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SOIL ASSESSMENT REPORT

CITY OF DURHAM PARKS

East End Park, Walltown Park, East Durham Park, Lyon Park, & Northgate Park
Durham, Durham County, North Carolina

ENGINEERING & ENVIRONMENTAL SOLUTIONS

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CITY OF DURHAM PARKS
EAST END PARK, WALLTOWN PARK, EAST DURHAM PARK, LYON PARK & NORTHGATE PARK
DURHAM, DURHAM COUNTY, NORTH CAROLINA

Mid-Atlantic Project No. R4370.00
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Prepared For:

City of Durham
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1.0 INTRODUCTION

The City of Durham retained Mid-Atlantic Associates, Inc. (Mid-Atlantic) to complete soil assessment activities at the following five city-owned parks: East End Park, Walltown Park, East Durham Park, Lyon Park, and Northgate Park **(Figure 1)**. The assessments were conducted in response to the results of a recent Duke University field study and in general accordance with Mid-Atlantic's *Soil Assessment Work Plan* and approved by the NC Department of Environmental Quality (NCDEQ), Division of Waste Management (DWM) Inactive Hazardous Sites Branch (IHSB) on July 14, 2023. Additional property information for the five parks in reference and included under this investigation is further described below:

Park ID	Address	PIN	Acres
Northgate Park	300 W. Club Boulevard	0832-06-76-4281	16.963
	404 W. Lavender Avenue	0822-97-83-8916	8.434
	2623 Acadia Street	0822-97-87-8798	1.763
Lyon Park	1101 Cornell Street	0831-84-30-4104	7.691
	1200 W. Lakewood Avenue	0821-34-90-6672	1.223
Walltown Park	1308 W. Club Boulevard	0822-55-35-6908	7.728
East Durham Park	2601 E. Main Street	0831-84-43-6444	1.607
	300 Gary Street	0831-84-30-4104	2.214
East End Park	1200 N. Alston Avenue	0831-47-08-2738	9.206

Three of the five target parks (East End Park, Walltown Park, and East Durham Park) were the subject of a previous field study conducted by Enikoe Bihari, a master's degree candidate at Duke University. These parks were selected due to the historical (pre-1950) operation of trash incinerators at each of these locations. The results of the field screening were documented in a December 16, 2022 paper (Duke Study): *Legacy Pb contamination in the soils of three Durham city parks: Do secondary forest organic horizons effectively blanket Pb in city park soils contaminated by historic waste incineration?* The Duke Study included screening of soils from these three parks using a handheld X-Ray Fluorescence (XRF) analyzer. A majority of the sampling focused on the upper 1-inch of soil below land surface (BLS) and targeted the mineral soil layer (the A horizon of soil).

The DWM IHSB has established Preliminary Soil Remediation Goals (PSRGs) for lead and other soil contaminants. The Residential Health-Based PSRG typically applies for park settings where the general public has access. For lead, this value is 400 mg/kg (milligrams per kilogram and equivalent to 400 parts per million (ppm)). During the Duke Study, 29 of the 269 field screening locations exhibited XRF measurements greater than 400 mg/kg for lead. XRF measurements exceeding the 400 mg/kg PSRG were identified at each of these three parks. The Duke Study did not include the confirmatory laboratory analytical testing associated with XRF field sampling, therefore, it is presumed that verification analysis using EPA Method 6010D and/or 6020B was not conducted as part of the previous site evaluations.

The Duke Study contains XRF data collected from East End Park, Walltown Park, and East Durham Park. Although the primary objective of the Duke Study was intended to evaluate lead uptake in organic horizons at the three target parks, the XRF field screening measurements indicated that, from a public health perspective, further assessment and laboratory testing in select areas of these parks was warranted. Lyon Park was identified as a fourth park with historical incinerator operations conducted on an adjacent, off-site property; however, XRF measurements were not collected from Lyon Park during the Duke Study due to timeline constraints. A circa-1950's newspaper article excerpt also indicated that a fifth park, Northgate Park, received ash and cinders from Walltown Park (a former incinerator location) for use as fill material during its construction. As such, assessment of these two additional parks was included as part of this investigation.

The overall objective of this investigation was to rapidly assess surface soil in these five parks for the presence of lead and other potential contaminants, since contact with these soils appears to be the most likely exposure pathway to the public. The scope of work was approved by the DWM IHSB and included the following: (a) verification of select XRF-derived data contained in the Duke University field study at East End, Walltown, and East Durham Parks; (b) soil assessment of the previously unassessed Lyon and Northgate Parks; and (c) creation of a database for comparison to the applicable PSRGs established by the DWM IHSB. The scope of work also included the analysis of select samples for semi-volatile organics to determine the potential for additional impacts from incineration activities and/or deposition.

In general accordance with the procedures outlined in the approved *Soil Assessment Work Plan*, Mid-Atlantic has prepared this Soil Assessment Report to document the results of the field activities conducted at the above-referenced parks in July 2023. The opinions included herein are based on our experience and the information obtained during the study. This report is based on observations made on the dates noted using the procedures described herein. If additional information becomes available, we request the opportunity to review the information, reassess the potential environmental concerns and modify our conclusions and recommendations, if appropriate.

2.0 BACKGROUND INFORMATION

The following sections provide additional details and historical site information associated with each of the five city-owned parks included under this assessment. Selected historical background information is included in **Appendix A** for reference**.**

2.1 Northgate Park

The portion of Northgate Park included under this assessment consists of three parcels located west of Acadia Street. This area is comprised of three separate playground areas, two dog parks, walking trails, greenway access, open fields/grassland, and several

wooded/undeveloped areas along the western boundary of the park. Ellerbe Creek bisects the park and runs northwest-southeast across the central portions of the site. Based on available historical information, incinerator operations do not appear to have been conducted on the site or in the vicinity of the park. However, a circa-1950s newspaper article excerpt indicated Northgate Park received approximately 500 truckloads of ash and cinders from Walltown Park (a former incinerator location) for use as fill material in the low-lying areas of Northgate Park. The screening of this park was not included as part of the previous Duke Study.

2.2 Lyon Park

The portion of Lyon Park included under this assessment consists of two parcels located north of West Lakewood Avenue. This area is comprised of two playgrounds, a baseball field, basketball court, community center, walking trails, and open fields/grassland. The northeast and southwest portions of the site are wooded and undeveloped, and an unnamed tributary (UT) to Third Fork Creek bisects the park and runs northeast-southwest across the central portion of the site. Sanborn Fire Insurance Maps from 1937 and 1950 indicate the historical off-site incinerator operations were conducted on the eastern adjacent property (1228 Carroll Street). The screening of this park was not included as part of the previous Duke Study.

2.3 Walltown Park

Walltown Park is comprised of a playground area, three basketball courts, a recreation center, and open fields/grassland. A UT to Ellerbe Creek bisects the park and runs south-north across the central portion of the site. The 1937 Sanborn Fire Insurance Map indicates the historical incinerator operations were conducted east of the UT to Ellerbe Creek on the central portion of the site. The Duke Study included a total of 99 XRF screening locations, 14 of which exhibited XRF measurements above the adjusted target field screening and sample collection threshold of 280 mg/kg[1].

2.4 East Durham Park

The portion of East Durham Park included under this assessment consists of two parcels located north of East Main Street. The northernmost parcel is currently wooded and undeveloped with no apparent public access. The southernmost parcel (adjacent to East

[1] As noted in EPA Operating Procedure LSADPROC-107-R6 titled "*Field X-Ray Fluorescence Measurement*" (EPA Operating Procedure for XRF Measurements), "Of the samples that screen at or within 20-30% of the action level, most all, with a high degree of confidence, exceed the action level." Therefore, as a protective measure, previous locations exhibiting XRF field screening values of 280 mg/kg (70% of 400 mg/kg) or above were collected and submitted to the laboratory for analysis of lead according to EPA Method 6010D and/or 6020B.

Main Street) includes the park amenities, recreational areas, and public access areas. In addition, a UT to Ellerbe Creek bisects the park and runs southwest-northeast across the central portion of the site. The area west of the UT on this portion of the park is comprised of two playgrounds, a recreational shelter, and open fields/grassland. The area east of the UT on this portion of the park includes an open field adjacent to an off-site multi-family residential property (2607 East Main Street). The 1937 Sanborn Fire Insurance Map indicates that historical incinerator operations were conducted west of the UT along the western property boundary for the park, adjacent to Gary Street. The Duke Study included a total of 62 XRF screening locations, 16 of which exhibited XRF measurements above the target field screening and sample collection threshold of 280 mg/kg.

2.5 East End Park

The portion of East End Park included under this assessment is comprised of two tennis courts, a soccer field, two playground areas, and a former community center. The eastern portion of the park includes wooded, undeveloped land with no apparent public access. The park shares a parcel with a vacant, partially paved lot with a former city-owned sign and signal shop on the southern portion of the parcel. These areas are fenced and gated off from the park with access restricted to the general public. Sanborn Fire Insurance Maps from 1937 and 1950 indicate the historical incinerator operations were conducted on the northwest portion of the park. The Duke Study included a total of 108 XRF field screening locations, nine of which exhibited XRF measurements above the target field screening and sample collection threshold of 280 mg/kg. Eight of these locations were located outside the footprint of the park and within the gated area with restricted access to the general public.

3.0 SUMMARY OF FIELD ACTIVITIES

Mid-Atlantic performed XRF field screening and confirmatory soil sampling at five city-owned parks from July 19-26, 2023. The field activities were performed in general accordance with the approved *Soil Assessment Work Plan* and a general overview of the assessment activities completed for each park is also included in **Table 1**. In accordance with the EPA Operating Procedure LSADPROC-107-R6, "*Field X-Ray Fluorescence Measurement*" (referred to herein as the *EPA Operating Procedure for XRF Measurements*), Mid-Atlantic cleared an approximate 6" x 6" area of vegetation at each screening location; excavated the upper 0.5 inches of soil using a decontaminated trowel; and covered the exposed mineral soil layer with a thin Mylar® film. The XRF was then pressed against the Mylar® film for forty-five to sixty seconds to screen in-situ soil for lead. Field screening was performed using a SciAps X-550 XRF analyzer set on the soil analysis mode. Ambient temperature readings were also regularly collected using a TSI 9565 with a 964 probe.

The *EPA Operating Procedure for XRF Measurements* indicates that "Of the samples that screen at or within 20-30% of the action level, most all, with a high degree of confidence, exceed the action level." Therefore, as a protective measure, locations which exhibited XRF field screening values of 280 mg/kg (70% of 400 mg/kg) and above during both the current assessment and/or the previous Duke Study were selected for in-situ field screening and confirmatory laboratory testing. Approximately ten percent of the samples from the XRF screening measurements under the 280 mg/kg target threshold were also verified using in-situ XRF field screening and confirmatory laboratory testing at each park. The samples collected for laboratory analysis with field screening values below 280 mg/kg were selected based on their locations within the park, field screening measurements, and/or achieving spatial coverage. In order to assess the vertical extent of potential lead impacts to soil, soil samples were also collected from approximately 12 inches below land surface (BLS) using a decontaminated hand auger at select locations within each park. These locations were selected based on the associated XRF field screening values for the paired surface soil samples and their associated locations within the park.

Additionally, to evaluate the potential presence of other targeted constituents of concern, the samples exhibiting both the highest (and/or elevated) XRF measurement as well as one sample exhibiting an XRF measurement below the 280 mg/kg threshold from each park were selected for additional laboratory analysis of Semi-Volatile Organic Compounds (SVOCs) according to EPA Method 8270 and the full suite of hazardous substance list (HSL) metals identified in IHSB's "*Guidance for Assessment and Cleanup of Contaminated Sites*" (September 2022) according to EPA Methods 6020B and 7471B. In addition to lead, the HSL metals include antimony, arsenic, barium, beryllium, cadmium, chromium, cobalt, copper, manganese, mercury, nickel, selenium, silver, thallium, vanadium, and zinc. The samples which exhibited XRF measurements below 280 mg/kg were selected for SVOC and HSL metals analyses based on their locations within the park and the reported screening values of adjoining samples.

Soil sampling for potential lead impacts was also conducted at playground areas in which synthetic liners or artificial turf were encountered during field assessment activities. A total of nine playground areas were evaluated within the parks, seven of which exhibited the presence of artificial turf or synthetic liners. Soil samples were collected from the two playground areas (located in Northgate Park and East End Park) that did not exhibit evidence of artificial turf or synthetic liners. The samples were collected from beneath the overlying mulch (□12 inches of overburden) and submitted for laboratory analysis of lead according to EPA Method 6010D. Additional discussion regarding the playground areas at each park location is provided in the sections below.

Soil samples for laboratory confirmation analysis were collected from the upper inch of the soil profile, placed into laboratory-supplied containers, and packed into an ice-filled cooler within 15 minutes of sample collection. Samples were then submitted under proper chain-of-custody control to Waypoint Analytical (Waypoint, NC Certification Number 402) for laboratory analysis of lead according to EPA Method 6010D; SVOCs according to EPA

Method 8270; and/or HSL metals according to EPA Methods 6020B and 7471B. **Table 1** provides a general overview and summary of the screening and sampling activities completed at each park. The site-specific sample locations and analytical testing results are summarized on **Figures 2A through 6C, Tables 2 through 6, and Table 8**.

3.1 Northgate Park

The field screening locations and associated XRF measurements for the assessment activities completed at Northgate Park are summarized in **Table 2** and illustrated on **Figures 2A and 2B.** The locations of soil samples collected for laboratory analysis are shown on **Figure 2C.**

As indicated, the July 2023 assessment included a total of 259 XRF field screening locations; 32 soil samples (30 primary and two duplicate) collected from the upper inch of the soil profile for laboratory analysis of lead; one paired soil sample collected from 12 inches BLS below the surface soil location exhibiting the highest XRF field screening measurement [SS-NG-226 (1')] for laboratory analysis of lead; two soil samples for additional laboratory analysis of SVOCs and HSL metals (SS-NG-226 and SS-NG-153); and one soil sample from beneath a playground area in which a liner was not encountered beneath the mulch (SS-NG-Playground). Additionally, a total of 24 proposed XRF screening locations were deemed inaccessible due to dense poison ivy and heavy forestation.

Native soils were encountered to a depth of approximately 12 inches BLS in the location of the highest XRF surface soil field screening measurement [SS-NG-226 (1')], and visual/ olfactory evidence of ash deposition or impacted materials was not observed at this depth.

Northgate Park includes three playground areas, two of which were equipped with a fabric liner and overlain by approximately one foot of mulch (restricting access to the underlying soils). Mid-Atlantic did not encounter a liner beneath the third playground area and, therefore, one soil sample (SS-NG-Playground) was collected from beneath the base of the mulch at a depth of approximately 12-18 inches BLS for laboratory analysis of lead according to EPA Method 6010D.

3.2 Lyon Park

The field screening locations and associated XRF measurements for the assessment activities completed at Lyon Park are summarized in **Table 3** and illustrated on **Figure 3A**. The locations of soil samples collected for laboratory analysis are shown on **Figure 3B.**

As indicated, the July 2023 assessment included a total of 81 XRF field screening locations; 14 soil samples (13 primary and one duplicate) collected from the upper inch of the soil profile for laboratory analysis of lead; one paired soil sample collected from 12 inches BLS below the surface soil location exhibiting the highest XRF field screening

measurement [SS-LY-45 (1')] for laboratory analysis of lead; and two soil samples for additional laboratory analysis of SVOCs and HSL metals (SS-LY-45 and SS-LY-61). Additionally, a total of 13 proposed XRF screening locations were deemed inaccessible due to dense poison ivy and heavy forestation.

Native soils were encountered to a depth of approximately 12 inches BLS in the location of the highest XRF field screening measurement [SS-LY-45 (1')], and visual/olfactory evidence of ash deposition or impacted materials was not observed at this depth.

Lyon Park includes one playground area that was equipped with a fabric liner and overlain by approximately one foot of mulch (restricting access to the underlying soils). As such, a sample was not collected for laboratory analysis at this location.

3.3 Walltown Park

The field screening locations and associated XRF measurements for the assessment activities completed at Walltown Park are summarized in **Table 4** and illustrated on **Figures 4A and 4B**. The locations of soil samples collected for laboratory analysis are shown on **Figure 4C**.

As indicated, the July 2023 assessment included in-situ XRF screening and confirmation soil sampling at various locations which exhibited elevated XRF values above the target field screening and sample collection threshold of 280 mg/kg during the Duke Study. The Duke Study included a total of 99 XRF field screening locations, five of which reportedly contained lead at concentrations above the Residential PSRG of 400 mg/kg.

The July 2023 assessment included a total of 23 XRF field screening locations; 24 soil samples (23 primary and one duplicate) collected from the upper inch of the soil profile for laboratory analysis of lead; three paired soil samples collected from 12 inches BLS below three surface soil locations exhibiting the highest (or elevated) XRF field screening measurements [SS-WT-43 (1'), SS-WT-79 (1'), and SS-WT-93 (1')] for laboratory analysis of lead; and two soil samples for additional laboratory analysis of SVOCs and HSL metals (SS-WT-18 and SS-WT-50).

Glass and porcelain fragments were encountered to a depth of approximately 12 inches BLS at each of the three locations exhibiting elevated XRF field screening values in surface soils [SS-WT-43 (1'), SS-WT-79 (1'), and SS-WT-93 (1')]. These materials are often considered to be characteristic of incinerator ash deposits.

Walltown Park includes one playground area that was equipped with a fabric liner overlain with approximately one foot of mulch (restricting access to the underlying soils). As such, a sample was not collected for laboratory analysis at this location.

3.4 East Durham Park

The field screening locations and associated XRF measurements for the assessment activities completed at East Durham Park are summarized in **Table 5** and illustrated on **Figure 5A**. The locations of soil samples collected for laboratory analysis are shown on **Figure 5B**.

As indicated, the July 2023 assessment included in-situ XRF screening and confirmation soil sampling at various locations which exhibited elevated XRF values above the target field screening and sample collection threshold of 280 mg/kg during the Duke Study. The Duke Study included a total of 62 XRF field screening locations, 15 of which exhibited lead at concentrations above the Residential PSRG of 400 mg/kg.

The July 2023 assessment included a total of 14 XRF field screening locations; 15 soil samples (14 primary and one duplicate) collected from the upper inch of the soil profile for laboratory analysis of lead; four paired soil samples collected from 12 inches BLS for laboratory analysis of lead, with three of the surface soil locations exhibiting elevated XRF field screening values [SS-ED-40 (1'), SS-ED-51 (1'), and SS-ED-55 (1')] and one exhibiting an XRF field screening measurement below the Residential PSRG for lead [SS-ED-39 (1')], and two soil samples for additional laboratory analysis of SVOCs and HSL metals (SS-ED-48 and SS-ED-51). Additionally, a total of 10 proposed XRF screening locations were deemed inaccessible due to field interference associated with dense poison ivy and heavy forestation.

Glass and porcelain fragments were encountered to a depth of approximately 12 inches BLS at each of the three locations exhibiting elevated XRF field screening values in surface soils [SS-ED-40 (1'), SS-ED-51 (1'), and SS-ED-55 (1')]. These materials were not observed during hand auger boring advancement for the fourth sample [SS-ED-39 (1')], which exhibited a XRF field screening measurement below the Residential PSRG for lead in surface soils. As indicated, these materials are often considered to be characteristic of incinerator ash deposits.

East Durham Park includes one playground area partially covered with an artificial turf/mat surface and partially equipped with a fabric liner overlain by approximately one foot of mulch (restricting access to the underlying soils). As such, a sample was not collected for laboratory analysis at this location.

3.5 East End Park

The field screening locations and associated XRF measurements for the assessment activities completed at East End Park are summarized in **Table 6** and illustrated on **Figures 6A and 6B**. The locations of soil samples collected for laboratory analysis are shown on **Figure 6C**.

As indicated, the July 2023 assessment included in-situ XRF screening and confirmation soil sampling at various locations which exhibited elevated XRF values above the target field screening and sample collection threshold of 280 mg/kg during the Duke Study. The Duke Study included a total of 108 XRF field screening locations, eight of which identified lead at concentrations above the Residential PSRG of 400 mg/kg.

The July 2023 assessment included a total of 12 XRF field screening locations; 20 soil samples (19 primary and one duplicate) collected from the upper inch of the soil profile for laboratory analysis of lead; two paired soil samples collected from 12 inches BLS below accessible areas (i.e. not underlain by asphalt) exhibiting elevated surface soil XRF field screening measurements [SS-EE-81 (1') and SS-EE-82 (1')] for laboratory analysis of lead; two soil samples for additional laboratory analysis of SVOCs and HSL metals (SS-EE-54 and SS-EE-104); and one soil sample from beneath a playground area in which a liner was not encountered beneath the mulch (SS-EE-Playground).

XRF equipment issues were encountered in the field prior to screening the final eight locations which had previously exhibited XRF screenings below 280 mg/kg during the Duke Study. In response, Mid-Atlantic implemented a conservative approach in which soil samples from these final locations were collected/submitted for laboratory analysis in lieu of field screening. As such, a total of 19 primary soil samples (eight of which had previously screened below 280 mg/kg during the Duke Study) were collected from East End Park and submitted for laboratory analysis of lead according to EPA Method 6010D.

Sample locations SS-95, SS-101, and SS-104 were located in an area underlain by asphalt pavement and located inside the restricted area associated with the former sign and signal shop on the southern portion of the property. Mid-Atlantic screened and sampled the soils above the pavement at each of these locations. White and yellow paint were visibly mixed into these soils. Since these materials appeared to contain lead-based paint, efforts were made to prevent inclusion of these materials in the samples collected from this area and submitted for laboratory analysis.

East End Park includes two playground areas, one of which was equipped with a fabric liner and approximately one foot of mulch overburden (restricting access to the underlying soils). Mid-Atlantic did not observe the presence of a liner beneath the second playground area and, therefore, one soil sample (SS-EE-Playground) was collected from beneath the base of the mulch at a depth of approximately 12-18 inches BLS for laboratory analysis of lead according to EPA Method 6010D.

4.0 QUALITY ASSURANCE & QUALITY CONTROL

4.1 QA/QC Procedures

The *Soil Assessment Work Plan,* approved by NCDEQ on July 14, 2023, established the procedures and methodologies for data collection and defined the specific procedures and adjustments necessary to maintain data quality to support project execution. The Work Plan was prepared using protocols outlined in the *EPA Operating Procedure for XRF Measurements*. In general accordance with these protocols and the NCDEQ approved Work Plan, the following operational checks and calibration/recalibrations procedures were performed throughout the July 2023 field activities:

- Prior to soil analysis at the beginning of each day, a performance check was conducted by comparing the XRF outputs to a traceable standard reference material. An instrument blank was also analyzed to evaluate whether the instrument registered false positives;
- A reference standard and blank were analyzed every 4 to 5 hours of screening time, after the instrument had been deactivated for an hour, following battery changes, and at the end of each day;
- Ambient air temperature was recorded regularly. If the ambient air temperature changed by more than 10□F, the instrument was recalibrated;
- A duplicate screening was performed once every twenty samples; and,
- A precision check was performed on a screening location once per day by screening a location seven times in replicate.

One duplicate sample was collected at each park and/or per day of sampling and submitted for analysis of lead according to EPA Method 6010D. Duplicate samples and XRF screenings are referenced and provided as notes on **Tables 2 through 6**, with the outcome of the XRF quality control procedures summarized on **Table 7**.

4.2 Deviations from the Work Plan

The following adjustments and/or deviations to Mid-Atlantic's *Soil Assessment Work Plan* were documented during completion of the July 2023 field activities:

- A total of 24 of the 283 proposed screening locations at Northgate Park were deemed inaccessible due to dense poison ivy and heavy forestation;
- A total of 13 of the 94 proposed screening locations at Lyon Park were deemed inaccessible due to dense poison ivy and heavy forestation;
- A total of 10 of the 24 proposed screening/sampling locations at East Durham Park were deemed inaccessible due to dense poison ivy and heavy forestation;
- The XRF screening result for sample location SS-65 at Walltown Park was

inadvertently not recorded during field activities; however, a soil sample was collected from this location and submitted for laboratory analysis of lead;

- Multiple screening/sampling locations were offset and/or substituted for alternate locations (within the same general proximity) as those previously screened in the Duke Study due to dense poison ivy or vegetation encountered at the respective park locations;
- There were two instances in which the interval between duplicate screenings (including precision checks) exceeded 20 samples. One instance occurred at Lyon Park (23 samples prior to duplicate screening) and one instance occurred at Northgate Park (38 samples prior to a duplicate screening);
- Shallow refusal (e.g., the hand auger could not be advanced) was encountered at East End Park for sample locations SS-101 and SS-104. In response, sample locations SS-81 and SS-82 were sampled at 12 inches BLS based on their field screening values and ability of Mid-Atlantic personnel to hand auger to 12 inches BLS at these sample locations;
- Field XRF measurements collected at Lyon, Walltown, East Durham, and East End Parks were collected over a 45-second duration per screening location (in lieu of the initial 60-second duration proposed in the approved Work Plan) due to field time constraints; and,
- The XRF malfunctioned during screening at East End Park. In response, a conservative approach was implemented with the remaining eight locations (which had previously screened below 280 mg/kg during the Duke Study) sampled and submitted for laboratory analysis of lead in lieu of proposed XRF field screening.

Mid-Atlantic does not consider the above deviations to be significant with respect to the overall project execution given that duplicate screenings, performance checks, and precision checks indicated XRF field screening values were generally consistent over the course of the assessment. As such, these deviations did not prevent Mid-Atlantic from completing the overall objective of this assessment.

5.0 DISCUSSION OF RESULTS

A general summary of the overall field assessment activities is provided as **Table 1** and includes the total number of XRF field screening locations, soil sample locations, playground areas, and the number of soil samples exceeding the Residential PSRG for lead at each park. Site-specific quantitative results from the XRF field screening and confirmatory lead soil sampling at each park are summarized in **Tables 2 through 6**, with the results of additional SVOC and HSL metals analyses summarized in **Table 8** for all five parks. Laboratory analytical results and chain of custody records are included in **Appendix B**. Additional discussion for each park is provided in the following sections.

5.1 Northgate Park

The XRF field screening values and laboratory confirmation results for lead at Northgate Park are summarized in **Table 2** with the results and sample locations illustrated on **Figures 2A, 2B and 2C.** Results of the additional SVOC and HSL metals analyses are summarized in **Table 8.**

As indicated, XRF field screening and laboratory confirmation testing of surface soils did not identify lead concentrations above the Residential PSRG of 400 mg/kg. Of the 259 screening locations, four locations (SS-72, SS-91, SS-92, and SS-226) exhibited elevated XRF values above the target field screening and soil sample collection threshold of 280 mg/kg but below the Residential PSRG of 400 mg/kg for lead. The laboratory analytical results also did not identify concentrations of lead above the Residential PSRG for the paired sample collected at depth from approximately 12 inches BLS (SS-NG-226 (1')), and no field evidence of incinerator ash deposits (including glass/porcelain fragments) was encountered during hand auger boring advancement at this location. However, lead was reported in the sample collected from the unlined playground (SS-NG-Playground) above its Residential PSRG and at a concentration of 1,430 mg/kg. This sample was collected from beneath an overlying layer of mulch at a sample depth of approximately 12-18 inches BLS.

Arsenic was reported in soil samples SS-NG-153 (1.11 mg/kg) and SS-NG-226 (2.26 mg/kg) at concentrations above the Residential PSRG of 0.68 mg/kg for arsenic. Sample SS-NG-153 also exhibited manganese and cobalt at concentrations above their respective Residential PSRGs of 380 mg/kg and 4.7 mg/kg. The sample which exhibited a lower/background lead concentration (SS-NG-153, 12.7 mg/kg) reported a higher manganese concentration of 726 mg/kg and, conversely, the sample which exhibited a higher lead concentration (SS-NG-226, 300 mg/kg) reported a lower manganese concentration of 209 mg/kg, reflecting an inverse relationship between the reported manganese and lead concentrations based on this sample comparison. A similar relationship is apparent for cobalt in these samples with reported concentrations of 7.72 mg/kg in SS-NG-153 and 3.19 mg/kg in SS-NG-226.

For arsenic, the NC Department of Agriculture and Consumer Services publication "*Heavy Metals in North Carolina Soils: Occurrence & Significance*" references an average arsenic concentration of 4.5 mg/kg in North Carolina. With respect to manganese, the Agency for Toxic Substances and Disease Registry (ASTDR) publication "*Toxicological Profile for Manganese"* indicates average natural background levels of manganese in soils range from around 40 to 900 mg/kg, with an estimated mean background concentration of 330 mg/kg. The ASTDR publication "*Toxicological Profile for Cobalt*" also indicates typical cobalt concentrations in soil range between 1 mg/kg to 40 mg/kg and notes an average concentration of 7.2 mg/kg in US soils. As such, the detections of

arsenic, manganese, and cobalt reported in these samples do not appear to be attributed to anthropogenic causes or historical use of the park, but rather a byproduct of the natural environment.

The SVOC benzo(b)fluoranthene was reported in sample SS-NG-153 at an estimated ("J-value") concentration equal to its Residential PSRG when adjusting for significant digits. Several other SVOCs and/or HSL metals were also reported in samples SS-NG-153 and SS-NG-226, but at concentrations below their respective PSRGs.

Based on the results of the field screening and confirmatory soil sampling activities performed to date, the Residential PSRG exceedance of lead reported in the sample collected from beneath the mulch (approximately 12-18 inches BLS) of the unlined playground area appears to be an isolated occurrence at Northgate Park. However, elevated lead concentrations (e.g., greater than 280 mg/kg) were confirmed at locations SS-72, SS-91, SS-92, SS-184, and SS-226 (both the paired shallow and deep samples), but at concentrations below the Residential PSRG of 400 mg/kg. Four of these samples (SS-72, SS-91, SS-92, and SS-226) were located on the eastern portion of the park near Acadia Street and along the perimeter of a parking lot. The fifth sample location (SS-184) was located along the southernmost boundary of the park, immediately adjacent to West Club Boulevard. The relatively close proximity of these screening locations to a roadway and parking area suggests historical automobile traffic could be a potential source of the lead deposition observed at these locations.

5.2 Lyon Park

The XRF field screening values and laboratory confirmation results for lead at Lyon Park are summarized on **Table 3** with the results and sample locations illustrated on **Figures 3A and 3B.** Results of the additional SVOC and HSL metals analyses are summarized in **Table 8.**

As indicated, XRF field screening and laboratory confirmation testing of surface soils did not identify lead concentrations above the Residential PSRG of 400 mg/kg, with exception of the duplicate sample collected at SS-45 (553 mg/kg, with the lead concentration in the primary sample from this location reported at 384 mg/kg and below the Residential PSRG). The paired sample collected from approximately 12 inches BLS at this location [SS-LY-45 (1')] exhibited a lead concentration of 248 mg/kg, below the Residential PSRG. Additionally, no evidence of incinerator ash deposits (including glass/porcelain fragments) was encountered during hand auger boring advancement at this location.

Surface soil samples at location SS-45 were also submitted for laboratory analysis of SVOCs and HSL metals. The results reported arsenic (5.04 mg/kg) and cobalt (5.95 mg/kg) above their Residential PSRGs but at concentrations considered to be naturally occurring. Paired samples SS-LY-45 and SS-LY-45 (1') were collected along the eastern

boundary of the site, adjacent to the property that formerly housed the historical off-site incinerator operations. The samples were collected on the eastern side of the UT to Third Fork Creek near the historical off-site incinerator property and opposite the accessible recreation areas within the park. Please also note there is a significant topographic gradient between Lyon Park (downgradient) and the historical off-site incinerator property (upgradient). Several proposed screening locations in the vicinity of SS-45 were also inaccessible during the July 2023 assessment due to dense poison ivy and/or heavy forestation in these areas.

The sample collected from approximately 12 inches BLS for the paired shallow/deep location at SS-61 (which exhibited background concentrations of lead at 5.14 mg/kg) did not exhibit SVOCs or HSL metals at concentrations above the Residential PSRGs, with exception of arsenic at naturally occurring background concentrations. In general, the reported HSL metals and lead concentrations appear to reflect a direct proportional relationship based on comparison of the two paired sample locations within Lyon Park.

Based on the results of the field screening and confirmatory soil sampling activities performed to date, the Residential PSRG exceedance of lead reported in the sample along the eastern property boundary, located adjacent to the former off-site incinerator property, appears to be an isolated occurrence on the opposite side of the UT to Third Fork Creek from the baseball field and other associated recreation areas within the park. Additionally, while the vegetated northeast portion of the park was not accessible, screening and sampling performed around the perimeter of this area did not suggest elevated lead concentrations indicative of an unacceptable exposure risk to the public.

5.3 Walltown Park

The XRF field screening values and laboratory confirmation results for lead at Walltown Park are summarized in **Table 4** with the results and sample locations illustrated on **Figures 4A, 4B, and 4C.** Results of the additional SVOC and HSL metals analyses are summarized in **Table 8.**

As indicated, XRF field screening and laboratory confirmation testing of surface soils performed to date identified several areas with lead concentrations above the Residential PSRG. A total of eight surface soil sample locations were identified with lead concentrations above the Residential PSRG, with seven of these locations located within 50 feet of the UT to Ellerbe Creek. The exception is sample location SS-53, located adjacent to a basketball court on the western portion of the park, which reported a lead concentration of 459 mg/kg.

Arsenic, cadmium, cobalt, lead, and manganese were reported at concentrations above their respective Residential PSRGs in one of the two soil samples collected for additional SVOC and HSL metals analyses (SS-WT-50, collected from a location exhibiting a lead concentration of 1,780 mg/kg). While typical naturally occurring concentrations of arsenic are above the Residential PSRG, the concentration of arsenic reported in SS-WT-50 (16.8 mg/kg) appears to be elevated above what would be considered naturally occurring background concentrations. No additional HSL metals or SVOCs were reported above the Residential PSRGs for sample SS-WT-50 or sample SS-WT-18, with the exception of arsenic (2.10 mg/kg) and cobalt (4.70 mg/kg; equal to its Residential PSRG) reported at naturally occurring background concentrations in sample SS-WT-18. In general, the reported HSL metals and lead concentrations appear to reflect a direct proportional relationship based on comparison of the above sample locations within Walltown Park.

The soil samples collected from 12 inches BLS for the paired shallow/deep sample locations at SS-43, SS-79, and SS-93 (locations with surface soil lead concentrations above 400 mg/kg) also exhibited lead concentrations above the Residential PSRG in the deep (12 inches BLS) samples. Two of the paired soil sample locations (SS-79 and SS-93) exhibited higher lead concentrations in the samples collected at depth when compared to those reported in the surface samples (3,480 mg/kg vs. 1,330 mg/kg for SS-79 and 2,290 mg/kg vs. 653 mg/kg for SS-93). Glass and porcelain fragments were also encountered during hand auger boring advancement at each of the deep sample locations (SS-43, SS-79, and SS-93). These materials are often considered to be characteristic of incinerator ash deposits, as these fragments suggest the disposal of non-combustible products and/or byproducts from the historical on-site incinerator operations.

5.4 East Durham Park

The XRF field screening values and laboratory confirmation results for the lead at East Durham Park are summarized in **Table 3** with the results and sample locations illustrated on **Figures 5A and 5B.** Results of the additional SVOC and HSL metals analyses are summarized in **Table 8.**

As indicated, XRF field screening and laboratory confirmation testing of surficial soils performed to date have identified several locations with elevated lead concentrations above the Residential PSRG. These locations appear to be primarily associated with two separate areas: an open field on the southeast portion of the property (sample locations SS 44, SS-45, SS-51, SS-54, SS-55, SS-60, and SS-61), located adjacent to a multi-family residential property and separated from the main access and recreation areas of the park by the UT to Ellerbe Creek; and an open field on the western portion of the park located adjacent to an on-site recreation shelter (sample location SS-40).

Sample location SS-48 was selected for analysis of HSL metals and SVOCs based on the low lead concentration suggested by field screening and SS-51 was selected based on lead concentration reported during the previous field screening.

Cadmium, cobalt, copper, lead, and manganese were reported at concentrations above their respective Residential PSRGs in one of the two soil samples collected for additional SVOC and HSL metals analyses (SS-ED-51, collected from a location exhibiting a lead concentration of 1,510 mg/kg). Arsenic was also reported in SS-ED-51 at a naturally occurring concentration, but above its Residential PSRG. HSL metals were not reported above their respective Residential PSRGs for sample SS-ED-48, which exhibited a lower/background lead concentration of 7.95 mg/kg, and SVOCs were not reported in either of the samples at concentrations above laboratory detection limits. In general, the reported HSL metals and lead concentrations appear to reflect a direct proportional relationship based on comparison of the above soil sample locations within East Durham Park.

Three of the four soil samples collected from 12 inches BLS for the paired shallow/deep samples were collected from locations that exhibited surface concentrations of lead above the Residential PSRG (SS-40, SS-51, and SS-55). These paired samples collected at depth also exhibited lead concentrations above the Residential PSRG. Two of the paired locations (SS-40 and SS-51) exhibited higher lead concentrations in the samples at depth when compared to those reported in the surface samples (3,180 mg/kg vs. 860 mg/kg at SS-40 and 2,530 mg/kg vs. 1,510 mg/kg (primary) and 2,210 mg/kg (duplicate) at SS-51). The fourth sample collected from 12 inches BLS for the paired shallow/deep samples was collected from a location that exhibited a surficial concentration of lead (184 mg/kg) beneath the Residential PSRG. The deep sample collected from this location indicated a decreasing trend for lead concentrations when compared to the results of the shallow soil sample (184 mg/kg in the shallow sample vs. 12.8 mg/kg in the deep sample). Glass and porcelain fragments were encountered during hand auger boring advancement at each of the paired sample locations that exhibited lead concentrations above the Residential PSRG (SS-40, SS-51, and SS-55). These materials are often considered to be characteristic of incinerator ash deposits, as these fragments suggest the disposal of non-combustible products and/or byproducts from the historical on-site incinerator operations.

5.5 East End Park

The XRF field screening values and laboratory confirmation results for lead at East End Park are summarized in **Table 6** with the results and sample locations illustrated on **Figures 6A and 6B.** Results of the additional SVOC and HSL metals analyses are summarized in **Table 8.**

As indicated, XRF field screening and laboratory confirmation testing of surficial soils performed to date have identified several soil sample locations above the Residential PSRG. Of the 20 surface soil samples collected for lead analysis during the July 2023 field assessment activities, three sample locations (SS-24, SS-90, and SS-101) exhibited lead above the Residential PSRG. Two of these sample locations (SS-90 and SS-101) were located within the gated/restricted area (i.e. not accessible to the public or included in park operations) on the southern portion of the property. The laboratory analytical results also did not identify concentrations of lead above the Residential PSRG for the paired samples collected at depth from approximately 12 inches BLS (SS-EE-81 (1') and SS-EE-82 (1')). Field evidence of incinerator ash deposits such as glass or porcelain fragments was also not encountered during hand auger boring advancement at these locations. Finally, a natural/background lead concentration of 13.2 mg/kg was reported in the soil sample collected from beneath the unlined playground (SS-EE-Playground) and associated overlying mulch layer.

Cobalt and arsenic were reported at concentrations above their respective Residential PSRGs in one of the two soil samples collected for additional SVOC and HSL metals analyses (SS-EE-54, collected from a location exhibiting a natural/background lead concentration of 24.8 mg/kg) but at concentrations considered to be naturally occurring. HSL metals were not reported above their respective Residential PSRGs for sample SS-EE-104, which exhibited a higher lead concentration of 134 mg/kg. SVOCs were not reported in either of the samples at concentrations above laboratory detection limits. In general, the reported HSL metals and lead concentrations appear to reflect an inverse relationship based on comparison of the above soil samples for East End Park.

Based on the results of the field screening and confirmatory soil sampling activities performed to date, the Residential PSRG exceedance of lead reported at sample location SS-24 (772 mg/kg) appears to be an isolated occurrence with respect to the accessible and/or unrestricted areas within the park. This sample was collected from an area located adjacent to the former community center (a painted cinderblock structure within the park). Historical aerial images show this building was present at the park beginning in the early to mid 1960's and, therefore, a potential source of lead found in the surface soil sample collected at SS-24 may potentially be associated with peeling and/or chipping of paint from the nearby structure.

6.0 SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

The overall objective of this investigation was to rapidly assess surface soil in these five parks for the presence of lead and other potential contaminants, since contact with these soils appears to be the most likely exposure pathway to the public. As such, Mid-Atlantic offers the following summary of assessment activities and results:

- Northgate Park: Mid-Atlantic screened and/or sampled 259 locations at Northgate Park and collected a paired sample for lead analysis at 12 inches BLS at sample location SS-226. A sample from 12-18 inches BLS was also collected beneath a playground area which exhibited lead impacts above its Residential PSRG. The other two playgrounds at the park were equipped with a fabric liner and overlain by approximately one foot of mulch (restricting access to the underlying soils). Of the 34 samples collected, one exhibited lead impacts above the Residential PSRG. Three HSL metals (arsenic, cobalt, manganese) were reported in sample SS-NG-153 above their Residential PSRGs. The reported concentrations of these metals appear to be consistent with natural background levels. Elevated lead concentrations in soil (above 280 mg/kg but below 400 mg/kg) on the eastern portion of the park near Acadia Street and along the perimeter of an adjoining parking lot suggests lead deposition from historical automobile traffic as a potential source of lead impacts.
- Lyon Park: Assessment at Lyon Park included screening at 81 locations. In addition, one sample was taken 12 inches BLS at sample location SS-45. The two playgrounds at the park were equipped with fabric liners underneath the mulch and were not sampled for lead. One of the 15 samples collected, the duplicate for sample SS-LY-45 (located adjacent to the upgradient former off-site incinerator property), exhibited lead at a concentration (553 mg/kg) above its Residential PSRG. The remaining samples did not exhibit lead at concentrations above its Residential PSRG. Other HSL metals, except for arsenic and cobalt at reported concentrations consistent with naturally occurring background levels, and SVOCs were not reported at concentrations above their respective Residential PSRGs.
- Walltown Park: Eleven samples at Walltown Park exhibited lead impacts to soil above its Residential PSRG out of the 27 samples collected. A total of eight surface sample locations were identified with lead concentrations above its Residential PSRG, with seven of these locations located within 50 feet of the UT to Ellerbe Creek which bisects the central portion of the park. The three paired samples from 12 inches BLS also exhibited lead at concentrations above its Residential PSRG, two of which exhibited greater lead concentrations at depth. Materials often considered to be characteristic of incinerator ash deposits were encountered during hand auger advancement at the park. Arsenic, cadmium, and lead were identified in sample SS-WT-50 at concentrations above their respective Residential PSRGs. Cobalt and manganese were also reported in the sample above their Residential PSRGs, but at concentrations consistent with naturally occurring background levels SVOCs were not reported in soil above laboratory method detection limits. Since the playground at the park was equipped with a fabric liner under approximately one foot of much, a playground sample was not collected at the park.

- East Durham Park: Out of 19 soil samples collected at East Durham Park, laboratory confirmation testing indicated the presence of lead above its Residential PSRG in eleven samples. The laboratory reported lead concentrations above its Residential PSRG in three of the four paired samples from 12 inches BLS, with two of these locations exhibiting increasing lead concentrations in the samples collected at depth. Materials often considered to be characteristic of incinerator ash deposits were encountered during hand auger advancement at these three locations. Elevated lead impacts appear to be primarily located in an open field on the southeast portion of the property and an open field on the western portion of the park located adjacent to the recreational shelter. HSL metals including arsenic, cadmium, cobalt, copper, and manganese were also present at concentrations above their respective Residential PSRGs. The reported concentrations of arsenic, cobalt, and manganese were consistent with naturally occurring background levels. SVOCs were not reported in soil above laboratory method detection limits.
- East End Park: Of the 23 soil samples collected for lead analysis at East End Park, three exhibited lead above its Residential PSRG. One of these samples was collected adjacent to a former community center on the park grounds and two consisted of soil collected at a former sign and signal shop south of the public access areas for the park. White and yellow strips of road paint on the pavement next to the paint shop and the paint applied to the park structure adjacent to SS-24 are possible sources of lead that has migrated to soil. The two paired samples collected from 12 inches BLS located at the former paint shop did not exhibit lead at concentrations above its Residential PSRG. Except for arsenic and cobalt at concentrations consistent with natural background levels, HSL metals nor SVOCs were reported in soil above their respective Residential PSRGs. Two playground areas were encountered at the park, one of which was equipped with a fabric liner and approximately one foot of mulch overburden and one that was not. The sample collected beneath the playground without a liner did not exhibit lead impacts to soil above its Residential PSRG.

Based on these results, Mid-Atlantic offers the following conclusions:

- Based on surficial XRF screening, laboratory confirmation testing and field observations, widespread surficial lead impacts to soil do not appear to be present at Northgate Park or Lyon Park which would present a potential exposure risk to the public. The elevated lead in the playground at Northgate Park was located under approximately 1-foot of mulch while sample location SS-45 at Lyon Park was located east of the on-site UT to Third Fork Creek and on the opposite side of the UT from the baseball field and other main access areas within the park.
- Based on surficial XRF screening, laboratory confirmation testing and field observations, widespread surficial lead impacts to soil do not appear to be present within the accessible/unrestricted areas of East End Park. It appears lead-based

paint may have contributed to lead concentrations reported in samples collected from the sign and signal shop (a fenced area not accessible to the public) on the southern portion of the property and/or in the vicinity of sample location SS-24.

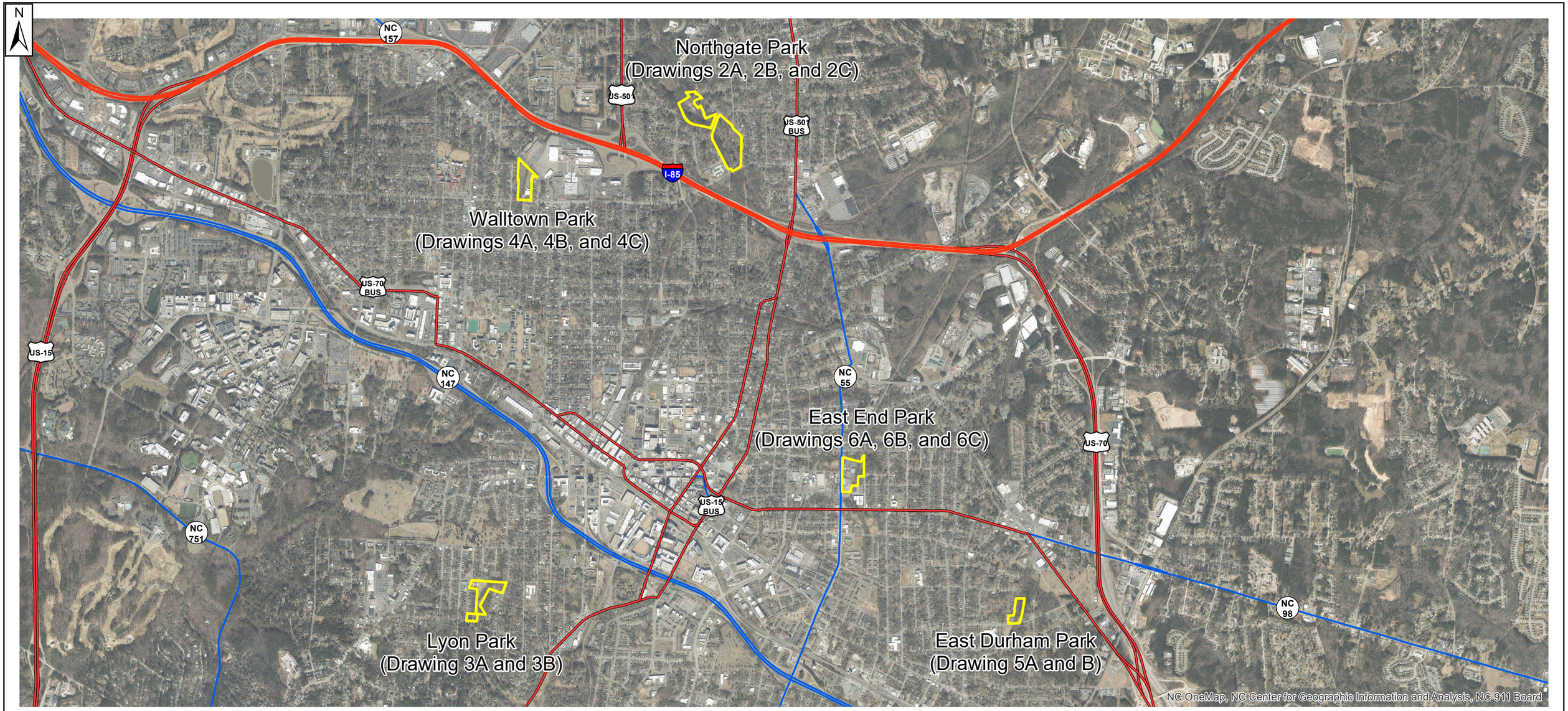
- Arsenic, cobalt, and/or manganese were reported in soil samples collected from Northgate Park, Lyon Park, and East End Park above their respective Residential PSRGs but at concentrations considered to be naturally occurring.
- Based on surficial XRF screening, laboratory confirmation testing, paired shallow/ deep soil sample analyses and field observations, incinerator ash/debris appears to have been disposed at Walltown Park and East Durham Park.
- HSL metals appear to exhibit a direct proportional relationship to elevated lead concentrations at the parks which exhibited apparent incinerator ash deposition (Walltown Park and East Durham Park).
- SVOCs were not detected at concentrations above their respective laboratory detection limits and/or Residential PSRGs. As such, it appears that lead is the main contaminant of concern associated with the former incineration activities.

Based on these conclusions, Mid-Atlantic offers the following recommendations:

- Submit this report to the NCDEQ IHSB for review.
- Restrict access to areas where lead impacts to soil were identified above its Residential PSRG to prevent exposure.
- Further investigation to delineate lead impacts to soil and confirm whether lead-based paint is a source contributing to lead impacts.
- Evaluate remedial and/or mitigation strategies to prevent potential future exposure to the lead impacted soil. These options may include excavation of lead-impacted soil, access and/or land use restrictions, placement of a cap over impacted soil, and/or lead stabilization.

FIGURES

Mid Atlantic



REFERENCES:

1. AERIAL IMAGERY AND PARCEL BOUNDARIES FROM NC ONEMAP.
2. HIGHWAY DATA FROM NCDOT.

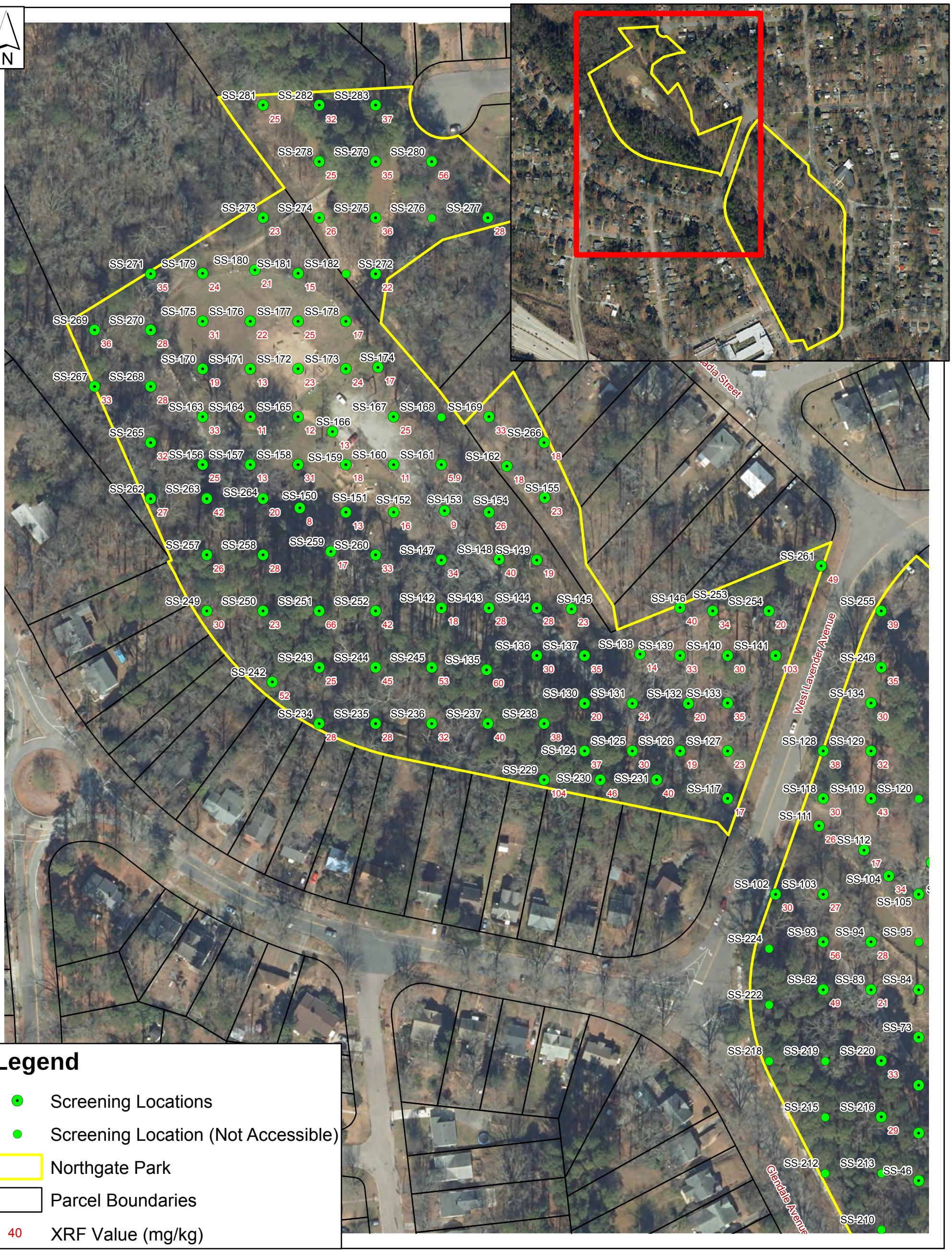
1 inch = 2,500 feet

0 5,000 10,000 15,000 Feet

Mid Atlantic
Engineering & Environmental Solutions

PARK LOCATION MAP
DURHAM PARK LEAD ASSESSMENT
DURHAM, NORTH CAROLINA

DRAWN BY: KRC	DATE: AUGUST 2023
DRAFT CHECK: CBH	JOB NO: R4370.00
ENG. CHECK:	GIS NO: 03G-R4370.00-1-Overview
APPROVAL: CBH	FIG NO: 1



Legend

- Screening Locations
- Screening Location (Not Accessible)
- Northgate Park
- Parcel Boundaries
- 40 XRF Value (mg/kg)

REFERENCES:

1. AERIAL IMAGERY AND PARCEL BOUNDARIES FROM NC ONEMAP.
2. MID-ATLANTIC FIELD NOTES.

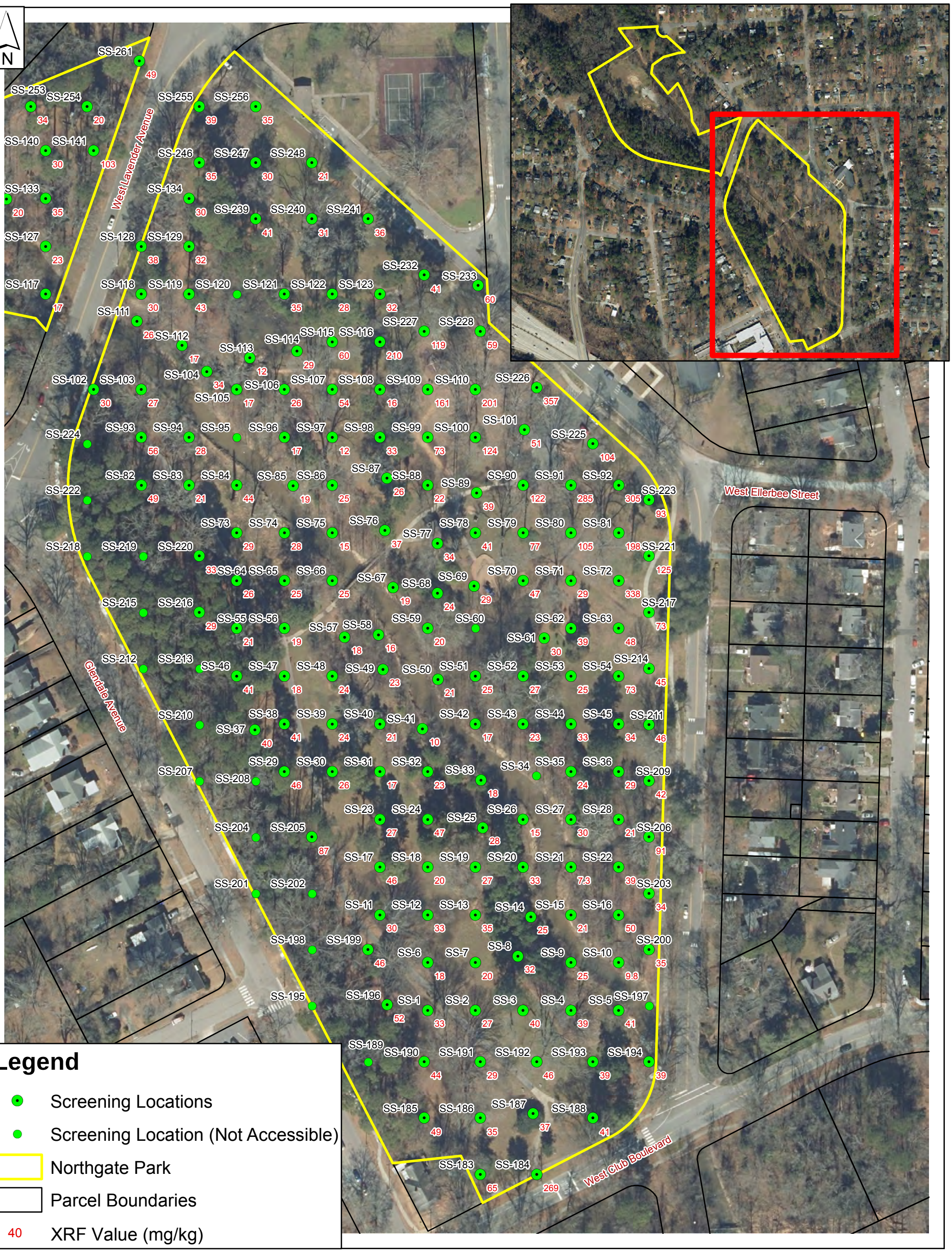
1 inch □ 120 feet

0 240 480 Feet

Mid Atlantic
Engineering & Environmental Solutions

SOIL SCREENING LOCATION MAP
DURHAM PARK LEAD ASSESSMENT
NORTHERN PORTION OF
NORTHGATE PARK
300 WEST CLUB BOULEVARD
404 WEST LAVENDER AVENUE AND
2623 ACADIA STREET

DRAWN BY: KRC	DATE: AUGUST 2023
DRAFT CHECK: CBH	JOB NO: R4370.00
ENG. CHECK:	GIS NO: 03G-R4370.00-2A-NG□N
APPROVAL: CBH	FIG NO: 2A



REFERENCES:

1. AERIAL IMAGERY AND PARCEL BOUNDARIES FROM NC ONEMAP.
2. MID-ATLANTIC FIELD NOTES.

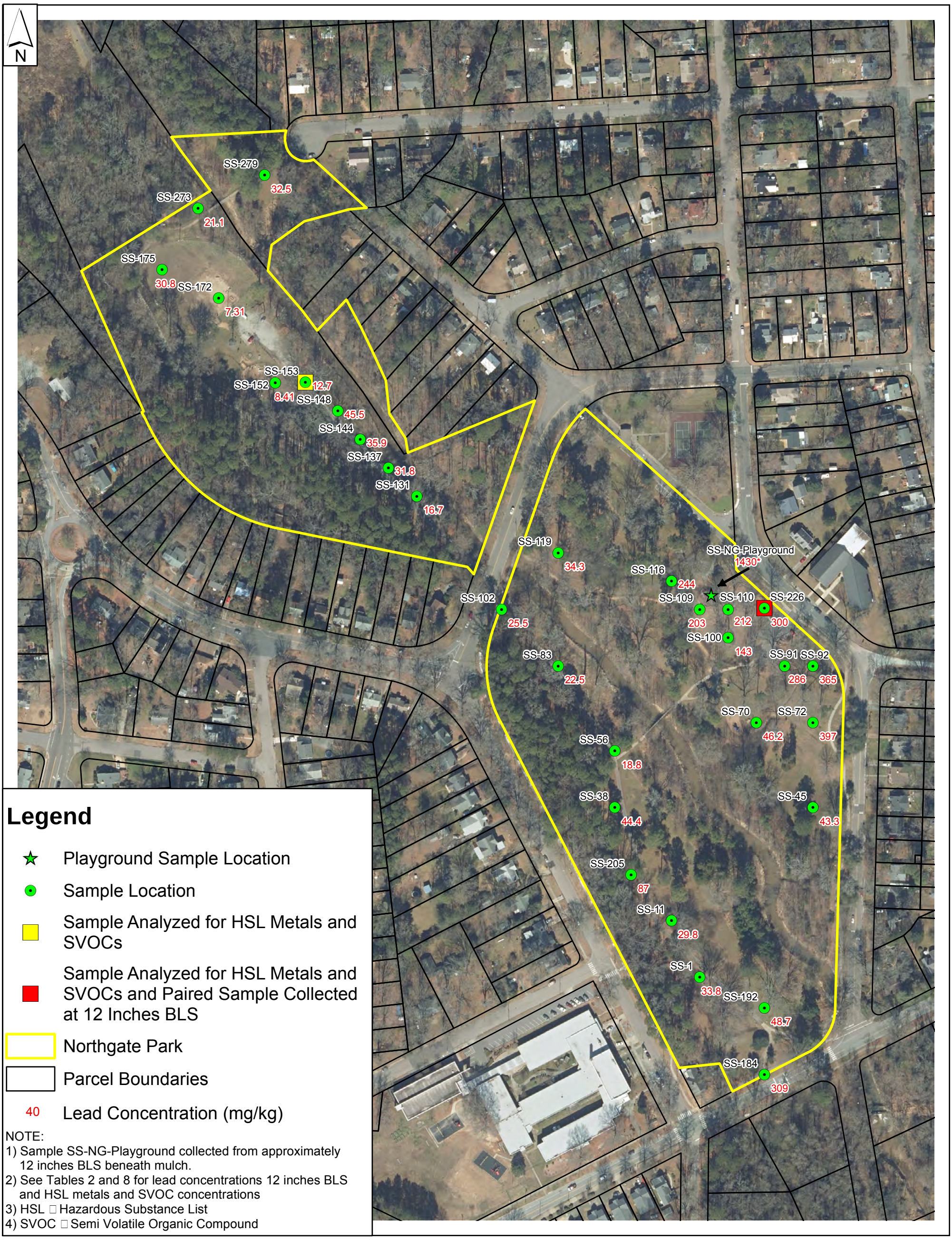
1 inch □ 120 feet

0 240 480 Feet

Mid Atlantic
Engineering & Environmental Solutions

SOIL SCREENING LOCATION MAP
DURHAM PARK LEAD ASSESSMENT
SOUTHERN PORTION OF
NORTHGATE PARK
300 WEST CLUB BOULEVARD
404 WEST LAVENDER AVENUE AND
2623 ACADIA STREET

DRAWN BY: KRC	DATE: AUGUST 2023
DRAFT CHECK: CBH	JOB NO: R4370.00
ENG. CHECK:	GIS NO: 03G-R4370.00-2B-NG□S
APPROVAL: CBH	FIG NO: 2B



Legend

- Playground Sample Location
- Sample Location
- Sample Analyzed for HSL Metals and SVOCs
- Sample Analyzed for HSL Metals and SVOCs and Paired Sample Collected at 12 Inches BLS
- Northgate Park
- Parcel Boundaries
- 40 Lead Concentration (mg/kg)

NOTE:
1) Sample SS-NG-Playground collected from approximately 12 inches BLS beneath mulch.
2) See Tables 2 and 8 for lead concentrations 12 inches BLS and HSL metals and SVOC concentrations
3) HSL □ Hazardous Substance List
4) SVOC □ Semi Volatile Organic Compound

REFERENCES:
1. AERIAL IMAGERY AND PARCEL BOUNDARIES FROM NC ONEMAP.
2. MID-ATLANTIC FIELD NOTES.

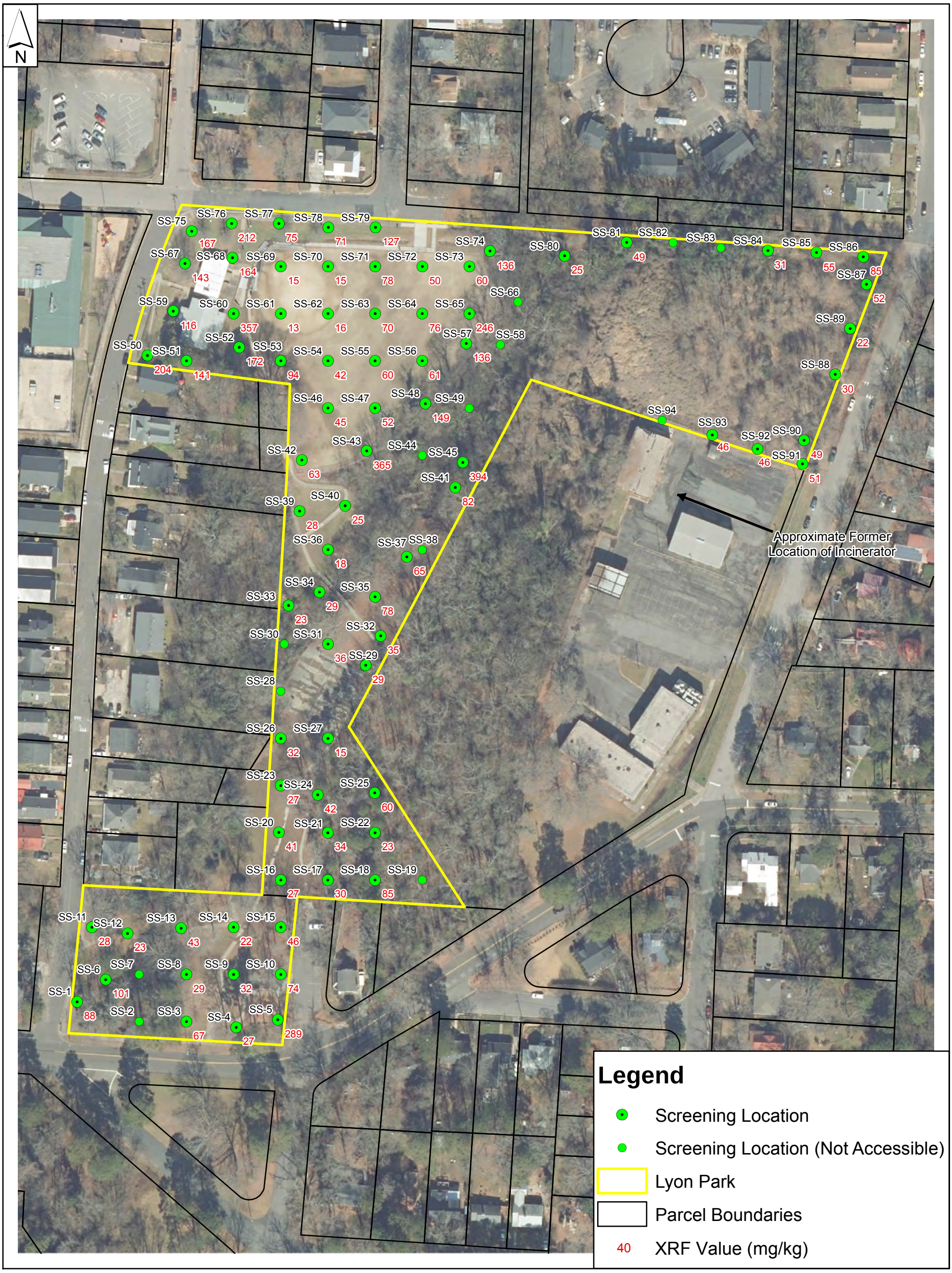
1 inch □ 200 feet

0 400 800 Feet

Mid Atlantic
Engineering & Environmental Solutions

SOIL SAMPLE LOCATION MAP
DURHAM PARK LEAD ASSESSMENT
NORTHGATE PARK
300 WEST CLUB BOULEVARD
404 WEST LAVENDER AVENUE AND
2623 ACADIA STREET

DRAWN BY: KRC	DATE: AUGUST 2023
DRAFT CHECK: CBH	JOB NO: R4370.00
ENG. CHECK:	GIS NO: 03G-R4370.00-2C-NG□LB
APPROVAL: CBH	FIG NO: 2C



REFERENCES:

1. AERIAL IMAGERY AND PARCEL BOUNDARIES FROM NC ONEMAP.
2. CERTIFIED SANBORN MAP REPORT BY ENVIRONMENTAL DATA RESOURCES, INC. DATED JUNE 27, 2023
3. MID-ATLANTIC FIELD NOTES

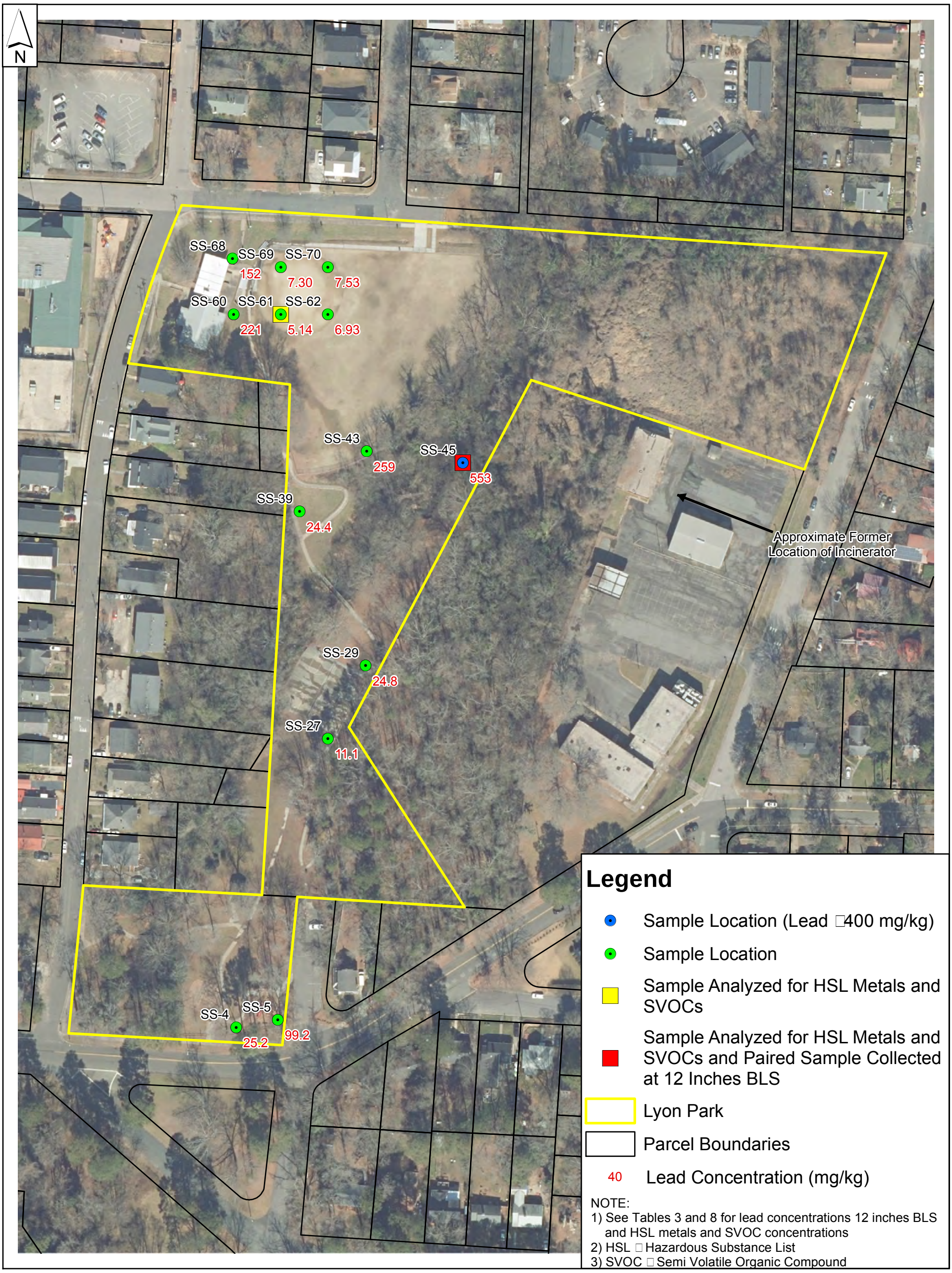
1 inch □ 120 feet

0 240 480 Feet

Mid Atlantic
Engineering & Environmental Solutions

SOIL SCREENING LOCATION MAP
DURHAM PARK LEAD ASSESSMENT
LYON PARK
1101 CORNELL STREET AND
1200 WEST LAKEWOOD AVENUE
DURHAM, NORTH CAROLINA

DRAWN BY: KRC	DATE: AUGUST 2023
DRAFT CHECK: DHN	JOB NO: R4370.00
ENG. CHECK:	GIS NO: 03G-R4370.00-3A-LY
APPROVAL: DHN	FIG NO: 3A



REFERENCES:

1. AERIAL IMAGERY AND PARCEL BOUNDARIES FROM NC ONEMAP.
2. CERTIFIED SANBORN MAP REPORT BY ENVIRONMENTAL DATA RESOURCES, INC. DATED JUNE 27, 2023
3. MID-ATLANTIC FIELD NOTES

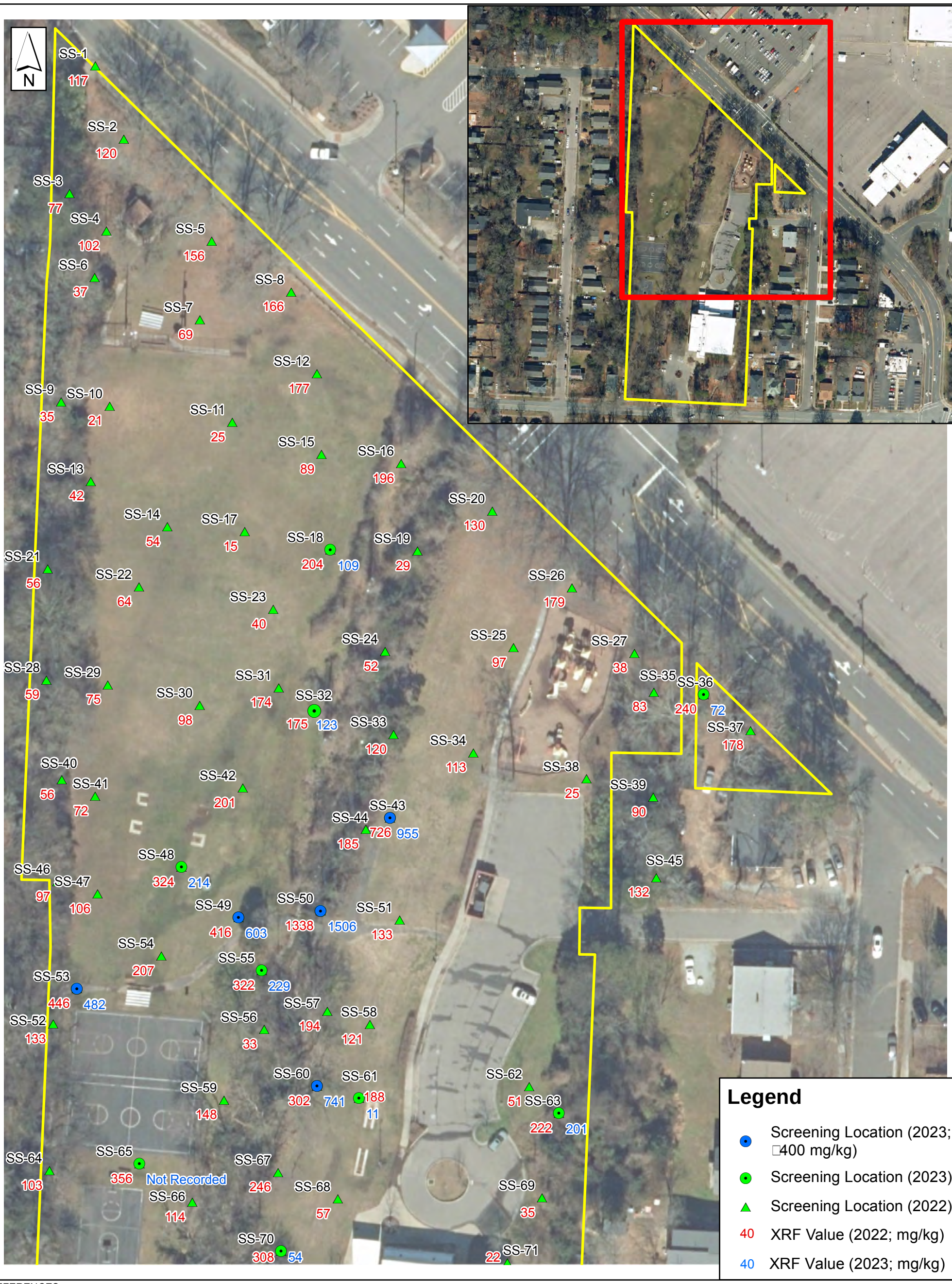
1 inch = 120 feet

0 240 480 Feet

Mid Atlantic
Engineering & Environmental Solutions

SAMPLE LOCATION MAP
DURHAM PARK LEAD ASSESSMENT
LYON PARK
1101 CORNELL STREET AND
1200 WEST LAKEWOOD AVENUE
DURHAM, NORTH CAROLINA

DRAWN BY: KRC	DATE: AUGUST 2023
DRAFT CHECK: DHN	JOB NO: R4370.00
ENG. CHECK:	GIS NO: 03G-R4370.00-3B-LY
APPROVAL: DHN	FIG NO: 3B



REFERENCES:

1. AERIAL IMAGERY AND PARCEL BOUNDARIES FROM NC ONEMAP.
2. *Legacy Pb contamination in the soils of three Durham city parks: Do secondary forest organic horizons effectively blanket Pb in city park soils contaminated by historic waste incineration?* Enikoe Bihari, December 16, 2022
3. MID-ATLANTIC FIELD NOTES.

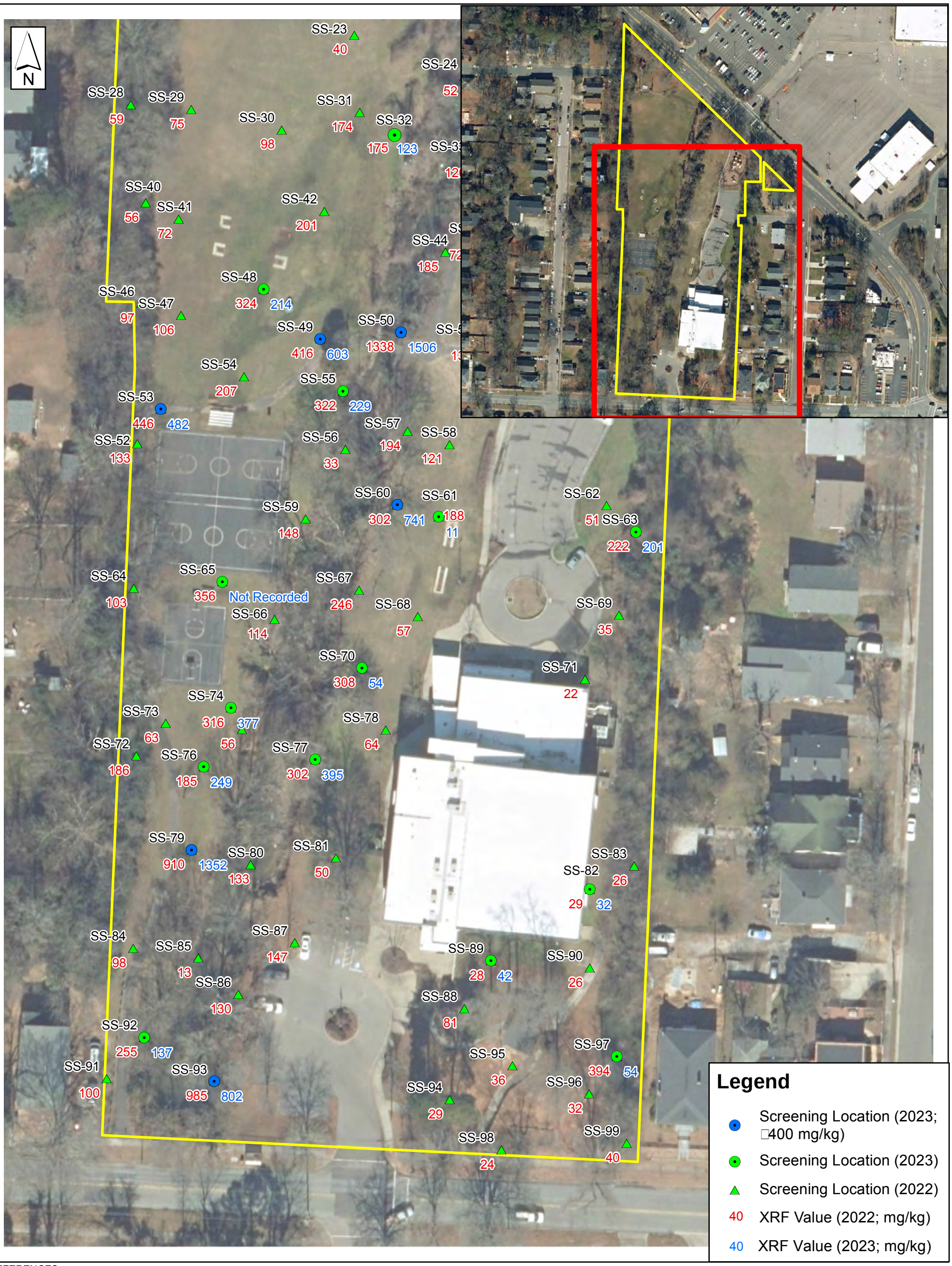
1 inch = 60 feet

0 120 240 Feet

Mid Atlantic
Engineering & Environmental Solutions

SCREENING LOCATION MAP
DURHAM PARK LEAD ASSESSMENT
NORTHERN PORTION OF WALLTOWN PARK
1308 WEST CLUB BOULEVARD
DURHAM, NORTH CAROLINA

DRAWN BY: KRC	DATE: AUGUST 2023
DRAFT CHECK: CBH	JOB NO: R4370.00
ENG. CHECK:	GIS NO: 03G-R4370.00-4A-Walltown
APPROVAL: CBH	FIG NO: 4A



Legend

- Screening Location (2023; ≥400 mg/kg)
- Screening Location (2023)
- Screening Location (2022)
- 40 XRF Value (2022; mg/kg)
- 40 XRF Value (2023; mg/kg)

REFERENCES:

1. AERIAL IMAGERY AND PARCEL BOUNDARIES FROM NC ONEMAP.
2. *Legacy Pb contamination in the soils of three Durham city parks: Do secondary forest organic horizons effectively blanket Pb in city park soils contaminated by historic waste incineration?* Enikoe Bihari, December 16, 2022
3. MID-ATLANTIC FIELD NOTES.

