778353002, 92778353003, 92778353004, 92778353005, 92778353006, 92778353007, 92778353008		

METHOD BLANK:	4705451	Matrix:	Water
Associated Lab Samples:	92778353001, 92778353002, 92778353003, 92778353004, 92778353005, 92778353006, 92778353007, 92778353008		

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Barium	ug/L	ND	5.0	0.79	02/12/25 22:05	
Boron	ug/L	4.6J	50.0	4.0	02/12/25 22:05	
Hardness, Total(SM 2340B)	ug/L	44.8J	662	36.8	02/12/25 22:05	
Manganese	ug/L	ND	5.0	0.86	02/12/25 22:05	
Strontium	ug/L	ND	5.0	0.66	02/12/25 22:05	
Zinc	ug/L	ND	10.0	3.0	02/13/25 14:55	

LABORATORY CONTROL SAMPLE: 4705452

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Barium	ug/L	500	458	92	80-120	
Boron	ug/L	500	464	93	80-120	
Hardness, Total(SM 2340B)	ug/L	33100	29100	88	80-120	
Manganese	ug/L	500	453	91	80-120	
Strontium	ug/L	500	456	91	80-120	
Zinc	ug/L	500	493	99	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 4705453 4705454

Parameter	Units	92778353001	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		Result										
Barium	ug/L	21.3	500	500	557	566	107	109	75-125	1	20	
Boron	ug/L	10.4J	500	500	511	520	100	102	75-125	2	20	
Hardness, Total(SM 2340B)	ug/L	56200	33100	33100	89900	91200	102	106	75-125	1	20	
Manganese	ug/L	10.1	500	500	530	535	104	105	75-125	1	20	
Strontium	ug/L	96.5	500	500	630	640	107	109	75-125	1	20	
Zinc	ug/L	ND	500	500	506	514	101	102	75-125	2	20	

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QUALITY CONTROL DATA

Project: TCH.009-3

Pace Project No.: 92778353

QC Batch:	915515	Analysis Method:	EPA 6020B
QC Batch Method:	EPA 3010A	Analysis Description:	6020 MET
		Laboratory:	Pace Analytical Services - Asheville
Associated Lab Samples:	92778353001, 92778353002, 92778353003, 92778353004, 92778353005, 92778353006, 92778353007, 92778353008		

METHOD BLANK: 4705430

Matrix: Water

Associated Lab Samples: 92778353001, 92778353002, 92778353003, 92778353004, 92778353005, 92778353006, 92778353007, 92778353008

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	ug/L	ND	1.0	0.10	02/22/25 03:53	
Arsenic	ug/L	ND	1.0	0.17	02/22/25 03:53	
Beryllium	ug/L	ND	0.10	0.045	02/22/25 15:05	
Cadmium	ug/L	ND	0.10	0.037	02/22/25 03:53	
Chromium	ug/L	ND	1.0	0.39	02/22/25 03:53	
Cobalt	ug/L	ND	1.0	0.14	02/22/25 03:53	
Copper	ug/L	ND	2.0	0.55	02/22/25 03:53	
Lithium	ug/L	ND	2.5	0.33	02/22/25 15:05	
Molybdenum	ug/L	0.33J	1.0	0.075	02/22/25 03:53	
Nickel	ug/L	ND	1.0	0.26	02/22/25 03:53	
Selenium	ug/L	ND	2.0	0.22	02/22/25 03:53	
Thallium	ug/L	ND	0.20	0.028	02/22/25 03:53	
Vanadium	ug/L	ND	1.0	0.064	02/22/25 03:53	

LABORATORY CONTROL SAMPLE: 4705431

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	ug/L	50	48.0	96	80-120	
Arsenic	ug/L	50	49.4	99	80-120	
Beryllium	ug/L	50	50.3	101	80-120	
Cadmium	ug/L	50	49.9	100	80-120	
Chromium	ug/L	50	50.8	102	80-120	
Cobalt	ug/L	50	50.5	101	80-120	
Copper	ug/L	50	50.9	102	80-120	
Lithium	ug/L	50	49.6	99	80-120	
Molybdenum	ug/L	50	49.7	99	80-120	
Nickel	ug/L	50	50.8	102	80-120	
Selenium	ug/L	50	47.6	95	80-120	
Thallium	ug/L	25	24.3	97	80-120	
Vanadium	ug/L	50	50.7	101	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 4705432

4705433

Parameter	Units	92778353001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Antimony	ug/L	ND	50	50	47.6	47.4	95	95	75-125	0	20	

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QUALITY CONTROL DATA

Project: TCH.009-3

Pace Project No.: 92778353

MATRIX SPIKE & MATRIX SPIKE DUPLICATE:												
4705432					4705433							
Parameter	Units	92778353001	MS	MSD	MS	MSD	MS	MSD	% Rec	RPD	Max	Qual
		Result	Spike	Spike								
Arsenic	ug/L	ND	50	50	50.0	49.8	100	99	75-125	0	20	
Beryllium	ug/L	ND	50	50	49.9	50.6	100	101	75-125	1	20	
Cadmium	ug/L	ND	50	50	49.7	49.4	99	99	75-125	1	20	
Chromium	ug/L	ND	50	50	51.1	50.8	101	101	75-125	0	20	
Cobalt	ug/L	ND	50	50	50.2	50.4	100	101	75-125	0	20	
Copper	ug/L	0.80J	50	50	51.3	51.3	101	101	75-125	0	20	
Lithium	ug/L	0.34J	50	50	48.4	48.8	96	97	75-125	1	20	
Molybdenum	ug/L	0.16J	50	50	49.8	49.3	99	98	75-125	1	20	
Nickel	ug/L	ND	50	50	50.6	50.7	101	101	75-125	0	20	
Selenium	ug/L	ND	50	50	46.7	47.8	93	95	75-125	2	20	
Thallium	ug/L	ND	25	25	24.6	24.9	99	100	75-125	1	20	
Vanadium	ug/L	0.60J	50	50	51.0	51.5	101	102	75-125	1	20	

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QUALITY CONTROL DATA

Project: TCH.009-3

Pace Project No.: 92778353

QC Batch: 915154

Analysis Method: SM 2540C-2015

QC Batch Method: SM 2540C-2015

Analysis Description: 2540C Total Dissolved Solids

Laboratory: Pace Analytical Services - Asheville

Associated Lab Samples: 92778353001, 92778353002, 92778353003, 92778353004, 92778353005, 92778353006, 92778353007, 92778353008

METHOD BLANK: 4703783

Matrix: Water

Associated Lab Samples: 92778353001, 92778353002, 92778353003, 92778353004, 92778353005, 92778353006, 92778353007, 92778353008

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	25.0	25.0	02/11/25 12:12	

LABORATORY CONTROL SAMPLE: 4703784

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	250	254	101	90-110	

SAMPLE DUPLICATE: 4703785

Parameter	Units	92778538021 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	324	323	0	25	

SAMPLE DUPLICATE: 4703786

Parameter	Units	92778353003 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	102	110	8	25	

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QUALIFIERS

Project: TCH.009-3
Pace Project No.: 92778353

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.
ND - Not Detected at or above adjusted reporting limit.
TNTC - Too Numerous To Count
J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.
MDL - Adjusted Method Detection Limit.
PQL - Practical Quantitation Limit.
RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.
S - Surrogate
1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.
Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.
LCS(D) - Laboratory Control Sample (Duplicate)
MS(D) - Matrix Spike (Duplicate)
DUP - Sample Duplicate
RPD - Relative Percent Difference
NC - Not Calculable.
SG - Silica Gel - Clean-Up
U - Indicates the compound was analyzed for, but not detected.
Acid preservation may not be appropriate for 2 Chloroethylvinyl ether.
A separate vial preserved to a pH of 4-5 is recommended in SW846 Chapter 4 for the analysis of Acrolein and Acrylonitrile by EPA Method 8260.
N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.
Reported results are not rounded until the final step prior to reporting. Therefore, calculated parameters that are typically reported as "Total" may vary slightly from the sum of the reported component parameters.
Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.
TNI - The NELAC Institute.

ANALYTE QUALIFIERS

H1 Analysis conducted outside the EPA method holding time.
H3 Sample was received or analysis requested beyond the recognized method holding time.
P4 Sample field preservation does not meet EPA or method recommendations for this analysis.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: TCH.009-3
Pace Project No.: 92778353

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92778353001	SW-1	EPA 7199	914556		
92778353002	SW-2	EPA 7199	914556		
92778353003	SW-3	EPA 7199	914556		
92778353004	SW-4	EPA 7199	914556		
92778353005	SW-5	EPA 7199	914556		
92778353006	SW-6	EPA 7199	914556		
92778353007	SW-7	EPA 7199	914556		
92778353008	SW-DUP	EPA 7199	914556		
92778353001	SW-1	EPA 3010A	915523	EPA 6010D	915540
92778353002	SW-2	EPA 3010A	915523	EPA 6010D	915540
92778353003	SW-3	EPA 3010A	915523	EPA 6010D	915540
92778353004	SW-4	EPA 3010A	915523	EPA 6010D	915540
92778353005	SW-5	EPA 3010A	915523	EPA 6010D	915540
92778353006	SW-6	EPA 3010A	915523	EPA 6010D	915540
92778353007	SW-7	EPA 3010A	915523	EPA 6010D	915540
92778353008	SW-DUP	EPA 3010A	915523	EPA 6010D	915540
92778353001	SW-1	EPA 3010A	915515	EPA 6020B	915543
92778353002	SW-2	EPA 3010A	915515	EPA 6020B	915543
92778353003	SW-3	EPA 3010A	915515	EPA 6020B	915543
92778353004	SW-4	EPA 3010A	915515	EPA 6020B	915543
92778353005	SW-5	EPA 3010A	915515	EPA 6020B	915543
92778353006	SW-6	EPA 3010A	915515	EPA 6020B	915543
92778353007	SW-7	EPA 3010A	915515	EPA 6020B	915543
92778353008	SW-DUP	EPA 3010A	915515	EPA 6020B	915543
92778353001	SW-1	EPA 7470A	914824	EPA 7470A	914893
92778353002	SW-2	EPA 7470A	914824	EPA 7470A	914893
92778353003	SW-3	EPA 7470A	914824	EPA 7470A	914893
92778353004	SW-4	EPA 7470A	914824	EPA 7470A	914893
92778353005	SW-5	EPA 7470A	914824	EPA 7470A	914893
92778353006	SW-6	EPA 7470A	914824	EPA 7470A	914893
92778353007	SW-7	EPA 7470A	914824	EPA 7470A	914893
92778353008	SW-DUP	EPA 7470A	914824	EPA 7470A	914893
92778353001	SW-1	SM 2540C-2015	915154		
92778353002	SW-2	SM 2540C-2015	915154		
92778353003	SW-3	SM 2540C-2015	915154		
92778353004	SW-4	SM 2540C-2015	915154		
92778353005	SW-5	SM 2540C-2015	915154		
92778353006	SW-6	SM 2540C-2015	915154		
92778353007	SW-7	SM 2540C-2015	915154		
92778353008	SW-DUP	SM 2540C-2015	915154		

REPORT OF LABORATORY ANALYSIS

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DC#_Title: ENV-FRM-HUN1-0083 v05_Sample Condition Upon Receipt

Effective Date: 05/24/2024

Laboratory receiving samples:

Asheville ☐ Eden ☐ Greenwood ☐ Huntersville ☒ Raleigh ☐ Mechanicsville ☐ Atlanta ☐ Kernersville ☐Sample Condition
Upon Receipt

Client Name:

Project #:

WO#: 92778353

Courier:

☐ Commercial☒ Fed Ex☐ UPS☐ USPS☐ Client☐ Pace☐ Other: _____

92778353

Custody Seal Present?

☐ Yes☒ No

Seals Intact?

☐ Yes☐ No☒ N/ADate/Initials Person Examining Contents: AV 2/7

Packing Material:

☐ Bubble Wrap☐ Bubble Bags☒ None☐ Other

Biological Tissue Frozen?