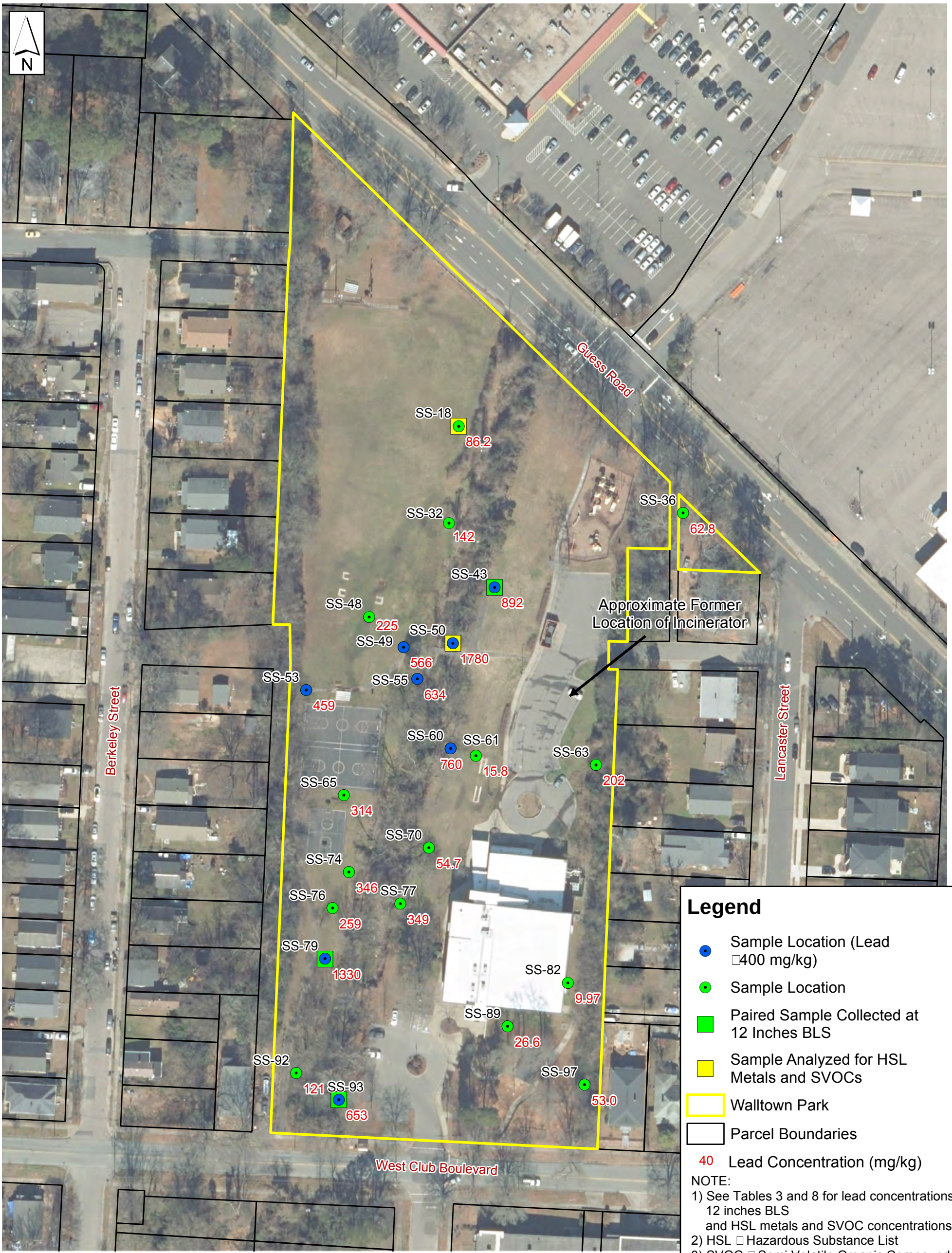
1 inch = 60 feet

0 120 240 Feet

Mid Atlantic
Engineering & Environmental Solutions

SCREENING LOCATION MAP
DURHAM PARK LEAD ASSESSMENT
SOUTHERN PORTION OF WALLTOWN PARK
1308 WEST CLUB BOULEVARD
DURHAM, NORTH CAROLINA

DRAWN BY: KRC	DATE: AUGUST 2023
DRAFT CHECK: CBH	JOB NO: R4370.00
ENG. CHECK:	GIS NO: 03G-R4370.00-4B-Walltown
APPROVAL: CBH	FIG NO: 4B



REFERENCES:

1. AERIAL IMAGERY AND PARCEL BOUNDARIES FROM NC ONEMAP.
2. *Legacy Pb contamination in the soils of three Durham city parks: Do secondary forest organic horizons effectively blanket Pb in city park soils contaminated by historic waste incineration?* Enikoe Bihari, December 16, 2022
3. MID-ATLANTIC FIELD NOTES.

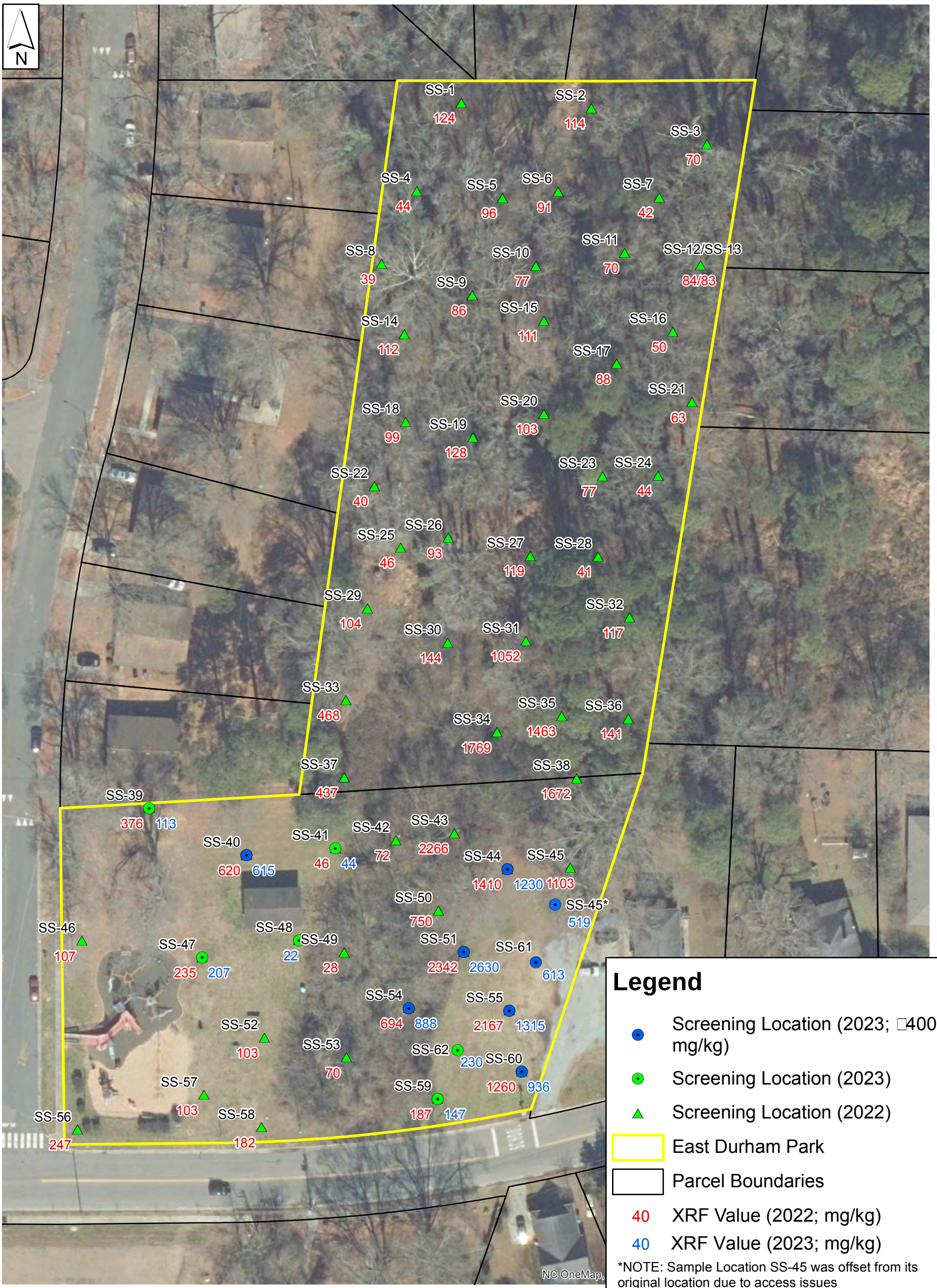
1 inch □ 100 feet

0 200 400 Feet

Mid Atlantic
Engineering & Environmental Solutions

SCREENING LOCATION MAP
DURHAM PARK LEAD ASSESSMENT
SOUTHERN PORTION OF WALLTOWN PARK
1308 WEST CLUB BOULEVARD
DURHAM, NORTH CAROLINA

DRAWN BY: KRC	DATE: AUGUST 2023
DRAFT CHECK: CBH	JOB NO: R4370.00
ENG. CHECK:	GIS NO: 03G-R4370.00-4C-Walltown
APPROVAL: CBH	FIG NO: 4C



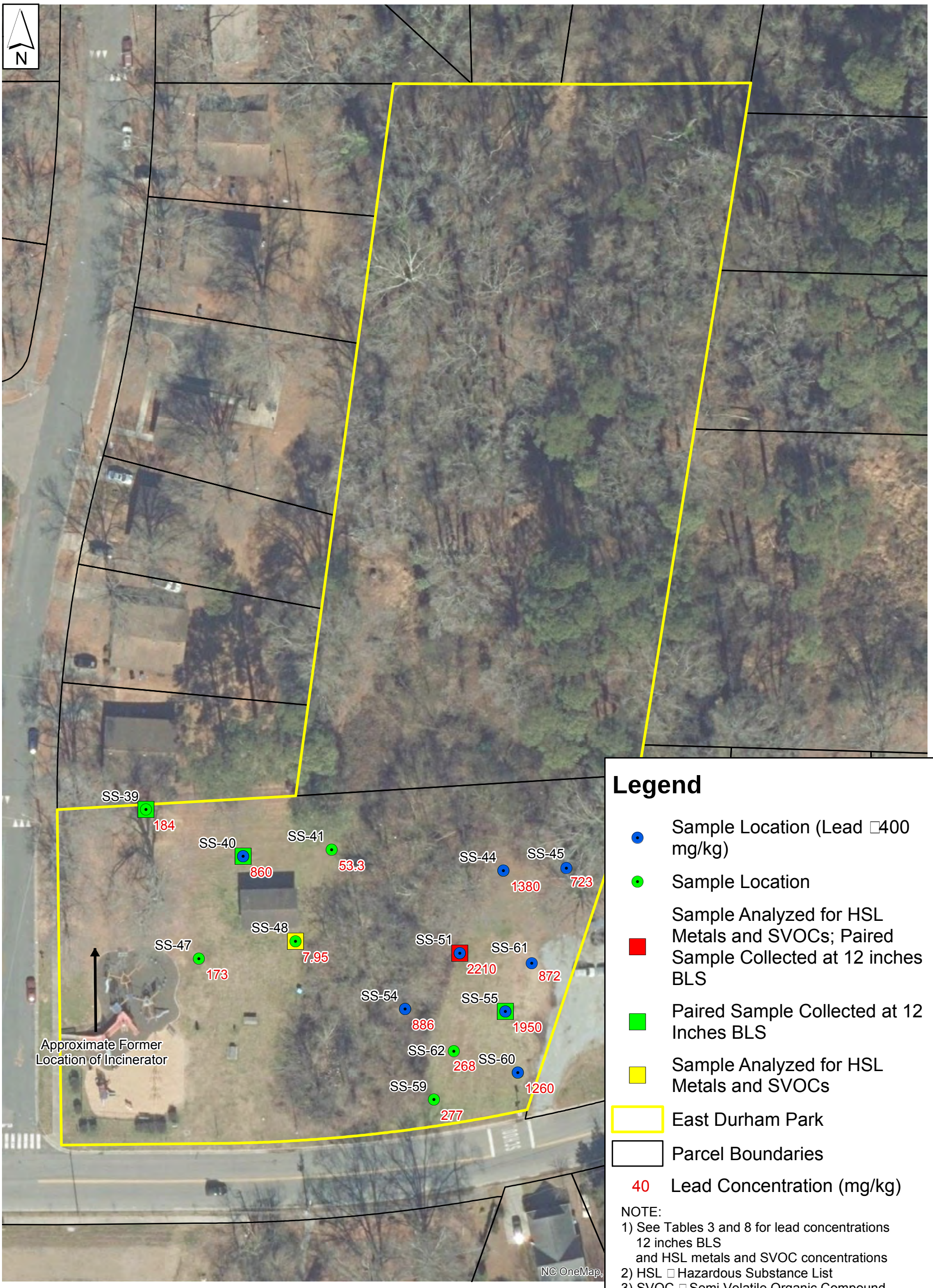
REFERENCES:

1. AERIAL IMAGERY AND PARCEL BOUNDARIES FROM NC ONEMAP.
2. *Legacy Pb contamination in the soils of three Durham city parks: Do secondary forest organic horizons effectively blanket Pb in city park soils contaminated by historic waste incineration?* Enikoe Bihari, December 16, 2022
3. MID-ATLANTIC FIELD NOTES

Mid Atlantic
Engineering & Environmental Solutions

SCREENING LOCATION MAP
EAST DURHAM PARK
2601 EAST MAIN STREET AND
300 GARY STREET
DURHAM, NORTH CAROLINA

DRAWN BY: KRC	DATE: AUGUST 2023
DRAFT CHECK: CBH	JOB NO: R4370.00
ENG. CHECK:	GIS NO: 03G-R4370.00-5A-East Durham Park
APPROVAL: CBH	FIG NO: 5A



Legend

- Sample Location (Lead □400 mg/kg)
- Sample Location
- Sample Analyzed for HSL Metals and SVOCs; Paired Sample Collected at 12 inches BLS
- Paired Sample Collected at 12 Inches BLS
- Sample Analyzed for HSL Metals and SVOCs
- East Durham Park
- Parcel Boundaries
- 40 Lead Concentration (mg/kg)

NOTE:
1) See Tables 3 and 8 for lead concentrations 12 inches BLS and HSL metals and SVOC concentrations
2) HSL □ Hazardous Substance List
3) SVOC □ Semi Volatile Organic Compound

REFERENCES:

1. AERIAL IMAGERY AND PARCEL BOUNDARIES FROM NC ONEMAP.
2. MID-ATLANTIC FIELD NOTES
3. *Legacy Pb contamination in the soils of three Durham city parks: Do secondary forest organic horizons effectively blanket Pb in city park soils contaminated by historic waste incineration?* Enikoe Bihari, December 16, 2022

1 inch □ 60 feet

0 120 240 Feet

Mid Atlantic Engineering & Environmental Solutions

SAMPLE LOCATION MAP
EAST DURHAM PARK
2601 EAST MAIN STREET AND
300 GARY STREET
DURHAM, NORTH CAROLINA

DRAWN BY: KRC	DATE: AUGUST 2023
DRAFT CHECK: CBH	JOB NO: R4370.00
ENG. CHECK:	GIS NO: 03G-R4370.00-5B-East□Durham□Park
APPROVAL: CBH	FIG NO: 5B

N

SS-1 44
SS-2 40
SS-3 126
SS-4 146
SS-5 21
SS-6 190
SS-7 122
SS-8 27
SS-9 22
SS-10 24
SS-11 31
SS-12 212
SS-13 93
SS-14 74
SS-15 205
SS-16 34
SS-17 61
SS-18 103
SS-19 141
SS-20 40
SS-21 47
SS-22 48
SS-23 177
SS-24 253
SS-25 84
SS-26 179
SS-27 123
SS-28 86
SS-29 19
SS-30 43
SS-31 19
SS-32 252
SS-33 134
SS-34 150
SS-35 35
SS-36 144
SS-37 40
SS-38 38
SS-39* 721
SS-40 105
SS-41 54
SS-42 23
SS-43 38
SS-44 54
SS-45 185
SS-46 37
SS-47 34
SS-48 112
SS-49/ SS-50 144 97
SS-51 174
SS-52 58
SS-53 47
SS-54 55
SS-55 9
SS-56 31
SS-57 15
SS-58 18
SS-59 26
SS-60 21
SS-61 103
SS-62 8
SS-64 31
SS-65 9
SS-66 30
SS-67 172
SS-68 34
SS-69 44
SS-70 134
42

NC OneMap, NC Center for Geographic Information and Analysis, NC 911 Board

Legend

- Screening Location (2023; ≥400 mg/kg)
- Screening Location (2023)
- Screening Location (2022)
- East End Park
- Parcel Boundaries
- Approximate Location of Fencing
- 40 XRF Value (2022; mg/kg)
- 40 XRF Value (2023; mg/kg)

NOTE:
1) Locations denoted with an asterisk (*) indicate screening locations where the planned sample location had to be offset due to access issues.

REFERENCES:

1. AERIAL IMAGERY AND PARCEL BOUNDARIES FROM NC ONEMAP.
2. *Legacy Pb contamination in the soils of three Durham city parks: Do secondary forest organic horizons effectively blanket Pb in city park soils contaminated by historic waste incineration?* Enikoe Bihari, December 16, 2022
3. MID-ATLANTIC FIELD NOTES

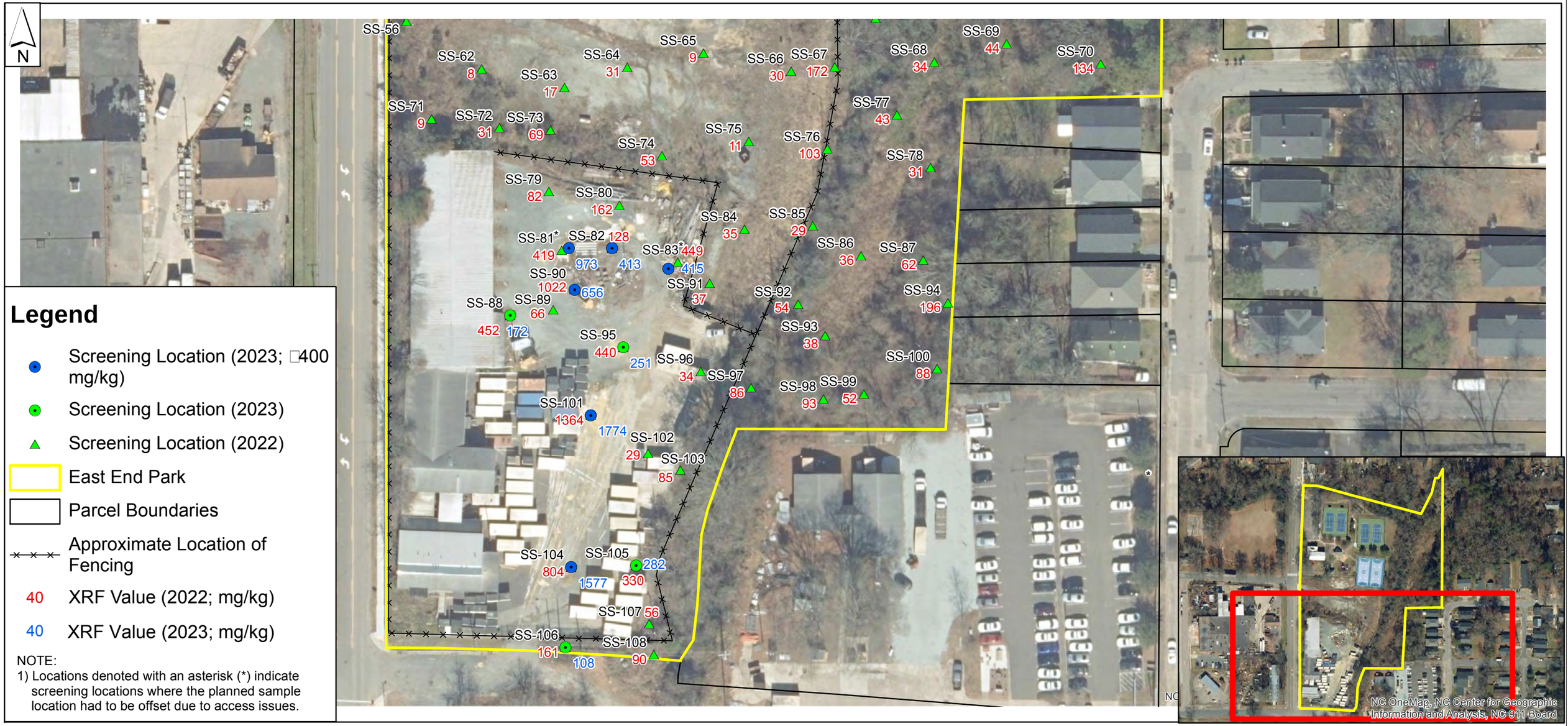
1 inch ≈ 70 feet

0 140 280 420 Feet

Mid Atlantic
Engineering & Environmental Solutions

SCREENING LOCATION MAP
DURHAM PARK LEAD ASSESSMENT
NORTHERN PORTION OF EAST END PARK
2300 NORTH ALSTON AVENUE
DURHAM, NORTH CAROLINA

DRAWN BY: KRC	DATE: AUGUST 2023
DRAFT CHECK: CBH	JOB NO: R4370.00
ENG. CHECK:	GIS NO: 03G-R4370.00-6A-East≈End
APPROVAL: CBH	FIG NO: 6A



Legend

- Screening Location (2023; ≥400 mg/kg)
- Screening Location (2023)
- Screening Location (2022)
- East End Park
- Parcel Boundaries
- Approximate Location of Fencing
- 40 XRF Value (2022; mg/kg)
- 40 XRF Value (2023; mg/kg)

NOTE:
1) Locations denoted with an asterisk (*) indicate screening locations where the planned sample location had to be offset due to access issues.

REFERENCES:

1. AERIAL IMAGERY AND PARCEL BOUNDARIES FROM NC ONEMAP.
2. *Legacy Pb contamination in the soils of three Durham city parks: Do secondary forest organic horizons effectively blanket Pb in city park soils contaminated by historic waste incineration?* Enikoe Bihari, December 16, 2022
3. MID-ATLANTIC FIELD NOTES

1 inch ≈ 70 feet

0 140 280 420 Feet

Mid Atlantic Engineering & Environmental Solutions

SCREENING LOCATION MAP
DURHAM PARK LEAD ASSESSMENT
SOUTHERN PORTION OF EAST END PARK
2300 NORTH ALSTON AVENUE
DURHAM, NORTH CAROLINA

DRAWN BY: KRC	DATE: AUGUST 2023
DRAFT CHECK: CBH	JOB NO: R4370.00
ENG. CHECK:	GIS NO: 03G-R4370.00-6B-East≈End
APPROVAL: CBH	FIG NO: 6B

Legend

- Sample Location (Lead ≥400 mg/kg)
- Sample Location
- Paired Sample Collected at 12 Inches BLS
- Sample Analyzed for HSL Metals and SVOCs
- Approximate Location of Fencing
- East End Park
- Parcel Boundaries
- 40 Lead Concentration (mg/kg)

NOTE:
1) Sample SS-EE-Playground collected from approximately 12 inches BLS beneath mulch.
2) See Tables 3 and 8 for lead concentrations 12 inches BLS and HSL metals and SVOC concentrations
3) HSL – Hazardous Substance List
4) SVOC – Semi Volatile Organic Compound

REFERENCES:

1. AERIAL IMAGERY AND PARCEL BOUNDARIES FROM NC ONEMAP.
2. *Legacy Pb contamination in the soils of three Durham city parks: Do secondary forest organic horizons effectively blanket Pb in city park soils contaminated by historic waste incineration?* Enikoe Bihari, December 16, 2022
3. MID-ATLANTIC FIELD NOTES

1 inch = 80 feet

0 80 160 240 Feet

Mid Atlantic
Engineering & Environmental Solutions

SAMPLE LOCATION MAP
DURHAM PARK LEAD ASSESSMENT
EAST END PARK
2300 NORTH ALSTON AVENUE
DURHAM, NORTH CAROLINA

DRAWN BY: KRC	DATE: AUGUST 2023
DRAFT CHECK: CBH	JOB NO: R4370.00
ENG. CHECK:	GIS NO: 03G-R4370.00-6C-East End
APPROVAL: CBH	FIG NO: 6C

TABLES

Mid Atlantic

TABLE 1
SUMMARY OF FIELD ASSESSMENT ACTIVITIES
CITY OF DURHAM PARKS
DURHAM, DURHAM COUNTY, NORTH CAROLINA

DURHAM PARKS	Summary of Field Activities - XRF Field Screening and Soil Sampling Activities							Summary of Assessment Results				Summary of Playground Areas		
	# Initial XRF Screening Locations (Duke 2022)	# Confirmatory XRF Screening Locations (July 2023)	# Locations Inaccessible for the July 2023 Assessment*	# Surface Soil Samples for Lead Analysis (EPA 6010D/6020B)	# Samples for HSL Metals and SVOC Analyses (Refer to Table 8)	# Soil Samples for Characterization of Vertical Extent (~12 inches BLS)	# Soil Samples Collected from Playground Areas (EPA 6010D)	Total # Areas Assessed via Screening or Sampling	Total # Soil Samples for Laboratory Analysis	Total # Sample Locations Exceeding Lead > 400 mg/kg	% Assessed vs. Locations Exceeding Lead > 400 mg/kg	Total # of Playground Areas	Lined Playground Areas	Unlined Playground Areas (Sampled for Lead 6010D)
Northgate	N/A	259	24	32	2	1	1	261	34	1	0.38%	3	2	1
Lyon	N/A	81	13	14	2	1	0	83	15	1	1.20%	1	1	--
Walltown	99	23	--	24	2	3	0	102	27	11	10.78%	2	2	--
East Durham	62	14	10	15	2	4	0	66	19	11	**28.79%	1	1	--
East End	108	12	--	20	2	2	1	111	23	3	2.70%	2	1	1

Notes:
mg/kg = milligrams per kilogram
N/A = Not Applicable (Northgate Park and Lyon Park not included in the 2022 Duke Study)
BLS = Below Land Surface
XRF = X-Ray Fluorescence (field screening instrument for lead)
HSL = Hazardous Substance List (HSL) metals identified in IHSB's "Guidance for Assessment and Cleanup of Contaminated Sites" (September 2022) and analyzed according to EPA Methods 6020B and 7471B
SVOCs = Semi-Volatile Organic Compounds analyzed according to EPA Method 8270D
Soil samples submitted for laboratory analysis of lead only analyzed according to EPA Method 6010D
Surface soil samples collected from upper inch of the soil profile
* Locations deemed inaccessbile during the July 2023 field activities due to interference from dense poison ivy and heavy forestation
** A total of 10 proposed sample locations previously screened by Duke were inaccessible during the July 2023 field activities; eight of these locations screened > 400 mg/kg during the Duke Study; as such, these eight locations were included in the percentage calculation

TABLE 2
SUMMARY OF XRF FIELD SCREENING RESULTS AND LEAD CONCENTRATIONS DETECTED IN SOIL
NORTHGATE PARK
300 WEST CLUB BOULEVARD, 404 WEST LAVENDAR AVENUE, 2623 ACADIA STREET
DURHAM, DURHAM COUNTY, NORTH CAROLINA

Sample Name	Mid-Atlantic XRF Screening Value (mg/kg or ppm)	Lead by EPA 6010D (Laboratory Testing; mg/kg or ppm)	Comments
SS-NG-1	33	33.8	Lead confirmation sampling (10% of samples screened under 280 mg/kg)
SS-2	27	N/A	N/A
SS-3	40	N/A	N/A
SS-4	39	N/A	N/A
SS-5	41	N/A	N/A
SS-6	18	N/A	N/A
SS-7	20	N/A	N/A
SS-8	32	N/A	N/A
SS-9	25	N/A	N/A
SS-10	9.8	N/A	N/A
SS-NG-11	30	29.8	Lead confirmation sampling (10% of samples screened under 280 mg/kg)
SS-12	33	N/A	N/A
SS-13	35	N/A	N/A
SS-14	25	N/A	N/A
SS-15	21	N/A	N/A
SS-16	50	N/A	N/A
SS-17	46	N/A	N/A
SS-18	20	N/A	N/A
SS-19	27	N/A	N/A
SS-20	33	N/A	N/A
SS-21	7.3	N/A	N/A
SS-22	39	N/A	N/A
SS-23	27	N/A	N/A
SS-24	47	N/A	N/A
SS-25	28	N/A	N/A
SS-26	15	N/A	N/A
SS-27	30	N/A	N/A
SS-28	21	N/A	N/A
SS-29	46	N/A	N/A
SS-30	26	N/A	N/A
SS-31	17	N/A	N/A
SS-32	23	N/A	N/A
SS-33	18	N/A	N/A
SS-34	N/A	N/A	Sample location not accessible
SS-35	24	N/A	N/A
SS-36	29	N/A	N/A
SS-37	40	N/A	N/A
SS-NG-38	41, 39 (Duplicate)	44.4	Lead confirmation sampling (10% of samples screened under 280 mg/kg)
SS-39	24	N/A	N/A
SS-40	21	N/A	N/A
SS-41	10	N/A	N/A
SS-42	17	N/A	N/A
SS-43	23	N/A	N/A
SS-44	33	N/A	N/A
SS-NG-45	34	43.3	N/A
SS-46	41	N/A	N/A
SS-47	18	N/A	N/A
SS-48	24	N/A	N/A
SS-49	23	N/A	N/A
SS-50	21	N/A	N/A
SS-51	25	N/A	N/A
SS-52	27	N/A	N/A
SS-53	25	N/A	N/A
SS-54	73	N/A	N/A
SS-55	21	N/A	N/A
SS-NG-56	19	18.8	Lead confirmation sampling (10% of samples screened under 280 mg/kg)
SS-57	18	N/A	N/A
SS-58	16	N/A	N/A
SS-59	20	N/A	N/A
SS-60	N/A	N/A	Sample location not accessible
SS-61	30	N/A	N/A
SS-62	39	N/A	N/A
SS-63	48	N/A	N/A
SS-64	26	N/A	N/A
SS-65	25	N/A	N/A
SS-66	25	N/A	N/A
SS-67	19	N/A	N/A
SS-68	24	N/A	N/A
SS-69	29	N/A	N/A
SS-NG-70	47	46.2	Lead confirmation sampling (10% of samples screened under 280 mg/kg)
SS-71	29	N/A	N/A
SS-NG-72	335, 338 (Duplicate)	397	Lead confirmation sampling (sample screened above 280 mg/kg)
SS-73	29	N/A	N/A
SS-74	28	N/A	N/A
SS-75	15	N/A	N/A

TABLE 2
SUMMARY OF XRF FIELD SCREENING RESULTS AND LEAD CONCENTRATIONS DETECTED IN SOIL
NORTHGATE PARK
300 WEST CLUB BOULEVARD, 404 WEST LAVENDAR AVENUE, 2623 ACADIA STREET
DURHAM, DURHAM COUNTY, NORTH CAROLINA

SS-76	37	N/A	N/A
SS-77	34	N/A	N/A
SS-78	41	N/A	N/A
SS-79	77	N/A	N/A
SS-80	105	N/A	N/A
SS-81	198	N/A	N/A
SS-82	46, 49 (Duplicate)	N/A	N/A
SS-83	21	22.5	Lead confirmation sampling (10% of samples screened under 280 mg/kg)
SS-84	44	N/A	N/A
SS-85	19	N/A	N/A
SS-86	25	N/A	N/A
SS-87	26	N/A	N/A
SS-88	22	N/A	N/A
SS-89	39	N/A	N/A
SS-90	122	N/A	N/A
SS-NG-91 SS-NG-Dup-1	285	283/286	Primary/Duplicate; Lead confirmation sampling (sample screened above 280 mg/kg)
SS-NG-92	289, 305 (Duplicate)	365	Lead confirmation sampling (sample screened above 280 mg/kg)
SS-93	56	N/A	N/A
SS-94	28	N/A	N/A
SS-95	N/A	N/A	Sample location not accessible
SS-96	17	N/A	N/A
SS-97	12	N/A	N/A
SS-98	33	N/A	N/A
SS-99	73	N/A	N/A
SS-NG-100	124	143	Lead confirmation sampling (10% of samples screened under 280 mg/kg)
SS-101	51	N/A	N/A
SS-NG-102	30	25.5	Lead confirmation sampling (10% of samples screened under 280 mg/kg)
SS-103	27	N/A	N/A
SS-104	34	N/A	N/A
SS-105	17	N/A	N/A
SS-106	26	N/A	N/A
SS-107	54	N/A	N/A
SS-108	16	N/A	N/A
SS-NG-109	161	203	Lead confirmation sampling (10% of samples screened under 280 mg/kg)
SS-NG-110	201	212	Lead confirmation sampling (10% of samples screened under 280 mg/kg)
SS-111	26	N/A	N/A
SS-112	17	N/A	N/A
SS-113	12	N/A	N/A
SS-114	29	N/A	N/A
SS-115	60	N/A	N/A
SS-NG-116	187, 210 (Duplicate)	244	Lead confirmation sampling (10% of samples screened under 280 mg/kg)
SS-117	17	N/A	N/A
SS-118	30	N/A	N/A
SS-NG-119	43	34.3	Lead confirmation sampling (10% of samples screened under 280 mg/kg)
SS-120	N/A	N/A	Sample location not accessible
SS-121	35	N/A	N/A
SS-122	28	N/A	N/A
SS-123	32	N/A	N/A
SS-124	37	N/A	N/A
SS-125	30	N/A	N/A
SS-126	19	N/A	N/A
SS-127	23	N/A	N/A
SS-128	38	N/A	N/A
SS-129	32	N/A	N/A
SS-130	20	N/A	N/A
SS-NG-131	20, 24 (Duplicate)	16.7	Lead confirmation sampling (10% of samples screened under 280 mg/kg)
SS-132	20	N/A	N/A
SS-133	35	N/A	N/A
SS-134	30	N/A	N/A
SS-135	60	N/A	N/A
SS-136	30	N/A	N/A
SS-NG-137	35	31.8	Lead confirmation sampling (10% of samples screened under 280 mg/kg)
SS-138	14	N/A	N/A
SS-139	33	N/A	N/A
SS-140	30	N/A	N/A
SS-141	103	N/A	N/A
SS-142	18	N/A	N/A
SS-143	28	N/A	N/A
SS-NG-144 SS-NG-Dup-2	28	35.9/32.9	Primary/Duplicate; Lead confirmation sampling (10% of samples screened under 280 mg/kg)
SS-145	23	N/A	N/A
SS-146	40	N/A	N/A
SS-147	34	N/A	N/A
SS-NG-148	40	45.5	Lead confirmation sampling (10% of samples screened under 280 mg/kg)
SS-149	19	N/A	N/A
SS-150	8	N/A	N/A

TABLE 2
SUMMARY OF XRF FIELD SCREENING RESULTS AND LEAD CONCENTRATIONS DETECTED IN SOIL
NORTHGATE PARK
300 WEST CLUB BOULEVARD, 404 WEST LAVENDAR AVENUE, 2623 ACADIA STREET
DURHAM, DURHAM COUNTY, NORTH CAROLINA

SS-151	13	N/A	N/A
SS-NG-152	16	8.41	Lead confirmation sampling (10% of samples screened under 280 mg/kg)
SS-NG-153	9.0	12.7	Lead confirmation sampling (10% of samples screened under 280 mg/kg), and analysis of hazardous substance list metals and SVOCs
SS-154	26	N/A	N/A
SS-155	23	N/A	N/A
SS-156	25	N/A	N/A
SS-157	13	N/A	N/A
SS-158	31	N/A	N/A
SS-159	18	N/A	N/A
SS-160	11	N/A	N/A
SS-161	5.9	N/A	N/A
SS-162	18	N/A	N/A
SS-163	33	N/A	N/A
SS-164	11	N/A	N/A
SS-165	12	N/A	N/A
SS-166	13	N/A	N/A
SS-167	25	N/A	N/A
SS-168	N/A	N/A	Sample location not accessible
SS-169	33	N/A	N/A
SS-170	19	N/A	N/A
SS-171	13	N/A	N/A
SS-NG-172	23	7.31	Lead confirmation sampling (10% of samples screened under 280 mg/kg)
SS-173	24	N/A	N/A
SS-174	17	N/A	N/A
SS-NG-175	31	30.8	Lead confirmation sampling (10% of samples screened under 280 mg/kg)
SS-176	22	N/A	N/A
SS-177	25	N/A	N/A
SS-178	17	N/A	N/A
SS-179	24	N/A	N/A
SS-180	21	N/A	N/A
SS-181	15	N/A	N/A
SS-182	N/A	N/A	Sample location not accessible
SS-183	65	N/A	N/A
SS-NG-184	269	309	Lead confirmation sampling (10% of samples screened under 280 mg/kg)
SS-185	49	N/A	N/A
SS-186	35	N/A	N/A
SS-187	37	N/A	N/A
SS-188	41	N/A	N/A
SS-189	N/A	N/A	Sample location not accessible
SS-190	44	N/A	N/A
SS-191	29	N/A	N/A
SS-NG-192	46	48.7	Lead confirmation sampling (10% of samples screened under 280 mg/kg)
SS-193	33, 39 (Duplicate)	N/A	N/A
SS-194	39	N/A	N/A
SS-195	N/A	N/A	Sample location not accessible
SS-196	52	N/A	N/A
SS-197	N/A	N/A	Sample location not accessible
SS-198	N/A	N/A	Sample location not accessible
SS-199	39, 46 (Duplicate)	N/A	N/A
SS-200	35	N/A	N/A
SS-201	N/A	N/A	Sample location not accessible
SS-202	N/A	N/A	Sample location not accessible
SS-203	34	N/A	N/A
SS-204	N/A	N/A	Sample location not accessible
SS-NG-205	87	87.0	Lead confirmation sampling (10% of samples screened under 280 mg/kg)
SS-206	91	N/A	N/A
SS-207	N/A	N/A	Sample location not accessible
SS-208	N/A	N/A	Sample location not accessible
SS-209	42	N/A	N/A
SS-210	N/A	N/A	Sample location not accessible
SS-211	46	N/A	N/A
SS-212	N/A	N/A	Sample location not accessible
SS-213	N/A	N/A	Sample location not accessible
SS-214	45	N/A	N/A
SS-215	N/A	N/A	Sample location not accessible
SS-216	29	N/A	N/A
SS-217	73	N/A	N/A
SS-218	N/A	N/A	Sample location not accessible
SS-219	N/A	N/A	Sample location not accessible
SS-220	33	N/A	N/A
SS-221	125	N/A	N/A
SS-222	N/A	N/A	Sample location not accessible
SS-223	93	N/A	N/A
SS-224	N/A	N/A	Sample location not accessible
SS-225	104	N/A	N/A

TABLE 2
SUMMARY OF XRF FIELD SCREENING RESULTS AND LEAD CONCENTRATIONS DETECTED IN SOIL
NORTHGATE PARK
300 WEST CLUB BOULEVARD, 404 WEST LAVENDAR AVENUE, 2623 ACADIA STREET
DURHAM, DURHAM COUNTY, NORTH CAROLINA

SS-NG-226	357, 270 (Duplicate), 260 (Duplicate)	300	Lead confirmation sampling (sample screened above 280 mg/kg) and analysis of hazardous substance list metals and SVOCs
SS-NG-226 (1')	N/A	283	Sample collected 12 inches BLS
SS-227	119	N/A	N/A
SS-228	59	N/A	N/A
SS-229	101, 104 (Duplicate)	N/A	N/A
SS-230	46	N/A	N/A
SS-231	40, 40 (Duplicate)	N/A	N/A
SS-232	41	N/A	N/A
SS-233	60	N/A	N/A
SS-234	28	N/A	N/A
SS-235	28	N/A	N/A
SS-236	32	N/A	N/A
SS-237	40	N/A	N/A
SS-238	38	N/A	N/A
SS-239	41	N/A	N/A
SS-240	31	N/A	N/A
SS-241	36	N/A	N/A
SS-242	52	N/A	N/A
SS-243	25	N/A	N/A
SS-244	45	N/A	N/A
SS-245	53	N/A	N/A
SS-246	35	N/A	N/A
SS-247	30	N/A	N/A
SS-248	21	N/A	N/A
SS-249	30	N/A	N/A
SS-250	23	N/A	N/A
SS-251	66	N/A	N/A
SS-252	42	N/A	N/A
SS-253	34	N/A	N/A
SS-254	20	N/A	N/A
SS-255	39	N/A	N/A
SS-256	35, 31 (Duplicate)	N/A	N/A
SS-257	26	N/A	N/A
SS-258	28	N/A	N/A
SS-259	17	N/A	N/A
SS-260	33	N/A	N/A
SS-261	49	N/A	N/A
SS-262	27	N/A	N/A
SS-263	42	N/A	N/A
SS-264	20	N/A	N/A
SS-265	32	N/A	N/A
SS-266	18	N/A	N/A
SS-267	33	N/A	N/A
SS-268	28	N/A	N/A
SS-269	36	N/A	N/A
SS-270	28	N/A	N/A
SS-271	35	N/A	N/A
SS-272	22	N/A	N/A
SS-NG-273	23	21.1	Lead confirmation sampling (10% of samples screened under 280 mg/kg)
SS-274	26	N/A	N/A
SS-275	36	N/A	N/A
SS-276	N/A	N/A	Sample location not accessible
SS-277	28	N/A	N/A
SS-278	25	N/A	N/A
SS-NG-279	35	32.5	Lead confirmation sampling (10% of samples screened under 280 mg/kg)
SS-280	56	N/A	N/A
SS-281	25	N/A	N/A
SS-282	32	N/A	N/A
SS-283	37	N/A	N/A
SS-NG-Playground	N/A	**1430**	Sampling beneath a playground where a fabric liner was not encountered

Notes:

XRF: X-ray fluorescence
BLS: Below land surface
N/A: Not applicable
mg/kg: miligram per kilogram (equivalent to parts per million; ppm)
Bold laboratory reported lead concentration exceeds the 400 mg/kg Residential PSRG

TABLE 3
SUMMARY OF XRF FIELD SCREENING RESULTS AND LEAD CONCENTRATIONS DETECTED IN SOIL
LYON PARK
1101 CORNELL STREET AND 1200 WEST LAKEWOOD AVENUE
DURHAM, DURHAM COUNTY, NORTH CAROLINA

Sample Name	Mid-Atlantic XRF Screening Value (mg/kg or ppm)	Lead by EPA 6010D (Laboratory Testing; mg/kg or ppm)	Comments
SS-1	88	N/A	N/A
SS-2	N/A	N/A	Sample location not accessible
SS-3	67	N/A	N/A
SS-LY-4	27	25.2	Lead confirmation sampling (10% of samples screened under 280 mg/kg)
SS-LY-5	281, 289 (Duplicate)	99.2	Lead confirmation sampling (sample screened above 280 mg/kg)
SS-6	101	N/A	N/A
SS-7	N/A	N/A	Sample location not accessible
SS-8	29	N/A	N/A
SS-9	32	N/A	N/A
SS-10	74	N/A	N/A
SS-11	28	N/A	N/A
SS-12	23	N/A	N/A
SS-13	43	N/A	N/A
SS-14	22	N/A	N/A
SS-15	46	N/A	N/A
SS-16	27	N/A	N/A
SS-17	30	N/A	N/A
SS-18	85	N/A	N/A
SS-19	N/A	N/A	Sample location not accessible
SS-20	41	N/A	N/A
SS-21	34	N/A	N/A
SS-22	23	N/A	N/A
SS-23	27	N/A	N/A
SS-24	42	N/A	N/A
SS-25	59, 60 (Duplicate)	N/A	N/A
SS-26	32	N/A	N/A
SS-LY-27	15	11.1	Lead confirmation sampling (10% of samples screened under 280 mg/kg)
SS-28	N/A	N/A	Sample location not accessible
SS-LY-29	29	24.8	Lead confirmation sampling (10% of samples screened under 280 mg/kg)
SS-30	N/A	N/A	Sample location not accessible
SS-31	36	N/A	N/A
SS-32	35	N/A	N/A
SS-33	23	N/A	N/A
SS-34	29	N/A	N/A
SS-35	78	N/A	N/A
SS-36	18	N/A	N/A
SS-37	65	N/A	N/A
SS-38	N/A	N/A	Sample location not accessible
SS-LY-39	28	24.4	Lead confirmation sampling (10% of samples screened under 280 mg/kg)
SS-40	25	N/A	N/A
SS-41	82	N/A	N/A
SS-42	63	N/A	N/A
SS-LY-43	365, 358 (Duplicate)	259	Lead confirmation sampling (sample screened above 280 mg/kg)
SS-44	N/A	N/A	Sample location not accessible
SS-LY-45(Pb) SS-LY-DUP1	394 (Precision Check; see Table 7)	384/**553**	Primary/Duplicate; Lead confirmation sampling (sample screened above 280 mg/kg), and analysis of hazardous substance list metals and SVOCs
SS-LY-45(1')	N/A	248	Sample collected from 12 inches BLS
SS-46	45	N/A	N/A
SS-47	52, 51 (Duplicate)	N/A	N/A
SS-48	149	N/A	N/A
SS-49	N/A	N/A	Sample location not accessible
SS-50	204	N/A	N/A
SS-51	141	N/A	N/A
SS-52	172	N/A	N/A
SS-53	94	N/A	N/A
SS-54	42	N/A	N/A
SS-55	60	N/A	N/A
SS-56	61	N/A	N/A
SS-57	136	N/A	N/A
SS-58	N/A	N/A	Sample location not accessible
SS-59	116	N/A	N/A
SS-LY-60	357, 300 (Duplicate)	221	Lead confirmation sampling (sample screened above 280 mg/kg)
SS-LY-61	13	5.14	Lead confirmation sampling (10% of samples screened under 280 mg/kg), and analysis of hazardous substance list metals and SVOCs
SS-LY-62	16	6.93	Lead confirmation sampling (10% of samples screened under 280 mg/kg)
SS-63	70	N/A	N/A
SS-64	76	N/A	N/A
SS-65	222, 246 (Duplicate)	N/A	N/A
SS-66	N/A	N/A	Sample location not accessible
SS-67	143	N/A	N/A
SS-LY-68	164	152	Lead confirmation sampling (10% of samples screened under 280 mg/kg)
SS-LY-69	15	7.30	Lead confirmation sampling (10% of samples screened under 280 mg/kg)

TABLE 3
SUMMARY OF XRF FIELD SCREENING RESULTS AND LEAD CONCENTRATIONS DETECTED IN SOIL
LYON PARK
1101 CORNELL STREET AND 1200 WEST LAKEWOOD AVENUE
DURHAM, DURHAM COUNTY, NORTH CAROLINA

SS-LY-70	15	7.53	Lead confirmation sampling (10% of samples screened under 280 mg/kg)
SS-71	78	N/A	N/A
SS-72	50	N/A	N/A
SS-73	60	N/A	N/A
SS-74	136	N/A	N/A
SS-75	167	N/A	N/A
SS-76	212	N/A	N/A
SS-77	75, 73 (Duplicate)	N/A	N/A
SS-78	71	N/A	N/A
SS-79	127	N/A	N/A
SS-80	25	N/A	N/A
SS-81	49	N/A	N/A
SS-82	N/A	N/A	Sample location not accessible
SS-83	N/A	N/A	Sample location not accessible
SS-84	31	N/A	N/A
SS-85	55	N/A	N/A
SS-86	85	N/A	N/A
SS-87	52	N/A	N/A
SS-88	30	N/A	N/A
SS-89	22	N/A	N/A
SS-90	49	N/A	N/A
SS-91	51	N/A	N/A
SS-92	46	N/A	N/A
SS-93	46	N/A	N/A
SS-94	N/A	N/A	Sample location not accessible

Notes:

XRF: X-ray fluorescence
BLS: Below land surface
N/A: Not applicable
mg/kg: miligram per kilogram (equivalent to parts per million; ppm)
Bold laboratory reported lead concentration exceeds the 400 mg/kg Residential PSRG

TABLE 4
SUMMARY OF XRF FIELD SCREENING RESULTS AND LEAD CONCENTRATIONS DETECTED IN SOIL
WALLTOWN PARK
1308 WEST CLUB BOULEVARD
DURHAM, DURHAM COUNTY, NORTH CAROLINA

Sample Name	Duke XRF Screening Value (mg/kg or ppm)*	Mid-Atlantic XRF Screening Value (mg/kg or ppm)	Lead by EPA 6010D (Laboratory Testing; mg/kg or ppm)	Comments
SS-1	117	N/A	N/A	N/A
SS-2	120	N/A	N/A	N/A
SS-3	77	N/A	N/A	N/A
SS-4	102	N/A	N/A	N/A
SS-5	156	N/A	N/A	N/A
SS-6	37	N/A	N/A	N/A
SS-7	69	N/A	N/A	N/A
SS-8	166	N/A	N/A	N/A
SS-9	35	N/A	N/A	N/A
SS-10	21	N/A	N/A	N/A
SS-11	25	N/A	N/A	N/A
SS-12	177	N/A	N/A	N/A
SS-13	42	N/A	N/A	N/A
SS-14	54	N/A	N/A	N/A
SS-15	89	N/A	N/A	N/A
SS-16	196	N/A	N/A	N/A
SS-17	15	N/A	N/A	N/A
SS-WT-18	204	109	86.2	Lead confirmation sampling (10% of samples screened under 280 mg/kg) and analysis of hazardous substance list metals and SVOCs
SS-19	29	N/A	N/A	N/A
SS-20	130	N/A	N/A	N/A
SS-21	56	N/A	N/A	N/A
SS-22	64	N/A	N/A	N/A
SS-23	40	N/A	N/A	N/A
SS-24	52	N/A	N/A	N/A
SS-25	97	N/A	N/A	N/A
SS-26	179	N/A	N/A	N/A
SS-27	38	N/A	N/A	N/A
SS-28	59	N/A	N/A	N/A
SS-29	75	N/A	N/A	N/A
SS-30	98	N/A	N/A	N/A
SS-31	174	N/A	N/A	N/A
SS-WT-32	175	123	142	Lead confirmation sampling (10% of samples screened under 280 mg/kg)
SS-33	120	N/A	N/A	N/A
SS-34	113	N/A	N/A	N/A
SS-35	83	N/A	N/A	N/A
SS-WT-36 SS-WT-DUP1	240	72	47.1/62.8	Primary/Duplicate Sample; Lead confirmation sampling (10% of samples screened under 280 mg/kg)
SS-37	178	N/A	N/A	N/A
SS-38	25	N/A	N/A	N/A
SS-39	90	N/A	N/A	N/A
SS-40	56	N/A	N/A	N/A
SS-41	72	N/A	N/A	N/A
SS-42	201	N/A	N/A	N/A
SS-WT-43	726	955	**892**	Lead confirmation sampling (sample screened above 280 mg/kg)
SS-WT-43 (1')	N/A	N/A	**458**	Sample collected 12 inches BLS. Glass fragments encountered during hand augering.
SS-44	185	N/A	N/A	N/A
SS-45	132	N/A	N/A	N/A
SS-46	97	N/A	N/A	N/A
SS-47	106	N/A	N/A	N/A
SS-WT-48	324	214	225	Lead confirmation sampling (sample screened above 280 mg/kg)
SS-WT-49	416	603	**566**	Lead confirmation sampling (sample screened above 280 mg/kg)
SS-WT-50	1338	1506	**1780**	Lead confirmation sampling (sample screened above 280 mg/kg) and analysis of hazardous substance list metals and SVOCs
SS-51	133	N/A	N/A	N/A
SS-52	133	N/A	N/A	N/A
SS-WT-53	446	482 (Precision Check; see Table 7)	**459**	Lead confirmation sampling (sample screened above 280 mg/kg)
SS-54	207	N/A	N/A	N/A
SS-WT-55	322	229, 227 (Duplicate)	**634**	Lead confirmation sampling (sample screened above 280 mg/kg)
SS-56	33	N/A	N/A	N/A
SS-57	194	N/A	N/A	N/A
SS-58	121	N/A	N/A	N/A
SS-59	148	N/A	N/A	N/A
SS-WT-60	302	741	**760**	Lead confirmation sampling (sample screened above 280 mg/kg)
SS-WT-61	188	11	15.8	Lead confirmation sampling (10% of samples screened under 280 mg/kg)
SS-62	51	N/A	N/A	N/A
SS-WT-63	222	201	202	Lead confirmation sampling (10% of samples screened under 280 mg/kg)
SS-64	103	N/A	N/A	N/A
SS-WT-65	356	Not Recorded	314	Lead confirmation sampling (sample screened above 280 mg/kg)
SS-66	114	N/A	N/A	N/A
SS-67	246	N/A	N/A	N/A
SS-68	57	N/A	N/A	N/A
SS-69	35	N/A	N/A	N/A
SS-WT-70	308	54	54.7	Lead confirmation sampling (sample screened above 280 mg/kg)
SS-71	22	N/A	N/A	N/A
SS-72	186	N/A	N/A	N/A
SS-73	63	N/A	N/A	N/A
SS-WT-74	316	377	346	Lead confirmation sampling (sample screened above 280 mg/kg)
SS-75	56	N/A	N/A	N/A
SS-WT-76	185	249	259	Lead confirmation sampling (10% of samples screened under 280 mg/kg)
SS-WT-77	302	395	349	Lead confirmation sampling (sample screened above 280 mg/kg)
SS-78	64	N/A	N/A	N/A
SS-WT-79	910	1352, 1268 (Duplicate)	**1330**	Lead confirmation sampling (sample screened above 280 mg/kg)
SS-WT-79 (1')	N/A	N/A	**3480**	Sample collected 12 inches BLS. Glass and porcelain fragments encountered during hand augering.

TABLE 4
SUMMARY OF XRF FIELD SCREENING RESULTS AND LEAD CONCENTRATIONS DETECTED IN SOIL
WALLTOWN PARK
1308 WEST CLUB BOULEVARD
DURHAM, DURHAM COUNTY, NORTH CAROLINA

SS-80	133	N/A	N/A	N/A
SS-81	50	N/A	N/A	N/A
SS-WT-82	29	32, 28 (Duplicate)	9.97	Lead confirmation sampling (10% of samples screened under 280 mg/kg)
SS-83	26	N/A	N/A	N/A
SS-84	98	N/A	N/A	N/A
SS-85	13	N/A	N/A	N/A
SS-86	130	N/A	N/A	N/A
SS-87	147	N/A	N/A	N/A
SS-88	81	N/A	N/A	N/A
SS-WT-89	28	42	26.6	Lead confirmation sampling (10% of samples screened under 280 mg/kg)
SS-90	26	N/A	N/A	N/A
SS-91	100	N/A	N/A	N/A
SS-WT-92	255	137	121	Lead confirmation sampling (10% of samples screened under 280 mg/kg)
SS-WT-93	985	802	**653**	Lead confirmation sampling (sample screened above 280 mg/kg)
SS-WT-93 (1')	N/A	N/A	**2290**	Sample collected 12 inches BLS. Glass and porcelain fragments encountered during hand augering.
SS-94	29	N/A	N/A	N/A
SS-95	36	N/A	N/A	N/A
SS-96	32	N/A	N/A	N/A
SS-WT-97	394	54	53.0	Lead confirmation sampling (sample screened above 280 mg/kg)
SS-98	24	N/A	N/A	N/A
SS-99	40	N/A	N/A	N/A

Notes:

XRF: X-ray fluorescence
BLS: Below land surface
N/A: Not applicable
mg/kg: miligram per kilogram (equivalent to parts per million; ppm)
*: XRF screening values are reported in the Duke Report
Bold laboratory reported lead concentration exceeds the 400 mg/kg Residential PSRG

TABLE 5
SUMMARY OF XRF FIELD SCREENING RESULTS AND LEAD CONCENTRATIONS DETECTED IN SOIL
EAST DURHAM PARK
2601 EAST MAIN STREET AND 300 GARY STREET
DURHAM, DURHAM COUNTY, NORTH CAROLINA

Sample Name	Duke XRF Screening Value (mg/kg or ppm)*	Mid-Atlantic XRF Screening Value (mg/kg or ppm)	Lead by EPA 6010D (Laboratory Testing; mg/kg or ppm)	Comments
SS-1	124	N/A	N/A	N/A
SS-2	114	N/A	N/A	N/A
SS-3	70	N/A	N/A	N/A
SS-4	44	N/A	N/A	N/A
SS-5	96	N/A	N/A	N/A
SS-6	91	N/A	N/A	N/A
SS-7	42	N/A	N/A	N/A
SS-8	39	N/A	N/A	N/A
SS-9	86	N/A	N/A	N/A
SS-10	77	N/A	N/A	N/A
SS-11	70	N/A	N/A	N/A
SS-12	84	N/A	N/A	N/A
SS-13	83	N/A	N/A	N/A
SS-14	112	N/A	N/A	N/A
SS-15	111	N/A	N/A	N/A
SS-16	50	N/A	N/A	N/A
SS-17	88	N/A	N/A	N/A
SS-18	99	N/A	N/A	N/A
SS-19	128	N/A	N/A	N/A
SS-20	103	N/A	N/A	N/A
SS-21	63	N/A	N/A	N/A
SS-22	40	N/A	N/A	N/A
SS-23	77	N/A	N/A	N/A
SS-24	44	N/A	N/A	N/A
SS-25	46	N/A	N/A	Sample location not accessible
SS-26	93	N/A	N/A	N/A
SS-27	119	N/A	N/A	N/A
SS-28	41	N/A	N/A	N/A
SS-29	104	N/A	N/A	N/A
SS-30	144	N/A	N/A	N/A
SS-31	1052	N/A	N/A	Sample location not accessible
SS-32	117	N/A	N/A	N/A
SS-33	468	N/A	N/A	Sample location not accessible
SS-34	1769	N/A	N/A	Sample location not accessible
SS-35	1463	N/A	N/A	Sample location not accessible
SS-36	141	N/A	N/A	Sample location not accessible
SS-37	437	N/A	N/A	Sample location not accessible
SS-38	1672	N/A	N/A	Sample location not accessible
SS-ED-39	376	113	184	Lead confirmation sampling (sample screened above 280 mg/kg)
SS-ED-39 (1')	N/A	N/A	12.8	Sample collected 12 inches BLS
SS-ED-40	620	615	**860**	Lead confirmation sampling (sample screened above 280 mg/kg)
SS-ED-40 (1')	N/A	N/A	**3180**	Sample collected 12 inches BLS. Glass and porcelain fragments encountered during hand augering.
SS-ED-41	46	44	53.3	Lead confirmation sampling (sample screened below 280 mg/kg)
SS-42	72	N/A	N/A	N/A
SS-43	2266	N/A	N/A	Sample location not accessible
SS-ED-44	1410	1230	**1380**	Lead confirmation sampling (sample screened above 280 mg/kg)
SS-ED-45**	1103	519	**723**	Lead confirmation sampling (sample screened above 280 mg/kg)
SS-46	107	N/A	N/A	N/A
SS-ED-47	235	207	173	Lead confirmation sampling (10% of samples screened under 280 mg/kg)
SS-ED-48	37	22	7.95	Lead confirmation sampling (10% of samples screened under 280 mg/kg) and analysis of hazardous substance list metals and SVOCs
SS-49	28	N/A	N/A	N/A
SS-50	750	N/A	N/A	Sample location not accessible
SS-ED-51 SS-ED-DUP1	2342	2630 (Precision Check; see Table 7)	**1510/2210**	Primary/Duplicate Sample; Lead confirmation sampling (sample screened above 280 mg/kg), and analysis of hazardous substance list metals and SVOCs
SS-ED-51 (1')	N/A	N/A	**2530**	Sample collected 12 inches BLS. Glass and porcelain fragments encountered during hand augering.
SS-52	103	N/A	N/A	N/A
SS-53	70	N/A	N/A	N/A
SS-ED-54	694	888	**886**	Lead confirmation sampling (sample screened above 280 mg/kg)
SS-ED-55	2167	1315	**1950**	Lead confirmation sampling and lead sampling 1 ft BLS
SS-ED-55 (1')	N/A	N/A	**1740**	Sample collected 12 inches BLS. Glass and porcelain fragments encountered during hand augering.
SS-56	247	N/A	N/A	N/A
SS-57	103	N/A	N/A	N/A
SS-58	182	N/A	N/A	N/A
SS-ED-59	187	147	277	Lead confirmation sampling (10% of samples screened under 280 mg/kg)
SS-ED-60	1260	936	**1260**	Lead confirmation sampling (sample screened above 280 mg/kg)
SS-ED-61	N/A	613	**872**	Additional sample location in grassy area
SS-ED-62	N/A	230	268	Additional sample location in grassy area

Notes:

XRF:	X-ray fluorescence
BLS:	Below land surface
N/A:	Not applicable
mg/kg:	miligram per kilogram (equivalent to parts per million; ppm)
*:	XRF screening values are reported in the Duke Report
**:	Location offset due to access issues
Bold	laboratory reported lead concentration exceeds the 400 mg/kg Residential PSRG

TABLE 6
SUMMARY OF XRF FIELD SCREENING RESULTS AND LEAD CONCENTRATIONS DETECTED IN SOIL
EAST END PARK
1200 NORTH ALSTON AVENUE
DURHAM, DURHAM COUNTY, NORTH CAROLINA

Sample Name	Duke XRF Screening Value (mg/kg or ppm)*	Mid-Atlantic XRF Screening Value (mg/kg or ppm)	Lead by EPA 6010D (Laboratory Testing; mg/kg or ppm)	Comments
SS-1	44	N/A	N/A	N/A
SS-2	40	N/A	N/A	N/A
SS-3	126	N/A	N/A	N/A
SS-4	146	N/A	N/A	N/A
SS-5	21	N/A	N/A	N/A
SS-6	190	N/A	N/A	N/A
SS-7	122	N/A	N/A	N/A
SS-8	27	N/A	N/A	N/A
SS-9	22	N/A	N/A	N/A
SS-10	24	N/A	N/A	N/A
SS-11	31	N/A	N/A	N/A
SS-EE-12	212	N/A	203	Lead confirmation sampling (10% of samples screened under 280 mg/kg)
SS-13	93	N/A	N/A	N/A
SS-14	74	N/A	N/A	N/A
SS-EE-15 SS-EE-DUP1	205	N/A	222/366	Lead confirmation sampling (10% of samples screened under 280 mg/kg) Primary/Dulicate Sampling
SS-16	34	N/A	N/A	N/A
SS-17	61	N/A	N/A	N/A
SS-18	103	N/A	N/A	N/A
SS-19	141	N/A	N/A	N/A
SS-20	40	N/A	N/A	N/A
SS-21	47	N/A	N/A	N/A
SS-22	48	N/A	N/A	N/A
SS-23	177	N/A	N/A	N/A
SS-EE-24	253	N/A	**772**	Lead confirmation sampling (10% of samples screened under 280 mg/kg)
SS-25	84	N/A	N/A	N/A
SS-EE-26	179	N/A	35.2	Lead confirmation sampling (10% of samples screened under 280 mg/kg)
SS-27	123	N/A	N/A	N/A
SS-28	86	N/A	N/A	N/A
SS-29	19	N/A	N/A	N/A
SS-30	43	N/A	N/A	N/A
SS-31	19	N/A	N/A	N/A
SS-EE-32	252	N/A	146	Lead confirmation sampling (10% of samples screened under 280 mg/kg)
SS-33	134	N/A	N/A	N/A
SS-34	150	N/A	N/A	N/A
SS-35	35	N/A	N/A	N/A
SS-36	144	N/A	N/A	N/A
SS-37	40	N/A	N/A	N/A
SS-38	38	N/A	N/A	N/A
SS-EE-39**	721	42	30.4	Lead confirmation sampling (sample screened above 280 mg/kg)
SS-40	105	N/A	N/A	N/A
SS-41	54	N/A	N/A	N/A
SS-42	23	N/A	N/A	N/A
SS-43	38	N/A	N/A	N/A
SS-44	54	N/A	N/A	N/A
SS-45	185	N/A	N/A	N/A
SS-46	37	N/A	N/A	N/A
SS-47	34	N/A	N/A	N/A
SS-48	112	N/A	N/A	N/A
SS-EE-49/SS-50	144	97	86.9	Lead confirmation sampling (10% of samples screened under 280 mg/kg)
SS-51	174	N/A	N/A	N/A
SS-52	58	N/A	N/A	N/A
SS-53	47	N/A	N/A	N/A
SS-EE-54	55	N/A	24.8	Lead confirmation sampling (10% of samples screened under 280 mg/kg) and analysis of hazardous substance list metals and SVOCs
SS-55	9	N/A	N/A	N/A
SS-56	31	N/A	N/A	N/A
SS-57	15	N/A	N/A	N/A
SS-58	18	N/A	N/A	N/A
SS-59	26	N/A	N/A	N/A
SS-60	21	N/A	N/A	N/A
SS-61	103	N/A	N/A	N/A
SS-62	8	N/A	N/A	N/A
SS-63	17	N/A	N/A	N/A
SS-64	31	N/A	N/A	N/A
SS-65	9	N/A	N/A	N/A
SS-EE-66	30	N/A	33.1	Lead confirmation sampling (10% of samples screened under 280 mg/kg)
SS-67	172	N/A	N/A	N/A
SS-68	34	N/A	N/A	N/A
SS-69	44	N/A	N/A	N/A
SS-70	134	N/A	N/A	N/A
SS-71	9	N/A	N/A	N/A
SS-72	31	N/A	N/A	N/A
SS-73	69	N/A	N/A	N/A
SS-74	53	N/A	N/A	N/A
SS-75	11	N/A	N/A	N/A
SS-76	103	N/A	N/A	N/A
SS-77	43	N/A	N/A	N/A
SS-78	31	N/A	N/A	N/A
SS-79	82	N/A	N/A	N/A
SS-80	162	N/A	N/A	N/A
SS-EE-81**	419	973 (Precision Check; see Table 7)	322	Lead confirmation sampling (sample screened above 280 mg/kg)
SS-EE-81 (1')	N/A	N/A	49.0	Sample collected 12 inches BLS
SS-EE-82	128	413	183	Lead confirmation sampling (10% of samples screened under 280 mg/kg)
SS-EE-82 (1')	N/A	N/A	28.0	Sample collected 12 inches BLS
SS-EE-83**	449	415	328	Lead confirmation sampling (sample screened above 280 mg/kg)

TABLE 6
SUMMARY OF XRF FIELD SCREENING RESULTS AND LEAD CONCENTRATIONS DETECTED IN SOIL
EAST END PARK
1200 NORTH ALSTON AVENUE
DURHAM, DURHAM COUNTY, NORTH CAROLINA

SS-84	35	N/A	N/A	N/A
SS-85	29	N/A	N/A	N/A
SS-86	36	N/A	N/A	N/A
SS-87	62	N/A	N/A	N/A
SS-EE-88	452	172	296	Lead confirmation sampling (sample screened above 280 mg/kg)
SS-89	66	N/A	N/A	N/A
SS-EE-90	1022	656	**435**	Lead confirmation sampling (sample screened above 280 mg/kg)
SS-91	37	N/A	N/A	N/A
SS-92	54	N/A	N/A	N/A
SS-93	38	N/A	N/A	N/A
SS-94	196	N/A	N/A	N/A
SS-EE-95	440	251	197	Lead confirmation sampling (sample screened above 280 mg/kg)
SS-96	34	N/A	N/A	N/A
SS-97	86	N/A	N/A	N/A
SS-98	93	N/A	N/A	N/A
SS-99	52	N/A	N/A	N/A
SS-100	88	N/A	N/A	N/A
SS-EE-101	1364	1774	**995**	Lead confirmation sampling (sample screened above 280 mg/kg)
SS-102	29	N/A	N/A	N/A
SS-103	85	N/A	N/A	N/A
SS-EE-104	804	1577	134	Lead confirmation sampling (samples screened above 280 mg/kg), and analysis of hazardous substance list metals and SVOCs
SS-EE-105	330	282	148	Lead confirmation sampling (sample screened above 280 mg/kg)
SS-EE-106	161	108	76.5	Lead confirmation sampling (10% of samples screened under 280 mg/kg)
SS-107	56	N/A	N/A	N/A
SS-108	90	N/A	N/A	N/A
SS-EE-Playground	N/A	N/A	13.2	Sampling beneath a playground where a fabric liner was not encountered

Notes:

XRF: X-ray fluorescence
BLS: Below land surface
N/A: Not applicable
mg/kg: miligram per kilogram (equivalent to parts per million; ppm)
*: XRF screening values are reported in the Duke Report
**: Location offset due to access issues
Bold laboratory reported lead concentration exceeds the 400 mg/kg Residential PSRG

Table 7
Quality Control Summary
City of Durham Parks
Durham, North Carolina

PRECISION CHECKS

Northgate Park	Mid-Atlantic XRF Screening Value (mg/kg or ppm)	Standard Deviation (mg/kg or ppm)	Average Concentration (mg/kg or ppm)	Relative Standard Deviation (%)
SS-173	24	2.19	29	7.68
	30			
	31			
	29			
	30			
	27			
	29			
SS-141	103	8.90	86	10.34
	74			
	86			
	88			
	85			
	90			
	76			
SS-77	34	2.91	35	8.26
	39			
	35			
	34			
	34			
	40			
	31			
Lyon Park	Mid-Atlantic XRF Screening Value (mg/kg or ppm)	Standard Deviation	Average Concentration	Relative Standard Deviation
SS-45	394	24.84	363	6.85
	379			
	312			
	355			
	350			
	373			
	376			
Walltown Park	Mid-Atlantic XRF Screening Value (mg/kg or ppm)	Standard Deviation	Average Concentration	Relative Standard Deviation
SS-53	482	9.90	485	2.04
	465			
	489			
	492			
	481			
	499			
	485			
East Durham Park	Mid-Atlantic XRF Screening Value (mg/kg or ppm)	Standard Deviation	Average Concentration	Relative Standard Deviation
SS-51	2630	117.96	2486	4.74
	2535			
	2437			
	2554			
	2571			
	2428			
	2248			
East End Park	Mid-Atlantic XRF Screening Value (mg/kg or ppm)	Standard Deviation	Average Concentration	Relative Standard Deviation
SS-81	973	46.8	875	5.34
	854			
	815			
	849			
	854			
	889			
	894			

Table 7 Quality Control Summary City of Durham Parks Durham, North Carolina		
PERFORMANCE CHECKS		
Northgate Park	Reading on Blank (180-647)	Reading on RCRApp 180-661 (500 ppm Pb)
7/19/23 at 1105	5.9	462
7/19/23 at 1313	7, 5.5 (second shot)	448
7/19/23 at 1338	Not Detected	505
7/19/23 at 1738	6.5	523
7/19/23 at 1809	Not Detected	459
7/20/23 at 0645	5.6	485
7/20/23 at 0902	5.0	463
7/20/23 at 1117	7.4, Not Detected (second shot)	488
7/20/23 at 1256	Not Detected	507
7/20/23 at 1410	Not Detected	536
7/20/23 at 1621	6.0	490
7/20/23 at 1652	Not Detected	570
7/21/23 at 0630	Not Detected	503
7/21/23 at 0817	5.5	511
7/21/23 at 0929	Not Detected	551
7/21/23 at 1052	8.1	483
7/21/23 at 1200	Not Detected	565
7/21/23 at 1400	Not Detected	489
Lyon Park	Reading on Blank (180-647)	Reading on RCRApp 180-661 (500 ppm Pb)
7/24/23 at 0741	Not Detected	513
7/24/23 at 0902	Not Detected	501
7/24/23 at 1102	8.8	491
7/24/23 at 1119	Not Detected	492
7/24/23 at 1224	8.0	500
7/24/23 at 1515	8.1	465
Walltown Park	Reading on Blank (180-647)	Reading on RCRApp 180-661 (500 ppm Pb)
7/25/23 at 0750	6.9	492
7/25/23 at 0916	Not Detected	478
7/25/23 at 0957	Not Detected	519
7/25/23 at 1142	Not Detected	507
East Durham Park	Reading on Blank (180-647)	Reading on RCRApp 180-661 (500 ppm Pb)
7/25/23 at 1406	Not Detected	520
7/25/23 at 1615	Not Detected	496
East End Park	Reading on Blank (180-647)	Reading on RCRApp 180-661 (500 ppm Pb)
7/26/23 at 0752	Not Detected	507
7/26/23 at 0946	Not Detected	518

Notes:

XRF: X-ray fluorescence
BLS: Below land surface
N/A: Not applicable
mg/kg: miligram per kilogram (equivalent to parts per million; ppm)

TABLE 8
SUMMARY OF METALS AND SEMI-VOLATILE ORGANIC COMPOUNDS DETECTED IN SOIL
CITY OF DURHAM PARKS
DURHAM, NORTH CAROLINA
MID-ATLANTIC JOB NO. R4370.00

PARAMETER	SAMPLING LOCATION										PRELIMINARY SOIL REMEDIATION GOALS (PSRGs; JULY 2023)		
	Northgate		Lyon Park		Walltown Park		East Durham Park		East End Park				
	SS-NG-153 07/21/23	SS-NG-226 07/21/23	SS-LY-45 07/24/23	SS-LY-61 07/24/23	SS-WT-18 07/25/23	SS-WT-50 07/25/23	SS-ED-48 07/25/23	SS-ED-51 07/25/23	SS-EE-54 07/26/23	SS-EE-104 07/26/23	Residential (mg/kg)	Industrial/ Commercial (mg/kg)	Protection of Groundwater (mg/kg)
Metals by Method 6020B/7471A													
Antimony	<0.300	0.336	1.84	<0.261	<0.275	5.61	<0.293	5.42	<0.266	<0.256	6.3	93.0	0.9
Arsenic	**1.11**	**2.26**	**5.04**	**1.12**	**2.10**	**16.8**	0.315	**7.18**	**4.52**	0.377	0.68	3.0	5.8
Barium	60.9	105	153	22.7	71.3	1160	25.6	612	26.1	9.56	3100	47000	580
Beryllium	0.309	0.391	0.531	<0.261	0.446	0.685	<0.293	0.522	<0.266	<0.256	31	470	63
Cadmium	<0.300	0.439	1.15	<0.261	<0.275	**3.30**	<0.293	**2.38**	<0.266	<0.256	1.4	20	3.0
Cobalt	**7.72**	3.19	**5.95**	2.43	4.70	**8.16**	1.44	**6.40**	**5.20**	2.51	4.7	70	0.9
Chromium (Total)	25.2	14.4	22.3	17.3	12.6	41.6	3.70	34.5	12.5	32.7	23000	350000	360000
Copper	21	55.5	102	6.61	37.0	436	4.57	**647**	17.1	7.06	630	9300	700
Lead	12.7	300	384/**553**	5.14	86.2	**1780**	7.95	**1510**	24.8	134	400	800	270
Manganese	**726**	209	298	72.6	163	**749**	67.0	**482**	169	67.7	380	5600	65
Mercury	0.0488	0.174	0.198	0.0230 J	0.0657	0.0618	<0.0351	0.173	<0.0319	<0.0307	4.7	70	NE
Nickel	16.7	7.63	17.8	9.64	6.71	24.4	1.57	16.3	16.9	6.54	310	4700	130
Selenium	<0.300	0.352	0.612	<0.260	0.524	0.74	<0.292	0.531	<0.266	<0.255	78	1200	2.1
Silver	0.768	0.58	<0.477	<0.261	<0.275	2.31	<0.293	1.05	<0.266	<0.256	78	1200	3.4
Thallium	<0.300	<0.301	<0.477	<0.261	<0.275	<0.365	<0.293	<0.341	<0.266	<0.256	0.16	2.3	2.8
Vanadium	24.6	28.0	19.3	17.8	36.8	18.0	5.50	6.40	15.2	13.9	78	1200	140
Zinc	75	172	494	23	112	2280	23.4	1550	52.0	18.2	4700	70000	1200
SVOCs by Method 8270E													
Benzo(b)flouranthene	1.14J	<0.176	<0.417	<0.152	<0.643	<0.852	<0.683	<0.795	<0.621	<1.20	1.1	21	1.2
Benzoic Acid	6.29J	<0.697	<1.66	<0.604	<2.56	<3.39	<2.72	<3.16	<2.47	<4.75	5400	66000	120
Chrysene	0.700J	<0.170	<0.406	<0.148	<0.625	<0.829	<0.665	<0.773	<0.604	<1.17	110	2100	36
Pyrene	1.03J	<0.161	<0.383	<0.139	<0.590	<0.782	<0.627	<0.730	<0.570	<1.10	360	4500	440

NOTES:
All samples collected from at land surface
All values reported in milligrams per kilogram (mg/kg)
SVOCs = Semi-Volatile Organic Compounds
<# = Not Detected at or above laboratory method detection limits
Bold values exceed the Residential PSRG
Shaded values exceed Industrial/Commercial PSRG
Underlined values exceed Protection of Groundwater PSRGs
J = Concentration was detected between the method detection limit and the reporting limit; value is an estimation.

APPENDIX A

SELECTED HISTORICAL BACKGROUND INFORMATION

Mid Atlantic

Legacy Pb contamination in the soils of three Durham city parks:
Do secondary forest organic horizons effectively blanket Pb in city park soils contaminated by historic waste incineration?

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16 December, 2022

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I. Executive Summary

Lead (Pb) has historically been used in many products such as gasoline, paint, batteries, ceramics, pipes and plumbing, solders, and cosmetics, and Pb contamination from these materials and their waste streams is widespread around the world. Pb is a highly insoluble and persistent contaminant that accumulates in the environment, especially in urban soils; to this day, soil Pb concentrations remain high in many cities, posing a significant long-term public health and environmental risk. Some remediation options are available for Pb, with the most effective being removal and replacement of the contaminated soil. However, plants that can tolerate soil Pb may be effective at phytostabilization. In phytostabilization, soil Pb is immobilized both physically and chemically by the roots, while also being sequestered by new layers of organic matter and soil that accumulate on the surface.

Throughout the early 1900s, the city of Durham, NC operated neighborhood municipal incinerators which combusted most of the city's waste, including waste collected from homes, businesses, and public street cleaning. Around 1950, the four of the incinerator sites were closed and converted into public parks, with playgrounds, grass fields, picnic benches, sports facilities, and walking paths. These are now Walltown, East End, East Durham, and Lyon Parks. The parks currently contain streams and large areas of secondary forest cover, which have been largely unmanaged throughout the last century. From local newspaper articles, we have direct evidence for the disposal of incinerator refuse at these sites and other Durham parks. While historic news accounts describe the incinerator sites being covered with topsoil, until this study there has been no monitoring of the status of contaminant metals in the soils throughout the parks. We hypothesized that the surface soils of these parks had elevated Pb concentrations as the result of the parks' history of incineration.

Our primary objectives were to:

1. Measure total mineral surface soil Pb concentrations across three of Durham's urban parks which were historically used for waste incineration (Walltown, East End, and East Durham Parks).

2. Assess whether secondary hardwood forests have accumulated organic horizons that were effective barriers to Pb-contaminated mineral soil below.

We sampled mineral surface soil and organic horizon according to a stratified random sampling design, and the samples were measured for total Pb with an Olympus Vanta pXRF instrument. Data were analyzed using R and ArcGIS Pro, resulting in statistical models and spatial interpolations.

Our main results were:

1. Mineral soil Pb concentrations across Walltown, East End, and East Durham Parks are elevated above both geologic background levels and several EPA hazard thresholds, especially in some highly-trafficked areas.
2. Hardwood forest organic horizons provide a blanket for highly Pb-contaminated mineral soil, but a significant amounts of surface soil Pb is mixed up into these O horizons. Thus, exposure risk is not eliminated and can remain quite high.

Our results show that all three parks have total Pb in surface soils (0-2.5 cm) well above the geologic background (0-30 ppm), with many soils exceeding the US EPA's hazard thresholds for gardening (100 ppm), residential play areas (400 ppm), and residential non-play areas (1200 ppm). For all three parks combined, mineral soil Pb ranged from 8 to 2342 ppm, with a mean of 201 ppm and a median of 93 ppm. A notable hotspot with extremely high Pb was mapped throughout the southeastern portion of East Durham Park north of East Main St., spanning a grassy field and part a secondary forest (Figure 12). Mineral soil Pb in this hotspot ranged from 694 to 2342 ppm. This is of particular concern because this field is adjacent to an apartment building, and residents appear to use this area to play, garden, and park their cars.

Additionally, our study demonstrates that while hardwood O horizons provide a physical barrier to exposure for highly contaminated mineral soil, a significant amount of mineral soil Pb is mixed up into the O horizons. This relationship differed significantly between the upper O1/O2 and the lower O3 horizons. Pb concentration in the lower O3 horizon increased by 0.6 ppm for every 1 ppm increase in Pb increase in the mineral soil, with an adjusted R^2 of 0.86.

This means that the lower O3 horizon has about 60% of the Pb concentration of the mineral soil below. In contrast, Pb concentration in the upper O1/O2 horizon increased by 0.1 ppm for every 1 ppm increase in Pb increase in the mineral soil, with an adjusted R^2 of 0.49. This means that the upper O1/O2 horizons have about 10% of the Pb concentration of the mineral soil below,

Our results suggest limitations to phytostabilization as tool to reduce Pb exposure, particularly in hardwood forests where there is relatively rapid decomposition and bioturbation in the O horizons compared to many coniferous forests. Overall, the spatial distribution of soil Pb concentrations demonstrates the complicated land use history of these landscapes, pointing towards multiple sources of Pb inputs and outputs throughout the 20th century.

Based on articles in historic newspapers from five cities across the USA, many municipalities may have public parks converted from historic waste incinerator sites; these sites may be contaminated with Pb and other metals that would have accumulated in ash and cinders, posing an exposure risk to residents who visit the parks.

II. Table of Contents

III. Abstract

As a result of its historical uses in common materials, lead (Pb) tends to accumulate in urban soils throughout the world. Durham, NC operated at least four waste incinerators in the first half of the 20th century, and around 1950, these sites were converted into public parks containing large areas of secondary urban forest. Our objective was to measure total mineral surface soil Pb in three of these parks and to assess whether secondary hardwood organic horizons (O horizons) effectively blanket Pb-contaminated soil below. Our results show that all the parks have total Pb in surface soils (0-2.5 cm) well above the geologic background (0-30 ppm), with many soils exceeding the US EPA's hazard thresholds for gardening (100 ppm), residential play areas (400 ppm), and residential non-play areas (1200 ppm). Additionally, our study demonstrates that while hardwood O horizons provide a physical barrier to exposure for highly contaminated mineral soil, a significant amount of mineral soil Pb is mixed up into the O horizons. The upper O1 and O2 horizons have about 10% of the Pb concentration of the mineral soil below, and the lower O3 horizon has about 60% of the Pb concentration of the mineral soil below. This highlights the limitations of phytostabilization as tool to reduce Pb exposure, particularly in hardwood forests where there is rapid decomposition and bioturbation in the O horizons. Based on historic newspapers from cities across the USA, we suggest that many municipalities have public parks with contaminant metals from historic waste incineration, posing a similar exposure threat to residents.

IV. Introduction

Soil Pb and Phytostabilization:

Lead (Pb) has historically been used in many products such as gasoline, paint, batteries, ceramics, pipes and plumbing, solders, and cosmetics, and residual Pb contamination from these materials is widespread around the world [1–3]. Even at low levels of exposure, Pb can cause dire health issues for both children and adults, ranging from cardiovascular stress to neurological damage [4–8]. Cognitive and behavioral impairments in children have been thoroughly demonstrated by large environmental health data sets [4–8].

It is a highly persistent and insoluble contaminant in the environment, and to this day, soil concentrations remain high in many cities, posing a significant long-term public health and environmental risk [2,6,9,10]. Soil Pb an is garnering increased attention in the environmental and public health fields, being studied globally as a pathway to exposure [9]. Many studies demonstrate Pb exposure through soil, through activities such as gardening, building, playing, and tracking dust into home [11–14]. Children are especially vulnerable to this kind of exposure sue to their behaviors, especially through ingestion and inhalation, and there is a direct relationship between soil Pb and blood Pb levels in children [1,11,13–16].

The health risks associated with Pb exposure pose a serious environmental justice problem, since marginalized and socioeconomically disadvantaged communities tend to have higher Pb exposures than the rest of the population [3,7,17]. This trend is also evident in soil Pb exposure, since many black and other minority communities have been systemically driven to live and work in and around structures that serve as Pb sources (such as older houses, gas stations, factories, and waste incinerators and landfills) [3,7,17,18].

Pb is present naturally at low levels in many soils found around the world, due to the underlying rock that the soil is created from. These geologic background levels range from 10-30 ppm, on average [19–21]. The US EPA has set several concentration thresholds for soil Pb to limit human exposure (Table 1). In 1994, it set soil screening levels (SSLs) which state that a

soil Pb hazard is present when soil from a residential play area surpasses 400 ppm Pb, and when soil from a residential non-play area surpasses 1,200 ppm Pb [22]. Then, in 2014, it published a technical review that recommended keeping soil under 100 ppm Pb for safe gardening activities [23].

Table 1: Hazardous soil Pb thresholds set by the US EPA [22,23].

Concentration	**Threshold**	**Source**
<30 ppm	Background geologic levels	See above
<100 ppm	Safe for gardening activities	EPA, 2014
<400 ppm	Safe for residential play areas	EPA, 1994
<1200 ppm	Safe for residential non-play areas	EPA, 1994

Some remediation options are available for Pb, with the most effective being removal and replacement of the contaminated soil, or stabilizing and burying the soil [2,10]. Some other methods are also used, such as chemical stabilization/solidification for sequestration or chemical mobilization for extraction by soil washing [24–26]. Much literature exists on the possibilities of phytoextraction of soil Pb, with some studies suggesting that plants can relocate Pb from the soil into their tissues, particularly in the presence of soil amendments such as chelates, lime, and cement [25,27]. However, most plants have physiological mechanisms that exclude Pb from their tissues, and even if they do take up Pb, it usually stays in the roots and is not transferred to stems and foliage – which is actually considered phytostabilization [10,25,27–29]. One recent meta-analysis found that no plants actually meet hyperaccumulator criteria without amendments, meaning that plants are largely unable to extract Pb in the quantities and time frames necessary for remediation projects [10,27]. Several studies and review papers also underpin the ineffectiveness of Pb phytoextraction as a remediation tool, despite the fact that plants can effectively accumulate some other heavy metals in their aerial tissues, such as cadmium, nickel, and zinc [10,27,30–32].

However, plants that can tolerate soil Pb may be effective at phytostabilization [10,27,31]. In phytostabilization, soil Pb is immobilized both physically and chemically by the roots, while also being sequestered by new layers of organic matter and soil that accumulate on the surface [3,10,24,31,33,34]. This reduces exposure from direct contact, soil erosion/migration, air turbation (inhalation of contaminated particulates), or water leaching (ingestion of contaminated water) [10,33]. Many studies have enhanced phytostabilization with various amendments such as compost, manure, biochar, acids, phosphorus, mycorrhizal fungi, and chelates, which help by stimulating

plant growth, improving plant Pb tolerance, increasing root Pb uptake, decreasing Pb bioavailability, and improving soil structure (by creating water stable aggregates and irregular porosity) [25,32,34–39]. It is important to note, however, that phytostabilization is only effective in the root zone of plants [24].

Durham's Waste Incinerators:

Throughout the early 1900s, the city of Durham, NC operated four municipal incinerators which processed most of the city's waste, including waste collected from homes, businesses, and public street cleaning (Figures 1-4) [40–45]. Each incinerator had a capacity of processing 15-20 tons of waste [43]. They went out of commission around 1940, when the city constructed a new centralized incinerator in northeast Durham [40,41,44,46–48]. Some incinerators were demolished soon after, while others were left abandoned for longer periods of time, such as the facility located at what is now East Durham Park [49–52]. There is evidence of lively public debate over the fate of both the old and new incinerators, with many Durham residents reporting, petitioning, and suing over concerns that they are significant nuisances in their neighborhoods [44–47,53,54].

Around 1950, all four of the unused incinerator sites were converted into public parks, with playgrounds, grass fields, picnic benches, sports facilities, and walking paths [49,51,55]. These are now Walltown, East End, East Durham, and Lyon Parks. There is evidence that potentially high Pb materials were used as fill in some of these parks during the landscaping process. For example, fill for some of the playgrounds came from dirt and rubble from streets that were being renovated [49]. Additionally, "500 truckloads" of ash and cinders from refuse piles at the Walltown Park incinerator were used as fill covered by topsoil at another Durham park [55]. However, "2000 truckloads" of cinders and ash were removed from the Walltown site in total, which could have been used as fill at other similar sites [55].

All four parks currently contain streams and large areas of secondary forest cover, which appear to have been unmanaged throughout the last century. Walltown Park has 1.06 ha of forest cover (42% of its total area), East End Park has 1.38 ha of forest cover (44% of its total area), and East Durham Park has 1.10 ha of forest cover (75% of its total area). They are dominated by

native hardwood trees and invasive plants, with some native pines present in East Durham and East End Parks. The forest canopies range from being fairly open to entirely closed, depending on the soil characteristics. Based on airplane and satellite imagery from the 1900s, it seems that most of these incinerator sites were barren or covered in low-lying shrubs in the early 20th century, and much of this land has been left to undergo natural succession, which has produced the secondary forests present today (Figure 5). Most of the incinerator buildings can be easily identified in 1940 aerial photography, along with the roads and refuse piles associated with them (Figure 4).

We hypothesized that these parks would have high levels of soil Pb contamination, since the waste processed at these incinerators included many common household products that contained Pb, including batteries, ceramics, pipes, solders, and cosmetics, as well as housepaint and gasoline exhaust that accumulated on the streets. Many studies from around the world have concluded that waste incineration is a source of heavy metal contamination in surrounding soils [18,56–60]. We also anticipated the contamination levels and patterns to be different among the sites, considering their different land use histories. Additionally, the presence of nearly 70-year-old secondary hardwood forests with well-developed organic horizons (O horizons) allowed us to study the effectiveness of organic matter as a stabilization and exposure mitigation tool. This part of the study relied on the knowledge that this organic matter from canopy litterfall did not contain appreciable Pb, since plants are unable to accumulate Pb in their stems, branches, and foliage, and that there have been no recent anthropogenic Pb inputs, since these forests appear unmanaged since the 1950's.

Project Objectives:

Our primary objectives were to:

3. Measure total mineral soil Pb concentrations across three of Durham's urban parks which used to be waste incinerator sites.
4. Assess whether secondary hardwood organic horizons provide an effective barrier to Pb-contaminated mineral soil below.

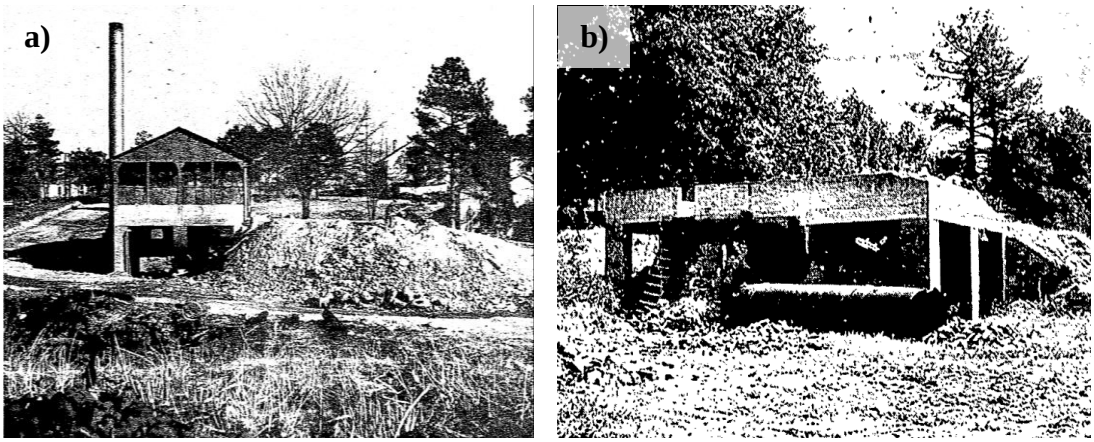

Figure 1: Newspaper photographs of Durham's historical waste incinerators; ***a)*** *A photograph of one of the four incinerators, published in the Durham Morning Herald in 1940* [44]*;* ***b)*** *A photograph of the partially-demolished Walltown incinerator, published in the Durham Morning Herald in 1950* [51]*.*

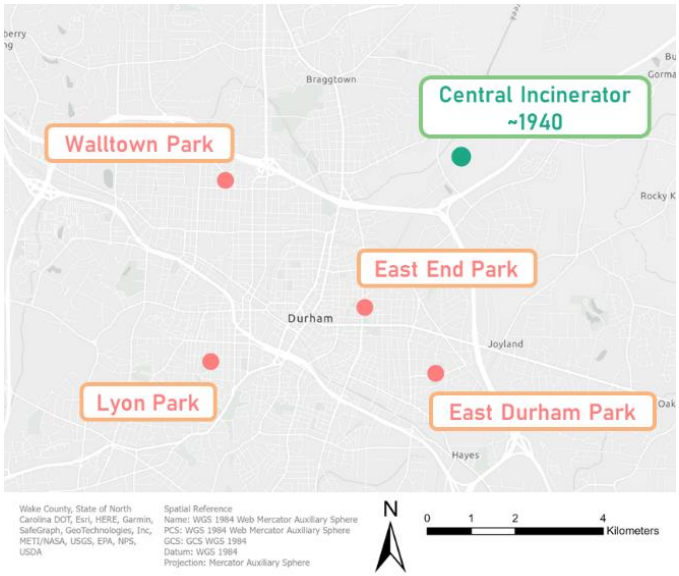

Figure 2: The locations of the four original waste incinerators and the new centralized waste incinerator built around 1940, shown on a current map of Durham, NC.

Figure 3: A 1937 Map of Durham, published by the Durham Department of Public Works, with the four original waste incinerator sites labelled along with their waste-processing capacity [43].

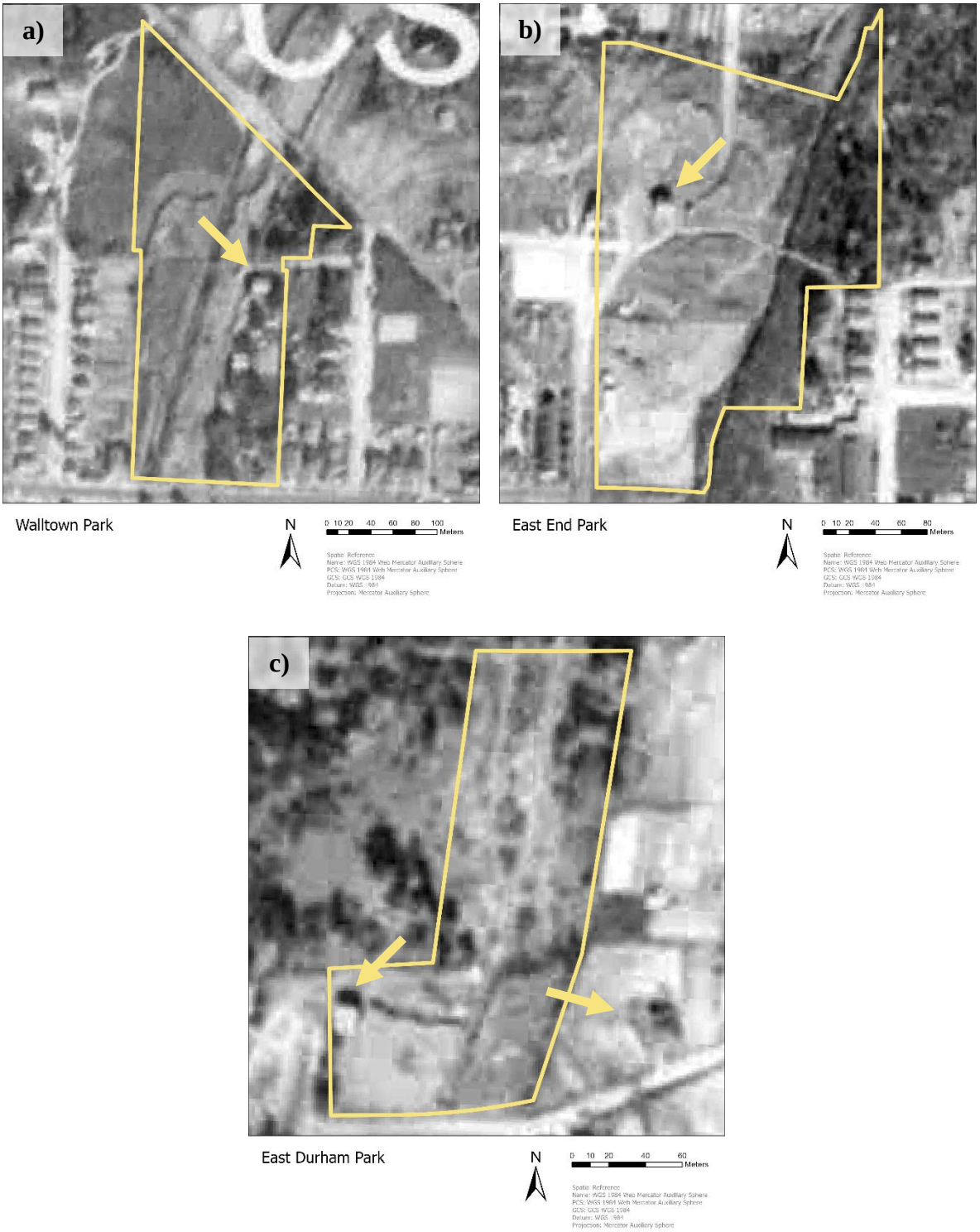

Figure 4: 1940 aerial imagery of three of the parks which used to be waste incinerator sites, with lines showing the current extent of the parks and arrows indicating the possible locations of the incinerator buildings; ***a)*** *Walltown Park;* ***b)*** *East End Park;* ***c)*** *East Durham Park* [61].

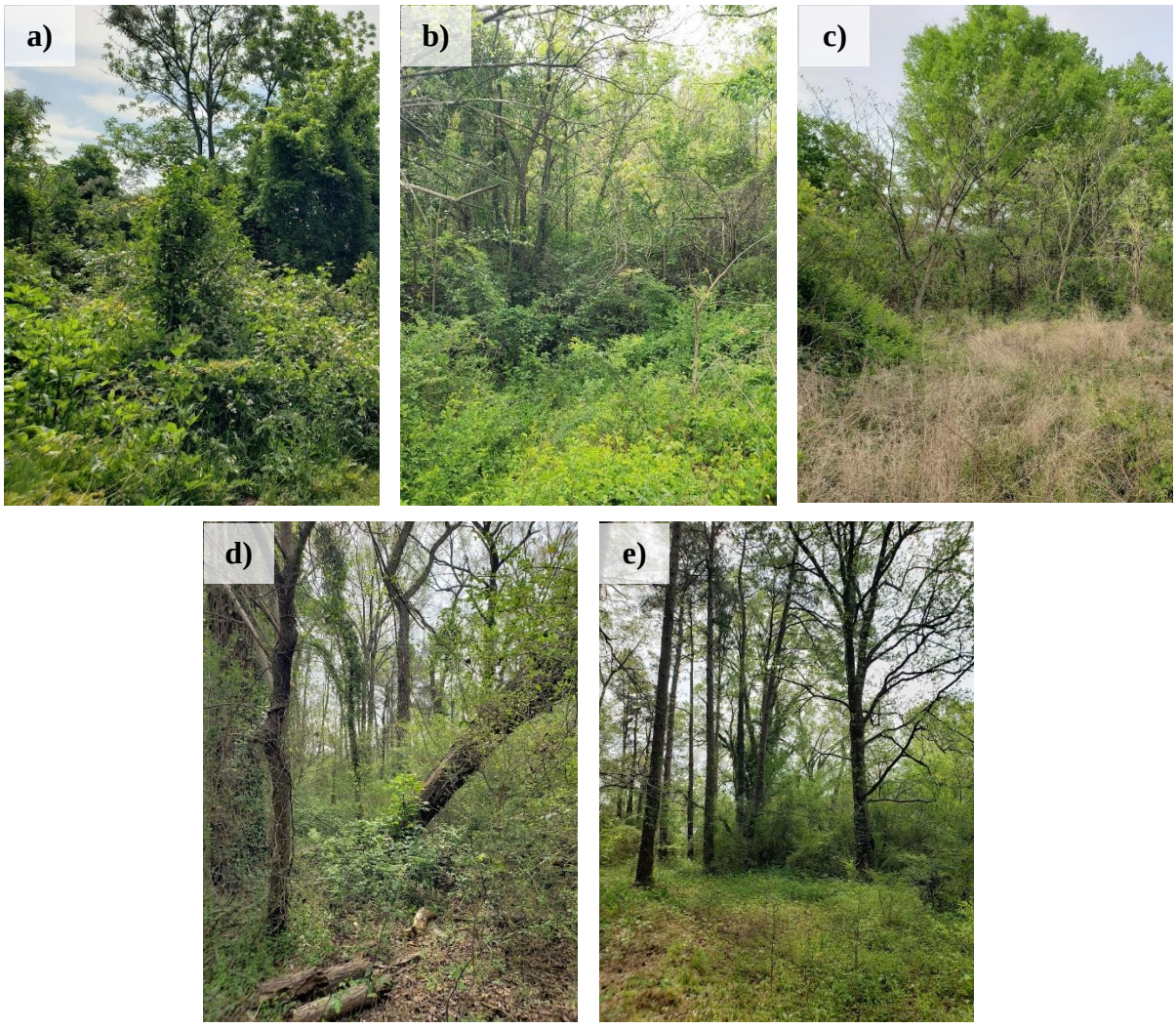

Figure 5: Photographs of the current forest cover in the three of the parks which used to be waste incinerator sites; ***a)*** *Walltown Park;* ***b)*** *East End Park;* ***c)*** *East End Park;* ***d)*** *East Durham Park;* ***e)*** *East Durham Park.*

V. Methods

Background Research:

We conducted preliminary research on the location and history of the incinerator sites at Walltown, East End, and East Durham Parks in order to create an appropriate sample design. Lyon Park was left out of our study due to time constraints and the fact that the old incinerator location is not a heavily-trafficked part of the park. The incinerator sites that would become city parks are explicitly labelled on a 1937 street map of Durham (Figure 3), and I georectified this map along with 1940, 1955, and 1972 North Carolina aerial imagery (Figure 4) [43,61]. Overlaying these maps and photos, I found the geographic locations of the incinerators on their respective city blocks. Buildings are easy to identify this way, even in low-resolution imagery, since they have distinct shapes, colors, and shadows. However, these locations are only best estimates, since the 1937 map could only be used to identify the city blocks on which the incinerators were located, and the precise locations were based on information pieced together from the imagery and local newspaper articles. At East Durham Park, I identified multiple buildings which could have been the waste incinerator site, piecing together information from newspaper articles, aerial imagery, and Pb contamination patterns. We used these layers both to qualitatively inform our understanding of land cover/land use at the time and to create point features for the incinerators.

After initial visits to each park to collect preliminary soil samples and qualify the land cover, I divided each park into different sampling strata based on current land cover and inferred land use history (Figure 6). I used ArcGIS Online to acquire shapefiles for Durham's parks and ArcGIS Pro to subdivide them into the sampling strata. For these delineations, I used aerial imagery from 1940, 1955, and 1972, and Google Earth satellite imagery from different seasons that date back to the 1980's [61]. I removed buildings and paved surfaces from the sampleable areas. I used ArcGIS Pro to generate random sample points about 15 meters apart in each stratum, with a final sampling density of about 1 point per 250 m^2. This resulted in a total number of 269 sample points across all three parks. This stratified random sampling was chosen in order to help ensure coverage of all land cover types within the parks while also avoiding any

regularly-spaced vegetative, edaphic, geologic, or topographic patterns that might coincide with our sample point density.

Field Sampling:

Throughout September 2021 to May 2021, we conducted mineral surface soil sampling at these sample points in Walltown, East End, and East Durham Parks. At each sample point, we composited four samples from the upper 2.5 cm of mineral soil (A horizon) from a 30x30 cm area, excluding O horizons [3].

In October 2022, we conducted O horizon sampling at East Durham Park, across a gradient of mineral soil Pb concentrations under secondary forests. This park was selected because it had the widest range of mineral soil Pb under a consistent and well-developed O horizon, ranging from 28 to 2266 ppm. This allowed us to test whether mineral soil Pb is bioturbated up into the O horizon. We collected the upper and lower O horizon layers from an area with a 30 cm diameter at each point, along with a sample of the mineral soil directly below. We classified the upper O horizon as O1/O2, which included fresh litter and debris, with individual components such as leaves, twigs, and bark mostly intact and easily recognizable. We classified the lower O horizon as O3, which included organic matter was well decomposed into unrecognizable, amorphous humus that had begun to mix with the mineral soil below. Our O1, O2, and O3 classes correspond directly to Oi, Oe, and Oa designations often used by others.

Lab Analysis:

In the lab, the mineral soil samples were air dried, homogenized and passed through a 2 mm sieve. The O horizon samples were air dried, homogenized, subsampled, and ground with a Wiley Mill using a 0.4 mm screen. These homogenized samples were then measured for total Pb with an Olympus Vanta pXRF instrument that was calibrated for measuring total Pb between 5 and 50,000 mg/kg (ppm) [3].

Data Analysis:

I used R to clean and compile the chemical and spatial data into a single data set that could be used for statistical and geospatial analysis. For the statistical models, I calculated several relevant environmental variables for each sample point in ArcGIS Pro. I calculated each point's elevation, slope, and topographic position index from an NC digital elevation model, and I calculated each point's distance to the incinerators and nearby roads [62]. Thus, I created one master data set with the location, Pb concentration, and environmental variables for each soil sample.

Using ArcGIS Pro, I interpolated the sample point Pb concentrations in order to create a full Pb map for each park. I tested multiple interpolation methods, including simpler ones like natural neighbor, inverse distance weighted, and spline, as well as more complex ones such as kriging. I decided to use the maps produced by the inverse distance weighted interpolation, as it seemed like the most straightforward and parsimonious way to estimate Pb levels between sample points (Figures 10-12). I used a variable search radius of 10 points and a power of 2 for the exponent of distance. This method allowed interpolation of the entire park areas, not just the extent of the sample points, as is the case with natural neighbor. It also retained some of the true spatial heterogeneity in Pb levels that was smoothed over by kriging. The land use history of these parks is clearly complex – many gradual processes and sporadic events have interacted to create contemporary soil Pb distributions. Thus, it was difficult to find equations that accurately model the underlying spatial autocorrelation of sample points, and the kriging process created maps with strikingly low variation in Pb levels.

I created many generalized linear models in R to relate environmental variables to mineral soil Pb concentrations across the three parks. Due to the strong skew of the data, they were log-transformed to fulfill the assumption of normality. However, after trying many combinations of explanatory variables and random effects, I decided to leave most of these statistical models out of my final results. The relationships between variables were mostly inconsistent between the parks, meaning that the significant explanatory variables also differed greatly between the parks. This is likely related to the complicated and diverse land use history of these incinerator sites, which is not fully captured by current environmental variables and probably explains some of the spatial variation in Pb concentration.

To model the relationship of O horizon Pb concentrations to mineral soil Pb concentrations, I generated simple linear regressions in R, which appeared to capture the relationships well. I regressed the O1/O2 and O3 horizon Pb with mineral soil Pb, and I regressed the O1/O2 horizon Pb with the O3 horizon Pb to explore the patterns occurring within the O horizon.

Figure 6: Sampling strata used for mineral surface soil samples in three of the parks which used to be waste incinerator sites, with Google Earth imagery from May 2017; ***a)*** *Walltown Park;* ***b)*** *East End Park;* ***c)*** *East Durham Park.*

VI. Results

Soil Pb:

Mineral surface soil (0-2.5 cm) Pb levels in all parks reached levels well above geologic background levels of 0-30 ppm [19–21]. In all three parks, the historic incinerators were apparently located in what are now highly-trafficked areas such as grass fields, sports facilities, playgrounds, and picnic areas. The parks also had alarmingly high Pb levels in some such areas. For all three parks combined, mineral soil Pb ranged from 8 to 2342 ppm, with its distribution having a strong right skew, a mean of 201 ppm, and a median of 93 ppm (Figure 7).

When data from all three parks is aggregated and parks are accounted for as an explanatory variable, it appears that the current presence of forest cover may have a slightly negative effect on mineral soil Pb concentrations (Figure 9). In areas with forest cover, Pb concentration is predicted to be lower by a factor of 0.25 than areas without forest cover, at a significance level of $P = 0.074$. However, as mentioned in the methods, these patterns could be attributed to inconsistent Pb inputs and other human activities.

Walltown Park: Mineral soil Pb in Walltown park ranged from 13 to 1338 ppm, with its distribution having a strong right skew, a mean of 162 ppm, and a median of 105 ppm (Figure 8). Many samples were on the lower end of the range (but still well above geologic background levels), with several Pb hotspots spread out along the vegetated riparian zone running north-south through the middle of the park. Additionally, some of the grassy areas near the basketball courts and horseshoe pits had elevated Pb. In contrast, some areas where clean fill was used during landscaping and construction, such as baseball fields and the community center, had relatively low Pb (Figure 10).

East End Park: Mineral soil Pb in East End Park ranged from 8 to 1364 ppm, with its distribution having a strong right skew, a mean of 127 ppm, and a median of 57 ppm (Figure 8). Many samples were on the lower end of the range (but still well above geologic background levels), especially between the tennis courts and throughout the riparian zone in the forested area.

In the southern region of the park, behind a fence with a locked gate, Pb was very high in a number of soil samples. While this area was likely not affected by historic waste incineration, it was historically used by the city for paint and sign production. This is concerning because this area lacks much vegetative cover and contaminated surface soil particles can be easily eroded by wind and water into the neighboring environment. Just north of the paint and sign shop, there is an area of extremely low Pb, which is mostly covered by impermeable concrete and gravel; these surfaces may act as a barrier to the contaminated soil below and likely allow all new Pb inputs to be eroded into adjacent soil (Figure 11).

East Durham Park: Mineral soil Pb in East Durham Park ranged from 28 to 2342 ppm, with its distribution having a strong right skew, a mean of 405 ppm, and a median of 107 ppm (Figure 8). Many samples were on the lower end of the range (but still well above geologic background levels), especially throughout the northern forested area, with a smaller hotspot on the western grassy area just north of the playground. A notable hotspot with extremely high Pb was mapped throughout the southeastern region of the park, spanning a grassy field and part the forested areas (Figure 12). Mineral soil Pb in this hotspot ranged from 694 to 2342 ppm. This is of particular concern because this field is adjacent to an apartment building, and residents appear to use this area to play, garden, and park their cars. This hotspot indicates a large, direct input of Pb into the soil, possibly from a refuse pile, which supports the possibility that the incinerator may have actually been located near the southeastern boundary of the park and not near the current playground. This possibility is also underpinned by several newspaper articles from the 1950s, which detail that playground construction had begun by 1950, but that the incinerator building and its buried debris were still present somewhere on that site in 1952 (experiencing an underground fire in that year) [49,51,52].

O Horizon Pb:

Pb concentration in the O horizons in East Durham Park was positively correlated with the Pb concentration in the underlying mineral soil (A horizon) Pb (Figures 13-14). This relationship differed significantly between the upper O1/O2 horizon and the lower O3 horizon. Pb concentration in the lower O3 horizon increased by 0.6 ppm for every 1 ppm increase in Pb

increase in the mineral soil, with an adjusted R^2 of 0.86. This means that 86% of the variability in O1/O2 horizon Pb can be explained by Pb in the mineral soil. In contrast, Pb concentration in the upper O1/O2 horizon increased by 0.1 ppm for every 1 ppm increase in Pb increase in the mineral soil, with an adjusted R^2 of 0.49. This means that 49% of the variability in O1/O2 horizon Pb can be explained by Pb in the mineral soil. When O1/O2 horizon Pb is regressed against O3 horizon Pb, O1/O2 horizon Pb increases by 0.1 ppm for every 1 ppm increase in in the O3 horizon Pb, with an adjusted R^2 of 0.35. These results demonstrate that much lower quantities of soil Pb are mixed up into the upper O horizon than the lower O horizon; the upper O horizon maintains at least an order of magnitude lower Pb levels than the mineral soil below it. The lower O horizon does have lower Pb levels than the mineral soil below it, but clearly a significant amount of soil Pb is mixed up into this layer.

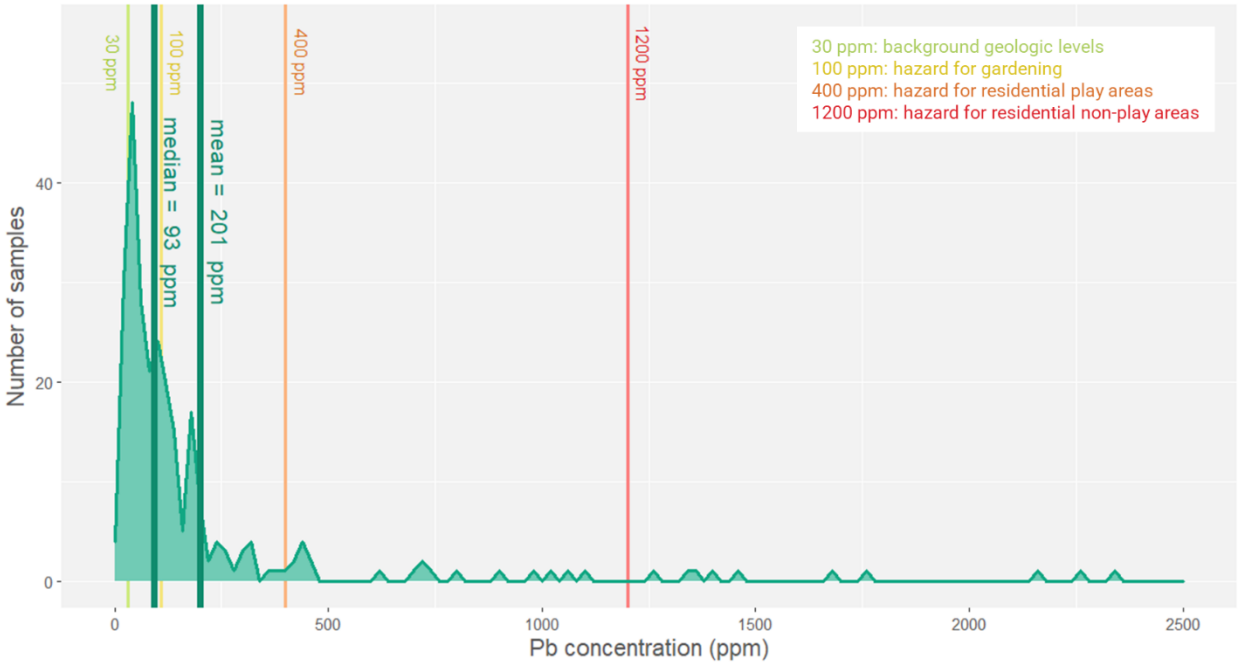

Figure 7: Distribution of Pb concentration in soil samples across all parks, with geologic background levels and US EPA hazard thresholds (Table 1).

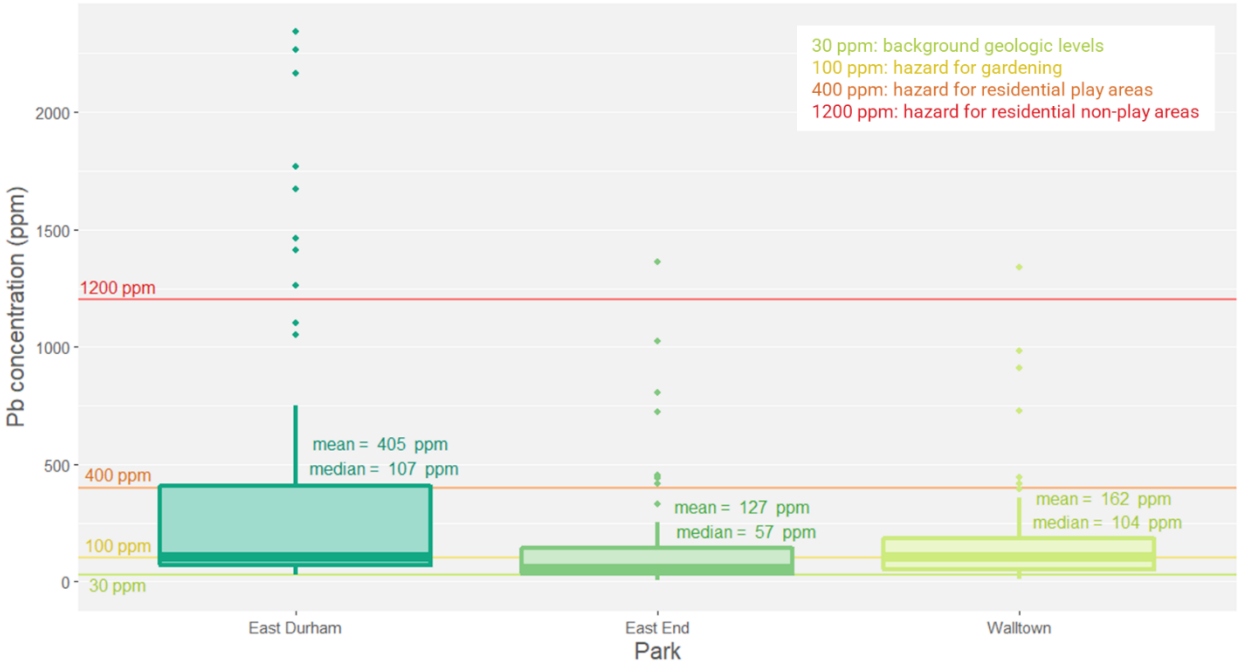

Figure 8: Distribution of Pb concentration in soil samples broken down per park, with geologic background levels and US EPA hazard thresholds (Table 1).

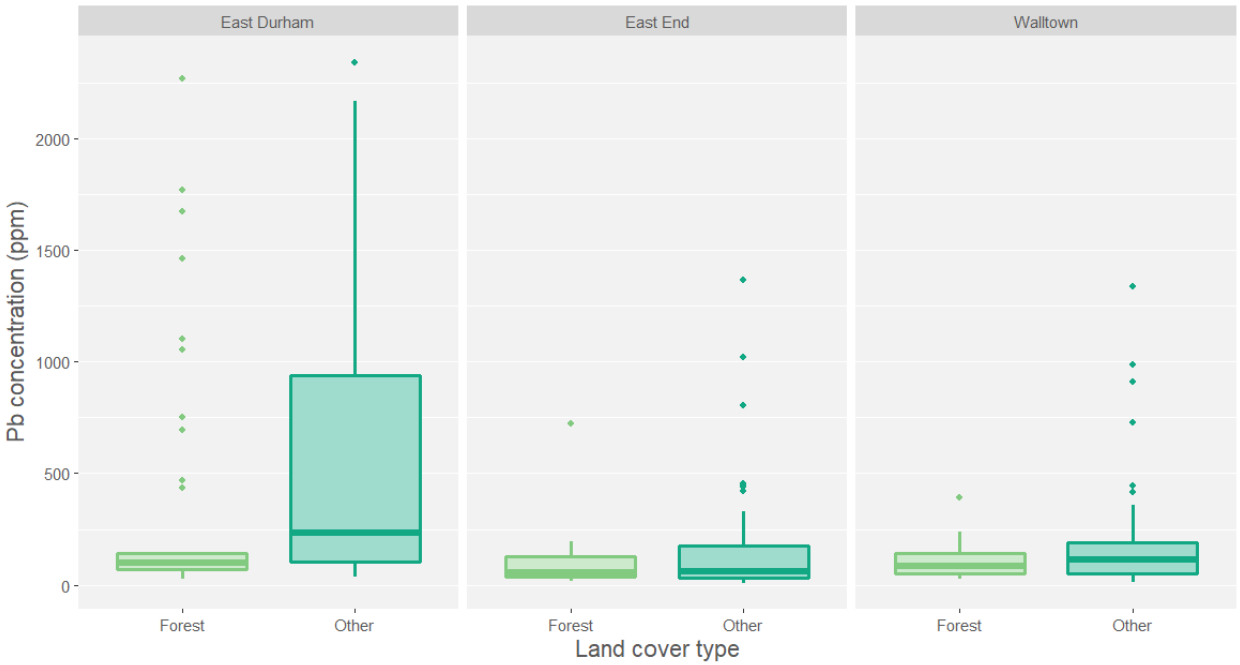

Figure 9: Distribution of Pb concentration in soil samples broken down per park and land cover type.

Figure 10: Map of interpolated mineral soil Pb concentrations in Walltown Park.

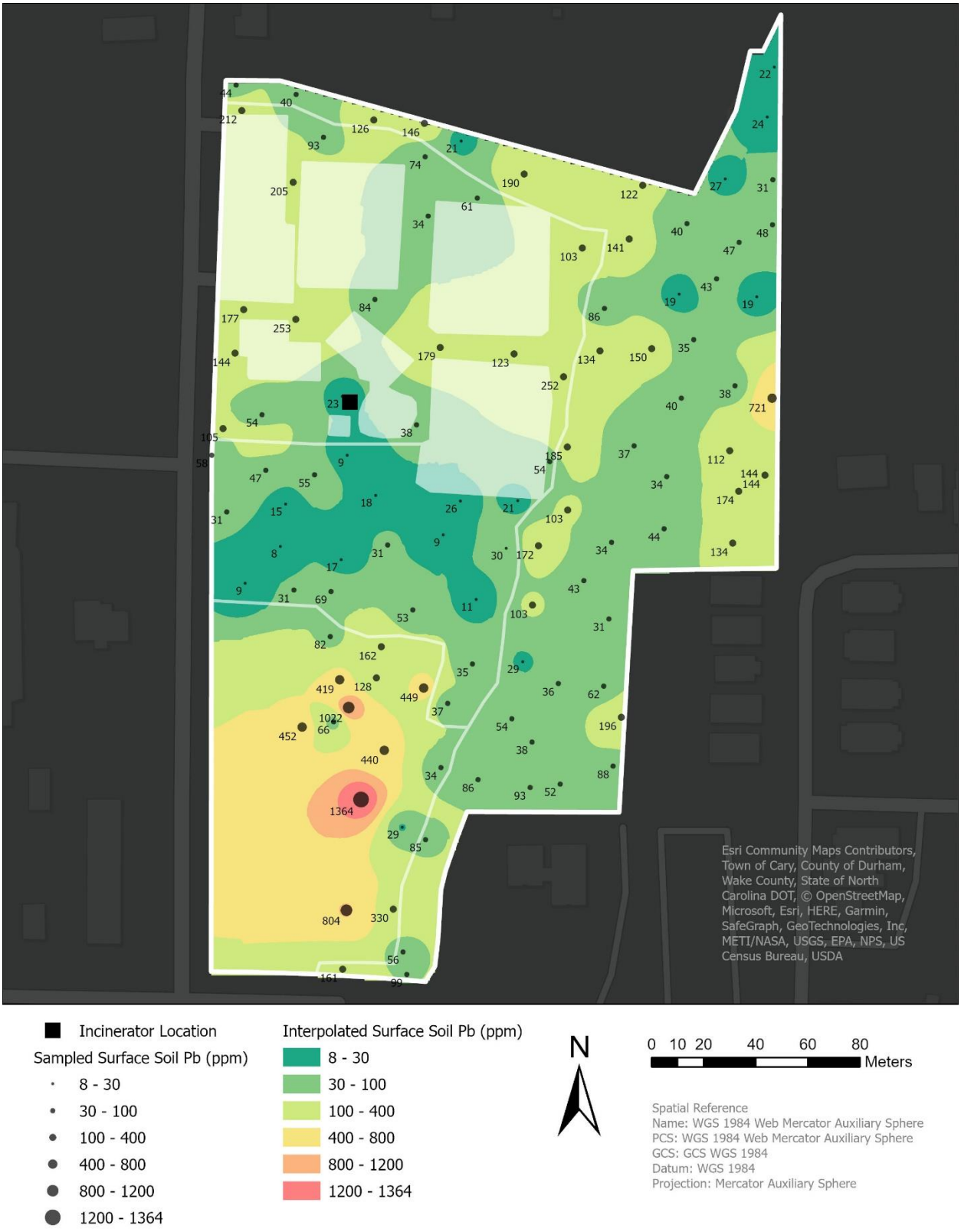

Figure 11: Map of interpolated mineral soil Pb concentrations in East End Park.

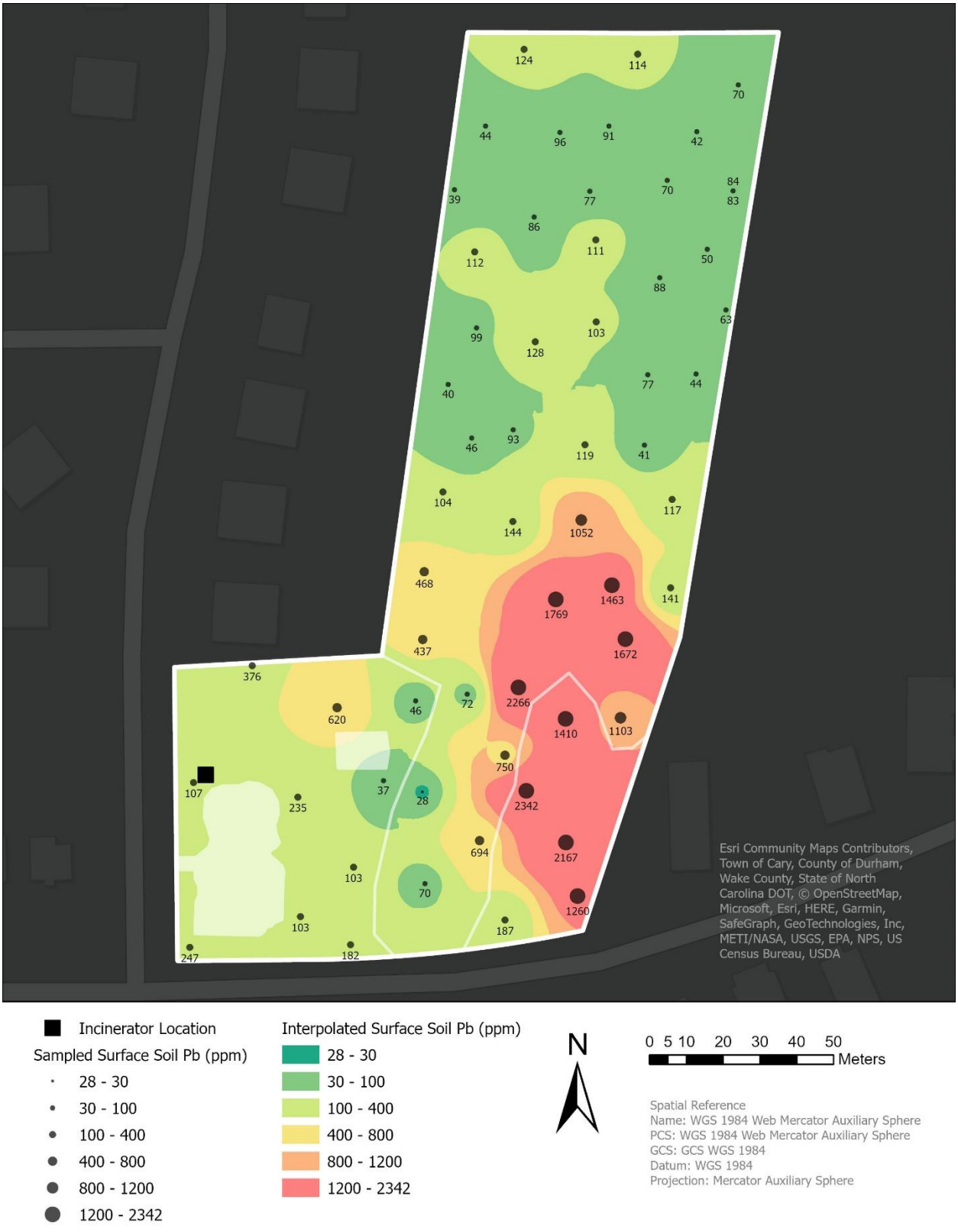

Figure 12: Map of interpolated mineral soil Pb concentrations in East Durham Park.

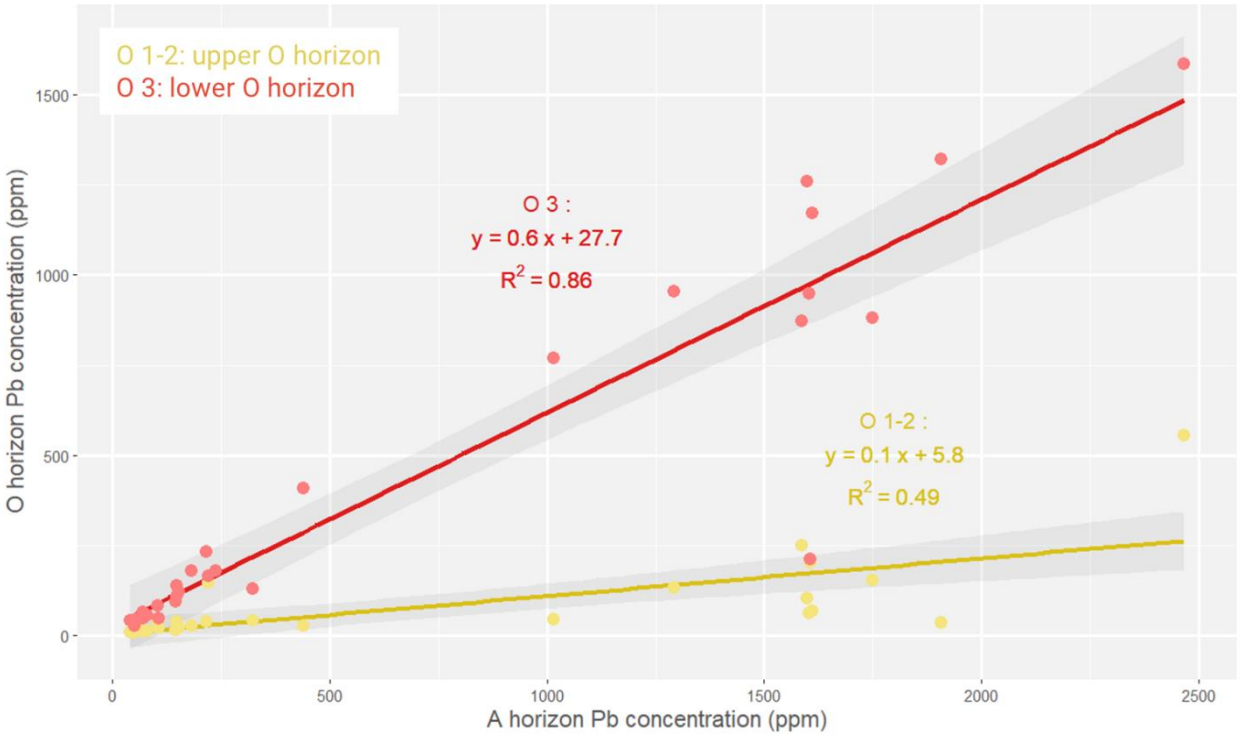

Figure 13: Graph of O horizon (organic matter) Pb concentrations vs. A horizon (mineral soil) Pb concentrations, with respective the linear regressions.

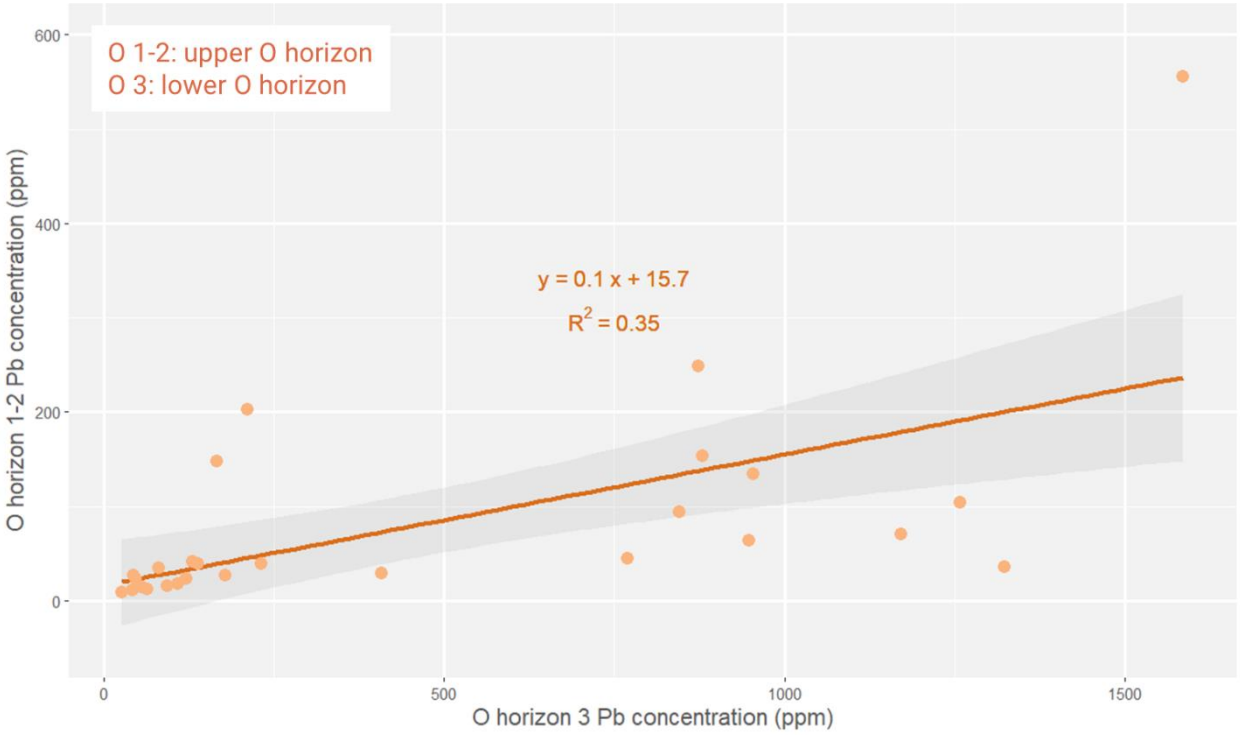

Figure 14: Graph of upper O1/O2 horizon Pb concentrations vs. upper O3 horizon Pb concentrations, with the linear regression.

VII. Discussion

Soil Pb:

Our results show that Walltown, East End, and East Durham Parks all have mineral soil Pb well above the geologic background, with many areas exceeding the US EPA's hazard thresholds for gardening (100 ppm), residential play areas (400 ppm), and residential non-play areas (1200 ppm) [22,23]. The Pb levels in the soil samples from our hotspots were elevated when compared to soil samples from a 2021 study by Wade et al., which extensively sampled soil from Pb-contaminated sites across the city of Durham [3]. Our samples had elevated Pb compared samples from street sides and residential yards in Durham, and our samples had similar Pb to samples from residential foundations in Durham [3]. Additionally, the geospatial distribution of soil Pb concentrations demonstrates the complicated land use history of these land parcels, pointing towards multiple sources of Pb inputs and outputs throughout the 20th century. From local newspaper articles, we have direct evidence for the disposal of incinerator refuse on these sites, along with the removal and addition of soil, gravel, and other landscaping materials. While the contamination patterns in our study are clearly related to the historic waste incinerators at these sites, Pb has many other well-known historical sources which could have also contributed to these patterns. Some studies from around the world demonstrate some difficulty in parsing out the sources of metal contamination and the effects of other environmental variables (such as soil type and wind direction) at incinerator site soils [18,57,59,60].

O Horizon Pb:

Our study also demonstrates that hardwood secondary forest O horizons provide a blanket for highly Pb-contaminated mineral soil. However, a significant amount of mineral soil Pb is mixed up into the O horizons, especially into the lower O3 horizons; this layer experiences more bioturbation as uncontaminated organic materials are decomposed into smaller particles and incorporated into the contaminated mineral soil below. Additionally, this barrier depends strongly on the fact that there is a sustained and substantial input of leaf litter and other plant

debris, and that this organic matter then remains in place without disturbance. Organic matter is not necessarily a stationary or robust layer, and it is prone to many disturbances from both humans and the natural environment, which can create a direct pathway of exposure to contaminated soil below. This highlights the limitations of phytostabilization as tool to reduce Pb exposure, particularly in hardwood forests where there is relatively rapid decomposition and bioturbation in the O horizons compared to some coniferous forests.

VIII. Conclusion

Our main conclusions were:

3. Mineral soil Pb concentrations across Walltown, East End, and East Durham Parks are elevated above both geologic background levels and several EPA hazard thresholds, especially in some highly-trafficked areas.
4. Hardwood forest organic horizons provide a blanket for highly Pb-contaminated mineral soil, but a significant amounts of mineral soil Pb is mixed up into these O horizons. Thus, exposure risk is not eliminated and can remain quite high.

Significance:

The highly-contaminated and high-use areas in our study, such as the southeastern portion of East Durham Park, need to be remediated. Surrounding areas, such as those near the southeastern boundary of East Durham Park along East Main St., should be sampled for soil Pb contamination as well, and exposure monitoring for residents may also be beneficial. Based on historic newspapers from five cities across the USA, many municipalities may have public parks with contaminant metals from historic waste incineration, posing a similar exposure threat to residents.

Additionally, the urban parks in our study provide countless services to the Durham community, and the forests within them have great potential for management activities that would further increase their value as natural areas. They are ideal targets for invasive species management and increasing trail connectivity throughout the city, but these activities should be guided by knowledge each park's history, particularly the contamination and subsequent exposure risks for the people who would manage and use the parks.

Future Recommendations:

Going forward, I suggest exploring the vertical distribution of soil Pb at these sites through soil coring, as this can give greater insight into the exact land use history and how this

impacted soil Pb accumulation throughout the last century. I also recommend comparing hardwood and conifer O horizons in terms of their ability to provide a barrier to Pb exposure from contaminated soil. Conifer litter decomposes much more slowly with less bioturbation, allowing thicker, denser layers to accumulate on the forest floor. Thus, it may be expected that Pb is mixed up into the O horizon less in a conifer forests than hardwood forests. This kind of comparison can be carried out with other plant types and ecosystems as well.

I also suggest sampling mineral soil and O horizon Pb at Lyon Park, which was also a historic waste incinerator site but was left out of our study due to time constraints. This park also has a riparian zone and a large area of unmanaged forest in and around the old incinerator site. Additionally, other parks such as Northgate Park received ash and cinders as fill from the historic incinerators during their construction in the 1950s [55]. These should also be sampled for mineral soil and O horizon Pb contamination.

The areas surrounding the newer centralized incinerator in northeast Durham should be sampled, especially the adjacent, low-lying swamp in which ash and cinders were dumped throughout the lifetime of the facility [53]. This incinerator was sited in this location in part because of this potential dumping area just north of the incinerator, which is likely to be very high in many heavy metal contaminants [40,53].

Additionally, a more controlled experiment or study should be done that corrects for the highly variable land use history and Pb inputs present in our study areas. It should use study areas that have had the same type and amount of Pb inputs over the same time frame and have not been affected by different human activities since that time.

IX. Acknowledgements

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- Adam Skinner & Carson Lambert, MEM graduate students, Nicholas School of the Environment – for helping with soil sampling and lab analysis
- Rett Grewal & Julia Kagiliery, Undergraduate students, Duke University – for helping with soil sampling and lab analysis
- Durham Parks and Recreation Department – for providing access to city-owned land at the parks

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Major Improvements Carried Out—

City Parks Have Undergone Thorough Face Lifting During Past Few Years

By BILL STRAWN

Private citizens and city officials often comment on improvements made to various city parks within the past two or three years. Several have had a thorough "face lifting."

City Building Inspector E. H. Johnson, who is in charge of park and heavy recreational maintenance, says that the improvements at several parks include landscaping, construction of permanent picnic facilities and walkways.

Johnson listed major improvements at the various parks, including the following:

Duke Park—construction of a paved walkway system, with the paved walks serving also as a drainage system; removing several hundred diseased and overcrowded trees; closing a large open ditch which ran north from Knox Street parallel to Acadia Street; construction of a paved road, which also serves for off-street parking, through the park; construction of a large number of "permanent type picnic areas

East End Park — landscaped and picnic facilities constructed.

East Durham Community Center and park—development of entire park in less than three years, including the construction of the center building which Johnson's department supervised; provision of a modern athletic field; numerous undesirable trees removed; outdoor fireplaces built; development of parking lot with 50-car capacity; concrete walks constructed around building.

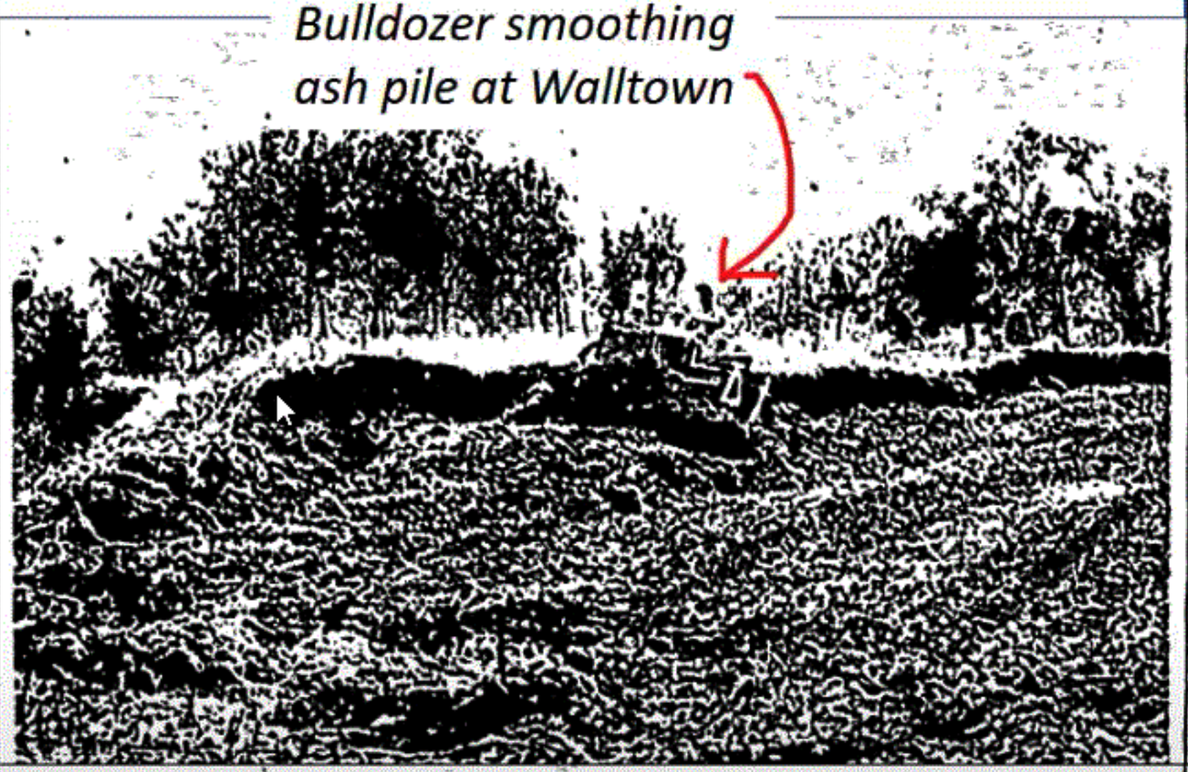
Walltown Park—elimination of old city incinerator dump; removal of some 2,000 truck loads of cinders; construction of rain shelter and a foot bridge across the creek in the park; the erection of bleacher seats next to the athletic field; and landscaping of entire park.

Northgate Park—removal of several hundred trees; making submarginal land on the east side usuable by dumping thereon 500 truck loads of cinders from Walltown Park and covering them with topsoil; Ellerbee Creek dredged through park; landscaping park; rain shelter built; construction of numerous outdoor ovens and other picnic facilities; parking lot within park constructed.

Durham Sun

From Incinerator Site To Playground

Bulldozer smoothing ash pile at Walltown



The old Walltown incinerator site which stretches from Club Boulevard to Guess Road is taking on a new look. Work of converting the site into a City playground for children of that section of the city began this week. The two pictures above illustrate graphically the change which is taking place as the old gives way to the new. Two other incinerator sites in the city also are being converted to playgrounds. These are at Lyon Park and East Durham. All three playgrounds are expected to be completed in the near future. (Staff Photos)

Durham Morning Herald
16 September 1950, p. 9

Lyon Park

1101 Cornell St

Durham, NC 27707

Inquiry Number: 7374693.2

June 27, 2023

Certified Sanborn® Map Report

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Certified Sanborn® Map Report

06/27/23

Site Name:

Lyon Park
1101 Cornell St
Durham, NC 27707
EDR Inquiry # 7374693.2

Client Name:

Mid-Atlantic Associates
409 Rogers View Ct
Raleigh, NC 27610
Contact: Kevin Clay

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Maps Provided:

1979
1950
1937
1913

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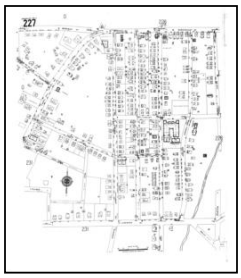
1979 Source Sheets



Volume 2, Sheet 227
1979

Volume 2, Sheet 228
1979

1950 Source Sheets

Volume 1, Sheet 227
1950

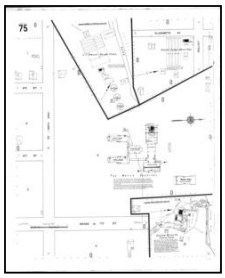
Volume 1, Sheet 228
1950

1937 Source Sheets

Volume 1, Sheet 227
1937

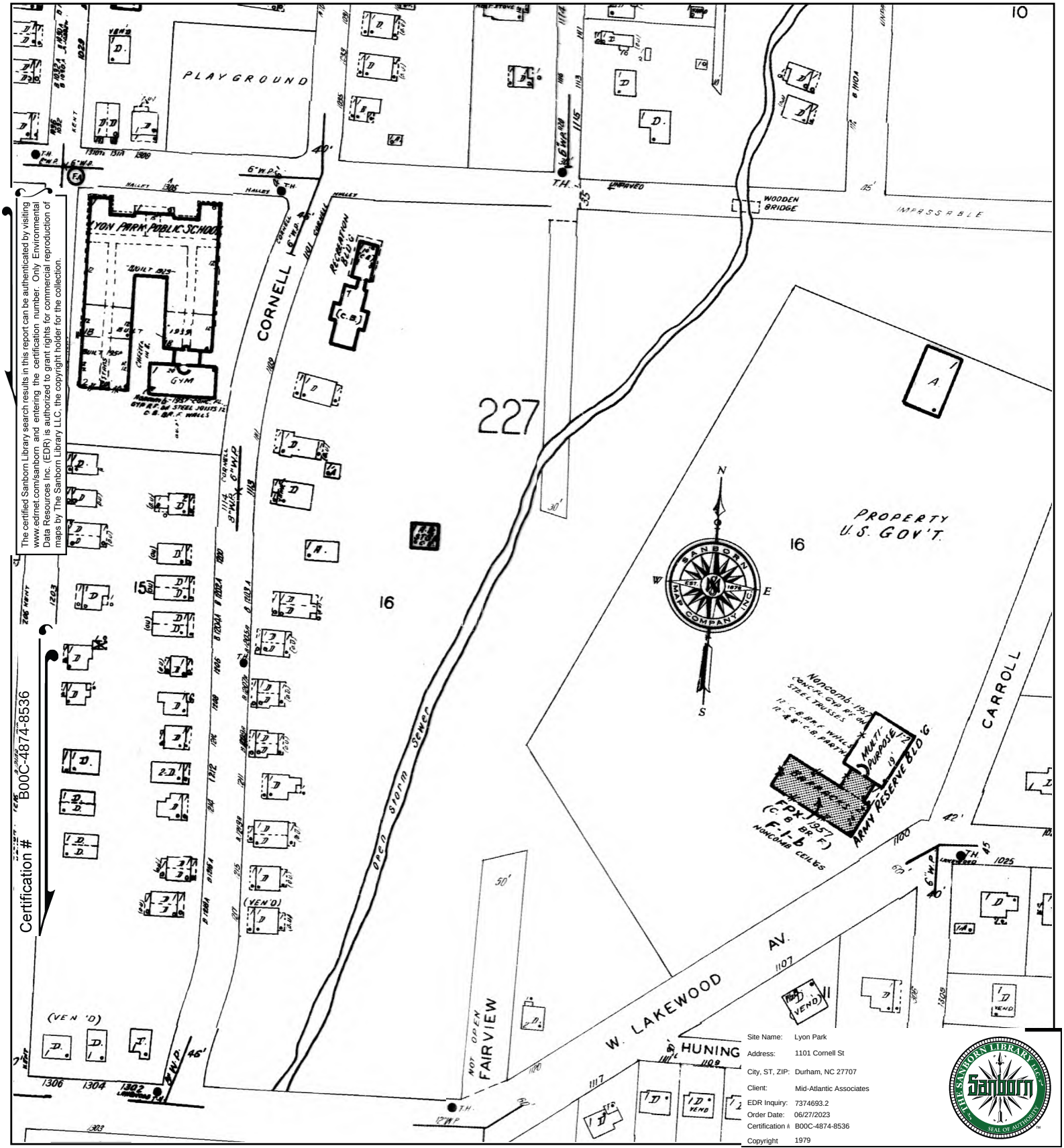
Volume 1, Sheet 228
1937

1913 Source Sheets



Volume 1, Sheet 75
1913

Volume 1, Sheet 12
1913



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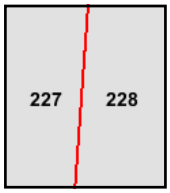
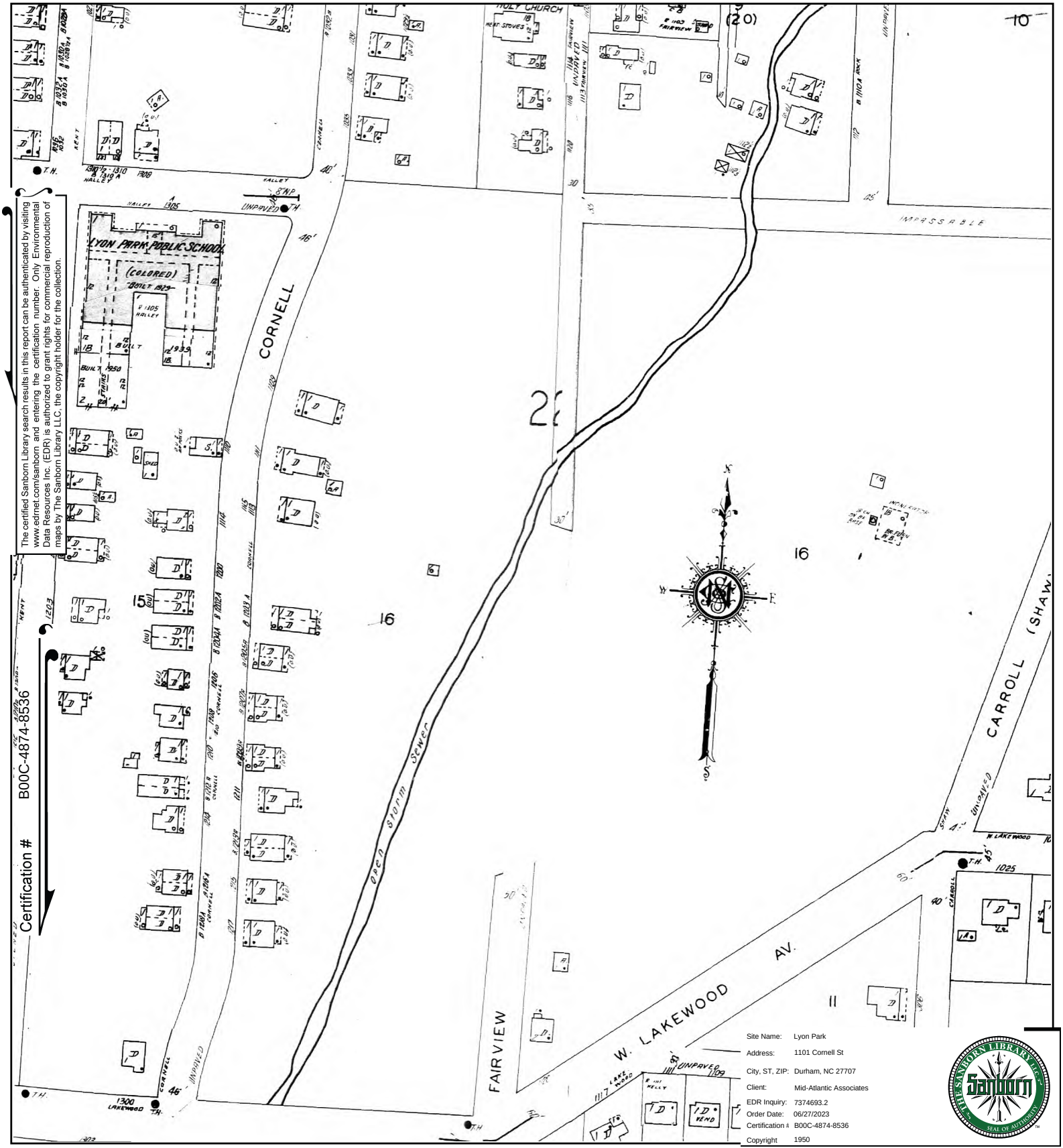


Volume 2, Sheet 228
Volume 2, Sheet 227

N



Site Name:	Lyon Park
Address:	1101 Cornell St
City, ST, ZIP:	Durham, NC 27707
Client:	Mid-Atlantic Associates
EDR Inquiry:	7374693.2
Order Date:	06/27/2023
Certification #:	B00C-4874-8536
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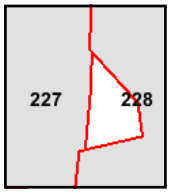

Volume 1, Sheet 228
Volume 1, Sheet 227

0 Feet 150 300 600

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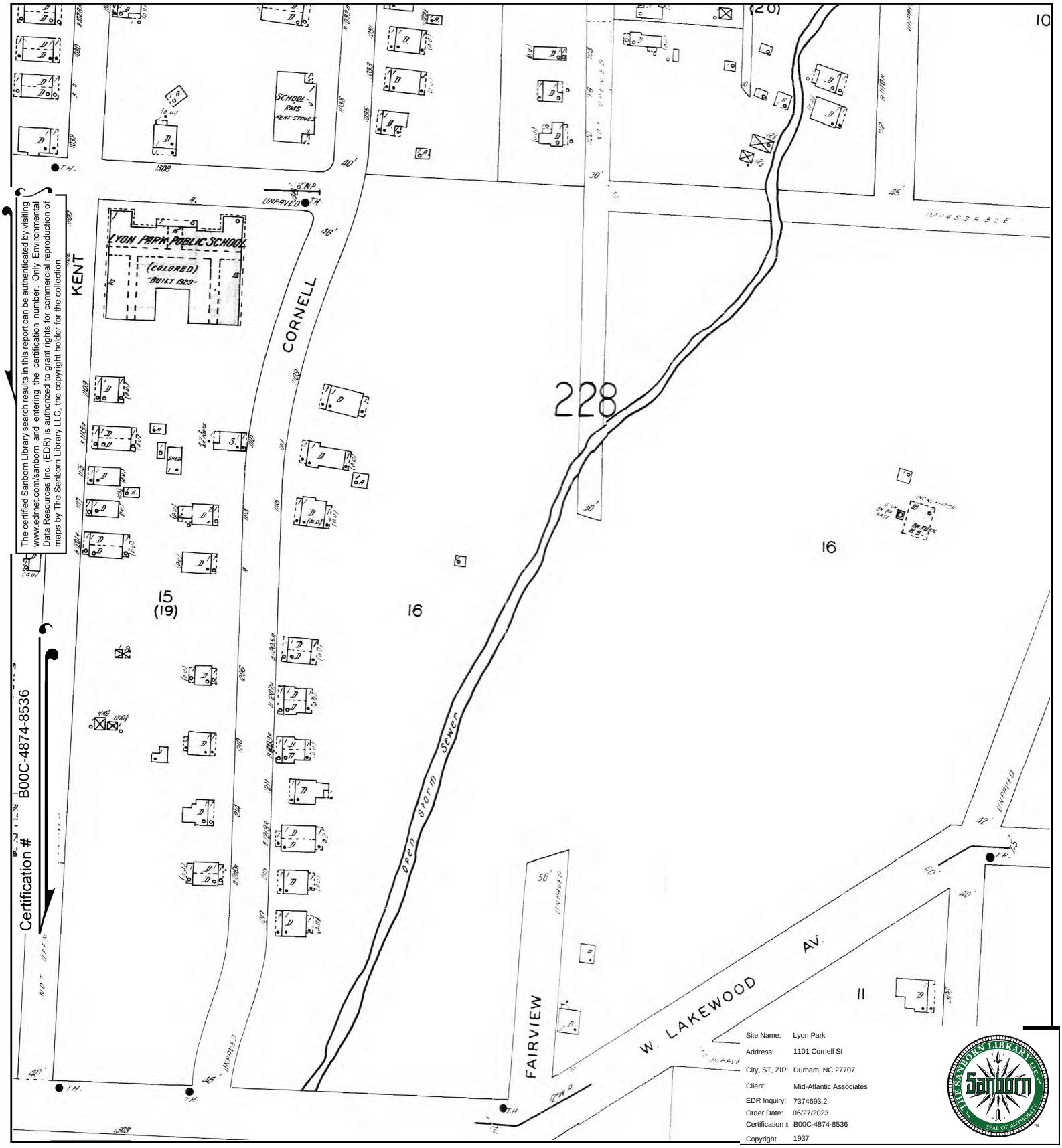

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Volume 1, Sheet 228
Volume 1, Sheet 227

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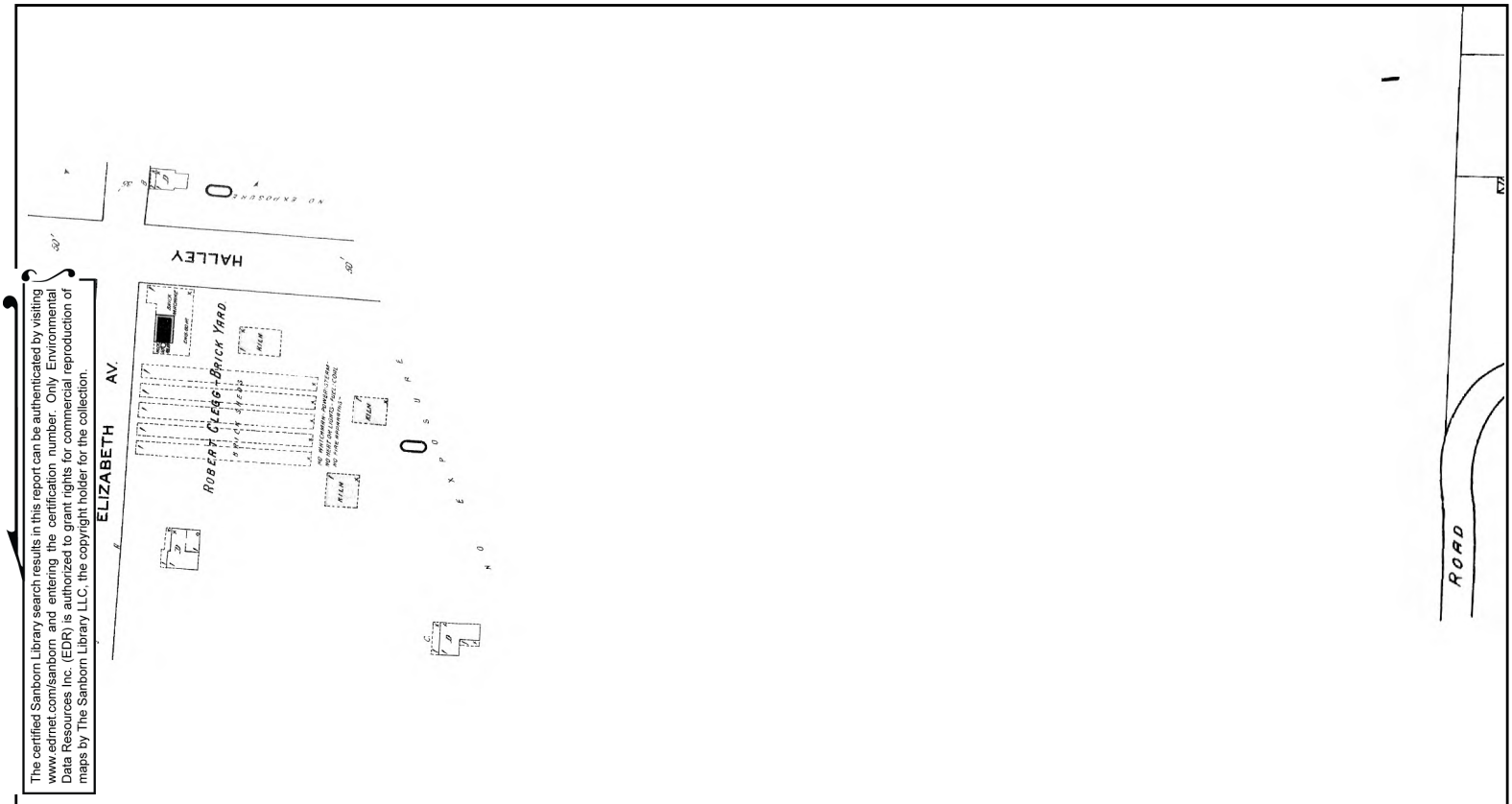

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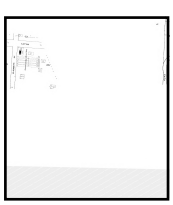

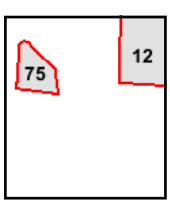

Volume 1, Sheet 12
Volume 1, Sheet 75

0 Feet 150 300 600

N

Walltown Park
1700 Guess Rd
Durham, NC 27705

Inquiry Number: 7386247.3
July 11, 2023

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07/11/23

Site Name:

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EDR Inquiry # 7386247.3

Client Name:

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1979
1950
1937

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1979 Source Sheets

Volume 1, Sheet 54
1979

1950 Source Sheets

Volume 1, Sheet 54
1950

1937 Source Sheets

Volume 1, Sheet 54
1937

Certified Sanborn® Map

1979

Site Name:	Walltown Park
Address:	1700 Guess Rd
City, ST, ZIP:	Durham, NC 27705
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EDR Inquiry:	7386247.3
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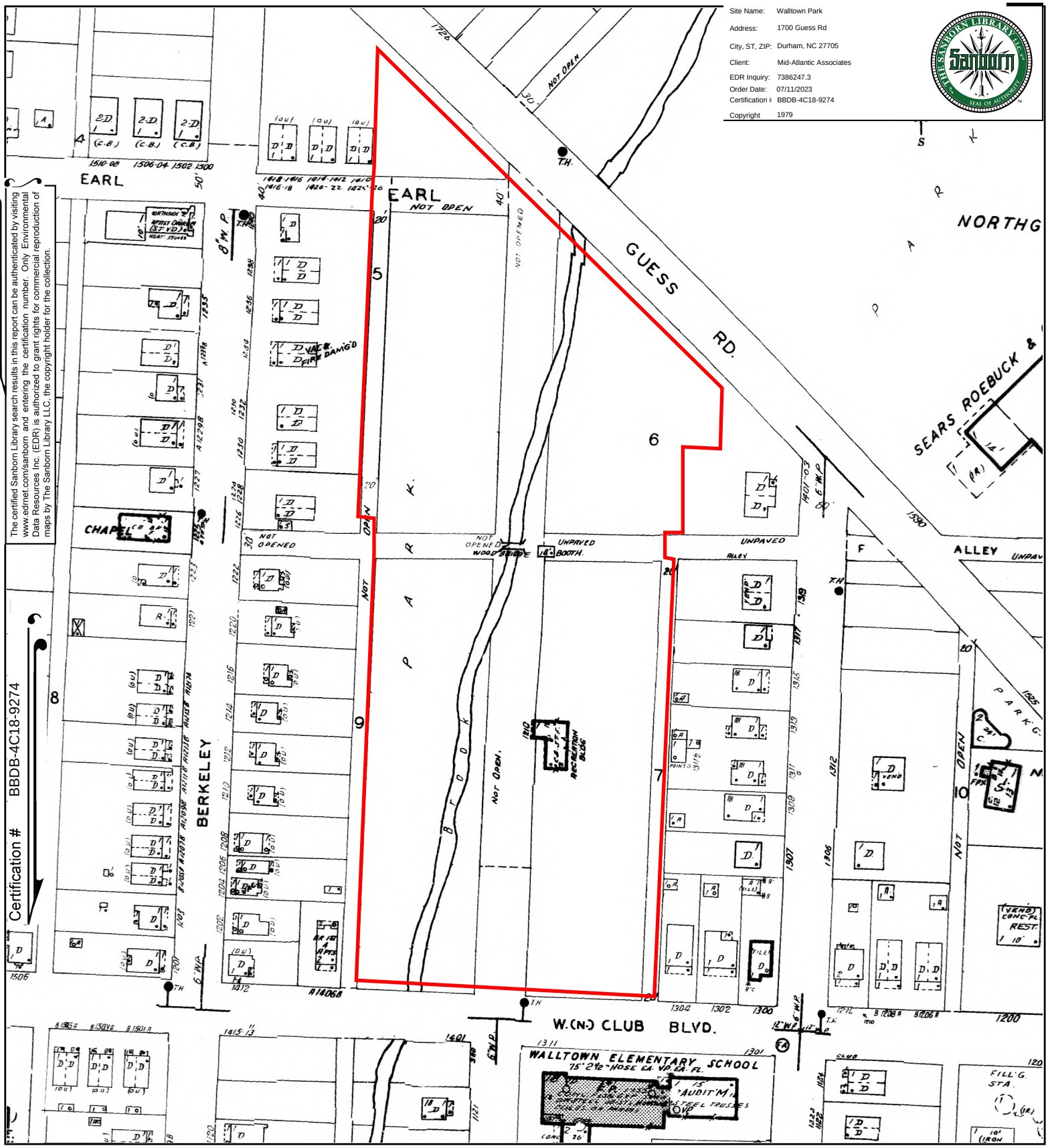

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54

Volume 1, Sheet 54

N

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1950

Site Name:	Walltown Park
Address:	1700 Guess Rd
City, ST, ZIP:	Durham, NC 27705
Client:	Mid-Atlantic Associates
EDR Inquiry:	7386247.3
Order Date:	07/11/2023
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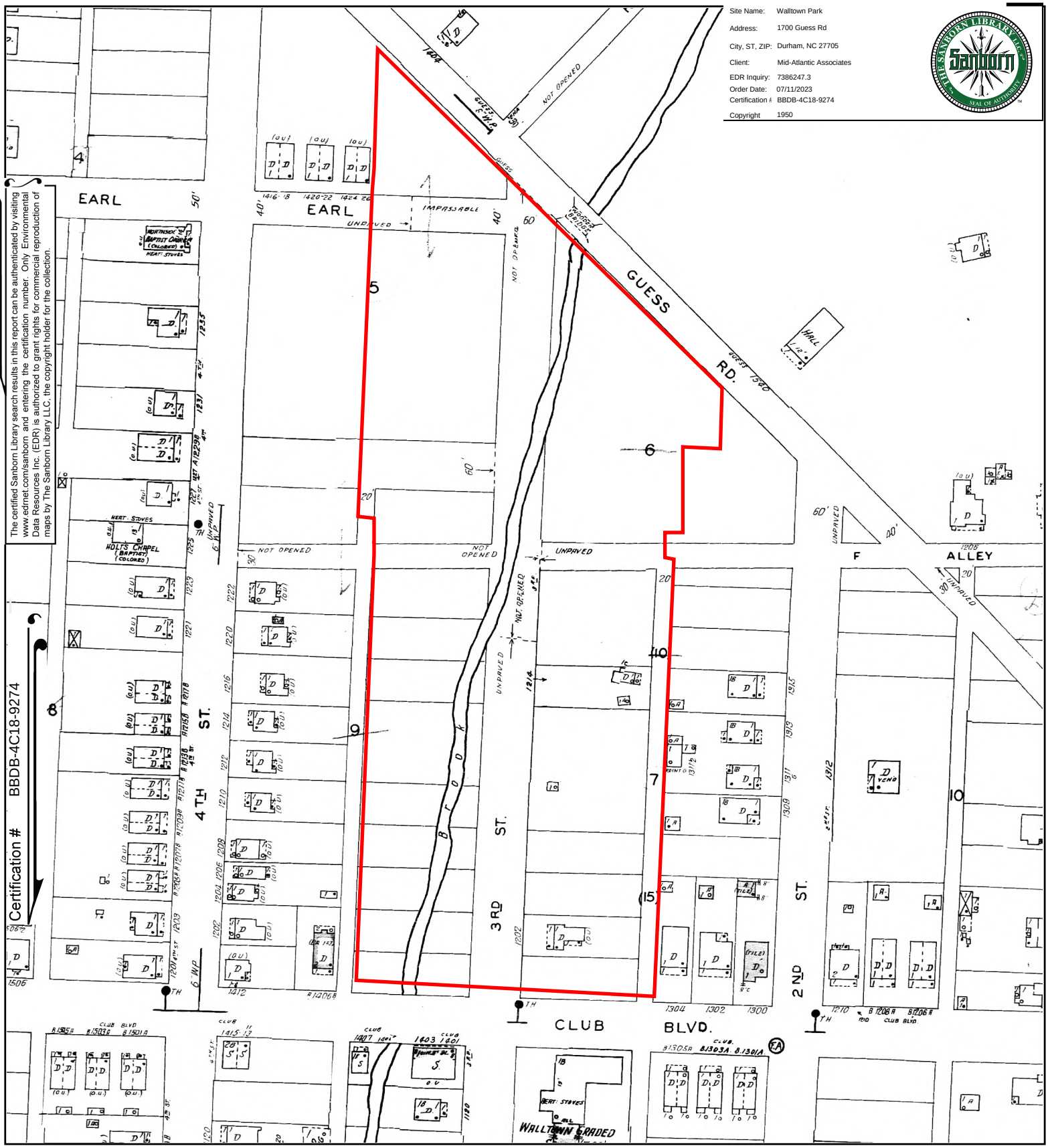