☐ Yes☐ No☒ N/A

Thermometer:

☒ IR Gun ID:927782

Type of Ice:

☒ Wet☐ Blue☐ None

Cooler Temp:

3.4

Correction Factor:

Add/Subtract (°C)

0

Temp should be above freezing to 6°C

☐ Samples out of temp criteria. Samples on ice, cooling process has begun

Cooler Temp Corrected (°C):

3.4USDA Regulated Soil (☒ N/A, water sample)Did samples originate in a quarantine zone within the United States: CA, NY, or SC (check maps)? ☐ Yes ☒ NoDid samples originate from a foreign source (internationally, including Hawaii and Puerto Rico)? ☐ Yes ☒ No

Comments/Discrepancy:

Chain of Custody Present?

☒ Yes☐ No☐ N/A

1.

Samples Arrived within Hold Time?

☒ Yes☐ No☐ N/A

2.

Short Hold Time Analysis (<72 hr.)?

☒ Yes☐ No☐ N/A

3.

Rush Turn Around Time Requested?

☐ Yes☐ No☒ N/A

4.

Sufficient Volume?

☒ Yes☐ No☐ N/A

5.

Correct Containers Used?

☒ Yes☐ No☐ N/A

6.

-Pace Containers Used?

☒ Yes☐ No☐ N/A

Containers Intact?

☒ Yes☐ No☐ N/A

7.

Dissolved analysis: Samples Field Filtered?

☐ Yes☐ No☒ N/A

8.

Sample Labels Match COC?

☒ Yes☐ No☐ N/A

9.

-Includes Date/Time/ID/Analysis Matrix: WT

Headspace in VOA Vials (>5-6mm)?

☐ Yes☐ No☒ N/A

10.

Trip Blank Present?

☐ Yes☐ No☒ N/A

11.

Trip Blank Custody Seals Present?

☐ Yes☐ No☒ N/A

COMMENTS/SAMPLE DISCREPANCY

Field Data Required? ☐ Yes ☐ No

Lot ID of split containers:

CLIENT NOTIFICATION/RESOLUTION

Person contacted:

Date/Time:

Project Manager SCURF Review:

Date:

Project Manager SRF Review:

Date:



Effective Date: 05/24/2024

*Check mark top half of box if pH and/or dechlorination is verified and within the acceptance range for preservation samples.

Exceptions: VOA, Coliform, TOC, Oil and Grease, DRO/8015 (water) DOC, LLHg

**Bottom half of box is to list number of bottles

***Check all unpreserved Nitrates for chlorine

Project #

WO#: 92778353

PM: TMC

Due Date: 02/14/25

CLIENT: 92-Hart_Ral

Laboratory Receiving Location: Asheville ☐ Eden ☐ Greenwood ☐ Huntersville ☐ Raleigh ☐ Mechanicsville ☐ Atlanta ☐ Kernersville ☐

Client _____ Profile/EZ (Circle one) _____ Notes _____

Item#	BP4U-125 mL Plastic Unpreserved (N/A) (Cl-)	BP3U-250 mL Plastic Unpreserved (N/A)	BP2U-500 mL Plastic Unpreserved (N/A)	BP1U-1 liter Plastic Unpreserved (N/A)	BP4S-125 mL Plastic H2SO4 (pH < 2) (Cl-)	BP3N-250 mL plastic HNO3 (pH < 2)	BP4Z-125 mL Plastic Zn Acetate & NaOH (>9)	BP4B-125 mL Plastic NaOH (pH > 12) (Cl-)	WGFU-Wide-mouthed Glass jar Unpreserved	AG1U-1 liter Amber Unpreserved (N/A) (Cl-)	AG1H-1 liter Amber HCl (pH < 2)	AG3U-250 mL Amber Unpreserved (N/A) (Cl-)	AG1S-1 liter Amber H2SO4 (pH < 2)	AG3S-250 mL Amber H2SO4 (pH < 2)	DG9H-40 mL Amber NH4Cl (N/A)(Cl-)	DG9H-40 mL VOA HCl (N/A)	VG9T-40 mL VOA Na2S2O3 (N/A)	VG9U-40 mL VOA Unpreserved (N/A)	DG9V-40 mL VOA H3PO4 (N/A)	KP7U-50 mL Plastic Unpreserved (N/A)	V/GK (3 vials per kit)-VPH/Gas kit (N/A)	SP5T-125 mL Sterile Plastic (N/A - lab)	SP2T-250 mL Sterile Plastic (N/A - lab)	BP3R-250 mL Plastic (NH2)2SO4 (9.3-9.7)	AG0U-100 mL Amber Unpreserved (N/A) (Cl-)	VSGU-20 mL Scintillation vials (N/A)	DG9U-40 mL Amber Unpreserved vials (N/A)	
CC																												
1																												
2																												
3																												
4																												
5																												
6																												
7																												
8																												
9																												
10																												
11																												
12																												

pH Adjustment Log for Preserved Samples

Sample ID	Type of Preservative	pH upon receipt	Date preservation adjusted	Time preservation adjusted	Amount of Preservative added	Lot #

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DENR Certification Office (i.e. Out of hold, incorrect preservative, out of temp, incorrect containers.

Pace® Location Requested (City/State):
Pace Analytical Charlotte
9800 Kinsey Ave., Suite 100, Huntersville, NC 28078

CHAIN-OF-CUSTODY Analytical Request Document
Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevant fields

LAB USE ONLY - Affix Workorder/Login Label Here

Company Name: Hart & Hickman, Raleigh
Street Address: 3921 Sunset Ridge Rd.
Suite 301
Raleigh, NC 27607

Customer Project #: TCH-009-3

Project Name: TCH-009-3

Site Collection Info/Facility ID (as applicable):

Contact/Report To: Justin Ballard
Phone #: (919)723-2507
E-Mail: jballard@hartthickman.com
Cc E-Mail: AWRight@hartthickman.com

Invoice To: Accounts Payable
Invoice E-Mail: accounts payable@hartthickman.com
Purchase Order # (if applicable): TCH-009-3

Specify Container Size **
2 10 3 3
Identify Container Preservative Type***
1 11 2 2
Analysis Requested

**Container Size: (1) 1L, (2) 500mL, (3) 250mL, (4) 125mL, (5) 100mL, (6) 40mL vial, (7) Encore, (8) Teracore, (9) 90mL, (10) Other
***Preservative Type: (1) None, (2) HNO3, (3) H2SO4, (4) HCl, (5) NaOH, (6) Zn Acetate, (7) NaOAc, (8) Sol. Thiosulfate, (9) Ascorbic Acid, (10) MCH, (11) Other

Time Zone Collected: [] AK [] PT [] MT [] CT [X] ET
County / State origin of sample(s): North Carolina

Lab Use Only
Proj. Mgr: Taylor Cannon
Accession / Client ID:
Table #:
Profile / Template: 9481
Prelog / Bottle Ord. ID: EZ3219192
Sample Comment

Preservation non-conformance identified for sample.

Data Deliverables: Regulatory Program (DW, RCRA, etc.) as applicable: Reportable [] Yes [] No
Rush (Pre-approval required): [] Same Day [] 1 Day [] 2 Day [] 3 Day [] Other
Date Results: Standard 1HT
Requested: Standard 1HT
Field File # (if applicable): [] Yes [X] No

Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Waste Water (WW), Product (P), Soil/Solid (SS), Oil (OL), Wipe (WP), Tissue (TS), Bioassay (B), Vapor (V), Surface Water (SW), Sediment (SED), Sludge (SL), Caulk (CK), Leachate (LL), Biosolid (BS), Other (OT)
Customer Sample ID

Matrix *	Comp / Grab	Composite Start Date	Time	Collected or Composite End Date	Time	# Cont.	Res. Chlorine Results	Units	2540C Total Dissolved Solids	7199 Chromium, Hexavalent	9056 IC Anions	Metals 6010/6020/7470	Metals 6010/6020/7470+Hardness	Other
SW-1	SW	G		216125	1310	3			X	X		X	X	
SW-2					1300									
SW-3					1250									
SW-4					1235									
SW-5					1220									
SW-6					1205									
SW-7					1150									
SW-DVP														

Additional Instructions from Pace®:
6010: Ba, B, Mn, Sr, Sn
6020: Sb, As, Be, Cd, Cr, Co, Cu, U, Mo, Ni, Se, Ti, V
9056: Chloride, Fluoride, Nitrate, Sulfate

Collected By: C. W. Jensen
(Printed Name)
Signature: [Signature]
Customer Remarks / Special Conditions / Possible Hazards:
Copies: Thermometer ID: Correction Factor (°C): Obs. Temp (°C) Corrected Temp (°C) On Ice:
Date/Time: 2/7/23 1500
Received by Company (Signature): [Signature]
Date/Time: 2/7/23 1500
Received by Company (Signature): [Signature]

Relinquished by Company (Signature): [Signature]	Date/Time: 2/7/23 1500	Received by Company (Signature): [Signature]	Date/Time: 2/7/23 1500
Relinquished by Company (Signature): [Signature]	Date/Time: []	Received by Company (Signature): [Signature]	Date/Time: []
Relinquished by Company (Signature): [Signature]	Date/Time: []	Received by Company (Signature): [Signature]	Date/Time: []



February 12, 2025

Justin Ballard
Hart & Hickman
3921 Sunset Ridge Rd.
Suite 301
Raleigh, NC 27607

RE: Project: TCH.009-3
Pace Project No.: 92778388

Dear Justin Ballard:

Enclosed are the analytical results for sample(s) received by the laboratory on February 07, 2025. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

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

- Pace Analytical Services - Asheville

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

Sincerely,

A handwritten signature in black ink, appearing to read "T Cannon".

Taylor M Cannon
taylor.cannon@pacelabs.com
704-977-0943
Project Manager

Enclosures



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: TCH.009-3

Pace Project No.: 92778388

Pace Analytical Services Asheville

2225 Riverside Drive, Asheville, NC 28804

Florida/NELAP Certification #: E87648

North Carolina Drinking Water Certification #: 37712

North Carolina Wastewater Certification #: 40

South Carolina Laboratory ID: 99030

South Carolina Certification #: 99030001

Virginia/VELAP Certification #: 460222

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SAMPLE SUMMARY

Project: TCH.009-3

Pace Project No.: 92778388

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92778388001	SW-1	Water	02/06/25 13:10	02/07/25 11:14
92778388002	SW-2	Water	02/06/25 13:00	02/07/25 11:14
92778388003	SW-3	Water	02/06/25 12:50	02/07/25 11:14
92778388004	SW-4	Water	02/06/25 12:35	02/07/25 11:14
92778388005	SW-5	Water	02/06/25 12:20	02/07/25 11:14
92778388006	SW-6	Water	02/06/25 12:05	02/07/25 11:14
92778388007	SW-7	Water	02/06/25 11:50	02/07/25 11:14
92778388008	SW-DUPE	Water	02/06/25 12:01	02/07/25 11:14

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SAMPLE ANALYTE COUNT

Project: TCH.009-3

Pace Project No.: 92778388

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92778388001	SW-1	EPA 9056A	JCM	4	PASI-A
92778388002	SW-2	EPA 9056A	JCM	4	PASI-A
92778388003	SW-3	EPA 9056A	JCM	4	PASI-A
92778388004	SW-4	EPA 9056A	JCM	4	PASI-A
92778388005	SW-5	EPA 9056A	JCM	4	PASI-A
92778388006	SW-6	EPA 9056A	JCM	4	PASI-A
92778388007	SW-7	EPA 9056A	JCM	4	PASI-A
92778388008	SW-DUPE	EPA 9056A	JCM	4	PASI-A

PASI-A = Pace Analytical Services - Asheville

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ANALYTICAL RESULTS

Project: TCH.009-3

Pace Project No.: 92778388

Sample: SW-1		Lab ID: 92778388001		Collected: 02/06/25 13:10		Received: 02/07/25 11:14		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
9056 IC Anions 48hr									
Analytical Method: EPA 9056A									
Pace Analytical Services - Asheville									
Chloride	13.7	mg/L	1.0	0.60	1		02/07/25 17:33	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		02/07/25 17:33	16984-48-8	
Nitrate as N	0.15	mg/L	0.020	0.0060	1		02/07/25 17:33	14797-55-8	
Sulfate	8.8	mg/L	1.0	0.50	1		02/07/25 17:33	14808-79-8	