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0 Feet 150 300 600

54

Volume 1, Sheet 54

N

Site Name: Walltown Park
Address: 1700 Guess Rd
City, ST, ZIP: Durham, NC 27705
Client: Mid-Atlantic Associates
EDR Inquiry: 7386247.3
Order Date: 07/11/2023
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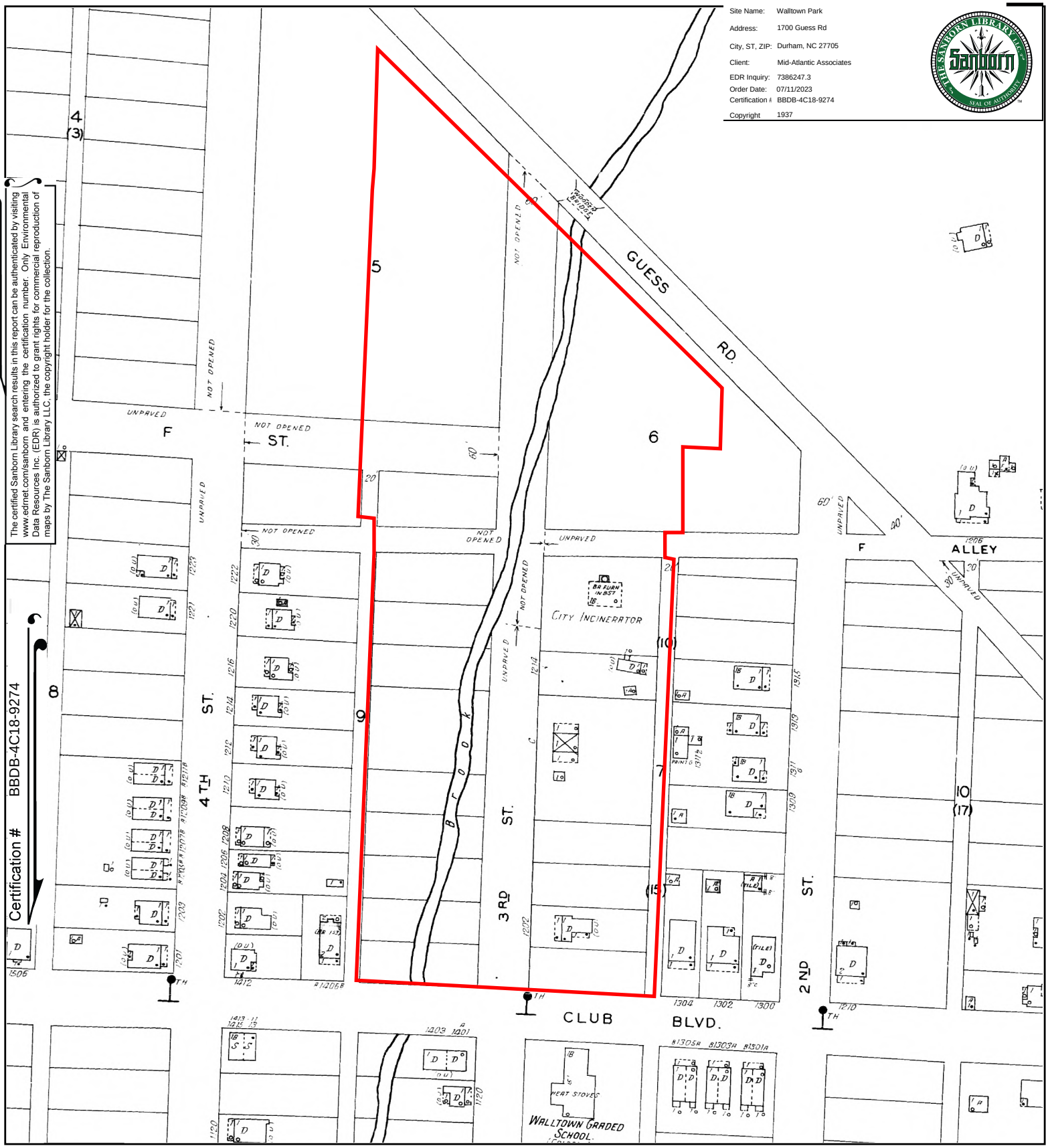

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54

Volume 1, Sheet 54

N

East Durham Park
2601 East Main Street
Durham, NC 27703

Inquiry Number: 7386252.3
July 11, 2023

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07/11/23

Site Name:

East Durham Park
2601 East Main Street
Durham, NC 27703
EDR Inquiry # 7386252.3

Client Name:

Mid-Atlantic Associates
409 Rogers View Ct
Raleigh, NC 27610
Contact: Kevin Clay

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Maps Provided:

1979
1950
1937

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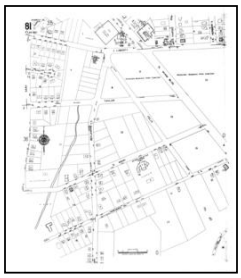

Volume 1, Sheet 81
1979

Volume 1, Sheet 36
1979

1950 Source Sheets

Volume 1, Sheet 36
1950

1937 Source Sheets

Volume 1, Sheet 36
1937

Certified Sanborn® Map

1979

Site Name: East Durham Park
Address: 2601 East Main Street
City, ST, ZIP: Durham, NC 27703
Client: Mid-Atlantic Associates
EDR Inquiry: 7386252.3
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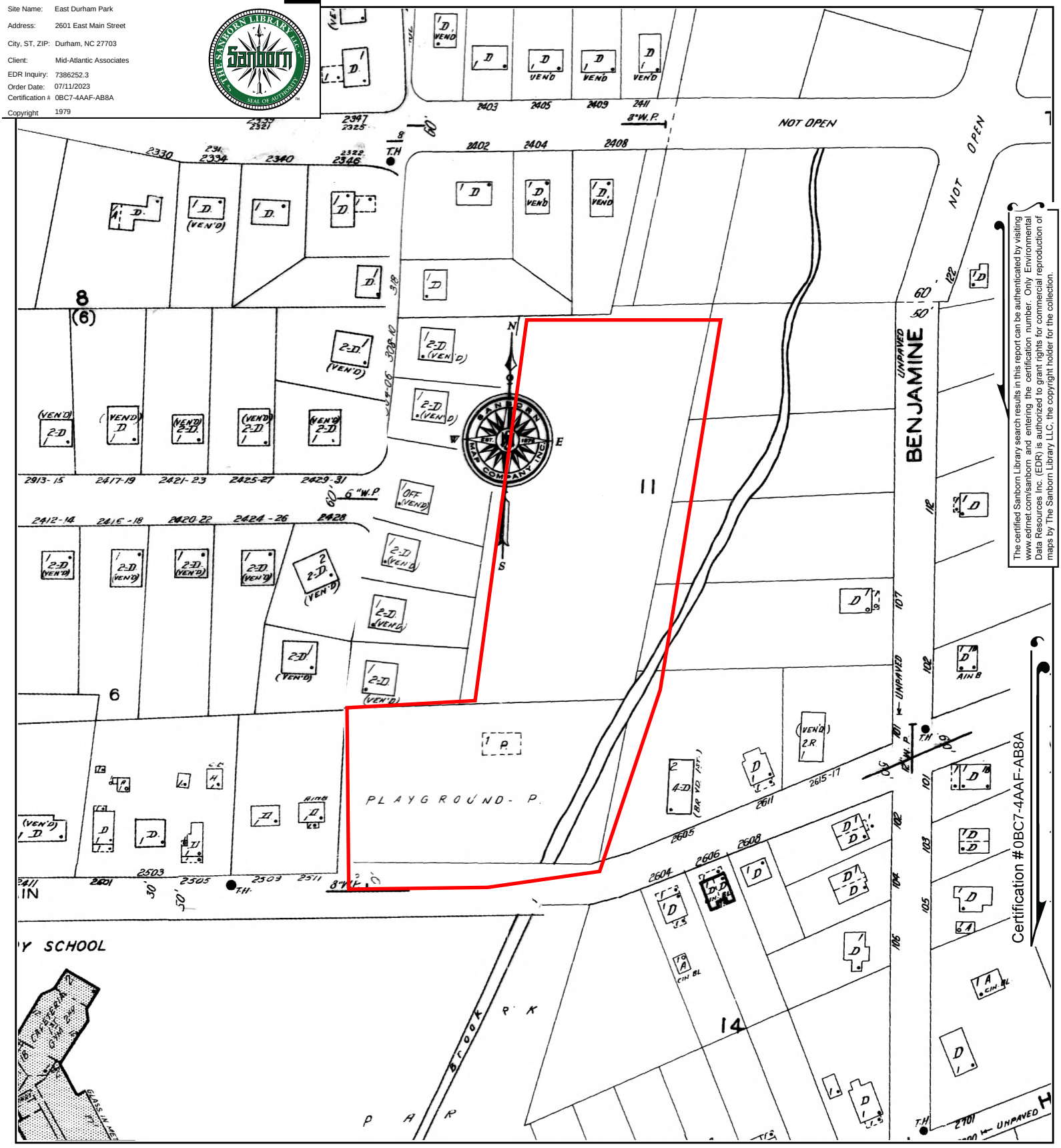

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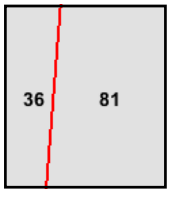

Volume 1, Sheet 36
Volume 1, Sheet 81

N

Certified Sanborn® Map

1950

Site Name: East Durham Park
Address: 2601 East Main Street
City, ST, ZIP: Durham, NC 27703
Client: Mid-Atlantic Associates
EDR Inquiry: 7386252.3
Order Date: 07/11/2023
Certification #: 0BC7-4AAF-AB8A
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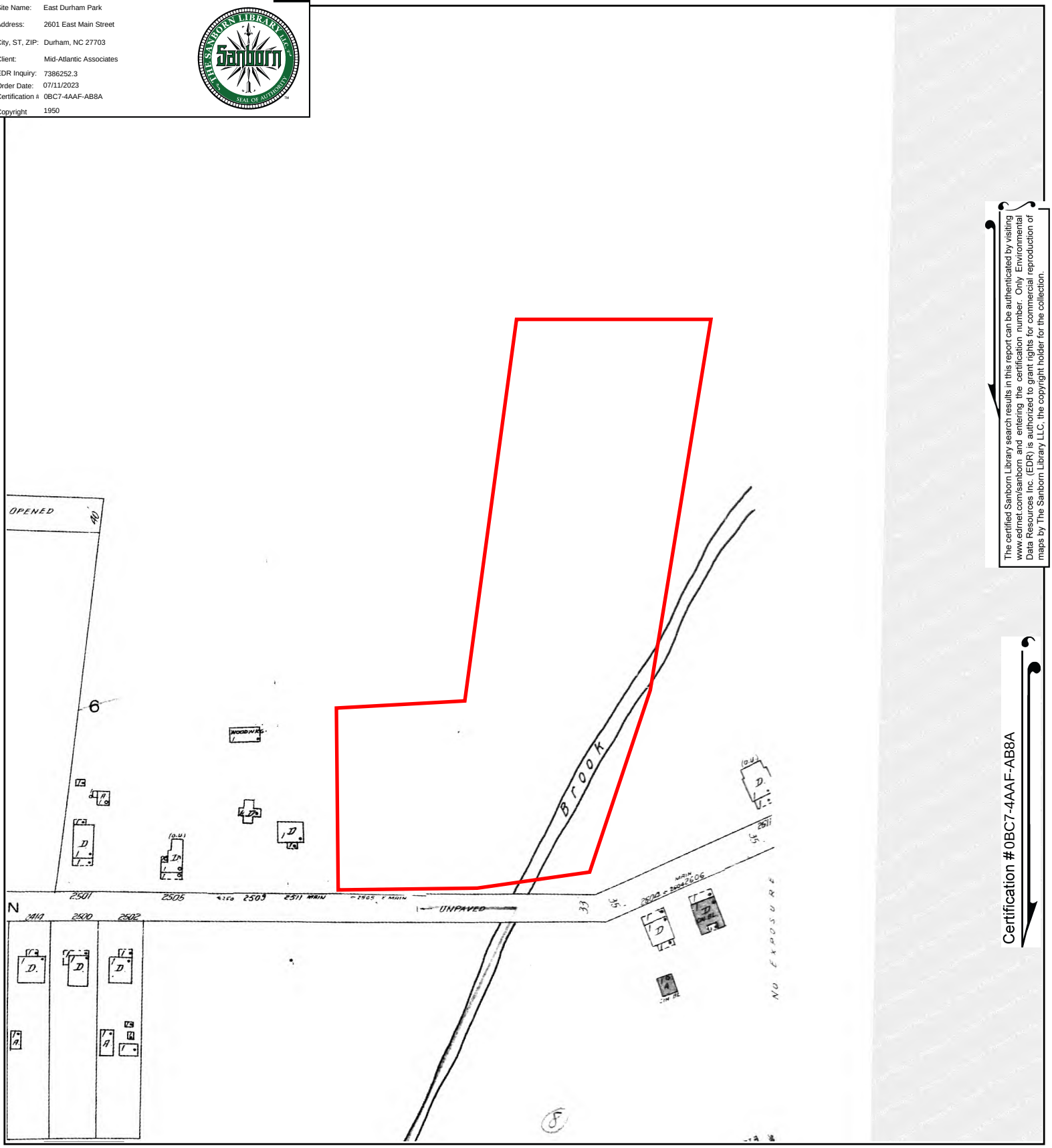

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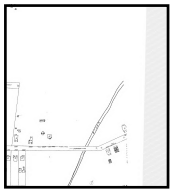

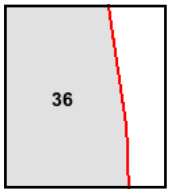

Volume 1, Sheet 36

N

Certified Sanborn® Map

1937

Site Name: East Durham Park
Address: 2601 East Main Street
City, ST, ZIP: Durham, NC 27703
Client: Mid-Atlantic Associates
EDR Inquiry: 7386252.3
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Certification #: 0BC7-4AAF-AB8A
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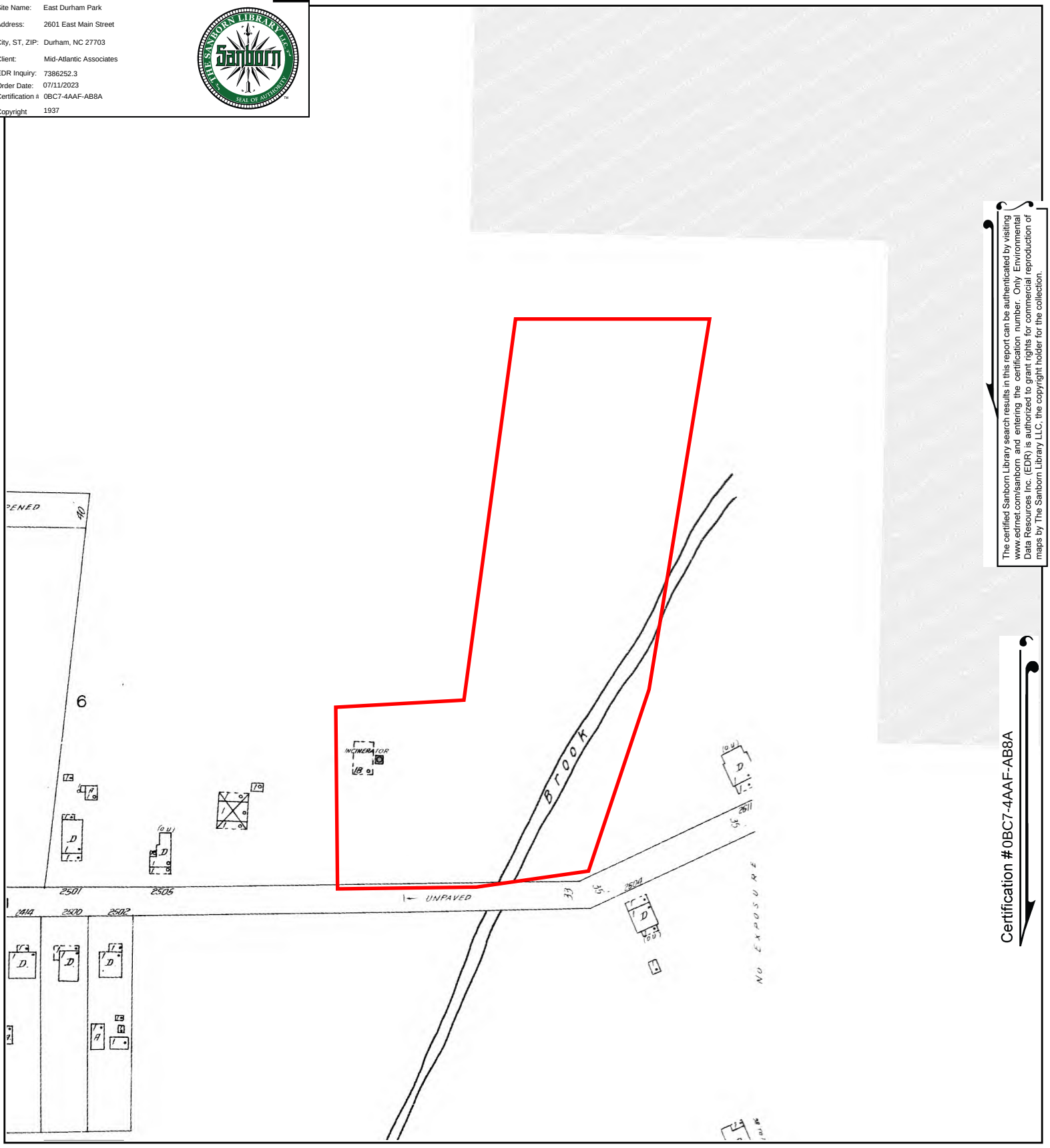
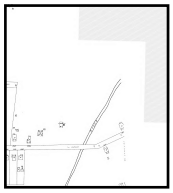
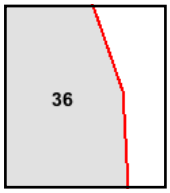


Certification #0BC7-4AAF-AB8A

This Certified Sanborn Map combines the following sheets.
Outlined areas indicate map sheets within the collection.

0 Feet 150 300 600





Volume 1, Sheet 36

N

East End Park
1100 N ALSTON AVE
Durham, NC 27701

Inquiry Number: 7386249.3
July 11, 2023

Certified Sanborn® Map Report

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

Certified Sanborn® Map Report

07/11/23

Site Name:

East End Park
1100 N ALSTON AVE
Durham, NC 27701
EDR Inquiry # 7386249.3

Client Name:

Mid-Atlantic Associates
409 Rogers View Ct
Raleigh, NC 27610
Contact: Kevin Clay

The Sanborn Library has been searched by EDR and maps covering the target property location as provided by Mid-Atlantic Associates were identified for the years listed below. The Sanborn Library is the largest, most complete collection of fire insurance maps. The collection includes maps from Sanborn, Bromley, Perris & Browne, Hopkins, Barlow, and others. Only Environmental Data Resources Inc. (EDR) is authorized to grant rights for commercial reproduction of maps by the Sanborn Library LLC, the copyright holder for the collection. Results can be authenticated by visiting www.edrnet.com/sanborn.

The Sanborn Library is continually enhanced with newly identified map archives. This report accesses all maps in the collection as of the day this report was generated.

Certified Sanborn Results:

Certification # EAE1-4E36-B475

PO # R4370.00

Project R4370.00

Maps Provided:

1979
1950
1937

Sanborn® Library search results

Certification #: EAE1-4E36-B475

The Sanborn Library includes more than 1.2 million fire insurance maps from Sanborn, Bromley, Perris & Browne, Hopkins, Barlow and others which track historical property usage in approximately 12,000 American cities and towns. Collections searched:

- ☑ Library of Congress
- ☑ University Publications of America
- ☑ EDR Private Collection

The Sanborn Library LLC Since 1866™

Limited Permission To Make Copies

Mid-Atlantic Associates (the client) is permitted to make up to FIVE photocopies of this Sanborn Map transmittal and each fire insurance map accompanying this report solely for the limited use of its customer. No one other than the client is authorized to make copies. Upon request made directly to an EDR Account Executive, the client may be permitted to make a limited number of additional photocopies. This permission is conditioned upon compliance by the client, its customer and their agents with EDR's copyright policy; a copy of which is available upon request.

Sanborn Sheet Key

This Certified Sanborn Map Report is based upon the following Sanborn Fire Insurance map sheets.

1979 Source Sheets

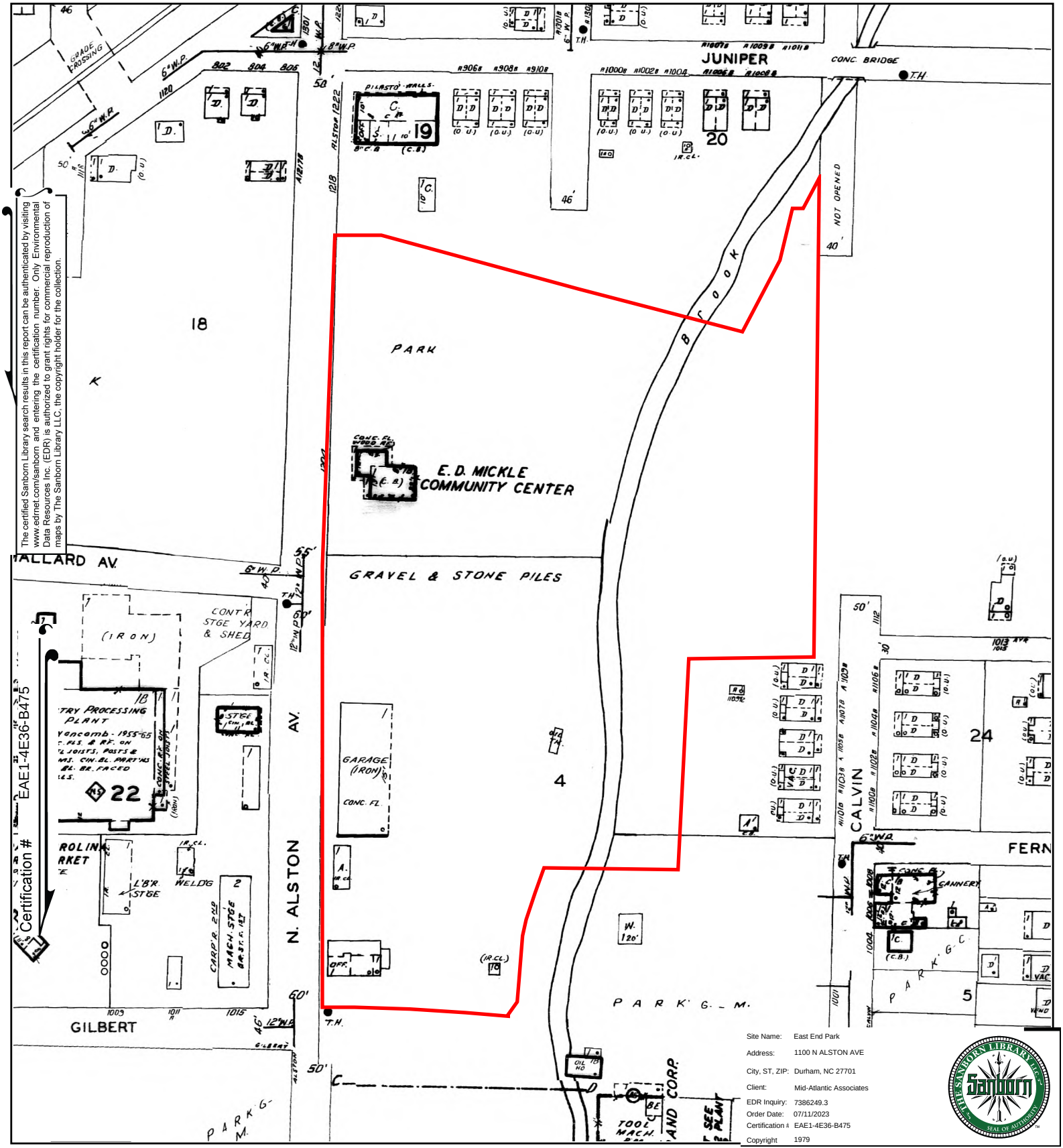
Volume 1, Sheet 32
1979

1950 Source Sheets

Volume 1, Sheet 32
1950

1937 Source Sheets

Volume 1, Sheet 32
1937



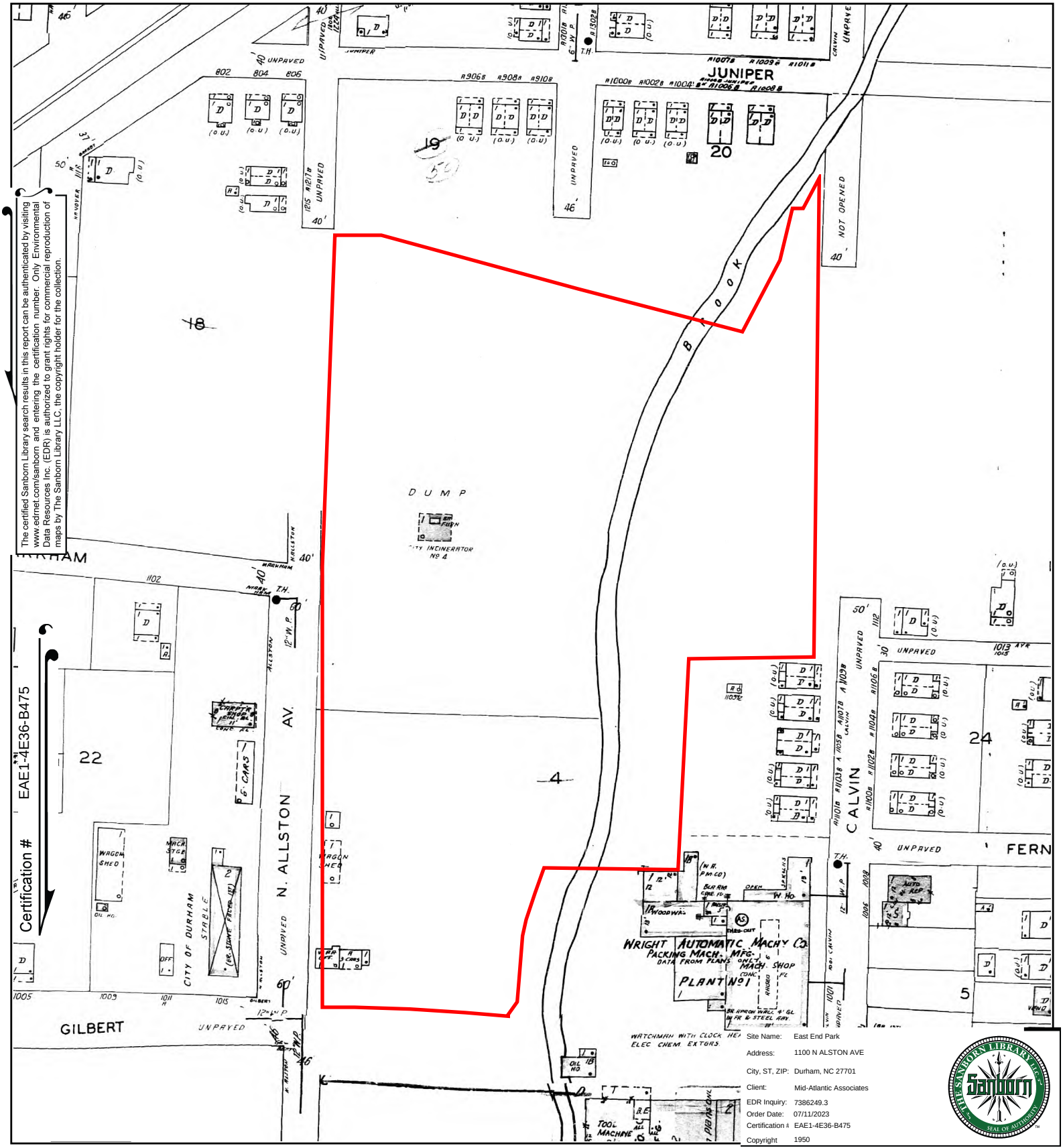
Certification # EAE1-4E36-B475

This Certified Sanborn Map combines the following sheets.
Outlined areas indicate map sheets within the collection.

0 Feet 150 300 600

32

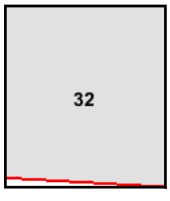
Volume 1, Sheet 32



Site Name:	East End Park
Address:	1100 N ALSTON AVE
City, ST, ZIP:	Durham, NC 27701
Client:	Mid-Atlantic Associates
EDR Inquiry:	7386249.3
Order Date:	07/11/2023
Certification #:	EAE1-4E36-B475
Copyright	1950

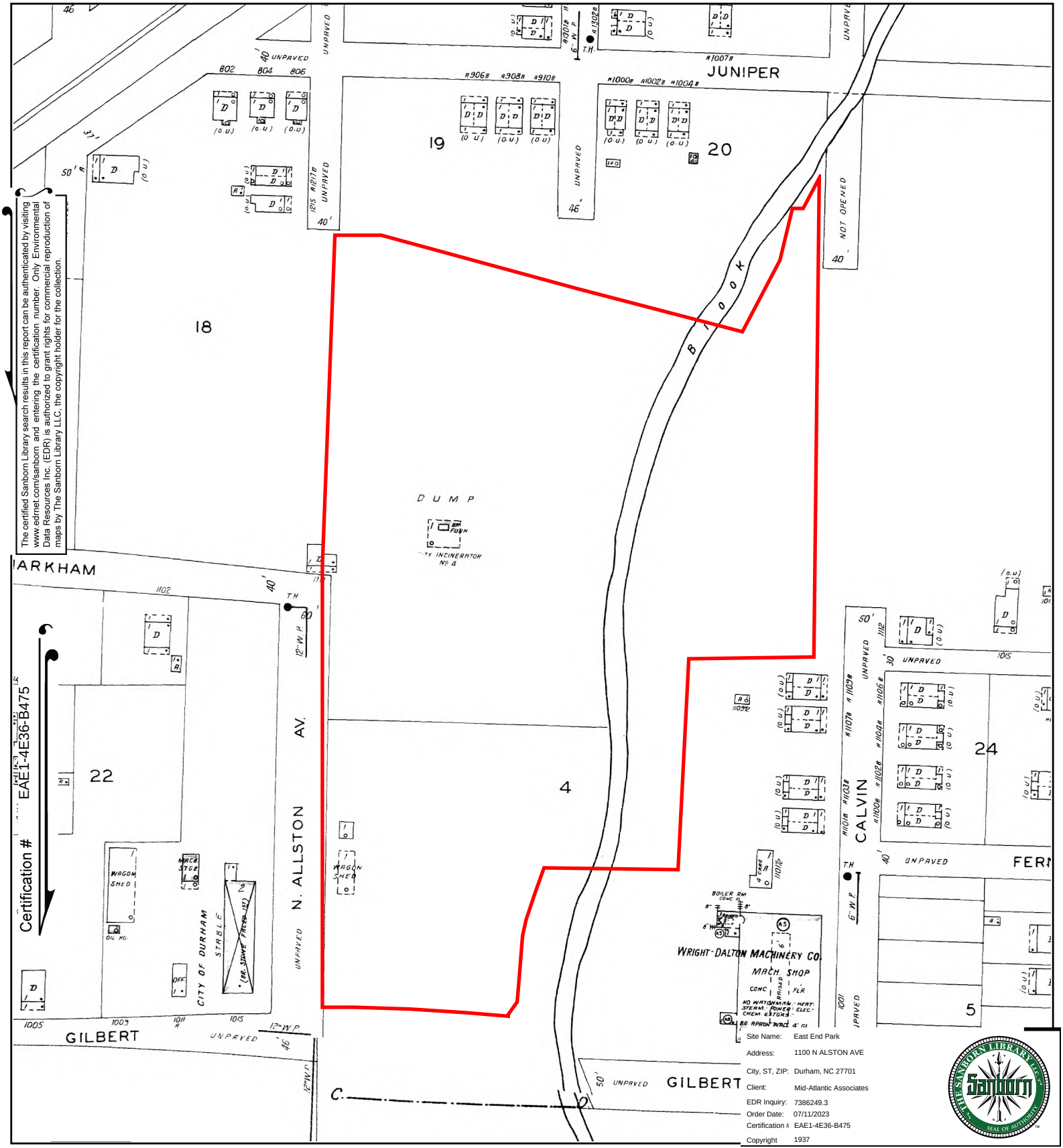
This Certified Sanborn Map combines the following sheets.
Outlined areas indicate map sheets within the collection.

0 Feet 150 300 600



Volume 1, Sheet 32

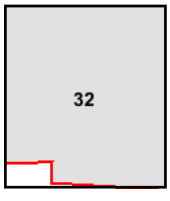
N



Site Name:	East End Park
Address:	1100 N ALSTON AVE
City, ST, ZIP:	Durham, NC 27701
Client:	Mid-Atlantic Associates
EDR Inquiry:	7386249.3
Order Date:	07/11/2023
Certification #:	EAE1-4E36-B475
Copyright	1937

This Certified Sanborn Map combines the following sheets.
Outlined areas indicate map sheets within the collection.

0 Feet 150 300 600



Volume 1, Sheet 32

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APPENDIX B

LABORATORY ANALYTICAL REPORTS AND CHAIN-OF-CUSTODY RECORDS

Mid Atlantic

449 Springbrook Rd, Charlotte, NC 28217
Main 704.529.6364
www.waypointanalytical.com

8/16/2023

Mid-Atlantic Associates, Inc. - Raleigh
Kevin Clay
409 Rogers View Court
Raleigh, NC, 27610

Ref: Analytical Testing
Revised Lab Report Number: 23-206-0058
Client Project Description: R4370.00

Dear Kevin Clay:

Waypoint Analytical, LLC (Charlotte) received sample(s) on 7/25/2023 for the analyses presented in the following report.

The above referenced project has been analyzed per your instructions. The analyses were performed in accordance with the applicable analytical method.

The analytical data has been validated using standard quality control measures performed as required by the analytical method. Quality Assurance, method validations, instrumentation maintenance and calibration for all parameters were performed in accordance with guidelines established by the USEPA (including 40 CFR 136 Method Update Rule May 2021) unless otherwise indicated.

Certain parameters (chlorine, pH, dissolved oxygen, sulfite...) are required to be analyzed within 15 minutes of sampling. Usually, but not always, any field parameter analyzed at the laboratory is outside of this holding time. Refer to sample analysis time for confirmation of holding time compliance.

The results are shown on the attached Report of Analysis(s). Results for solid matrices are reported on an as-received basis unless otherwise indicated. This report shall not be reproduced except in full and relates only to the samples included in this report.

Please do not hesitate to contact me or client services if you have any questions or need additional information.

Sincerely,

Angela D Overcash
Senior Project Manager

Laboratory's liability in any claim relating to analyses performed shall be limited to, at laboratory's option, repeating the analysis in question at laboratory's expense, or the refund of the charges paid for performance of said analysis.

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Certification Summary

Laboratory ID: WP CNC: Waypoint Analytical Carolina, Inc. (C), Charlotte, NC

State	Program	Lab ID	Expiration Date
North Carolina	State Program	37735	07/31/2024
North Carolina	State Program	402	12/31/2023
South Carolina	State Program	99012	07/31/2023
South Carolina	State Program	99012	12/31/2022

Laboratory ID: WP MTN: Waypoint Analytical, LLC., Memphis, TN

State	Program	Lab ID	Expiration Date
Alabama	State Program	40750	02/29/2024
Arkansas	State Program	88-0650	02/07/2024
California	State Program	2904	06/30/2024
Florida	State Program - NELAP	E871157	06/30/2024
Georgia	State Program	C044	11/14/2025
Georgia	State Program	04015	06/30/2024
Illinois	State Program - NELAP	200078	10/10/2024
Kentucky	State Program	80215	06/30/2024
Kentucky	State Program	KY90047	12/31/2023
Louisiana	State Program - NELAP	LA037	12/31/2023
Louisiana	State Program - NELAP	04015	06/30/2024
Mississippi	State Program	MS	11/14/2025
North Carolina	State Program	47701	07/31/2024
North Carolina	State Program	415	12/31/2023
Pennsylvania	State Program - NELAP	68-03195	05/31/2024
South Carolina	State Program	84002	06/30/2023
Tennessee	State Program	02027	11/14/2025
Texas	State Program - NELAP	T104704180	09/30/2023
Virginia	State Program	00106	06/30/2024
Virginia	State Program - NELAP	460181	09/14/2023

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Sample Summary Table

Report Number: **23-206-0058**

Client Project Description: **R4370.00**

Lab No	Client Sample ID	Matrix	Date Collected	Date Received	Method	Lab ID
90502	SS-NG-175	Solids	07/21/2023 15:52	07/25/2023 13:00		
90503	SS-NG-56	Solids	07/21/2023 14:58	07/25/2023 13:00		
90504	SS-NG-172	Solids	07/21/2023 15:48	07/25/2023 13:00		
90505	SS-NG-83	Solids	07/21/2023 15:03	07/25/2023 13:00		
90506	SS-NG-192	Solids	07/21/2023 14:25	07/25/2023 13:00		
90507	SS-NG-11	Solids	07/21/2023 14:35	07/25/2023 13:00		
90508	SS-NG-38	Solids	07/21/2023 14:55	07/25/2023 13:00		
90509	SS-NG-110	Solids	07/21/2023 16:15	07/25/2023 13:00		
90510	SS-NG-109	Solids	07/21/2023 16:21	07/25/2023 13:00		
90511	SS-NG-226	Solids	07/21/2023 16:23	07/25/2023 13:00		
90511	SS-NG-226	Solids	07/21/2023 16:23	07/25/2023 13:00	6020B	WP MTN
90512	SS-NG-266 @ 1'	Solids	07/21/2023 16:26	07/25/2023 13:00		
90513	SS-NG-148	Solids	07/21/2023 15:20	07/25/2023 13:00		
90514	SS-NG-70	Solids	07/21/2023 16:35	07/25/2023 13:00		
90515	SS-NG-119	Solids	07/21/2023 16:02	07/25/2023 13:00		
90516	SS-NG-Playground	Solids	07/21/2023 06:20	07/25/2023 13:00		
90517	SS-NG-Dup-2	Solids	07/21/2023 15:11	07/25/2023 13:00		
90518	SS-NG-152	Solids	07/21/2023 15:30	07/25/2023 13:00		
90519	SS-NG-72	Solids	07/21/2023 15:58	07/25/2023 13:00		
90520	SS-NG-279	Solids	07/21/2023 15:38	07/25/2023 13:00		
90521	SS-NG-144	Solids	07/21/2023 15:15	07/25/2023 13:00		
90522	SS-NG-137	Solids	07/21/2023 15:11	07/25/2023 13:00		
90523	SS-NG-131	Solids	07/21/2023 15:08	07/25/2023 13:00		
90524	SS-NG-91	Solids	07/21/2023 14:15	07/25/2023 13:00		
90525	SS-NG-Dup-1	Solids	07/21/2023 14:16	07/25/2023 13:00		
90526	SS-NG-45	Solids	07/21/2023 16:40	07/25/2023 13:00		
90527	SS-NG-1	Solids	07/21/2023 14:30	07/25/2023 13:00		

WP MTN - Memphis, TN: Waypoint Analytical - TN, Memphis, TN

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Sample Summary Table

Report Number: **23-206-0058**

Client Project Description: **R4370.00**

Lab No	Client Sample ID	Matrix	Date Collected	Date Received	Method	Lab ID
90528	SS-NG-184	Solids	07/21/2023 14:28	07/25/2023 13:00		
90529	SS-NG-116	Solids	07/21/2023 16:10	07/25/2023 13:00		
90530	SS-NG-226	Solids	07/21/2023 14:47	07/25/2023 13:00		
90531	SS-NG-205	Solids	07/21/2023 14:48	07/25/2023 13:00		
90532	SS-NG-273	Solids	07/21/2023 15:44	07/25/2023 13:00		
90533	SS-NG-92	Solids	07/21/2023 15:45	07/25/2023 13:00		
90534	SS-NG-100	Solids	07/21/2023 16:20	07/25/2023 13:00		
90536	SS-NG-102	Solids	07/21/2023 15:24	07/25/2023 13:00		
90536	SS-NG-102	Solids	07/21/2023 15:24	07/25/2023 13:00	6020B	WP MTN
90537	SS-NG-153	Solids	07/21/2023 15:24	07/25/2023 13:00		
90537	SS-NG-153	Solids	07/21/2023 15:24	07/25/2023 13:00	6020B	WP MTN

WP MTN - Memphis, TN: Waypoint Analytical - TN, Memphis, TN

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Summary of Detected Analytes

Project: R4370.00

Report Number: 23-206-0058

Client Sample ID / Method	Lab Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
SS-NG-175	**V 90502**					
6010D	Lead	30.8	mg/Kg - dry	0.359	08/03/2023 19:54	
SW-DRYWT	Moisture	16.6	%		07/26/2023 12:30	
SS-NG-56	**V 90503**					
6010D	Lead	18.8	mg/Kg - dry	0.402	08/03/2023 19:58	
SW-DRYWT	Moisture	25.5	%		07/26/2023 12:30	
SS-NG-172	**V 90504**					
6010D	Lead	7.31	mg/Kg - dry	0.395	08/03/2023 20:02	
SW-DRYWT	Moisture	24.2	%		07/26/2023 12:30	
SS-NG-83	**V 90505**					
6010D	Lead	22.5	mg/Kg - dry	0.490	08/07/2023 18:46	
SW-DRYWT	Moisture	38.8	%		07/26/2023 12:30	
SS-NG-192	**V 90506**					
6010D	Lead	48.7	mg/Kg - dry	0.416	08/07/2023 18:50	
SW-DRYWT	Moisture	27.9	%		07/26/2023 12:30	
SS-NG-11	**V 90507**					
6010D	Lead	29.8	mg/Kg - dry	0.385	08/07/2023 18:55	
SW-DRYWT	Moisture	22.2	%		07/26/2023 12:30	
SS-NG-38	**V 90508**					
6010D	Lead	44.4	mg/Kg - dry	0.375	08/07/2023 19:17	
SW-DRYWT	Moisture	20.2	%		07/26/2023 12:30	
SS-NG-110	**V 90509**					
6010D	Lead	212	mg/Kg - dry	1.66	08/08/2023 16:20	
SW-DRYWT	Moisture	9.48	%		07/26/2023 12:30	
SS-NG-109	**V 90510**					
6010D	Lead	203	mg/Kg - dry	1.80	08/08/2023 16:29	
SW-DRYWT	Moisture	16.8	%		07/26/2023 12:30	
SS-NG-226	**V 90511**					
6020B	Antimony	0.336	mg/Kg - dry	0.301	08/01/2023 13:50	
6020B	Arsenic	2.26	mg/Kg - dry	0.301	08/01/2023 13:50	
6020B	Barium	105	mg/Kg - dry	0.300	08/01/2023 13:50	
6020B	Beryllium	0.391	mg/Kg - dry	0.301	08/02/2023 14:34	

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Summary of Detected Analytes

Project: R4370.00

Report Number: 23-206-0058

Client Sample ID / Method	Lab Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
SS-NG-226	**V 90511**					
6020B	Cadmium	0.439	mg/Kg - dry	0.301	08/01/2023 13:50	
6020B	Chromium	14.4	mg/Kg - dry	0.300	08/01/2023 13:50	
6020B	Cobalt	3.19	mg/Kg - dry	0.300	08/01/2023 13:50	
6020B	Copper	55.5	mg/Kg - dry	1.50	08/02/2023 14:30	
6020B	Manganese	209	mg/Kg - dry	0.300	08/01/2023 13:50	
6020B	Nickel	7.63	mg/Kg - dry	0.301	08/01/2023 13:50	
6020B	Selenium	0.352	mg/Kg - dry	0.300	08/01/2023 13:50	
6020B	Silver	0.580	mg/Kg - dry	0.301	08/01/2023 13:50	
6020B	Vanadium	28.0	mg/Kg - dry	1.50	08/01/2023 13:50	
6020B	Zinc	172	mg/Kg - dry	3.01	08/01/2023 13:50	
7471B	Mercury (Total)	0.174	mg/Kg - dry	0.0361	07/28/2023 15:54	
SW-DRYWT	Moisture	16.9	%		07/26/2023 12:30	
SS-NG-266 @ 1'	**V 90512**					
6010D	Lead	283	mg/Kg - dry	1.97	08/08/2023 16:25	
SW-DRYWT	Moisture	23.8	%		07/26/2023 12:30	
SS-NG-148	**V 90513**					
6010D	Lead	45.5	mg/Kg - dry	0.453	08/07/2023 19:43	
SW-DRYWT	Moisture	33.9	%		07/26/2023 12:30	
SS-NG-70	**V 90514**					
6010D	Lead	46.2	mg/Kg - dry	0.408	08/07/2023 19:47	
SW-DRYWT	Moisture	26.6	%		07/26/2023 13:50	
SS-NG-119	**V 90515**					
6010D	Lead	34.3	mg/Kg - dry	0.528	08/07/2023 19:52	
SW-DRYWT	Moisture	43.2	%		07/26/2023 13:50	
SS-NG-Playground	**V 90516**					
6010D	Lead	1430	mg/Kg - dry	18.0	08/09/2023 18:48	
SW-DRYWT	Moisture	16.5	%		07/26/2023 13:50	
SS-NG-Dup-2	**V 90517**					
6010D	Lead	32.9	mg/Kg - dry	0.400	08/07/2023 20:00	
SW-DRYWT	Moisture	25.0	%		07/26/2023 13:50	
SS-NG-152	**V 90518**					
6010D	Lead	8.41	mg/Kg - dry	0.322	08/07/2023 20:05	

Waypoint ANALYTICAL
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Summary of Detected Analytes

Project: R4370.00

Report Number: 23-206-0058

Client Sample ID / Method	Lab Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
SS-NG-152	**V 90518**					
SW-DRYWT	Moisture	7.09	%		07/26/2023 13:50	
SS-NG-72	**V 90519**					
6010D	Lead	397	mg/Kg - dry	4.98	08/09/2023 19:01	
SW-DRYWT	Moisture	39.8	%		07/26/2023 13:50	
SS-NG-279	**V 90520**					
6010D	Lead	32.5	mg/Kg - dry	0.390	08/07/2023 20:14	
SW-DRYWT	Moisture	23.1	%		07/26/2023 13:50	
SS-NG-144	**V 90521**					
6010D	Lead	35.9	mg/Kg - dry	0.390	08/07/2023 20:18	
SW-DRYWT	Moisture	23.1	%		07/26/2023 13:50	
SS-NG-137	**V 90522**					
6010D	Lead	31.8	mg/Kg - dry	0.362	08/01/2023 13:15	
SW-DRYWT	Moisture	17.2	%		07/26/2023 13:50	
SS-NG-131	**V 90523**					
6010D	Lead	16.7	mg/Kg - dry	0.329	08/01/2023 13:21	
SW-DRYWT	Moisture	8.86	%		07/26/2023 13:50	
SS-NG-91	**V 90524**					
6010D	Lead	283	mg/Kg - dry	1.79	08/02/2023 16:44	
SW-DRYWT	Moisture	16.4	%		07/26/2023 13:50	
SS-NG-Dup-1	**V 90525**					
6010D	Lead	286	mg/Kg - dry	3.16	08/02/2023 16:49	
SW-DRYWT	Moisture	52.5	%		07/26/2023 13:50	
SS-NG-45	**V 90526**					
6010D	Lead	43.3	mg/Kg - dry	0.452	08/01/2023 14:18	
SW-DRYWT	Moisture	33.7	%		07/26/2023 13:50	
SS-NG-1	**V 90527**					
6010D	Lead	33.8	mg/Kg - dry	0.437	08/01/2023 14:22	
SW-DRYWT	Moisture	31.4	%		07/26/2023 13:50	
SS-NG-184	**V 90528**					
6010D	Lead	309	mg/Kg - dry	1.72	08/02/2023 16:53	

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Summary of Detected Analytes

Project: **R4370.00**

Report Number: **23-206-0058**

Client Sample ID / Method	Lab Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
SS-NG-184	**V 90528**					
SW-DRYWT	Moisture	12.9	%		07/26/2023 13:50	
SS-NG-116	**V 90529**					
6010D	Lead	244	mg/Kg - dry	1.99	08/02/2023 16:58	
SW-DRYWT	Moisture	24.6	%		07/26/2023 13:50	
SS-NG-226	**V 90530**					
6010D	Lead	300	mg/Kg - dry	1.91	08/02/2023 17:02	
SW-DRYWT	Moisture	21.4	%		07/26/2023 13:50	
SS-NG-205	**V 90531**					
6010D	Lead	87.0	mg/Kg - dry	0.335	08/02/2023 17:07	
SW-DRYWT	Moisture	10.6	%		07/26/2023 13:50	
SS-NG-273	**V 90532**					
6010D	Lead	21.1	mg/Kg - dry	0.337	08/01/2023 15:11	
SW-DRYWT	Moisture	11.1	%		07/26/2023 13:50	
SS-NG-92	**V 90533**					
6010D	Lead	365	mg/Kg - dry	3.21	08/02/2023 17:11	
SW-DRYWT	Moisture	53.2	%		07/26/2023 13:50	
SS-NG-100	**V 90534**					
6010D	Lead	143	mg/Kg - dry	1.64	08/02/2023 17:15	
SW-DRYWT	Moisture	8.66	%		07/27/2023 10:36	
SS-NG-102	**V 90536**					
6020B	Lead	25.5	mg/Kg - dry	0.311	08/01/2023 13:54	
SW-DRYWT	Moisture	19.6	%		07/28/2023 10:38	
SS-NG-153	**V 90537**					
6020B	Arsenic	1.11	mg/Kg - dry	0.300	08/01/2023 13:58	
6020B	Barium	60.9	mg/Kg - dry	0.300	08/01/2023 13:58	
6020B	Beryllium	0.309	mg/Kg - dry	0.300	08/02/2023 14:50	
6020B	Chromium	25.2	mg/Kg - dry	0.300	08/01/2023 13:58	
6020B	Cobalt	7.72	mg/Kg - dry	0.300	08/01/2023 13:58	
6020B	Copper	21.0	mg/Kg - dry	0.300	08/01/2023 13:58	
6020B	Lead	12.7	mg/Kg - dry	0.300	08/01/2023 13:58	
6020B	Manganese	726	mg/Kg - dry	1.20	08/02/2023 14:46	
6020B	Nickel	16.7	mg/Kg - dry	0.300	08/01/2023 13:58	

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Summary of Detected Analytes

Project: **R4370.00**

Report Number: **23-206-0058**

Client Sample ID / Method	Lab Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
SS-NG-153	**V 90537**					
6020B	Silver	0.768	mg/Kg - dry	0.300	08/01/2023 13:58	
6020B	Vanadium	24.6	mg/Kg - dry	1.50	08/01/2023 13:58	
6020B	Zinc	75.0	mg/Kg - dry	3.00	08/01/2023 13:58	
7471B	Mercury (Total)	0.0488	mg/Kg - dry	0.0361	07/28/2023 15:59	
8270E	Benzo(b)fluoranthene	1.14	mg/Kg - dry	0.701	07/28/2023 16:30	J
8270E	Benzoic Acid	6.29	mg/Kg - dry	2.79	07/28/2023 16:30	J
8270E	Chrysene	0.700	mg/Kg - dry	0.682	07/28/2023 16:30	J
8270E	Pyrene	1.03	mg/Kg - dry	0.644	07/28/2023 16:30	J
SW-DRYWT	Moisture	16.8	%		07/28/2023 10:38	

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Client: Mid-Atlantic Associates, Inc. - Raleigh **CASE NARRATIVE**
Project: R4370.00
Lab Report Number: 23-206-0058
Date: 8/16/2023

Report Comments
Revised report: Revision 1
Co and V have been added to be reported.

Metals Analysis Method 6010D
Sample 90534 (SS-NG-100)
Analyte: Lead
QC Batch No: V36145/V35953
Matrix spike/matrix spike duplicate recoveries are outside of control limits. Acceptable LCS recovery indicates the system was in control, but the reported result could be affected by matrix interference.

Sample 90507 (SS-NG-11)
Analyte: Lead
QC Batch No: V36316/V36086
The matrix spike, matrix spike duplicate and the dilution test were all outside of the quality control acceptance ranges. Matrix interference is suspected.

Analyte: Lead
QC Batch No: V36421/V36086
LLC failed high. Result 10x concentration. Result not affected.

Metals Analyses Method 6020B
Sample 90647 (SS-LY-45)
Analyte: Arsenic
QC Batch No: L696237/L695858
The matrix spike and/or the matrix spike duplicate was outside quality control acceptance ranges. A post digestion spike was performed and passed quality control acceptance ranges. No matrix interference is suspected.

Sample 90647 (SS-LY-45)
Analyte: Barium
QC Batch No: L696237/L695858
The matrix spike and/or the matrix spike duplicate was outside quality control acceptance ranges. A dilution test was performed and passed quality control acceptance ranges. No matrix interference is suspected.

Sample 90647 (SS-LY-45)
Analyte: Copper
QC Batch No: L696547/L695858
The matrix spike, matrix spike duplicate and the dilution test were all outside of the quality control acceptance ranges. Matrix interference is suspected.

Sample 90647 (SS-LY-45)
Analyte: Manganese
QC Batch No: L696237/L695858

The matrix spike, matrix spike duplicate and the dilution test were all outside of the quality control acceptance ranges. Matrix interference is suspected.

Sample 90647 (SS-LY-45)
Analyte: Nickel
QC Batch No: L696237/L695858
The matrix spike, matrix spike duplicate and the dilution test were all outside of the quality control acceptance ranges. Matrix interference is suspected.

Sample 90647 (SS-LY-45)
Analyte: Lead
QC Batch No: L696237/L695858
The matrix spike and/or the matrix spike duplicate was outside quality control acceptance ranges. A dilution test was performed and passed quality control acceptance ranges. No matrix interference is suspected.

Sample 90647 (SS-LY-45)
Analyte: Antimony
QC Batch No: L696547/L695858
The matrix spike and/or the matrix spike duplicate was outside quality control acceptance ranges. A post digestion spike was performed and passed quality control acceptance ranges. No matrix interference is suspected.

Sample 90647 (SS-LY-45)
Analyte: Thallium
QC Batch No: L696237/L695858
The matrix spike and/or the matrix spike duplicate was outside quality control acceptance ranges. A post digestion spike was performed and passed quality control acceptance ranges. No matrix interference is suspected.

Sample 90647 (SS-LY-45)
Analyte: Zinc
QC Batch No: L696237/L695858
The matrix spike and/or the matrix spike duplicate was outside quality control acceptance ranges. A dilution test was performed and passed quality control acceptance ranges. No matrix interference is suspected.

Semivolatile Organic Compounds - GC/MS Method 8270E
Sample 90537 (SS-NG-153)
QC Batch No: V35874/V35831
The sample was diluted due to the nature of the sample matrix. Reporting limits have been adjusted accordingly.

Analyte: Benzoic Acid
QC Batch No: V35874/V35831
Refer to LCS/LCSD.

Sample 90683
Analyte: Hexachlorocyclopentadiene
QC Batch No: V35874/V35831
Relative Percent Difference (RPD) for the duplicate analysis was outside of the allowable QC limits.

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Project R4370.00
Information :

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Report Number : **23-206-0058**

REPORT OF ANALYSIS

Lab No : **90502**
Sample ID : **SS-NG-175**

Matrix: **Solids**
Sampled: **7/21/2023 15:52**

Test	Results	Units	MQL	DF	Date / Time Analyzed	By	Analytical Method
Moisture	**16.6**	%		1	07/26/23 12:30	CNC	SW-DRYWT
Lead	**30.8**	mg/Kg - dry	0.359	1	08/03/23 19:54	JKC	6010D

Qualifiers/ Definitions				
	B	Analyte detected in blank	DF	Dilution Factor
	J	Estimated value	MQL	Method Quantitation Limit

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REPORT OF ANALYSIS

Lab No : **90503**
Sample ID : **SS-NG-56**

Matrix: **Solids**
Sampled: **7/21/2023 14:58**

Test	Results	Units	MQL	DF	Date / Time Analyzed	By	Analytical Method
Moisture	**25.5**	%		1	07/26/23 12:30	CNC	SW-DRYWT
Lead	**18.8**	mg/Kg - dry	0.402	1	08/03/23 19:58	JKC	6010D

Qualifiers/ Definitions				
	B	Analyte detected in blank	DF	Dilution Factor
	J	Estimated value	MQL	Method Quantitation Limit

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REPORT OF ANALYSIS

Lab No : **90504**
Sample ID : **SS-NG-172**

Matrix: **Solids**
Sampled: **7/21/2023 15:48**

Test	Results	Units	MQL	DF	Date / Time Analyzed	By	Analytical Method
Moisture	**24.2**	%		1	07/26/23 12:30	CNC	SW-DRYWT
Lead	**7.31**	mg/Kg - dry	0.395	1	08/03/23 20:02	JKC	6010D

Qualifiers/ Definitions

B	Analyte detected in blank	DF	Dilution Factor
J	Estimated value	MQL	Method Quantitation Limit

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Report Number : **23-206-0058**

REPORT OF ANALYSIS

Lab No : **90505**
Sample ID : **SS-NG-83**

Matrix: **Solids**
Sampled: **7/21/2023 15:03**

Test	Results	Units	MQL	DF	Date / Time Analyzed	By	Analytical Method
Moisture	**38.8**	%		1	07/26/23 12:30	CNC	SW-DRYWT
Lead	**22.5**	mg/Kg - dry	0.490	1	08/07/23 18:46	JKC	6010D

Qualifiers/ Definitions

B	Analyte detected in blank	DF	Dilution Factor
J	Estimated value	MQL	Method Quantitation Limit

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REPORT OF ANALYSIS

Lab No : **90506**
Sample ID : **SS-NG-192**

Matrix: **Solids**
Sampled: **7/21/2023 14:25**

Test	Results	Units	MQL	DF	Date / Time Analyzed	By	Analytical Method
Moisture	**27.9**	%		1	07/26/23 12:30	CNC	SW-DRYWT
Lead	**48.7**	mg/Kg - dry	0.416	1	08/07/23 18:50	JKC	6010D

Qualifiers/ Definitions				
	B	Analyte detected in blank	DF	Dilution Factor
	J	Estimated value	MQL	Method Quantitation Limit

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REPORT OF ANALYSIS

Lab No : **90507**
Sample ID : **SS-NG-11**

Matrix: **Solids**
Sampled: **7/21/2023 14:35**

Test	Results	Units	MQL	DF	Date / Time Analyzed	By	Analytical Method
Moisture	**22.2**	%		1	07/26/23 12:30	CNC	SW-DRYWT
Lead	**29.8**	mg/Kg - dry	0.385	1	08/07/23 18:55	JKC	6010D

Qualifiers/ Definitions				
	B	Analyte detected in blank	DF	Dilution Factor
	J	Estimated value	MQL	Method Quantitation Limit

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REPORT OF ANALYSIS

Lab No : **90508**
Sample ID : **SS-NG-38**

Matrix: **Solids**
Sampled: **7/21/2023 14:55**

Test	Results	Units	MQL	DF	Date / Time Analyzed	By	Analytical Method
Moisture	**20.2**	%		1	07/26/23 12:30	CNC	SW-DRYWT
Lead	**44.4**	mg/Kg - dry	0.375	1	08/07/23 19:17	JKC	6010D

Qualifiers/ Definitions	B	Analyte detected in blank	DF	Dilution Factor
	J	Estimated value	MQL	Method Quantitation Limit

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REPORT OF ANALYSIS

Lab No : **90509**
Sample ID : **SS-NG-110**

Matrix: **Solids**
Sampled: **7/21/2023 16:15**

Test	Results	Units	MQL	DF	Date / Time Analyzed	By	Analytical Method
Moisture	**9.48**	%		1	07/26/23 12:30	CNC	SW-DRYWT
Lead	**212**	mg/Kg - dry	1.66	5	08/08/23 16:20	JKC	6010D

Qualifiers/ Definitions

B	Analyte detected in blank	DF	Dilution Factor
J	Estimated value	MQL	Method Quantitation Limit

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REPORT OF ANALYSIS

Lab No : **90510**
Sample ID : **SS-NG-109**

Matrix: **Solids**
Sampled: **7/21/2023 16:21**

Test	Results	Units	MQL	DF	Date / Time Analyzed	By	Analytical Method
Moisture	**16.8**	%		1	07/26/23 12:30	CNC	SW-DRYWT
Lead	**203**	mg/Kg - dry	1.80	5	08/08/23 16:29	JKC	6010D

Qualifiers/ Definitions	B	Analyte detected in blank	DF	Dilution Factor
	J	Estimated value	MQL	Method Quantitation Limit

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Report Number : **23-206-0058**

REPORT OF ANALYSIS

Lab No : **90511**
Sample ID : **SS-NG-226**

Matrix: **Solids**
Sampled: **7/21/2023 16:23**

Test	Results	Units	MDL	MQL	DF	Date / Time Analyzed	By	Analytical Method
Moisture	**16.9**	%			1	07/26/23 12:30	CNC	SW-DRYWT
Antimony	**0.336**	mg/Kg - dry		0.301	5	08/01/23 13:50	CPW	6020B
Arsenic	**2.26**	mg/Kg - dry		0.301	5	08/01/23 13:50	CPW	6020B
Barium	**105**	mg/Kg - dry		0.300	5	08/01/23 13:50	CPW	6020B
Beryllium	**0.391**	mg/Kg - dry		0.301	5	08/02/23 14:34	CPW	6020B
Cadmium	**0.439**	mg/Kg - dry		0.301	5	08/01/23 13:50	CPW	6020B
Chromium	**14.4**	mg/Kg - dry		0.300	5	08/01/23 13:50	CPW	6020B
Cobalt	**3.19**	mg/Kg - dry		0.300	5	08/01/23 13:50	CPW	6020B
Copper	**55.5**	mg/Kg - dry		1.50	25	08/02/23 14:30	CPW	6020B
Manganese	**209**	mg/Kg - dry		0.300	5	08/01/23 13:50	CPW	6020B
Mercury (Total)	**0.174**	mg/Kg - dry		0.0361	1	07/28/23 15:54	JKC	7471B
Nickel	**7.63**	mg/Kg - dry		0.301	5	08/01/23 13:50	CPW	6020B
Selenium	**0.352**	mg/Kg - dry		0.300	5	08/01/23 13:50	CPW	6020B
Silver	**0.580**	mg/Kg - dry		0.301	5	08/01/23 13:50	CPW	6020B
Thallium	<0.301	mg/Kg - dry		0.301	5	08/01/23 13:50	CPW	6020B
Vanadium	**28.0**	mg/Kg - dry		1.50	5	08/01/23 13:50	CPW	6020B
Zinc	**172**	mg/Kg - dry		3.01	5	08/01/23 13:50	CPW	6020B

Qualifiers/ Definitions

B	Analyte detected in blank	DF	Dilution Factor
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REPORT OF ANALYSIS

Lab No : **90511**
Sample ID : **SS-NG-226**

Matrix: **Solids**
Sampled: **7/21/2023 16:23**

Analytical Method: 8270E **Prep Batch(es):** **V35831** 07/27/23 11:30
Prep Method: 3546

Test	Results	Units	MDL	MQL	DF	Date / Time Analyzed	By	Analytical Batch
Acenaphthene	<0.139	mg/Kg - dry	0.139	0.794	1	07/28/23 15:22	AMP	V35874
Acenaphthylene	<0.126	mg/Kg - dry	0.126	0.794	1	07/28/23 15:22	AMP	V35874
Aniline	<0.182	mg/Kg - dry	0.182	0.794	1	07/28/23 15:22	AMP	V35874
Anthracene	<0.172	mg/Kg - dry	0.172	0.794	1	07/28/23 15:22	AMP	V35874
Benzo(a)anthracene	<0.167	mg/Kg - dry	0.167	0.794	1	07/28/23 15:22	AMP	V35874
Benzo(a)pyrene	<0.176	mg/Kg - dry	0.176	0.794	1	07/28/23 15:22	AMP	V35874
Benzo(b)fluoranthene	<0.175	mg/Kg - dry	0.175	0.794	1	07/28/23 15:22	AMP	V35874
Benzo(g,h,i)perylene	<0.163	mg/Kg - dry	0.163	0.794	1	07/28/23 15:22	AMP	V35874
Benzo(k)fluoranthene	<0.164	mg/Kg - dry	0.164	0.794	1	07/28/23 15:22	AMP	V35874
Benzoic Acid	<0.697	mg/Kg - dry	0.697	2.41	1	07/28/23 15:22	AMP	V35874
Benzyl alcohol	<0.126	mg/Kg - dry	0.126	0.794	1	07/28/23 15:22	AMP	V35874
Bis(2-Chloroethoxy)methane	<0.141	mg/Kg - dry	0.141	0.794	1	07/28/23 15:22	AMP	V35874
Bis(2-Chloroethyl)ether	<0.128	mg/Kg - dry	0.128	0.794	1	07/28/23 15:22	AMP	V35874
Bis(2-Chloroisopropyl)ether	<0.163	mg/Kg - dry	0.163	0.397	1	07/28/23 15:22	AMP	V35874
Bis(2-ethylhexyl)phthalate	<0.144	mg/Kg - dry	0.144	0.794	1	07/28/23 15:22	AMP	V35874
4-Bromophenyl phenyl ether	<0.131	mg/Kg - dry	0.131	0.794	1	07/28/23 15:22	AMP	V35874
Butyl benzyl phthalate	<0.135	mg/Kg - dry	0.135	0.397	1	07/28/23 15:22	AMP	V35874
4-Chloro-3-methylphenol	<0.111	mg/Kg - dry	0.111	0.794	1	07/28/23 15:22	AMP	V35874
4-Chloroaniline	<0.134	mg/Kg - dry	0.134	0.397	1	07/28/23 15:22	AMP	V35874
2-Chloronaphthalene	<0.139	mg/Kg - dry	0.139	0.794	1	07/28/23 15:22	AMP	V35874
2-Chlorophenol	<0.118	mg/Kg - dry	0.118	0.794	1	07/28/23 15:22	AMP	V35874
4-Chlorophenyl phenyl ether	<0.151	mg/Kg - dry	0.151	1.20	1	07/28/23 15:22	AMP	V35874

Qualifiers/ Definitions

B	Analyte detected in blank	DF	Dilution Factor
J	Estimated value	MQL	Method Quantitation Limit

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REPORT OF ANALYSIS

Lab No : **90511**
Sample ID : **SS-NG-226**

Matrix: **Solids**
Sampled: **7/21/2023 16:23**

Analytical Method: 8270E **Prep Batch(es):** **V35831** 07/27/23 11:30
Prep Method: 3546

Test	Results	Units	MDL	MQL	DF	Date / Time Analyzed	By	Analytical Batch
Chrysene	<0.170	mg/Kg - dry	0.170	0.794	1	07/28/23 15:22	AMP	V35874
Dibenz(a,h)anthracene	<0.276	mg/Kg - dry	0.276	0.794	1	07/28/23 15:22	AMP	V35874
Dibenzofuran	<0.143	mg/Kg - dry	0.143	0.794	1	07/28/23 15:22	AMP	V35874
1,2-Dichlorobenzene	<0.113	mg/Kg - dry	0.113	0.794	1	07/28/23 15:22	AMP	V35874
1,3-Dichlorobenzene	<0.117	mg/Kg - dry	0.117	0.794	1	07/28/23 15:22	AMP	V35874
1,4-Dichlorobenzene	<0.117	mg/Kg - dry	0.117	0.397	1	07/28/23 15:22	AMP	V35874
3,3'-Dichlorobenzidine	<0.176	mg/Kg - dry	0.176	0.794	1	07/28/23 15:22	AMP	V35874
2,4-Dichlorophenol	<0.115	mg/Kg - dry	0.115	0.794	1	07/28/23 15:22	AMP	V35874
Diethyl phthalate	<0.216	mg/Kg - dry	0.216	0.794	1	07/28/23 15:22	AMP	V35874
Dimethyl phthalate	<0.209	mg/Kg - dry	0.209	0.794	1	07/28/23 15:22	AMP	V35874
2,4-Dimethylphenol	<0.129	mg/Kg - dry	0.129	0.397	1	07/28/23 15:22	AMP	V35874
Di-n-butyl phthalate	<0.128	mg/Kg - dry	0.128	0.794	1	07/28/23 15:22	AMP	V35874
4,6-Dinitro-2-methylphenol	<0.288	mg/Kg - dry	0.288	1.81	1	07/28/23 15:22	AMP	V35874
2,4-Dinitrophenol	<0.625	mg/Kg - dry	0.625	1.81	1	07/28/23 15:22	AMP	V35874
2,4-Dinitrotoluene	<0.116	mg/Kg - dry	0.116	0.794	1	07/28/23 15:22	AMP	V35874
2,6-Dinitrotoluene	<0.129	mg/Kg - dry	0.129	0.794	1	07/28/23 15:22	AMP	V35874
Di-n-Octyl Phthalate	<0.172	mg/Kg - dry	0.172	0.397	1	07/28/23 15:22	AMP	V35874
Fluoranthene	<0.148	mg/Kg - dry	0.148	0.794	1	07/28/23 15:22	AMP	V35874
Fluorene	<0.154	mg/Kg - dry	0.154	0.794	1	07/28/23 15:22	AMP	V35874
Hexachlorobenzene	<0.127	mg/Kg - dry	0.127	0.794	1	07/28/23 15:22	AMP	V35874
Hexachlorobutadiene	<0.117	mg/Kg - dry	0.117	0.794	1	07/28/23 15:22	AMP	V35874
Hexachlorocyclopentadiene	<0.188	mg/Kg - dry	0.188	0.794	1	07/28/23 15:22	AMP	V35874

Qualifiers/ Definitions

B	Analyte detected in blank	DF	Dilution Factor
J	Estimated value	MQL	Method Quantitation Limit

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Report Number : **23-206-0058**

REPORT OF ANALYSIS

Lab No : **90511**
Sample ID : **SS-NG-226**

Matrix: **Solids**
Sampled: **7/21/2023 16:23**

Analytical Method: 8270E **Prep Batch(es):** **V35831** 07/27/23 11:30
Prep Method: 3546

Test	Results	Units	MDL	MQL	DF	Date / Time Analyzed	By	Analytical Batch
Hexachloroethane	<0.095	mg/Kg - dry	0.095	0.794	1	07/28/23 15:22	AMP	V35874
Indeno(1,2,3-cd)pyrene	<0.215	mg/Kg - dry	0.215	0.794	1	07/28/23 15:22	AMP	V35874
Isophorone	<0.229	mg/Kg - dry	0.229	0.794	1	07/28/23 15:22	AMP	V35874
1-Methylnaphthalene	<0.127	mg/Kg - dry	0.127	0.794	1	07/28/23 15:22	AMP	V35874
2-Methylnaphthalene	<0.120	mg/Kg - dry	0.120	0.794	1	07/28/23 15:22	AMP	V35874
2-Methylphenol	<0.116	mg/Kg - dry	0.116	0.794	1	07/28/23 15:22	AMP	V35874
3&4 Methylphenol	<0.102	mg/Kg - dry	0.102	0.794	1	07/28/23 15:22	AMP	V35874
Naphthalene	<0.173	mg/Kg - dry	0.173	0.794	1	07/28/23 15:22	AMP	V35874
2-Nitroaniline	<0.116	mg/Kg - dry	0.116	0.794	1	07/28/23 15:22	AMP	V35874
3-Nitroaniline	<0.144	mg/Kg - dry	0.144	0.794	1	07/28/23 15:22	AMP	V35874
4-Nitroaniline	<0.112	mg/Kg - dry	0.112	0.397	1	07/28/23 15:22	AMP	V35874
Nitrobenzene	<0.139	mg/Kg - dry	0.139	0.397	1	07/28/23 15:22	AMP	V35874
2-Nitrophenol	<0.106	mg/Kg - dry	0.106	0.794	1	07/28/23 15:22	AMP	V35874
4-Nitrophenol	<0.140	mg/Kg - dry	0.140	0.794	1	07/28/23 15:22	AMP	V35874
N-Nitrosodimethylamine	<0.316	mg/Kg - dry	0.316	0.794	1	07/28/23 15:22	AMP	V35874
N-Nitrosodiphenylamine	<0.217	mg/Kg - dry	0.217	0.794	1	07/28/23 15:22	AMP	V35874
N-Nitroso-di-n-propylamine	<0.141	mg/Kg - dry	0.141	0.794	1	07/28/23 15:22	AMP	V35874
Pentachlorophenol	<0.417	mg/Kg - dry	0.417	1.20	1	07/28/23 15:22	AMP	V35874
Phenanthrene	<0.250	mg/Kg - dry	0.250	0.794	1	07/28/23 15:22	AMP	V35874
Phenol	<0.134	mg/Kg - dry	0.134	0.794	1	07/28/23 15:22	AMP	V35874
Pyrene	<0.161	mg/Kg - dry	0.161	0.794	1	07/28/23 15:22	AMP	V35874
Pyridine	<0.095	mg/Kg - dry	0.095	0.397	1	07/28/23 15:22	AMP	V35874

Qualifiers/ Definitions

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J	Estimated value	MQL	Method Quantitation Limit

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Report Number : **23-206-0058**

REPORT OF ANALYSIS

Lab No : **90511**
Sample ID : **SS-NG-226**

Matrix: **Solids**
Sampled: **7/21/2023 16:23**

Analytical Method: 8270E **Prep Batch(es):** **V35831** 07/27/23 11:30
Prep Method: 3546

Test	Results	Units	MDL	MQL	DF	Date / Time Analyzed	By	Analytical Batch
1,2,4-Trichlorobenzene	<0.128	mg/Kg - dry	0.128	0.794	1	07/28/23 15:22	AMP	V35874
2,4,5-Trichlorophenol	<0.115	mg/Kg - dry	0.115	0.794	1	07/28/23 15:22	AMP	V35874
2,4,6-Trichlorophenol	<0.116	mg/Kg - dry	0.116	0.794	1	07/28/23 15:22	AMP	V35874
Surrogate: Phenol-d5	67.3		Limits: 34-121%		1	07/28/23 15:22	AMP	8270E
Surrogate: 2-Fluorobiphenyl	83.8		Limits: 44-115%		1	07/28/23 15:22	AMP	V35874
Surrogate: 2-Fluorophenol	71.5		Limits: 35-115%		1	07/28/23 15:22	AMP	V35874
Surrogate: Nitrobenzene-d5	79.0		Limits: 37-122%		1	07/28/23 15:22	AMP	V35874
Surrogate: 4-Terphenyl-d14	97.0		Limits: 54-127%		1	07/28/23 15:22	AMP	V35874
Surrogate: 2,4,6-Tribromophenol	75.1		Limits: 39-132%		1	07/28/23 15:22	AMP	V35874

Qualifiers/ Definitions

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REPORT OF ANALYSIS

Lab No : **90512**
Sample ID : **SS-NG-266 @ 1'**

Matrix: **Solids**
Sampled: **7/21/2023 16:26**

Test	Results	Units	MQL	DF	Date / Time Analyzed	By	Analytical Method
Moisture	**23.8**	%		1	07/26/23 12:30	CNC	SW-DRYWT
Lead	**283**	mg/Kg - dry	1.97	5	08/08/23 16:25	JKC	6010D

Qualifiers/ Definitions

B	Analyte detected in blank	DF	Dilution Factor
J	Estimated value	MQL	Method Quantitation Limit

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REPORT OF ANALYSIS

Lab No : **90513**
Sample ID : **SS-NG-148**

Matrix: **Solids**
Sampled: **7/21/2023 15:20**

Test	Results	Units	MQL	DF	Date / Time Analyzed	By	Analytical Method
Moisture	**33.9**	%		1	07/26/23 12:30	CNC	SW-DRYWT
Lead	**45.5**	mg/Kg - dry	0.453	1	08/07/23 19:43	JKC	6010D

Qualifiers/ Definitions

B	Analyte detected in blank	DF	Dilution Factor
J	Estimated value	MQL	Method Quantitation Limit

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REPORT OF ANALYSIS

Lab No : **90514**
Sample ID : **SS-NG-70**

Matrix: **Solids**
Sampled: **7/21/2023 16:35**

Test	Results	Units	MQL	DF	Date / Time Analyzed	By	Analytical Method
Moisture	**26.6**	%		1	07/26/23 13:50	CNC	SW-DRYWT
Lead	**46.2**	mg/Kg - dry	0.408	1	08/07/23 19:47	JKC	6010D

Qualifiers/ Definitions				
	B	Analyte detected in blank	DF	Dilution Factor
	J	Estimated value	MQL	Method Quantitation Limit

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REPORT OF ANALYSIS

Lab No : **90515**
Sample ID : **SS-NG-119**

Matrix: **Solids**
Sampled: **7/21/2023 16:02**

Test	Results	Units	MQL	DF	Date / Time Analyzed	By	Analytical Method
Moisture	**43.2**	%		1	07/26/23 13:50	CNC	SW-DRYWT
Lead	**34.3**	mg/Kg - dry	0.528	1	08/07/23 19:52	JKC	6010D

Qualifiers/ Definitions				
	B	Analyte detected in blank	DF	Dilution Factor
	J	Estimated value	MQL	Method Quantitation Limit

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REPORT OF ANALYSIS

Lab No : **90516**
Sample ID : **SS-NG-Playground**

Matrix: **Solids**
Sampled: **7/21/2023 6:20**

Test	Results	Units	MQL	DF	Date / Time Analyzed	By	Analytical Method
Moisture	**16.5**	%		1	07/26/23 13:50	CNC	SW-DRYWT
Lead	**1430**	mg/Kg - dry	18.0	50	08/09/23 18:48	JKC	6010D

Qualifiers/ Definitions				
	B	Analyte detected in blank	DF	Dilution Factor
	J	Estimated value	MQL	Method Quantitation Limit

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REPORT OF ANALYSIS

Lab No : **90517**
Sample ID : **SS-NG-Dup-2**

Matrix: **Solids**
Sampled: **7/21/2023 15:11**

Test	Results	Units	MQL	DF	Date / Time Analyzed	By	Analytical Method
Moisture	**25.0**	%		1	07/26/23 13:50	CNC	SW-DRYWT
Lead	**32.9**	mg/Kg - dry	0.400	1	08/07/23 20:00	JKC	6010D

Qualifiers/ Definitions				
	B	Analyte detected in blank	DF	Dilution Factor
	J	Estimated value	MQL	Method Quantitation Limit

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REPORT OF ANALYSIS

Lab No : **90518**
Sample ID : **SS-NG-152**

Matrix: **Solids**
Sampled: **7/21/2023 15:30**

Test	Results	Units	MQL	DF	Date / Time Analyzed	By	Analytical Method
Moisture	**7.09**	%		1	07/26/23 13:50	CNC	SW-DRYWT
Lead	**8.41**	mg/Kg - dry	0.322	1	08/07/23 20:05	JKC	6010D

Qualifiers/ Definitions				
	B	Analyte detected in blank	DF	Dilution Factor
	J	Estimated value	MQL	Method Quantitation Limit

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REPORT OF ANALYSIS

Lab No : **90519**
Sample ID : **SS-NG-72**

Matrix: **Solids**
Sampled: **7/21/2023 15:58**

Test	Results	Units	MQL	DF	Date / Time Analyzed	By	Analytical Method
Moisture	**39.8**	%		1	07/26/23 13:50	CNC	SW-DRYWT
Lead	**397**	mg/Kg - dry	4.98	10	08/09/23 19:01	JKC	6010D

Qualifiers/ Definitions

B	Analyte detected in blank	DF	Dilution Factor
J	Estimated value	MQL	Method Quantitation Limit

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REPORT OF ANALYSIS

Lab No : **90520**
Sample ID : **SS-NG-279**

Matrix: **Solids**
Sampled: **7/21/2023 15:38**

Test	Results	Units	MQL	DF	Date / Time Analyzed	By	Analytical Method
Moisture	**23.1**	%		1	07/26/23 13:50	CNC	SW-DRYWT
Lead	**32.5**	mg/Kg - dry	0.390	1	08/07/23 20:14	JKC	6010D

Qualifiers/ Definitions				
	B	Analyte detected in blank	DF	Dilution Factor
	J	Estimated value	MQL	Method Quantitation Limit

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REPORT OF ANALYSIS

Lab No : **90521**
Sample ID : **SS-NG-144**

Matrix: **Solids**
Sampled: **7/21/2023 15:15**

Test	Results	Units	MQL	DF	Date / Time Analyzed	By	Analytical Method
Moisture	**23.1**	%		1	07/26/23 13:50	CNC	SW-DRYWT
Lead	**35.9**	mg/Kg - dry	0.390	1	08/07/23 20:18	JKC	6010D

Qualifiers/ Definitions				
	B	Analyte detected in blank	DF	Dilution Factor
	J	Estimated value	MQL	Method Quantitation Limit

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REPORT OF ANALYSIS

Lab No : **90522**
Sample ID : **SS-NG-137**

Matrix: **Solids**
Sampled: **7/21/2023 15:11**

Test	Results	Units	MQL	DF	Date / Time Analyzed	By	Analytical Method
Moisture	**17.2**	%		1	07/26/23 13:50	CNC	SW-DRYWT
Lead	**31.8**	mg/Kg - dry	0.362	1	08/01/23 13:15	JKC	6010D

Qualifiers/ Definitions				
	B	Analyte detected in blank	DF	Dilution Factor
	J	Estimated value	MQL	Method Quantitation Limit

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REPORT OF ANALYSIS

Lab No : **90523**
Sample ID : **SS-NG-131**

Matrix: **Solids**
Sampled: **7/21/2023 15:08**

Test	Results	Units	MQL	DF	Date / Time Analyzed	By	Analytical Method
Moisture	**8.86**	%		1	07/26/23 13:50	CNC	SW-DRYWT
Lead	**16.7**	mg/Kg - dry	0.329	1	08/01/23 13:21	JKC	6010D

Qualifiers/ Definitions

B	Analyte detected in blank	DF	Dilution Factor
J	Estimated value	MQL	Method Quantitation Limit

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REPORT OF ANALYSIS

Lab No : **90524**
Sample ID : **SS-NG-91**

Matrix: **Solids**
Sampled: **7/21/2023 14:15**

Test	Results	Units	MQL	DF	Date / Time Analyzed	By	Analytical Method
Moisture	**16.4**	%		1	07/26/23 13:50	CNC	SW-DRYWT
Lead	**283**	mg/Kg - dry	1.79	5	08/02/23 16:44	JKC	6010D

Qualifiers/ Definitions	B	Analyte detected in blank	DF	Dilution Factor
	J	Estimated value	MQL	Method Quantitation Limit

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REPORT OF ANALYSIS

Lab No : **90525**
Sample ID : **SS-NG-Dup-1**

Matrix: **Solids**
Sampled: **7/21/2023 14:16**

Test	Results	Units	MQL	DF	Date / Time Analyzed	By	Analytical Method
Moisture	**52.5**	%		1	07/26/23 13:50	CNC	SW-DRYWT
Lead	**286**	mg/Kg - dry	3.16	5	08/02/23 16:49	JKC	6010D

Qualifiers/ Definitions	B	Analyte detected in blank	DF	Dilution Factor
	J	Estimated value	MQL	Method Quantitation Limit

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REPORT OF ANALYSIS

Lab No : **90526**
Sample ID : **SS-NG-45**

Matrix: **Solids**
Sampled: **7/21/2023 16:40**

Test	Results	Units	MQL	DF	Date / Time Analyzed	By	Analytical Method
Moisture	**33.7**	%		1	07/26/23 13:50	CNC	SW-DRYWT
Lead	**43.3**	mg/Kg - dry	0.452	1	08/01/23 14:18	JKC	6010D

Qualifiers/ Definitions				
	B	Analyte detected in blank	DF	Dilution Factor
	J	Estimated value	MQL	Method Quantitation Limit

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REPORT OF ANALYSIS

Lab No : **90527**
Sample ID : **SS-NG-1**

Matrix: **Solids**
Sampled: **7/21/2023 14:30**

Test	Results	Units	MQL	DF	Date / Time Analyzed	By	Analytical Method
Moisture	**31.4**	%		1	07/26/23 13:50	CNC	SW-DRYWT
Lead	**33.8**	mg/Kg - dry	0.437	1	08/01/23 14:22	JKC	6010D

Qualifiers/ Definitions				
	B	Analyte detected in blank	DF	Dilution Factor
	J	Estimated value	MQL	Method Quantitation Limit

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REPORT OF ANALYSIS

Lab No : **90528**
Sample ID : **SS-NG-184**

Matrix: **Solids**
Sampled: **7/21/2023 14:28**

Test	Results	Units	MQL	DF	Date / Time Analyzed	By	Analytical Method
Moisture	**12.9**	%		1	07/26/23 13:50	CNC	SW-DRYWT
Lead	**309**	mg/Kg - dry	1.72	5	08/02/23 16:53	JKC	6010D

Qualifiers/ Definitions	B	Analyte detected in blank	DF	Dilution Factor
	J	Estimated value	MQL	Method Quantitation Limit

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REPORT OF ANALYSIS

Lab No : **90529**
Sample ID : **SS-NG-116**

Matrix: **Solids**
Sampled: **7/21/2023 16:10**

Test	Results	Units	MQL	DF	Date / Time Analyzed	By	Analytical Method
Moisture	**24.6**	%		1	07/26/23 13:50	CNC	SW-DRYWT
Lead	**244**	mg/Kg - dry	1.99	5	08/02/23 16:58	JKC	6010D

Qualifiers/ Definitions				
	B	Analyte detected in blank	DF	Dilution Factor
	J	Estimated value	MQL	Method Quantitation Limit

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REPORT OF ANALYSIS

Lab No : **90530**
Sample ID : **SS-NG-226**

Matrix: **Solids**
Sampled: **7/21/2023 14:47**

Test	Results	Units	MQL	DF	Date / Time Analyzed	By	Analytical Method
Moisture	**21.4**	%		1	07/26/23 13:50	CNC	SW-DRYWT
Lead	**300**	mg/Kg - dry	1.91	5	08/02/23 17:02	JKC	6010D

Qualifiers/ Definitions	B	Analyte detected in blank	DF	Dilution Factor
	J	Estimated value	MQL	Method Quantitation Limit

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Project R4370.00

Information :

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Report Number : **23-206-0058**

REPORT OF ANALYSIS

Lab No : **90531**
Sample ID : **SS-NG-205**

Matrix: **Solids**
Sampled: **7/21/2023 14:48**

Test	Results	Units	MQL	DF	Date / Time Analyzed	By	Analytical Method
Moisture	**10.6**	%		1	07/26/23 13:50	CNC	SW-DRYWT
Lead	**87.0**	mg/Kg - dry	0.335	1	08/02/23 17:07	JKC	6010D

Qualifiers/ Definitions	B	Analyte detected in blank	DF	Dilution Factor
	J	Estimated value	MQL	Method Quantitation Limit

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Report Number : **23-206-0058**

REPORT OF ANALYSIS

Lab No : **90532**
Sample ID : **SS-NG-273**

Matrix: **Solids**
Sampled: **7/21/2023 15:44**

Test	Results	Units	MQL	DF	Date / Time Analyzed	By	Analytical Method
Moisture	**11.1**	%		1	07/26/23 13:50	CNC	SW-DRYWT
Lead	**21.1**	mg/Kg - dry	0.337	1	08/01/23 15:11	JKC	6010D

Qualifiers/ Definitions	B	Analyte detected in blank	DF	Dilution Factor
	J	Estimated value	MQL	Method Quantitation Limit

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Report Number : **23-206-0058**

REPORT OF ANALYSIS

Lab No : **90533**
Sample ID : **SS-NG-92**

Matrix: **Solids**
Sampled: **7/21/2023 15:45**

Test	Results	Units	MQL	DF	Date / Time Analyzed	By	Analytical Method
Moisture	**53.2**	%		1	07/26/23 13:50	CNC	SW-DRYWT
Lead	**365**	mg/Kg - dry	3.21	5	08/02/23 17:11	JKC	6010D

Qualifiers/ Definitions	B	Analyte detected in blank	DF	Dilution Factor
	J	Estimated value	MQL	Method Quantitation Limit

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REPORT OF ANALYSIS

Lab No : **90534**
Sample ID : **SS-NG-100**

Matrix: **Solids**
Sampled: **7/21/2023 16:20**

Test	Results	Units	MQL	DF	Date / Time Analyzed	By	Analytical Method
Moisture	**8.66**	%		1	07/27/23 10:36	CNC	SW-DRYWT
Lead	**143**	mg/Kg - dry	1.64	5	08/02/23 17:15	JKC	6010D

Qualifiers/ Definitions

B	Analyte detected in blank	DF	Dilution Factor
J	Estimated value	MQL	Method Quantitation Limit

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REPORT OF ANALYSIS

Lab No : **90536**
Sample ID : **SS-NG-102**

Matrix: **Solids**
Sampled: **7/21/2023 15:24**

Test	Results	Units	MQL	DF	Date / Time Analyzed	By	Analytical Method
Moisture	**19.6**	%		1	07/28/23 10:38	CNC	SW-DRYWT
Lead	**25.5**	mg/Kg - dry	0.311	5	08/01/23 13:54	CPW	6020B

Qualifiers/ Definitions				
	B	Analyte detected in blank	DF	Dilution Factor
	J	Estimated value	MQL	Method Quantitation Limit

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Report Number : **23-206-0058**

REPORT OF ANALYSIS

Lab No : **90537**
Sample ID : **SS-NG-153**

Matrix: **Solids**
Sampled: **7/21/2023 15:24**

Test	Results	Units	MDL	MQL	DF	Date / Time Analyzed	By	Analytical Method
Moisture	**16.8**	%			1	07/28/23 10:38	CNC	SW-DRYWT
Antimony	<0.300	mg/Kg - dry		0.300	5	08/01/23 13:58	CPW	6020B
Arsenic	**1.11**	mg/Kg - dry		0.300	5	08/01/23 13:58	CPW	6020B
Barium	**60.9**	mg/Kg - dry		0.300	5	08/01/23 13:58	CPW	6020B
Beryllium	**0.309**	mg/Kg - dry		0.300	5	08/02/23 14:50	CPW	6020B
Cadmium	<0.300	mg/Kg - dry		0.300	5	08/01/23 13:58	CPW	6020B
Chromium	**25.2**	mg/Kg - dry		0.300	5	08/01/23 13:58	CPW	6020B
Cobalt	**7.72**	mg/Kg - dry		0.300	5	08/01/23 13:58	CPW	6020B
Copper	**21.0**	mg/Kg - dry		0.300	5	08/01/23 13:58	CPW	6020B
Lead	**12.7**	mg/Kg - dry		0.300	5	08/01/23 13:58	CPW	6020B
Manganese	**726**	mg/Kg - dry		1.20	20	08/02/23 14:46	CPW	6020B
Mercury (Total)	**0.0488**	mg/Kg - dry		0.0361	1	07/28/23 15:59	JKC	7471B
Nickel	**16.7**	mg/Kg - dry		0.300	5	08/01/23 13:58	CPW	6020B
Selenium	<0.300	mg/Kg - dry		0.300	5	08/01/23 13:58	CPW	6020B
Silver	**0.768**	mg/Kg - dry		0.300	5	08/01/23 13:58	CPW	6020B
Thallium	<0.300	mg/Kg - dry		0.300	5	08/01/23 13:58	CPW	6020B
Vanadium	**24.6**	mg/Kg - dry		1.50	5	08/01/23 13:58	CPW	6020B
Zinc	**75.0**	mg/Kg - dry		3.00	5	08/01/23 13:58	CPW	6020B

Qualifiers/ Definitions

B	Analyte detected in blank	DF	Dilution Factor
J	Estimated value	MQL	Method Quantitation Limit

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Report Number : **23-206-0058**

REPORT OF ANALYSIS

Lab No : **90537**
Sample ID : **SS-NG-153**

Matrix: **Solids**
Sampled: **7/21/2023 15:24**

Analytical Method: 8270E **Prep Batch(es):** **V35831** 07/27/23 11:30
Prep Method: 3546

Test	Results	Units	MDL	MQL	DF	Date / Time Analyzed	By	Analytical Batch
Acenaphthene	<0.557	mg/Kg - dry	0.557	3.17	4	07/28/23 16:30	AMP	V35874
Acenaphthylene	<0.504	mg/Kg - dry	0.504	3.17	4	07/28/23 16:30	AMP	V35874
Aniline	<0.730	mg/Kg - dry	0.730	3.17	4	07/28/23 16:30	AMP	V35874
Anthracene	<0.687	mg/Kg - dry	0.687	3.17	4	07/28/23 16:30	AMP	V35874
Benzo(a)anthracene	<0.668	mg/Kg - dry	0.668	3.17	4	07/28/23 16:30	AMP	V35874
Benzo(a)pyrene	<0.706	mg/Kg - dry	0.706	3.17	4	07/28/23 16:30	AMP	V35874
Benzo(b)fluoranthene	**1.14 J**	mg/Kg - dry	0.701	3.17	4	07/28/23 16:30	AMP	V35874
Benzo(g,h,i)perylene	<0.653	mg/Kg - dry	0.653	3.17	4	07/28/23 16:30	AMP	V35874
Benzo(k)fluoranthene	<0.658	mg/Kg - dry	0.658	3.17	4	07/28/23 16:30	AMP	V35874
Benzoic Acid	**6.29 J**	mg/Kg - dry	2.79	9.62	4	07/28/23 16:30	AMP	V35874
Benzyl alcohol	<0.504	mg/Kg - dry	0.504	3.17	4	07/28/23 16:30	AMP	V35874
Bis(2-Chloroethoxy)methane	<0.567	mg/Kg - dry	0.567	3.17	4	07/28/23 16:30	AMP	V35874
Bis(2-Chloroethyl)ether	<0.514	mg/Kg - dry	0.514	3.17	4	07/28/23 16:30	AMP	V35874
Bis(2-Chloroisopropyl)ether	<0.653	mg/Kg - dry	0.653	1.59	4	07/28/23 16:30	AMP	V35874
Bis(2-ethylhexyl)phthalate	<0.576	mg/Kg - dry	0.576	3.17	4	07/28/23 16:30	AMP	V35874
4-Bromophenyl phenyl ether	<0.524	mg/Kg - dry	0.524	3.17	4	07/28/23 16:30	AMP	V35874
Butyl benzyl phthalate	<0.543	mg/Kg - dry	0.543	1.59	4	07/28/23 16:30	AMP	V35874
4-Chloro-3-methylphenol	<0.444	mg/Kg - dry	0.444	3.17	4	07/28/23 16:30	AMP	V35874
4-Chloroaniline	<0.538	mg/Kg - dry	0.538	1.59	4	07/28/23 16:30	AMP	V35874
2-Chloronaphthalene	<0.557	mg/Kg - dry	0.557	3.17	4	07/28/23 16:30	AMP	V35874
2-Chlorophenol	<0.472	mg/Kg - dry	0.472	3.17	4	07/28/23 16:30	AMP	V35874
4-Chlorophenyl phenyl ether	<0.605	mg/Kg - dry	0.605	4.81	4	07/28/23 16:30	AMP	V35874

Qualifiers/ Definitions

B	Analyte detected in blank	DF	Dilution Factor
J	Estimated value	MQL	Method Quantitation Limit

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Report Number : **23-206-0058**

REPORT OF ANALYSIS

Lab No : **90537**
Sample ID : **SS-NG-153**

Matrix: **Solids**
Sampled: **7/21/2023 15:24**

Analytical Method: 8270E **Prep Batch(es):** **V35831** 07/27/23 11:30
Prep Method: 3546

Test	Results	Units	MDL	MQL	DF	Date / Time Analyzed	By	Analytical Batch
Chrysene	**0.700 J**	mg/Kg - dry	0.682	3.17	4	07/28/23 16:30	AMP	V35874
Dibenz(a,h)anthracene	<1.11	mg/Kg - dry	1.11	3.17	4	07/28/23 16:30	AMP	V35874
Dibenzofuran	<0.572	mg/Kg - dry	0.572	3.17	4	07/28/23 16:30	AMP	V35874
1,2-Dichlorobenzene	<0.454	mg/Kg - dry	0.454	3.17	4	07/28/23 16:30	AMP	V35874
1,3-Dichlorobenzene	<0.467	mg/Kg - dry	0.467	3.17	4	07/28/23 16:30	AMP	V35874
1,4-Dichlorobenzene	<0.468	mg/Kg - dry	0.468	1.59	4	07/28/23 16:30	AMP	V35874
3,3'-Dichlorobenzidine	<0.706	mg/Kg - dry	0.706	3.17	4	07/28/23 16:30	AMP	V35874
2,4-Dichlorophenol	<0.460	mg/Kg - dry	0.460	3.17	4	07/28/23 16:30	AMP	V35874
Diethyl phthalate	<0.865	mg/Kg - dry	0.865	3.17	4	07/28/23 16:30	AMP	V35874
Dimethyl phthalate	<0.836	mg/Kg - dry	0.836	3.17	4	07/28/23 16:30	AMP	V35874
2,4-Dimethylphenol	<0.519	mg/Kg - dry	0.519	1.59	4	07/28/23 16:30	AMP	V35874
Di-n-butyl phthalate	<0.514	mg/Kg - dry	0.514	3.17	4	07/28/23 16:30	AMP	V35874
4,6-Dinitro-2-methylphenol	<1.15	mg/Kg - dry	1.15	7.21	4	07/28/23 16:30	AMP	V35874
2,4-Dinitrophenol	<2.50	mg/Kg - dry	2.50	7.21	4	07/28/23 16:30	AMP	V35874
2,4-Dinitrotoluene	<0.463	mg/Kg - dry	0.463	3.17	4	07/28/23 16:30	AMP	V35874
2,6-Dinitrotoluene	<0.519	mg/Kg - dry	0.519	3.17	4	07/28/23 16:30	AMP	V35874
Di-n-Octyl Phthalate	<0.687	mg/Kg - dry	0.687	1.59	4	07/28/23 16:30	AMP	V35874
Fluoranthene	<0.591	mg/Kg - dry	0.591	3.17	4	07/28/23 16:30	AMP	V35874
Fluorene	<0.615	mg/Kg - dry	0.615	3.17	4	07/28/23 16:30	AMP	V35874
Hexachlorobenzene	<0.509	mg/Kg - dry	0.509	3.17	4	07/28/23 16:30	AMP	V35874
Hexachlorobutadiene	<0.468	mg/Kg - dry	0.468	3.17	4	07/28/23 16:30	AMP	V35874
Hexachlorocyclopentadiene	<0.754	mg/Kg - dry	0.754	3.17	4	07/28/23 16:30	AMP	V35874

Qualifiers/ Definitions

B	Analyte detected in blank	DF	Dilution Factor
J	Estimated value	MQL	Method Quantitation Limit

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Report Number : **23-206-0058**

REPORT OF ANALYSIS

Lab No : **90537**
Sample ID : **SS-NG-153**

Matrix: **Solids**
Sampled: **7/21/2023 15:24**

Analytical Method: 8270E **Prep Batch(es):** **V35831** 07/27/23 11:30
Prep Method: 3546

Test	Results	Units	MDL	MQL	DF	Date / Time Analyzed	By	Analytical Batch
Hexachloroethane	<0.381	mg/Kg - dry	0.381	3.17	4	07/28/23 16:30	AMP	V35874
Indeno(1,2,3-cd)pyrene	<0.860	mg/Kg - dry	0.860	3.17	4	07/28/23 16:30	AMP	V35874
Isophorone	<0.918	mg/Kg - dry	0.918	3.17	4	07/28/23 16:30	AMP	V35874
1-Methylnaphthalene	<0.509	mg/Kg - dry	0.509	3.17	4	07/28/23 16:30	AMP	V35874
2-Methylnaphthalene	<0.480	mg/Kg - dry	0.480	3.17	4	07/28/23 16:30	AMP	V35874
2-Methylphenol	<0.466	mg/Kg - dry	0.466	3.17	4	07/28/23 16:30	AMP	V35874
3&4 Methylphenol	<0.408	mg/Kg - dry	0.408	3.17	4	07/28/23 16:30	AMP	V35874
Naphthalene	<0.692	mg/Kg - dry	0.692	3.17	4	07/28/23 16:30	AMP	V35874
2-Nitroaniline	<0.465	mg/Kg - dry	0.465	3.17	4	07/28/23 16:30	AMP	V35874
3-Nitroaniline	<0.576	mg/Kg - dry	0.576	3.17	4	07/28/23 16:30	AMP	V35874
4-Nitroaniline	<0.448	mg/Kg - dry	0.448	1.59	4	07/28/23 16:30	AMP	V35874
Nitrobenzene	<0.557	mg/Kg - dry	0.557	1.59	4	07/28/23 16:30	AMP	V35874
2-Nitrophenol	<0.426	mg/Kg - dry	0.426	3.17	4	07/28/23 16:30	AMP	V35874
4-Nitrophenol	<0.562	mg/Kg - dry	0.562	3.17	4	07/28/23 16:30	AMP	V35874
N-Nitrosodimethylamine	<1.26	mg/Kg - dry	1.26	3.17	4	07/28/23 16:30	AMP	V35874
N-Nitrosodiphenylamine	<0.870	mg/Kg - dry	0.870	3.17	4	07/28/23 16:30	AMP	V35874
N-Nitroso-di-n-propylamine	<0.567	mg/Kg - dry	0.567	3.17	4	07/28/23 16:30	AMP	V35874
Pentachlorophenol	<1.67	mg/Kg - dry	1.67	4.81	4	07/28/23 16:30	AMP	V35874
Phenanthrene	<1.00	mg/Kg - dry	1.00	3.17	4	07/28/23 16:30	AMP	V35874
Phenol	<0.538	mg/Kg - dry	0.538	3.17	4	07/28/23 16:30	AMP	V35874
Pyrene	**1.03 J**	mg/Kg - dry	0.644	3.17	4	07/28/23 16:30	AMP	V35874
Pyridine	<0.381	mg/Kg - dry	0.381	1.59	4	07/28/23 16:30	AMP	V35874

Qualifiers/ Definitions

B Analyte detected in blank
J Estimated value
DF Dilution Factor
MQL Method Quantitation Limit

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Report Number : **23-206-0058**

REPORT OF ANALYSIS

Lab No : **90537**
Sample ID : **SS-NG-153**

Matrix: **Solids**
Sampled: **7/21/2023 15:24**

Analytical Method: 8270E **Prep Batch(es):** **V35831** 07/27/23 11:30
Prep Method: 3546

Test	Results	Units	MDL	MQL	DF	Date / Time Analyzed	By	Analytical Batch
1,2,4-Trichlorobenzene	<0.514	mg/Kg - dry	0.514	3.17	4	07/28/23 16:30	AMP	V35874
2,4,5-Trichlorophenol	<0.462	mg/Kg - dry	0.462	3.17	4	07/28/23 16:30	AMP	V35874
2,4,6-Trichlorophenol	<0.463	mg/Kg - dry	0.463	3.17	4	07/28/23 16:30	AMP	V35874
Surrogate: Phenol-d5	61.3	Limits: 34-121%			4	07/28/23 16:30	AMP	8270E
Surrogate: 2-Fluorobiphenyl	76.6	Limits: 44-115%			4	07/28/23 16:30	AMP	V35874
Surrogate: 2-Fluorophenol	61.0	Limits: 35-115%			4	07/28/23 16:30	AMP	V35874
Surrogate: Nitrobenzene-d5	71.3	Limits: 37-122%			4	07/28/23 16:30	AMP	V35874
Surrogate: 4-Terphenyl-d14	85.0	Limits: 54-127%			4	07/28/23 16:30	AMP	V35874
Surrogate: 2,4,6-Tribromophenol	68.5	Limits: 39-132%			4	07/28/23 16:30	AMP	V35874

Qualifiers/ Definitions

B	Analyte detected in blank	DF	Dilution Factor
J	Estimated value	MQL	Method Quantitation Limit

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Quality Control Data

Client ID: Mid-Atlantic Associates, Inc. - Raleigh
Project Description: R4370.00
Report No: 23-206-0058

QC Prep: V35953
QC Prep Batch Method: 3050B
QC Analytical Batch(es): V36101,V36145
Analysis Method: 6010D
Analysis Description: Metals Analysis

Lab Reagent Blank LRB-V35953 Matrix: SOL
Associated Lab Samples: 90522, 90523, 90524, 90525, 90526, 90527, 90528, 90529, 90530, 90531, 90532, 90533, 90534

Parameter	Units	Blank Result	MQL	Analyzed
Lead	mg/Kg	<0.300	0.300	08/01/23 13:07

Laboratory Control Sample LCS-V35953

Parameter	Units	Spike Conc.	LCS Result	LCS %Rec	% Rec Limits
Lead	mg/Kg	5.00	5.83	117	80-120

Matrix Spike & Matrix Spike Duplicate V 90534-MS-V35953 V 90534-MSD-V35953

Parameter	Units	Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS %Rec	MSD %Rec	%Rec Limits	RPD	Max RPD
Lead	mg/Kg	131	5.00	5.00	123	128	0.0*	0.0*	75-125	3.9	20

Post Digestion Spike V 90534-PDS-V35953

Parameter	Units	PDS Result	% Recovery	Analyzed
Lead	mg/Kg	72.7	284*	08/02/23 17:20

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Quality Control Data

Client ID: **Mid-Atlantic Associates, Inc. - Raleigh**
Project Description: **R4370.00**
Report No: **23-206-0058**

QC Prep: V36086
QC Prep Batch Method: 3050B
QC Analytical Batch(es): V36213,V36316
Analysis Method: 6010D
Analysis Description: Metals Analysis

Lab Reagent Blank LRB-V36086 Matrix: SOL

Associated Lab Samples: 90502, 90503, 90504, 90505, 90506, 90507, 90508, 90509, 90510, 90512, 90513, 90514, 90515, 90516, 90517, 90518, 90519, 90520, 90521

Parameter	Units	Blank Result	MQL	Analyzed
Lead	mg/Kg	<0.300	0.300	08/03/23 19:45

Laboratory Control Sample LCS-V36086

Parameter	Units	Spike Conc.	LCS Result	LCS %Rec	% Rec Limits
Lead	mg/Kg	5.00	5.67	113	80-120

Matrix Spike & Matrix Spike Duplicate V 90507-MS-V36086 V 90507-MSD-V36086

Parameter	Units	Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS %Rec	MSD %Rec	%Rec Limits	RPD	Max RPD
Lead	mg/Kg	23.2	5.00	5.00	30.0	30.0	136*	136*	75-125	0.0	20

Post Digestion Spike V 90507-PDS-V36086

Parameter	Units	PDS Result	% Recovery	Analyzed
Lead	mg/Kg	25.6	107	08/07/23 18:59

* QC Fail

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Quality Control Data

Client ID: **Mid-Atlantic Associates, Inc. - Raleigh**
Project Description: **R4370.00**
Report No: **23-206-0058**

QC Prep: L695858
QC Prep Batch Method: 3050B
QC Analytical Batch(es): L696237,L696547,L698986
Analysis Method: 6020B
Analysis Description: Metals Analyses

Lab Reagent Blank LRB-L695858 Matrix: SOL
Associated Lab Samples: 90511, 90536, 90537

Parameter	Units	Blank Result	MQL	Analyzed
Antimony	mg/Kg	<0.250	0.250	08/01/23 13:34
Arsenic	mg/Kg	<0.250	0.250	08/01/23 13:34
Barium	mg/Kg	<0.250	0.250	08/01/23 13:34
Beryllium	mg/Kg	<0.250	0.250	08/02/23 14:22
Cadmium	mg/Kg	<0.250	0.250	08/01/23 13:34
Chromium	mg/Kg	<0.250	0.250	08/01/23 13:34
Cobalt	mg/Kg	<0.250	0.250	08/01/23 13:34
Copper	mg/Kg	<0.250	0.250	08/01/23 13:34
Lead	mg/Kg	<0.250	0.250	08/01/23 13:34
Manganese	mg/Kg	<0.250	0.250	08/01/23 13:34
Nickel	mg/Kg	<0.250	0.250	08/01/23 13:34
Selenium	mg/Kg	<0.250	0.250	08/01/23 13:34
Silver	mg/Kg	<0.250	0.250	08/01/23 13:34
Thallium	mg/Kg	<0.250	0.250	08/01/23 13:34
Vanadium	mg/Kg	<1.25	1.25	08/01/23 13:34
Zinc	mg/Kg	<2.50	2.50	08/01/23 13:34

Laboratory Control Sample LCS-L695858

Parameter	Units	Spike Conc.	LCS Result	LCS %Rec	% Rec Limits
Antimony	mg/Kg	5.00	4.69	94.0	80-120
Arsenic	mg/Kg	2.50	2.38	95.0	80-120
Barium	mg/Kg	5.00	4.59	92.0	80-120
Beryllium	mg/Kg	2.50	2.38	95.0	80-120
Cadmium	mg/Kg	0.500	0.480	96.0	80-120
Chromium	mg/Kg	5.00	4.77	95.0	80-120
Cobalt	mg/Kg	5.00	4.70	94.0	80-120

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Client ID: Mid-Atlantic Associates, Inc. - Raleigh
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Report No: 23-206-0058

QC Prep: L695858
QC Prep Batch Method: 3050B
QC Analytical Batch(es): L696237,L696547,L698986
Analysis Method: 6020B
Analysis Description: Metals Analyses

Laboratory Control Sample LCS-L695858

Parameter	Units	Spike Conc.	LCS Result	LCS %Rec	% Rec Limits
Copper	mg/Kg	2.50	2.52	101	80-120
Lead	mg/Kg	2.50	2.34	94.0	80-120
Manganese	mg/Kg	5.00	5.10	102	80-120
Nickel	mg/Kg	2.50	2.44	98.0	80-120
Selenium	mg/Kg	5.00	4.84	97.0	80-120
Silver	mg/Kg	0.500	0.470	94.0	80-120
Thallium	mg/Kg	0.500	0.464	93.0	80-120
Vanadium	mg/Kg	25.0	23.0	92.0	80-120
Zinc	mg/Kg	25.0	24.0	96.0	80-120

Matrix Spike & Matrix Spike Duplicate V 90647-MS-L695858 V 90647-MSD-L695858

Parameter	Units	Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS %Rec	MSD %Rec	%Rec Limits	RPD	Max RPD
Antimony	mg/Kg	0.964	4.98	4.82	3.09	2.49	43.0*	32.0*	75-125	21.5	80
Arsenic	mg/Kg	2.64	2.49	2.41	8.13	4.82	221*	91.0	75-125	51.1	80
Barium	mg/Kg	80.1	4.98	4.82	86.5	95.6	129*	322*	75-125	9.9	80
Beryllium	mg/Kg	0.278	2.49	2.41	2.56	2.82	92.0	106	75-125	9.6	80
Cadmium	mg/Kg	0.600	0.498	0.482	1.14	1.05	109	93.0	75-125	8.2	80
Chromium	mg/Kg	11.7	4.98	4.82	16.6	15.9	98.0	87.0	75-125	4.3	80
Cobalt	mg/Kg	3.12	4.98	4.82	8.15	7.50	101	91.0	75-125	8.3	80
Copper	mg/Kg	53.2	2.49	2.41	60.8	54.6	306*	58.0*	75-125	10.7	80
Lead	mg/Kg	188	2.49	2.41	203	186	603*	0.0*	75-125	8.7	80
Manganese	mg/Kg	156	4.98	4.82	180	174	482*	374*	75-125	3.3	80
Nickel	mg/Kg	9.31	2.49	2.41	13.6	11.3	172*	83.0	75-125	18.4	80
Selenium	mg/Kg	0.321	4.98	4.82	4.43	4.43	83.0	85.0	75-125	0.0	80
Silver	mg/Kg	<0.250	0.498	0.482	0.689	0.686	91.0	94.0	75-125	0.4	80

* QC Fail

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Quality Control Data

Client ID: **Mid-Atlantic Associates, Inc. - Raleigh**
Project Description: **R4370.00**
Report No: **23-206-0058**

QC Prep: L695858
QC Prep Batch Method: 3050B
QC Analytical Batch(es): L696237,L696547,L698986
Analysis Method: 6020B
Analysis Description: Metals Analyses

Matrix Spike & Matrix Spike Duplicate V 90647-MS-L695858 V 90647-MSD-L695858

Parameter	Units	Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS %Rec	MSD %Rec	%Rec Limits	RPD	Max RPD
Thallium	mg/Kg	<0.250	0.498	0.482	0.492	0.489	74.0*	76.0	75-125	0.6	80
Vanadium	mg/Kg	10.1	24.9	24.1	31.8	31.3	87.0	88.0	75-125	1.5	80
Zinc	mg/Kg	259	24.9	24.1	334	281	302*	91.0	75-125	17.2	80

Post Digestion Spike V 90647-PDS-L695858

Parameter	Units	PDS Result	% Recovery	Analyzed
Antimony	mg/Kg	2.26	92.0	08/02/23 16:09
Arsenic	mg/Kg	1.36	95.0	08/01/23 14:36
Barium	mg/Kg	10.2	99.0	08/01/23 14:36
Beryllium	mg/Kg	1.13	94.0	08/02/23 16:09
Cadmium	mg/Kg	0.288	98.0	08/01/23 14:36
Chromium	mg/Kg	3.42	97.0	08/01/23 14:36
Cobalt	mg/Kg	2.58	97.0	08/01/23 14:36
Copper	mg/Kg	2.50	112	08/02/23 15:41
Lead	mg/Kg	19.8	99.0	08/01/23 14:36
Manganese	mg/Kg	17.4	97.0	08/01/23 14:36
Nickel	mg/Kg	2.08	99.0	08/01/23 14:36
Selenium	mg/Kg	2.32	97.0	08/01/23 14:36
Silver	mg/Kg	<0.250	94.0	08/01/23 14:36
Thallium	mg/Kg	<0.250	94.0	08/01/23 14:36
Vanadium	mg/Kg	12.2	96.0	08/01/23 14:36
Zinc	mg/Kg	36.6	97.0	08/01/23 14:36

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Quality Control Data

Client ID: **Mid-Atlantic Associates, Inc. - Raleigh**
Project Description: **R4370.00**
Report No: **23-206-0058**

QC Prep: V35873
QC Prep Batch Method: 7471B (Prep)
QC Analytical Batch(es): V35952
Analysis Method: 7471B
Analysis Description: Solids Total Mercury Analysis - CVAA

Lab Reagent Blank LRB-V35873 Matrix: SOL
Associated Lab Samples: 90511, 90537

Parameter	Units	Blank Result	MQL	Analyzed
Mercury (Total)	mg/Kg	<0.0300	0.0300	07/28/23 15:43

Laboratory Control Sample LCS-V35873

Parameter	Units	Spike Conc.	LCS Result	LCS %Rec	% Rec Limits
Mercury (Total)	mg/Kg	0.417	0.451	108	80-120

Matrix Spike & Matrix Spike Duplicate V 90819-MS-V35873 V 90819-MSD-V35873

Parameter	Units	Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS %Rec	MSD %Rec	%Rec Limits	RPD	Max RPD
Mercury (Total)	mg/Kg	<0.0300	0.410	0.397	0.400	0.362	98.0	91.0	80-120	9.9	20

Post Digestion Spike V 90819-PDS-V35873

Parameter	Units	PDS Result	% Recovery	Analyzed
Mercury (Total)	mg/Kg	0.200	101	07/28/23 16:15

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Quality Control Data

Client ID: **Mid-Atlantic Associates, Inc. - Raleigh**
Project Description: **R4370.00**
Report No: **23-206-0058**

QC Prep: V35831
QC Prep Batch Method: 3546
QC Analytical Batch(es): V35874
Analysis Method: 8270E
Analysis Description: Semivolatile Organic Compounds - GC/MS

Lab Reagent Blank LRB-V35831 Matrix: SOL
Associated Lab Samples: 90511, 90537

Parameter	Units	Blank Result	MDL	MQL	Analyzed	% Recovery	% Rec Limits
Acenaphthene	mg/Kg	<0.116	0.116	0.660	07/27/23 16:49		
Acenaphthylene	mg/Kg	<0.105	0.105	0.660	07/27/23 16:49		
Aniline	mg/Kg	<0.152	0.152	0.660	07/27/23 16:49		
Anthracene	mg/Kg	<0.143	0.143	0.660	07/27/23 16:49		
Benzo(a)anthracene	mg/Kg	<0.139	0.139	0.660	07/27/23 16:49		
Benzo(a)pyrene	mg/Kg	<0.147	0.147	0.660	07/27/23 16:49		
Benzo(b)fluoranthene	mg/Kg	<0.146	0.146	0.660	07/27/23 16:49		
Benzo(g,h,i)perylene	mg/Kg	<0.136	0.136	0.660	07/27/23 16:49		
Benzo(k)fluoranthene	mg/Kg	<0.137	0.137	0.660	07/27/23 16:49		
Benzoic Acid	mg/Kg	<0.580	0.580	2.00	07/27/23 16:49		
Benzyl alcohol	mg/Kg	<0.105	0.105	0.660	07/27/23 16:49		
Bis(2-Chloroethoxy)methane	mg/Kg	<0.118	0.118	0.660	07/27/23 16:49		
Bis(2-Chloroethyl)ether	mg/Kg	<0.107	0.107	0.660	07/27/23 16:49		
Bis(2-Chloroisopropyl)ether	mg/Kg	<0.136	0.136	0.330	07/27/23 16:49		
Bis(2-ethylhexyl)phthalate	mg/Kg	<0.120	0.120	0.660	07/27/23 16:49		
4-Bromophenyl phenyl ether	mg/Kg	<0.109	0.109	0.660	07/27/23 16:49		
Butyl benzyl phthalate	mg/Kg	<0.113	0.113	0.330	07/27/23 16:49		
4-Chloro-3-methylphenol	mg/Kg	<0.092	0.092	0.660	07/27/23 16:49		
4-Chloroaniline	mg/Kg	<0.112	0.112	0.330	07/27/23 16:49		
2-Chloronaphthalene	mg/Kg	<0.116	0.116	0.660	07/27/23 16:49		
2-Chlorophenol	mg/Kg	<0.098	0.098	0.660	07/27/23 16:49		
4-Chlorophenyl phenyl ether	mg/Kg	<0.126	0.126	1.00	07/27/23 16:49		
Chrysene	mg/Kg	<0.142	0.142	0.660	07/27/23 16:49		
Dibenz(a,h)anthracene	mg/Kg	<0.230	0.230	0.660	07/27/23 16:49		
Dibenzofuran	mg/Kg	<0.119	0.119	0.660	07/27/23 16:49		
1,2-Dichlorobenzene	mg/Kg	<0.094	0.094	0.660	07/27/23 16:49		
1,3-Dichlorobenzene	mg/Kg	<0.097	0.097	0.660	07/27/23 16:49		

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Quality Control Data

Client ID: **Mid-Atlantic Associates, Inc. - Raleigh**
Project Description: **R4370.00**
Report No: **23-206-0058**

QC Prep: V35831
QC Prep Batch Method: 3546
QC Analytical Batch(es): V35874
Analysis Method: 8270E
Analysis Description: Semivolatile Organic Compounds - GC/MS

Lab Reagent Blank LRB-V35831 Matrix: SOL
Associated Lab Samples: 90511, 90537

Parameter	Units	Blank Result	MDL	MQL	Analyzed	% Recovery	% Rec Limits
1,4-Dichlorobenzene	mg/Kg	<0.097	0.097	0.330	07/27/23 16:49		
3,3'-Dichlorobenzidine	mg/Kg	<0.147	0.147	0.660	07/27/23 16:49		
2,4-Dichlorophenol	mg/Kg	<0.095	0.095	0.660	07/27/23 16:49		
Diethyl phthalate	mg/Kg	<0.180	0.180	0.660	07/27/23 16:49		
Dimethyl phthalate	mg/Kg	<0.174	0.174	0.660	07/27/23 16:49		
2,4-Dimethylphenol	mg/Kg	<0.108	0.108	0.330	07/27/23 16:49		
Di-n-butyl phthalate	mg/Kg	<0.107	0.107	0.660	07/27/23 16:49		
4,6-Dinitro-2-methylphenol	mg/Kg	<0.240	0.240	1.50	07/27/23 16:49		
2,4-Dinitrophenol	mg/Kg	<0.520	0.520	1.50	07/27/23 16:49		
2,4-Dinitrotoluene	mg/Kg	<0.096	0.096	0.660	07/27/23 16:49		
2,6-Dinitrotoluene	mg/Kg	<0.108	0.108	0.660	07/27/23 16:49		
Di-n-Octyl Phthalate	mg/Kg	<0.143	0.143	0.330	07/27/23 16:49		
Fluoranthene	mg/Kg	<0.123	0.123	0.660	07/27/23 16:49		
Fluorene	mg/Kg	<0.128	0.128	0.660	07/27/23 16:49		
Hexachlorobenzene	mg/Kg	<0.106	0.106	0.660	07/27/23 16:49		
Hexachlorobutadiene	mg/Kg	<0.097	0.097	0.660	07/27/23 16:49		
Hexachlorocyclopentadiene	mg/Kg	<0.157	0.157	0.660	07/27/23 16:49		
Hexachloroethane	mg/Kg	<0.079	0.079	0.660	07/27/23 16:49		
Indeno(1,2,3-cd)pyrene	mg/Kg	<0.179	0.179	0.660	07/27/23 16:49		
Isophorone	mg/Kg	<0.191	0.191	0.660	07/27/23 16:49		
1-Methylnaphthalene	mg/Kg	<0.106	0.106	0.660	07/27/23 16:49		
2-Methylnaphthalene	mg/Kg	<0.100	0.100	0.660	07/27/23 16:49		
2-Methylphenol	mg/Kg	<0.097	0.097	0.660	07/27/23 16:49		
3&4 Methylphenol	mg/Kg	<0.084	0.084	0.660	07/27/23 16:49		
Naphthalene	mg/Kg	<0.144	0.144	0.660	07/27/23 16:49		
2-Nitroaniline	mg/Kg	<0.096	0.096	0.660	07/27/23 16:49		
3-Nitroaniline	mg/Kg	<0.120	0.120	0.660	07/27/23 16:49		

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Project Description: **R4370.00**
Report No: **23-206-0058**

QC Prep: V35831
QC Prep Batch Method: 3546
QC Analytical Batch(es): V35874
Analysis Method: 8270E
Analysis Description: Semivolatile Organic Compounds - GC/MS

Lab Reagent Blank LRB-V35831 Matrix: SOL
Associated Lab Samples: 90511, 90537

Parameter	Units	Blank Result	MDL	MQL	Analyzed	% Recovery	% Rec Limits
4-Nitroaniline	mg/Kg	<0.093	0.093	0.330	07/27/23 16:49		
Nitrobenzene	mg/Kg	<0.116	0.116	0.330	07/27/23 16:49		
2-Nitrophenol	mg/Kg	<0.088	0.088	0.660	07/27/23 16:49		
4-Nitrophenol	mg/Kg	<0.117	0.117	0.660	07/27/23 16:49		
N-Nitrosodimethylamine	mg/Kg	<0.263	0.263	0.660	07/27/23 16:49		
N-Nitrosodiphenylamine	mg/Kg	<0.181	0.181	0.660	07/27/23 16:49		
N-Nitroso-di-n-propylamine	mg/Kg	<0.118	0.118	0.660	07/27/23 16:49		
Pentachlorophenol	mg/Kg	<0.347	0.347	1.00	07/27/23 16:49		
Phenanthrene	mg/Kg	<0.208	0.208	0.660	07/27/23 16:49		
Phenol	mg/Kg	<0.112	0.112	0.660	07/27/23 16:49		
Pyrene	mg/Kg	<0.134	0.134	0.660	07/27/23 16:49		
Pyridine	mg/Kg	<0.079	0.079	0.330	07/27/23 16:49		
1,2,4-Trichlorobenzene	mg/Kg	<0.107	0.107	0.660	07/27/23 16:49		
2,4,5-Trichlorophenol	mg/Kg	<0.096	0.096	0.660	07/27/23 16:49		
2,4,6-Trichlorophenol	mg/Kg	<0.096	0.096	0.660	07/27/23 16:49		
2-Fluorobiphenyl (S)					07/27/23 16:49	90.4	44-115
2-Fluorophenol (S)					07/27/23 16:49	83.1	35-115
Nitrobenzene-d5 (S)					07/27/23 16:49	86.8	37-122
4-Terphenyl-d14 (S)					07/27/23 16:49	102	54-127
2,4,6-Tribromophenol (S)					07/27/23 16:49	69.9	39-132
Phenol-d5 (S)					07/27/23 16:49	75.6	34-121

Laboratory Control Sample LCS-V35831

Parameter	Units	Spike Conc.	LCS Result	LCS %Rec	% Rec Limits
Acenaphthene	mg/Kg	1.67	1.55	92.8	40-123
Acenaphthylene	mg/Kg	1.67	1.57	94.0	32-132

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Quality Control Data

Client ID: **Mid-Atlantic Associates, Inc. - Raleigh**
Project Description: **R4370.00**
Report No: **23-206-0058**

QC Prep: V35831
QC Prep Batch Method: 3546
QC Analytical Batch(es): V35874
Analysis Method: 8270E
Analysis Description: Semivolatile Organic Compounds - GC/MS

Laboratory Control Sample LCS-V35831

Parameter	Units	Spike Conc.	LCS Result	LCS %Rec	% Rec Limits
Aniline	mg/Kg	1.67	2.61	156	12-197
Anthracene	mg/Kg	1.67	1.75	105	47-123
Benzo(a)anthracene	mg/Kg	1.67	1.70	102	49-126
Benzo(a)pyrene	mg/Kg	1.67	1.89	113	45-129
Benzo(b)fluoranthene	mg/Kg	1.67	1.85	111	45-132
Benzo(g,h,i)perylene	mg/Kg	1.67	1.69	101	43-134
Benzo(k)fluoranthene	mg/Kg	1.67	1.70	102	47-132
Benzoic Acid	mg/Kg	1.67	0.641	38.3	10-83
Benzyl alcohol	mg/Kg	1.67	1.58	94.6	29-122
Bis(2-Chloroethoxy)methane	mg/Kg	1.67	1.41	84.4	36-121
Bis(2-Chloroethyl)ether	mg/Kg	1.67	1.49	89.2	31-120
Bis(2-Chloroisopropyl)ether	mg/Kg	1.67	1.62	97.0	33-131
Bis(2-ethylhexyl)phthalate	mg/Kg	1.67	1.87	112	51-133
4-Bromophenyl phenyl ether	mg/Kg	1.67	1.67	100	46-124
Butyl benzyl phthalate	mg/Kg	1.67	1.86	111	48-132
4-Chloro-3-methylphenol	mg/Kg	1.67	1.37	82.0	45-122
4-Chloroaniline	mg/Kg	1.67	1.50	89.8	17-106
2-Chloronaphthalene	mg/Kg	1.67	1.54	92.2	41-114
2-Chlorophenol	mg/Kg	1.67	1.50	89.8	34-121
4-Chlorophenyl phenyl ether	mg/Kg	1.67	1.54	92.2	45-121
Chrysene	mg/Kg	1.67	1.65	98.8	50-124
Dibenz(a,h)anthracene	mg/Kg	1.67	1.74	104	45-134
Dibenzofuran	mg/Kg	1.67	1.53	91.6	44-120
1,2-Dichlorobenzene	mg/Kg	1.67	1.35	80.8	33-117
1,3-Dichlorobenzene	mg/Kg	1.67	1.32	79.0	30-115
1,4-Dichlorobenzene	mg/Kg	1.67	1.32	79.0	31-115
3,3'-Dichlorobenzidine	mg/Kg	1.67	1.59	95.2	22-121

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Quality Control Data

Client ID: **Mid-Atlantic Associates, Inc. - Raleigh**
Project Description: **R4370.00**
Report No: **23-206-0058**

QC Prep: V35831
QC Prep Batch Method: 3546
QC Analytical Batch(es): V35874
Analysis Method: 8270E
Analysis Description: Semivolatile Organic Compounds - GC/MS

Laboratory Control Sample LCS-V35831

Parameter	Units	Spike Conc.	LCS Result	LCS %Rec	% Rec Limits
2,4-Dichlorophenol	mg/Kg	1.67	1.33	79.6	40-122
Diethyl phthalate	mg/Kg	1.67	1.69	101	50-124
Dimethyl phthalate	mg/Kg	1.67	1.67	100	48-124
2,4-Dimethylphenol	mg/Kg	1.67	1.82	109	30-127
Di-n-butyl phthalate	mg/Kg	1.67	1.94	116	51-128
4,6-Dinitro-2-methylphenol	mg/Kg	1.67	1.59	95.2	29-132
2,4-Dinitrophenol	mg/Kg	1.67	1.36	81.4	27-129
2,4-Dinitrotoluene	mg/Kg	1.67	1.71	102	48-126
2,6-Dinitrotoluene	mg/Kg	1.67	1.67	100	46-124
Di-n-Octyl Phthalate	mg/Kg	1.67	2.05	123	45-140
Fluoranthene	mg/Kg	1.67	1.70	102	50-127
Fluorene	mg/Kg	1.67	1.57	94.0	43-125
Hexachlorobenzene	mg/Kg	1.67	1.58	94.6	45-122
Hexachlorobutadiene	mg/Kg	1.67	1.23	73.6	32-123
Hexachlorocyclopentadiene	mg/Kg	1.67	1.41	84.4	32-117
Hexachloroethane	mg/Kg	1.67	1.31	78.4	28-117
Indeno(1,2,3-cd)pyrene	mg/Kg	1.67	1.72	103	45-133
Isophorone	mg/Kg	1.67	1.25	74.8	30-122
1-Methylnaphthalene	mg/Kg	1.67	1.29	77.2	40-119
2-Methylnaphthalene	mg/Kg	1.67	1.26	75.4	38-122
2-Methylphenol	mg/Kg	1.67	1.58	94.6	32-122
3&4 Methylphenol	mg/Kg	1.67	1.42	85.0	34-119
Naphthalene	mg/Kg	1.67	1.27	76.0	35-123
2-Nitroaniline	mg/Kg	1.67	1.77	106	44-127
3-Nitroaniline	mg/Kg	1.67	1.77	106	33-119
4-Nitroaniline	mg/Kg	1.67	1.80	108	63-147
Nitrobenzene	mg/Kg	1.67	1.29	77.2	34-122

Waypoint ANALYTICAL
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Quality Control Data

Client ID: **Mid-Atlantic Associates, Inc. - Raleigh**
Project Description: **R4370.00**
Report No: **23-206-0058**

QC Prep: V35831
QC Prep Batch Method: 3546
QC Analytical Batch(es): V35874
Analysis Method: 8270E
Analysis Description: Semivolatile Organic Compounds - GC/MS

Laboratory Control Sample LCS-V35831

Parameter	Units	Spike Conc.	LCS Result	LCS %Rec	% Rec Limits
2-Nitrophenol	mg/Kg	1.67	1.31	78.4	36-123
4-Nitrophenol	mg/Kg	1.67	1.81	108	30-132
N-Nitrosodimethylamine	mg/Kg	1.67	1.35	80.8	10-146
N-Nitrosodiphenylamine	mg/Kg	1.67	2.02	121	38-127
N-Nitroso-di-n-propylamine	mg/Kg	1.67	1.57	94.0	36-120
Pentachlorophenol	mg/Kg	1.67	1.63	97.6	25-133
Phenanthrene	mg/Kg	1.67	1.67	100	50-121
Phenol	mg/Kg	1.67	1.50	89.8	34-121
Pyrene	mg/Kg	1.67	1.56	93.4	47-127
Pyridine	mg/Kg	1.67	1.08	64.6	10-80
1,2,4-Trichlorobenzene	mg/Kg	1.67	1.18	70.6	34-118
2,4,5-Trichlorophenol	mg/Kg	1.67	1.59	95.2	41-124
2,4,6-Trichlorophenol	mg/Kg	1.67	1.54	92.2	39-126
2-Fluorobiphenyl (S)				92.2	44-115
2-Fluorophenol (S)				88.8	35-115
Nitrobenzene-d5 (S)				77.8	37-122
4-Terphenyl-d14 (S)				97.6	54-127
2,4,6-Tribromophenol (S)				79.5	39-132
Phenol-d5 (S)				78.3	34-121

Matrix Spike & Matrix Spike Duplicate V 90683-MS-V35831 V 90683-MSD-V35831

Parameter	Units	Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS %Rec	MSD %Rec	%Rec Limits	RPD	Max RPD
Acenaphthene	mg/Kg	<0.116	1.67	1.67	1.48	1.39	88.6	83.2	40-123	6.2	20
Acenaphthylene	mg/Kg	<0.105	1.67	1.67	1.48	1.39	88.6	83.2	32-132	6.2	20
Aniline	mg/Kg	<0.152	1.67	1.67	2.55	2.32	153	139	12-197	9.4	20

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Quality Control Data

Client ID: Mid-Atlantic Associates, Inc. - Raleigh
Project Description: R4370.00
Report No: 23-206-0058

QC Prep: V35831
QC Prep Batch Method: 3546
QC Analytical Batch(es): V35874
Analysis Method: 8270E
Analysis Description: Semivolatile Organic Compounds - GC/MS

Matrix Spike & Matrix Spike Duplicate V 90683-MS-V35831 V 90683-MSD-V35831

Parameter	Units	Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS %Rec	MSD %Rec	%Rec Limits	RPD	Max RPD
Anthracene	mg/Kg	<0.143	1.67	1.67	1.65	1.60	98.8	95.8	47-123	3.0	20
Benzo(a)anthracene	mg/Kg	<0.139	1.67	1.67	1.63	1.55	97.6	92.8	49-126	5.0	20
Benzo(a)pyrene	mg/Kg	<0.147	1.67	1.67	1.84	1.77	110	106	45-129	3.8	20
Benzo(b)fluoranthene	mg/Kg	<0.146	1.67	1.67	1.74	1.64	104	98.2	45-132	5.9	20
Benzo(g,h,i)perylene	mg/Kg	<0.136	1.67	1.67	1.61	1.52	96.4	91.0	43-134	5.7	20
Benzo(k)fluoranthene	mg/Kg	<0.137	1.67	1.67	1.67	1.58	100	94.6	47-132	5.5	20
Benzoic Acid	mg/Kg	<0.580	1.67	1.67	<0.580	<0.580	0.0*	0.0*	10-83	0.0	20
Benzyl alcohol	mg/Kg	<0.105	1.67	1.67	1.48	1.41	88.6	84.4	29-122	4.8	20
Bis(2-Chloroethoxy)methane	mg/Kg	<0.118	1.67	1.67	1.33	1.24	79.6	74.2	36-121	7.0	20
Bis(2-Chloroethyl)ether	mg/Kg	<0.107	1.67	1.67	1.46	1.31	87.4	78.4	31-120	10.8	20
Bis(2-Chloroisopropyl)ether	mg/Kg	<0.136	1.67	1.67	1.51	1.37	90.4	82.0	33-131	9.7	20
Bis(2-ethylhexyl)phthalate	mg/Kg	<0.120	1.67	1.67	1.85	1.80	111	108	51-133	2.7	20
4-Bromophenyl phenyl ether	mg/Kg	<0.109	1.67	1.67	1.59	1.53	95.2	91.6	46-124	3.8	20
Butyl benzyl phthalate	mg/Kg	<0.113	1.67	1.67	1.94	1.83	116	110	48-132	5.8	20
4-Chloro-3-methylphenol	mg/Kg	<0.092	1.67	1.67	1.33	1.33	79.6	79.6	45-122	0.0	20
4-Chloroaniline	mg/Kg	<0.112	1.67	1.67	1.43	1.37	85.6	82.0	17-106	4.2	20
2-Chloronaphthalene	mg/Kg	<0.116	1.67	1.67	1.48	1.37	88.6	82.0	41-114	7.7	20
2-Chlorophenol	mg/Kg	<0.098	1.67	1.67	1.46	1.31	87.4	78.4	34-121	10.8	20
4-Chlorophenyl phenyl ether	mg/Kg	<0.126	1.67	1.67	1.46	1.41	87.4	84.4	45-121	3.4	20
Chrysene	mg/Kg	<0.142	1.67	1.67	1.57	1.50	94.0	89.8	50-124	4.5	20
Dibenz(a,h)anthracene	mg/Kg	<0.230	1.67	1.67	1.61	1.46	96.4	87.4	45-134	9.7	20
Dibenzofuran	mg/Kg	<0.119	1.67	1.67	1.47	1.40	88.0	83.8	44-120	4.8	20
1,2-Dichlorobenzene	mg/Kg	<0.094	1.67	1.67	1.27	1.12	76.0	67.0	33-117	12.5	20
1,3-Dichlorobenzene	mg/Kg	<0.097	1.67	1.67	1.27	1.10	76.0	65.8	30-115	14.3	20
1,4-Dichlorobenzene	mg/Kg	<0.097	1.67	1.67	1.24	1.09	74.2	65.2	31-115	12.8	20
3,3'-Dichlorobenzidine	mg/Kg	<0.147	1.67	1.67	1.56	1.51	93.4	90.4	22-121	3.2	20

* QC Fail

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Quality Control Data

Client ID: Mid-Atlantic Associates, Inc. - Raleigh
Project Description: R4370.00
Report No: 23-206-0058

QC Prep: V35831
QC Prep Batch Method: 3546
QC Analytical Batch(es): V35874
Analysis Method: 8270E
Analysis Description: Semivolatile Organic Compounds - GC/MS

Matrix Spike & Matrix Spike Duplicate V 90683-MS-V35831 V 90683-MSD-V35831

Parameter	Units	Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS %Rec	MSD %Rec	%Rec Limits	RPD	Max RPD
2,4-Dichlorophenol	mg/Kg	<0.095	1.67	1.67	1.32	1.19	79.0	71.2	40-122	10.3	20
Diethyl phthalate	mg/Kg	<0.180	1.67	1.67	1.61	1.54	96.4	92.2	50-124	4.4	20
Dimethyl phthalate	mg/Kg	<0.174	1.67	1.67	1.54	1.51	92.2	90.4	48-124	1.9	30
2,4-Dimethylphenol	mg/Kg	<0.108	1.67	1.67	1.80	1.68	108	101	30-127	6.8	20
Di-n-butyl phthalate	mg/Kg	<0.107	1.67	1.67	1.78	1.73	107	104	51-128	2.8	20
4,6-Dinitro-2-methylphenol	mg/Kg	<0.240	1.67	1.67	1.46	1.37	87.4	82.0	29-132	6.3	20
2,4-Dinitrophenol	mg/Kg	<0.520	1.67	1.67	1.26	1.15	75.4	68.8	27-129	9.1	20
2,4-Dinitrotoluene	mg/Kg	<0.096	1.67	1.67	1.60	1.50	95.8	89.8	48-126	6.4	20
2,6-Dinitrotoluene	mg/Kg	<0.108	1.67	1.67	1.55	1.46	92.8	87.4	46-124	5.9	20
Di-n-Octyl Phthalate	mg/Kg	<0.143	1.67	1.67	2.13	2.03	128	122	45-140	4.8	20
Fluoranthene	mg/Kg	<0.123	1.67	1.67	1.46	1.42	87.4	85.0	50-127	2.7	20
Fluorene	mg/Kg	<0.128	1.67	1.67	1.49	1.42	89.2	85.0	43-125	4.8	20
Hexachlorobenzene	mg/Kg	<0.106	1.67	1.67	1.47	1.43	88.0	85.6	45-122	2.7	20
Hexachlorobutadiene	mg/Kg	<0.097	1.67	1.67	1.18	1.11	70.6	66.4	32-123	6.1	20
Hexachlorocyclopentadiene	mg/Kg	<0.157	1.67	1.67	1.22	0.607	73.0	36.3	32-117	67.1*	20
Hexachloroethane	mg/Kg	<0.079	1.67	1.67	1.22	1.10	73.0	65.8	28-117	10.3	20
Indeno(1,2,3-cd)pyrene	mg/Kg	<0.179	1.67	1.67	1.68	1.56	101	93.4	45-133	7.4	20
Isophorone	mg/Kg	<0.191	1.67	1.67	1.19	1.08	71.2	64.6	30-122	9.6	20
1-Methylnaphthalene	mg/Kg	<0.106	1.67	1.67	1.22	1.18	73.0	70.6	40-119	3.3	20
2-Methylnaphthalene	mg/Kg	<0.100	1.67	1.67	1.23	1.16	73.6	69.4	38-122	5.8	20
2-Methylphenol	mg/Kg	<0.097	1.67	1.67	1.52	1.39	91.0	83.2	32-122	8.9	20
3&4 Methylphenol	mg/Kg	<0.084	1.67	1.67	1.34	1.28	80.2	76.6	34-119	4.5	20
Naphthalene	mg/Kg	<0.144	1.67	1.67	1.22	1.11	73.0	66.4	35-123	9.4	20
2-Nitroaniline	mg/Kg	<0.096	1.67	1.67	1.61	1.58	96.4	94.6	44-127	1.8	20
3-Nitroaniline	mg/Kg	<0.120	1.67	1.67	1.65	1.59	98.8	95.2	33-119	3.7	20
4-Nitroaniline	mg/Kg	<0.093	1.67	1.67	1.65	1.62	98.8	97.0	63-147	1.8	20

* QC Fail

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Quality Control Data

Client ID: **Mid-Atlantic Associates, Inc. - Raleigh**
Project Description: **R4370.00**
Report No: **23-206-0058**

QC Prep: V35831
QC Prep Batch Method: 3546
QC Analytical Batch(es): V35874
Analysis Method: 8270E
Analysis Description: Semivolatile Organic Compounds - GC/MS

Matrix Spike & Matrix Spike Duplicate V 90683-MS-V35831 V 90683-MSD-V35831

Parameter	Units	Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS %Rec	MSD %Rec	%Rec Limits	RPD	Max RPD
Nitrobenzene	mg/Kg	<0.116	1.67	1.67	1.21	1.10	72.4	65.8	34-122	9.5	20
2-Nitrophenol	mg/Kg	<0.088	1.67	1.67	1.25	1.16	74.8	69.4	32-123	7.4	20
4-Nitrophenol	mg/Kg	<0.117	1.67	1.67	1.70	1.60	102	95.8	30-132	6.0	20
N-Nitrosodimethylamine	mg/Kg	<0.263	1.67	1.67	1.22	1.06	73.0	63.4	10-146	14.0	30
N-Nitrosodiphenylamine	mg/Kg	<0.181	1.67	1.67	1.91	1.84	114	110	38-127	3.7	20
N-Nitroso-di-n-propylamine	mg/Kg	<0.118	1.67	1.67	1.48	1.37	88.6	82.0	36-120	7.7	20
Pentachlorophenol	mg/Kg	<0.347	1.67	1.67	1.27	1.23	76.0	73.6	25-133	3.2	20
Phenanthrene	mg/Kg	<0.208	1.67	1.67	1.56	1.51	93.4	90.4	50-121	3.2	20
Phenol	mg/Kg	<0.112	1.67	1.67	1.41	1.32	84.4	79.0	34-121	6.5	20
Pyrene	mg/Kg	<0.134	1.67	1.67	1.58	1.54	94.6	92.2	47-127	2.5	20
Pyridine	mg/Kg	<0.079	1.67	1.67	1.04	0.903	62.2	54.0	10-80	14.1	20
1,2,4-Trichlorobenzene	mg/Kg	<0.107	1.67	1.67	1.14	1.07	68.2	64.0	34-118	6.3	20
2,4,5-Trichlorophenol	mg/Kg	<0.096	1.67	1.67	1.42	1.39	85.0	83.2	41-124	2.1	20
2,4,6-Trichlorophenol	mg/Kg	<0.096	1.67	1.67	1.39	1.29	83.2	77.2	39-126	7.4	20
2-Fluorobiphenyl (S)							85.0	76.6	44-115		
2-Fluorophenol (S)							79.5	69.1	35-115		
Nitrobenzene-d5 (S)							74.2	64.6	37-122		
4-Terphenyl-d14 (S)							95.8	89.2	54-127		
2,4,6-Tribromophenol (S)							69.3	59.5	39-132		
Phenol-d5 (S)							74.1	67.0	34-121		

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Quality Control Data

Client ID: **Mid-Atlantic Associates, Inc. - Raleigh**
Project Description: **R4370.00**
Report No: **23-206-0058**

QC Analytical Batch: V35776
Analysis Method: SW-DRYWT
Analysis Description: Dry Weight Determination

Duplicate V 90505-DUP

Parameter	Units	Result	DUP Result	RPD	Max RPD	Analyzed
Moisture	%	38.8	39.9	2.7	20.0	07/26/23 12:30

Duplicate V 90574-DUP

Parameter	Units	Result	DUP Result	RPD	Max RPD	Analyzed
Moisture	%	25.2	25.7	1.9	20.0	07/26/23 12:30

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Quality Control Data

Client ID: **Mid-Atlantic Associates, Inc. - Raleigh**
Project Description: **R4370.00**
Report No: **23-206-0058**

QC Analytical Batch: V35779
Analysis Method: SW-DRYWT
Analysis Description: Dry Weight Determination

Duplicate V 90516-DUP

Parameter	Units	Result	DUP Result	RPD	Max RPD	Analyzed
Moisture	%	16.5	16.5	0.0	20.0	07/26/23 13:50

Duplicate V 90519-DUP

Parameter	Units	Result	DUP Result	RPD	Max RPD	Analyzed
Moisture	%	39.8	39.6	0.5	20.0	07/26/23 13:50

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Quality Control Data

Client ID: **Mid-Atlantic Associates, Inc. - Raleigh**
Project Description: **R4370.00**
Report No: **23-206-0058**

QC Analytical Batch: V35809
Analysis Method: SW-DRYWT
Analysis Description: Dry Weight Determination

Duplicate V 90635-DUP

Parameter	Units	Result	DUP Result	RPD	Max RPD	Analyzed
Moisture	%	20.1	19.9	1.0	20.0	07/27/23 10:36

Duplicate V 90691-DUP

Parameter	Units	Result	DUP Result	RPD	Max RPD	Analyzed
Moisture	%	21.3	21.8	2.3	20.0	07/27/23 10:36

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Quality Control Data

Client ID: **Mid-Atlantic Associates, Inc. - Raleigh**
Project Description: **R4370.00**
Report No: **23-206-0058**

QC Analytical Batch: V35859
Analysis Method: SW-DRYWT
Analysis Description: Dry Weight Determination

Duplicate V 90537-DUP

Parameter	Units	Result	DUP Result	RPD	Max RPD	Analyzed
Moisture	%	16.8	16.5	1.8	20.0	07/28/23 10:38

Duplicate V 90733-DUP

Parameter	Units	Result	DUP Result	RPD	Max RPD	Analyzed
Moisture	%	27.9	29.9	6.9	20.0	07/28/23 10:38

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Shipment Receipt Form

Customer Number: **01139**
Customer Name: **Mid-Atlantic Associates, Inc. - Raleigh**
Report Number: **23-206-0058**

Shipping Method

○ Fed Ex	○ US Postal	○ Lab	○ Other :	
○ UPS	○ Client	◉ Courier	Thermometer ID:	IRT-15 1.9C

Shipping container/cooler uncompromised?	◉ Yes	○ No	
Number of coolers/boxes received	1		
Custody seals intact on shipping container/cooler?	○ Yes	○ No	◉ Not Present
Custody seals intact on sample bottles?	○ Yes	○ No	◉ Not Present
Chain of Custody (COC) present?	◉ Yes	○ No	
COC agrees with sample label(s)?	◉ Yes	○ No	
COC properly completed	◉ Yes	○ No	
Samples in proper containers?	◉ Yes	○ No	
Sample containers intact?	◉ Yes	○ No	
Sufficient sample volume for indicated test(s)?	◉ Yes	○ No	
All samples received within holding time?	◉ Yes	○ No	
Cooler temperature in compliance?	◉ Yes	○ No	
Cooler/Samples arrived at the laboratory on ice. Samples were considered acceptable as cooling process had begun.	◉ Yes	○ No	
Water - Sample containers properly preserved	○ Yes	○ No	◉ N/A
Water - VOA vials free of headspace	○ Yes	○ No	◉ N/A
Trip Blanks received with VOAs	○ Yes	○ No	◉ N/A
Soil VOA method 5035 – compliance criteria met	◉ Yes	○ No	○ N/A

☐ High concentration container (48 hr) ☐ Low concentration EnCore samplers (48 hr)
☐ High concentration pre-weighed (methanol -14 d) ☐ Low conc pre-weighed vials (Sod Bis -14 d)

Special precautions or instructions included?	○ Yes	◉ No

Comments:

Signature: Caitlyn Cummins Date & Time: 07/25/2023 14:13:27

Waypoint ANALYTICAL

449 Springbrook Road • Charlotte, NC 28217
Phone 704/529-6364 • Fax: 704/525-0409

CHAIN OF CUSTODY RECORD

PAGE 1 OF 4 QUOTE # TO ENSURE PROPER BILLING:

Client Company Name: Mid-Atlantic Assoc.
Report To/Contact Name: Kevin Clay
Reporting Address: 409 Rogers View Ct Raleigh, N.C. 27610
Phone: Fax (Yes)(No):
Email Address:
EDD Type: PDF Excel Other
Site Location Name:
Site Location Physical Address:

Project Name: Durham Parks
Short Hold Analysis (Yes) (No) UST Project: (Yes) (No)
*Please ATTACH any project specific reporting (QC LEVEL I II III IV) provisions and/or QC Requirements
Invoice To: SAME
Address:

Purchase Order No./Billing Reference R4370.00
Requested Due Date ☐ 1 Day ☐ 2 Days ☐ 3 Days ☐ 4 Days ☐ 5 Days
"Working Days" ☐ 6-9 Days ☐ Standard 10 days ☐ Rush Work Must Be Pre Approved
Samples received after 15:00 will be processed next business day.
Turnaround time is based on business days, excluding weekends and holidays.
(SEE REVERSE FOR TERMS & CONDITIONS REGARDING SERVICES RENDERED BY WAYPOINT ANALYTICAL, LLC TO CLIENT)

LAB USE ONLY

	YES	NO	N/A
Samples INTACT upon arrival?	X		
Received IN ICE?	X		
PROPER PRESERVATIVES indicated?	X		
Received WITHIN HOLDING TIMES?	X		
CUSTODY SEALS INTACT?			X
VOLATILES rec'd W/OUT HEADSPACE?			X
PROPER CONTAINERS used?	X		

TEMP: Therm ID: IRT-15 Observed 1.9 °C /Corr. 1.9 °C

TO BE FILLEDIN BY CLIENT/SAMPLING PERSONNEL
Certification: NC___ SC___ Other___ N/A___
Water Chlorinated: YES___ NO___
Samples Iced Upon Collection: YES___ NO___

CLIENT SAMPLE DESCRIPTION	DATE COLLECTED	TIME COLLECTED MILITARY HOURS	MATRIX (SOIL, WATER, OR SLUDGE)	SAMPLE CONTAINER *TYPE SEE BELOW	NO.	SIZE	PRESERVATIVES	ANALYSIS REQUESTED: lead						REMARKS	ID NO.
SS-N6-175	7/21/23	1552	SOIL												
SS-N6-56		1458													
SS-N6-172		1548													
SS-N6-83		1503													
SS-N6-192		1425													
SS-N6-11		1435													
SS-N6-38		1455													
SS-N6-110		1615													
SS-N6-109		1621													

23-206-0058
01139
07-25-2023
14:04:59
Mid-Atlantic Associates, Inc. - Raleigh
R4370.00

PRESS DOWN FIRMLY - 2 COPIES

Sampler's Signature [signature] Sampled By (Print Name) Gary Fisher Affiliation MAA

Upon relinquishing this Chain of Custody is your authorization for Waypoint Analytical to proceed with the analyses as requested above. Any changes must be submitted in writing to the Waypoint Analytical Project Manager. There will be charges for any changes after analyses have been initialized.

Relinquished By (Signature)	Received By (Signature)	Date	Military/Hours
[signature]	[signature]	7-24-23	13:00
[signature]	Courier Express	7-24-23	15:29
	Received For Waypoint Analytical By: [signature]	7/25/23	1300

Method of Shipment: NOTE: ALL SAMPLE COOLERS SHOULD BE TAPED SHUT WITH CUSTODY SEALS FOR TRANSPORTATION TO THE LABORATORY. SAMPLES ARE NOT ACCEPTED AND VERIFIED AGAINST COC UNTIL RECEIVED AT THE LABORATORY.
COC Group No.

☐ Fed Ex ☐ UPS ☐ Hand-delivered ☐ Waypoint Analytical Field Service ☐ Other

Additional Comments:

LAB USE ONLY
Site Arrival Time:
Site Departure Time:
Field Tech Fee:
Mileage:

NPDES: ☐ NC ☐ SC ☐ | UST: ☐ NC ☐ SC ☐ | GROUNDWATER: ☐ NC ☐ SC ☐ | DRINKING WATER: ☐ NC ☐ SC ☐ | SOLID WASTE: ☐ NC ☐ SC ☐ | RCRA: ☐ NC ☐ SC ☐ | BRWNFLD ☐ NC ☐ SC ☐ | LANDFILL ☐ NC ☐ SC ☐ | OTHER: ☐ NC ☐ SC ☐

SEE REVERSE FOR TERMS & CONDITIONS

ORIGINAL

CHAIN OF CUSTODY RECORD

Waypoint ANALYTICAL
449 Springbrook Road • Charlotte, NC 28217
Phone 704/529-6364 • Fax 704/525-0409

PAGE 2 OF 4 QUOTE # TO ENSURE PROPER BILLING:

Client Company Name: Mid-Atlantic Assoc
Report To/Contact Name: Kevin Clay
Reporting Address: 409 Regency Blvd Ct, Raleigh, N.C. 27610
Phone: (919) 250-9918 Fax (Yes)(No): (919) 250-9950
Email Address:
EDD Type: PDF ___ Excel ___ Other ___
Site Location Name:
Site Location Physical Address:

Project Name: Durham Parks
Short Hold Analysis (Yes) (No) UST Project: (Yes) (No)
*Please ATTACH any project specific reporting (QC LEVEL I II III IV) provisions and/or QC Requirements
Invoice To:
Address: SAME
Purchase Order No./Billing Reference R4370.00

Requested Due Date ❑ 1 Day ❑ 2 Days ❑ 3 Days ❑ 4 Days ❑ 5 Days
"Working Days" ❑ 6-9 Days ❑ Standard 10 days ❑ Rush Work Must Be Pre Approved
Samples received after 15:00 will be processed next business day.
Turnaround time is based on business days, excluding weekends and holidays.
(SEE REVERSE FOR TERMS & CONDITIONS REGARDING SERVICES RENDERED BY WAYPOINT ANALYTICAL, LLC TO CLIENT)

LAB USE ONLY

	YES	NO	N/A
Samples INTACT upon arrival?	X		
Received IN ICE?	X		
PROPER PRESERVATIVES indicated?	X		
Received WITHIN HOLDING TIMES?	X		
CUSTODY SEALS INTACT?			X
VOLATILES rec'd W/OUT HEADSPACE?			X
PROPER CONTAINERS used?	X		

TEMP: Therm ID: IRT-15 Observed 1.9 °C /Corr. 1.9 °C

TO BE FILLED IN BY CLIENT/SAMPLING PERSONNEL
Certification: NC_____ SC_____
Other_____ N/A_____
Water Chlorinated: YES___ NO___
Samples Iced Upon Collection: YES___NO___

CLIENT SAMPLE DESCRIPTION	DATE COLLECTED	TIME COLLECTED MILITARY HOURS	MATRIX (SOIL, WATER, OR SLUDGE)	SAMPLE CONTAINER *TYPE SEE BELOW	SAMPLE CONTAINER NO.	SAMPLE CONTAINER SIZE	PRESERVATIVES	ANALYSIS REQUESTED: Lead	ANALYSIS REQUESTED: Haz metals	ANALYSIS REQUESTED: SVOCs	REMARKS	ID NO.
SS-N6-226	7/21/23	1626	Soil					X		X		
SS-N6-148		1520										
SS-N6-70		1635										
SS-N6-119		1602										
SS-N6-Playground		0620										
SS-N6-Dup-2		1511										
SS-N6-152		1530										
SS-N6-72	7/20/23	1558										
SS-N6-279	7/21/23	1538										

Mid-Atlantic Associates, Inc. - Raleigh
R4370.00
23-206-0058
01139
07-25-2023
14:04:59

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Sampler's Signature: Sam C Fisher
Sampled By (Print Name): Cory A Fischer
Affiliation: MAA

Upon relinquishing this Chain of Custody is your authorization for Waypoint Analytical to proceed with the analyses as requested above. Any changes must be submitted in writing to the Waypoint Analytical Project Manager. There will be charges for any changes after analyses have been initialized.

		Date	Military/Hours
Relinquished By: (Signature) Sam C Fisher	Received By: (Signature) Philip Paige	7-24-23	13:00
Relinquished By: (Signature) Philip Paige	Received By: (Signature) Courier express	7-24-23	15:29
Relinquished By: (Signature)	Received For Waypoint Analytical By:	07/24/23	1300

Method of Shipment: NOTE: ALL SAMPLE COOLERS SHOULD BE TAPED SHUT WITH CUSTODY SEALS FOR TRANSPORTATION TO THE LABORATORY. SAMPLES ARE NOT ACCEPTED AND VERIFIED AGAINST COC UNTIL RECEIVED AT THE LABORATORY.
❑ Fed Ex ❑ UPS ❑ Hand-delivered ❑ Waypoint Analytical Field Services ❑ Other
COC Group No.

Additional Comments:

LAB USE ONLY
Site Arrival Time:
Site Departure Time:
Field Tech Fee:
Mileage:

NPDES:	UST:	GROUNDWATER:	DRINKING WATER:	SOLID WASTE:	RCRA:	BRWNFLD	LANDFILL	OTHER:
❑ NC ❑ SC ❑	❑ NC ❑ SC ❑	❑ NC ❑ SC ❑	❑ NC ❑ SC ❑	❑ NC ❑ SC ❑	❑ NC ❑ SC ❑	❑ NC ❑ SC ❑	❑ NC ❑ SC ❑	❑ NC ❑ SC ❑

SEE REVERSE FOR TERMS & CONDITIONS

ORIGINAL

CHAIN OF CUSTODY RECORD

Waypoint ANALYTICAL
449 Springbrook Road • Charlotte, NC 28217
Phone 704/529-6364 • Fax 704/525-0409

PAGE 3 OF 4 QUOTE # TO ENSURE PROPER BILLING:

Project Name: Durham Parks
Short Hold Analysis (Yes) (No) UST Project: (Yes) (No)
*Please ATTACH any project specific reporting (QC LEVEL I II III IV) provisions and/or QC Requirements
Invoice To:
Address: SAME

Client Company Name: Mid-Atlantic Assoc
Report To/Contact Name: Kevin Clay
Reporting Address: 409 Rogers Rd, Ste H
Raleigh, N.C. 27610
Phone (919) 250-9918 Fax (Yes)(No): (919) 250-9950
Email Address:
EDD Type: PDF Excel Other
Site Location Name:
Site Location Physical Address:

Purchase Order No./Billing Reference R4370.00
Requested Due Date ❑ 1 Day ❑ 2 Days ❑ 3 Days ❑ 4 Days ❑ 5 Days
"Working Days" ❑ 6-9 Days ❑ Standard 10 days ❑ Rush Work Must Be Pre Approved
Samples received after 15:00 will be processed next business day.
Turnaround time is based on business days, excluding weekends and holidays.
(SEE REVERSE FOR TERMS & CONDITIONS REGARDING SERVICES RENDERED BY WAYPOINT ANALYTICAL, LLC TO CLIENT)

LAB USE ONLY

	YES	NO	N/A
Samples INTACT upon arrival?	X		
Received IN ICE?	X		
PROPER PRESERVATIVES indicated?	X		
Received WITHIN HOLDING TIMES?	X		
CUSTODY SEALS INTACT?			X
VOLATILES rec'd W/OUT HEADSPACE?			X
PROPER CONTAINERS used?	X		

TEMP: Therm ID: IR T-15 Observed 1.9 °C /Corr. 1.9 °C

TO BE FILLED IN BY CLIENT/SAMPLING PERSONNEL
Certification: NC_____ SC_____
Other_____ N/A_____
Water Chlorinated: YES___ NO___
Samples Iced Upon Collection: YES___NO___

CLIENT SAMPLE DESCRIPTION	DATE COLLECTED	TIME COLLECTED MILITARY HOURS	MATRIX (SOIL, WATER, OR SLUDGE)	SAMPLE CONTAINER *TYPE SEE BELOW	NO.	SIZE	PRESERVATIVES	ANALYSIS REQUESTED: Lead	REMARKS	ID NO.
SS-N6-144	7/21/23	1515	Soil							
SS-N6-137		1511								
SS-N6-131		1508								
SS-N6-91	7/20/23	1415								
SS-N6-Dup-1		1416								
SS-N6-45	7/21/23	1640								
SS-N6-1		1430								
SS-N6-184		1428								
SS-N6-116		1610								

23-206-0058
01139
07-25-2023
14:04:59
Mid-Atlantic Associates, Inc. - Raleigh
R4370.00

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Sampler's Signature: Gary A. Fischer Sampled By (Print Name) Gary A. Fischer Affiliation MAA

Upon relinquishing this Chain of Custody is your authorization for Waypoint Analytical to proceed with the analyses as requested above. Any changes must be submitted in writing to the Waypoint Analytical Project Manager. There will be charges for any changes after analyses have been initialized.

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Relinquished By: (Signature) Gary A. Fischer	Received By: (Signature) Philip Paige	7-24-23	13:00
Relinquished By: (Signature) Philip Paige	Received By: (Signature) courier express	7-24-23	15:29
Relinquished By: (Signature)	Received For Waypoint Analytical By:	7/25/23	1301

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❑ Fed Ex ❑ UPS ❑ Hand-delivered ❑ Waypoint Analytical Field Service ❑ Other
COC Group No.

Additional Comments:

LAB USE ONLY
Site Arrival Time:
Site Departure Time:
Field Tech Fee:
Mileage:

NPDES:	UST:	GROUNDWATER:	DRINKING WATER:	SOLID WASTE:	RCRA:	BRWNFLD	LANDFILL	OTHER:
❑ NC ❑ SC ❑	❑ NC ❑ SC ❑	❑ NC ❑ SC ❑	❑ NC ❑ SC ❑	❑ NC ❑ SC ❑	❑ NC ❑ SC ❑	❑ NC ❑ SC ❑	❑ NC ❑ SC ❑	❑ NC ❑ SC ❑

SEE REVERSE FOR TERMS & CONDITIONS

ORIGINAL

Waypoint ANALYTICAL

449 Springbrook Road • Charlotte, NC 28217
Phone 704/529-6364 • Fax: 704/525-0409

CHAIN OF CUSTODY RECORD

PAGE 4 OF 4 QUOTE # TO ENSURE PROPER BILLING:

Project Name: Durham Parks

Short Hold Analysis (Yes) (No) UST Project: (Yes) (No)

*Please ATTACH any project specific reporting (QC LEVEL I II III IV) provisions and/or QC Requirements

Invoice To:

Address: SAME

Purchase Order No./Billing Reference R4370.00

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Turnaround time is based on business days, excluding weekends and holidays.
(SEE REVERSE FOR TERMS & CONDITIONS REGARDING SERVICES RENDERED BY WAYPOINT ANALYTICAL, LLC TO CLIENT)

Client Company Name: Mid-Atlantic Assoc.
Report To/Contact Name: Kevin Clay
Reporting Address: 4709 Rogers View Ct Raleigh N.C. 27610
Phone (919) 250-4118 Fax (Yes)(No) (919) 250-4950
Email Address:
EDD Type: PDF ___ Excel ___ Other ___
Site Location Name:
Site Location Physical Address:

LAB USE ONLY

	YES	NO	N/A
Samples INTACT upon arrival?	X		
Received IN ICE?	X		
PROPER PRESERVATIVES indicated?	X		
Received WITHIN HOLDING TIMES?	X		
CUSTODY SEALS INTACT?			X
VOLATILES rec'd W/OUT HEADSPACE?			X
PROPER CONTAINERS used?	X		

TEMP: Therm ID: IR T-15 Observed 1.9 °C /Corr. 1.9 °C

TO BE FILLED IN BY CLIENT/SAMPLING PERSONNEL

Certification: NC ___ SC ___
Other ___ N/A ___
Water Chlorinated: YES ___ NO ___
Samples Iced Upon Collection: YES ___ NO ___

CLIENT SAMPLE DESCRIPTION	DATE COLLECTED	TIME COLLECTED MILITARY HOURS	MATRIX (SOIL, WATER, OR SLUDGE)	SAMPLE CONTAINER *TYPE SEE BELOW	SAMPLE CONTAINER NO.	SAMPLE CONTAINER SIZE	PRESERVATIVES	ANALYSIS REQUESTED: Lead	ANALYSIS REQUESTED: Haz Metals	ANALYSIS REQUESTED: SVOC's	REMARKS	ID NO.
SS-N6-226	7/20/23	1447	SOIL									
SS-N6-205	7/21/23	1448										
SS-N6-273	↓	1544										
SS-N6-92	7/20/23	1545										
SS-N6-100	7/21/23	1620										
SS-N6-153		1524										
SS-N6-102		1505										
SS-N6-153	↓	1524	↓									

23-206-0058
01139
07-25-2023
14:04:59
Mid-Atlantic Associates, Inc. - Raleigh
R4370.00

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Sampler's Signature: Gary A Fiscke
Sampled By (Print Name): Gary A Fiscke
Affiliation: MAA

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COC Group No.

Additional Comments:

LAB USE ONLY

Site Arrival Time:
Site Departure Time:
Field Tech Fee:
Mileage:

SEE REVERSE FOR TERMS & CONDITIONS

NPDES:	UST:	GROUNDWATER:	DRINKING WATER:	SOLID WASTE:	RCRA:	BRWNFLD	LANDFILL	OTHER:
❑ NC ❑ SC ❑ ___	❑ NC ❑ SC ❑ ___	❑ NC ❑ SC ❑ ___	❑ NC ❑ SC ❑ ___	❑ NC ❑ SC ❑ ___	❑ NC ❑ SC ❑ ___	❑ NC ❑ SC ❑ ___	❑ NC ❑ SC ❑ ___	❑ NC ❑ SC ❑ ___

ORIGINAL

449 Springbrook Rd, Charlotte, NC 28217
Main 704.529.6364
www.waypointanalytical.com

8/16/2023

Mid-Atlantic Associates, Inc. - Raleigh
Kevin Clay
409 Rogers View Court
Raleigh, NC, 27610

Ref: Analytical Testing
Revised Lab Report Number: 23-207-0017
Client Project Description: R4370.00

Dear Kevin Clay:

Waypoint Analytical, LLC (Charlotte) received sample(s) on 7/26/2023 for the analyses presented in the following report.

The above referenced project has been analyzed per your instructions. The analyses were performed in accordance with the applicable analytical method.

The analytical data has been validated using standard quality control measures performed as required by the analytical method. Quality Assurance, method validations, instrumentation maintenance and calibration for all parameters were performed in accordance with guidelines established by the USEPA (including 40 CFR 136 Method Update Rule May 2021) unless otherwise indicated.

Certain parameters (chlorine, pH, dissolved oxygen, sulfite...) are required to be analyzed within 15 minutes of sampling. Usually, but not always, any field parameter analyzed at the laboratory is outside of this holding time. Refer to sample analysis time for confirmation of holding time compliance.

The results are shown on the attached Report of Analysis(s). Results for solid matrices are reported on an as-received basis unless otherwise indicated. This report shall not be reproduced except in full and relates only to the samples included in this report.

Please do not hesitate to contact me or client services if you have any questions or need additional information.

Sincerely,

Angela D Overcash
Senior Project Manager

Laboratory's liability in any claim relating to analyses performed shall be limited to, at laboratory's option, repeating the analysis in question at laboratory's expense, or the refund of the charges paid for performance of said analysis.