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ANALYTICAL RESULTS

Project: TCH.009-3
Pace Project No.: 92778388

Sample: SW-2		Lab ID: 92778388002		Collected: 02/06/25 13:00		Received: 02/07/25 11:14		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
9056 IC Anions 48hr									
Analytical Method: EPA 9056A									
Pace Analytical Services - Asheville									
Chloride	13.7	mg/L	1.0	0.60	1		02/07/25 17:18	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		02/07/25 17:18	16984-48-8	
Nitrate as N	0.15	mg/L	0.020	0.0060	1		02/07/25 17:18	14797-55-8	
Sulfate	8.8	mg/L	1.0	0.50	1		02/07/25 17:18	14808-79-8	

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ANALYTICAL RESULTS

Project: TCH.009-3
Pace Project No.: 92778388

Sample: SW-3		Lab ID: 92778388003		Collected: 02/06/25 12:50		Received: 02/07/25 11:14		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
9056 IC Anions 48hr									
Analytical Method: EPA 9056A									
Pace Analytical Services - Asheville									
Chloride	14.1	mg/L	1.0	0.60	1		02/07/25 17:03	16887-00-6	
Fluoride	0.057J	mg/L	0.10	0.050	1		02/07/25 17:03	16984-48-8	
Nitrate as N	0.15	mg/L	0.020	0.0060	1		02/07/25 17:03	14797-55-8	
Sulfate	10.7	mg/L	1.0	0.50	1		02/07/25 17:03	14808-79-8	

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ANALYTICAL RESULTS

Project: TCH.009-3
Pace Project No.: 92778388

Sample: SW-4		Lab ID: 92778388004		Collected: 02/06/25 12:35		Received: 02/07/25 11:14		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
9056 IC Anions 48hr									
Analytical Method: EPA 9056A									
Pace Analytical Services - Asheville									
Chloride	14.2	mg/L	1.0	0.60	1		02/07/25 16:48	16887-00-6	
Fluoride	0.056J	mg/L	0.10	0.050	1		02/07/25 16:48	16984-48-8	
Nitrate as N	0.15	mg/L	0.020	0.0060	1		02/07/25 16:48	14797-55-8	
Sulfate	10	mg/L	1.0	0.50	1		02/07/25 16:48	14808-79-8	

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ANALYTICAL RESULTS

Project: TCH.009-3
Pace Project No.: 92778388

Sample: SW-5		Lab ID: 92778388005		Collected: 02/06/25 12:20		Received: 02/07/25 11:14		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
9056 IC Anions 48hr									
Analytical Method: EPA 9056A									
Pace Analytical Services - Asheville									
Chloride	14.2	mg/L	1.0	0.60	1		02/07/25 16:33	16887-00-6	
Fluoride	0.053J	mg/L	0.10	0.050	1		02/07/25 16:33	16984-48-8	
Nitrate as N	0.15	mg/L	0.020	0.0060	1		02/07/25 16:33	14797-55-8	
Sulfate	10.1	mg/L	1.0	0.50	1		02/07/25 16:33	14808-79-8	

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ANALYTICAL RESULTS

Project: TCH.009-3

Pace Project No.: 92778388

Sample: SW-6		Lab ID: 92778388006		Collected: 02/06/25 12:05		Received: 02/07/25 11:14		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
9056 IC Anions 48hr									
Analytical Method: EPA 9056A									
Pace Analytical Services - Asheville									
Chloride	14.2	mg/L	1.0	0.60	1		02/07/25 16:19	16887-00-6	
Fluoride	0.054J	mg/L	0.10	0.050	1		02/07/25 16:19	16984-48-8	
Nitrate as N	0.14	mg/L	0.020	0.0060	1		02/07/25 16:19	14797-55-8	
Sulfate	10	mg/L	1.0	0.50	1		02/07/25 16:19	14808-79-8	

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ANALYTICAL RESULTS

Project: TCH.009-3

Pace Project No.: 92778388

Sample: SW-7		Lab ID: 92778388007		Collected: 02/06/25 11:50		Received: 02/07/25 11:14		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
9056 IC Anions 48hr									
Analytical Method: EPA 9056A									
Pace Analytical Services - Asheville									
Chloride	14.3	mg/L	1.0	0.60	1		02/07/25 15:49	16887-00-6	
Fluoride	0.068J	mg/L	0.10	0.050	1		02/07/25 15:49	16984-48-8	
Nitrate as N	0.14	mg/L	0.020	0.0060	1		02/07/25 15:49	14797-55-8	
Sulfate	10.2	mg/L	1.0	0.50	1		02/07/25 15:49	14808-79-8	

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ANALYTICAL RESULTS

Project: TCH.009-3
Pace Project No.: 92778388

Sample: SW-DUPE		Lab ID: 92778388008		Collected: 02/06/25 12:01		Received: 02/07/25 11:14		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
9056 IC Anions 48hr									
Analytical Method: EPA 9056A									
Pace Analytical Services - Asheville									
Chloride	14.4	mg/L	1.0	0.60	1		02/07/25 16:04	16887-00-6	
Fluoride	0.055J	mg/L	0.10	0.050	1		02/07/25 16:04	16984-48-8	
Nitrate as N	0.14	mg/L	0.020	0.0060	1		02/07/25 16:04	14797-55-8	
Sulfate	10.4	mg/L	1.0	0.50	1		02/07/25 16:04	14808-79-8	

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QUALITY CONTROL DATA

Project: TCH.009-3

Pace Project No.: 92778388

QC Batch:	914644	Analysis Method:	EPA 9056A
QC Batch Method:	EPA 9056A	Analysis Description:	9056 IC Anions
		Laboratory:	Pace Analytical Services - Asheville
Associated Lab Samples:	92778388001, 92778388002, 92778388003, 92778388004, 92778388005, 92778388006, 92778388007, 92778388008		

METHOD BLANK: 4701404

Matrix: Water

Associated Lab Samples: 92778388001, 92778388002, 92778388003, 92778388004, 92778388005, 92778388006, 92778388007, 92778388008

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	0.60	02/07/25 15:19	
Fluoride	mg/L	ND	0.10	0.050	02/07/25 15:19	
Nitrate as N	mg/L	ND	0.020	0.0060	02/07/25 15:19	
Sulfate	mg/L	ND	1.0	0.50	02/07/25 15:19	

LABORATORY CONTROL SAMPLE: 4701405

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	50	49.8	100	90-110	
Fluoride	mg/L	2.5	2.5	102	90-110	
Nitrate as N	mg/L	2.5	2.4	97	90-110	
Sulfate	mg/L	50	49.9	100	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 4701406 4701407

Parameter	Units	92778388001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	13.7	50	50	63.5	64.3	100	101	90-110	1	10	
Fluoride	mg/L	ND	2.5	2.5	2.4	2.4	94	95	90-110	1	10	
Nitrate as N	mg/L	0.15	2.5	2.5	2.6	2.6	98	100	90-110	2	10	
Sulfate	mg/L	8.8	50	50	58.7	59.6	100	102	90-110	2	10	

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

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QUALIFIERS

Project: TCH.009-3
Pace Project No.: 92778388

DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

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

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

Acid preservation may not be appropriate for 2 Chloroethylvinyl ether.

A separate vial preserved to a pH of 4-5 is recommended in SW846 Chapter 4 for the analysis of Acrolein and Acrylonitrile by EPA Method 8260.

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

Reported results are not rounded until the final step prior to reporting. Therefore, calculated parameters that are typically reported as "Total" may vary slightly from the sum of the reported component parameters.

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

TNI - The NELAC Institute.

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: TCH.009-3

Pace Project No.: 92778388

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92778388001	SW-1	EPA 9056A	914644		
92778388002	SW-2	EPA 9056A	914644		
92778388003	SW-3	EPA 9056A	914644		
92778388004	SW-4	EPA 9056A	914644		
92778388005	SW-5	EPA 9056A	914644		
92778388006	SW-6	EPA 9056A	914644		
92778388007	SW-7	EPA 9056A	914644		
92778388008	SW-DUPE	EPA 9056A	914644		

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DC#_Title: ENV-FRM-HUN1-0083 v05_Sample Condition Upon Receipt

Effective Date: 05/24/2024

Laboratory receiving samples:

Asheville ☒ Eden ☐ Greenwood ☐ Huntersville ☐ Raleigh ☐ Mechanicsville ☐ Atlanta ☐ Kernersville ☐Sample Condition
Upon Receipt

Client Name:

Project #:

WO#: 92778388

Courier:

☐ Commercial☒ Fed Ex☐ UPS☐ USPS☐ Client☐ Pace☐ Other:

92778388

Custody Seal Present? ☒ Yes ☐ No Seals Intact? ☒ Yes ☐ No ☐ N/A

Date/Initials Person Examining Contents: 2/7/25 AW

Packing Material: ☒ Bubble Wrap ☐ Bubble Bags ☐ None ☐ Other

Biological Tissue Frozen?

☐ Yes ☐ No ☒ N/A

Thermometer:

☐ IR Gun ID:

937690

Type of Ice:

☒ Wet☐ Blue☐ None

Cooler Temp:

0.9

Correction Factor:

Add/Subtract (°C) +0.2

Temp should be above freezing to 6°C

☐ Samples out of temp criteria. Samples on ice, cooling process has begun

Cooler Temp Corrected (°C):

1.1

USDA Regulated Soil (☒ N/A, water sample)Did samples originate in a quarantine zone within the United States: CA, NY, or SC (check maps)? ☐ Yes ☐ NoDid samples originate from a foreign source (internationally, including Hawaii and Puerto Rico)? ☐ Yes ☐ No

			Comments/Discrepancy:
Chain of Custody Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.	
Samples Arrived within Hold Time?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.	
Short Hold Time Analysis (<72 hr.)?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	3.	
Rush Turn Around Time Requested?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	4.	
Sufficient Volume?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.	
Correct Containers Used?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	6.	
-Pace Containers Used?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		
Containers Intact?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	7.	
Dissolved analysis: Samples Field Filtered?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	8.	
Sample Labels Match COC?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.	
-Includes Date/Time/ID/Analysis Matrix: SW			
Headspace in VOA Vials (>5-6mm)?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	10.	
Trip Blank Present?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.	
Trip Blank Custody Seals Present?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A		

COMMENTS/SAMPLE DISCREPANCY

Field Data Required? ☐ Yes ☐ NoPace(R) Analytical Services
9800 Kinney Ave. Suite 100
Huntersville, NC 28078
EZ 3219669 704-875-9092

CLIENT

Hart & Hickman Raleigh

TCH.009-3

Sample ID:

Collection Date:

Time:

By:

Person

4oz wide jar unpreserved

Prc

6010 Strontium

Date:

Date:

Project Manager SRF Review:



DC#_Title: ENV-FRM-HUN1-0083 v05_Sample Condition Upon Receipt

Effective Date: 05/24/2024

*Check mark top half of box if pH and/or dechlorination is verified and within the acceptance range for preservation samples.

Exceptions: VOA, Coliform, TOC, Oil and Grease, DRO/8015 (water) DOC, LLHg

**Bottom half of box is to list number of bottles

***Check all unpreserved Nitrates for chlorine

Project #

W0#: 92778388

PM: TMC

Due Date: 02/14/25

CLIENT: 92-Hart_Ral

Laboratory Receiving Location: Asheville ☒ Eden ☐ Greenwood ☐ Huntersville ☐ Raleigh ☐ Mechanicsville ☐ Atlanta ☐ Kernersville ☐Client Hart & Hickman Profile EZ (Circle one) 3219192 Notes

Item#	BP4U-125 mL Plastic Unpreserved (N/A) (Cl-)	BP3U-250 mL Plastic Unpreserved (N/A)	BP2U-500 mL Plastic Unpreserved (N/A)	BP1U-1 liter Plastic Unpreserved (N/A)	BP4S-125 mL Plastic H2SO4 (pH < 2) (Cl-)	BP3N-250 mL plastic HNO3 (pH < 2)	BP4Z-125 mL Plastic 2N Acetate & NaOH (>9)	BP4B-125 mL Plastic NaOH (pH > 12) (Cl-)	WGFW-Wide-mouthed Glass Jar Unpreserved	AG1U-1 liter Amber Unpreserved (N/A) (Cl-)	AG1H-1 liter Amber HCl (pH < 2)	AG3U-250 mL Amber Unpreserved (N/A) (Cl-)	AG1S-1 liter Amber H2SO4 (pH < 2)	AG3S-250 mL Amber H2SO4 (pH < 2)	DG9U-40 mL Amber NH4Cl (N/A)(Cl-)	DG9H-40 mL VOA HCl (N/A)	VG9T-40 mL VOA Na2S2O3 (N/A)	VG9U-40 mL VOA Unpreserved (N/A)	DG9V-40 mL VOA H3PO4 (N/A)	KP7U-50 mL Plastic Unpreserved (N/A)	V/GK (3 vials per kit)-VPH/Gas kit (N/A)	SP5T-125 mL Sterile Plastic (N/A – lab)	SP2T-250 mL Sterile Plastic (N/A – lab)	BP3R-250 mL Plastic (NH2)2SO4 (9.3-9.7)	AG0U-100 mL Amber Unpreserved (N/A) (Cl-)	VSGU-20 mL Scintillation vials (N/A)	DG9U-40 mL Amber Unpreserved vials (N/A)
CC		AS																									
1																											
2																											
3																											
4																											
5																											
6																											
7																											
8																											
9																											
10																											
11																											
12																											

pH Adjustment Log for Preserved Samples

Sample ID	Type of Preservative	pH upon receipt	Date preservation adjusted	Time preservation adjusted	Amount of Preservative added	Lot #

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DENR Certification Office (i.e. Out of hold, incorrect preservative, out of temp, incorrect containers.

Pace® Location Requested (City/State):
Pace Analytical Charlotte
9800 Kincey Ave. Suite 100, Huntersville, NC 28078

CHAIN-OF-CUSTODY Analytical Request Document
Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevant fields

LAB USE ONLY - Affix Workorder/Login Label Here

Company Name: Hart & Hickman, Raleigh
Street Address: 3921 Sunset Ridge Rd.
Suite 301
Raleigh, NC 27607

Customer Project #: TCH-009

Project Name: TCH-009-3

Site Collection Info/Facility ID (as applicable):

Contact/Report To: Justin Ballard
Phone #: (919) 723-2507
E-Mail: jballard@hartickman.com
Cc E-Mail:

Invoice To: Accounts Payable
Invoice E-Mail: accounts payable@hartickman.com
Purchase Order # (if applicable): TCH-009-3
Quote #:

Scan QR Code for instructions

Time Zone Collected: [] AK [] PT [] MT [] CT [] ET

Data Deliverables: Regulatory Program (DW, RCRA, etc.) as applicable: Reportable [] Yes [] No

[] Level II [] Level III [] Level IV

[] EQUIS

Exc1 EDD

Rush (Pre-approval required):
[] Same Day [] 1 Day [] 2 Day [] 3 Day [] Other
Date Results: Started TAT
Field Filtered (if applicable): [] Yes [] No
Analysis:

[] Other
Matrix Codes (insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Waste Water (WW), Product (P), Soil/Solid (SS), Oil (OL), Wipe (WP), Tissue (TS), Bioassay (B), Vapor (V), Surface Water (SW), Sediment (SED), Sludge (SL), Leachate (LL), Biosolid (BS), Other (OT)

Customer Sample ID

2540C Total Dissolved Solids
7199 Chromium, Hexavalent
9056 IC Anions
Metals 6010/6020/7470
Metals 6010/6020/7470+Hardness

Lab Use Only
Proj. Mgr.: Taylor Cannon
Accession / Client ID:
Table #:
Profile / Template: 9481
Prelog / Bottle Ord. ID: EZ 3219192
Sample Comment
Preservation non-conformance identified for sample.

Matrix *	Comp / Grab	Composite Start	Collected or Composite End	# Cont.	Res. Chlorine
SW-1	SW	C	2/6/25	1310	1
SW-2				1300	1
SW-3				1250	1
SW-4				1235	1
SW-5				1220	1
SW-6				1205	1
SW-7				1150	1
SW-DUP					

Additional Instructions from Pace®:

6020: Ba, B, Mn, Sr, Sn
6020: Sb, As, Be, Cd, Cr, Co, Cu, Li, Mo, Ni, Se, Ti, V
9056: Chloride, Fluoride, Nitrate, Sulfate

Collected By: Cusca Parra
Signature: CP

Customer Remarks / Special Conditions / Possible Hazards:

Coolers: 1
Thermometer ID: 937090
Correction Factor (°C): +0.2
Date/Time: 2/6/25 11:14

Obs. Temp (°C): 0.9
Corrected Temp (°C): 1.1
On Ice: Y

Relinquished by/Company: (Signature) Hart & Hickman
Date/Time: 2/6/25 1500

Received by/Company: (Signature) Justin Ballard
Date/Time: 2/6/25 11:14

Relinquished by/Company: (Signature)

Received by/Company: (Signature)

Relinquished by/Company: (Signature)

Received by/Company: (Signature)

Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace® Terms and Conditions found at <https://www.pacelabs.com/resource-library/resource/pace-terms-and-conditions/>

Appendix C

Low-Flow Groundwater and Surface Water Sampling Records

LOW-FLOW GROUNDWATER SAMPLING RECORD

Generalized Stabilization Criteria ⁽¹⁾

pH: +/- 0.1 SU
Specific Conductivity: +/- 5%
Turbidity: <10 NTUs or stabilized
Water Level: slight and stable drawdown (<0.33 ft)
Dissolved Oxygen: +/- 0.2 mg/L

Page: 1 of 1

Job No: TCH.009

Well ID: MW-1

Date: 2-5-25

Site Name: Town of Chapel Hill

Site Location: Chapel Hill, NC

Sampling Personnel: BNO

Weather: 48° Cloudy

Casing Material: PVC

Well Diameter: 2"

Screen Interval (ft TOC): 25 - 40

Top of Casing Elevation (ft msl): -

Total Well Depth (ft TOC): 40

Depth to Water (ft TOC): 36.87

Pump/Tubing set at (ft): 39ft

Type of Pump: Geotech Bubbler

☒ Tubing Material: LDPE

NOTES:

GROUNDWATER FIELD PARAMETERS

Time	Water Level	Volume Purged	Purging Rate	DO (mg/L)	Temp. (°C)	S. Cond. (µS/cm)	pH (SU)	ORP (mV)	Turbidity (NTU)
11:40	36.83	—	200	2.79	12.8	1.00	7.53	-20.8	64.6
11:45	37.12	800	800	3.40	13.4	1.02	7.50	-28.7	52.9
11:50	37.33	2000	200	0.98	14.4	1.01	7.46	-26.2	38.7
11:55	37.62	3000	200	0.68	14.7	1.01	7.45	-22.4	28.7
12:00	37.57	4000	100	0.71	13.0	1.02	7.48	-19.7	15.0
12:05	37.54	4000	100	0.78	12.0	1.01	7.47	-15.6	14.2
12:10	37.46	4500	100	0.87	11.5	1.01	7.48	-12.9	13.9
12:15	37.46	5000	100	0.91	11.4	1.00	7.48	-12.3	12.6
12:20	37.46	5500	100	0.88	11.5	1.00	7.50	-12.7	11.7
12:25	37.46	6000	100	0.80	11.9	1.00	7.48	-12.6	9.88

Other Field Parameters:

Parameters taken with: 5i ProPlus Hach 2100G (Pine)

Sample Condition (Clear, Cloudy, Other): Clear

Field Filtration: Yes ☐ No ☒ If yes, which sample parameters were field filtered:

Sampled at: 12:25

Sample Delivered to: Pass by FedEx Counter

Analytical Parameters and Containers (Types, Number of Containers, Preservatives): 1 x 50mL vial w/ Cr6 Buffer (7199), 1 x 250mL plastic bottle w/ HNO₃ (metals 6010/6029 7470), 1 x 250mL plastic bottle unpreserved (9056), 1 x 500mL plastic bottle unpreserved (TDS 2540c)



SMARTER ENVIRONMENTAL SOLUTIONS

**LOW-FLOW GROUNDWATER
SAMPLING RECORD****Generalized Stabilization Criteria ⁽¹⁾**

pH: +/- 0.1 SU
 Specific Conductivity: +/- 5%
 Turbidity: <10 NTUs or stabilized
 Water Level: slight and stable
 drawdown (<0.33 ft)
 Dissolved Oxygen: +/- 0.2 mg/L

Page: 1 of 1Job No: 1CH.009Well ID: MJ-1A ☒Date: 02/05/25Site Name: Town of Chapel HillSite Location: Chapel Hill, NCSampling Personnel: BNOWeather: 46° cloudyCasing Material: PVCWell Diameter: 2"Screen Interval (ft TOC): 25 - 40Top of Casing Elevation (ft msl): —Total Well Depth (ft TOC): 40Depth to Water (ft TOC): 31.14Pump/Tubing set at (ft): 35.5Type of Pump: Bladder Geotech☒ Tubing Material: LDPE

NOTES:

GROUNDWATER FIELD PARAMETERS

Time	Water Level	Volume Purged	Purging Rate	DO (mg/L)	Temp. (°C)	S. Cond. ^(mS/cm) µS/cm	pH (SU)	ORP (mV)	Turbidity (NTU)
1015	31.15	—	200	0.91	15.4	1.12	7.52	-83.6	23.1
1020	31.40	1000	200	1.09	15.1	1.12	7.52	-92.1	37.1
1025	31.55	2000	200	0.90	15.2	1.13	7.53	-95.2	52.6
1030	31.60	3000	200	0.67	15.0	1.15	7.54	-100.7	187
1035	31.70	4000	200	0.50	15.2	1.14	7.53	-108.9	62.4
1040	31.76	5000	200	0.45	15.2	1.13	7.53	-113.0	31.4
1045	31.85	6000	200	0.41	15.4	1.12	7.53	-116.6	22.6
1050	31.93	7000	200	0.36	15.5	1.11	7.52	-120.4	13.4
1055	32.00	8000	200	0.35	15.6	1.11	7.52	-122.4	11.3
1100	32.10	9000	200	0.33	15.6	1.11	7.52	-124.7	9.73

Other Field Parameters:

Parameters taken with: YSI Pro310S Hach 2006 (Pine)Sample Condition (Clear, Cloudy, Other): ClearField Filtration: Yes ☐ No ☒ If yes, which sample parameters were field filtered:Sampled at: 1100Sample Delivered to: Pace by FedEx/courier

Analytical Parameters and Containers (Types, Number of Containers, Preservatives): 1 x 50mL vial w/ Cr6 Buffer (7199),
1 x 250mL plastic bottle w/ HNO₃ (metals 6010/6020/7470), 1 x 250mL plastic bottle
unpreserved (9056), 1 x 500mL plastic bottle unpreserved (TDS 2540c)



SMARTER ENVIRONMENTAL SOLUTIONS

**LOW-FLOW GROUNDWATER
SAMPLING RECORD****Generalized Stabilization Criteria ⁽¹⁾**

pH: +/- 0.1 SU
Specific Conductivity: +/- 5%
Turbidity: <10 NTUs or stabilized
Water Level: slight and stable
drawdown (<0.33 ft)
Dissolved Oxygen: +/- 0.2 mg/L

Page: 1 of 1Job No: TCH.009Well ID: MW-4A ☒Date: 2/5/25Site Name: Town of Chapel Hill, Police StationSite Location: Chapel Hill, NCSampling Personnel CAP, BNDWeather: Cloudy 50s FCasing Material: PVCWell Diameter: 2 inScreen Interval (ft TOC): 4 - 19Top of Casing Elevation (ft msl): —Total Well Depth (ft TOC): 19Depth to Water (ft TOC): 4.52Pump/Tubing set at (ft): ~ 11Type of Pump: Peristaltic ☒Tubing Material: LDPE

NOTES:

GROUNDWATER FIELD PARAMETERS

Time	Water Level	(L) Volume Purged	(ml/min) Purging Rate	DO (mg/L)	Temp. (°C)	S. Cond. (µS/cm)	pH (SU)	ORP (mV)	Turbidity (NTU)
1405	4.52	—	160	—	—	—	—	—	—
1410	4.23	—	—	4.88	13.20	150	6.07	80.6	143
1415	4.25	—	—	4.67	13.12	142	5.89	88.6	127
1420	4.24	—	—	4.57	12.96	132	5.83	97.6	107
1425	4.26	—	—	4.46	12.90	130	5.79	103.6	85.1
1430	4.27	—	—	4.46	12.83	128	5.77	104.2	82.0
1435	4.25	—	—	4.49	12.60	124	5.75	103.9	75.0
1440	4.26	—	—	4.44	12.42	122	5.72	103.7	57.8
1445	4.24	—	—	3.38	12.91	121	5.72	103.0	54.1
1450	4.25	—	—	4.40	12.31	121	5.72	102.0	52.3
1455	4.25	—	—	4.34	12.31	120	5.72	101.4	51.0
1500	4.24	—	—	4.33	12.27	120	5.72	100.5	47.5
1505	4.27	—	—	4.27	12.17	120	5.72	99.8	45.2
1510	4.25	—	—	4.30	12.16	120	5.72	99.1	46.9

Other Field Parameters:

Parameters taken with: YSI 650, Hach tub (Pine) Sample Condition (Clear, Cloudy, Other):Field Filtration: Yes ☐ No ☒ If yes, which sample parameters were field filtered:Sampled at: 1340 1540Sample Delivered to: Pace by FedEx/courier

Analytical Parameters and Containers (Types, Number of Containers, Preservatives): 1x 50mL vial w/ Cr6 Buffer (7199)
1x 250mL Plastic Bottle w/ HNO₃ (metals 6010/6020/7470), 1x 250mL plastic Bottle
unpreserved (9056), 1x 500mL plastic Bottle unpreserved (TDS 2540c)

**LOW-FLOW GROUNDWATER
SAMPLING RECORD**

Generalized Stabilization Criteria ⁽¹⁾

pH: +/- 0.1 SU
Specific Conductivity: +/- 5%
Turbidity: <10 NTUs or stabilized
Water Level: slight and stable
drawdown (<0.33 ft)
Dissolved Oxygen: +/- 0.2 mg/L

Page: 1 of 2

Job No: TCH. 009

Well ID: MW-5 ☒

Date: 2/4/25

Site Name: Town of Chapel Hill - Police Station

Site Location: Chapel Hill, NC

Sampling Personnel: CAP, ABW

Weather: Sunny 60s F

Casing Material: PVC

Well Diameter: 2 in

Screen Interval (ft TOC): 17.5 - 27.5

Top of Casing Elevation (ft msl): —

Total Well Depth (ft TOC): 27.5

Depth to Water (ft TOC): CAP 8.30 8.11

Pump/Tubing set at (ft): ~22

Type of Pump: Peristaltic



Tubing Material: LDPE

NOTES: Switched YSI's due to possible DO sensor issues at 1315

GROUNDWATER FIELD PARAMETERS

Time	Water Level	Volume Purged (mL)	Purging Rate (mL/min)	DO (mg/L)	Temp. (°C)	S. Cond. (µS/cm)	pH (SU)	ORP (mV)	Turbidity (NTU)
1255	8.30	0.25L	160	—	19.2	578	6.87	-41.5	+++
1300	8.39	800 mL	160	—	19.4	572	6.87	-41.6	777
1305	8.41	800	160	—	19.4	570	6.89	-42.0	712
1310	8.43	800	160	—	19.2	576	6.88	-42.5	601
1315									
1320	8.46	800	160	0.28	17.3	555.6	6.69	7.2	417
1325	8.51	800	160	0.24	17.3	552.8	6.68	6.3	371
1330	8.52	800	160	0.22	17.2	554.8	6.67	6.6	313
1335	8.51	800	160	0.23	17.5	551.8	6.64	8.7	285
1340	8.53	800	160	0.20	17.5	552.0	6.65	7.7	219
1345	8.54	800	160	0.22	17.6	552.5	6.64	8.4	239
1350	8.56	800	160	0.24	17.7	551.4	6.63	7.8	166
1355	8.57	800	160	0.24	17.4	552.3	6.63	7.8	193
1400	8.57	800	160	0.24	17.6	551.7	6.63	7.9	156

Other Field Parameters: ABW

Parameters taken with: YSI Pro Plus / Hach 2100Q

Sample Condition (Clear, Cloudy, Other): see page 2

Field Filtration: Yes ☐ No ☒ If yes, which sample parameters were field filtered: —

Sampled at: 1455

Sample Delivered to: —

Analytical Parameters and Containers (Types, Number of Containers, Preservatives): —



Generalized Stabilization Criteria ⁽¹⁾

pH: +/- 0.1 SU

Specific Conductivity: +/- 5%

Turbidity: <10 NTUs or stabilized

Water Level: slight and stable drawdown (<0.33 ft)

Dissolved Oxygen: +/- 0.2 mg/L

Job No: TCH.009

Well ID: MW-6

Date: 2/5/25

Site Name: **Town of Chapel Hill - Police Station**

Site Location: Chapel Hill, NC

Sampling Personnel CAP , BNO

Weather: Cloudy 40s F

Casing Material: **PVC**

Well Diameter: 2 in

Screen Interval (ft TOC): 7.5 - 17.5

Top of Casing Elevation (ft msl): —

Total Well Depth (ft TOC): 17.5

Depth to Water (ft TOC): 7.14

Pump/Tubing set at (ft): ~ 12

Type of Pump: **peristaltic** ☒ Tubing Material: **LDPE**

NOTES:

GROUNDWATER FIELD PARAMETERS

[illegible]

Other Field Parameters: _____

Parameters taken with: YSI and Hach 2100Q Sample Condition (Clear, Cloudy, Other):

Field Filtration: Yes ☐ No ☒ If yes, which sample parameters were field filtered:

Sampled at: **1155** Sample Delivered to: **Pace by FedEx/Counter**

Analytical Parameters and Containers (Types, Number of Containers, Preservatives): 1 x 50 mL vial w/ Cr6 Buffer (7199), 1 x 250 mL Plastic Bottle w/ HNO₃ (Metals 6010/6020/7470), 1 x 250 mL plastic Bottle unpreserved (9056), 1 x 500 mL Plastic Bottle unpreserved (TDS 2540c)



VOLUMETRIC GROUNDWATER SAMPLING RECORD

Generalized Stabilization Criteria (1)

Purge a minimum of three well volumes

pH: +/- 0.1 SU

Specific Conductivity: +/- 5%

Turbidity: Check with Project Manager

Job No: TCH.004

Well ID: MW-7

Date: 2-5-25

Site Name: Town of Chapel Hill

Site Location: Chapel Hill

Sampling Personnel: BNO

Weather: cloudy, 50°F

Casing Material: PVC

Well Diameter: 2"

Screen Interval (ft bgs): 59.5 - 69.5

Top of Casing Elevation (ft msl): —

Total Well Depth (ft bgs): 69.5

Depth to Water (ft bgs): 46.62

Gallons per Well Volume: 65 ft

Sampling Equipment: Geotech Budder

Equipment Material: LDPE

NOTES:

GROUNDWATER FIELD PARAMETERS

DTW	Time	Volume Purged	Purging Rate	Temp. (°C)	S. Cond. (µS/cm) ^(mS/cm)	pH (SU)	ORP (mV)	Turbidity (NTU)	DO (mg/L)
46.95	1550	—	100	12.1	0.161	7.12	72.3	269	6.82
47.0	1555	500	100	13.5	0.175	6.92	139.4	765	2.88
46.95	1600	1000	100	12.4	0.175	6.94	126.9	616	1.78
46.90	1605	1500	100	12.6	0.173	6.94	141.0	567	1.73
47.0	1610	2000	100	12.8	0.172	6.94	143.6	511	1.72
47.0	1615	2500	100	12.9	0.169	6.94	145.0	431	1.69
47.0	1620	3000	100	13.4	0.167	6.93	147.0	356	1.58
47.0	1625	3500	100	13.4	0.166	6.93	149.5	295	1.48
47.0	1630	4000	100	13.6	0.165	6.93	152.3	242	1.41
47.0	1635	4500	100	13.6	0.165	6.93	152.8	460	1.43
47.0	1640	5000	100	13.7	0.170	6.93	158.3	909	1.34
	1645	5500	100	13.6	0.169	6.93	159.7	872	1.35
	1650	6000	100	13.6	0.166	6.93	159.7	738	1.36

Other Field Parameters:

Parameters taken with: FS1 Pro Plus Hach 2100A C Pine

Sample Condition (Clear, Cloudy, Other):

Field Filtration: Yes ☒ No ☐ If yes, which sample parameters were field filtered: field filtered and unfiltered samples collected

Sampled at: 1655 Sample Delivered to: SSS Pace by FedEx/courier for all parameters

Analytical Parameters and Containers (Types, Number of Containers, Preservatives): 1 x 50mL vial w/ Cr6 Buffer (7199), 1 x 250mL Plastic Bottle w/ HNO3 (Metals 6010/6020/2470), 1 x 250mL Plastic Bottle unpreserved (9056), 1 x 500mL plastic bottle unpreserved (TDS 2540C)



Generalized Stabilization Criteria ⁽¹⁾

pH: +/- 0.1 SU
Specific Conductivity: +/- 5%
Turbidity: <10 NTUs or stabilized
Water Level: slight and stable
drawdown (<0.33 ft)
Dissolved Oxygen: +/- 0.2 mg/L



SMARTER ENVIRONMENTAL SOLUTIONS

**LOW-FLOW GROUNDWATER
SAMPLING RECORD****Generalized Stabilization Criteria ⁽¹⁾**

pH: +/- 0.1 SU

Specific Conductivity: +/- 5%

Turbidity: <10 NTUs or stabilized

Water Level: slight and stable
drawdown (<0.33 ft)

Dissolved Oxygen: +/- 0.2 mg/L

Job No: TCH009Well ID: NW-8 ☒Date: 2-5-25Site Name: Town of Chapel HillSite Location: Chapel Hill, NCSampling Personnel: BNOWeather: cloudy, 50s°FCasing Material: PVCWell Diameter: 2Screen Interval (ft bgs): 30 - 45Top of Casing Elevation (ft msl): Total Well Depth (ft bgs): 45Depth to Water (ft bgs): 39.81Pump/Tubing set at (ft): 44 ftType of Pump: Bladder boosterTubing Material: LDPENOTES: **GROUNDWATER FIELD PARAMETERS**

Time	Water Level	Volume Purged	Purging Rate	Temp. (°C)	S. Cond. µmS/cm mS/cm	pH (SU)	ORP (mV)	Turbidity (NTU)	DO (mg/L)
1325	39.91	—	200	12.8	0.652	7.37	-37.3	502	5.12
1330	39.83	1000	200	14.0	0.650	7.36	-27.5	484	4.75
1335	39.81	2000	100	14.2	0.650	7.30	-26.7	711	3.12
1340	39.83	2500	25	12.9	0.647	7.30	-24.7	597	2.68
1345	39.83	2800	100 1000	14.4	0.640	7.27	-27.0	357	1.92
1350	39.84	3300	100	15.7	0.650	7.25	-30.7	202	1.42
1355	39.84	3800	100	16.1	0.650	7.24	-32.6	124	1.17
1400	39.84	4300	100	15.9	0.650	7.24	-34.2	102	1.01
1405	39.84	4800	100	16.0	0.650	7.24	-35.4	80.4	0.90
1410	39.84	5300	100	16.3	0.650	7.24	-36.4	58.2	0.82
1415	39.84	5800	100	16.2	0.650	7.23	-37.1	44.6	0.76
1422	39.84	6300	100	16.4	0.650	7.23	-38.1	34.3	0.69
1425	39.84	6800	100	16.4	0.650	7.23	-38.6	33.3	0.67