449 Springbrook Rd, Charlotte, NC 28217
Main 704.529.6364
www.waypointanalytical.com

Certification Summary

Laboratory ID: WP CNC: Waypoint Analytical Carolina, Inc. (C), Charlotte, NC

State	Program	Lab ID	Expiration Date
North Carolina	State Program	37735	07/31/2024
North Carolina	State Program	402	12/31/2023
South Carolina	State Program	99012	07/31/2023
South Carolina	State Program	99012	12/31/2022

Laboratory ID: WP MTN: Waypoint Analytical, LLC., Memphis, TN

State	Program	Lab ID	Expiration Date
Alabama	State Program	40750	02/29/2024
Arkansas	State Program	88-0650	02/07/2024
California	State Program	2904	06/30/2024
Florida	State Program - NELAP	E871157	06/30/2024
Georgia	State Program	C044	11/14/2025
Georgia	State Program	04015	06/30/2024
Illinois	State Program - NELAP	200078	10/10/2024
Kentucky	State Program	80215	06/30/2024
Kentucky	State Program	KY90047	12/31/2023
Louisiana	State Program - NELAP	LA037	12/31/2023
Louisiana	State Program - NELAP	04015	06/30/2024
Mississippi	State Program	MS	11/14/2025
North Carolina	State Program	47701	07/31/2024
North Carolina	State Program	415	12/31/2023
Pennsylvania	State Program - NELAP	68-03195	05/31/2024
South Carolina	State Program	84002	06/30/2023
Tennessee	State Program	02027	11/14/2025
Texas	State Program - NELAP	T104704180	09/30/2023
Virginia	State Program	00106	06/30/2024
Virginia	State Program - NELAP	460181	09/14/2023

449 Springbrook Rd, Charlotte, NC 28217
Main 704.529.6364
www.waypointanalytical.com

Sample Summary Table

Report Number: **23-207-0017**

Client Project Description: **R4370.00**

Lab No	Client Sample ID	Matrix	Date Collected	Date Received	Method	Lab ID
90635	SS-LY-5	Solids	07/24/2023 08:00	07/26/2023 13:30		
90636	SS-LY-43	Solids	07/24/2023 10:53	07/26/2023 13:30		
90637	SS-LY-60	Solids	07/24/2023 12:53	07/26/2023 13:30		
90638	SS-LY-68	Solids	07/24/2023 15:48	07/26/2023 13:30		
90639	SS-LY-61	Solids	07/24/2023 15:55	07/26/2023 13:30		
90639	SS-LY-61	Solids	07/24/2023 15:55	07/26/2023 13:30	7471A	WP MTN
90639	SS-LY-61	Solids	07/24/2023 15:55	07/26/2023 13:30	6020B	WP MTN
90640	SS-LY-69	Solids	07/24/2023 16:00	07/26/2023 13:30		
90641	SS-LY-70	Solids	07/24/2023 16:02	07/26/2023 13:30		
90642	SS-LY-62	Solids	07/24/2023 16:04	07/26/2023 13:30		
90643	SS-LY-39	Solids	07/24/2023 16:10	07/26/2023 13:30		
90644	SS-LY-29	Solids	07/24/2023 16:28	07/26/2023 13:30		
90645	SS-LY-27	Solids	07/24/2023 16:32	07/26/2023 13:30		
90646	SS-LY-4	Solids	07/24/2023 16:38	07/26/2023 13:30		
90647	SS-LY-45	Solids	07/24/2023 16:18	07/26/2023 13:30		
90647	SS-LY-45	Solids	07/24/2023 16:18	07/26/2023 13:30	6020B	WP MTN
90648	SS-LY-45(1')	Solids	07/24/2023 16:20	07/26/2023 13:30		
90649	SS-LY-45(Pb)	Solids	07/24/2023 10:15	07/26/2023 13:30		
90650	SS-LY-DUP1	Solids	07/24/2023 10:20	07/26/2023 13:30		

WP MTN - Memphis, TN: Waypoint Analytical - TN, Memphis, TN

Waypoint ANALYTICAL
449 Springbrook Rd, Charlotte, NC 28217
Main 704.529.6364
www.waypointanalytical.com

Summary of Detected Analytes

Project: R4370.00

Report Number: 23-207-0017

Client Sample ID / Method	Lab Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
SS-LY-5	**V 90635**					
6010D	Lead	99.2	mg/Kg - dry	0.375	08/02/2023 17:56	
SW-DRYWT	Moisture	20.1	%		07/27/2023 10:36	
SS-LY-43	**V 90636**					
6010D	Lead	259	mg/Kg - dry	1.78	08/07/2023 17:09	
SW-DRYWT	Moisture	15.5	%		07/27/2023 10:36	
SS-LY-60	**V 90637**					
6010D	Lead	221	mg/Kg - dry	1.88	08/07/2023 17:14	
SW-DRYWT	Moisture	20.0	%		07/27/2023 10:36	
SS-LY-68	**V 90638**					
6010D	Lead	152	mg/Kg - dry	1.63	08/07/2023 17:36	
SW-DRYWT	Moisture	8.02	%		07/27/2023 10:36	
SS-LY-61	**V 90639**					
6020B	Arsenic	1.12	mg/Kg - dry	0.261	08/01/2023 14:02	
6020B	Barium	22.7	mg/Kg - dry	0.260	08/01/2023 14:02	
6020B	Chromium	17.3	mg/Kg - dry	0.260	08/01/2023 14:02	
6020B	Cobalt	2.43	mg/Kg - dry	0.260	08/01/2023 14:02	
6020B	Copper	6.61	mg/Kg - dry	0.261	08/01/2023 14:02	
6020B	Lead	5.14	mg/Kg - dry	0.261	08/01/2023 14:02	
6020B	Manganese	72.6	mg/Kg - dry	0.260	08/01/2023 14:02	
6020B	Nickel	9.64	mg/Kg - dry	0.261	08/01/2023 14:02	
6020B	Vanadium	17.8	mg/Kg - dry	1.30	08/01/2023 14:02	
6020B	Zinc	23.0	mg/Kg - dry	2.61	08/01/2023 14:02	
7471A	Mercury (Total)	0.0230	mg/Kg - dry	0.0205	08/04/2023 10:38	J
SW-DRYWT	Moisture	4.10	%		07/27/2023 10:36	
SS-LY-69	**V 90640**					
6010D	Lead	7.30	mg/Kg - dry	0.332	08/02/2023 18:40	
SW-DRYWT	Moisture	9.74	%		07/27/2023 10:36	
SS-LY-70	**V 90641**					
6010D	Lead	7.53	mg/Kg - dry	0.305	08/02/2023 18:45	
SW-DRYWT	Moisture	1.94	%		07/27/2023 10:36	
SS-LY-62	**V 90642**					
6010D	Lead	6.93	mg/Kg - dry	0.312	08/02/2023 18:49	

Waypoint ANALYTICAL
449 Springbrook Rd, Charlotte, NC 28217
Main 704.529.6364
www.waypointanalytical.com

Summary of Detected Analytes

Project: R4370.00

Report Number: 23-207-0017

Client Sample ID / Method	Lab Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
SS-LY-62	**V 90642**					
SW-DRYWT	Moisture	4.12	%		07/27/2023 10:36	
SS-LY-39	**V 90643**					
6010D	Lead	24.4	mg/Kg - dry	0.359	08/02/2023 18:54	
SW-DRYWT	Moisture	16.5	%		07/27/2023 10:36	
SS-LY-29	**V 90644**					
6010D	Lead	24.8	mg/Kg - dry	0.361	08/02/2023 18:58	
SW-DRYWT	Moisture	17.1	%		07/28/2023 10:30	
SS-LY-27	**V 90645**					
6010D	Lead	11.1	mg/Kg - dry	0.398	08/02/2023 19:02	
SW-DRYWT	Moisture	24.7	%		07/28/2023 10:30	
SS-LY-4	**V 90646**					
6010D	Lead	25.2	mg/Kg - dry	0.336	08/02/2023 19:07	
SW-DRYWT	Moisture	10.8	%		07/28/2023 10:30	
SS-LY-45	**V 90647**					
6020B	Antimony	1.84	mg/Kg - dry	0.477	08/02/2023 15:57	
6020B	Arsenic	5.04	mg/Kg - dry	0.477	08/01/2023 14:24	
6020B	Barium	153	mg/Kg - dry	0.477	08/01/2023 14:24	
6020B	Beryllium	0.531	mg/Kg - dry	0.477	08/02/2023 15:57	
6020B	Cadmium	1.15	mg/Kg - dry	0.477	08/01/2023 14:24	
6020B	Chromium	22.3	mg/Kg - dry	0.477	08/01/2023 14:24	
6020B	Cobalt	5.95	mg/Kg - dry	0.477	08/01/2023 14:24	
6020B	Copper	102	mg/Kg - dry	2.39	08/02/2023 15:29	
6020B	Manganese	298	mg/Kg - dry	0.477	08/01/2023 14:24	
6020B	Nickel	17.8	mg/Kg - dry	0.477	08/01/2023 14:24	
6020B	Selenium	0.612	mg/Kg - dry	0.477	08/01/2023 14:24	
6020B	Vanadium	19.3	mg/Kg - dry	2.39	08/01/2023 14:24	
6020B	Zinc	494	mg/Kg - dry	4.77	08/01/2023 14:24	
7471B	Mercury (Total)	0.198	mg/Kg - dry	0.0573	07/28/2023 16:02	
SW-DRYWT	Moisture	47.6	%		07/31/2023 11:05	
SS-LY-45(1')	**V 90648**					
6010D	Lead	248	mg/Kg - dry	1.78	08/07/2023 17:40	
SW-DRYWT	Moisture	15.6	%		07/28/2023 10:30	

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Summary of Detected Analytes

Project: **R4370.00**

Report Number: **23-207-0017**

Client Sample ID / Method	Lab Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
SS-LY-45(Pb)	**V 90649**					
6010D	Lead	384	mg/Kg - dry	2.37	08/07/2023 17:53	
SW-DRYWT	Moisture	36.7	%		07/28/2023 10:30	
SS-LY-DUP1	**V 90650**					
6010D	Lead	553	mg/Kg - dry	4.46	08/07/2023 17:58	
SW-DRYWT	Moisture	32.7	%		07/28/2023 10:30	

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Client: Mid-Atlantic Associates, Inc. - Raleigh **CASE NARRATIVE**
Project: R4370.00
Lab Report Number: 23-207-0017
Date: 8/16/2023

Report Comments
Revised report: Revision 1
Co and V have been added to be reported.

Metals Analysis Method 6010D
Sample 90637 (SS-LY-60)
Analyte: Lead
QC Batch No: V36316/V36022
The matrix spike and/or the matrix spike duplicate was outside quality control acceptance ranges. A dilution test was performed and passed quality control acceptance ranges. No matrix interference is suspected.

Metals Analyses Method 6020B
Sample 90647 (SS-LY-45)
Analyte: Arsenic
QC Batch No: L696237/L695858
The matrix spike and/or the matrix spike duplicate was outside quality control acceptance ranges. A post digestion spike was performed and passed quality control acceptance ranges. No matrix interference is suspected.

Sample 90647 (SS-LY-45)
Analyte: Barium
QC Batch No: L696237/L695858
The matrix spike and/or the matrix spike duplicate was outside quality control acceptance ranges. A dilution test was performed and passed quality control acceptance ranges. No matrix interference is suspected.

Sample 90647 (SS-LY-45)
Analyte: Copper
QC Batch No: L696547/L695858
The matrix spike, matrix spike duplicate and the dilution test were all outside of the quality control acceptance ranges. Matrix interference is suspected.

Sample 90647 (SS-LY-45)
Analyte: Manganese
QC Batch No: L696237/L695858
The matrix spike, matrix spike duplicate and the dilution test were all outside of the quality control acceptance ranges. Matrix interference is suspected.

Sample 90647 (SS-LY-45)
Analyte: Nickel
QC Batch No: L696237/L695858
The matrix spike, matrix spike duplicate and the dilution test were all outside of the quality control acceptance ranges. Matrix interference is suspected.

Sample 90647 (SS-LY-45)
Analyte: Lead

QC Batch No: L696237/L695858
The matrix spike and/or the matrix spike duplicate was outside quality control acceptance ranges. A dilution test was performed and passed quality control acceptance ranges. No matrix interference is suspected.

Sample 90647 (SS-LY-45)
Analyte: Antimony
QC Batch No: L696547/L695858
The matrix spike and/or the matrix spike duplicate was outside quality control acceptance ranges. A post digestion spike was performed and passed quality control acceptance ranges. No matrix interference is suspected.

Sample 90647 (SS-LY-45)
Analyte: Thallium
QC Batch No: L696237/L695858
The matrix spike and/or the matrix spike duplicate was outside quality control acceptance ranges. A post digestion spike was performed and passed quality control acceptance ranges. No matrix interference is suspected.

Sample 90647 (SS-LY-45)
Analyte: Zinc
QC Batch No: L696237/L695858
The matrix spike and/or the matrix spike duplicate was outside quality control acceptance ranges. A dilution test was performed and passed quality control acceptance ranges. No matrix interference is suspected.

Semivolatile Organic Compounds - GC/MS Method 8270E
Analyte: Benzoic Acid
QC Batch No: V35874/V35831
Refer to LCS/LCSD.

Sample 90683
Analyte: Hexachlorocyclopentadiene
QC Batch No: V35874/V35831
Relative Percent Difference (RPD) for the duplicate analysis was outside of the allowable QC limits.

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Information :

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Report Number : **23-207-0017**

REPORT OF ANALYSIS

Lab No : **90635**
Sample ID : **SS-LY-5**

Matrix: **Solids**
Sampled: **7/24/2023 8:00**

Test	Results	Units	MQL	DF	Date / Time Analyzed	By	Analytical Method
Moisture	**20.1**	%		1	07/27/23 10:36	CNC	SW-DRYWT
Lead	**99.2**	mg/Kg - dry	0.375	1	08/02/23 17:56	JKC	6010D

Qualifiers/ Definitions				
	B	Analyte detected in blank	DF	Dilution Factor
	J	Estimated value	MQL	Method Quantitation Limit

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REPORT OF ANALYSIS

Lab No : **90636**
Sample ID : **SS-LY-43**

Matrix: **Solids**
Sampled: **7/24/2023 10:53**

Test	Results	Units	MQL	DF	Date / Time Analyzed	By	Analytical Method
Moisture	**15.5**	%		1	07/27/23 10:36	CNC	SW-DRYWT
Lead	**259**	mg/Kg - dry	1.78	5	08/07/23 17:09	JKC	6010D

Qualifiers/ Definitions				
	B	Analyte detected in blank	DF	Dilution Factor
	J	Estimated value	MQL	Method Quantitation Limit

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REPORT OF ANALYSIS

Lab No : **90637**
Sample ID : **SS-LY-60**

Matrix: **Solids**
Sampled: **7/24/2023 12:53**

Test	Results	Units	MQL	DF	Date / Time Analyzed	By	Analytical Method
Moisture	**20.0**	%		1	07/27/23 10:36	CNC	SW-DRYWT
Lead	**221**	mg/Kg - dry	1.88	5	08/07/23 17:14	JKC	6010D

Qualifiers/ Definitions				
	B	Analyte detected in blank	DF	Dilution Factor
	J	Estimated value	MQL	Method Quantitation Limit

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REPORT OF ANALYSIS

Lab No : **90638**
Sample ID : **SS-LY-68**

Matrix: **Solids**
Sampled: **7/24/2023 15:48**

Test	Results	Units	MQL	DF	Date / Time Analyzed	By	Analytical Method
Moisture	**8.02**	%		1	07/27/23 10:36	CNC	SW-DRYWT
Lead	**152**	mg/Kg - dry	1.63	5	08/07/23 17:36	JKC	6010D

Qualifiers/ Definitions

B	Analyte detected in blank	DF	Dilution Factor
J	Estimated value	MQL	Method Quantitation Limit

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Report Number : **23-207-0017**

REPORT OF ANALYSIS

Lab No : **90639**
Sample ID : **SS-LY-61**

Matrix: **Solids**
Sampled: **7/24/2023 15:55**

Test	Results	Units	MDL	MQL	DF	Date / Time Analyzed	By	Analytical Method
Moisture	**4.10**	%			1	07/27/23 10:36	CNC	SW-DRYWT
Antimony	<0.261	mg/Kg - dry		0.261	5	08/01/23 14:02	CPW	6020B
Arsenic	**1.12**	mg/Kg - dry		0.261	5	08/01/23 14:02	CPW	6020B
Barium	**22.7**	mg/Kg - dry		0.260	5	08/01/23 14:02	CPW	6020B
Beryllium	<0.261	mg/Kg - dry		0.261	5	08/02/23 14:58	CPW	6020B
Cadmium	<0.261	mg/Kg - dry		0.261	5	08/01/23 14:02	CPW	6020B
Chromium	**17.3**	mg/Kg - dry		0.260	5	08/01/23 14:02	CPW	6020B
Cobalt	**2.43**	mg/Kg - dry		0.260	5	08/01/23 14:02	CPW	6020B
Copper	**6.61**	mg/Kg - dry		0.261	5	08/01/23 14:02	CPW	6020B
Lead	**5.14**	mg/Kg - dry		0.261	5	08/01/23 14:02	CPW	6020B
Manganese	**72.6**	mg/Kg - dry		0.260	5	08/01/23 14:02	CPW	6020B
Mercury (Total)	**0.0230 J**	mg/Kg - dry	0.0205	0.170	1	08/04/23 10:38	FDS	7471A
Nickel	**9.64**	mg/Kg - dry		0.261	5	08/01/23 14:02	CPW	6020B
Selenium	<0.260	mg/Kg - dry		0.260	5	08/01/23 14:02	CPW	6020B
Silver	<0.261	mg/Kg - dry		0.261	5	08/01/23 14:02	CPW	6020B
Thallium	<0.261	mg/Kg - dry		0.261	5	08/01/23 14:02	CPW	6020B
Vanadium	**17.8**	mg/Kg - dry		1.30	5	08/01/23 14:02	CPW	6020B
Zinc	**23.0**	mg/Kg - dry		2.61	5	08/01/23 14:02	CPW	6020B

Qualifiers/ Definitions

B	Analyte detected in blank	DF	Dilution Factor
J	Estimated value	MQL	Method Quantitation Limit

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REPORT OF ANALYSIS

Lab No : **90639**
Sample ID : **SS-LY-61**

Matrix: **Solids**
Sampled: **7/24/2023 15:55**

Analytical Method: 8270E **Prep Batch(es):** **V35831** 07/27/23 11:30
Prep Method: 3546

Test	Results	Units	MDL	MQL	DF	Date / Time Analyzed	By	Analytical Batch
Acenaphthene	<0.120	mg/Kg - dry	0.120	0.688	1	07/28/23 13:52	AMP	V35874
Acenaphthylene	<0.109	mg/Kg - dry	0.109	0.688	1	07/28/23 13:52	AMP	V35874
Aniline	<0.158	mg/Kg - dry	0.158	0.688	1	07/28/23 13:52	AMP	V35874
Anthracene	<0.149	mg/Kg - dry	0.149	0.688	1	07/28/23 13:52	AMP	V35874
Benzo(a)anthracene	<0.144	mg/Kg - dry	0.144	0.688	1	07/28/23 13:52	AMP	V35874
Benzo(a)pyrene	<0.153	mg/Kg - dry	0.153	0.688	1	07/28/23 13:52	AMP	V35874
Benzo(b)fluoranthene	<0.152	mg/Kg - dry	0.152	0.688	1	07/28/23 13:52	AMP	V35874
Benzo(g,h,i)perylene	<0.141	mg/Kg - dry	0.141	0.688	1	07/28/23 13:52	AMP	V35874
Benzo(k)fluoranthene	<0.142	mg/Kg - dry	0.142	0.688	1	07/28/23 13:52	AMP	V35874
Benzoic Acid	<0.604	mg/Kg - dry	0.604	2.09	1	07/28/23 13:52	AMP	V35874
Benzyl alcohol	<0.109	mg/Kg - dry	0.109	0.688	1	07/28/23 13:52	AMP	V35874
Bis(2-Chloroethoxy)methane	<0.123	mg/Kg - dry	0.123	0.688	1	07/28/23 13:52	AMP	V35874
Bis(2-Chloroethyl)ether	<0.111	mg/Kg - dry	0.111	0.688	1	07/28/23 13:52	AMP	V35874
Bis(2-Chloroisopropyl)ether	<0.141	mg/Kg - dry	0.141	0.344	1	07/28/23 13:52	AMP	V35874
Bis(2-ethylhexyl)phthalate	<0.125	mg/Kg - dry	0.125	0.688	1	07/28/23 13:52	AMP	V35874
4-Bromophenyl phenyl ether	<0.113	mg/Kg - dry	0.113	0.688	1	07/28/23 13:52	AMP	V35874
Butyl benzyl phthalate	<0.117	mg/Kg - dry	0.117	0.344	1	07/28/23 13:52	AMP	V35874
4-Chloro-3-methylphenol	<0.096	mg/Kg - dry	0.096	0.688	1	07/28/23 13:52	AMP	V35874
4-Chloroaniline	<0.116	mg/Kg - dry	0.116	0.344	1	07/28/23 13:52	AMP	V35874
2-Chloronaphthalene	<0.120	mg/Kg - dry	0.120	0.688	1	07/28/23 13:52	AMP	V35874
2-Chlorophenol	<0.102	mg/Kg - dry	0.102	0.688	1	07/28/23 13:52	AMP	V35874
4-Chlorophenyl phenyl ether	<0.131	mg/Kg - dry	0.131	1.04	1	07/28/23 13:52	AMP	V35874

Qualifiers/ Definitions

B	Analyte detected in blank	DF	Dilution Factor
J	Estimated value	MQL	Method Quantitation Limit

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REPORT OF ANALYSIS

Lab No : **90639**
Sample ID : **SS-LY-61**

Matrix: **Solids**
Sampled: **7/24/2023 15:55**

Analytical Method: 8270E **Prep Batch(es):** **V35831** 07/27/23 11:30
Prep Method: 3546

Test	Results	Units	MDL	MQL	DF	Date / Time Analyzed	By	Analytical Batch
Chrysene	<0.148	mg/Kg - dry	0.148	0.688	1	07/28/23 13:52	AMP	V35874
Dibenz(a,h)anthracene	<0.239	mg/Kg - dry	0.239	0.688	1	07/28/23 13:52	AMP	V35874
Dibenzofuran	<0.124	mg/Kg - dry	0.124	0.688	1	07/28/23 13:52	AMP	V35874
1,2-Dichlorobenzene	<0.098	mg/Kg - dry	0.098	0.688	1	07/28/23 13:52	AMP	V35874
1,3-Dichlorobenzene	<0.101	mg/Kg - dry	0.101	0.688	1	07/28/23 13:52	AMP	V35874
1,4-Dichlorobenzene	<0.101	mg/Kg - dry	0.101	0.344	1	07/28/23 13:52	AMP	V35874
3,3'-Dichlorobenzidine	<0.153	mg/Kg - dry	0.153	0.688	1	07/28/23 13:52	AMP	V35874
2,4-Dichlorophenol	<0.099	mg/Kg - dry	0.099	0.688	1	07/28/23 13:52	AMP	V35874
Diethyl phthalate	<0.187	mg/Kg - dry	0.187	0.688	1	07/28/23 13:52	AMP	V35874
Dimethyl phthalate	<0.181	mg/Kg - dry	0.181	0.688	1	07/28/23 13:52	AMP	V35874
2,4-Dimethylphenol	<0.112	mg/Kg - dry	0.112	0.344	1	07/28/23 13:52	AMP	V35874
Di-n-butyl phthalate	<0.111	mg/Kg - dry	0.111	0.688	1	07/28/23 13:52	AMP	V35874
4,6-Dinitro-2-methylphenol	<0.250	mg/Kg - dry	0.250	1.56	1	07/28/23 13:52	AMP	V35874
2,4-Dinitrophenol	<0.542	mg/Kg - dry	0.542	1.56	1	07/28/23 13:52	AMP	V35874
2,4-Dinitrotoluene	<0.100	mg/Kg - dry	0.100	0.688	1	07/28/23 13:52	AMP	V35874
2,6-Dinitrotoluene	<0.112	mg/Kg - dry	0.112	0.688	1	07/28/23 13:52	AMP	V35874
Di-n-Octyl Phthalate	<0.149	mg/Kg - dry	0.149	0.344	1	07/28/23 13:52	AMP	V35874
Fluoranthene	<0.128	mg/Kg - dry	0.128	0.688	1	07/28/23 13:52	AMP	V35874
Fluorene	<0.133	mg/Kg - dry	0.133	0.688	1	07/28/23 13:52	AMP	V35874
Hexachlorobenzene	<0.110	mg/Kg - dry	0.110	0.688	1	07/28/23 13:52	AMP	V35874
Hexachlorobutadiene	<0.101	mg/Kg - dry	0.101	0.688	1	07/28/23 13:52	AMP	V35874
Hexachlorocyclopentadiene	<0.163	mg/Kg - dry	0.163	0.688	1	07/28/23 13:52	AMP	V35874

Qualifiers/ Definitions

B	Analyte detected in blank	DF	Dilution Factor
J	Estimated value	MQL	Method Quantitation Limit

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Report Number : **23-207-0017**

REPORT OF ANALYSIS

Lab No : **90639**
Sample ID : **SS-LY-61**

Matrix: **Solids**
Sampled: **7/24/2023 15:55**

Analytical Method: 8270E **Prep Batch(es):** **V35831** 07/27/23 11:30
Prep Method: 3546

Test	Results	Units	MDL	MQL	DF	Date / Time Analyzed	By	Analytical Batch
Hexachloroethane	<0.082	mg/Kg - dry	0.082	0.688	1	07/28/23 13:52	AMP	V35874
Indeno(1,2,3-cd)pyrene	<0.186	mg/Kg - dry	0.186	0.688	1	07/28/23 13:52	AMP	V35874
Isophorone	<0.199	mg/Kg - dry	0.199	0.688	1	07/28/23 13:52	AMP	V35874
1-Methylnaphthalene	<0.110	mg/Kg - dry	0.110	0.688	1	07/28/23 13:52	AMP	V35874
2-Methylnaphthalene	<0.104	mg/Kg - dry	0.104	0.688	1	07/28/23 13:52	AMP	V35874
2-Methylphenol	<0.101	mg/Kg - dry	0.101	0.688	1	07/28/23 13:52	AMP	V35874
3&4 Methylphenol	<0.088	mg/Kg - dry	0.088	0.688	1	07/28/23 13:52	AMP	V35874
Naphthalene	<0.150	mg/Kg - dry	0.150	0.688	1	07/28/23 13:52	AMP	V35874
2-Nitroaniline	<0.100	mg/Kg - dry	0.100	0.688	1	07/28/23 13:52	AMP	V35874
3-Nitroaniline	<0.125	mg/Kg - dry	0.125	0.688	1	07/28/23 13:52	AMP	V35874
4-Nitroaniline	<0.097	mg/Kg - dry	0.097	0.344	1	07/28/23 13:52	AMP	V35874
Nitrobenzene	<0.120	mg/Kg - dry	0.120	0.344	1	07/28/23 13:52	AMP	V35874
2-Nitrophenol	<0.092	mg/Kg - dry	0.092	0.688	1	07/28/23 13:52	AMP	V35874
4-Nitrophenol	<0.122	mg/Kg - dry	0.122	0.688	1	07/28/23 13:52	AMP	V35874
N-Nitrosodimethylamine	<0.274	mg/Kg - dry	0.274	0.688	1	07/28/23 13:52	AMP	V35874
N-Nitrosodiphenylamine	<0.188	mg/Kg - dry	0.188	0.688	1	07/28/23 13:52	AMP	V35874
N-Nitroso-di-n-propylamine	<0.123	mg/Kg - dry	0.123	0.688	1	07/28/23 13:52	AMP	V35874
Pentachlorophenol	<0.361	mg/Kg - dry	0.361	1.04	1	07/28/23 13:52	AMP	V35874
Phenanthrene	<0.216	mg/Kg - dry	0.216	0.688	1	07/28/23 13:52	AMP	V35874
Phenol	<0.116	mg/Kg - dry	0.116	0.688	1	07/28/23 13:52	AMP	V35874
Pyrene	<0.139	mg/Kg - dry	0.139	0.688	1	07/28/23 13:52	AMP	V35874
Pyridine	<0.082	mg/Kg - dry	0.082	0.344	1	07/28/23 13:52	AMP	V35874

Qualifiers/ Definitions

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J	Estimated value	MQL	Method Quantitation Limit

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REPORT OF ANALYSIS

Lab No : **90639**
Sample ID : **SS-LY-61**

Matrix: **Solids**
Sampled: **7/24/2023 15:55**

Analytical Method: 8270E **Prep Batch(es):** **V35831** 07/27/23 11:30
Prep Method: 3546

Test	Results	Units	MDL	MQL	DF	Date / Time Analyzed	By	Analytical Batch
1,2,4-Trichlorobenzene	<0.111	mg/Kg - dry	0.111	0.688	1	07/28/23 13:52	AMP	V35874
2,4,5-Trichlorophenol	<0.100	mg/Kg - dry	0.100	0.688	1	07/28/23 13:52	AMP	V35874
2,4,6-Trichlorophenol	<0.100	mg/Kg - dry	0.100	0.688	1	07/28/23 13:52	AMP	V35874
Surrogate: Phenol-d5	75.1		Limits: 34-121%		1	07/28/23 13:52	AMP	8270E
Surrogate: 2-Fluorobiphenyl	88.0		Limits: 44-115%		1	07/28/23 13:52	AMP	V35874
Surrogate: 2-Fluorophenol	79.0		Limits: 35-115%		1	07/28/23 13:52	AMP	V35874
Surrogate: Nitrobenzene-d5	82.0		Limits: 37-122%		1	07/28/23 13:52	AMP	V35874
Surrogate: 4-Terphenyl-d14	103		Limits: 54-127%		1	07/28/23 13:52	AMP	V35874
Surrogate: 2,4,6-Tribromophenol	81.1		Limits: 39-132%		1	07/28/23 13:52	AMP	V35874

Qualifiers/ Definitions

B	Analyte detected in blank	DF	Dilution Factor
J	Estimated value	MQL	Method Quantitation Limit

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Information :

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Report Number : **23-207-0017**

REPORT OF ANALYSIS

Lab No : **90640**
Sample ID : **SS-LY-69**

Matrix: **Solids**
Sampled: **7/24/2023 16:00**

Test	Results	Units	MQL	DF	Date / Time Analyzed	By	Analytical Method
Moisture	**9.74**	%		1	07/27/23 10:36	CNC	SW-DRYWT
Lead	**7.30**	mg/Kg - dry	0.332	1	08/02/23 18:40	JKC	6010D

Qualifiers/ Definitions				
	B	Analyte detected in blank	DF	Dilution Factor
	J	Estimated value	MQL	Method Quantitation Limit

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REPORT OF ANALYSIS

Lab No : **90641**
Sample ID : **SS-LY-70**

Matrix: **Solids**
Sampled: **7/24/2023 16:02**

Test	Results	Units	MQL	DF	Date / Time Analyzed	By	Analytical Method
Moisture	**1.94**	%		1	07/27/23 10:36	CNC	SW-DRYWT
Lead	**7.53**	mg/Kg - dry	0.305	1	08/02/23 18:45	JKC	6010D

Qualifiers/ Definitions

B	Analyte detected in blank	DF	Dilution Factor
J	Estimated value	MQL	Method Quantitation Limit

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REPORT OF ANALYSIS

Lab No : **90642**
Sample ID : **SS-LY-62**

Matrix: **Solids**
Sampled: **7/24/2023 16:04**

Test	Results	Units	MQL	DF	Date / Time Analyzed	By	Analytical Method
Moisture	**4.12**	%		1	07/27/23 10:36	CNC	SW-DRYWT
Lead	**6.93**	mg/Kg - dry	0.312	1	08/02/23 18:49	JKC	6010D

Qualifiers/ Definitions				
	B	Analyte detected in blank	DF	Dilution Factor
	J	Estimated value	MQL	Method Quantitation Limit

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REPORT OF ANALYSIS

Lab No : **90643**
Sample ID : **SS-LY-39**

Matrix: **Solids**
Sampled: **7/24/2023 16:10**

Test	Results	Units	MQL	DF	Date / Time Analyzed	By	Analytical Method
Moisture	**16.5**	%		1	07/27/23 10:36	CNC	SW-DRYWT
Lead	**24.4**	mg/Kg - dry	0.359	1	08/02/23 18:54	JKC	6010D

Qualifiers/ Definitions				
	B	Analyte detected in blank	DF	Dilution Factor
	J	Estimated value	MQL	Method Quantitation Limit

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REPORT OF ANALYSIS

Lab No : **90644**
Sample ID : **SS-LY-29**

Matrix: **Solids**
Sampled: **7/24/2023 16:28**

Test	Results	Units	MQL	DF	Date / Time Analyzed	By	Analytical Method
Moisture	**17.1**	%		1	07/28/23 10:30	CNC	SW-DRYWT
Lead	**24.8**	mg/Kg - dry	0.361	1	08/02/23 18:58	JKC	6010D

Qualifiers/ Definitions				
	B	Analyte detected in blank	DF	Dilution Factor
	J	Estimated value	MQL	Method Quantitation Limit

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REPORT OF ANALYSIS

Lab No : **90645**
Sample ID : **SS-LY-27**

Matrix: **Solids**
Sampled: **7/24/2023 16:32**

Test	Results	Units	MQL	DF	Date / Time Analyzed	By	Analytical Method
Moisture	**24.7**	%		1	07/28/23 10:30	CNC	SW-DRYWT
Lead	**11.1**	mg/Kg - dry	0.398	1	08/02/23 19:02	JKC	6010D

Qualifiers/ Definitions				
	B	Analyte detected in blank	DF	Dilution Factor
	J	Estimated value	MQL	Method Quantitation Limit

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REPORT OF ANALYSIS

Lab No : **90646**
Sample ID : **SS-LY-4**

Matrix: **Solids**
Sampled: **7/24/2023 16:38**

Test	Results	Units	MQL	DF	Date / Time Analyzed	By	Analytical Method
Moisture	**10.8**	%		1	07/28/23 10:30	CNC	SW-DRYWT
Lead	**25.2**	mg/Kg - dry	0.336	1	08/02/23 19:07	JKC	6010D

Qualifiers/ Definitions				
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	J	Estimated value	MQL	Method Quantitation Limit

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REPORT OF ANALYSIS

Lab No : **90647**
Sample ID : **SS-LY-45**

Matrix: **Solids**
Sampled: **7/24/2023 16:18**

Test	Results	Units	MDL	MQL	DF	Date / Time Analyzed	By	Analytical Method
Moisture	**47.6**	%			1	07/31/23 11:05	CNC	SW-DRYWT
Antimony	**1.84**	mg/Kg - dry		0.477	5	08/02/23 15:57	CPW	6020B
Arsenic	**5.04**	mg/Kg - dry		0.477	5	08/01/23 14:24	CPW	6020B
Barium	**153**	mg/Kg - dry		0.477	5	08/01/23 14:24	CPW	6020B
Beryllium	**0.531**	mg/Kg - dry		0.477	5	08/02/23 15:57	CPW	6020B
Cadmium	**1.15**	mg/Kg - dry		0.477	5	08/01/23 14:24	CPW	6020B
Chromium	**22.3**	mg/Kg - dry		0.477	5	08/01/23 14:24	CPW	6020B
Cobalt	**5.95**	mg/Kg - dry		0.477	5	08/01/23 14:24	CPW	6020B
Copper	**102**	mg/Kg - dry		2.39	25	08/02/23 15:29	CPW	6020B
Manganese	**298**	mg/Kg - dry		0.477	5	08/01/23 14:24	CPW	6020B
Mercury (Total)	**0.198**	mg/Kg - dry		0.0573	1	07/28/23 16:02	JKC	7471B
Nickel	**17.8**	mg/Kg - dry		0.477	5	08/01/23 14:24	CPW	6020B
Selenium	**0.612**	mg/Kg - dry		0.477	5	08/01/23 14:24	CPW	6020B
Silver	<0.477	mg/Kg - dry		0.477	5	08/01/23 14:24	CPW	6020B
Thallium	<0.477	mg/Kg - dry		0.477	5	08/01/23 14:24	CPW	6020B
Vanadium	**19.3**	mg/Kg - dry		2.39	5	08/01/23 14:24	CPW	6020B
Zinc	**494**	mg/Kg - dry		4.77	5	08/01/23 14:24	CPW	6020B

Qualifiers/ Definitions

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REPORT OF ANALYSIS

Lab No : **90647**
Sample ID : **SS-LY-45**

Matrix: **Solids**
Sampled: **7/24/2023 16:18**

Analytical Method: 8270E **Prep Batch(es):** **V35831** 07/27/23 11:30
Prep Method: 3546

Test	Results	Units	MDL	MQL	DF	Date / Time Analyzed	By	Analytical Batch
Acenaphthene	<0.332	mg/Kg - dry	0.332	1.89	1	07/28/23 14:14	AMP	V35874
Acenaphthylene	<0.301	mg/Kg - dry	0.301	1.89	1	07/28/23 14:14	AMP	V35874
Aniline	<0.435	mg/Kg - dry	0.435	1.89	1	07/28/23 14:14	AMP	V35874
Anthracene	<0.410	mg/Kg - dry	0.410	1.89	1	07/28/23 14:14	AMP	V35874
Benzo(a)anthracene	<0.398	mg/Kg - dry	0.398	1.89	1	07/28/23 14:14	AMP	V35874
Benzo(a)pyrene	<0.421	mg/Kg - dry	0.421	1.89	1	07/28/23 14:14	AMP	V35874
Benzo(b)fluoranthene	<0.417	mg/Kg - dry	0.417	1.89	1	07/28/23 14:14	AMP	V35874
Benzo(g,h,i)perylene	<0.389	mg/Kg - dry	0.389	1.89	1	07/28/23 14:14	AMP	V35874
Benzo(k)fluoranthene	<0.393	mg/Kg - dry	0.393	1.89	1	07/28/23 14:14	AMP	V35874
Benzoic Acid	<1.66	mg/Kg - dry	1.66	5.73	1	07/28/23 14:14	AMP	V35874
Benzyl alcohol	<0.301	mg/Kg - dry	0.301	1.89	1	07/28/23 14:14	AMP	V35874
Bis(2-Chloroethoxy)methane	<0.337	mg/Kg - dry	0.337	1.89	1	07/28/23 14:14	AMP	V35874
Bis(2-Chloroethyl)ether	<0.307	mg/Kg - dry	0.307	1.89	1	07/28/23 14:14	AMP	V35874
Bis(2-Chloroisopropyl)ether	<0.389	mg/Kg - dry	0.389	0.944	1	07/28/23 14:14	AMP	V35874
Bis(2-ethylhexyl)phthalate	<0.343	mg/Kg - dry	0.343	1.89	1	07/28/23 14:14	AMP	V35874
4-Bromophenyl phenyl ether	<0.312	mg/Kg - dry	0.312	1.89	1	07/28/23 14:14	AMP	V35874
Butyl benzyl phthalate	<0.324	mg/Kg - dry	0.324	0.944	1	07/28/23 14:14	AMP	V35874
4-Chloro-3-methylphenol	<0.265	mg/Kg - dry	0.265	1.89	1	07/28/23 14:14	AMP	V35874
4-Chloroaniline	<0.320	mg/Kg - dry	0.320	0.944	1	07/28/23 14:14	AMP	V35874
2-Chloronaphthalene	<0.332	mg/Kg - dry	0.332	1.89	1	07/28/23 14:14	AMP	V35874
2-Chlorophenol	<0.280	mg/Kg - dry	0.280	1.89	1	07/28/23 14:14	AMP	V35874
4-Chlorophenyl phenyl ether	<0.360	mg/Kg - dry	0.360	2.86	1	07/28/23 14:14	AMP	V35874

Qualifiers/ Definitions

B	Analyte detected in blank	DF	Dilution Factor
J	Estimated value	MQL	Method Quantitation Limit

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REPORT OF ANALYSIS

Lab No : **90647**
Sample ID : **SS-LY-45**

Matrix: **Solids**
Sampled: **7/24/2023 16:18**

Analytical Method: 8270E **Prep Batch(es):** **V35831** 07/27/23 11:30
Prep Method: 3546

Test	Results	Units	MDL	MQL	DF	Date / Time Analyzed	By	Analytical Batch
Chrysene	<0.406	mg/Kg - dry	0.406	1.89	1	07/28/23 14:14	AMP	V35874
Dibenz(a,h)anthracene	<0.658	mg/Kg - dry	0.658	1.89	1	07/28/23 14:14	AMP	V35874
Dibenzofuran	<0.341	mg/Kg - dry	0.341	1.89	1	07/28/23 14:14	AMP	V35874
1,2-Dichlorobenzene	<0.270	mg/Kg - dry	0.270	1.89	1	07/28/23 14:14	AMP	V35874
1,3-Dichlorobenzene	<0.278	mg/Kg - dry	0.278	1.89	1	07/28/23 14:14	AMP	V35874
1,4-Dichlorobenzene	<0.278	mg/Kg - dry	0.278	0.944	1	07/28/23 14:14	AMP	V35874
3,3'-Dichlorobenzidine	<0.421	mg/Kg - dry	0.421	1.89	1	07/28/23 14:14	AMP	V35874
2,4-Dichlorophenol	<0.274	mg/Kg - dry	0.274	1.89	1	07/28/23 14:14	AMP	V35874
Diethyl phthalate	<0.515	mg/Kg - dry	0.515	1.89	1	07/28/23 14:14	AMP	V35874
Dimethyl phthalate	<0.498	mg/Kg - dry	0.498	1.89	1	07/28/23 14:14	AMP	V35874
2,4-Dimethylphenol	<0.309	mg/Kg - dry	0.309	0.944	1	07/28/23 14:14	AMP	V35874
Di-n-butyl phthalate	<0.307	mg/Kg - dry	0.307	1.89	1	07/28/23 14:14	AMP	V35874
4,6-Dinitro-2-methylphenol	<0.687	mg/Kg - dry	0.687	4.29	1	07/28/23 14:14	AMP	V35874
2,4-Dinitrophenol	<1.49	mg/Kg - dry	1.49	4.29	1	07/28/23 14:14	AMP	V35874
2,4-Dinitrotoluene	<0.276	mg/Kg - dry	0.276	1.89	1	07/28/23 14:14	AMP	V35874
2,6-Dinitrotoluene	<0.309	mg/Kg - dry	0.309	1.89	1	07/28/23 14:14	AMP	V35874
Di-n-Octyl Phthalate	<0.410	mg/Kg - dry	0.410	0.944	1	07/28/23 14:14	AMP	V35874
Fluoranthene	<0.353	mg/Kg - dry	0.353	1.89	1	07/28/23 14:14	AMP	V35874
Fluorene	<0.366	mg/Kg - dry	0.366	1.89	1	07/28/23 14:14	AMP	V35874
Hexachlorobenzene	<0.303	mg/Kg - dry	0.303	1.89	1	07/28/23 14:14	AMP	V35874
Hexachlorobutadiene	<0.278	mg/Kg - dry	0.278	1.89	1	07/28/23 14:14	AMP	V35874
Hexachlorocyclopentadiene	<0.450	mg/Kg - dry	0.450	1.89	1	07/28/23 14:14	AMP	V35874

Qualifiers/ Definitions

B	Analyte detected in blank	DF	Dilution Factor
J	Estimated value	MQL	Method Quantitation Limit

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REPORT OF ANALYSIS

Lab No : **90647**
Sample ID : **SS-LY-45**

Matrix: **Solids**
Sampled: **7/24/2023 16:18**

Analytical Method: 8270E **Prep Batch(es):** **V35831** 07/27/23 11:30
Prep Method: 3546

Test	Results	Units	MDL	MQL	DF	Date / Time Analyzed	By	Analytical Batch
Hexachloroethane	<0.227	mg/Kg - dry	0.227	1.89	1	07/28/23 14:14	AMP	V35874
Indeno(1,2,3-cd)pyrene	<0.513	mg/Kg - dry	0.513	1.89	1	07/28/23 14:14	AMP	V35874
Isophorone	<0.547	mg/Kg - dry	0.547	1.89	1	07/28/23 14:14	AMP	V35874
1-Methylnaphthalene	<0.303	mg/Kg - dry	0.303	1.89	1	07/28/23 14:14	AMP	V35874
2-Methylnaphthalene	<0.286	mg/Kg - dry	0.286	1.89	1	07/28/23 14:14	AMP	V35874
2-Methylphenol	<0.278	mg/Kg - dry	0.278	1.89	1	07/28/23 14:14	AMP	V35874
3&4 Methylphenol	<0.242	mg/Kg - dry	0.242	1.89	1	07/28/23 14:14	AMP	V35874
Naphthalene	<0.412	mg/Kg - dry	0.412	1.89	1	07/28/23 14:14	AMP	V35874
2-Nitroaniline	<0.276	mg/Kg - dry	0.276	1.89	1	07/28/23 14:14	AMP	V35874
3-Nitroaniline	<0.343	mg/Kg - dry	0.343	1.89	1	07/28/23 14:14	AMP	V35874
4-Nitroaniline	<0.267	mg/Kg - dry	0.267	0.944	1	07/28/23 14:14	AMP	V35874
Nitrobenzene	<0.332	mg/Kg - dry	0.332	0.944	1	07/28/23 14:14	AMP	V35874
2-Nitrophenol	<0.253	mg/Kg - dry	0.253	1.89	1	07/28/23 14:14	AMP	V35874
4-Nitrophenol	<0.335	mg/Kg - dry	0.335	1.89	1	07/28/23 14:14	AMP	V35874
N-Nitrosodimethylamine	<0.753	mg/Kg - dry	0.753	1.89	1	07/28/23 14:14	AMP	V35874
N-Nitrosodiphenylamine	<0.519	mg/Kg - dry	0.519	1.89	1	07/28/23 14:14	AMP	V35874
N-Nitroso-di-n-propylamine	<0.337	mg/Kg - dry	0.337	1.89	1	07/28/23 14:14	AMP	V35874
Pentachlorophenol	<0.994	mg/Kg - dry	0.994	2.86	1	07/28/23 14:14	AMP	V35874
Phenanthrene	<0.595	mg/Kg - dry	0.595	1.89	1	07/28/23 14:14	AMP	V35874
Phenol	<0.320	mg/Kg - dry	0.320	1.89	1	07/28/23 14:14	AMP	V35874
Pyrene	<0.383	mg/Kg - dry	0.383	1.89	1	07/28/23 14:14	AMP	V35874
Pyridine	<0.227	mg/Kg - dry	0.227	0.944	1	07/28/23 14:14	AMP	V35874

Qualifiers/ Definitions

B Analyte detected in blank
J Estimated value
DF Dilution Factor
MQL Method Quantitation Limit

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REPORT OF ANALYSIS

Lab No : **90647**
Sample ID : **SS-LY-45**

Matrix: **Solids**
Sampled: **7/24/2023 16:18**

Analytical Method: 8270E **Prep Batch(es):** **V35831** 07/27/23 11:30
Prep Method: 3546

Test	Results	Units	MDL	MQL	DF	Date / Time Analyzed	By	Analytical Batch
1,2,4-Trichlorobenzene	<0.307	mg/Kg - dry	0.307	1.89	1	07/28/23 14:14	AMP	V35874
2,4,5-Trichlorophenol	<0.274	mg/Kg - dry	0.274	1.89	1	07/28/23 14:14	AMP	V35874
2,4,6-Trichlorophenol	<0.276	mg/Kg - dry	0.276	1.89	1	07/28/23 14:14	AMP	V35874
Surrogate: Phenol-d5	72.4		Limits: 34-121%		1	07/28/23 14:14	AMP	8270E
Surrogate: 2-Fluorobiphenyl	81.2		Limits: 44-115%		1	07/28/23 14:14	AMP	V35874
Surrogate: 2-Fluorophenol	76.2		Limits: 35-115%		1	07/28/23 14:14	AMP	V35874
Surrogate: Nitrobenzene-d5	76.4		Limits: 37-122%		1	07/28/23 14:14	AMP	V35874
Surrogate: 4-Terphenyl-d14	99.6		Limits: 54-127%		1	07/28/23 14:14	AMP	V35874
Surrogate: 2,4,6-Tribromophenol	80.4		Limits: 39-132%		1	07/28/23 14:14	AMP	V35874

Qualifiers/ Definitions

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J	Estimated value	MQL	Method Quantitation Limit

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REPORT OF ANALYSIS

Lab No : **90648**
Sample ID : **SS-LY-45(1')**

Matrix: **Solids**
Sampled: **7/24/2023 16:20**

Test	Results	Units	MQL	DF	Date / Time Analyzed	By	Analytical Method
Moisture	**15.6**	%		1	07/28/23 10:30	CNC	SW-DRYWT
Lead	**248**	mg/Kg - dry	1.78	5	08/07/23 17:40	JKC	6010D

Qualifiers/ Definitions

B	Analyte detected in blank	DF	Dilution Factor
J	Estimated value	MQL	Method Quantitation Limit

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Mid-Atlantic Associates, Inc. - Raleigh
Kevin Clay
409 Rogers View Court
Raleigh , NC 27610

Project R4370.00
Information :

Original Report Date : 08/08/2023
Revised Report Date: 08/16/2023
Received : 07/26/2023

Report Number : **23-207-0017**

REPORT OF ANALYSIS

Lab No : **90649**
Sample ID : **SS-LY-45(Pb)**

Matrix: **Solids**
Sampled: **7/24/2023 10:15**

Test	Results	Units	MQL	DF	Date / Time Analyzed	By	Analytical Method
Moisture	**36.7**	%		1	07/28/23 10:30	CNC	SW-DRYWT
Lead	**384**	mg/Kg - dry	2.37	5	08/07/23 17:53	JKC	6010D

Qualifiers/ Definitions

B	Analyte detected in blank	DF	Dilution Factor
J	Estimated value	MQL	Method Quantitation Limit

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Project R4370.00
Information :

Original Report Date : 08/08/2023
Revised Report Date: 08/16/2023
Received : 07/26/2023

Report Number : **23-207-0017**

REPORT OF ANALYSIS

Lab No : **90650**
Sample ID : **SS-LY-DUP1**

Matrix: **Solids**
Sampled: **7/24/2023 10:20**

Test	Results	Units	MQL	DF	Date / Time Analyzed	By	Analytical Method
Moisture	**32.7**	%		1	07/28/23 10:30	CNC	SW-DRYWT
Lead	**553**	mg/Kg - dry	4.46	10	08/07/23 17:58	JKC	6010D

Qualifiers/ Definitions				
	B	Analyte detected in blank	DF	Dilution Factor
	J	Estimated value	MQL	Method Quantitation Limit

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Quality Control Data

Client ID: **Mid-Atlantic Associates, Inc. - Raleigh**
Project Description: **R4370.00**
Report No: **23-207-0017**

QC Prep: V36022
QC Prep Batch Method: 3050B
QC Analytical Batch(es): V36145,V36316
Analysis Method: 6010D
Analysis Description: Metals Analysis

Lab Reagent Blank LRB-V36022 Matrix: SOL
Associated Lab Samples: 90635, 90636, 90637, 90638, 90640, 90641, 90642, 90643, 90644, 90645, 90646, 90648, 90649, 90650

Parameter	Units	Blank Result	MQL	Analyzed
Lead	mg/Kg	<0.300	0.300	08/02/23 17:42

Laboratory Control Sample LCS-V36022

Parameter	Units	Spike Conc.	LCS Result	LCS %Rec	% Rec Limits
Lead	mg/Kg	5.00	5.98	120	80-120

Matrix Spike & Matrix Spike Duplicate V 90637-MS-V36022 V 90637-MSD-V36022

Parameter	Units	Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS %Rec	MSD %Rec	%Rec Limits	RPD	Max RPD
Lead	mg/Kg	177	5.00	5.00	195	171	360*	0.0*	75-125	13.1	20

Post Digestion Spike V 90637-PDS-V36022

Parameter	Units	PDS Result	% Recovery	Analyzed
Lead	mg/Kg	152	101	08/07/23 17:18

* QC Fail

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Quality Control Data

Client ID: **Mid-Atlantic Associates, Inc. - Raleigh**
Project Description: **R4370.00**
Report No: **23-207-0017**

QC Prep: L695858
QC Prep Batch Method: 3050B
QC Analytical Batch(es): L696237,L696547,L698986
Analysis Method: 6020B
Analysis Description: Metals Analyses

Lab Reagent Blank LRB-L695858 Matrix: SOL
Associated Lab Samples: 90639, 90647

Parameter	Units	Blank Result	MQL	Analyzed
Antimony	mg/Kg	<0.250	0.250	08/01/23 13:34
Arsenic	mg/Kg	<0.250	0.250	08/01/23 13:34
Barium	mg/Kg	<0.250	0.250	08/01/23 13:34
Beryllium	mg/Kg	<0.250	0.250	08/02/23 14:22
Cadmium	mg/Kg	<0.250	0.250	08/01/23 13:34
Chromium	mg/Kg	<0.250	0.250	08/01/23 13:34
Cobalt	mg/Kg	<0.250	0.250	08/01/23 13:34
Copper	mg/Kg	<0.250	0.250	08/01/23 13:34
Lead	mg/Kg	<0.250	0.250	08/01/23 13:34
Manganese	mg/Kg	<0.250	0.250	08/01/23 13:34
Nickel	mg/Kg	<0.250	0.250	08/01/23 13:34
Selenium	mg/Kg	<0.250	0.250	08/01/23 13:34
Silver	mg/Kg	<0.250	0.250	08/01/23 13:34
Thallium	mg/Kg	<0.250	0.250	08/01/23 13:34
Vanadium	mg/Kg	<1.25	1.25	08/01/23 13:34
Zinc	mg/Kg	<2.50	2.50	08/01/23 13:34

Laboratory Control Sample LCS-L695858

Parameter	Units	Spike Conc.	LCS Result	LCS %Rec	% Rec Limits
Antimony	mg/Kg	5.00	4.69	94.0	80-120
Arsenic	mg/Kg	2.50	2.38	95.0	80-120
Barium	mg/Kg	5.00	4.59	92.0	80-120
Beryllium	mg/Kg	2.50	2.38	95.0	80-120
Cadmium	mg/Kg	0.500	0.480	96.0	80-120
Chromium	mg/Kg	5.00	4.77	95.0	80-120
Cobalt	mg/Kg	5.00	4.70	94.0	80-120

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Quality Control Data

Client ID: Mid-Atlantic Associates, Inc. - Raleigh
Project Description: R4370.00
Report No: 23-207-0017

QC Prep: L695858
QC Prep Batch Method: 3050B
QC Analytical Batch(es): L696237,L696547,L698986
Analysis Method: 6020B
Analysis Description: Metals Analyses

Laboratory Control Sample LCS-L695858

Parameter	Units	Spike Conc.	LCS Result	LCS %Rec	% Rec Limits
Copper	mg/Kg	2.50	2.52	101	80-120
Lead	mg/Kg	2.50	2.34	94.0	80-120
Manganese	mg/Kg	5.00	5.10	102	80-120
Nickel	mg/Kg	2.50	2.44	98.0	80-120
Selenium	mg/Kg	5.00	4.84	97.0	80-120
Silver	mg/Kg	0.500	0.470	94.0	80-120
Thallium	mg/Kg	0.500	0.464	93.0	80-120
Vanadium	mg/Kg	25.0	23.0	92.0	80-120
Zinc	mg/Kg	25.0	24.0	96.0	80-120

Matrix Spike & Matrix Spike Duplicate V 90647-MS-L695858 V 90647-MSD-L695858

Parameter	Units	Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS %Rec	MSD %Rec	%Rec Limits	RPD	Max RPD
Antimony	mg/Kg	0.964	4.98	4.82	3.09	2.49	43.0*	32.0*	75-125	21.5	80
Arsenic	mg/Kg	2.64	2.49	2.41	8.13	4.82	221*	91.0	75-125	51.1	80
Barium	mg/Kg	80.1	4.98	4.82	86.5	95.6	129*	322*	75-125	9.9	80
Beryllium	mg/Kg	0.278	2.49	2.41	2.56	2.82	92.0	106	75-125	9.6	80
Cadmium	mg/Kg	0.600	0.498	0.482	1.14	1.05	109	93.0	75-125	8.2	80
Chromium	mg/Kg	11.7	4.98	4.82	16.6	15.9	98.0	87.0	75-125	4.3	80
Cobalt	mg/Kg	3.12	4.98	4.82	8.15	7.50	101	91.0	75-125	8.3	80
Copper	mg/Kg	53.2	2.49	2.41	60.8	54.6	306*	58.0*	75-125	10.7	80
Lead	mg/Kg	188	2.49	2.41	203	186	603*	0.0*	75-125	8.7	80
Manganese	mg/Kg	156	4.98	4.82	180	174	482*	374*	75-125	3.3	80
Nickel	mg/Kg	9.31	2.49	2.41	13.6	11.3	172*	83.0	75-125	18.4	80
Selenium	mg/Kg	0.321	4.98	4.82	4.43	4.43	83.0	85.0	75-125	0.0	80
Silver	mg/Kg	<0.250	0.498	0.482	0.689	0.686	91.0	94.0	75-125	0.4	80

* QC Fail

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Quality Control Data

Client ID: **Mid-Atlantic Associates, Inc. - Raleigh**
Project Description: **R4370.00**
Report No: **23-207-0017**

QC Prep: L695858
QC Prep Batch Method: 3050B
QC Analytical Batch(es): L696237,L696547,L698986
Analysis Method: 6020B
Analysis Description: Metals Analyses

Matrix Spike & Matrix Spike Duplicate V 90647-MS-L695858 V 90647-MSD-L695858

Parameter	Units	Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS %Rec	MSD %Rec	%Rec Limits	RPD	Max RPD
Thallium	mg/Kg	<0.250	0.498	0.482	0.492	0.489	74.0*	76.0	75-125	0.6	80
Vanadium	mg/Kg	10.1	24.9	24.1	31.8	31.3	87.0	88.0	75-125	1.5	80
Zinc	mg/Kg	259	24.9	24.1	334	281	302*	91.0	75-125	17.2	80

Post Digestion Spike V 90647-PDS-L695858

Parameter	Units	PDS Result	% Recovery	Analyzed
Antimony	mg/Kg	2.26	92.0	08/02/23 16:09
Arsenic	mg/Kg	1.36	95.0	08/01/23 14:36
Barium	mg/Kg	10.2	99.0	08/01/23 14:36
Beryllium	mg/Kg	1.13	94.0	08/02/23 16:09
Cadmium	mg/Kg	0.288	98.0	08/01/23 14:36
Chromium	mg/Kg	3.42	97.0	08/01/23 14:36
Cobalt	mg/Kg	2.58	97.0	08/01/23 14:36
Copper	mg/Kg	2.50	112	08/02/23 15:41
Lead	mg/Kg	19.8	99.0	08/01/23 14:36
Manganese	mg/Kg	17.4	97.0	08/01/23 14:36
Nickel	mg/Kg	2.08	99.0	08/01/23 14:36
Selenium	mg/Kg	2.32	97.0	08/01/23 14:36
Silver	mg/Kg	<0.250	94.0	08/01/23 14:36
Thallium	mg/Kg	<0.250	94.0	08/01/23 14:36
Vanadium	mg/Kg	12.2	96.0	08/01/23 14:36
Zinc	mg/Kg	36.6	97.0	08/01/23 14:36

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Quality Control Data

Client ID: **Mid-Atlantic Associates, Inc. - Raleigh**
Project Description: **R4370.00**
Report No: **23-207-0017**

QC Prep: L696684
QC Prep Batch Method: 7471A
QC Analytical Batch(es): L696885
Analysis Method: 7471A
Analysis Description: Solids Total Mercury Analysis - CVAA

Lab Reagent Blank LRB-L696684 Matrix: SOL
Associated Lab Samples: 90639

Parameter	Units	Blank Result	MDL	MQL	Analyzed
Mercury (Total)	mg/Kg	<0.0232	0.0232	0.192	08/04/23 10:32

Laboratory Control Sample LCS-L696684

Parameter	Units	Spike Conc.	LCS Result	LCS %Rec	% Rec Limits
Mercury (Total)	mg/Kg	0.400	0.428	107	80-120

Matrix Spike & Matrix Spike Duplicate L 89326-MS-L696684 L 89326-MSD-L696684

Parameter	Units	Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS %Rec	MSD %Rec	%Rec Limits	RPD	Max RPD
Mercury (Total)	mg/Kg	0.0547	0.368	0.364	0.404	0.396	95.0	94.0	80-120	2.0	20

Post Digestion Spike L 89326-PDS-L696684

Parameter	Units	PDS Result	% Recovery	Analyzed
Mercury (Total)	mg/Kg	0.814	97.0	08/04/23 11:05

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Quality Control Data

Client ID: **Mid-Atlantic Associates, Inc. - Raleigh**
Project Description: **R4370.00**
Report No: **23-207-0017**

QC Prep: V35873
QC Prep Batch Method: 7471B (Prep)
QC Analytical Batch(es): V35952
Analysis Method: 7471B
Analysis Description: Solids Total Mercury Analysis - CVAA

Lab Reagent Blank LRB-V35873 Matrix: SOL
Associated Lab Samples: 90647

Parameter	Units	Blank Result	MQL	Analyzed
Mercury (Total)	mg/Kg	<0.0300	0.0300	07/28/23 15:43

Laboratory Control Sample LCS-V35873

Parameter	Units	Spike Conc.	LCS Result	LCS %Rec	% Rec Limits
Mercury (Total)	mg/Kg	0.417	0.451	108	80-120

Matrix Spike & Matrix Spike Duplicate V 90819-MS-V35873 V 90819-MSD-V35873

Parameter	Units	Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS %Rec	MSD %Rec	%Rec Limits	RPD	Max RPD
Mercury (Total)	mg/Kg	<0.0300	0.410	0.397	0.400	0.362	98.0	91.0	80-120	9.9	20

Post Digestion Spike V 90819-PDS-V35873

Parameter	Units	PDS Result	% Recovery	Analyzed
Mercury (Total)	mg/Kg	0.200	101	07/28/23 16:15

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Quality Control Data

Client ID: **Mid-Atlantic Associates, Inc. - Raleigh**
Project Description: **R4370.00**
Report No: **23-207-0017**

QC Prep: V35831
QC Prep Batch Method: 3546
QC Analytical Batch(es): V35874
Analysis Method: 8270E
Analysis Description: Semivolatile Organic Compounds - GC/MS

Lab Reagent Blank LRB-V35831 Matrix: SOL
Associated Lab Samples: 90639, 90647

Parameter	Units	Blank Result	MDL	MQL	Analyzed	% Recovery	% Rec Limits
Acenaphthene	mg/Kg	<0.116	0.116	0.660	07/27/23 16:49		
Acenaphthylene	mg/Kg	<0.105	0.105	0.660	07/27/23 16:49		
Aniline	mg/Kg	<0.152	0.152	0.660	07/27/23 16:49		
Anthracene	mg/Kg	<0.143	0.143	0.660	07/27/23 16:49		
Benzo(a)anthracene	mg/Kg	<0.139	0.139	0.660	07/27/23 16:49		
Benzo(a)pyrene	mg/Kg	<0.147	0.147	0.660	07/27/23 16:49		
Benzo(b)fluoranthene	mg/Kg	<0.146	0.146	0.660	07/27/23 16:49		
Benzo(g,h,i)perylene	mg/Kg	<0.136	0.136	0.660	07/27/23 16:49		
Benzo(k)fluoranthene	mg/Kg	<0.137	0.137	0.660	07/27/23 16:49		
Benzoic Acid	mg/Kg	<0.580	0.580	2.00	07/27/23 16:49		
Benzyl alcohol	mg/Kg	<0.105	0.105	0.660	07/27/23 16:49		
Bis(2-Chloroethoxy)methane	mg/Kg	<0.118	0.118	0.660	07/27/23 16:49		
Bis(2-Chloroethyl)ether	mg/Kg	<0.107	0.107	0.660	07/27/23 16:49		
Bis(2-Chloroisopropyl)ether	mg/Kg	<0.136	0.136	0.330	07/27/23 16:49		
Bis(2-ethylhexyl)phthalate	mg/Kg	<0.120	0.120	0.660	07/27/23 16:49		
4-Bromophenyl phenyl ether	mg/Kg	<0.109	0.109	0.660	07/27/23 16:49		
Butyl benzyl phthalate	mg/Kg	<0.113	0.113	0.330	07/27/23 16:49		
4-Chloro-3-methylphenol	mg/Kg	<0.092	0.092	0.660	07/27/23 16:49		
4-Chloroaniline	mg/Kg	<0.112	0.112	0.330	07/27/23 16:49		
2-Chloronaphthalene	mg/Kg	<0.116	0.116	0.660	07/27/23 16:49		
2-Chlorophenol	mg/Kg	<0.098	0.098	0.660	07/27/23 16:49		
4-Chlorophenyl phenyl ether	mg/Kg	<0.126	0.126	1.00	07/27/23 16:49		
Chrysene	mg/Kg	<0.142	0.142	0.660	07/27/23 16:49		
Dibenz(a,h)anthracene	mg/Kg	<0.230	0.230	0.660	07/27/23 16:49		
Dibenzofuran	mg/Kg	<0.119	0.119	0.660	07/27/23 16:49		
1,2-Dichlorobenzene	mg/Kg	<0.094	0.094	0.660	07/27/23 16:49		
1,3-Dichlorobenzene	mg/Kg	<0.097	0.097	0.660	07/27/23 16:49		

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Quality Control Data

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Project Description: R4370.00
Report No: 23-207-0017

QC Prep: V35831
QC Prep Batch Method: 3546
QC Analytical Batch(es): V35874
Analysis Method: 8270E
Analysis Description: Semivolatile Organic Compounds - GC/MS

Lab Reagent Blank LRB-V35831 Matrix: SOL
Associated Lab Samples: 90639, 90647

Parameter	Units	Blank Result	MDL	MQL	Analyzed	% Recovery	% Rec Limits
1,4-Dichlorobenzene	mg/Kg	<0.097	0.097	0.330	07/27/23 16:49		
3,3'-Dichlorobenzidine	mg/Kg	<0.147	0.147	0.660	07/27/23 16:49		
2,4-Dichlorophenol	mg/Kg	<0.095	0.095	0.660	07/27/23 16:49		
Diethyl phthalate	mg/Kg	<0.180	0.180	0.660	07/27/23 16:49		
Dimethyl phthalate	mg/Kg	<0.174	0.174	0.660	07/27/23 16:49		
2,4-Dimethylphenol	mg/Kg	<0.108	0.108	0.330	07/27/23 16:49		
Di-n-butyl phthalate	mg/Kg	<0.107	0.107	0.660	07/27/23 16:49		
4,6-Dinitro-2-methylphenol	mg/Kg	<0.240	0.240	1.50	07/27/23 16:49		
2,4-Dinitrophenol	mg/Kg	<0.520	0.520	1.50	07/27/23 16:49		
2,4-Dinitrotoluene	mg/Kg	<0.096	0.096	0.660	07/27/23 16:49		
2,6-Dinitrotoluene	mg/Kg	<0.108	0.108	0.660	07/27/23 16:49		
Di-n-Octyl Phthalate	mg/Kg	<0.143	0.143	0.330	07/27/23 16:49		
Fluoranthene	mg/Kg	<0.123	0.123	0.660	07/27/23 16:49		
Fluorene	mg/Kg	<0.128	0.128	0.660	07/27/23 16:49		
Hexachlorobenzene	mg/Kg	<0.106	0.106	0.660	07/27/23 16:49		
Hexachlorobutadiene	mg/Kg	<0.097	0.097	0.660	07/27/23 16:49		
Hexachlorocyclopentadiene	mg/Kg	<0.157	0.157	0.660	07/27/23 16:49		
Hexachloroethane	mg/Kg	<0.079	0.079	0.660	07/27/23 16:49		
Indeno(1,2,3-cd)pyrene	mg/Kg	<0.179	0.179	0.660	07/27/23 16:49		
Isophorone	mg/Kg	<0.191	0.191	0.660	07/27/23 16:49		
1-Methylnaphthalene	mg/Kg	<0.106	0.106	0.660	07/27/23 16:49		
2-Methylnaphthalene	mg/Kg	<0.100	0.100	0.660	07/27/23 16:49		
2-Methylphenol	mg/Kg	<0.097	0.097	0.660	07/27/23 16:49		
3&4 Methylphenol	mg/Kg	<0.084	0.084	0.660	07/27/23 16:49		
Naphthalene	mg/Kg	<0.144	0.144	0.660	07/27/23 16:49		
2-Nitroaniline	mg/Kg	<0.096	0.096	0.660	07/27/23 16:49		
3-Nitroaniline	mg/Kg	<0.120	0.120	0.660	07/27/23 16:49		

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Quality Control Data

Client ID: **Mid-Atlantic Associates, Inc. - Raleigh**
Project Description: **R4370.00**
Report No: **23-207-0017**

QC Prep: V35831
QC Prep Batch Method: 3546
QC Analytical Batch(es): V35874
Analysis Method: 8270E
Analysis Description: Semivolatile Organic Compounds - GC/MS

Lab Reagent Blank LRB-V35831 Matrix: SOL
Associated Lab Samples: 90639, 90647

Parameter	Units	Blank Result	MDL	MQL	Analyzed	% Recovery	% Rec Limits
4-Nitroaniline	mg/Kg	<0.093	0.093	0.330	07/27/23 16:49		
Nitrobenzene	mg/Kg	<0.116	0.116	0.330	07/27/23 16:49		
2-Nitrophenol	mg/Kg	<0.088	0.088	0.660	07/27/23 16:49		
4-Nitrophenol	mg/Kg	<0.117	0.117	0.660	07/27/23 16:49		
N-Nitrosodimethylamine	mg/Kg	<0.263	0.263	0.660	07/27/23 16:49		
N-Nitrosodiphenylamine	mg/Kg	<0.181	0.181	0.660	07/27/23 16:49		
N-Nitroso-di-n-propylamine	mg/Kg	<0.118	0.118	0.660	07/27/23 16:49		
Pentachlorophenol	mg/Kg	<0.347	0.347	1.00	07/27/23 16:49		
Phenanthrene	mg/Kg	<0.208	0.208	0.660	07/27/23 16:49		
Phenol	mg/Kg	<0.112	0.112	0.660	07/27/23 16:49		
Pyrene	mg/Kg	<0.134	0.134	0.660	07/27/23 16:49		
Pyridine	mg/Kg	<0.079	0.079	0.330	07/27/23 16:49		
1,2,4-Trichlorobenzene	mg/Kg	<0.107	0.107	0.660	07/27/23 16:49		
2,4,5-Trichlorophenol	mg/Kg	<0.096	0.096	0.660	07/27/23 16:49		
2,4,6-Trichlorophenol	mg/Kg	<0.096	0.096	0.660	07/27/23 16:49		
2-Fluorobiphenyl (S)					07/27/23 16:49	90.4	44-115
2-Fluorophenol (S)					07/27/23 16:49	83.1	35-115
Nitrobenzene-d5 (S)					07/27/23 16:49	86.8	37-122
4-Terphenyl-d14 (S)					07/27/23 16:49	102	54-127
2,4,6-Tribromophenol (S)					07/27/23 16:49	69.9	39-132
Phenol-d5 (S)					07/27/23 16:49	75.6	34-121

Laboratory Control Sample LCS-V35831

Parameter	Units	Spike Conc.	LCS Result	LCS %Rec	% Rec Limits
Acenaphthene	mg/Kg	1.67	1.55	92.8	40-123
Acenaphthylene	mg/Kg	1.67	1.57	94.0	32-132

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Quality Control Data

Client ID: **Mid-Atlantic Associates, Inc. - Raleigh**
Project Description: **R4370.00**
Report No: **23-207-0017**

QC Prep: V35831
QC Prep Batch Method: 3546
QC Analytical Batch(es): V35874
Analysis Method: 8270E
Analysis Description: Semivolatile Organic Compounds - GC/MS

Laboratory Control Sample LCS-V35831

Parameter	Units	Spike Conc.	LCS Result	LCS %Rec	% Rec Limits
Aniline	mg/Kg	1.67	2.61	156	12-197
Anthracene	mg/Kg	1.67	1.75	105	47-123
Benzo(a)anthracene	mg/Kg	1.67	1.70	102	49-126
Benzo(a)pyrene	mg/Kg	1.67	1.89	113	45-129
Benzo(b)fluoranthene	mg/Kg	1.67	1.85	111	45-132
Benzo(g,h,i)perylene	mg/Kg	1.67	1.69	101	43-134
Benzo(k)fluoranthene	mg/Kg	1.67	1.70	102	47-132
Benzoic Acid	mg/Kg	1.67	0.641	38.3	10-83
Benzyl alcohol	mg/Kg	1.67	1.58	94.6	29-122
Bis(2-Chloroethoxy)methane	mg/Kg	1.67	1.41	84.4	36-121
Bis(2-Chloroethyl)ether	mg/Kg	1.67	1.49	89.2	31-120
Bis(2-Chloroisopropyl)ether	mg/Kg	1.67	1.62	97.0	33-131
Bis(2-ethylhexyl)phthalate	mg/Kg	1.67	1.87	112	51-133
4-Bromophenyl phenyl ether	mg/Kg	1.67	1.67	100	46-124
Butyl benzyl phthalate	mg/Kg	1.67	1.86	111	48-132
4-Chloro-3-methylphenol	mg/Kg	1.67	1.37	82.0	45-122
4-Chloroaniline	mg/Kg	1.67	1.50	89.8	17-106
2-Chloronaphthalene	mg/Kg	1.67	1.54	92.2	41-114
2-Chlorophenol	mg/Kg	1.67	1.50	89.8	34-121
4-Chlorophenyl phenyl ether	mg/Kg	1.67	1.54	92.2	45-121
Chrysene	mg/Kg	1.67	1.65	98.8	50-124
Dibenz(a,h)anthracene	mg/Kg	1.67	1.74	104	45-134
Dibenzofuran	mg/Kg	1.67	1.53	91.6	44-120
1,2-Dichlorobenzene	mg/Kg	1.67	1.35	80.8	33-117
1,3-Dichlorobenzene	mg/Kg	1.67	1.32	79.0	30-115
1,4-Dichlorobenzene	mg/Kg	1.67	1.32	79.0	31-115
3,3'-Dichlorobenzidine	mg/Kg	1.67	1.59	95.2	22-121

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Quality Control Data

Client ID: **Mid-Atlantic Associates, Inc. - Raleigh**
Project Description: **R4370.00**
Report No: **23-207-0017**

QC Prep: V35831
QC Prep Batch Method: 3546
QC Analytical Batch(es): V35874
Analysis Method: 8270E
Analysis Description: Semivolatile Organic Compounds - GC/MS

Laboratory Control Sample LCS-V35831

Parameter	Units	Spike Conc.	LCS Result	LCS %Rec	% Rec Limits
2,4-Dichlorophenol	mg/Kg	1.67	1.33	79.6	40-122
Diethyl phthalate	mg/Kg	1.67	1.69	101	50-124
Dimethyl phthalate	mg/Kg	1.67	1.67	100	48-124
2,4-Dimethylphenol	mg/Kg	1.67	1.82	109	30-127
Di-n-butyl phthalate	mg/Kg	1.67	1.94	116	51-128
4,6-Dinitro-2-methylphenol	mg/Kg	1.67	1.59	95.2	29-132
2,4-Dinitrophenol	mg/Kg	1.67	1.36	81.4	27-129
2,4-Dinitrotoluene	mg/Kg	1.67	1.71	102	48-126
2,6-Dinitrotoluene	mg/Kg	1.67	1.67	100	46-124
Di-n-Octyl Phthalate	mg/Kg	1.67	2.05	123	45-140
Fluoranthene	mg/Kg	1.67	1.70	102	50-127
Fluorene	mg/Kg	1.67	1.57	94.0	43-125
Hexachlorobenzene	mg/Kg	1.67	1.58	94.6	45-122
Hexachlorobutadiene	mg/Kg	1.67	1.23	73.6	32-123
Hexachlorocyclopentadiene	mg/Kg	1.67	1.41	84.4	32-117
Hexachloroethane	mg/Kg	1.67	1.31	78.4	28-117
Indeno(1,2,3-cd)pyrene	mg/Kg	1.67	1.72	103	45-133
Isophorone	mg/Kg	1.67	1.25	74.8	30-122
1-Methylnaphthalene	mg/Kg	1.67	1.29	77.2	40-119
2-Methylnaphthalene	mg/Kg	1.67	1.26	75.4	38-122
2-Methylphenol	mg/Kg	1.67	1.58	94.6	32-122
3&4 Methylphenol	mg/Kg	1.67	1.42	85.0	34-119
Naphthalene	mg/Kg	1.67	1.27	76.0	35-123
2-Nitroaniline	mg/Kg	1.67	1.77	106	44-127
3-Nitroaniline	mg/Kg	1.67	1.77	106	33-119
4-Nitroaniline	mg/Kg	1.67	1.80	108	63-147
Nitrobenzene	mg/Kg	1.67	1.29	77.2	34-122

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Quality Control Data

Client ID: **Mid-Atlantic Associates, Inc. - Raleigh**
Project Description: **R4370.00**
Report No: **23-207-0017**

QC Prep: V35831
QC Prep Batch Method: 3546
QC Analytical Batch(es): V35874
Analysis Method: 8270E
Analysis Description: Semivolatile Organic Compounds - GC/MS

Laboratory Control Sample LCS-V35831

Parameter	Units	Spike Conc.	LCS Result	LCS %Rec	% Rec Limits
2-Nitrophenol	mg/Kg	1.67	1.31	78.4	36-123
4-Nitrophenol	mg/Kg	1.67	1.81	108	30-132
N-Nitrosodimethylamine	mg/Kg	1.67	1.35	80.8	10-146
N-Nitrosodiphenylamine	mg/Kg	1.67	2.02	121	38-127
N-Nitroso-di-n-propylamine	mg/Kg	1.67	1.57	94.0	36-120
Pentachlorophenol	mg/Kg	1.67	1.63	97.6	25-133
Phenanthrene	mg/Kg	1.67	1.67	100	50-121
Phenol	mg/Kg	1.67	1.50	89.8	34-121
Pyrene	mg/Kg	1.67	1.56	93.4	47-127
Pyridine	mg/Kg	1.67	1.08	64.6	10-80
1,2,4-Trichlorobenzene	mg/Kg	1.67	1.18	70.6	34-118
2,4,5-Trichlorophenol	mg/Kg	1.67	1.59	95.2	41-124
2,4,6-Trichlorophenol	mg/Kg	1.67	1.54	92.2	39-126
2-Fluorobiphenyl (S)				92.2	44-115
2-Fluorophenol (S)				88.8	35-115
Nitrobenzene-d5 (S)				77.8	37-122
4-Terphenyl-d14 (S)				97.6	54-127
2,4,6-Tribromophenol (S)				79.5	39-132
Phenol-d5 (S)				78.3	34-121

Matrix Spike & Matrix Spike Duplicate V 90683-MS-V35831 V 90683-MSD-V35831

Parameter	Units	Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS %Rec	MSD %Rec	%Rec Limits	RPD	Max RPD
Acenaphthene	mg/Kg	<0.116	1.67	1.67	1.48	1.39	88.6	83.2	40-123	6.2	20
Acenaphthylene	mg/Kg	<0.105	1.67	1.67	1.48	1.39	88.6	83.2	32-132	6.2	20
Aniline	mg/Kg	<0.152	1.67	1.67	2.55	2.32	153	139	12-197	9.4	20

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Quality Control Data

Client ID: Mid-Atlantic Associates, Inc. - Raleigh
Project Description: R4370.00
Report No: 23-207-0017

QC Prep: V35831
QC Prep Batch Method: 3546
QC Analytical Batch(es): V35874
Analysis Method: 8270E
Analysis Description: Semivolatile Organic Compounds - GC/MS

Matrix Spike & Matrix Spike Duplicate V 90683-MS-V35831 V 90683-MSD-V35831

Parameter	Units	Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS %Rec	MSD %Rec	%Rec Limits	RPD	Max RPD
Anthracene	mg/Kg	<0.143	1.67	1.67	1.65	1.60	98.8	95.8	47-123	3.0	20
Benzo(a)anthracene	mg/Kg	<0.139	1.67	1.67	1.63	1.55	97.6	92.8	49-126	5.0	20
Benzo(a)pyrene	mg/Kg	<0.147	1.67	1.67	1.84	1.77	110	106	45-129	3.8	20
Benzo(b)fluoranthene	mg/Kg	<0.146	1.67	1.67	1.74	1.64	104	98.2	45-132	5.9	20
Benzo(g,h,i)perylene	mg/Kg	<0.136	1.67	1.67	1.61	1.52	96.4	91.0	43-134	5.7	20
Benzo(k)fluoranthene	mg/Kg	<0.137	1.67	1.67	1.67	1.58	100	94.6	47-132	5.5	20
Benzoic Acid	mg/Kg	<0.580	1.67	1.67	<0.580	<0.580	0.0*	0.0*	10-83	0.0	20
Benzyl alcohol	mg/Kg	<0.105	1.67	1.67	1.48	1.41	88.6	84.4	29-122	4.8	20
Bis(2-Chloroethoxy)methane	mg/Kg	<0.118	1.67	1.67	1.33	1.24	79.6	74.2	36-121	7.0	20
Bis(2-Chloroethyl)ether	mg/Kg	<0.107	1.67	1.67	1.46	1.31	87.4	78.4	31-120	10.8	20
Bis(2-Chloroisopropyl)ether	mg/Kg	<0.136	1.67	1.67	1.51	1.37	90.4	82.0	33-131	9.7	20
Bis(2-ethylhexyl)phthalate	mg/Kg	<0.120	1.67	1.67	1.85	1.80	111	108	51-133	2.7	20
4-Bromophenyl phenyl ether	mg/Kg	<0.109	1.67	1.67	1.59	1.53	95.2	91.6	46-124	3.8	20
Butyl benzyl phthalate	mg/Kg	<0.113	1.67	1.67	1.94	1.83	116	110	48-132	5.8	20
4-Chloro-3-methylphenol	mg/Kg	<0.092	1.67	1.67	1.33	1.33	79.6	79.6	45-122	0.0	20
4-Chloroaniline	mg/Kg	<0.112	1.67	1.67	1.43	1.37	85.6	82.0	17-106	4.2	20
2-Chloronaphthalene	mg/Kg	<0.116	1.67	1.67	1.48	1.37	88.6	82.0	41-114	7.7	20
2-Chlorophenol	mg/Kg	<0.098	1.67	1.67	1.46	1.31	87.4	78.4	34-121	10.8	20
4-Chlorophenyl phenyl ether	mg/Kg	<0.126	1.67	1.67	1.46	1.41	87.4	84.4	45-121	3.4	20
Chrysene	mg/Kg	<0.142	1.67	1.67	1.57	1.50	94.0	89.8	50-124	4.5	20
Dibenz(a,h)anthracene	mg/Kg	<0.230	1.67	1.67	1.61	1.46	96.4	87.4	45-134	9.7	20
Dibenzofuran	mg/Kg	<0.119	1.67	1.67	1.47	1.40	88.0	83.8	44-120	4.8	20
1,2-Dichlorobenzene	mg/Kg	<0.094	1.67	1.67	1.27	1.12	76.0	67.0	33-117	12.5	20
1,3-Dichlorobenzene	mg/Kg	<0.097	1.67	1.67	1.27	1.10	76.0	65.8	30-115	14.3	20
1,4-Dichlorobenzene	mg/Kg	<0.097	1.67	1.67	1.24	1.09	74.2	65.2	31-115	12.8	20
3,3'-Dichlorobenzidine	mg/Kg	<0.147	1.67	1.67	1.56	1.51	93.4	90.4	22-121	3.2	20

* QC Fail

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Quality Control Data

Client ID: Mid-Atlantic Associates, Inc. - Raleigh
Project Description: R4370.00
Report No: 23-207-0017

QC Prep: V35831
QC Prep Batch Method: 3546
QC Analytical Batch(es): V35874
Analysis Method: 8270E
Analysis Description: Semivolatile Organic Compounds - GC/MS

Matrix Spike & Matrix Spike Duplicate V 90683-MS-V35831 V 90683-MSD-V35831

Parameter	Units	Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS %Rec	MSD %Rec	%Rec Limits	RPD	Max RPD
2,4-Dichlorophenol	mg/Kg	<0.095	1.67	1.67	1.32	1.19	79.0	71.2	40-122	10.3	20
Diethyl phthalate	mg/Kg	<0.180	1.67	1.67	1.61	1.54	96.4	92.2	50-124	4.4	20
Dimethyl phthalate	mg/Kg	<0.174	1.67	1.67	1.54	1.51	92.2	90.4	48-124	1.9	30
2,4-Dimethylphenol	mg/Kg	<0.108	1.67	1.67	1.80	1.68	108	101	30-127	6.8	20
Di-n-butyl phthalate	mg/Kg	<0.107	1.67	1.67	1.78	1.73	107	104	51-128	2.8	20
4,6-Dinitro-2-methylphenol	mg/Kg	<0.240	1.67	1.67	1.46	1.37	87.4	82.0	29-132	6.3	20
2,4-Dinitrophenol	mg/Kg	<0.520	1.67	1.67	1.26	1.15	75.4	68.8	27-129	9.1	20
2,4-Dinitrotoluene	mg/Kg	<0.096	1.67	1.67	1.60	1.50	95.8	89.8	48-126	6.4	20
2,6-Dinitrotoluene	mg/Kg	<0.108	1.67	1.67	1.55	1.46	92.8	87.4	46-124	5.9	20
Di-n-Octyl Phthalate	mg/Kg	<0.143	1.67	1.67	2.13	2.03	128	122	45-140	4.8	20
Fluoranthene	mg/Kg	<0.123	1.67	1.67	1.46	1.42	87.4	85.0	50-127	2.7	20
Fluorene	mg/Kg	<0.128	1.67	1.67	1.49	1.42	89.2	85.0	43-125	4.8	20
Hexachlorobenzene	mg/Kg	<0.106	1.67	1.67	1.47	1.43	88.0	85.6	45-122	2.7	20
Hexachlorobutadiene	mg/Kg	<0.097	1.67	1.67	1.18	1.11	70.6	66.4	32-123	6.1	20
Hexachlorocyclopentadiene	mg/Kg	<0.157	1.67	1.67	1.22	0.607	73.0	36.3	32-117	67.1*	20
Hexachloroethane	mg/Kg	<0.079	1.67	1.67	1.22	1.10	73.0	65.8	28-117	10.3	20
Indeno(1,2,3-cd)pyrene	mg/Kg	<0.179	1.67	1.67	1.68	1.56	101	93.4	45-133	7.4	20
Isophorone	mg/Kg	<0.191	1.67	1.67	1.19	1.08	71.2	64.6	30-122	9.6	20
1-Methylnaphthalene	mg/Kg	<0.106	1.67	1.67	1.22	1.18	73.0	70.6	40-119	3.3	20
2-Methylnaphthalene	mg/Kg	<0.100	1.67	1.67	1.23	1.16	73.6	69.4	38-122	5.8	20
2-Methylphenol	mg/Kg	<0.097	1.67	1.67	1.52	1.39	91.0	83.2	32-122	8.9	20
3&4 Methylphenol	mg/Kg	<0.084	1.67	1.67	1.34	1.28	80.2	76.6	34-119	4.5	20
Naphthalene	mg/Kg	<0.144	1.67	1.67	1.22	1.11	73.0	66.4	35-123	9.4	20
2-Nitroaniline	mg/Kg	<0.096	1.67	1.67	1.61	1.58	96.4	94.6	44-127	1.8	20
3-Nitroaniline	mg/Kg	<0.120	1.67	1.67	1.65	1.59	98.8	95.2	33-119	3.7	20
4-Nitroaniline	mg/Kg	<0.093	1.67	1.67	1.65	1.62	98.8	97.0	63-147	1.8	20

* QC Fail

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Quality Control Data

Client ID: **Mid-Atlantic Associates, Inc. - Raleigh**
Project Description: **R4370.00**
Report No: **23-207-0017**

QC Prep: V35831
QC Prep Batch Method: 3546
QC Analytical Batch(es): V35874
Analysis Method: 8270E
Analysis Description: Semivolatile Organic Compounds - GC/MS

Matrix Spike & Matrix Spike Duplicate V 90683-MS-V35831 V 90683-MSD-V35831

Parameter	Units	Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS %Rec	MSD %Rec	%Rec Limits	RPD	Max RPD
Nitrobenzene	mg/Kg	<0.116	1.67	1.67	1.21	1.10	72.4	65.8	34-122	9.5	20
2-Nitrophenol	mg/Kg	<0.088	1.67	1.67	1.25	1.16	74.8	69.4	32-123	7.4	20
4-Nitrophenol	mg/Kg	<0.117	1.67	1.67	1.70	1.60	102	95.8	30-132	6.0	20
N-Nitrosodimethylamine	mg/Kg	<0.263	1.67	1.67	1.22	1.06	73.0	63.4	10-146	14.0	30
N-Nitrosodiphenylamine	mg/Kg	<0.181	1.67	1.67	1.91	1.84	114	110	38-127	3.7	20
N-Nitroso-di-n-propylamine	mg/Kg	<0.118	1.67	1.67	1.48	1.37	88.6	82.0	36-120	7.7	20
Pentachlorophenol	mg/Kg	<0.347	1.67	1.67	1.27	1.23	76.0	73.6	25-133	3.2	20
Phenanthrene	mg/Kg	<0.208	1.67	1.67	1.56	1.51	93.4	90.4	50-121	3.2	20
Phenol	mg/Kg	<0.112	1.67	1.67	1.41	1.32	84.4	79.0	34-121	6.5	20
Pyrene	mg/Kg	<0.134	1.67	1.67	1.58	1.54	94.6	92.2	47-127	2.5	20
Pyridine	mg/Kg	<0.079	1.67	1.67	1.04	0.903	62.2	54.0	10-80	14.1	20
1,2,4-Trichlorobenzene	mg/Kg	<0.107	1.67	1.67	1.14	1.07	68.2	64.0	34-118	6.3	20
2,4,5-Trichlorophenol	mg/Kg	<0.096	1.67	1.67	1.42	1.39	85.0	83.2	41-124	2.1	20
2,4,6-Trichlorophenol	mg/Kg	<0.096	1.67	1.67	1.39	1.29	83.2	77.2	39-126	7.4	20
2-Fluorobiphenyl (S)							85.0	76.6	44-115		
2-Fluorophenol (S)							79.5	69.1	35-115		
Nitrobenzene-d5 (S)							74.2	64.6	37-122		
4-Terphenyl-d14 (S)							95.8	89.2	54-127		
2,4,6-Tribromophenol (S)							69.3	59.5	39-132		
Phenol-d5 (S)							74.1	67.0	34-121		

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Quality Control Data

Client ID: **Mid-Atlantic Associates, Inc. - Raleigh**
Project Description: **R4370.00**
Report No: **23-207-0017**

QC Analytical Batch: V35809
Analysis Method: SW-DRYWT
Analysis Description: Dry Weight Determination

Duplicate V 90635-DUP

Parameter	Units	Result	DUP Result	RPD	Max RPD	Analyzed
Moisture	%	20.1	19.9	1.0	20.0	07/27/23 10:36

Duplicate V 90691-DUP

Parameter	Units	Result	DUP Result	RPD	Max RPD	Analyzed
Moisture	%	21.3	21.8	2.3	20.0	07/27/23 10:36

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Quality Control Data

Client ID: **Mid-Atlantic Associates, Inc. - Raleigh**
Project Description: **R4370.00**
Report No: **23-207-0017**

QC Analytical Batch: V35860
Analysis Method: SW-DRYWT
Analysis Description: Dry Weight Determination

Duplicate V 90644-DUP

Parameter	Units	Result	DUP Result	RPD	Max RPD	Analyzed
Moisture	%	17.1	18.5	7.8	20.0	07/28/23 10:30

Duplicate V 90677-DUP

Parameter	Units	Result	DUP Result	RPD	Max RPD	Analyzed
Moisture	%	24.2	23.4	3.3	20.0	07/28/23 10:30

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Quality Control Data

Client ID: **Mid-Atlantic Associates, Inc. - Raleigh**
Project Description: **R4370.00**
Report No: **23-207-0017**

QC Analytical Batch: V35954
Analysis Method: SW-DRYWT
Analysis Description: Dry Weight Determination

Duplicate V 90999-DUP

Parameter	Units	Result	DUP Result	RPD	Max RPD	Analyzed
Moisture	%	21.0	20.3	3.3	20.0	07/31/23 11:05

Duplicate V 91015-DUP

Parameter	Units	Result	DUP Result	RPD	Max RPD	Analyzed
Moisture	%	16.6	16.5	0.6	20.0	07/31/23 11:05

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Main 704.529.6364
www.waypointanalytical.com

Shipment Receipt Form

Customer Number: **01139**
Customer Name: **Mid-Atlantic Associates, Inc. - Raleigh**
Report Number: **23-207-0017**

Shipping Method

◯ Fed Ex	◯ US Postal	◯ Lab	◯ Other :	
◯ UPS	◯ Client	◉ Courier	Thermometer ID:	IRT15 1.8C

Shipping container/cooler uncompromised?	◉ Yes	◯ No	
Number of coolers/boxes received	1		
Custody seals intact on shipping container/cooler?	◉ Yes	◯ No	◯ Not Present
Custody seals intact on sample bottles?	◯ Yes	◯ No	◉ Not Present
Chain of Custody (COC) present?	◉ Yes	◯ No	
COC agrees with sample label(s)?	◉ Yes	◯ No	
COC properly completed	◉ Yes	◯ No	
Samples in proper containers?	◉ Yes	◯ No	
Sample containers intact?	◉ Yes	◯ No	
Sufficient sample volume for indicated test(s)?	◉ Yes	◯ No	
All samples received within holding time?	◉ Yes	◯ No	
Cooler temperature in compliance?	◉ Yes	◯ No	
Cooler/Samples arrived at the laboratory on ice. Samples were considered acceptable as cooling process had begun.	◉ Yes	◯ No	
Water - Sample containers properly preserved	◯ Yes	◯ No	◉ N/A
Water - VOA vials free of headspace	◯ Yes	◯ No	◉ N/A
Trip Blanks received with VOAs	◯ Yes	◯ No	◉ N/A
Soil VOA method 5035 – compliance criteria met	◯ Yes	◯ No	◉ N/A

☐ High concentration container (48 hr) ☐ Low concentration EnCore samplers (48 hr)
☐ High concentration pre-weighed (methanol -14 d) ☐ Low conc pre-weighed vials (Sod Bis -14 d)

Special precautions or instructions included?	◯ Yes	◉ No

Comments:

Signature: Angelo Norvell Date & Time: 07/26/2023 14:37:42

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Phone 704/529-6364 • Fax: 704/525-0409

CHAIN OF CUSTODY RECORD

PAGE 1 OF 2 QUOTE # TO ENSURE PROPER BILLING:

Client Company Name: Mid-Atlantic Associates
Report To/Contact Name: Kevin Clay
Reporting Address: 409 Rogers View Ct Raleigh NC 27610
Phone: 704 690 2145 Fax (Yes)(No):
Email Address: kclay@maainc.com
EDD Type: PDF ✓ Excel ✓ Other
Site Location Name: Lyon Park
Site Location Physical Address:

Project Name:
Short Hold Analysis (Yes) (No) UST Project: (Yes) (No)
*Please ATTACH any project specific reporting (QC LEVEL I II III IV) provisions and/or QC Requirements
Invoice To:
Address:

Purchase Order No./Billing Reference
Requested Due Date ☐ 1 Day ☐ 2 Days ☐ 3 Days ☐ 4 Days ☐ 5 Days
"Working Days" ☐ 6-9 Days ☑ Standard 10 days ☐ Rush Work Must Be Pre Approved
Samples received after 15:00 will be processed next business day.
Turnaround time is based on business days, excluding weekends and holidays.
(SEE REVERSE FOR TERMS & CONDITIONS REGARDING SERVICES RENDERED BY WAYPOINT ANALYTICAL, LLC TO CLIENT)

LAB USE ONLY

	YES	NO	N/A
Samples INTACT upon arrival?	✓		
Received IN ICE?	✓		
PROPER PRESERVATIVES indicated?	✓		
Received WITHIN HOLDING TIMES?	✓		
CUSTODY SEALS INTACT?			✓
VOLATILES rec'd W/OUT HEADSPACE?			✓
PROPER CONTAINERS used?	✓		

TEMP: Therm ID: [illegible] Observed 1.8 °C /Corr. 1.8 °C

TO BE FILLED IN BY CLIENT/SAMPLING PERSONNEL

Certification: NC____ SC____
Other____ N/A____
Water Chlorinated: YES____ NO____
Samples Iced Upon Collection: YES____ NO____

CLIENT SAMPLE DESCRIPTION	DATE COLLECTED	TIME COLLECTED MILITARY HOURS	MATRIX (SOIL, WATER, OR SLUDGE)	SAMPLE CONTAINER *TYPE SEE BELOW	SAMPLE CONTAINER NO.	SAMPLE CONTAINER SIZE	PRESERVATIVES	ANALYSIS REQUESTED Lead 6020B	Arsenic 6020B	SVOCs 8270				REMARKS	ID NO.
SS-LY-5	7/24/23	0800	Soil				ICE	✓							
SS-LY-43		1053						✓							
SS-LY-60		1253						✓							
SS-LY-68		1548						✓							
SS-LY-61		1555						✓	✓	✓					
SS-LY-69		1600						✓							
SS-LY-70		1602						✓							
SS-LY-62		1604						✓							
SS-LY-39		1610						✓							

PRESS DOWN FIRMLY - 2 COPIES

Sampler's Signature | Sampled By (Print Name) | Affiliation

Upon relinquishing this Chain of Custody is your authorization for Waypoint Analytical to proceed with the analyses as requested above. Any changes must be submitted in writing to the Waypoint Analytical Project Manager. There will be charges for any changes after analyses have been initialized.