Other Field Parameters: see second page for sample detailsParameters taken with: YSI 600plus, Hach 200Q (Pine)Sample Condition (Clear, Cloudy, Other): ClearField Filtration: Yes ☐ No ☒ ~~AND~~ Yes, which sample parameters were field filtered: Sampled at: Sample Delivered to: ☒Analytical Parameters and Containers (Types, Number of Containers, Preservatives):



SMARTER ENVIRONMENTAL SOLUTIONS

**LOW-FLOW GROUNDWATER
SAMPLING RECORD****Generalized Stabilization Criteria ⁽¹⁾**

pH: +/- 0.1 SU

Specific Conductivity: +/- 5%

Turbidity: <10 NTUs or stabilized

Water Level: slight and stable
drawdown (<0.33 ft)

Dissolved Oxygen: +/- 0.2 mg/L

Page: 1 of 1Job No: TCH.009Well ID: MW-9 ☒Date: 2-4-25Site Name: Chapel Hill Police StationSite Location: Chapel Hill, NCSampling Personnel: A. WightWeather: sunny, 70°FCasing Material: PVCWell Diameter: 2"Screen Interval (ft TOC): 30 - 45Top of Casing Elevation (ft msl): -Total Well Depth (ft TOC): 45Depth to Water (ft TOC): 27.21Pump/Tubing set at (ft): 40Type of Pump: Bladder☒ Tubing Material: LDPE

NOTES:

GROUNDWATER FIELD PARAMETERS

Time	Water Level	mL Volume Purged	mL/min Purging Rate	DO (mg/L)	Temp. (°C)	S. Cond. (µS/cm)	pH (SU)	ORP (mV)	Turbidity (NTU)
1450	28.28	-	100	1.38	18.2	810	4.37	55.0	67.2
1455	28.72	500	100	0.68	18.3	831	4.47	47.9	65.7
1500	29.15	500	100	0.46	18.1	867	4.49	45.2	55.6
1505	29.25	500	100	0.35	18.4	889	4.49	44.4	46.7
1510	29.43	500	100	1.02	18.1	901	6.40	-57.6	52.3
1515	29.56	500	100	1.23	18.1	900	6.42	-57.1	37.6
1520	29.82	500	100	0.44	18.1	902	6.42	-61.5	35.3
1525	29.94	500	100	0.36	18.1	904	6.37	-59.9	37.7
1530	30.02	500	100	0.23	18.0	908	6.26	-53.0	31.5
1535	30.12	500	100	0.20	18.0	904	6.25	-52.1	33.0
1540	30.17	500	100	0.19	18.0	907	6.20	-50.3	34.4
1545	30.42	500	100	0.17	18.0	901	6.13	-47.5	33.2
1550	30.53	500	100	0.19	17.9	899	6.13	-47.2	34.9
1555	30.61	500	100	0.17	17.8	899	6.10	-45.0	29.2

Other Field Parameters:

Parameters taken with: YSI Pro Plus, Hach Turb(Pine) Sample Condition (Clear, Cloudy, Other):Field Filtration: Yes ☐ No ☒ If yes, which sample parameters were field filtered:Sampled at: 1555 Sample Delivered to: Pass by FedEx/courierAnalytical Parameters and Containers (Types, Number of Containers, Preservatives): 1 x 50mL vial w/ Erb Buffer (7199), 1 x 250mL Plastic Bottle w/ HNO₃ (Metals 6010/6020/7470), 1 x 250mL Plastic Bottle unpreserved (9056), 1 x 500mL plastic bottle unpreserved (TDS 2540c)

SURFACE WATER SAMPLING RECORD



Clear all Field Parameters

Job No: TCH.009

Sample ID: SW-1 ☒

Date: 2/6/25

Site Name: Town of Chapel Hill - Police Station

Site Location: Chapel Hill, NC

Sampling Personnel: CAP, ADW

Weather: Cloudy 50s F

Surface Water Equipment/Material: Hach ☒ YSI ☒

Surface Water Feature: Stream ☒ Width: 11 ft Depth: 0.5 ft

SURFACE WATER FIELD PARAMETERS

Time	Temp. (°C)	S. Cond. (µS/cm)	pH (SU)	ORP (mV)	Turbidity (NTU)	DO (mg/L)
<u>1310</u>	<u>9.24</u>	<u>144</u>	<u>6.79</u>	<u>35.8</u>	<u>3.11</u>	<u>7.50</u>

Comments: _____

Other Field Parameters: _____

Parameters taken with: YSI SS6 MPS, Hach Z100Q

Sample Condition (Clear, Cloudy, Other): Clear

Sampled at: 1310

Sample Delivered To: Pace by FedEx/courier ☒

Analytical Parameters and Containers (Types, Number of Containers, Preservatives: 1x50mL vial w/ Crb Buffer (7199),
1x250 mL Plastic Bottle w/ HNO₃ (metals 6010/6020/7470), 1x250mL Plastic
bottle unpreserved (9056), 1x500mL Plastic Bottle unpreserved (TPS 2540C)
→ and hardness

SURFACE WATER SAMPLING RECORD



Job No: TCH.009Sample ID: SW-2 ☒Date: 216125Site Name: Town of Chapel Hill, Police StationSite Location: Chapel Hill, NCSampling Personnel: CAP, ADWWeather: cloudy 50°FSurface Water Equipment/Material: YSI ☒ Hach ☒Surface Water Feature: Stream ☒ Width: 10 ft Depth: 1 ft

SURFACE WATER FIELD PARAMETERS

Time	Temp. (°C)	S. Cond. (µS/cm)	pH (SU)	ORP (mV)	Turbidity (NTU)	DO (mg/L)
1300	9.02	145	8.68	+45 50.2	3.03	7.38

Comments: _____

Other Field Parameters: _____

Parameters taken with: YSI 556 MPS, Hach 2100Q Sample Condition (Clear, Cloudy, Other): ClearSampled at: 1300 Sample Delivered To: Pace by FedEx/courier ☒

Analytical Parameters and Containers (Types, Number of Containers, Preservatives: 1x50mL vial w/ Cr6 Buffer (7199), 1x250mL plastic bottle w/ HNO₃ (Metals 6010/6020/7470) and hardness), 1x250mL plastic bottle unpreserved (9056), 1x500mL plastic bottle unpreserved (TDS 2540c)

SURFACE WATER SAMPLING RECORD

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Clear all Field Parameters

Job No: TCH-009

Sample ID: SW-3

Date: 2/6/25

Site Name: Town of Chapel Hill - Police Station

Site Location: Chapel Hill, NC

Sampling Personnel: CAP, ADW

Weather: Cloudy 40s F

Surface Water Equipment/Material: Hach ☒ YSI ☒

Surface Water Feature: Stream ☒ Width: 12 ft Depth: 1.5 ft

SURFACE WATER FIELD PARAMETERS

Time	Temp. (°C)	S. Cond. (µS/cm)	pH (SU)	ORP (mV)	Turbidity (NTU)	DO (mg/L)
<u>1250</u>	<u>9.10</u>	<u>150</u>	<u>8.37</u>	<u>91.0</u>	<u>2.94</u>	<u>7.71</u>

Comments: _____

Other Field Parameters: _____

Parameters taken with: Hach 2100 Q, YSI 556 MPS Sample Condition (Clear, Cloudy, Other): Clear

Sampled at: 1250 Sample Delivered To: Pass by FedEx/courier ☒

Analytical Parameters and Containers (Types, Number of Containers, Preservatives: 1x50mL vial w/ Crb Buffer (7199),
1x250mL plastic Bottle w/ HNO₃ (metals 6010/6020/7470) and hardness, 1x250mL
Plastic bottle unpreserved (9056), 1x500mL plastic bottle unpreserved (TDS 2540c)

SURFACE WATER SAMPLING RECORD



Clear all Field Parameters

Job No: TCH.009

Sample ID: SW-4 ☒

Date: 2/6/25

Site Name: Town of Chapel Hill - Police Station

Site Location: Chapel Hill, NC

Sampling Personnel: CAP, ADW

Weather: Cloudy 40's

Surface Water Equipment/Material: Hann ☒ YSI ☒

Surface Water Feature: Stream ☒ Width: ~12 ft Depth: 1 ft

SURFACE WATER FIELD PARAMETERS

Time	Temp. (°C)	S. Cond. (µS/cm)	pH (SU)	ORP (mV)	Turbidity (NTU)	DO (mg/L)
<u>1235</u>	<u>9.17</u>	<u>153</u>	<u>8.29</u>	<u>153</u> <u>101.2</u>	<u>2.64</u>	<u>7.34</u>

Comments: _____

Other Field Parameters: _____

Parameters taken with: Hann 21000, YSI 556 MP Sample Condition (Clear, Cloudy, Other): Clear

Sampled at: 1235 Sample Delivered To: Pass by FedEx/courier ☒

Analytical Parameters and Containers (Types, Number of Containers, Preservatives: 1x50mL vial w/ Crb Buffer (7199)
1x250mL plastic bottle w/ HNO₃ (Metals 6010/6020/7470 and hardness),
1x250mL plastic bottle unpreserved (9056), 1x500mL plastic bottle unpreserved
(TDS 2510C)

SURFACE WATER SAMPLING RECORD



Clear all Field Parameters

Job No: TCH.009

Sample ID: SW-5

Date: 2/6/25

Site Name: Town of Chapel Hill - Police Department ^{Station} CP Site Location: Chapel Hill, NC

Sampling Personnel: CAP, ADW Weather: cloudy 40s F

Surface Water Equipment/Material: Hach 200Q ☒ YSI ☒

Surface Water Feature: Stream ☒ Width: 12 ft Depth: 0.5 ft

SURFACE WATER FIELD PARAMETERS

Time	Temp. (°C)	S. Cond. (µS/cm)	pH (SU)	ORP (mV)	Turbidity (NTU)	DO (mg/L)
<u>1220</u>	<u>8.80</u>	<u>153</u>	<u>8.27</u>	<u>130.6</u>	<u>2.62</u>	<u>7.45</u>

Comments: _____

Other Field Parameters: _____

Parameters taken with: Hach 200Q, YSI 556 MPS Sample Condition (Clear, Cloudy, Other): Clear

Sampled at: 1220 Sample Delivered To: Pass by FedEx/courier ☒

Analytical Parameters and Containers (Types, Number of Containers, Preservatives: 1x50mL vial w/ Crb Buffer (7199)
1x250mL Plastic bottle w/ HNO₃ (Metals 6010/6020/7470 and hardness), 1x250mL
plastic bottle unpreserved (9056), 1x500mL plastic bottle unpreserved (TDS 2540C)

SURFACE WATER SAMPLING RECORD



Clear all Field Parameters

Job No: TCH.009

Sample ID: SW-6

Date: 2/6/25

Site Name: Town of Chapel Hill - Police Station

Site Location: Chapel Hill, NC

Sampling Personnel: CAV, ADW

Weather: Cloudy 40s F

Surface Water Equipment/Material: Hach ☒ YSI ☒

Surface Water Feature: ☒ Width: 20 ft Depth: 2.5 ft

SURFACE WATER FIELD PARAMETERS

<u>Time</u>	<u>Temp. (°C)</u>	<u>S. Cond. (µS/cm)</u>	<u>pH (SU)</u>	<u>ORP (mV)</u>	<u>Turbidity (NTU)</u>	<u>DO (mg/L)</u>
<u>1205</u>	<u>8.78</u>	<u>159</u>	<u>8.03</u>	<u>170.8</u>	<u>2.75</u>	<u>6.89</u>

Comments: _____

Other Field Parameters: _____

Parameters taken with: YSI 556 MPS, Hach 2100Q Sample Condition (Clear, Cloudy, Other): Clear

Sampled at: 1205 Sample Delivered To: Pace by Fed Ex/Courier ☒

Analytical Parameters and Containers (Types, Number of Containers, Preservatives: 1x50mL vial w/ Cr6 Buffer (749)
1x250 mL plastic bottle w/ HNO₃ (metals 6010/6020/7470 and hardness), 1x250mL
plastic bottle unpreserved (9056), 1x500mL plastic bottle unpreserved (TDS 2540C)