		Date	Military/Hours
Relinquished By: (Signature)	Received By: (Signature) Philip Paige	7-25-23	11:40
Relinquished By: (Signature) Philip Paige	Received By: (Signature) courier express	7-25-23	16:00
Relinquished By: (Signature)	Received For Waypoint Analytical By:	7/25/23	1330

Method of Shipment: NOTE: ALL SAMPLE COOLERS SHOULD BE TAPED SHUT WITH CUSTODY SEALS FOR TRANSPORTATION TO THE LABORATORY. SAMPLES ARE NOT ACCEPTED AND VERIFIED AGAINST COC UNTIL RECEIVED AT THE LABORATORY.

☐ Fed Ex ☐ UPS ☐ Hand-delivered ☐ Waypoint Analytical Field Services ☐ Other

COC Group No.

NPDES:	UST:	GROUNDWATER:	DRINKING WATER:	SOLID WASTE:	RCRA:	BRWNFLD	LANDFILL	OTHER:
☐ NC ☐ SC ☐ ____	☐ NC ☐ SC ☐ ____	☐ NC ☐ SC ☐ ____	☐ NC ☐ SC ☐ ____	☐ NC ☐ SC ☐	☐ NC ☐ SC ☐	☐ NC ☐ SC ☐	☐ NC ☐ SC ☐	☐ NC ☐ SC ☐

23-207-0017
01139
07-26-2023
14:34:02
Mid-Atlantic Associates, Inc. - Raleigh
R4370.00

Additional Comments:

LAB USE ONLY

Site Arrival Time:
Site Departure Time:
Field Tech Fee:
Mileage:

SEE REVERSE FOR TERMS & CONDITIONS

ORIGINAL

Waypoint ANALYTICAL

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Phone 704/529-6364 • Fax: 704/525-0409

CHAIN OF CUSTODY RECORD

PAGE ___ OF ___ QUOTE # TO ENSURE PROPER BILLING: ___

Client Company Name: ___
Report To/Contact Name: ___
Reporting Address: ___

Phone: ___ Fax (Yes)(No): ___
Email Address: ___
EDD Type: PDF ___ Excel ___ Other ___
Site Location Name: ___
Site Location Physical Address: ___

Project Name: ___
Short Hold Analysis (Yes) (No) UST Project: (Yes) (No)
*Please ATTACH any project specific reporting (QC LEVEL I II III IV) provisions and/or QC Requirements
Invoice To: ___
Address: ___

Purchase Order No./Billing Reference ___
Requested Due Date ❑ 1 Day ❑ 2 Days ❑ 3 Days ❑ 4 Days ❑ 5 Days
"Working Days" ❑ 6-9 Days ❑ Standard 10 days ❑ Rush Work Must Be Pre Approved
Samples received after 15:00 will be processed next business day.
Turnaround time is based on business days, excluding weekends and holidays.
(SEE REVERSE FOR TERMS & CONDITIONS REGARDING SERVICES RENDERED BY WAYPOINT ANALYTICAL, LLC TO CLIENT)

LAB USE ONLY

	YES	NO	N/A
Samples INTACT upon arrival?	X		
Received IN ICE?	X		
PROPER PRESERVATIVES indicated?	✓		
Received WITHIN HOLDING TIMES?	✓		
CUSTODY SEALS INTACT?			X
VOLATILES rec'd W/OUT HEADSPACE?			X
PROPER CONTAINERS used?	X		

TEMP: Therm ID: TA85 Observed 1.8 °C /Corr. 1.8 °C

TO BE FILLED IN BY CLIENT/SAMPLING PERSONNEL
Certification: NC ___ SC ___
Other ___ N/A ___
Water Chlorinated: YES ___ NO ___
Samples Iced Upon Collection: YES ___ NO ___

CLIENT SAMPLE DESCRIPTION	DATE COLLECTED	TIME COLLECTED MILITARY HOURS	MATRIX (SOIL, WATER, OR SLUDGE)	SAMPLE CONTAINER *TYPE SEE BELOW	NO.	SIZE	PRESERVATIVES	Lead 6020B	Haz list metals	SVOCs 8270				REMARKS	ID NO.
SS-LY-29	7/24/23	1628	Soil				Ice	✓							
SS-LY-27	↓	1632	↓				↓	✓							
SS-LY-4	↓	1638	↓				↓	✓	see 7/24/23						
SS-LY-45	↓	1618	↓				↓	X	✓	✓					
SS-LY-45(1')	↓	1620	↓				↓	✓							
SS-LY-45(PB)	↓	1015	Soil				↓	✓							
SS-LY-Dup1	↓	1020	Soil				↓	✓							

23-207-0017
01139
07-26-2023
14:34:02
Mid-Atlantic Associates, Inc. - Raleigh
R4370.00

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Sampler's Signature ___ Sampled By (Print Name) ___ Affiliation ___

Upon relinquishing this Chain of Custody is your authorization for Waypoint Analytical to proceed with the analyses as requested above. Any changes must be submitted in writing to the Waypoint Analytical Project Manager. There will be charges for any changes after analyses have been initialized.

Relinquished By (Signature)	Received By (Signature)	Date	Military/Hours
	Philip Paige	7-25-23	11:40
Philip Paige	Courier Express	7-25-23	16:00
	Received For Waypoint Analytical By: [signature]	7/25/23	1230

COC Group No.

Method of Shipment: NOTE: ALL SAMPLE COOLERS SHOULD BE TAPED SHUT WITH CUSTODY SEALS FOR TRANSPORTATION TO THE LABORATORY. SAMPLES ARE NOT ACCEPTED AND VERIFIED AGAINST COC UNTIL RECEIVED AT THE LABORATORY.
❑ Fed Ex ❑ UPS ❑ Hand-delivered ❑ Waypoint Analytical Field Service ❑ Other

NPDES: ❑ NC ❑ SC ❑ | UST: ❑ NC ❑ SC ❑ | GROUNDWATER: ❑ NC ❑ SC ❑ | DRINKING WATER: ❑ NC ❑ SC ❑ | SOLID WASTE: ❑ NC ❑ SC ❑ | RCRA: ❑ NC ❑ SC ❑ | BRWNFLD ❑ NC ❑ SC ❑ | LANDFILL ❑ NC ❑ SC ❑ | OTHER: ❑ NC ❑ SC ❑

Additional Comments:

LAB USE ONLY
Site Arrival Time:
Site Departure Time:
Field Tech Fee:
Mileage:

SEE REVERSE FOR TERMS & CONDITIONS

ORIGINAL

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Main 704.529.6364
www.waypointanalytical.com

8/16/2023

Mid-Atlantic Associates, Inc. - Raleigh
Kevin Clay
409 Rogers View Court
Raleigh, NC, 27610

Ref: Analytical Testing
Revised Lab Report Number: 23-208-0055
Client Project Description: R4370.00

Dear Kevin Clay:

Waypoint Analytical, LLC (Charlotte) received sample(s) on 7/27/2023 for the analyses presented in the following report.

The above referenced project has been analyzed per your instructions. The analyses were performed in accordance with the applicable analytical method.

The analytical data has been validated using standard quality control measures performed as required by the analytical method. Quality Assurance, method validations, instrumentation maintenance and calibration for all parameters were performed in accordance with guidelines established by the USEPA (including 40 CFR 136 Method Update Rule May 2021) unless otherwise indicated.

Certain parameters (chlorine, pH, dissolved oxygen, sulfite...) are required to be analyzed within 15 minutes of sampling. Usually, but not always, any field parameter analyzed at the laboratory is outside of this holding time. Refer to sample analysis time for confirmation of holding time compliance.

The results are shown on the attached Report of Analysis(s). Results for solid matrices are reported on an as-received basis unless otherwise indicated. This report shall not be reproduced except in full and relates only to the samples included in this report.

Please do not hesitate to contact me or client services if you have any questions or need additional information.

Sincerely,

Angela D Overcash
Senior Project Manager

Laboratory's liability in any claim relating to analyses performed shall be limited to, at laboratory's option, repeating the analysis in question at laboratory's expense, or the refund of the charges paid for performance of said analysis.

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Certification Summary

Laboratory ID: WP CNC: Waypoint Analytical Carolina, Inc. (C), Charlotte, NC

State	Program	Lab ID	Expiration Date
North Carolina	State Program	37735	07/31/2024
North Carolina	State Program	402	12/31/2023
South Carolina	State Program	99012	07/31/2023
South Carolina	State Program	99012	12/31/2022

Laboratory ID: WP MTN: Waypoint Analytical, LLC., Memphis, TN

State	Program	Lab ID	Expiration Date
Alabama	State Program	40750	02/29/2024
Arkansas	State Program	88-0650	02/07/2024
California	State Program	2904	06/30/2024
Florida	State Program - NELAP	E871157	06/30/2024
Georgia	State Program	C044	11/14/2025
Georgia	State Program	04015	06/30/2024
Illinois	State Program - NELAP	200078	10/10/2024
Kentucky	State Program	80215	06/30/2024
Kentucky	State Program	KY90047	12/31/2023
Louisiana	State Program - NELAP	LA037	12/31/2023
Louisiana	State Program - NELAP	04015	06/30/2024
Mississippi	State Program	MS	11/14/2025
North Carolina	State Program	47701	07/31/2024
North Carolina	State Program	415	12/31/2023
Pennsylvania	State Program - NELAP	68-03195	05/31/2024
South Carolina	State Program	84002	06/30/2023
Tennessee	State Program	02027	11/14/2025
Texas	State Program - NELAP	T104704180	09/30/2023
Virginia	State Program	00106	06/30/2024
Virginia	State Program - NELAP	460181	09/14/2023

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Sample Summary Table

Report Number: **23-208-0055**

Client Project Description: **R4370.00**

Lab No	Client Sample ID	Matrix	Date Collected	Date Received	Method	Lab ID
90826	SS-WT-36	Solids	07/25/2023 08:20	07/27/2023 13:00		
90827	SS-WT-43	Solids	07/25/2023 08:35	07/27/2023 13:00		
90828	SS-WT-50	Solids	07/25/2023 08:45	07/27/2023 13:00		
90828	SS-WT-50	Solids	07/25/2023 08:45	07/27/2023 13:00	6020B	WP MTN
90829	SS-WT-49	Solids	07/25/2023 08:55	07/27/2023 13:00		
90830	SS-WT-55	Solids	07/25/2023 09:10	07/27/2023 13:00		
90831	SS-WT-48	Solids	07/25/2023 09:20	07/27/2023 13:00		
90832	SS-WT-32	Solids	07/25/2023 09:30	07/27/2023 13:00		
90833	SS-WT-18	Solids	07/25/2023 09:40	07/27/2023 13:00		
90833	SS-WT-18	Solids	07/25/2023 09:40	07/27/2023 13:00	6020B	WP MTN
90834	SS-WT-53	Solids	07/25/2023 09:58	07/27/2023 13:00		
90835	SS-WT-76	Solids	07/25/2023 10:03	07/27/2023 13:00		
90836	SS-WT-74	Solids	07/25/2023 10:08	07/27/2023 13:00		
90837	SS-WT-79	Solids	07/25/2023 10:15	07/27/2023 13:00		
90838	SS-WT-92	Solids	07/25/2023 10:28	07/27/2023 13:00		
90839	SS-WT-93	Solids	07/25/2023 10:35	07/27/2023 13:00		
90840	SS-WT-77	Solids	07/25/2023 10:45	07/27/2023 13:00		
90841	SS-WT-70	Solids	07/25/2023 10:50	07/27/2023 13:00		
90842	SS-WT-60	Solids	07/25/2023 10:58	07/27/2023 13:00		
90843	SS-WT-61	Solids	07/25/2023 11:02	07/27/2023 13:00		
90844	SS-WT-63	Solids	07/25/2023 11:15	07/27/2023 13:00		
90845	SS-WT-89	Solids	07/25/2023 11:25	07/27/2023 13:00		
90846	SS-WT-97	Solids	07/25/2023 11:33	07/27/2023 13:00		
90847	SS-WT-82	Solids	07/25/2023 11:40	07/27/2023 13:00		
90848	SS-WT-Dup 1	Solids	07/25/2023 08:25	07/27/2023 13:00		
90849	SS-WT-43 (1')	Solids	07/25/2023 12:00	07/27/2023 13:00		
90850	SS-WT-79 (1')	Solids	07/25/2023 12:05	07/27/2023 13:00		

WP MTN - Memphis, TN: Waypoint Analytical - TN, Memphis, TN

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Main 704.529.6364
www.waypointanalytical.com

Sample Summary Table

Report Number: **23-208-0055**

Client Project Description: **R4370.00**

Lab No	Client Sample ID	Matrix	Date Collected	Date Received	Method	Lab ID
90851	SS-WT-93 (1')	Solids	07/25/2023 12:15	07/27/2023 13:00		

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Summary of Detected Analytes

Project: R4370.00

Report Number: 23-208-0055

Client Sample ID / Method	Lab Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
SS-WT-36	**V 90826**					
6010D	Lead	47.1	mg/Kg - dry	0.318	08/08/2023 23:17	
SW-DRYWT	Moisture	5.94	%		08/01/2023 11:05	
SS-WT-43	**V 90827**					
6010D	Lead	892	mg/Kg - dry	6.86	08/08/2023 23:21	
SW-DRYWT	Moisture	12.6	%		08/01/2023 11:05	
SS-WT-50	**V 90828**					
6020B	Antimony	5.61	mg/Kg - dry	0.365	08/03/2023 19:32	
6020B	Arsenic	16.8	mg/Kg - dry	0.365	08/03/2023 19:32	
6020B	Barium	1160	mg/Kg - dry	0.364	08/03/2023 19:32	
6020B	Beryllium	0.685	mg/Kg - dry	0.365	08/03/2023 19:32	
6020B	Cadmium	3.30	mg/Kg - dry	0.365	08/03/2023 19:32	
6020B	Chromium	41.6	mg/Kg - dry	0.364	08/03/2023 19:32	
6020B	Cobalt	8.16	mg/Kg - dry	0.364	08/03/2023 19:32	
6020B	Copper	436	mg/Kg - dry	7.30	08/04/2023 12:24	
6020B	Lead	1780	mg/Kg - dry	0.365	08/03/2023 19:32	
6020B	Manganese	749	mg/Kg - dry	0.729	08/04/2023 12:28	
6020B	Nickel	24.4	mg/Kg - dry	0.365	08/03/2023 19:32	
6020B	Selenium	0.740	mg/Kg - dry	0.364	08/03/2023 19:32	
6020B	Silver	2.31	mg/Kg - dry	0.365	08/03/2023 19:32	
6020B	Vanadium	18.0	mg/Kg - dry	1.82	08/03/2023 19:32	
6020B	Zinc	2280	mg/Kg - dry	7.30	08/04/2023 12:28	
7471B	Mercury (Total)	0.0618	mg/Kg - dry	0.0438	07/28/2023 16:27	
SW-DRYWT	Moisture	31.5	%		08/01/2023 11:05	
SS-WT-49	**V 90829**					
6010D	Lead	566	mg/Kg - dry	3.56	08/08/2023 23:26	
SW-DRYWT	Moisture	15.7	%		08/01/2023 11:05	
SS-WT-55	**V 90830**					
6010D	Lead	634	mg/Kg - dry	3.47	08/09/2023 19:14	
SW-DRYWT	Moisture	13.5	%		08/01/2023 17:10	
SS-WT-48	**V 90831**					
6010D	Lead	225	mg/Kg - dry	3.21	08/08/2023 23:35	
SW-DRYWT	Moisture	53.3	%		08/01/2023 17:10	

Waypoint ANALYTICAL
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Summary of Detected Analytes

Project: R4370.00

Report Number: 23-208-0055

Client Sample ID / Method	Lab Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
SS-WT-32	**V 90832**					
6010D	Lead	142	mg/Kg - dry	3.79	08/08/2023 23:39	
SW-DRYWT	Moisture	20.9	%		08/01/2023 17:10	
SS-WT-18	**V 90833**					
6020B	Arsenic	2.10	mg/Kg - dry	0.275	08/03/2023 19:36	
6020B	Barium	71.3	mg/Kg - dry	0.275	08/03/2023 19:36	
6020B	Beryllium	0.446	mg/Kg - dry	0.275	08/03/2023 19:36	
6020B	Chromium	12.6	mg/Kg - dry	0.275	08/03/2023 19:36	
6020B	Cobalt	4.70	mg/Kg - dry	0.275	08/03/2023 19:36	
6020B	Copper	37.0	mg/Kg - dry	1.10	08/04/2023 12:32	
6020B	Lead	86.2	mg/Kg - dry	0.275	08/03/2023 19:36	
6020B	Manganese	163	mg/Kg - dry	0.275	08/03/2023 19:36	
6020B	Nickel	6.71	mg/Kg - dry	0.275	08/03/2023 19:36	
6020B	Selenium	0.524	mg/Kg - dry	0.275	08/03/2023 19:36	
6020B	Vanadium	36.8	mg/Kg - dry	1.38	08/03/2023 19:36	
6020B	Zinc	112	mg/Kg - dry	2.75	08/03/2023 19:36	
7471B	Mercury (Total)	0.0657	mg/Kg - dry	0.0330	07/28/2023 16:29	
SW-DRYWT	Moisture	9.20	%		08/01/2023 17:10	
SS-WT-53	**V 90834**					
6010D	Lead	459	mg/Kg - dry	3.46	08/08/2023 23:52	
SW-DRYWT	Moisture	13.3	%		08/01/2023 17:10	
SS-WT-76	**V 90835**					
6010D	Lead	259	mg/Kg - dry	1.87	08/08/2023 23:57	
SW-DRYWT	Moisture	19.8	%		08/01/2023 17:10	
SS-WT-74	**V 90836**					
6010D	Lead	346	mg/Kg - dry	3.46	08/09/2023 00:01	
SW-DRYWT	Moisture	13.4	%		08/01/2023 17:10	
SS-WT-79	**V 90837**					
6010D	Lead	1330	mg/Kg - dry	7.15	08/10/2023 15:54	
SW-DRYWT	Moisture	16.1	%		08/01/2023 17:10	
SS-WT-92	**V 90838**					
6010D	Lead	121	mg/Kg - dry	1.76	08/09/2023 00:28	
SW-DRYWT	Moisture	14.7	%		08/01/2023 17:10	

Waypoint ANALYTICAL
449 Springbrook Rd, Charlotte, NC 28217
Main 704.529.6364
www.waypointanalytical.com

Summary of Detected Analytes

Project: R4370.00

Report Number: 23-208-0055

Client Sample ID / Method	Lab Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
SS-WT-93	**V 90839**					
6010D	Lead	653	mg/Kg - dry	3.80	08/09/2023 00:32	
SW-DRYWT	Moisture	21.1	%		08/01/2023 17:10	
SS-WT-77	**V 90840**					
6010D	Lead	349	mg/Kg - dry	3.46	08/09/2023 00:46	
SW-DRYWT	Moisture	13.3	%		08/01/2023 11:05	
SS-WT-70	**V 90841**					
6010D	Lead	54.7	mg/Kg - dry	0.398	08/02/2023 23:34	
SW-DRYWT	Moisture	24.8	%		08/01/2023 11:05	
SS-WT-60	**V 90842**					
6010D	Lead	760	mg/Kg - dry	7.24	08/09/2023 00:50	
SW-DRYWT	Moisture	17.1	%		08/01/2023 11:05	
SS-WT-61	**V 90843**					
6010D	Lead	15.8	mg/Kg - dry	0.311	08/02/2023 23:52	
SW-DRYWT	Moisture	3.61	%		08/01/2023 11:05	
SS-WT-63	**V 90844**					
6010D	Lead	202	mg/Kg - dry	1.79	08/08/2023 05:23	
SW-DRYWT	Moisture	16.4	%		08/01/2023 11:05	
SS-WT-89	**V 90845**					
6010D	Lead	26.6	mg/Kg - dry	0.322	08/03/2023 00:01	
SW-DRYWT	Moisture	7.12	%		08/01/2023 11:05	
SS-WT-97	**V 90846**					
6010D	Lead	53.0	mg/Kg - dry	0.359	08/03/2023 00:06	
SW-DRYWT	Moisture	16.6	%		08/01/2023 11:05	
SS-WT-82	**V 90847**					
6010D	Lead	9.97	mg/Kg - dry	0.336	08/03/2023 00:10	
SW-DRYWT	Moisture	10.9	%		08/01/2023 11:05	
SS-WT-Dup 1	**V 90848**					
6010D	Lead	62.8	mg/Kg - dry	0.322	08/03/2023 00:15	
SW-DRYWT	Moisture	7.01	%		08/01/2023 11:05	

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Summary of Detected Analytes

Project: **R4370.00**

Report Number: **23-208-0055**

Client Sample ID / Method	Lab Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
SS-WT-43 (1')	**V 90849**					
6010D	Lead	458	mg/Kg - dry	1.87	08/08/2023 05:27	
SW-DRYWT	Moisture	19.9	%		08/01/2023 11:05	
SS-WT-79 (1')	**V 90850**					
6010D	Lead	3480	mg/Kg - dry	18.0	08/08/2023 05:32	
SW-DRYWT	Moisture	16.6	%		08/01/2023 11:05	
SS-WT-93 (1')	**V 90851**					
6010D	Lead	2290	mg/Kg - dry	11.4	08/08/2023 05:36	
SW-DRYWT	Moisture	34.0	%		08/01/2023 11:05	

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Client: Mid-Atlantic Associates, Inc. - Raleigh **CASE NARRATIVE**
Project: R4370.00
Lab Report Number: 23-208-0055
Date: 8/16/2023

Report Comments
Revised report: Revision 1
Co and V have been added to be reported.

Metals Analysis Method 6010D
Sample 90807 (SS-EE-95)
Analyte: Lead
QC Batch No: V36366/V36025
The matrix spike and/or the matrix spike duplicate was outside quality control acceptance ranges. A dilution test was performed and passed quality control acceptance ranges. No matrix interference is suspected.

Analyte: Lead
QC Batch No: V36421/V36025
LLC failed high. Result 10x concentration. Result not affected.

Sample 90837 (SS-WT-79)
Analyte: Lead
QC Batch No: V36366/V36026
The matrix spike and/or the matrix spike duplicate was outside quality control acceptance ranges. A dilution test was performed and passed quality control acceptance ranges. No matrix interference is suspected.

Metals Analyses Method 6020B
Sample 90860 (SS-ED-51)
Analyte: Silver
QC Batch No: L696918/L696239
The matrix spike and/or the matrix spike duplicate was outside quality control acceptance ranges. A post digestion spike was performed and passed quality control acceptance ranges. No matrix interference is suspected.

Sample 90860 (SS-ED-51)
Analyte: Arsenic
QC Batch No: L696918/L696239
The matrix spike and/or the matrix spike duplicate was outside quality control acceptance ranges. A post digestion spike was performed and passed quality control acceptance ranges. No matrix interference is suspected.

Sample 90860 (SS-ED-51)
Analyte: Barium
QC Batch No: L696918/L696239
The matrix spike, matrix spike duplicate and the dilution test were all outside of the quality control acceptance ranges. Matrix interference is suspected.

Sample 90860 (SS-ED-51)
Analyte: Cadmium
QC Batch No: L696918/L696239

The matrix spike and/or the matrix spike duplicate was outside quality control acceptance ranges. A post digestion spike was performed and passed quality control acceptance ranges. No matrix interference is suspected.

Sample 90860 (SS-ED-51)
Analyte: Cobalt
QC Batch No: L698988/L696239
The matrix spike and/or the matrix spike duplicate was outside quality control acceptance ranges. A post digestion spike was performed and passed quality control acceptance ranges. No matrix interference is suspected.

Sample 90860 (SS-ED-51)
Analyte: Chromium
QC Batch No: L696918/L696239
The matrix spike and/or the matrix spike duplicate was outside quality control acceptance ranges. A dilution test was performed and passed quality control acceptance ranges. No matrix interference is suspected.

Sample 90860 (SS-ED-51)
Analyte: Manganese
QC Batch No: L696918/L696239
The matrix spike, matrix spike duplicate and the dilution test were all outside of the quality control acceptance ranges. Matrix interference is suspected.

Sample 90860 (SS-ED-51)
Analyte: Nickel
QC Batch No: L696918/L696239
The matrix spike and/or the matrix spike duplicate was outside quality control acceptance ranges. A dilution test was performed and passed quality control acceptance ranges. No matrix interference is suspected.

Sample 90860 (SS-ED-51)
Analyte: Lead
QC Batch No: L696918/L696239
The matrix spike and/or the matrix spike duplicate was outside quality control acceptance ranges. A dilution test was performed and passed quality control acceptance ranges. No matrix interference is suspected.

Sample 90860 (SS-ED-51)
Analyte: Antimony
QC Batch No: L696918/L696239
The matrix spike and/or the matrix spike duplicate was outside quality control acceptance ranges. A post digestion spike was performed and passed quality control acceptance ranges. No matrix interference is suspected.

Sample 90860 (SS-ED-51)
Analyte: Selenium
QC Batch No: L696918/L696239
The matrix spike and/or the matrix spike duplicate was outside quality control acceptance ranges. A post digestion spike was performed and passed quality control acceptance ranges. No matrix interference is suspected.

Sample 90860 (SS-ED-51)
Analyte: Vanadium
QC Batch No: L698988/L696239

The matrix spike and/or the matrix spike duplicate was outside quality control acceptance ranges. A post digestion spike was performed and passed quality control acceptance ranges. No matrix interference is suspected.

Sample 90860 (SS-ED-51)
Analyte: Zinc
QC Batch No: L696918/L696239
The matrix spike, matrix spike duplicate and the dilution test were all outside of the quality control acceptance ranges. Matrix interference is suspected.

Semivolatile Organic Compounds - GC/MS Method 8270E
Sample 90828 (SS-WT-50)
QC Batch No: V36073/V36047
Surrogate(s) flagged for recovery outside QC limits in this project sample due to a required dilution. The dilution factor resulted in surrogate concentration(s) below the minimum detectable level. Batch QC samples (method blank and laboratory control samples) all showed surrogates within QC limits.

Sample 90828 (SS-WT-50)
QC Batch No: V36073/V36047
The sample was diluted due to the nature of the sample matrix. Reporting limits have been adjusted accordingly.

Sample 90833 (SS-WT-18)
QC Batch No: V36073/V36047
The sample was diluted due to the nature of the sample matrix. Reporting limits have been adjusted accordingly.

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Project R4370.00

Information :

Original Report Date : 08/10/2023
Revised Report Date: 08/16/2023
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Report Number : **23-208-0055**

REPORT OF ANALYSIS

Lab No : **90826**
Sample ID : **SS-WT-36**

Matrix: **Solids**
Sampled: **7/25/2023 8:20**

Test	Results	Units	MQL	DF	Date / Time Analyzed	By	Analytical Method
Moisture	**5.94**	%		1	08/01/23 11:05	CNC	SW-DRYWT
Lead	**47.1**	mg/Kg - dry	0.318	1	08/08/23 23:17	JKC	6010D

Qualifiers/ Definitions				
	*	Outside QC Limit	DF	Dilution Factor
	J	Estimated value	MQL	Method Quantitation Limit

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Report Number : **23-208-0055**

REPORT OF ANALYSIS

Lab No : **90827**
Sample ID : **SS-WT-43**

Matrix: **Solids**
Sampled: **7/25/2023 8:35**

Test	Results	Units	MQL	DF	Date / Time Analyzed	By	Analytical Method
Moisture	**12.6**	%		1	08/01/23 11:05	CNC	SW-DRYWT
Lead	**892**	mg/Kg - dry	6.86	20	08/08/23 23:21	JKC	6010D

Qualifiers/ Definitions				
	*	Outside QC Limit	DF	Dilution Factor
	J	Estimated value	MQL	Method Quantitation Limit

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Report Number : **23-208-0055**

REPORT OF ANALYSIS

Lab No : **90828**
Sample ID : **SS-WT-50**

Matrix: **Solids**
Sampled: **7/25/2023 8:45**

Test	Results	Units	MDL	MQL	DF	Date / Time Analyzed	By	Analytical Method
Moisture	**31.5**	%			1	08/01/23 11:05	CNC	SW-DRYWT
Antimony	**5.61**	mg/Kg - dry		0.365	5	08/03/23 19:32	CPW	6020B
Arsenic	**16.8**	mg/Kg - dry		0.365	5	08/03/23 19:32	CPW	6020B
Barium	**1160**	mg/Kg - dry		0.364	5	08/03/23 19:32	CPW	6020B
Beryllium	**0.685**	mg/Kg - dry		0.365	5	08/03/23 19:32	BKN	6020B
Cadmium	**3.30**	mg/Kg - dry		0.365	5	08/03/23 19:32	CPW	6020B
Chromium	**41.6**	mg/Kg - dry		0.364	5	08/03/23 19:32	CPW	6020B
Cobalt	**8.16**	mg/Kg - dry		0.364	5	08/03/23 19:32	CPW	6020B
Copper	**436**	mg/Kg - dry		7.30	100	08/04/23 12:24	CPW	6020B
Lead	**1780**	mg/Kg - dry		0.365	5	08/03/23 19:32	CPW	6020B
Manganese	**749**	mg/Kg - dry		0.729	10	08/04/23 12:28	CPW	6020B
Mercury (Total)	**0.0618**	mg/Kg - dry		0.0438	1	07/28/23 16:27	JKC	7471B
Nickel	**24.4**	mg/Kg - dry		0.365	5	08/03/23 19:32	CPW	6020B
Selenium	**0.740**	mg/Kg - dry		0.364	5	08/03/23 19:32	CPW	6020B
Silver	**2.31**	mg/Kg - dry		0.365	5	08/03/23 19:32	CPW	6020B
Thallium	<0.365	mg/Kg - dry		0.365	5	08/03/23 19:32	BKN	6020B
Vanadium	**18.0**	mg/Kg - dry		1.82	5	08/03/23 19:32	CPW	6020B
Zinc	**2280**	mg/Kg - dry		7.30	10	08/04/23 12:28	CPW	6020B

Qualifiers/ Definitions

*	Outside QC Limit	DF	Dilution Factor
J	Estimated value	MQL	Method Quantitation Limit

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Information :

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Report Number : **23-208-0055**

REPORT OF ANALYSIS

Lab No : **90828**
Sample ID : **SS-WT-50**

Matrix: **Solids**
Sampled: **7/25/2023 8:45**

Analytical Method: 8270E **Prep Batch(es):** **V36047** 08/01/23 09:50
Prep Method: 3546

Test	Results	Units	MDL	MQL	DF	Date / Time Analyzed	By	Analytical Batch
Acenaphthene	<0.677	mg/Kg - dry	0.677	3.85	4	08/02/23 13:54	AMP	V36073
Acenaphthylene	<0.613	mg/Kg - dry	0.613	3.85	4	08/02/23 13:54	AMP	V36073
Aniline	<0.887	mg/Kg - dry	0.887	3.85	4	08/02/23 13:54	AMP	V36073
Anthracene	<0.835	mg/Kg - dry	0.835	3.85	4	08/02/23 13:54	AMP	V36073
Benzo(a)anthracene	<0.811	mg/Kg - dry	0.811	3.85	4	08/02/23 13:54	AMP	V36073
Benzo(a)pyrene	<0.858	mg/Kg - dry	0.858	3.85	4	08/02/23 13:54	AMP	V36073
Benzo(b)fluoranthene	<0.852	mg/Kg - dry	0.852	3.85	4	08/02/23 13:54	AMP	V36073
Benzo(g,h,i)perylene	<0.794	mg/Kg - dry	0.794	3.85	4	08/02/23 13:54	AMP	V36073
Benzo(k)fluoranthene	<0.800	mg/Kg - dry	0.800	3.85	4	08/02/23 13:54	AMP	V36073
Benzoic Acid	<3.39	mg/Kg - dry	3.39	11.7	4	08/02/23 13:54	AMP	V36073
Benzyl alcohol	<0.613	mg/Kg - dry	0.613	3.85	4	08/02/23 13:54	AMP	V36073
Bis(2-Chloroethoxy)methane	<0.689	mg/Kg - dry	0.689	3.85	4	08/02/23 13:54	AMP	V36073
Bis(2-Chloroethyl)ether	<0.624	mg/Kg - dry	0.624	3.85	4	08/02/23 13:54	AMP	V36073
Bis(2-Chloroisopropyl)ether	<0.794	mg/Kg - dry	0.794	1.93	4	08/02/23 13:54	AMP	V36073
Bis(2-ethylhexyl)phthalate	<0.700	mg/Kg - dry	0.700	3.85	4	08/02/23 13:54	AMP	V36073
4-Bromophenyl phenyl ether	<0.636	mg/Kg - dry	0.636	3.85	4	08/02/23 13:54	AMP	V36073
Butyl benzyl phthalate	<0.659	mg/Kg - dry	0.659	1.93	4	08/02/23 13:54	AMP	V36073
4-Chloro-3-methylphenol	<0.540	mg/Kg - dry	0.540	3.85	4	08/02/23 13:54	AMP	V36073
4-Chloroaniline	<0.654	mg/Kg - dry	0.654	1.93	4	08/02/23 13:54	AMP	V36073
2-Chloronaphthalene	<0.677	mg/Kg - dry	0.677	3.85	4	08/02/23 13:54	AMP	V36073
2-Chlorophenol	<0.573	mg/Kg - dry	0.573	3.85	4	08/02/23 13:54	AMP	V36073
4-Chlorophenyl phenyl ether	<0.735	mg/Kg - dry	0.735	5.84	4	08/02/23 13:54	AMP	V36073

Qualifiers/ Definitions

*	Outside QC Limit	DF	Dilution Factor
J	Estimated value	MQL	Method Quantitation Limit

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Information :

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Report Number : **23-208-0055**

REPORT OF ANALYSIS

Lab No : **90828**
Sample ID : **SS-WT-50**

Matrix: **Solids**
Sampled: **7/25/2023 8:45**

Analytical Method: 8270E **Prep Batch(es):** **V36047** 08/01/23 09:50
Prep Method: 3546

Test	Results	Units	MDL	MQL	DF	Date / Time Analyzed	By	Analytical Batch
Chrysene	<0.829	mg/Kg - dry	0.829	3.85	4	08/02/23 13:54	AMP	V36073
Dibenz(a,h)anthracene	<1.34	mg/Kg - dry	1.34	3.85	4	08/02/23 13:54	AMP	V36073
Dibenzofuran	<0.694	mg/Kg - dry	0.694	3.85	4	08/02/23 13:54	AMP	V36073
1,2-Dichlorobenzene	<0.551	mg/Kg - dry	0.551	3.85	4	08/02/23 13:54	AMP	V36073
1,3-Dichlorobenzene	<0.567	mg/Kg - dry	0.567	3.85	4	08/02/23 13:54	AMP	V36073
1,4-Dichlorobenzene	<0.569	mg/Kg - dry	0.569	1.93	4	08/02/23 13:54	AMP	V36073
3,3'-Dichlorobenzidine	<0.858	mg/Kg - dry	0.858	3.85	4	08/02/23 13:54	AMP	V36073
2,4-Dichlorophenol	<0.559	mg/Kg - dry	0.559	3.85	4	08/02/23 13:54	AMP	V36073
Diethyl phthalate	<1.05	mg/Kg - dry	1.05	3.85	4	08/02/23 13:54	AMP	V36073
Dimethyl phthalate	<1.02	mg/Kg - dry	1.02	3.85	4	08/02/23 13:54	AMP	V36073
2,4-Dimethylphenol	<0.630	mg/Kg - dry	0.630	1.93	4	08/02/23 13:54	AMP	V36073
Di-n-butyl phthalate	<0.624	mg/Kg - dry	0.624	3.85	4	08/02/23 13:54	AMP	V36073
4,6-Dinitro-2-methylphenol	<1.40	mg/Kg - dry	1.40	8.76	4	08/02/23 13:54	AMP	V36073
2,4-Dinitrophenol	<3.04	mg/Kg - dry	3.04	8.76	4	08/02/23 13:54	AMP	V36073
2,4-Dinitrotoluene	<0.563	mg/Kg - dry	0.563	3.85	4	08/02/23 13:54	AMP	V36073
2,6-Dinitrotoluene	<0.630	mg/Kg - dry	0.630	3.85	4	08/02/23 13:54	AMP	V36073
Di-n-Octyl Phthalate	<0.835	mg/Kg - dry	0.835	1.93	4	08/02/23 13:54	AMP	V36073
Fluoranthene	<0.718	mg/Kg - dry	0.718	3.85	4	08/02/23 13:54	AMP	V36073
Fluorene	<0.747	mg/Kg - dry	0.747	3.85	4	08/02/23 13:54	AMP	V36073
Hexachlorobenzene	<0.618	mg/Kg - dry	0.618	3.85	4	08/02/23 13:54	AMP	V36073
Hexachlorobutadiene	<0.569	mg/Kg - dry	0.569	3.85	4	08/02/23 13:54	AMP	V36073
Hexachlorocyclopentadiene	<0.916	mg/Kg - dry	0.916	3.85	4	08/02/23 13:54	AMP	V36073

Qualifiers/ Definitions

*	Outside QC Limit	DF	Dilution Factor
J	Estimated value	MQL	Method Quantitation Limit

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Project R4370.00
Information :

Original Report Date : 08/10/2023
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Received : 07/27/2023

Report Number : **23-208-0055**

REPORT OF ANALYSIS

Lab No : **90828**
Sample ID : **SS-WT-50**

Matrix: **Solids**
Sampled: **7/25/2023 8:45**

Analytical Method: 8270E **Prep Batch(es):** **V36047** 08/01/23 09:50
Prep Method: 3546

Test	Results	Units	MDL	MQL	DF	Date / Time Analyzed	By	Analytical Batch
Hexachloroethane	<0.462	mg/Kg - dry	0.462	3.85	4	08/02/23 13:54	AMP	V36073
Indeno(1,2,3-cd)pyrene	<1.05	mg/Kg - dry	1.05	3.85	4	08/02/23 13:54	AMP	V36073
Isophorone	<1.12	mg/Kg - dry	1.12	3.85	4	08/02/23 13:54	AMP	V36073
1-Methylnaphthalene	<0.618	mg/Kg - dry	0.618	3.85	4	08/02/23 13:54	AMP	V36073
2-Methylnaphthalene	<0.583	mg/Kg - dry	0.583	3.85	4	08/02/23 13:54	AMP	V36073
2-Methylphenol	<0.566	mg/Kg - dry	0.566	3.85	4	08/02/23 13:54	AMP	V36073
3&4 Methylphenol	<0.496	mg/Kg - dry	0.496	3.85	4	08/02/23 13:54	AMP	V36073
Naphthalene	<0.840	mg/Kg - dry	0.840	3.85	4	08/02/23 13:54	AMP	V36073
2-Nitroaniline	<0.564	mg/Kg - dry	0.564	3.85	4	08/02/23 13:54	AMP	V36073
3-Nitroaniline	<0.700	mg/Kg - dry	0.700	3.85	4	08/02/23 13:54	AMP	V36073
4-Nitroaniline	<0.544	mg/Kg - dry	0.544	1.93	4	08/02/23 13:54	AMP	V36073
Nitrobenzene	<0.677	mg/Kg - dry	0.677	1.93	4	08/02/23 13:54	AMP	V36073
2-Nitrophenol	<0.518	mg/Kg - dry	0.518	3.85	4	08/02/23 13:54	AMP	V36073
4-Nitrophenol	<0.683	mg/Kg - dry	0.683	3.85	4	08/02/23 13:54	AMP	V36073
N-Nitrosodimethylamine	<1.53	mg/Kg - dry	1.53	3.85	4	08/02/23 13:54	AMP	V36073
N-Nitrosodiphenylamine	<1.06	mg/Kg - dry	1.06	3.85	4	08/02/23 13:54	AMP	V36073
N-Nitroso-di-n-propylamine	<0.689	mg/Kg - dry	0.689	3.85	4	08/02/23 13:54	AMP	V36073
Pentachlorophenol	<2.03	mg/Kg - dry	2.03	5.84	4	08/02/23 13:54	AMP	V36073
Phenanthrene	<1.21	mg/Kg - dry	1.21	3.85	4	08/02/23 13:54	AMP	V36073
Phenol	<0.654	mg/Kg - dry	0.654	3.85	4	08/02/23 13:54	AMP	V36073
Pyrene	<0.782	mg/Kg - dry	0.782	3.85	4	08/02/23 13:54	AMP	V36073
Pyridine	<0.462	mg/Kg - dry	0.462	1.93	4	08/02/23 13:54	AMP	V36073

Qualifiers/ Definitions

*	Outside QC Limit	DF	Dilution Factor
J	Estimated value	MQL	Method Quantitation Limit

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Information :

Original Report Date : 08/10/2023
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Received : 07/27/2023

Report Number : **23-208-0055**

REPORT OF ANALYSIS

Lab No : **90828**
Sample ID : **SS-WT-50**

Matrix: **Solids**
Sampled: **7/25/2023 8:45**

Analytical Method: 8270E **Prep Batch(es):** **V36047** 08/01/23 09:50
Prep Method: 3546

Test	Results	Units	MDL	MQL	DF	Date / Time Analyzed	By	Analytical Batch
1,2,4-Trichlorobenzene	<0.624	mg/Kg - dry	0.624	3.85	4	08/02/23 13:54	AMP	V36073
2,4,5-Trichlorophenol	<0.562	mg/Kg - dry	0.562	3.85	4	08/02/23 13:54	AMP	V36073
2,4,6-Trichlorophenol	<0.563	mg/Kg - dry	0.563	3.85	4	08/02/23 13:54	AMP	V36073
Surrogate: Phenol-d5	45.3		Limits: 34-121%		4	08/02/23 13:54	AMP	8270E
Surrogate: 2-Fluorobiphenyl	56.9		Limits: 44-115%		4	08/02/23 13:54	AMP	V36073
Surrogate: 2-Fluorophenol	50.5		Limits: 35-115%		4	08/02/23 13:54	AMP	V36073
Surrogate: Nitrobenzene-d5	47.8		Limits: 37-122%		4	08/02/23 13:54	AMP	V36073
Surrogate: 4-Terphenyl-d14	63.9		Limits: 54-127%		4	08/02/23 13:54	AMP	V36073
Surrogate: 2,4,6-Tribromophenol	**36.9** *		Limits: 39-132%		4	08/02/23 13:54	AMP	V36073

Qualifiers/ Definitions

*	Outside QC Limit	DF	Dilution Factor
J	Estimated value	MQL	Method Quantitation Limit

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Information :

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Report Number : **23-208-0055**

REPORT OF ANALYSIS

Lab No : **90829**
Sample ID : **SS-WT-49**

Matrix: **Solids**
Sampled: **7/25/2023 8:55**

Test	Results	Units	MQL	DF	Date / Time Analyzed	By	Analytical Method
Moisture	**15.7**	%		1	08/01/23 11:05	CNC	SW-DRYWT
Lead	**566**	mg/Kg - dry	3.56	10	08/08/23 23:26	JKC	6010D

Qualifiers/ Definitions				
	*	Outside QC Limit	DF	Dilution Factor
	J	Estimated value	MQL	Method Quantitation Limit

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REPORT OF ANALYSIS

Lab No : **90830**
Sample ID : **SS-WT-55**

Matrix: **Solids**
Sampled: **7/25/2023 9:10**

Test	Results	Units	MQL	DF	Date / Time Analyzed	By	Analytical Method
Moisture	**13.5**	%		1	08/01/23 17:10	CNC	SW-DRYWT
Lead	**634**	mg/Kg - dry	3.47	10	08/09/23 19:14	JKC	6010D

Qualifiers/ Definitions				
	*	Outside QC Limit	DF	Dilution Factor
	J	Estimated value	MQL	Method Quantitation Limit

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REPORT OF ANALYSIS

Lab No : **90831**
Sample ID : **SS-WT-48**

Matrix: **Solids**
Sampled: **7/25/2023 9:20**

Test	Results	Units	MQL	DF	Date / Time Analyzed	By	Analytical Method
Moisture	**53.3**	%		1	08/01/23 17:10	CNC	SW-DRYWT
Lead	**225**	mg/Kg - dry	3.21	5	08/08/23 23:35	JKC	6010D

Qualifiers/ Definitions				
	*	Outside QC Limit	DF	Dilution Factor
	J	Estimated value	MQL	Method Quantitation Limit

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REPORT OF ANALYSIS

Lab No : **90832**
Sample ID : **SS-WT-32**

Matrix: **Solids**
Sampled: **7/25/2023 9:30**

Test	Results	Units	MQL	DF	Date / Time Analyzed	By	Analytical Method
Moisture	**20.9**	%		1	08/01/23 17:10	CNC	SW-DRYWT
Lead	**142**	mg/Kg - dry	3.79	10	08/08/23 23:39	JKC	6010D

Qualifiers/ Definitions				
	*	Outside QC Limit	DF	Dilution Factor
	J	Estimated value	MQL	Method Quantitation Limit

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REPORT OF ANALYSIS

Lab No : **90833**
Sample ID : **SS-WT-18**

Matrix: **Solids**
Sampled: **7/25/2023 9:40**

Test	Results	Units	MDL	MQL	DF	Date / Time Analyzed	By	Analytical Method
Moisture	**9.20**	%			1	08/01/23 17:10	CNC	SW-DRYWT
Antimony	<0.275	mg/Kg - dry		0.275	5	08/03/23 19:36	CPW	6020B
Arsenic	**2.10**	mg/Kg - dry		0.275	5	08/03/23 19:36	CPW	6020B
Barium	**71.3**	mg/Kg - dry		0.275	5	08/03/23 19:36	CPW	6020B
Beryllium	**0.446**	mg/Kg - dry		0.275	5	08/03/23 19:36	BKN	6020B
Cadmium	<0.275	mg/Kg - dry		0.275	5	08/03/23 19:36	CPW	6020B
Chromium	**12.6**	mg/Kg - dry		0.275	5	08/03/23 19:36	CPW	6020B
Cobalt	**4.70**	mg/Kg - dry		0.275	5	08/03/23 19:36	CPW	6020B
Copper	**37.0**	mg/Kg - dry		1.10	20	08/04/23 12:32	CPW	6020B
Lead	**86.2**	mg/Kg - dry		0.275	5	08/03/23 19:36	CPW	6020B
Manganese	**163**	mg/Kg - dry		0.275	5	08/03/23 19:36	CPW	6020B
Mercury (Total)	**0.0657**	mg/Kg - dry		0.0330	1	07/28/23 16:29	JKC	7471B
Nickel	**6.71**	mg/Kg - dry		0.275	5	08/03/23 19:36	CPW	6020B
Selenium	**0.524**	mg/Kg - dry		0.275	5	08/03/23 19:36	CPW	6020B
Silver	<0.275	mg/Kg - dry		0.275	5	08/03/23 19:36	CPW	6020B
Thallium	<0.275	mg/Kg - dry		0.275	5	08/03/23 19:36	BKN	6020B
Vanadium	**36.8**	mg/Kg - dry		1.38	5	08/03/23 19:36	CPW	6020B
Zinc	**112**	mg/Kg - dry		2.75	5	08/03/23 19:36	CPW	6020B

Qualifiers/ Definitions

*	Outside QC Limit	DF	Dilution Factor
J	Estimated value	MQL	Method Quantitation Limit

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REPORT OF ANALYSIS

Lab No : **90833**
Sample ID : **SS-WT-18**

Matrix: **Solids**
Sampled: **7/25/2023 9:40**

Analytical Method: 8270E **Prep Batch(es):** **V36047** 08/01/23 09:50
Prep Method: 3546

Test	Results	Units	MDL	MQL	DF	Date / Time Analyzed	By	Analytical Batch
Acenaphthene	<0.511	mg/Kg - dry	0.511	2.91	4	08/02/23 14:17	AMP	V36073
Acenaphthylene	<0.462	mg/Kg - dry	0.462	2.91	4	08/02/23 14:17	AMP	V36073
Aniline	<0.669	mg/Kg - dry	0.669	2.91	4	08/02/23 14:17	AMP	V36073
Anthracene	<0.629	mg/Kg - dry	0.629	2.91	4	08/02/23 14:17	AMP	V36073
Benzo(a)anthracene	<0.612	mg/Kg - dry	0.612	2.91	4	08/02/23 14:17	AMP	V36073
Benzo(a)pyrene	<0.647	mg/Kg - dry	0.647	2.91	4	08/02/23 14:17	AMP	V36073
Benzo(b)fluoranthene	<0.643	mg/Kg - dry	0.643	2.91	4	08/02/23 14:17	AMP	V36073
Benzo(g,h,i)perylene	<0.599	mg/Kg - dry	0.599	2.91	4	08/02/23 14:17	AMP	V36073
Benzo(k)fluoranthene	<0.603	mg/Kg - dry	0.603	2.91	4	08/02/23 14:17	AMP	V36073
Benzoic Acid	<2.56	mg/Kg - dry	2.56	8.82	4	08/02/23 14:17	AMP	V36073
Benzyl alcohol	<0.462	mg/Kg - dry	0.462	2.91	4	08/02/23 14:17	AMP	V36073
Bis(2-Chloroethoxy)methane	<0.519	mg/Kg - dry	0.519	2.91	4	08/02/23 14:17	AMP	V36073
Bis(2-Chloroethyl)ether	<0.471	mg/Kg - dry	0.471	2.91	4	08/02/23 14:17	AMP	V36073
Bis(2-Chloroisopropyl)ether	<0.599	mg/Kg - dry	0.599	1.45	4	08/02/23 14:17	AMP	V36073
Bis(2-ethylhexyl)phthalate	<0.528	mg/Kg - dry	0.528	2.91	4	08/02/23 14:17	AMP	V36073
4-Bromophenyl phenyl ether	<0.480	mg/Kg - dry	0.480	2.91	4	08/02/23 14:17	AMP	V36073
Butyl benzyl phthalate	<0.497	mg/Kg - dry	0.497	1.45	4	08/02/23 14:17	AMP	V36073
4-Chloro-3-methylphenol	<0.407	mg/Kg - dry	0.407	2.91	4	08/02/23 14:17	AMP	V36073
4-Chloroaniline	<0.493	mg/Kg - dry	0.493	1.45	4	08/02/23 14:17	AMP	V36073
2-Chloronaphthalene	<0.511	mg/Kg - dry	0.511	2.91	4	08/02/23 14:17	AMP	V36073
2-Chlorophenol	<0.432	mg/Kg - dry	0.432	2.91	4	08/02/23 14:17	AMP	V36073
4-Chlorophenyl phenyl ether	<0.556	mg/Kg - dry	0.556	4.42	4	08/02/23 14:17	AMP	V36073

Qualifiers/ Definitions

*	Outside QC Limit	DF	Dilution Factor
J	Estimated value	MQL	Method Quantitation Limit

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REPORT OF ANALYSIS

Lab No : **90833**
Sample ID : **SS-WT-18**

Matrix: **Solids**
Sampled: **7/25/2023 9:40**

Analytical Method: 8270E **Prep Batch(es):** **V36047** 08/01/23 09:50
Prep Method: 3546

Test	Results	Units	MDL	MQL	DF	Date / Time Analyzed	By	Analytical Batch
Chrysene	<0.625	mg/Kg - dry	0.625	2.91	4	08/02/23 14:17	AMP	V36073
Dibenz(a,h)anthracene	<1.01	mg/Kg - dry	1.01	2.91	4	08/02/23 14:17	AMP	V36073
Dibenzofuran	<0.524	mg/Kg - dry	0.524	2.91	4	08/02/23 14:17	AMP	V36073
1,2-Dichlorobenzene	<0.416	mg/Kg - dry	0.416	2.91	4	08/02/23 14:17	AMP	V36073
1,3-Dichlorobenzene	<0.428	mg/Kg - dry	0.428	2.91	4	08/02/23 14:17	AMP	V36073
1,4-Dichlorobenzene	<0.429	mg/Kg - dry	0.429	1.45	4	08/02/23 14:17	AMP	V36073
3,3'-Dichlorobenzidine	<0.647	mg/Kg - dry	0.647	2.91	4	08/02/23 14:17	AMP	V36073
2,4-Dichlorophenol	<0.421	mg/Kg - dry	0.421	2.91	4	08/02/23 14:17	AMP	V36073
Diethyl phthalate	<0.792	mg/Kg - dry	0.792	2.91	4	08/02/23 14:17	AMP	V36073
Dimethyl phthalate	<0.766	mg/Kg - dry	0.766	2.91	4	08/02/23 14:17	AMP	V36073
2,4-Dimethylphenol	<0.475	mg/Kg - dry	0.475	1.45	4	08/02/23 14:17	AMP	V36073
Di-n-butyl phthalate	<0.471	mg/Kg - dry	0.471	2.91	4	08/02/23 14:17	AMP	V36073
4,6-Dinitro-2-methylphenol	<1.06	mg/Kg - dry	1.06	6.62	4	08/02/23 14:17	AMP	V36073
2,4-Dinitrophenol	<2.29	mg/Kg - dry	2.29	6.62	4	08/02/23 14:17	AMP	V36073
2,4-Dinitrotoluene	<0.425	mg/Kg - dry	0.425	2.91	4	08/02/23 14:17	AMP	V36073
2,6-Dinitrotoluene	<0.475	mg/Kg - dry	0.475	2.91	4	08/02/23 14:17	AMP	V36073
Di-n-Octyl Phthalate	<0.629	mg/Kg - dry	0.629	1.45	4	08/02/23 14:17	AMP	V36073
Fluoranthene	<0.541	mg/Kg - dry	0.541	2.91	4	08/02/23 14:17	AMP	V36073
Fluorene	<0.563	mg/Kg - dry	0.563	2.91	4	08/02/23 14:17	AMP	V36073
Hexachlorobenzene	<0.466	mg/Kg - dry	0.466	2.91	4	08/02/23 14:17	AMP	V36073
Hexachlorobutadiene	<0.429	mg/Kg - dry	0.429	2.91	4	08/02/23 14:17	AMP	V36073
Hexachlorocyclopentadiene	<0.691	mg/Kg - dry	0.691	2.91	4	08/02/23 14:17	AMP	V36073

Qualifiers/ Definitions

*	Outside QC Limit	DF	Dilution Factor
J	Estimated value	MQL	Method Quantitation Limit

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REPORT OF ANALYSIS

Lab No : **90833**
Sample ID : **SS-WT-18**

Matrix: **Solids**
Sampled: **7/25/2023 9:40**

Analytical Method: 8270E **Prep Batch(es):** **V36047** 08/01/23 09:50
Prep Method: 3546

Test	Results	Units	MDL	MQL	DF	Date / Time Analyzed	By	Analytical Batch
Hexachloroethane	<0.349	mg/Kg - dry	0.349	2.91	4	08/02/23 14:17	AMP	V36073
Indeno(1,2,3-cd)pyrene	<0.788	mg/Kg - dry	0.788	2.91	4	08/02/23 14:17	AMP	V36073
Isophorone	<0.841	mg/Kg - dry	0.841	2.91	4	08/02/23 14:17	AMP	V36073
1-Methylnaphthalene	<0.466	mg/Kg - dry	0.466	2.91	4	08/02/23 14:17	AMP	V36073
2-Methylnaphthalene	<0.440	mg/Kg - dry	0.440	2.91	4	08/02/23 14:17	AMP	V36073
2-Methylphenol	<0.427	mg/Kg - dry	0.427	2.91	4	08/02/23 14:17	AMP	V36073
3&4 Methylphenol	<0.374	mg/Kg - dry	0.374	2.91	4	08/02/23 14:17	AMP	V36073
Naphthalene	<0.634	mg/Kg - dry	0.634	2.91	4	08/02/23 14:17	AMP	V36073
2-Nitroaniline	<0.426	mg/Kg - dry	0.426	2.91	4	08/02/23 14:17	AMP	V36073
3-Nitroaniline	<0.528	mg/Kg - dry	0.528	2.91	4	08/02/23 14:17	AMP	V36073
4-Nitroaniline	<0.410	mg/Kg - dry	0.410	1.45	4	08/02/23 14:17	AMP	V36073
Nitrobenzene	<0.511	mg/Kg - dry	0.511	1.45	4	08/02/23 14:17	AMP	V36073
2-Nitrophenol	<0.390	mg/Kg - dry	0.390	2.91	4	08/02/23 14:17	AMP	V36073
4-Nitrophenol	<0.515	mg/Kg - dry	0.515	2.91	4	08/02/23 14:17	AMP	V36073
N-Nitrosodimethylamine	<1.16	mg/Kg - dry	1.16	2.91	4	08/02/23 14:17	AMP	V36073
N-Nitrosodiphenylamine	<0.797	mg/Kg - dry	0.797	2.91	4	08/02/23 14:17	AMP	V36073
N-Nitroso-di-n-propylamine	<0.519	mg/Kg - dry	0.519	2.91	4	08/02/23 14:17	AMP	V36073
Pentachlorophenol	<1.53	mg/Kg - dry	1.53	4.42	4	08/02/23 14:17	AMP	V36073
Phenanthrene	<0.916	mg/Kg - dry	0.916	2.91	4	08/02/23 14:17	AMP	V36073
Phenol	<0.493	mg/Kg - dry	0.493	2.91	4	08/02/23 14:17	AMP	V36073
Pyrene	<0.590	mg/Kg - dry	0.590	2.91	4	08/02/23 14:17	AMP	V36073
Pyridine	<0.349	mg/Kg - dry	0.349	1.45	4	08/02/23 14:17	AMP	V36073

Qualifiers/ Definitions

*	Outside QC Limit	DF	Dilution Factor
J	Estimated value	MQL	Method Quantitation Limit

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REPORT OF ANALYSIS

Lab No : **90833**
Sample ID : **SS-WT-18**

Matrix: **Solids**
Sampled: **7/25/2023 9:40**

Analytical Method: 8270E **Prep Batch(es):** **V36047** 08/01/23 09:50
Prep Method: 3546

Test	Results	Units	MDL	MQL	DF	Date / Time Analyzed	By	Analytical Batch
1,2,4-Trichlorobenzene	<0.471	mg/Kg - dry	0.471	2.91	4	08/02/23 14:17	AMP	V36073
2,4,5-Trichlorophenol	<0.424	mg/Kg - dry	0.424	2.91	4	08/02/23 14:17	AMP	V36073
2,4,6-Trichlorophenol	<0.425	mg/Kg - dry	0.425	2.91	4	08/02/23 14:17	AMP	V36073
Surrogate: Phenol-d5	58.7		Limits: 34-121%		4	08/02/23 14:17	AMP	8270E
Surrogate: 2-Fluorobiphenyl	71.9		Limits: 44-115%		4	08/02/23 14:17	AMP	V36073
Surrogate: 2-Fluorophenol	60.2		Limits: 35-115%		4	08/02/23 14:17	AMP	V36073
Surrogate: Nitrobenzene-d5	66.5		Limits: 37-122%		4	08/02/23 14:17	AMP	V36073
Surrogate: 4-Terphenyl-d14	83.8		Limits: 54-127%		4	08/02/23 14:17	AMP	V36073
Surrogate: 2,4,6-Tribromophenol	58.7		Limits: 39-132%		4	08/02/23 14:17	AMP	V36073

Qualifiers/ Definitions

*	Outside QC Limit	DF	Dilution Factor
J	Estimated value	MQL	Method Quantitation Limit

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REPORT OF ANALYSIS

Lab No : **90834**
Sample ID : **SS-WT-53**

Matrix: **Solids**
Sampled: **7/25/2023 9:58**

Test	Results	Units	MQL	DF	Date / Time Analyzed	By	Analytical Method
Moisture	**13.3**	%		1	08/01/23 17:10	CNC	SW-DRYWT
Lead	**459**	mg/Kg - dry	3.46	10	08/08/23 23:52	JKC	6010D

Qualifiers/ Definitions				
	*	Outside QC Limit	DF	Dilution Factor
	J	Estimated value	MQL	Method Quantitation Limit

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REPORT OF ANALYSIS

Lab No : **90835**
Sample ID : **SS-WT-76**

Matrix: **Solids**
Sampled: **7/25/2023 10:03**

Test	Results	Units	MQL	DF	Date / Time Analyzed	By	Analytical Method
Moisture	**19.8**	%		1	08/01/23 17:10	CNC	SW-DRYWT
Lead	**259**	mg/Kg - dry	1.87	5	08/08/23 23:57	JKC	6010D

Qualifiers/ Definitions				
	*	Outside QC Limit	DF	Dilution Factor
	J	Estimated value	MQL	Method Quantitation Limit

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REPORT OF ANALYSIS

Lab No : **90836**
Sample ID : **SS-WT-74**

Matrix: **Solids**
Sampled: **7/25/2023 10:08**

Test	Results	Units	MQL	DF	Date / Time Analyzed	By	Analytical Method
Moisture	**13.4**	%		1	08/01/23 17:10	CNC	SW-DRYWT
Lead	**346**	mg/Kg - dry	3.46	10	08/09/23 00:01	JKC	6010D

Qualifiers/ Definitions				
	*	Outside QC Limit	DF	Dilution Factor
	J	Estimated value	MQL	Method Quantitation Limit

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REPORT OF ANALYSIS

Lab No : **90837**
Sample ID : **SS-WT-79**

Matrix: **Solids**
Sampled: **7/25/2023 10:15**

Test	Results	Units	MQL	DF	Date / Time Analyzed	By	Analytical Method
Moisture	**16.1**	%		1	08/01/23 17:10	CNC	SW-DRYWT
Lead	**1330**	mg/Kg - dry	7.15	20	08/10/23 15:54	JKC	6010D

Qualifiers/ Definitions				
	*	Outside QC Limit	DF	Dilution Factor
	J	Estimated value	MQL	Method Quantitation Limit

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Project R4370.00

Information :

Original Report Date : 08/10/2023
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Report Number : **23-208-0055**

REPORT OF ANALYSIS

Lab No : **90838**
Sample ID : **SS-WT-92**

Matrix: **Solids**
Sampled: **7/25/2023 10:28**

Test	Results	Units	MQL	DF	Date / Time Analyzed	By	Analytical Method
Moisture	**14.7**	%		1	08/01/23 17:10	CNC	SW-DRYWT
Lead	**121**	mg/Kg - dry	1.76	5	08/09/23 00:28	JKC	6010D

Qualifiers/ Definitions				
	*	Outside QC Limit	DF	Dilution Factor
	J	Estimated value	MQL	Method Quantitation Limit

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Report Number : **23-208-0055**

REPORT OF ANALYSIS

Lab No : **90839**
Sample ID : **SS-WT-93**

Matrix: **Solids**
Sampled: **7/25/2023 10:35**

Test	Results	Units	MQL	DF	Date / Time Analyzed	By	Analytical Method
Moisture	**21.1**	%		1	08/01/23 17:10	CNC	SW-DRYWT
Lead	**653**	mg/Kg - dry	3.80	10	08/09/23 00:32	JKC	6010D

Qualifiers/ Definitions				
	*	Outside QC Limit	DF	Dilution Factor
	J	Estimated value	MQL	Method Quantitation Limit

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Report Number : **23-208-0055**

REPORT OF ANALYSIS

Lab No : **90840**
Sample ID : **SS-WT-77**

Matrix: **Solids**
Sampled: **7/25/2023 10:45**

Test	Results	Units	MQL	DF	Date / Time Analyzed	By	Analytical Method
Moisture	**13.3**	%		1	08/01/23 11:05	CNC	SW-DRYWT
Lead	**349**	mg/Kg - dry	3.46	10	08/09/23 00:46	JKC	6010D

Qualifiers/ Definitions

*	Outside QC Limit	DF	Dilution Factor
J	Estimated value	MQL	Method Quantitation Limit

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Report Number : **23-208-0055**

REPORT OF ANALYSIS

Lab No : **90841**
Sample ID : **SS-WT-70**

Matrix: **Solids**
Sampled: **7/25/2023 10:50**

Test	Results	Units	MQL	DF	Date / Time Analyzed	By	Analytical Method
Moisture	**24.8**	%		1	08/01/23 11:05	CNC	SW-DRYWT
Lead	**54.7**	mg/Kg - dry	0.398	1	08/02/23 23:34	JKC	6010D

Qualifiers/ Definitions

*	Outside QC Limit	DF	Dilution Factor
J	Estimated value	MQL	Method Quantitation Limit

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Report Number : **23-208-0055**

REPORT OF ANALYSIS

Lab No : **90842**
Sample ID : **SS-WT-60**

Matrix: **Solids**
Sampled: **7/25/2023 10:58**

Test	Results	Units	MQL	DF	Date / Time Analyzed	By	Analytical Method
Moisture	**17.1**	%		1	08/01/23 11:05	CNC	SW-DRYWT
Lead	**760**	mg/Kg - dry	7.24	20	08/09/23 00:50	JKC	6010D

Qualifiers/ Definitions				
	*	Outside QC Limit	DF	Dilution Factor
	J	Estimated value	MQL	Method Quantitation Limit

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Report Number : **23-208-0055**

REPORT OF ANALYSIS

Lab No : **90843**
Sample ID : **SS-WT-61**

Matrix: **Solids**
Sampled: **7/25/2023 11:02**

Test	Results	Units	MQL	DF	Date / Time Analyzed	By	Analytical Method
Moisture	**3.61**	%		1	08/01/23 11:05	CNC	SW-DRYWT
Lead	**15.8**	mg/Kg - dry	0.311	1	08/02/23 23:52	JKC	6010D

Qualifiers/ Definitions				
	*	Outside QC Limit	DF	Dilution Factor
	J	Estimated value	MQL	Method Quantitation Limit

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Report Number : **23-208-0055**

REPORT OF ANALYSIS

Lab No : **90844**
Sample ID : **SS-WT-63**

Matrix: **Solids**
Sampled: **7/25/2023 11:15**

Test	Results	Units	MQL	DF	Date / Time Analyzed	By	Analytical Method
Moisture	**16.4**	%		1	08/01/23 11:05	CNC	SW-DRYWT
Lead	**202**	mg/Kg - dry	1.79	5	08/08/23 05:23	JKC	6010D

Qualifiers/ Definitions				
	*	Outside QC Limit	DF	Dilution Factor
	J	Estimated value	MQL	Method Quantitation Limit

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Report Number : **23-208-0055**

REPORT OF ANALYSIS

Lab No : **90845**
Sample ID : **SS-WT-89**

Matrix: **Solids**
Sampled: **7/25/2023 11:25**

Test	Results	Units	MQL	DF	Date / Time Analyzed	By	Analytical Method
Moisture	**7.12**	%		1	08/01/23 11:05	CNC	SW-DRYWT
Lead	**26.6**	mg/Kg - dry	0.322	1	08/03/23 00:01	JKC	6010D

Qualifiers/ Definitions				
	*	Outside QC Limit	DF	Dilution Factor
	J	Estimated value	MQL	Method Quantitation Limit

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Report Number : **23-208-0055**

REPORT OF ANALYSIS

Lab No : **90846**
Sample ID : **SS-WT-97**

Matrix: **Solids**
Sampled: **7/25/2023 11:33**

Test	Results	Units	MQL	DF	Date / Time Analyzed	By	Analytical Method
Moisture	**16.6**	%		1	08/01/23 11:05	CNC	SW-DRYWT
Lead	**53.0**	mg/Kg - dry	0.359	1	08/03/23 00:06	JKC	6010D

Qualifiers/ Definitions				
	*	Outside QC Limit	DF	Dilution Factor
	J	Estimated value	MQL	Method Quantitation Limit

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Report Number : **23-208-0055**

REPORT OF ANALYSIS

Lab No : **90847**
Sample ID : **SS-WT-82**

Matrix: **Solids**
Sampled: **7/25/2023 11:40**

Test	Results	Units	MQL	DF	Date / Time Analyzed	By	Analytical Method
Moisture	**10.9**	%		1	08/01/23 11:05	CNC	SW-DRYWT
Lead	**9.97**	mg/Kg - dry	0.336	1	08/03/23 00:10	JKC	6010D

Qualifiers/ Definitions				
	*	Outside QC Limit	DF	Dilution Factor
	J	Estimated value	MQL	Method Quantitation Limit

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Report Number : **23-208-0055**

REPORT OF ANALYSIS

Lab No : **90848**
Sample ID : **SS-WT-Dup 1**

Matrix: **Solids**
Sampled: **7/25/2023 8:25**

Test	Results	Units	MQL	DF	Date / Time Analyzed	By	Analytical Method
Moisture	**7.01**	%		1	08/01/23 11:05	CNC	SW-DRYWT
Lead	**62.8**	mg/Kg - dry	0.322	1	08/03/23 00:15	JKC	6010D

Qualifiers/ Definitions				
	*	Outside QC Limit	DF	Dilution Factor
	J	Estimated value	MQL	Method Quantitation Limit

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Report Number : **23-208-0055**

REPORT OF ANALYSIS

Lab No : **90849**
Sample ID : **SS-WT-43 (1')**

Matrix: **Solids**
Sampled: **7/25/2023 12:00**

Test	Results	Units	MQL	DF	Date / Time Analyzed	By	Analytical Method
Moisture	**19.9**	%		1	08/01/23 11:05	CNC	SW-DRYWT
Lead	**458**	mg/Kg - dry	1.87	5	08/08/23 05:27	JKC	6010D

Qualifiers/ Definitions				
	*	Outside QC Limit	DF	Dilution Factor
	J	Estimated value	MQL	Method Quantitation Limit

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Report Number : **23-208-0055**

REPORT OF ANALYSIS

Lab No : **90850**
Sample ID : **SS-WT-79 (1')**

Matrix: **Solids**
Sampled: **7/25/2023 12:05**

Test	Results	Units	MQL	DF	Date / Time Analyzed	By	Analytical Method
Moisture	**16.6**	%		1	08/01/23 11:05	CNC	SW-DRYWT
Lead	**3480**	mg/Kg - dry	18.0	50	08/08/23 05:32	JKC	6010D

Qualifiers/ Definitions

*	Outside QC Limit	DF	Dilution Factor
J	Estimated value	MQL	Method Quantitation Limit

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Report Number : **23-208-0055**

REPORT OF ANALYSIS

Lab No : **90851**
Sample ID : **SS-WT-93 (1')**

Matrix: **Solids**
Sampled: **7/25/2023 12:15**

Test	Results	Units	MQL	DF	Date / Time Analyzed	By	Analytical Method
Moisture	**34.0**	%		1	08/01/23 11:05	CNC	SW-DRYWT
Lead	**2290**	mg/Kg - dry	11.4	25	08/08/23 05:36	JKC	6010D

Qualifiers/ Definitions				
	*	Outside QC Limit	DF	Dilution Factor
	J	Estimated value	MQL	Method Quantitation Limit

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Quality Control Data

Client ID: Mid-Atlantic Associates, Inc. - Raleigh
Project Description: R4370.00
Report No: 23-208-0055

QC Prep: V36025
QC Prep Batch Method: 3050B
QC Analytical Batch(es): V36316,V36366
Analysis Method: 6010D
Analysis Description: Metals Analysis

Lab Reagent Blank LRB-V36025 Matrix: SOL
Associated Lab Samples: 90826, 90827, 90829, 90830

Parameter	Units	Blank Result	MQL	Analyzed
Lead	mg/Kg	<0.300	0.300	08/08/23 01:32

Laboratory Control Sample LCS-V36025

Parameter	Units	Spike Conc.	LCS Result	LCS %Rec	% Rec Limits
Lead	mg/Kg	5.00	5.30	106	80-120

Matrix Spike & Matrix Spike Duplicate V 90807-MS-V36025 V 90807-MSD-V36025

Parameter	Units	Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS %Rec	MSD %Rec	%Rec Limits	RPD	Max RPD
Lead	mg/Kg	195	5.00	5.00	190	190	0.0*	0.0*	75-125	0.0	20

Post Digestion Spike V 90807-PDS-V36025

Parameter	Units	PDS Result	% Recovery	Analyzed
Lead	mg/Kg	156	98.0	08/08/23 21:35

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Quality Control Data

Client ID: **Mid-Atlantic Associates, Inc. - Raleigh**
Project Description: **R4370.00**
Report No: **23-208-0055**

QC Prep: V36026
QC Prep Batch Method: 3050B
QC Analytical Batch(es): V36145,V36366
Analysis Method: 6010D
Analysis Description: Metals Analysis

Lab Reagent Blank LRB-V36026 Matrix: SOL

Associated Lab Samples: 90831, 90832, 90834, 90835, 90836, 90837, 90838, 90839, 90840, 90841, 90842, 90843, 90844, 90845, 90846, 90847, 90848, 90849, 90850, 90851