SURFACE WATER SAMPLING RECORD



Clear all Field Parameters

Job No: TCH-009

Sample ID: SW-7

Date: 2/6/25

Site Name: Town of Chapel Hill - Police Station Site Location: Chapel Hill, NC

Sampling Personnel: CAP, ADW Weather: Cloudy, 40s F

Surface Water Equipment/Material: YSI ☒ Turbidity ☒

Surface Water Feature: ☒ Width: 13 ft Depth: 1 ft

SURFACE WATER FIELD PARAMETERS

Time	Temp. (°C)	S. Cond. (µS/cm)	pH (SU)	ORP (mV)	Turbidity (NTU)	DO (mg/L)
<u>1150</u>	<u>9.09</u>	<u>302</u> <u>209</u>	<u>7.68</u>	<u>198.2</u>	<u>2.96</u>	<u>7.55</u>

Comments: DUP-taken here

Other Field Parameters: _____

Parameters taken with: YSI 556 MPS, Hach 2100 Q Sample Condition (Clear, Cloudy, Other): Clear

Sampled at: 1150 Sample Delivered To: Pace - Raleigh / Pace Huntersville ☒

Analytical Parameters and Containers (Types, Number of Containers, Preservatives: 1x500mL vial w/ Cr6 Buffer (7199)
1x250mL plastic bottle w/ HNO3 (metals 6010/6020/7470 and hardness), 1x250mL
plastic bottle unpreserved (9056), 1x500mL plastic bottle unpreserved (TDS 2840c)

Appendix D
DEQ Risk Calculator Forms

North Carolina Department of Environmental Quality Risk Calculator

Version Date:	January 2025
Basis:	November 2024 EPA RSL Table
Site Name:	Chapel Hill Police Property
Site Address:	828 Martin Luther King Jr. Blvd, Chapel Hill, NC
DEQ Section:	Brownfields Redevelopment Section
Site ID:	BPN 23022-19-068
Exposure Unit ID:	Area Outside of Silt Fence ("Worst Case")
Submittal Date:	3/17/2025
Prepared By:	Hart & Hickman, P.C. 3921 Sunset Ridge Rd, Ste 301, Raleigh, NC
Reviewed By:	Scott Drury, PE

Complete Exposure Pathways		Input Form 1A
Version Date: January 2025		
Basis: November 2024 EPA RSL Table		
Site ID: BPN 23022-19-068		
Exposure Unit ID: Area Outside of Silt Fence ("Worst Case")		
<i>Note: Risk output will only be calculated for complete exposure pathways.</i>		
Receptor	Pathway	Check box if pathway complete
DIRECT CONTACT SOIL AND WATER PATHWAYS		
Resident	Soil	<input type="checkbox"/>
	Groundwater Use	<input type="checkbox"/>
Non-Residential Worker	Soil	<input checked="" type="checkbox"/>
	Groundwater Use	<input type="checkbox"/>
Construction Worker	Soil	<input type="checkbox"/>
Recreator/Trespasser	Soil	<input checked="" type="checkbox"/>
	Surface Water	<input type="checkbox"/>
VAPOR INTRUSION PATHWAYS		
Resident	Groundwater to Indoor Air	<input type="checkbox"/>
	Soil Gas to Indoor Air	<input type="checkbox"/>
	Indoor Air	<input type="checkbox"/>
Non-Residential Worker	Groundwater to Indoor Air	<input type="checkbox"/>
	Soil Gas to Indoor Air	<input type="checkbox"/>
	Indoor Air	<input type="checkbox"/>
CONTAMINANT MIGRATION PATHWAYS		
Groundwater	Source Soil	<input type="checkbox"/>
	Source Groundwater	<input type="checkbox"/>
Surface Water	Source Soil	<input type="checkbox"/>
	Source Groundwater	<input type="checkbox"/>

Exposure Point Concentrations

Version Date: January 2025

Basis: November 2024 EPA RSL Table

Site ID: BPN 23022-19-068

Exposure Unit ID: Area Outside of Silt Fence ("Worst Case")

Soil Exposure Point Concentration Table

Description of Exposure Point Concentration Selection:

Maximum concentration of each analyte detected in soil samples HH-16A, HH-19B, and HH-20 through HH-26A/B which were collected outside of the outermost silt fence and which remain in place (i.e., not excavated).

NOTE: If the chemical list is changed from a prior calculator run, remember to select "See All Chemicals" on the data output sheet or newly added chemicals will not be included in risk calculations

Exposure Point Concentration (mg/kg)	Notes:	CAS Number	Chemical	Minimum Concentration (Qualifier)	Maximum Concentration (Qualifier)	Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits	Concentration Used for Screening	Background Value	Screening Toxicity Value (Screening Level) (n/c)	Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag (Y/N)	Rationale for Selection or Deletion
12		7440-38-2	Arsenic, Inorganic			mg/kg	HH-22A									
361		7440-39-3	Barium			mg/kg	HH-22A									
1.57		7440-41-7	Beryllium and compounds			mg/kg	HH-22A									
0.287		7440-43-9	Cadmium (Diet)			mg/kg	HH-24B									
52		16065-83-1	Chromium(III), Insoluble Salts			mg/kg	HH-26B									
0.61		18540-29-9	Chromium(VI)			mg/kg	HH-24B									
28.7		7440-48-4	Cobalt			mg/kg	HH-24B									
92.7		7440-50-8	Copper			mg/kg	HH-24B									
37.3		7439-92-1	~Lead and Compounds			mg/kg	HH-22A									
1150		7439-96-5	Manganese (Non-diet)			mg/kg	HH-24B									
0.102		7487-94-7	~Mercuric Chloride (and other Mercury salts)			mg/kg	HH-22A									
22.7		7440-02-0	Nickel Soluble Salts			mg/kg	HH-24B									
1.58		7782-49-2	Selenium			mg/kg	HH-22A									
76.2		7440-24-6	Strontium, Stable			mg/kg	HH-22A									

Risk for Individual Pathways				Output Form 1A
Version Date: January 2025				
Basis: November 2024 EPA RSL Table				
Site ID: BPN 23022-19-068				
Exposure Unit ID: Area Outside of Silt Fence ("Worst Case")				
DIRECT CONTACT SOIL AND WATER CALCULATORS				
Receptor	Pathway	Carcinogenic Risk	Hazard Index	Risk exceeded?
Resident	Soil	NC	NC	NC
	Groundwater Use*	NC	NC	NC
Non-Residential Worker	Soil	4.0E-06	1.6E-01	NO
	Groundwater Use*	NC	NC	NC
Construction Worker	Soil	NC	NC	NC
Recreator/Trespasser	Soil	7.9E-06	9.9E-01	NO
	Surface Water*	NC	NC	NC
VAPOR INTRUSION CALCULATORS				
Receptor	Pathway	Carcinogenic Risk	Hazard Index	Risk exceeded?
Resident	Groundwater to Indoor Air	NC	NC	NC
	Soil Gas to Indoor Air	NC	NC	NC
	Indoor Air	NC	NC	NC
Non-Residential Worker	Groundwater to Indoor Air	NC	NC	NC
	Soil Gas to Indoor Air	NC	NC	NC
	Indoor Air	NC	NC	NC
CONTAMINANT MIGRATION CALCULATORS				
Pathway	Source	Target Receptor Concentrations Exceeded?		
Groundwater	Source Soil	Exceedence of 2L at Receptor?		NC
	Source Groundwater	Exceedence of 2L at Receptor?		NC
Surface Water	Source Soil	Exceedence of 2B at Receptor?		NC
	Source Groundwater	Exceedence of 2B at Receptor?		NC
<p>Notes:</p> <p>1. If lead concentrations were entered in the exposure point concentration tables, see the individual calculator sheets for lead concentrations in comparison to screening levels. Note that lead is not included in cumulative risk calculations.</p> <p>2. * = If concentrations in groundwater exceed the NC 2L Standards or IMAC, or concentrations in surface water exceed the NC 2B Standards, appropriate remediation and/or institutional control measures will be necessary to be eligible for a risk-based closure.</p> <p>3. NM = Not modeled, required contaminant migration parameters were not entered.</p> <p>4. NC = Pathway not calculated, user did not check this pathway as complete.</p>				

Version Date: January 2025

Basis: November 2024 EPA RSL Table

Site ID: BPN 23022-19-068

Exposure Unit ID: Area Outside of Silt Fence ("Worst Case")

* - Note that inhalation on this calculator refers to outdoor inhalation of volatiles and particulates, not indoor inhalation associated with vapor intrusion.

** - Note that the EPA has no consensus on reference dose or cancer slope factor values for lead, therefore it is not possible to calculate cancer risk or hazard quotient. Lead concentrations are compared to the EPA screening level of 800 mg/kg for commercial/industrial soil.

CAS #	Chemical Name:	Ingestion Concentration (mg/kg)	Dermal Concentration (mg/kg)	Inhalation Concentration (mg/kg)*	Ingestion Carcinogenic Risk	Dermal Carcinogenic Risk	Inhalation Carcinogenic Risk	Calculated Carcinogenic Risk	Ingestion Hazard Quotient	Dermal Hazard Quotient	Inhalation Hazard Quotient	Calculated Non-Carcinogenic Hazard Quotient
7440-38-2	Arsenic, Inorganic	12	12	12	3.3E-06	7.0E-07	7.1E-11	4.0E-06	2.1E-02	4.3E-03	3.1E-06	2.5E-02
7440-39-3	Barium	361	361	361					1.5E-03		2.8E-06	1.5E-03
7440-41-7	Beryllium and compounds	1.57	1.57	1.57			5.2E-12	5.2E-12	6.7E-04		3.0E-07	6.7E-04
7440-43-9	Cadmium (Diet)	0.287	0.287	0.287			7.1E-13	7.1E-13	2.5E-03	4.2E-04	1.1E-07	2.9E-03
16065-83-1	Chromium(III), Insoluble Salts	52	52	52					3.0E-05			3.0E-05
18540-29-9	Chromium(VI)	0.61	0.61	0.61	3.0E-08		9.2E-12	3.0E-08	5.8E-04		7.8E-08	5.8E-04
7440-48-4	Cobalt	28.7	28.7	28.7			3.6E-10	3.6E-10	8.2E-02		1.8E-05	8.2E-02
7440-50-8	Copper	92.7	92.7	92.7					2.0E-03			2.0E-03
7439-92-1	~Lead and Compounds	37.3	37.3	37.3					<SL**	<SL**	<SL**	
7439-96-5	Manganese (Non-diet)	1150	1150	1150					4.1E-02		8.9E-05	4.1E-02
7487-94-7	~Mercuric Chloride (and other Mercury salts)	0.102	0.102	0.102					2.9E-04		1.3E-09	2.9E-04
7440-02-0	Nickel Soluble Salts	22.7	22.7	22.7			8.1E-12	8.1E-12	9.7E-04		8.7E-06	9.8E-04
7782-49-2	Selenium	1.58	1.58	1.58					2.7E-04		3.0E-10	2.7E-04
7440-24-6	Strontium, Stable	76.2	76.2	76.2					1.1E-04			1.1E-04
Cumulative:								4.0E-06	1.6E-01			

DEQ Risk Calculator - Direct Contact - Recreator/Trespasser Soil

Output Form 2F

Version Date: January 2025

Basic: November 2024 EPA RSL Table

Site ID: BPN 23022-19-068

Exposure Unit ID: Area Outside of Silt Fence ("Worst Case")

* - Note that inhalation on this calculator refers to outdoor inhalation of volatiles and particulates, not indoor inhalation associated with vapor intrusion.

** - Note that the EPA has no consensus on reference dose or cancer slope factor values for lead, therefore it is not possible to calculate cancer risk or hazard quotient. Lead concentrations are compared to the EPA screening level of 200 mg/kg for residential soil. If it has been demonstrated that additional sources of lead are present (e.g., lead water service lines or lead-based paint), the EPA screening level is 100 mg/kg.

Receptor Type: Recreator

CAS #	Chemical Name:	Ingestion Concentration (mg/kg)	Dermal Concentration (mg/kg)	Inhalation Concentration (mg/kg)*	Ingestion Carcinogenic Risk	Dermal Carcinogenic Risk	Inhalation Carcinogenic Risk	Calculated Carcinogenic Risk	Ingestion Hazard Quotient	Dermal Hazard Quotient	Inhalation Hazard Quotient	Calculated Non-Carcinogenic Hazard Quotient
7440-38-2	Arsenic, Inorganic	12	12	12	6.7E-06	9.4E-07	1.1E-11	7.6E-06	1.3E-01	1.6E-02	4.6E-07	1.5E-01
7440-39-3	Barium	361	361	361					9.9E-03		4.2E-07	9.9E-03
7440-41-7	Beryllium and compounds	1.57	1.57	1.57			8.1E-13	8.1E-13	4.3E-03		4.5E-08	4.3E-03
7440-43-9	Cadmium (Diet)	0.287	0.287	0.287			1.1E-13	1.1E-13	1.6E-02	1.5E-03	1.7E-08	1.7E-02
16065-83-1	Chromium(III), Insoluble Salts	52	52	52					1.9E-04			1.9E-04
18540-29-9	Chromium(VI)	0.61	0.61	0.61	2.7E-07		4.0E-12	2.7E-07	3.7E-03		1.2E-08	3.7E-03
7440-48-4	Cobalt	28.7	28.7	28.7			5.5E-11	5.5E-11	5.2E-01		2.8E-06	5.2E-01
7440-50-8	Copper	92.7	92.7	92.7					1.3E-02			1.3E-02
7439-92-1	-Lead and Compounds	37.3	37.3	37.3					<SL**	<SL**	<SL**	
7439-96-5	Manganese (Non-diet)	1150	1150	1150					2.6E-01		1.3E-05	2.6E-01
7487-94-7	-Mercuric Chloride (and other Mercury salts)	0.102	0.102	0.102					1.9E-03		2.0E-10	1.9E-03
7440-02-0	Nickel Soluble Salts	22.7	22.7	22.7			1.3E-12	1.3E-12	6.2E-03		1.3E-06	6.2E-03
7782-49-2	Selenium	1.58	1.58	1.58					1.7E-03		4.6E-11	1.7E-03
7440-24-6	Strontium, Stable	76.2	76.2	76.2					7.0E-04			7.0E-04

Cumulative:

7.9E-06

9.9E-01

North Carolina Department of Environmental Quality Risk Calculator

Version Date:	January 2025
Basis:	November 2024 EPA RSL Table
Site Name:	Chapel Hill Police Property
Site Address:	828 Martin Luther King Jr. Blvd, Chapel Hill, NC
DEQ Section:	Brownfields Redevelopment Section
Site ID:	BPN 23022-19-068
Exposure Unit ID:	Area Outside of Silt Fence (Recreator Surface Soil)
Submittal Date:	3/17/2025
Prepared By:	Hart & Hickman, P.C. 3921 Sunset Ridge Rd, Ste 301, Raleigh, NC
Reviewed By:	Scott Drury, PE

Complete Exposure Pathways		Input Form 1A
Version Date: January 2025		
Basis: November 2024 EPA RSL Table		
Site ID: BPN 23022-19-068		
Exposure Unit ID: Area Outside of Silt Fence (Recreator Surface Soil)		
<i>Note: Risk output will only be calculated for complete exposure pathways.</i>		
Receptor	Pathway	Check box if pathway complete
DIRECT CONTACT SOIL AND WATER PATHWAYS		
Resident	Soil	<input type="checkbox"/>
	Groundwater Use	<input type="checkbox"/>
Non-Residential Worker	Soil	<input type="checkbox"/>
	Groundwater Use	<input type="checkbox"/>
Construction Worker	Soil	<input type="checkbox"/>
Recreator/Trespasser	Soil	<input checked="" type="checkbox"/>
	Surface Water	<input type="checkbox"/>
VAPOR INTRUSION PATHWAYS		
Resident	Groundwater to Indoor Air	<input type="checkbox"/>
	Soil Gas to Indoor Air	<input type="checkbox"/>
	Indoor Air	<input type="checkbox"/>
Non-Residential Worker	Groundwater to Indoor Air	<input type="checkbox"/>
	Soil Gas to Indoor Air	<input type="checkbox"/>
	Indoor Air	<input type="checkbox"/>
CONTAMINANT MIGRATION PATHWAYS		
Groundwater	Source Soil	<input type="checkbox"/>
	Source Groundwater	<input type="checkbox"/>
Surface Water	Source Soil	<input type="checkbox"/>
	Source Groundwater	<input type="checkbox"/>

Exposure Point Concentrations

Version Date: January 2025

Basis: November 2024 EPA RSL Table

Site ID: BPN 23022-19-068

Exposure Unit ID: Area Outside of Silt Fence (Recreator Surface Soil)

Soil Exposure Point Concentration Table

Description of Exposure Point Concentration Selection:

Maximum concentration of each analyte detected in the uppermost soil sample collected from HH-16A, HH-19B, and HH-20 through HH-26 which were collected outside of the outermost silt fence and which remain in place (i.e., not excavated).

NOTE: If the chemical list is changed from a prior calculator run, remember to select "See All Chemicals" on the data output sheet or newly added chemicals will not be included in risk calculations

Exposure Point Concentration (mg/kg)	Notes:	CAS Number	Chemical	Minimum Concentration (Qualifier)	Maximum Concentration (Qualifier)	Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits	Concentration Used for Screening	Background Value	Screening Toxicity Value (Screening Level) (n/c)	Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag (Y/N)	Rationale for Selection or Deletion
12		7440-38-2	Arsenic, Inorganic			mg/kg	HH-22A									
361		7440-39-3	Barium			mg/kg	HH-22A									
1.57		7440-41-7	Beryllium and compounds			mg/kg	HH-22A									
0.198		7440-43-9	Cadmium (Diet)			mg/kg	HH-22A									
39.4		16065-83-1	Chromium(III), Insoluble Salts			mg/kg	HH-19B									
0.61		18540-29-9	Chromium(VI)			mg/kg	HH-24B									
17.1		7440-48-4	Cobalt			mg/kg	HH-22A									
42.8		7440-50-8	Copper			mg/kg	HH-22A									
37.3		7439-92-1	~Lead and Compounds			mg/kg	HH-22A									
872		7439-96-5	Manganese (Non-diet)			mg/kg	HH-22A									
0.102		7487-94-7	~Mercuric Chloride (and other Mercury salts)			mg/kg	HH-22A									
17.6		7440-02-0	Nickel Soluble Salts			mg/kg	HH-22A									
1.58		7782-49-2	Selenium			mg/kg	HH-22A									
76.2		7440-24-6	Strontium, Stable			mg/kg	HH-22A									

Risk for Individual Pathways				Output Form 1A
Version Date: January 2025				
Basis: November 2024 EPA RSL Table				
Site ID: BPN 23022-19-068				
Exposure Unit ID: Area Outside of Silt Fence (Recreator Surface Soil)				
DIRECT CONTACT SOIL AND WATER CALCULATORS				
Receptor	Pathway	Carcinogenic Risk	Hazard Index	Risk exceeded?
Resident	Soil	NC	NC	NC
	Groundwater Use*	NC	NC	NC
Non-Residential Worker	Soil	NC	NC	NC
	Groundwater Use*	NC	NC	NC
Construction Worker	Soil	NC	NC	NC
Recreator/Trespasser	Soil	7.9E-06	7.0E-01	NO
	Surface Water*	NC	NC	NC
VAPOR INTRUSION CALCULATORS				
Receptor	Pathway	Carcinogenic Risk	Hazard Index	Risk exceeded?
Resident	Groundwater to Indoor Air	NC	NC	NC
	Soil Gas to Indoor Air	NC	NC	NC
	Indoor Air	NC	NC	NC
Non-Residential Worker	Groundwater to Indoor Air	NC	NC	NC
	Soil Gas to Indoor Air	NC	NC	NC
	Indoor Air	NC	NC	NC
CONTAMINANT MIGRATION CALCULATORS				
Pathway	Source	Target Receptor Concentrations Exceeded?		
Groundwater	Source Soil	Exceedence of 2L at Receptor?		NC
	Source Groundwater	Exceedence of 2L at Receptor?		NC
Surface Water	Source Soil	Exceedence of 2B at Receptor?		NC
	Source Groundwater	Exceedence of 2B at Receptor?		NC
<p>Notes:</p> <p>1. If lead concentrations were entered in the exposure point concentration tables, see the individual calculator sheets for lead concentrations in comparison to screening levels. Note that lead is not included in cumulative risk calculations.</p> <p>2. * = If concentrations in groundwater exceed the NC 2L Standards or IMAC, or concentrations in surface water exceed the NC 2B Standards, appropriate remediation and/or institutional control measures will be necessary to be eligible for a risk-based closure.</p> <p>3. NM = Not modeled, required contaminant migration parameters were not entered.</p> <p>4. NC = Pathway not calculated, user did not check this pathway as complete.</p>				

DEQ Risk Calculator - Direct Contact - Recreator/Trespasser Soil

Output Form 2F

Version Date: January 2025

Basic: November 2024 EPA RSL Table

Site ID: BPN 23022-19-068

Exposure Unit ID: Area Outside of Silt Fence (Recreator Surface Soil)

* - Note that inhalation on this calculator refers to outdoor inhalation of volatiles and particulates, not indoor inhalation associated with vapor intrusion.

** - Note that the EPA has no consensus on reference dose or cancer slope factor values for lead, therefore it is not possible to calculate cancer risk or hazard quotient. Lead concentrations are compared to the EPA screening level of 200 mg/kg for residential soil. If it has been demonstrated that additional sources of lead are present (e.g., lead water service lines or lead-based paint), the EPA screening level is 100 mg/kg.

Receptor Type: Recreator

CAS #	Chemical Name:	Ingestion Concentration (mg/kg)	Dermal Concentration (mg/kg)	Inhalation Concentration (mg/kg)*	Ingestion Carcinogenic Risk	Dermal Carcinogenic Risk	Inhalation Carcinogenic Risk	Calculated Carcinogenic Risk	Ingestion Hazard Quotient	Dermal Hazard Quotient	Inhalation Hazard Quotient	Calculated Non-Carcinogenic Hazard Quotient
7440-38-2	Arsenic, Inorganic	12	12	12	6.7E-06	9.4E-07	1.1E-11	7.6E-06	1.3E-01	1.6E-02	4.6E-07	1.5E-01
7440-39-3	Barium	361	361	361					9.9E-03		4.2E-07	9.9E-03
7440-41-7	Beryllium and compounds	1.57	1.57	1.57			8.1E-13	8.1E-13	4.3E-03		4.5E-08	4.3E-03
7440-43-9	Cadmium (Diet)	0.198	0.198	0.198			7.6E-14	7.6E-14	1.1E-02	1.0E-03	1.1E-08	1.2E-02
16065-83-1	Chromium(III), Insoluble Salts	39.4	39.4	39.4					1.4E-04			1.4E-04
18540-29-9	Chromium(VI)	0.61	0.61	0.61	2.7E-07		4.0E-12	2.7E-07	3.7E-03		1.2E-08	3.7E-03
7440-48-4	Cobalt	17.1	17.1	17.1			3.3E-11	3.3E-11	3.1E-01		1.6E-06	3.1E-01
7440-50-8	Copper	42.8	42.8	42.8					5.9E-03			5.9E-03
7439-92-1	-Lead and Compounds	37.3	37.3	37.3					<SL**	<SL**	<SL**	
7439-96-5	Manganese (Non-diet)	872	872	872					2.0E-01		1.0E-05	2.0E-01
7487-94-7	-Mercuric Chloride (and other Mercury salts)	0.102	0.102	0.102					1.9E-03		2.0E-10	1.9E-03
7440-02-0	Nickel Soluble Salts	17.6	17.6	17.6			9.8E-13	9.8E-13	4.8E-03		1.0E-06	4.8E-03
7782-49-2	Selenium	1.58	1.58	1.58					1.7E-03		4.6E-11	1.7E-03
7440-24-6	Strontium, Stable	76.2	76.2	76.2					7.0E-04			7.0E-04

Cumulative:

7.9E-06

7.0E-01