Parameter	Units	Blank Result	MQL	Analyzed
Lead	mg/Kg	<0.300	0.300	08/02/23 22:19

Laboratory Control Sample LCS-V36026

Parameter	Units	Spike Conc.	LCS Result	LCS %Rec	% Rec Limits
Lead	mg/Kg	5.00	5.99	120	80-120

Matrix Spike & Matrix Spike Duplicate V 90837-MS-V36026 V 90837-MSD-V36026

Parameter	Units	Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS %Rec	MSD %Rec	%Rec Limits	RPD	Max RPD
Lead	mg/Kg	1080	5.00	4.95	1060	1070	0.0*	0.0*	75-125	0.9	20

Post Digestion Spike V 90837-PDS-V36026

Parameter	Units	PDS Result	% Recovery	Analyzed
Lead	mg/Kg	750	95.0	08/09/23 00:10

* QC Fail

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Quality Control Data

Client ID: **Mid-Atlantic Associates, Inc. - Raleigh**
Project Description: **R4370.00**
Report No: **23-208-0055**

QC Prep: L696239
QC Prep Batch Method: 3050B
QC Analytical Batch(es): L696766,L696918,L698988,L698996
Analysis Method: 6020B
Analysis Description: Metals Analyses

Lab Reagent Blank LRB-L696239 Matrix: SOL
Associated Lab Samples: 90828, 90833

Parameter	Units	Blank Result	MQL	Analyzed
Antimony	mg/Kg	<0.250	0.250	08/03/23 19:16
Arsenic	mg/Kg	<0.250	0.250	08/03/23 19:16
Barium	mg/Kg	<0.250	0.250	08/03/23 19:16
Beryllium	mg/Kg	<0.250	0.250	08/03/23 19:16
Cadmium	mg/Kg	<0.250	0.250	08/03/23 19:16
Chromium	mg/Kg	<0.250	0.250	08/03/23 19:16
Cobalt	mg/Kg	<0.250	0.250	08/03/23 19:16
Copper	mg/Kg	<0.250	0.250	08/03/23 19:16
Lead	mg/Kg	<0.250	0.250	08/03/23 19:16
Manganese	mg/Kg	<0.250	0.250	08/03/23 19:16
Nickel	mg/Kg	<0.250	0.250	08/03/23 19:16
Selenium	mg/Kg	<0.250	0.250	08/03/23 19:16
Silver	mg/Kg	<0.250	0.250	08/03/23 19:16
Thallium	mg/Kg	<0.250	0.250	08/03/23 19:16
Vanadium	mg/Kg	<1.25	1.25	08/03/23 19:16
Zinc	mg/Kg	<2.50	2.50	08/03/23 19:16

Laboratory Control Sample LCS-L696239

Parameter	Units	Spike Conc.	LCS Result	LCS %Rec	% Rec Limits
Antimony	mg/Kg	5.00	4.57	91.0	80-120
Arsenic	mg/Kg	2.50	2.41	96.0	80-120
Barium	mg/Kg	5.00	4.56	91.0	80-120
Beryllium	mg/Kg	2.50	2.50	100	80-120
Cadmium	mg/Kg	0.500	0.478	96.0	80-120
Chromium	mg/Kg	5.00	4.84	97.0	80-120
Cobalt	mg/Kg	5.00	4.78	96.0	80-120

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Quality Control Data

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Project Description: R4370.00
Report No: 23-208-0055

QC Prep: L696239
QC Prep Batch Method: 3050B
QC Analytical Batch(es): L696766,L696918,L698988,L698996
Analysis Method: 6020B
Analysis Description: Metals Analyses

Laboratory Control Sample LCS-L696239

Parameter	Units	Spike Conc.	LCS Result	LCS %Rec	% Rec Limits
Copper	mg/Kg	2.50	2.44	98.0	80-120
Lead	mg/Kg	2.50	2.30	92.0	80-120
Manganese	mg/Kg	5.00	4.92	98.0	80-120
Nickel	mg/Kg	2.50	2.47	99.0	80-120
Selenium	mg/Kg	5.00	4.57	91.0	80-120
Silver	mg/Kg	0.500	0.456	91.0	80-120
Thallium	mg/Kg	0.500	0.473	95.0	80-120
Vanadium	mg/Kg	25.0	23.5	94.0	80-120
Zinc	mg/Kg	25.0	25.7	103	80-120

Matrix Spike & Matrix Spike Duplicate V 90860-MS-L696239 V 90860-MSD-L696239

Parameter	Units	Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS %Rec	MSD %Rec	%Rec Limits	RPD	Max RPD
Antimony	mg/Kg	4.48	4.93	4.65	3.94	5.63	0.0*	25.0*	75-125	35.3	80
Arsenic	mg/Kg	5.61	2.47	2.33	6.58	8.46	39.0*	123	75-125	25.0	80
Barium	mg/Kg	459	4.93	4.65	421	450	0.0*	0.0*	75-125	6.6	80
Beryllium	mg/Kg	0.383	2.47	2.33	2.54	2.43	87.0	88.0	75-125	4.4	80
Cadmium	mg/Kg	1.83	0.493	0.465	1.92	2.14	18.0*	67.0*	75-125	10.8	80
Chromium	mg/Kg	27.7	4.93	4.65	29.0	25.3	26.0*	0.0*	75-125	13.6	80
Cobalt	mg/Kg	4.90	4.93	4.65	8.54	9.26	74.0*	94.0	75-125	8.0	80
Copper	mg/Kg	475	2.47	2.33	422	515	0.0*	1720*	75-125	19.8	80
Lead	mg/Kg	1200	2.47	2.33	813	786	0.0*	0.0*	75-125	3.3	80
Manganese	mg/Kg	384	4.93	4.65	314	407	0.0*	495*	75-125	25.7	80
Nickel	mg/Kg	13.3	2.47	2.33	16.1	16.9	114	155*	75-125	4.8	80
Selenium	mg/Kg	0.466	4.93	4.65	4.08	3.93	73.0*	74.0*	75-125	3.7	80
Silver	mg/Kg	0.830	0.493	0.465	1.08	0.927	51.0*	21.0*	75-125	15.2	80

* QC Fail

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Client ID: **Mid-Atlantic Associates, Inc. - Raleigh**
Project Description: **R4370.00**
Report No: **23-208-0055**

QC Prep: L696239
QC Prep Batch Method: 3050B
QC Analytical Batch(es): L696766,L696918,L698988,L698996
Analysis Method: 6020B
Analysis Description: Metals Analyses

Matrix Spike & Matrix Spike Duplicate V 90860-MS-L696239 V 90860-MSD-L696239

Parameter	Units	Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS %Rec	MSD %Rec	%Rec Limits	RPD	Max RPD
Thallium	mg/Kg	<0.250	0.493	0.465	0.451	0.435	84.0	86.0	75-125	3.6	80
Vanadium	mg/Kg	9.95	24.7	23.3	29.2	27.4	78.0	75.0	75-125	6.3	80
Zinc	mg/Kg	1140	24.7	23.3	1000	991	0.0*	0.0*	75-125	0.9	80

Post Digestion Spike V 90860-PDS-L696239

Parameter	Units	PDS Result	% Recovery	Analyzed
Antimony	mg/Kg	2.63	94.0	08/04/23 11:59
Arsenic	mg/Kg	1.65	96.0	08/04/23 11:59
Cadmium	mg/Kg	0.395	95.0	08/04/23 11:59
Cobalt	mg/Kg	2.68	93.0	08/04/23 11:59
Copper	mg/Kg	2.44	102	08/04/23 11:26
Silver	mg/Kg	0.299	94.0	08/04/23 11:59
Vanadium	mg/Kg	11.9	92.0	08/04/23 11:59
Zinc	mg/Kg	116	92.0	08/04/23 11:59

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Client ID: **Mid-Atlantic Associates, Inc. - Raleigh**
Project Description: **R4370.00**
Report No: **23-208-0055**

QC Prep: V35873
QC Prep Batch Method: 7471B (Prep)
QC Analytical Batch(es): V35952
Analysis Method: 7471B
Analysis Description: Solids Total Mercury Analysis - CVAA

Lab Reagent Blank LRB-V35873 Matrix: SOL
Associated Lab Samples: 90828, 90833

Parameter	Units	Blank Result	MQL	Analyzed
Mercury (Total)	mg/Kg	<0.0300	0.0300	07/28/23 15:43

Laboratory Control Sample LCS-V35873

Parameter	Units	Spike Conc.	LCS Result	LCS %Rec	% Rec Limits
Mercury (Total)	mg/Kg	0.417	0.451	108	80-120

Matrix Spike & Matrix Spike Duplicate V 90819-MS-V35873 V 90819-MSD-V35873

Parameter	Units	Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS %Rec	MSD %Rec	%Rec Limits	RPD	Max RPD
Mercury (Total)	mg/Kg	<0.0300	0.410	0.397	0.400	0.362	98.0	91.0	80-120	9.9	20

Post Digestion Spike V 90819-PDS-V35873

Parameter	Units	PDS Result	% Recovery	Analyzed
Mercury (Total)	mg/Kg	0.200	101	07/28/23 16:15

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Quality Control Data

Client ID: **Mid-Atlantic Associates, Inc. - Raleigh**
Project Description: **R4370.00**
Report No: **23-208-0055**

QC Prep: V36047
QC Prep Batch Method: 3546
QC Analytical Batch(es): V36073
Analysis Method: 8270E
Analysis Description: Semivolatile Organic Compounds - GC/MS

Lab Reagent Blank LRB-V36047 Matrix: SOL
Associated Lab Samples: 90828, 90833

Parameter	Units	Blank Result	MDL	MQL	Analyzed	% Recovery	% Rec Limits
Acenaphthene	mg/Kg	<0.116	0.116	0.660	08/01/23 15:51		
Acenaphthylene	mg/Kg	<0.105	0.105	0.660	08/01/23 15:51		
Aniline	mg/Kg	<0.152	0.152	0.660	08/01/23 15:51		
Anthracene	mg/Kg	<0.143	0.143	0.660	08/01/23 15:51		
Benzo(a)anthracene	mg/Kg	<0.139	0.139	0.660	08/01/23 15:51		
Benzo(a)pyrene	mg/Kg	<0.147	0.147	0.660	08/01/23 15:51		
Benzo(b)fluoranthene	mg/Kg	<0.146	0.146	0.660	08/01/23 15:51		
Benzo(g,h,i)perylene	mg/Kg	<0.136	0.136	0.660	08/01/23 15:51		
Benzo(k)fluoranthene	mg/Kg	<0.137	0.137	0.660	08/01/23 15:51		
Benzoic Acid	mg/Kg	<0.580	0.580	2.00	08/01/23 15:51		
Benzyl alcohol	mg/Kg	<0.105	0.105	0.660	08/01/23 15:51		
Bis(2-Chloroethoxy)methane	mg/Kg	<0.118	0.118	0.660	08/01/23 15:51		
Bis(2-Chloroethyl)ether	mg/Kg	<0.107	0.107	0.660	08/01/23 15:51		
Bis(2-Chloroisopropyl)ether	mg/Kg	<0.136	0.136	0.330	08/01/23 15:51		
Bis(2-ethylhexyl)phthalate	mg/Kg	<0.120	0.120	0.660	08/01/23 15:51		
4-Bromophenyl phenyl ether	mg/Kg	<0.109	0.109	0.660	08/01/23 15:51		
Butyl benzyl phthalate	mg/Kg	<0.113	0.113	0.330	08/01/23 15:51		
4-Chloro-3-methylphenol	mg/Kg	<0.092	0.092	0.660	08/01/23 15:51		
4-Chloroaniline	mg/Kg	<0.112	0.112	0.330	08/01/23 15:51		
2-Chloronaphthalene	mg/Kg	<0.116	0.116	0.660	08/01/23 15:51		
2-Chlorophenol	mg/Kg	<0.098	0.098	0.660	08/01/23 15:51		
4-Chlorophenyl phenyl ether	mg/Kg	<0.126	0.126	1.00	08/01/23 15:51		
Chrysene	mg/Kg	<0.142	0.142	0.660	08/01/23 15:51		
Dibenz(a,h)anthracene	mg/Kg	<0.230	0.230	0.660	08/01/23 15:51		
Dibenzofuran	mg/Kg	<0.119	0.119	0.660	08/01/23 15:51		
1,2-Dichlorobenzene	mg/Kg	<0.094	0.094	0.660	08/01/23 15:51		
1,3-Dichlorobenzene	mg/Kg	<0.097	0.097	0.660	08/01/23 15:51		

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Client ID: **Mid-Atlantic Associates, Inc. - Raleigh**
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Report No: **23-208-0055**

QC Prep: V36047
QC Prep Batch Method: 3546
QC Analytical Batch(es): V36073
Analysis Method: 8270E
Analysis Description: Semivolatile Organic Compounds - GC/MS

Lab Reagent Blank LRB-V36047 Matrix: SOL
Associated Lab Samples: 90828, 90833

Parameter	Units	Blank Result	MDL	MQL	Analyzed	% Recovery	% Rec Limits
1,4-Dichlorobenzene	mg/Kg	<0.097	0.097	0.330	08/01/23 15:51		
3,3'-Dichlorobenzidine	mg/Kg	<0.147	0.147	0.660	08/01/23 15:51		
2,4-Dichlorophenol	mg/Kg	<0.095	0.095	0.660	08/01/23 15:51		
Diethyl phthalate	mg/Kg	<0.180	0.180	0.660	08/01/23 15:51		
Dimethyl phthalate	mg/Kg	<0.174	0.174	0.660	08/01/23 15:51		
2,4-Dimethylphenol	mg/Kg	<0.108	0.108	0.330	08/01/23 15:51		
Di-n-butyl phthalate	mg/Kg	<0.107	0.107	0.660	08/01/23 15:51		
4,6-Dinitro-2-methylphenol	mg/Kg	<0.240	0.240	1.50	08/01/23 15:51		
2,4-Dinitrophenol	mg/Kg	<0.520	0.520	1.50	08/01/23 15:51		
2,4-Dinitrotoluene	mg/Kg	<0.096	0.096	0.660	08/01/23 15:51		
2,6-Dinitrotoluene	mg/Kg	<0.108	0.108	0.660	08/01/23 15:51		
Di-n-Octyl Phthalate	mg/Kg	<0.143	0.143	0.330	08/01/23 15:51		
Fluoranthene	mg/Kg	<0.123	0.123	0.660	08/01/23 15:51		
Fluorene	mg/Kg	<0.128	0.128	0.660	08/01/23 15:51		
Hexachlorobenzene	mg/Kg	<0.106	0.106	0.660	08/01/23 15:51		
Hexachlorobutadiene	mg/Kg	<0.097	0.097	0.660	08/01/23 15:51		
Hexachlorocyclopentadiene	mg/Kg	<0.157	0.157	0.660	08/01/23 15:51		
Hexachloroethane	mg/Kg	<0.079	0.079	0.660	08/01/23 15:51		
Indeno(1,2,3-cd)pyrene	mg/Kg	<0.179	0.179	0.660	08/01/23 15:51		
Isophorone	mg/Kg	<0.191	0.191	0.660	08/01/23 15:51		
1-Methylnaphthalene	mg/Kg	<0.106	0.106	0.660	08/01/23 15:51		
2-Methylnaphthalene	mg/Kg	<0.100	0.100	0.660	08/01/23 15:51		
2-Methylphenol	mg/Kg	<0.097	0.097	0.660	08/01/23 15:51		
3&4 Methylphenol	mg/Kg	<0.084	0.084	0.660	08/01/23 15:51		
Naphthalene	mg/Kg	<0.144	0.144	0.660	08/01/23 15:51		
2-Nitroaniline	mg/Kg	<0.096	0.096	0.660	08/01/23 15:51		
3-Nitroaniline	mg/Kg	<0.120	0.120	0.660	08/01/23 15:51		

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Quality Control Data

Client ID: **Mid-Atlantic Associates, Inc. - Raleigh**
Project Description: **R4370.00**
Report No: **23-208-0055**

QC Prep: V36047
QC Prep Batch Method: 3546
QC Analytical Batch(es): V36073
Analysis Method: 8270E
Analysis Description: Semivolatile Organic Compounds - GC/MS

Lab Reagent Blank LRB-V36047 Matrix: SOL
Associated Lab Samples: 90828, 90833

Parameter	Units	Blank Result	MDL	MQL	Analyzed	% Recovery	% Rec Limits
4-Nitroaniline	mg/Kg	<0.093	0.093	0.330	08/01/23 15:51		
Nitrobenzene	mg/Kg	<0.116	0.116	0.330	08/01/23 15:51		
2-Nitrophenol	mg/Kg	<0.088	0.088	0.660	08/01/23 15:51		
4-Nitrophenol	mg/Kg	<0.117	0.117	0.660	08/01/23 15:51		
N-Nitrosodimethylamine	mg/Kg	<0.263	0.263	0.660	08/01/23 15:51		
N-Nitrosodiphenylamine	mg/Kg	<0.181	0.181	0.660	08/01/23 15:51		
N-Nitroso-di-n-propylamine	mg/Kg	<0.118	0.118	0.660	08/01/23 15:51		
Pentachlorophenol	mg/Kg	<0.347	0.347	1.00	08/01/23 15:51		
Phenanthrene	mg/Kg	<0.208	0.208	0.660	08/01/23 15:51		
Phenol	mg/Kg	<0.112	0.112	0.660	08/01/23 15:51		
Pyrene	mg/Kg	<0.134	0.134	0.660	08/01/23 15:51		
Pyridine	mg/Kg	<0.079	0.079	0.330	08/01/23 15:51		
1,2,4-Trichlorobenzene	mg/Kg	<0.107	0.107	0.660	08/01/23 15:51		
2,4,5-Trichlorophenol	mg/Kg	<0.096	0.096	0.660	08/01/23 15:51		
2,4,6-Trichlorophenol	mg/Kg	<0.096	0.096	0.660	08/01/23 15:51		
2-Fluorobiphenyl (S)					08/01/23 15:51	94.0	44-115
2-Fluorophenol (S)					08/01/23 15:51	82.5	35-115
Nitrobenzene-d5 (S)					08/01/23 15:51	86.2	37-122
4-Terphenyl-d14 (S)					08/01/23 15:51	112	54-127
2,4,6-Tribromophenol (S)					08/01/23 15:51	78.6	39-132
Phenol-d5 (S)					08/01/23 15:51	78.0	34-121

Laboratory Control Sample & LCSD LCS-V36047 LCSD-V36047

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS %Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD
Acenaphthene	mg/Kg	1.67	1.46	1.52	87.4	91.0	40-123	4.0	20

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Quality Control Data

Client ID: Mid-Atlantic Associates, Inc. - Raleigh
Project Description: R4370.00
Report No: 23-208-0055

QC Prep: V36047
QC Prep Batch Method: 3546
QC Analytical Batch(es): V36073
Analysis Method: 8270E
Analysis Description: Semivolatile Organic Compounds - GC/MS

Laboratory Control Sample & LCSD LCS-V36047 LCSD-V36047

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS %Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD
Acenaphthylene	mg/Kg	1.67	1.47	1.53	88.0	91.6	32-132	4.0	20
Aniline	mg/Kg	1.67	2.71	2.82	162	169	12-197	3.9	20
Anthracene	mg/Kg	1.67	1.62	1.68	97.0	101	47-123	3.6	20
Benzo(a)anthracene	mg/Kg	1.67	1.66	1.70	99.4	102	49-126	2.3	20
Benzo(a)pyrene	mg/Kg	1.67	1.80	1.86	108	111	45-129	3.2	20
Benzo(b)fluoranthene	mg/Kg	1.67	1.70	1.85	102	111	45-132	8.4	20
Benzo(g,h,i)perylene	mg/Kg	1.67	1.66	1.74	99.4	104	43-134	4.7	20
Benzo(k)fluoranthene	mg/Kg	1.67	1.64	1.64	98.2	98.2	47-132	0.0	20
Benzoic Acid	mg/Kg	1.67	1.25	1.24	74.8	74.2	10-83	0.8	20
Benzyl alcohol	mg/Kg	1.67	1.48	1.59	88.6	95.2	29-122	7.1	20
Bis(2-Chloroethoxy)methane	mg/Kg	1.67	1.33	1.36	79.6	81.4	36-121	2.2	20
Bis(2-Chloroethyl)ether	mg/Kg	1.67	1.33	1.40	79.6	83.8	31-120	5.1	20
Bis(2-Chloroisopropyl)ether	mg/Kg	1.67	1.48	1.52	88.6	91.0	33-131	2.6	20
Bis(2-ethylhexyl)phthalate	mg/Kg	1.67	1.88	1.95	113	117	51-133	3.6	20
4-Bromophenyl phenyl ether	mg/Kg	1.67	1.64	1.71	98.2	102	46-124	4.1	20
Butyl benzyl phthalate	mg/Kg	1.67	1.85	1.95	111	117	48-132	5.2	20
4-Chloro-3-methylphenol	mg/Kg	1.67	1.35	1.41	80.8	84.4	45-122	4.3	20
4-Chloroaniline	mg/Kg	1.67	1.42	1.47	85.0	88.0	17-106	3.4	20
2-Chloronaphthalene	mg/Kg	1.67	1.48	1.52	88.6	91.0	41-114	2.6	20
2-Chlorophenol	mg/Kg	1.67	1.46	1.53	87.4	91.6	34-121	4.6	20
4-Chlorophenyl phenyl ether	mg/Kg	1.67	1.53	1.59	91.6	95.2	45-121	3.8	20
Chrysene	mg/Kg	1.67	1.57	1.64	94.0	98.2	50-124	4.3	20
Dibenz(a,h)anthracene	mg/Kg	1.67	1.52	1.56	91.0	93.4	45-134	2.5	20
Dibenzofuran	mg/Kg	1.67	1.47	1.53	88.0	91.6	44-120	4.0	20
1,2-Dichlorobenzene	mg/Kg	1.67	1.30	1.37	77.8	82.0	33-117	5.2	20
1,3-Dichlorobenzene	mg/Kg	1.67	1.31	1.35	78.4	80.8	30-115	3.0	20

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Quality Control Data

Client ID: Mid-Atlantic Associates, Inc. - Raleigh
Project Description: R4370.00
Report No: 23-208-0055

QC Prep: V36047
QC Prep Batch Method: 3546
QC Analytical Batch(es): V36073
Analysis Method: 8270E
Analysis Description: Semivolatile Organic Compounds - GC/MS

Laboratory Control Sample & LCSD LCS-V36047 LCSD-V36047

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS %Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD
1,4-Dichlorobenzene	mg/Kg	1.67	1.29	1.35	77.2	80.8	31-115	4.5	20
3,3'-Dichlorobenzidine	mg/Kg	1.67	1.68	1.77	101	106	22-121	5.2	20
2,4-Dichlorophenol	mg/Kg	1.67	1.31	1.39	78.4	83.2	40-122	5.9	20
Diethyl phthalate	mg/Kg	1.67	1.56	1.68	93.4	101	50-124	7.4	20
Dimethyl phthalate	mg/Kg	1.67	1.60	1.67	95.8	100	48-124	4.2	20
2,4-Dimethylphenol	mg/Kg	1.67	1.74	1.82	104	109	30-127	4.4	20
Di-n-butyl phthalate	mg/Kg	1.67	1.78	1.84	107	110	51-128	3.3	20
4,6-Dinitro-2-methylphenol	mg/Kg	1.67	1.42	1.43	85.0	85.6	29-132	0.7	20
2,4-Dinitrophenol	mg/Kg	1.67	1.24	1.30	74.2	77.8	27-129	4.7	20
2,4-Dinitrotoluene	mg/Kg	1.67	1.60	1.66	95.8	99.4	48-126	3.6	20
2,6-Dinitrotoluene	mg/Kg	1.67	1.53	1.67	91.6	100	46-124	8.7	20
Di-n-Octyl Phthalate	mg/Kg	1.67	2.08	2.17	125	130	45-140	4.2	20
Fluoranthene	mg/Kg	1.67	1.48	1.53	88.6	91.6	50-127	3.3	20
Fluorene	mg/Kg	1.67	1.47	1.55	88.0	92.8	43-125	5.2	20
Hexachlorobenzene	mg/Kg	1.67	1.58	1.61	94.6	96.4	45-122	1.8	20
Hexachlorobutadiene	mg/Kg	1.67	1.22	1.30	73.0	77.8	32-123	6.3	20
Hexachlorocyclopentadiene	mg/Kg	1.67	1.10	1.22	65.8	73.0	32-117	10.3	20
Hexachloroethane	mg/Kg	1.67	1.23	1.28	73.6	76.6	28-117	3.9	20
Indeno(1,2,3-cd)pyrene	mg/Kg	1.67	1.73	1.82	104	109	45-133	5.0	20
Isophorone	mg/Kg	1.67	1.16	1.19	69.4	71.2	30-122	2.5	20
1-Methylnaphthalene	mg/Kg	1.67	1.21	1.26	72.4	75.4	40-119	4.0	20
2-Methylnaphthalene	mg/Kg	1.67	1.22	1.27	73.0	76.0	38-122	4.0	20
2-Methylphenol	mg/Kg	1.67	1.50	1.55	89.8	92.8	32-122	3.2	20
3&4 Methylphenol	mg/Kg	1.67	1.34	1.39	80.2	83.2	34-119	3.6	20
Naphthalene	mg/Kg	1.67	1.20	1.24	71.8	74.2	35-123	3.2	20
2-Nitroaniline	mg/Kg	1.67	1.61	1.75	96.4	105	44-127	8.3	20

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Quality Control Data

Client ID: **Mid-Atlantic Associates, Inc. - Raleigh**
Project Description: **R4370.00**
Report No: **23-208-0055**

QC Prep: V36047
QC Prep Batch Method: 3546
QC Analytical Batch(es): V36073
Analysis Method: 8270E
Analysis Description: Semivolatile Organic Compounds - GC/MS

Laboratory Control Sample & LCSD LCS-V36047 LCSD-V36047

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS %Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD
3-Nitroaniline	mg/Kg	1.67	1.67	1.75	100	105	33-119	4.6	20
4-Nitroaniline	mg/Kg	1.67	1.56	1.67	93.4	100	63-147	6.8	20
Nitrobenzene	mg/Kg	1.67	1.19	1.22	71.2	73.0	34-122	2.4	20
2-Nitrophenol	mg/Kg	1.67	1.28	1.36	76.6	81.4	36-123	6.0	20
4-Nitrophenol	mg/Kg	1.67	1.67	1.72	100	103	30-132	2.9	20
N-Nitrosodimethylamine	mg/Kg	1.67	1.17	1.21	70.0	72.4	10-146	3.3	20
N-Nitrosodiphenylamine	mg/Kg	1.67	1.94	1.96	116	117	38-127	1.0	20
N-Nitroso-di-n-propylamine	mg/Kg	1.67	1.47	1.51	88.0	90.4	36-120	2.6	20
Pentachlorophenol	mg/Kg	1.67	1.77	1.85	106	111	25-133	4.4	20
Phenanthrene	mg/Kg	1.67	1.54	1.61	92.2	96.4	50-121	4.4	20
Phenol	mg/Kg	1.67	1.41	1.43	84.4	85.6	34-121	1.4	20
Pyrene	mg/Kg	1.67	1.63	1.70	97.6	102	47-127	4.2	20
Pyridine	mg/Kg	1.67	0.951	0.973	56.9	58.2	10-80	2.2	20
1,2,4-Trichlorobenzene	mg/Kg	1.67	1.18	1.22	70.6	73.0	34-118	3.3	20
2,4,5-Trichlorophenol	mg/Kg	1.67	1.57	1.63	94.0	97.6	41-124	3.7	20
2,4,6-Trichlorophenol	mg/Kg	1.67	1.48	1.55	88.6	92.8	39-126	4.6	20
2-Fluorobiphenyl (S)					91.6	92.2	44-115		
2-Fluorophenol (S)					81.9	81.3	35-115		
Nitrobenzene-d5 (S)					75.4	74.8	37-122		
4-Terphenyl-d14 (S)					106	107	54-127		
2,4,6-Tribromophenol (S)					83.4	86.7	39-132		
Phenol-d5 (S)					77.7	77.1	34-121		

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Quality Control Data

Client ID: **Mid-Atlantic Associates, Inc. - Raleigh**
Project Description: **R4370.00**
Report No: **23-208-0055**

QC Analytical Batch: V36016
Analysis Method: SW-DRYWT
Analysis Description: Dry Weight Determination

Duplicate V 90841-DUP

Parameter	Units	Result	DUP Result	RPD	Max RPD	Analyzed
Moisture	%	24.8	24.4	1.6	20.0	08/01/23 11:05

Duplicate V 90858-DUP

Parameter	Units	Result	DUP Result	RPD	Max RPD	Analyzed
Moisture	%	32.6	32.0	1.8	20.0	08/01/23 11:05

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Quality Control Data

Client ID: **Mid-Atlantic Associates, Inc. - Raleigh**
Project Description: **R4370.00**
Report No: **23-208-0055**

QC Analytical Batch: V36018
Analysis Method: SW-DRYWT
Analysis Description: Dry Weight Determination

Duplicate V 90820-DUP

Parameter	Units	Result	DUP Result	RPD	Max RPD	Analyzed
Moisture	%	5.08	4.98	1.9	20.0	08/01/23 11:05

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Quality Control Data

Client ID: **Mid-Atlantic Associates, Inc. - Raleigh**
Project Description: **R4370.00**
Report No: **23-208-0055**

QC Analytical Batch: V36036
Analysis Method: SW-DRYWT
Analysis Description: Dry Weight Determination

Duplicate V 90833-DUP

Parameter	Units	Result	DUP Result	RPD	Max RPD	Analyzed
Moisture	%	9.20	9.35	1.6	20.0	08/01/23 17:10

Duplicate V 90860-DUP

Parameter	Units	Result	DUP Result	RPD	Max RPD	Analyzed
Moisture	%	26.6	27.7	4.0	20.0	08/01/23 17:10

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Shipment Receipt Form

Customer Number: **01139**
Customer Name: **Mid-Atlantic Associates, Inc. - Raleigh**
Report Number: **23-208-0055**

Shipping Method

○ Fed Ex	○ US Postal	○ Lab	○ Other :	
○ UPS	○ Client	◉ Courier	Thermometer ID:	IRT-15 2.6C

Shipping container/cooler uncompromised?	◉ Yes	○ No	
Number of coolers/boxes received	1		
Custody seals intact on shipping container/cooler?	○ Yes	○ No	◉ Not Present
Custody seals intact on sample bottles?	○ Yes	○ No	◉ Not Present
Chain of Custody (COC) present?	◉ Yes	○ No	
COC agrees with sample label(s)?	◉ Yes	○ No	
COC properly completed	◉ Yes	○ No	
Samples in proper containers?	◉ Yes	○ No	
Sample containers intact?	◉ Yes	○ No	
Sufficient sample volume for indicated test(s)?	◉ Yes	○ No	
All samples received within holding time?	◉ Yes	○ No	
Cooler temperature in compliance?	◉ Yes	○ No	
Cooler/Samples arrived at the laboratory on ice. Samples were considered acceptable as cooling process had begun.	◉ Yes	○ No	
Water - Sample containers properly preserved	○ Yes	○ No	◉ N/A
Water - VOA vials free of headspace	○ Yes	○ No	◉ N/A
Trip Blanks received with VOAs	○ Yes	○ No	◉ N/A
Soil VOA method 5035 – compliance criteria met	◉ Yes	○ No	○ N/A

☐ High concentration container (48 hr) ☐ Low concentration EnCore samplers (48 hr)
☐ High concentration pre-weighed (methanol -14 d) ☐ Low conc pre-weighed vials (Sod Bis -14 d)

Special precautions or instructions included?	○ Yes	◉ No

Comments:

Signature: Caitlyn Cummins Date & Time: 07/27/2023 14:16:32

Waypoint ANALYTICAL

449 Springbrook Road • Charlotte, NC 28217
Phone 704/529-6364 • Fax: 704/525-0409

CHAIN OF CUSTODY RECORD

PAGE 1 OF 3 QUOTE # TO ENSURE PROPER BILLING:

Client Company Name: Mid-Atlantic Associates
Report To/Contact Name: Kevin Clay
Reporting Address: 409 Rogers View Ct Raleigh NC 27610
Phone: 704 609 0248 Fax (Yes)(No):
Email Address: kclay@meaonline.com
EDD Type: PDF ✓ Excel Other
Site Location Name: Walltown Park
Site Location Physical Address:

Project Name:
Short Hold Analysis (Yes) (No) UST Project: (Yes) (No)
*Please ATTACH any project specific reporting (QC LEVEL I II III IV) provisions and/or QC Requirements
Invoice To:
Address:

Purchase Order No./Billing Reference
Requested Due Date ❑ 1 Day ❑ 2 Days ❑ 3 Days ❑ 4 Days ❑ 5 Days
"Working Days" ❑ 6-9 Days ☑ Standard 10 days ❑ Rush Work Must Be Pre Approved
Samples received after 15:00 will be processed next business day.
Turnaround time is based on business days, excluding weekends and holidays.
(SEE REVERSE FOR TERMS & CONDITIONS REGARDING SERVICES RENDERED BY WAYPOINT ANALYTICAL, LLC TO CLIENT)

LAB USE ONLY

	YES	NO	N/A
Samples INTACT upon arrival?	X		
Received IN ICE?	X		
PROPER PRESERVATIVES indicated?	X		
Received WITHIN HOLDING TIMES?	X		
CUSTODY SEALS INTACT?			X
VOLATILES rec'd W/OUT HEADSPACE?			X
PROPER CONTAINERS used?	X		

TEMP: Therm ID: IRT-15 Observed 2.6 °C /Corr. 2.6 °C

TO BE FILLED IN BY CLIENT/SAMPLING PERSONNEL
Certification: NC ___ SC ___
Other ___ N/A ___
Water Chlorinated: YES ___ NO ___
Samples Iced Upon Collection: YES ___ NO ___

CLIENT SAMPLE DESCRIPTION KRC 7/25/23	DATE COLLECTED	TIME COLLECTED MILITARY HOURS	MATRIX (SOIL, WATER, OR SLUDGE)	SAMPLE CONTAINER *TYPE SEE BELOW	NO.	SIZE	PRESERVATIVES	Lead 6020B	Haz List metals	SVOC 8270				REMARKS	ID NO.
SS-WT-36	7/25/23	820	Soil				Ice	✓							
SS-WT-43	↓	835	↓				↓	✓							
SS-WT-50	↓	845	↓				↓		✓	✓					
SS-WT-49	↓	855	↓				↓	✓							
SS-WT-55	↓	910	↓				↓	✓							
SS-WT-48	↓	920	↓				↓	✓							
SS-WT-32	↓	930	↓				↓	✓							
SS-WT-18	↓	940	↓				↓		✓	✓					
SS-WT-53	↓	958	↓				↓	✓							

23-208-0055
01139
07-27-2023
14:11:26
Mid-Atlantic Associates, Inc. - Raleigh
R4370.00

PRESS DOWN FIRMLY - 2 COPIES

Sampler's Signature [signature] Sampled By (Print Name) Kevin Clay Affiliation Mid-Atlantic

Upon relinquishing this Chain of Custody is your authorization for Waypoint Analytical to proceed with the analyses as requested above. Any changes must be submitted in writing to the Waypoint Analytical Project Manager. There will be charges for any changes after analyses have been initialized.

Relinquished By (Signature)	Received By (Signature)	Date	Military/Hours
[signature]	Philip Paige	7-26-23	11:13
Philip Paige	Courier Express	7-26-23	16:00
	Received For Waypoint Analytical By: Caitlyn C[signature]	7/27/23	13:00

Method of Shipment: NOTE: ALL SAMPLE COOLERS SHOULD BE TAPED SHUT WITH CUSTODY SEALS FOR TRANSPORTATION TO THE LABORATORY. SAMPLES ARE NOT ACCEPTED AND VERIFIED AGAINST COC UNTIL RECEIVED AT THE LABORATORY.
❑ Fed Ex ❑ UPS ❑ Hand-delivered ❑ Waypoint Analytical Field Service ❑ Other

COC Group No.

Additional Comments:

LAB USE ONLY
Site Arrival Time:
Site Departure Time:
Field Tech Fee:
Mileage:

NPDES: ❑ NC ❑ SC ❑
UST: ❑ NC ❑ SC ❑
GROUNDWATER: ❑ NC ❑ SC ❑
DRINKING WATER: ❑ NC ❑ SC ❑
SOLID WASTE: ❑ NC ❑ SC ❑
RCRA: ❑ NC ❑ SC
BRWNFLD ❑ NC ❑ SC ❑
LANDFILL ❑ NC ❑ SC ❑
OTHER: ❑ NC ❑ SC ❑

SEE REVERSE FOR TERMS & CONDITIONS

ORIGINAL

CHAIN OF CUSTODY RECORD

Waypoint ANALYTICAL
449 Springbrook Road • Charlotte, NC 28217
Phone 704/529-6364 • Fax: 704/525-0409

PAGE 2 OF 3 QUOTE # TO ENSURE PROPER BILLING:

Client Company Name:
Report To/Contact Name:
Reporting Address: SEE P. 1
Phone: Fax (Yes)(No):
Email Address:
EDD Type: PDF Excel Other
Site Location Name:
Site Location Physical Address:

Project Name:
Short Hold Analysis (Yes) (No) UST Project: (Yes) (No)
*Please ATTACH any project specific reporting (QC LEVEL I II III IV) provisions and/or QC Requirements
Invoice To:
Address:

Purchase Order No./Billing Reference
Requested Due Date ☐ 1 Day ☐ 2 Days ☐ 3 Days ☐ 4 Days ☐ 5 Days
"Working Days" ☐ 6-9 Days ☑ Standard 10 days ☐ Rush Work Must Be Pre Approved
Samples received after 15:00 will be processed next business day.
Turnaround time is based on business days, excluding weekends and holidays.
(SEE REVERSE FOR TERMS & CONDITIONS REGARDING SERVICES RENDERED BY WAYPOINT ANALYTICAL, LLC TO CLIENT)

LAB USE ONLY

	YES	NO	N/A
Samples INTACT upon arrival?	X		
Received IN ICE?	X		
PROPER PRESERVATIVES indicated?	X		
Received WITHIN HOLDING TIMES?	X		
CUSTODY SEALS INTACT?			X
VOLATILES rec'd W/OUT HEADSPACE?			X
PROPER CONTAINERS used?	X		

TEMP: Therm ID: IRT-15 Observed 2.6 °C /Corr. 2.6 °C

TO BE FILLED IN BY CLIENT/SAMPLING PERSONNEL
Certification: NC_____ SC_____
Other_____ N/A_____
Water Chlorinated: YES___ NO___
Samples Iced Upon Collection: YES___NO___

CLIENT SAMPLE DESCRIPTION	DATE COLLECTED	TIME COLLECTED MILITARY HOURS	MATRIX (SOIL, WATER, OR SLUDGE)	SAMPLE CONTAINER *TYPE SEE BELOW	NO.	SIZE	PRESERVATIVES	ANALYSIS REQUESTED: Lead 6020B	Mercury	SVOC 8270	REMARKS	ID NO.
SS-WT-76	7/25/23	1003	Soil				Ice	✓				
SS-WT-74		1008										
SS-WT-79		1015										
SS-WT-92		1028										
SS-WT-93		1035										
SS-WT-77		1045										
SS-WT-70		1050										
SS-WT-60		1058										
SS-WT-61		1102										

23-208-0055
01139
07-27-2023
14:11:26
Mid-Atlantic Associates, Inc. - Raleigh
R4370.00

PRESS DOWN FIRMLY - 2 COPIES

Sampler's Signature: Kevin Clay Sampled By (Print Name): Kevin Clay Affiliation: Mid-Atlantic

Upon relinquishing this Chain of Custody is your authorization for Waypoint Analytical to proceed with the analyses as requested above. Any changes must be submitted in writing to the Waypoint Analytical Project Manager. There will be charges for any changes after analyses have been initialized.

		Date	Military/Hours
Relinquished By: (Signature)	Received By: (Signature) Philip Paige	7.26.23	11:13
Relinquished By: (Signature) Philip Paige	Received By: (Signature) Courier Express	7-26-23	16:00
Relinquished By: (Signature)	Received For Waypoint Analytical By: Caitlyn Cummings	7/27/23	13:00

Method of Shipment: NOTE: ALL SAMPLE COOLERS SHOULD BE TAPED SHUT WITH CUSTODY SEALS FOR TRANSPORTATION TO THE LABORATORY. SAMPLES ARE NOT ACCEPTED AND VERIFIED AGAINST COC UNTIL RECEIVED AT THE LABORATORY.
☐ Fed Ex ☐ UPS ☐ Hand-delivered ☐ Waypoint Analytical Field Services ☐ Other
COC Group No.

Additional Comments:

LAB USE ONLY
Site Arrival Time:
Site Departure Time:
Field Tech Fee:
Mileage:

SEE REVERSE FOR TERMS & CONDITIONS

NPDES:	UST:	GROUNDWATER:	DRINKING WATER:	SOLID WASTE:	RCRA:	BRWNFLD	LANDFILL	OTHER:
☐ NC ☐ SC ☐	☐ NC ☐ SC ☐	☐ NC ☐ SC ☐	☐ NC ☐ SC ☐	☐ NC ☐ SC ☐	☐ NC ☐ SC ☐	☐ NC ☐ SC ☐	☐ NC ☐ SC ☐	☐ NC ☐ SC ☐

ORIGINAL

Waypoint ANALYTICAL

449 Springbrook Road • Charlotte, NC 28217
Phone 704/529-6364 • Fax: 704/525-0409

CHAIN OF CUSTODY RECORD

PAGE 3 OF 3 QUOTE # TO ENSURE PROPER BILLING:

Client Company Name:
Report To/Contact Name: SEE P. 1
Reporting Address:
Phone: Fax (Yes)(No):
Email Address:
EDD Type: PDF Excel Other
Site Location Name:
Site Location Physical Address:

Project Name:
Short Hold Analysis (Yes) (No) UST Project: (Yes) (No)
*Please ATTACH any project specific reporting (QC LEVEL I II III IV) provisions and/or QC Requirements
Invoice To:
Address:

Purchase Order No./Billing Reference
Requested Due Date ❑ 1 Day ❑ 2 Days ❑ 3 Days ❑ 4 Days ❑ 5 Days
"Working Days" ❑ 6-9 Days ☑ Standard 10 days ❑ Rush Work Must Be Pre Approved
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Turnaround time is based on business days, excluding weekends and holidays.
(SEE REVERSE FOR TERMS & CONDITIONS REGARDING SERVICES RENDERED BY WAYPOINT ANALYTICAL, LLC TO CLIENT)

LAB USE ONLY

	YES	NO	N/A
Samples INTACT upon arrival?	X		
Received IN ICE?	X		
PROPER PRESERVATIVES indicated?	X		
Received WITHIN HOLDING TIMES?	X		
CUSTODY SEALS INTACT?			X
VOLATILES rec'd W/OUT HEADSPACE?			X
PROPER CONTAINERS used?	X		

TEMP: Therm ID: IRT-15 Observed 2.6 °C /Corr. 2.6 °C

TO BE FILLED IN BY CLIENT/SAMPLING PERSONNEL
Certification: NC___ SC___ Other___ N/A___
Water Chlorinated: YES___ NO___
Samples Iced Upon Collection: YES___ NO___

CLIENT SAMPLE DESCRIPTION	DATE COLLECTED	TIME COLLECTED MILITARY HOURS	MATRIX (SOIL, WATER, OR SLUDGE)	*TYPE SEE BELOW	NO.	SIZE	PRESERVATIVES	Lead 6020B	Haz Lst Metals	SVOC 8270				REMARKS	ID NO.
SS-WT-63	7/25/23	1115	Soil				Ice	✓							
SS-WT-89	↓	1125	↓				↓	↓							
SS-WT-97	↓	1133	↓				↓	↓							
SS-WT-82	↓	1140	↓				↓	↓							
SS-WT-Dup1	↓	825	↓				↓	↓							
SS-WT-43(1')	↓	1200	↓				↓	↓							
SS-WT-79(1')	↓	1206	↓				↓	↓							
SS-WT-93(1')	↓	1215	↓				↓	↓							

23-208-0055
01139
07-27-2023
14:11:26
Mid-Atlantic Associates, Inc. - Raleigh
R4370.00

PRESS DOWN FIRMLY - 2 COPIES

Sampler's Signature [signature] Sampled By (Print Name) Kevin Clay Affiliation Mid-Atlantic

Upon relinquishing this Chain of Custody is your authorization for Waypoint Analytical to proceed with the analyses as requested above. Any changes must be submitted in writing to the Waypoint Analytical Project Manager. There will be charges for any changes after analyses have been initialized.

Relinquished By (Signature)	Received By (Signature)	Date	Military/Hours
[signature]	Phillip Paige	7-26-23	11:13
Phillip Paige	Courier Express	7-26-23	16:00
	Received For Waypoint Analytical By: Caitlyn [signature]	7/27/23	13:00

Additional Comments:

LAB USE ONLY
Site Arrival Time:
Site Departure Time:
Field Tech Fee:
Mileage:

Method of Shipment NOTE: ALL SAMPLE COOLERS SHOULD BE TAPED SHUT WITH CUSTODY SEALS FOR TRANSPORTATION TO THE LABORATORY. SAMPLES ARE NOT ACCEPTED AND VERIFIED AGAINST COC UNTIL RECEIVED AT THE LABORATORY.
COC Group No.

❑ Fed Ex ❑ UPS ❑ Hand-delivered ❑ Waypoint Analytical Field Service ❑ Other

SEE REVERSE FOR TERMS & CONDITIONS

NPDES: ❑ NC ❑ SC ❑ | UST: ❑ NC ❑ SC ❑ | GROUNDWATER: ❑ NC ❑ SC ❑ | DRINKING WATER: ❑ NC ❑ SC ❑ | SOLID WASTE: ❑ NC ❑ SC ❑ | RCRA: ❑ NC ❑ SC ❑ | BRWNFLD ❑ NC ❑ SC | LANDFILL ❑ NC ❑ SC ❑ | OTHER: ❑ NC ❑ SC ❑

ORIGINAL

449 Springbrook Rd, Charlotte, NC 28217
Main 704.529.6364
www.waypointanalytical.com

8/11/2023

Mid-Atlantic Associates, Inc. - Raleigh
Kevin Clay
409 Rogers View Court
Raleigh, NC, 27610

Ref: Analytical Testing
Lab Report Number: 23-222-0015
Client Project Description: R4370.00
Wall Town Park

Dear Kevin Clay:

Waypoint Analytical, LLC (Charlotte) received sample(s) on 8/10/2023 for the analyses presented in the following report.

The above referenced project has been analyzed per your instructions. The analyses were performed in accordance with the applicable analytical method.

The analytical data has been validated using standard quality control measures performed as required by the analytical method. Quality Assurance, method validations, instrumentation maintenance and calibration for all parameters were performed in accordance with guidelines established by the USEPA (including 40 CFR 136 Method Update Rule May 2021) unless otherwise indicated.

Certain parameters (chlorine, pH, dissolved oxygen, sulfite...) are required to be analyzed within 15 minutes of sampling. Usually, but not always, any field parameter analyzed at the laboratory is outside of this holding time. Refer to sample analysis time for confirmation of holding time compliance.

The results are shown on the attached Report of Analysis(s). Results for solid matrices are reported on an as-received basis unless otherwise indicated. This report shall not be reproduced except in full and relates only to the samples included in this report.

Please do not hesitate to contact me or client services if you have any questions or need additional information.

Sincerely,

Angela D Overcash
Senior Project Manager

Laboratory's liability in any claim relating to analyses performed shall be limited to, at laboratory's option, repeating the analysis in question at laboratory's expense, or the refund of the charges paid for performance of said analysis.

449 Springbrook Rd, Charlotte, NC 28217
Main 704.529.6364
www.waypointanalytical.com

Certification Summary

Laboratory ID: WP CNC: Waypoint Analytical Carolina, Inc. (C), Charlotte, NC

State	Program	Lab ID	Expiration Date
North Carolina	State Program	37735	07/31/2024
North Carolina	State Program	402	12/31/2023
South Carolina	State Program	99012	07/31/2023
South Carolina	State Program	99012	12/31/2022

449 Springbrook Rd, Charlotte, NC 28217
Main 704.529.6364
www.waypointanalytical.com

Sample Summary Table

Report Number: **23-222-0015**

Client Project Description: **R4370.00**
Wall Town Park

Lab No	Client Sample ID	Matrix	Date Collected	Date Received
91932	SS-65	Solids	08/04/2023 13:13	08/10/2023 14:00

449 Springbrook Rd, Charlotte, NC 28217
Main 704.529.6364
www.waypointanalytical.com

Summary of Detected Analytes

Project: **R4370.00**

Report Number: **23-222-0015**

Client Sample ID / Method	Lab Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
SS-65	**V 91932**					
6010D	Lead	314	mg/Kg - dry	3.23	08/11/2023 15:01	
SW-DRYWT	Moisture	7.03	%		08/10/2023 17:13	

449 Springbrook Rd, Charlotte, NC 28217
Main 704.529.6364
www.waypointanalytical.com

Client: Mid-Atlantic Associates, Inc. - Raleigh **CASE NARRATIVE**
Project: R4370.00
Lab Report Number: 23-222-0015
Date: 8/11/2023

Metals Analysis Method 6010D
Sample 91932 (SS-65)
Analyte: Lead
QC Batch No: V36519/V36474
LLC failed high. Result 10x concentration. Result not affected.

449 Springbrook Rd, Charlotte, NC 28217
Main 704.529.6364
www.waypointanalytical.com

01139
Mid-Atlantic Associates, Inc. - Raleigh
Kevin Clay
409 Rogers View Court
Raleigh , NC 27610

Project R4370.00
Information : Wall Town Park

Report Date : 08/11/2023
Received : 08/10/2023

Report Number : **23-222-0015**

REPORT OF ANALYSIS

Lab No : **91932**
Sample ID : **SS-65**

Matrix: **Solids**
Sampled: **8/4/2023 13:13**

Test	Results	Units	MQL	DF	Date / Time Analyzed	By	Analytical Method
Moisture	**7.03**	%		1	08/10/23 17:13	CNC	SW-DRYWT
Lead	**314**	mg/Kg - dry	3.23	10	08/11/23 15:01	JKC	6010D

Qualifiers/ Definitions DF Dilution Factor MQL Method Quantitation Limit

449 Springbrook Rd, Charlotte, NC 28217
Main 704.529.6364
www.waypointanalytical.com

Quality Control Data

Client ID: **Mid-Atlantic Associates, Inc. - Raleigh**
Project Description: **R4370.00**
Report No: **23-222-0015**

QC Prep: V36474
QC Prep Batch Method: 3050B
QC Analytical Batch(es): V36519
Analysis Method: 6010D
Analysis Description: Metals Analysis

Lab Reagent Blank LRB-V36474 Matrix: SOL
Associated Lab Samples: 91932

Parameter	Units	Blank Result	MQL	Analyzed
Lead	mg/Kg	< 0.300	0.300	08/11/23 14:30

Laboratory Control Sample LCS-V36474

Parameter	Units	Spike Conc.	LCS Result	LCS %Rec	% Rec Limits
Lead	mg/Kg	5.00	5.61	112	80-120

449 Springbrook Rd, Charlotte, NC 28217
Main 704.529.6364
www.waypointanalytical.com

Quality Control Data

Client ID: **Mid-Atlantic Associates, Inc. - Raleigh**
Project Description: **R4370.00**
Report No: **23-222-0015**

QC Analytical Batch: V36479
Analysis Method: SW-DRYWT
Analysis Description: Dry Weight Determination

Duplicate V 91808-DUP

Parameter	Units	Result	DUP Result	RPD	Max RPD	Analyzed
Moisture	%	21.3	21.0	1.4	20.0	08/10/23 17:13

Waypoint ANALYTICAL
449 Springbrook Rd, Charlotte, NC 28217
Main 704.529.6364
www.waypointanalytical.com

Shipment Receipt Form

Customer Number: **01139**
Customer Name: **Mid-Atlantic Associates, Inc. - Raleigh**
Report Number: **23-222-0015**

Shipping Method

○ Fed Ex	○ US Postal	○ Lab	○ Other :	
○ UPS	○ Client	◉ Courier	Thermometer ID:	IRT15 4.0C

Shipping container/cooler uncompromised?	◉ Yes	○ No	
Number of coolers/boxes received	1		
Custody seals intact on shipping container/cooler?	○ Yes	○ No	◉ Not Present
Custody seals intact on sample bottles?	○ Yes	○ No	◉ Not Present
Chain of Custody (COC) present?	◉ Yes	○ No	
COC agrees with sample label(s)?	◉ Yes	○ No	
COC properly completed	◉ Yes	○ No	
Samples in proper containers?	◉ Yes	○ No	
Sample containers intact?	◉ Yes	○ No	
Sufficient sample volume for indicated test(s)?	◉ Yes	○ No	
All samples received within holding time?	◉ Yes	○ No	
Cooler temperature in compliance?	◉ Yes	○ No	
Cooler/Samples arrived at the laboratory on ice. Samples were considered acceptable as cooling process had begun.	◉ Yes	○ No	
Water - Sample containers properly preserved	○ Yes	○ No	◉ N/A
Water - VOA vials free of headspace	○ Yes	○ No	◉ N/A
Trip Blanks received with VOAs	○ Yes	○ No	◉ N/A
Soil VOA method 5035 – compliance criteria met	○ Yes	○ No	◉ N/A

☐ High concentration container (48 hr) ☐ Low concentration EnCore samplers (48 hr)
☐ High concentration pre-weighed (methanol -14 d) ☐ Low conc pre-weighed vials (Sod Bis -14 d)

Special precautions or instructions included?	○ Yes	◉ No

Comments:

Signature: Angelo Norvell Date & Time: 08/10/2023 15:30:52

CHAIN OF CUSTODY RECORD

Waypoint ANALYTICAL
449 Springbrook Road • Charlotte, NC 28217
Phone 704/529-6364 • Fax: 704/525-0409

PAGE 1 OF 1 QUOTE # TO ENSURE PROPER BILLING:

Client Company Name: Mid-Atlantic Assoc.
Report To/Contact Name: Kevin Clay
Reporting Address: 409 Rogers View Ct
Raleigh, NC 27610
Phone: (919)250-9918 Fax (Yes)(No):
Email Address: KClay@maaonline.com
EDD Type: PDF___ Excel___ Other
Site Location Name: Wall town Park
Site Location Physical Address: 1308 W Club Blvd
Durham NC

Project Name:
Short Hold Analysis (Yes) (No) UST Project: (Yes) (No)
*Please ATTACH any project specific reporting (QC LEVEL I II III IV) provisions and/or QC Requirements
Invoice To: BGlesby@maaonline.com
Address:

Purchase Order No./Billing Reference
Requested Due Date ☐ 1 Day ☑ 2 Days ☐ 3 Days ☐ 4 Days ☐ 5 Days
"Working Days" ☐ 6-9 Days ☐ Standard 10 days ☐ Rush Work Must Be Pre Approved
Samples received after 15:00 will be processed next business day.
Turnaround time is based on business days, excluding weekends and holidays.
(SEE REVERSE FOR TERMS & CONDITIONS REGARDING SERVICES RENDERED BY WAYPOINT ANALYTICAL, LLC TO CLIENT)

LAB USE ONLY

	YES	NO	N/A
Samples INTACT upon arrival?	✓		
Received IN ICE?	✓		
PROPER PRESERVATIVES indicated?	✓		
Received WITHIN HOLDING TIMES?	✓		
CUSTODY SEALS INTACT?			X
VOLATILES rec'd W/OUT HEADSPACE?			X
PROPER CONTAINERS used?	✓		

TEMP: Therm ID: IR15 Observed 4.0 °C /Corr. 4.0 °C

TO BE FILLED IN BY CLIENT/SAMPLING PERSONNEL

Certification: NC_____ SC_____
Other_____ N/A_____
Water Chlorinated: YES___ NO___
Samples Iced Upon Collection: YES___ NO___

CLIENT SAMPLE DESCRIPTION	DATE COLLECTED	TIME COLLECTED MILITARY HOURS	MATRIX (SOIL, WATER, OR SLUDGE)	SAMPLE CONTAINER *TYPE SEE BELOW	NO.	SIZE	PRESERVATIVES	ANALYSIS REQUESTED 6010D	REMARKS	ID NO.
SS-65	8-4-23	13:13	Soil	CG	1	4oz	none	✓	2 day TAT	

Mid-Atlantic Associates, Inc. - Raleigh
23-222-0015
01139
08-10-2023
15:30:09

PRESS DOWN FIRMLY - 2 COPIES

Sampler's Signature: Matt Mull
Sampled By (Print Name): Ruth Tull
Affiliation: MAA

Upon relinquishing, this Chain of Custody is your authorization for Waypoint Analytical to proceed with the analyses as requested above. Any changes must be submitted in writing to the Waypoint Analytical Project Manager. There will be charges for any changes after analyses have been initialized.

		Date	Military Hours
Relinquished By: (Signature)	Received By: (Signature) Philip Paige	8-9-23	15:30
Relinquished By: (Signature) Philip Paige	Received By: (Signature) Courier Express	8-9-23	15:57
Relinquished By: (Signature)	Received For Waypoint Analytical By:	8/10/23	1400

COC Group No.

Method of Shipment: NOTE: ALL SAMPLE COOLERS SHOULD BE TAPED SHUT WITH CUSTODY SEALS FOR TRANSPORTATION TO THE LABORATORY. SAMPLES ARE NOT ACCEPTED AND VERIFIED AGAINST COC UNTIL RECEIVED AT THE LABORATORY.

☐ Fed Ex ☐ UPS ☐ Hand-delivered ☐ Waypoint Analytical Field Service ☐ Other

Additional Comments:

LAB USE ONLY

Site Arrival Time:
Site Departure Time:
Field Tech Fee:
Mileage:

SEE REVERSE FOR TERMS & CONDITIONS

NPDES:	UST:	GROUNDWATER:	DRINKING WATER:	SOLID WASTE:	RCRA:	BRWNFLD	LANDFILL	OTHER:
☐ NC ☐ SC ☐	☐ NC ☐ SC ☐	☐ NC ☐ SC ☐	☐ NC ☐ SC ☐	☐ NC ☐ SC ☐	☐ NC ☐ SC ☐	☐ NC ☐ SC ☐	☐ NC ☐ SC ☐	☐ NC ☐ SC ☐

*CONTAINER TYPE CODES: A = Amber C = Clear G= Glass P = Plastic; TL = Teflon-Lined Cap VOA = Volatile Organics Analysis (Zero Head Space)

ORIGINAL

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8/16/2023

Mid-Atlantic Associates, Inc. - Raleigh
Kevin Clay
409 Rogers View Court
Raleigh, NC, 27610

Ref: Analytical Testing
Revised Lab Report Number: 23-208-0056
Client Project Description: R4370.00

Dear Kevin Clay:

Waypoint Analytical, LLC (Charlotte) received sample(s) on 7/27/2023 for the analyses presented in the following report.

The above referenced project has been analyzed per your instructions. The analyses were performed in accordance with the applicable analytical method.

The analytical data has been validated using standard quality control measures performed as required by the analytical method. Quality Assurance, method validations, instrumentation maintenance and calibration for all parameters were performed in accordance with guidelines established by the USEPA (including 40 CFR 136 Method Update Rule May 2021) unless otherwise indicated.

Certain parameters (chlorine, pH, dissolved oxygen, sulfite...) are required to be analyzed within 15 minutes of sampling. Usually, but not always, any field parameter analyzed at the laboratory is outside of this holding time. Refer to sample analysis time for confirmation of holding time compliance.

The results are shown on the attached Report of Analysis(s). Results for solid matrices are reported on an as-received basis unless otherwise indicated. This report shall not be reproduced except in full and relates only to the samples included in this report.

Please do not hesitate to contact me or client services if you have any questions or need additional information.

Sincerely,

Angela D Overcash
Senior Project Manager

Laboratory's liability in any claim relating to analyses performed shall be limited to, at laboratory's option, repeating the analysis in question at laboratory's expense, or the refund of the charges paid for performance of said analysis.

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Certification Summary

Laboratory ID: WP CNC: Waypoint Analytical Carolina, Inc. (C), Charlotte, NC

State	Program	Lab ID	Expiration Date
North Carolina	State Program	37735	07/31/2024
North Carolina	State Program	402	12/31/2023
South Carolina	State Program	99012	07/31/2023
South Carolina	State Program	99012	12/31/2022

Laboratory ID: WP MTN: Waypoint Analytical, LLC., Memphis, TN

State	Program	Lab ID	Expiration Date
Alabama	State Program	40750	02/29/2024
Arkansas	State Program	88-0650	02/07/2024
California	State Program	2904	06/30/2024
Florida	State Program - NELAP	E871157	06/30/2024
Georgia	State Program	C044	11/14/2025
Georgia	State Program	04015	06/30/2024
Illinois	State Program - NELAP	200078	10/10/2024
Kentucky	State Program	80215	06/30/2024
Kentucky	State Program	KY90047	12/31/2023
Louisiana	State Program - NELAP	LA037	12/31/2023
Louisiana	State Program - NELAP	04015	06/30/2024
Mississippi	State Program	MS	11/14/2025
North Carolina	State Program	47701	07/31/2024
North Carolina	State Program	415	12/31/2023
Pennsylvania	State Program - NELAP	68-03195	05/31/2024
South Carolina	State Program	84002	06/30/2023
Tennessee	State Program	02027	11/14/2025
Texas	State Program - NELAP	T104704180	09/30/2023
Virginia	State Program	00106	06/30/2024
Virginia	State Program - NELAP	460181	09/14/2023

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Sample Summary Table

Report Number: **23-208-0056**

Client Project Description: **R4370.00**

Lab No	Client Sample ID	Matrix	Date Collected	Date Received	Method	Lab ID
90852	SS-ED-39	Solids	07/25/2023 14:23	07/27/2023 13:00		
90853	SS-ED-40	Solids	07/25/2023 14:33	07/27/2023 13:00		
90854	SS-ED-41	Solids	07/25/2023 14:40	07/27/2023 13:00		
90855	SS-ED-48	Solids	07/25/2023 14:50	07/27/2023 13:00		
90855	SS-ED-48	Solids	07/25/2023 14:50	07/27/2023 13:00	6020B	WP MTN
90856	SS-ED-47	Solids	07/25/2023 14:58	07/27/2023 13:00		
90857	SS-ED-59	Solids	07/25/2023 15:10	07/27/2023 13:00		
90858	SS-ED-60	Solids	07/25/2023 15:16	07/27/2023 13:00		
90859	SS-ED-55	Solids	07/25/2023 15:25	07/27/2023 13:00		
90860	SS-ED-51	Solids	07/25/2023 15:38	07/27/2023 13:00		
90860	SS-ED-51	Solids	07/25/2023 15:38	07/27/2023 13:00	6020B	WP MTN
90861	SS-ED-54	Solids	07/25/2023 15:48	07/27/2023 13:00		
90862	SS-ED-44	Solids	07/25/2023 15:55	07/27/2023 13:00		
90863	SS-ED-45	Solids	07/25/2023 16:00	07/27/2023 13:00		
90864	SS-ED-61	Solids	07/25/2023 16:08	07/27/2023 13:00		
90865	SS-ED-62	Solids	07/25/2023 16:18	07/27/2023 13:00		
90866	SS-ED-Dup 1	Solids	07/25/2023 17:05	07/27/2023 13:00		
90867	SS-ED-39 (1')	Solids	07/25/2023 16:33	07/27/2023 13:00		
90868	SS-ED-40 (1')	Solids	07/25/2023 16:36	07/27/2023 13:00		
90869	SS-ED-51 (1')	Solids	07/25/2023 17:05	07/27/2023 13:00		
90870	SS-ED-55 (1')	Solids	07/25/2023 16:50	07/27/2023 13:00		

WP MTN - Memphis, TN: Waypoint Analytical - TN, Memphis, TN

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Summary of Detected Analytes

Project: R4370.00

Report Number: 23-208-0056

Client Sample ID / Method	Lab Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
SS-ED-39	**V 90852**					
6010D	Lead	184	mg/Kg - dry	2.03	08/08/2023 05:40	
SW-DRYWT	Moisture	26.2	%		08/01/2023 11:05	
SS-ED-40	**V 90853**					
6010D	Lead	860	mg/Kg - dry	4.28	08/08/2023 05:45	
SW-DRYWT	Moisture	29.9	%		08/01/2023 11:05	
SS-ED-41	**V 90854**					
6010D	Lead	53.3	mg/Kg - dry	0.391	08/08/2023 06:56	
SW-DRYWT	Moisture	23.3	%		08/01/2023 11:05	
SS-ED-48	**V 90855**					
6020B	Arsenic	0.315	mg/Kg - dry	0.293	08/03/2023 19:40	
6020B	Barium	25.6	mg/Kg - dry	0.292	08/03/2023 19:40	
6020B	Chromium	3.70	mg/Kg - dry	0.292	08/03/2023 19:40	
6020B	Cobalt	1.44	mg/Kg - dry	0.292	08/03/2023 19:40	
6020B	Copper	4.57	mg/Kg - dry	0.293	08/03/2023 19:40	
6020B	Lead	7.95	mg/Kg - dry	0.293	08/03/2023 19:40	
6020B	Manganese	67.0	mg/Kg - dry	0.292	08/03/2023 19:40	
6020B	Nickel	1.57	mg/Kg - dry	0.293	08/03/2023 19:40	
6020B	Vanadium	5.50	mg/Kg - dry	1.46	08/03/2023 19:40	
6020B	Zinc	23.4	mg/Kg - dry	2.93	08/03/2023 19:40	
SW-DRYWT	Moisture	14.6	%		08/01/2023 11:05	
SS-ED-47	**V 90856**					
6010D	Lead	173	mg/Kg - dry	1.79	08/08/2023 05:54	
SW-DRYWT	Moisture	16.4	%		08/01/2023 11:05	
SS-ED-59	**V 90857**					
6010D	Lead	277	mg/Kg - dry	1.87	08/08/2023 05:58	
SW-DRYWT	Moisture	19.6	%		08/01/2023 11:05	
SS-ED-60	**V 90858**					
6010D	Lead	1260	mg/Kg - dry	8.90	08/08/2023 06:03	
SW-DRYWT	Moisture	32.6	%		08/01/2023 11:05	
SS-ED-55	**V 90859**					
6010D	Lead	1950	mg/Kg - dry	10.5	08/08/2023 06:16	
SW-DRYWT	Moisture	28.3	%		08/01/2023 11:05	

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Summary of Detected Analytes

Project: R4370.00

Report Number: 23-208-0056

Client Sample ID / Method	Lab Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
SS-ED-51	**V 90860**					
6020B	Antimony	5.42	mg/Kg - dry	0.341	08/04/2023 11:46	
6020B	Arsenic	7.18	mg/Kg - dry	0.341	08/04/2023 11:46	
6020B	Barium	612	mg/Kg - dry	0.340	08/04/2023 11:46	
6020B	Beryllium	0.522	mg/Kg - dry	0.341	08/03/2023 19:52	
6020B	Cadmium	2.38	mg/Kg - dry	0.341	08/04/2023 11:46	
6020B	Chromium	34.5	mg/Kg - dry	0.340	08/04/2023 11:46	
6020B	Cobalt	6.40	mg/Kg - dry	1.70	08/03/2023 19:40	
6020B	Copper	647	mg/Kg - dry	13.6	08/04/2023 11:07	
6020B	Lead	1510	mg/Kg - dry	0.341	08/04/2023 11:46	
6020B	Manganese	482	mg/Kg - dry	0.340	08/04/2023 11:46	
6020B	Nickel	16.3	mg/Kg - dry	0.341	08/04/2023 11:46	
6020B	Selenium	0.531	mg/Kg - dry	0.340	08/04/2023 11:46	
6020B	Silver	1.05	mg/Kg - dry	0.341	08/04/2023 11:46	
6020B	Vanadium	6.40	mg/Kg - dry	1.70	08/03/2023 19:40	
6020B	Zinc	1550	mg/Kg - dry	3.41	08/04/2023 11:46	
7471B	Mercury (Total)	0.173	mg/Kg - dry	0.0409	07/28/2023 16:34	
SW-DRYWT	Moisture	26.6	%		08/01/2023 17:10	
SS-ED-54	**V 90861**					
6010D	Lead	886	mg/Kg - dry	7.68	08/08/2023 06:21	
SW-DRYWT	Moisture	21.9	%		08/01/2023 17:10	
SS-ED-44	**V 90862**					
6010D	Lead	1380	mg/Kg - dry	7.08	08/08/2023 06:25	
SW-DRYWT	Moisture	57.6	%		08/01/2023 17:10	
SS-ED-45	**V 90863**					
6010D	Lead	723	mg/Kg - dry	4.55	08/09/2023 01:04	
SW-DRYWT	Moisture	34.0	%		08/01/2023 17:10	
SS-ED-61	**V 90864**					
6010D	Lead	872	mg/Kg - dry	8.25	08/09/2023 01:08	
SW-DRYWT	Moisture	27.3	%		08/01/2023 17:10	
SS-ED-62	**V 90865**					
6010D	Lead	268	mg/Kg - dry	1.99	08/09/2023 01:13	
SW-DRYWT	Moisture	24.6	%		08/01/2023 17:10	

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Summary of Detected Analytes

Project: **R4370.00**

Report Number: **23-208-0056**

Client Sample ID / Method	Lab Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
SS-ED-Dup 1	**V 90866**					
6010D	Lead	2210	mg/Kg - dry	20.7	08/09/2023 01:17	
SW-DRYWT	Moisture	27.7	%		08/01/2023 17:10	
SS-ED-39 (1')	**V 90867**					
6010D	Lead	12.8	mg/Kg - dry	0.322	08/09/2023 01:22	
SW-DRYWT	Moisture	7.09	%		08/01/2023 17:10	
SS-ED-40 (1')	**V 90868**					
6010D	Lead	3180	mg/Kg - dry	19.5	08/09/2023 01:48	
SW-DRYWT	Moisture	23.2	%		08/01/2023 17:10	
SS-ED-51 (1')	**V 90869**					
6010D	Lead	2530	mg/Kg - dry	19.0	08/09/2023 01:53	
SW-DRYWT	Moisture	20.9	%		08/01/2023 17:10	
SS-ED-55 (1')	**V 90870**					
6010D	Lead	1740	mg/Kg - dry	17.4	08/09/2023 01:57	
SW-DRYWT	Moisture	13.9	%		08/01/2023 17:10	

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Client: Mid-Atlantic Associates, Inc. - Raleigh **CASE NARRATIVE**
Project: R4370.00
Lab Report Number: 23-208-0056
Date: 8/16/2023

Report Comments
Revised report: Revision 1
Co and V have been added to be reported.

Metals Analysis Method 6010D
Analyte: Lead
QC Batch No: V36421/V36074
LLC failed high. Result 10x concentration. Result not affected.

Metals Analyses Method 6020B
Sample 90860 (SS-ED-51)
Analyte: Silver
QC Batch No: L696918/L696239
The matrix spike and/or the matrix spike duplicate was outside quality control acceptance ranges. A post digestion spike was performed and passed quality control acceptance ranges. No matrix interference is suspected.

Sample 90860 (SS-ED-51)
Analyte: Arsenic
QC Batch No: L696918/L696239
The matrix spike and/or the matrix spike duplicate was outside quality control acceptance ranges. A post digestion spike was performed and passed quality control acceptance ranges. No matrix interference is suspected.

Sample 90860 (SS-ED-51)
Analyte: Barium
QC Batch No: L696918/L696239
The matrix spike, matrix spike duplicate and the dilution test were all outside of the quality control acceptance ranges. Matrix interference is suspected.

Sample 90860 (SS-ED-51)
Analyte: Cadmium
QC Batch No: L696918/L696239
The matrix spike and/or the matrix spike duplicate was outside quality control acceptance ranges. A post digestion spike was performed and passed quality control acceptance ranges. No matrix interference is suspected.

Sample 90860 (SS-ED-51)
Analyte: Cobalt
QC Batch No: L698988/L696239
The matrix spike and/or the matrix spike duplicate was outside quality control acceptance ranges. A post digestion spike was performed and passed quality control acceptance ranges. No matrix interference is suspected.

Sample 90860 (SS-ED-51)

Analyte: Chromium
QC Batch No: L696918/L696239
The matrix spike and/or the matrix spike duplicate was outside quality control acceptance ranges. A dilution test was performed and passed quality control acceptance ranges. No matrix interference is suspected.

Sample 90860 (SS-ED-51)
Analyte: Manganese
QC Batch No: L696918/L696239
The matrix spike, matrix spike duplicate and the dilution test were all outside of the quality control acceptance ranges. Matrix interference is suspected.

Sample 90860 (SS-ED-51)
Analyte: Nickel
QC Batch No: L696918/L696239
The matrix spike and/or the matrix spike duplicate was outside quality control acceptance ranges. A dilution test was performed and passed quality control acceptance ranges. No matrix interference is suspected.

Sample 90860 (SS-ED-51)
Analyte: Lead
QC Batch No: L696918/L696239
The matrix spike and/or the matrix spike duplicate was outside quality control acceptance ranges. A dilution test was performed and passed quality control acceptance ranges. No matrix interference is suspected.

Sample 90860 (SS-ED-51)
Analyte: Antimony
QC Batch No: L696918/L696239
The matrix spike and/or the matrix spike duplicate was outside quality control acceptance ranges. A post digestion spike was performed and passed quality control acceptance ranges. No matrix interference is suspected.

Sample 90860 (SS-ED-51)
Analyte: Selenium
QC Batch No: L696918/L696239
The matrix spike and/or the matrix spike duplicate was outside quality control acceptance ranges. A post digestion spike was performed and passed quality control acceptance ranges. No matrix interference is suspected.

Sample 90860 (SS-ED-51)
Analyte: Vanadium
QC Batch No: L698988/L696239
The matrix spike and/or the matrix spike duplicate was outside quality control acceptance ranges. A post digestion spike was performed and passed quality control acceptance ranges. No matrix interference is suspected.

Sample 90860 (SS-ED-51)
Analyte: Zinc
QC Batch No: L696918/L696239
The matrix spike, matrix spike duplicate and the dilution test were all outside of the quality control acceptance ranges. Matrix interference is suspected.

Semivolatile Organic Compounds - GC/MS Method 8270E
Sample 90855 (SS-ED-48)
QC Batch No: V36073/V36047

The sample was diluted due to the nature of the sample matrix. Reporting limits have been adjusted accordingly.

Sample 90860 (SS-ED-51)
QC Batch No: V36073/V36047
The sample was diluted due to the nature of the sample matrix. Reporting limits have been adjusted accordingly.

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Mid-Atlantic Associates, Inc. - Raleigh
Kevin Clay
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Raleigh , NC 27610

Project R4370.00
Information :

Original Report Date : 08/09/2023
Revised Report Date: 08/16/2023
Received : 07/27/2023

Report Number : **23-208-0056**

REPORT OF ANALYSIS

Lab No : **90852**
Sample ID : **SS-ED-39**

Matrix: **Solids**
Sampled: **7/25/2023 14:23**

Test	Results	Units	MQL	DF	Date / Time Analyzed	By	Analytical Method
Moisture	**26.2**	%		1	08/01/23 11:05	CNC	SW-DRYWT
Lead	**184**	mg/Kg - dry	2.03	5	08/08/23 05:40	JKC	6010D

Qualifiers/ Definitions				
	DF	Dilution Factor	J	Estimated value
	MQL	Method Quantitation Limit		

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Project R4370.00

Information :

Original Report Date : 08/09/2023
Revised Report Date: 08/16/2023
Received : 07/27/2023

Report Number : **23-208-0056**

REPORT OF ANALYSIS

Lab No : **90853**
Sample ID : **SS-ED-40**

Matrix: **Solids**
Sampled: **7/25/2023 14:33**

Test	Results	Units	MQL	DF	Date / Time Analyzed	By	Analytical Method
Moisture	**29.9**	%		1	08/01/23 11:05	CNC	SW-DRYWT
Lead	**860**	mg/Kg - dry	4.28	10	08/08/23 05:45	JKC	6010D

Qualifiers/ Definitions

DF Dilution Factor
MQL Method Quantitation Limit
J Estimated value

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Project R4370.00
Information :

Original Report Date : 08/09/2023
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Received : 07/27/2023

Report Number : **23-208-0056**

REPORT OF ANALYSIS

Lab No : **90854**
Sample ID : **SS-ED-41**

Matrix: **Solids**
Sampled: **7/25/2023 14:40**

Test	Results	Units	MQL	DF	Date / Time Analyzed	By	Analytical Method
Moisture	**23.3**	%		1	08/01/23 11:05	CNC	SW-DRYWT
Lead	**53.3**	mg/Kg - dry	0.391	1	08/08/23 06:56	JKC	6010D

Qualifiers/ Definitions

DF Dilution Factor
MQL Method Quantitation Limit
J Estimated value

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Project R4370.00
Information :

Original Report Date : 08/09/2023
Revised Report Date: 08/16/2023
Received : 07/27/2023

Report Number : **23-208-0056**

REPORT OF ANALYSIS

Lab No : **90855**
Sample ID : **SS-ED-48**

Matrix: **Solids**
Sampled: **7/25/2023 14:50**

Test	Results	Units	MDL	MQL	DF	Date / Time Analyzed	By	Analytical Method
Moisture	**14.6**	%			1	08/01/23 11:05	CNC	SW-DRYWT
Antimony	<0.293	mg/Kg - dry		0.293	5	08/03/23 19:40	CPW	6020B
Arsenic	**0.315**	mg/Kg - dry		0.293	5	08/03/23 19:40	CPW	6020B
Barium	**25.6**	mg/Kg - dry		0.292	5	08/03/23 19:40	CPW	6020B
Beryllium	<0.293	mg/Kg - dry		0.293	5	08/03/23 19:40	BKN	6020B
Cadmium	<0.293	mg/Kg - dry		0.293	5	08/03/23 19:40	CPW	6020B
Chromium	**3.70**	mg/Kg - dry		0.292	5	08/03/23 19:40	CPW	6020B
Cobalt	**1.44**	mg/Kg - dry		0.292	5	08/03/23 19:40	CPW	6020B
Copper	**4.57**	mg/Kg - dry		0.293	5	08/03/23 19:40	CPW	6020B
Lead	**7.95**	mg/Kg - dry		0.293	5	08/03/23 19:40	CPW	6020B
Manganese	**67.0**	mg/Kg - dry		0.292	5	08/03/23 19:40	CPW	6020B
Mercury (Total)	<0.0351	mg/Kg - dry		0.0351	1	07/28/23 16:32	JKC	7471B
Nickel	**1.57**	mg/Kg - dry		0.293	5	08/03/23 19:40	CPW	6020B
Selenium	<0.292	mg/Kg - dry		0.292	5	08/03/23 19:40	CPW	6020B
Silver	<0.293	mg/Kg - dry		0.293	5	08/03/23 19:40	CPW	6020B
Thallium	<0.293	mg/Kg - dry		0.293	5	08/03/23 19:40	BKN	6020B
Vanadium	**5.50**	mg/Kg - dry		1.46	5	08/03/23 19:40	CPW	6020B
Zinc	**23.4**	mg/Kg - dry		2.93	5	08/03/23 19:40	CPW	6020B

Qualifiers/ Definitions

DF Dilution Factor
MQL Method Quantitation Limit
J Estimated value

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Project R4370.00
Information :

Original Report Date : 08/09/2023
Revised Report Date: 08/16/2023
Received : 07/27/2023

Report Number : **23-208-0056**

REPORT OF ANALYSIS

Lab No : **90855**
Sample ID : **SS-ED-48**

Matrix: **Solids**
Sampled: **7/25/2023 14:50**

Analytical Method: 8270E **Prep Batch(es):** **V36047** 08/01/23 09:50
Prep Method: 3546

Test	Results	Units	MDL	MQL	DF	Date / Time Analyzed	By	Analytical Batch
Acenaphthene	<0.543	mg/Kg - dry	0.543	3.09	4	08/02/23 14:39	AMP	V36073
Acenaphthylene	<0.491	mg/Kg - dry	0.491	3.09	4	08/02/23 14:39	AMP	V36073
Aniline	<0.711	mg/Kg - dry	0.711	3.09	4	08/02/23 14:39	AMP	V36073
Anthracene	<0.669	mg/Kg - dry	0.669	3.09	4	08/02/23 14:39	AMP	V36073
Benzo(a)anthracene	<0.651	mg/Kg - dry	0.651	3.09	4	08/02/23 14:39	AMP	V36073
Benzo(a)pyrene	<0.688	mg/Kg - dry	0.688	3.09	4	08/02/23 14:39	AMP	V36073
Benzo(b)fluoranthene	<0.683	mg/Kg - dry	0.683	3.09	4	08/02/23 14:39	AMP	V36073
Benzo(g,h,i)perylene	<0.637	mg/Kg - dry	0.637	3.09	4	08/02/23 14:39	AMP	V36073
Benzo(k)fluoranthene	<0.641	mg/Kg - dry	0.641	3.09	4	08/02/23 14:39	AMP	V36073
Benzoic Acid	<2.72	mg/Kg - dry	2.72	9.38	4	08/02/23 14:39	AMP	V36073
Benzyl alcohol	<0.491	mg/Kg - dry	0.491	3.09	4	08/02/23 14:39	AMP	V36073
Bis(2-Chloroethoxy)methane	<0.552	mg/Kg - dry	0.552	3.09	4	08/02/23 14:39	AMP	V36073
Bis(2-Chloroethyl)ether	<0.501	mg/Kg - dry	0.501	3.09	4	08/02/23 14:39	AMP	V36073
Bis(2-Chloroisopropyl)ether	<0.637	mg/Kg - dry	0.637	1.55	4	08/02/23 14:39	AMP	V36073
Bis(2-ethylhexyl)phthalate	<0.562	mg/Kg - dry	0.562	3.09	4	08/02/23 14:39	AMP	V36073
4-Bromophenyl phenyl ether	<0.510	mg/Kg - dry	0.510	3.09	4	08/02/23 14:39	AMP	V36073
Butyl benzyl phthalate	<0.529	mg/Kg - dry	0.529	1.55	4	08/02/23 14:39	AMP	V36073
4-Chloro-3-methylphenol	<0.433	mg/Kg - dry	0.433	3.09	4	08/02/23 14:39	AMP	V36073
4-Chloroaniline	<0.524	mg/Kg - dry	0.524	1.55	4	08/02/23 14:39	AMP	V36073
2-Chloronaphthalene	<0.543	mg/Kg - dry	0.543	3.09	4	08/02/23 14:39	AMP	V36073
2-Chlorophenol	<0.460	mg/Kg - dry	0.460	3.09	4	08/02/23 14:39	AMP	V36073
4-Chlorophenyl phenyl ether	<0.591	mg/Kg - dry	0.591	4.70	4	08/02/23 14:39	AMP	V36073

Qualifiers/ Definitions
DF Dilution Factor
MQL Method Quantitation Limit
J Estimated value

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Report Number : **23-208-0056**

REPORT OF ANALYSIS

Lab No : **90855**
Sample ID : **SS-ED-48**

Matrix: **Solids**
Sampled: **7/25/2023 14:50**

Analytical Method: 8270E **Prep Batch(es):** **V36047** 08/01/23 09:50
Prep Method: 3546

Test	Results	Units	MDL	MQL	DF	Date / Time Analyzed	By	Analytical Batch
Chrysene	<0.665	mg/Kg - dry	0.665	3.09	4	08/02/23 14:39	AMP	V36073
Dibenz(a,h)anthracene	<1.08	mg/Kg - dry	1.08	3.09	4	08/02/23 14:39	AMP	V36073
Dibenzofuran	<0.557	mg/Kg - dry	0.557	3.09	4	08/02/23 14:39	AMP	V36073
1,2-Dichlorobenzene	<0.442	mg/Kg - dry	0.442	3.09	4	08/02/23 14:39	AMP	V36073
1,3-Dichlorobenzene	<0.455	mg/Kg - dry	0.455	3.09	4	08/02/23 14:39	AMP	V36073
1,4-Dichlorobenzene	<0.456	mg/Kg - dry	0.456	1.55	4	08/02/23 14:39	AMP	V36073
3,3'-Dichlorobenzidine	<0.688	mg/Kg - dry	0.688	3.09	4	08/02/23 14:39	AMP	V36073
2,4-Dichlorophenol	<0.448	mg/Kg - dry	0.448	3.09	4	08/02/23 14:39	AMP	V36073
Diethyl phthalate	<0.843	mg/Kg - dry	0.843	3.09	4	08/02/23 14:39	AMP	V36073
Dimethyl phthalate	<0.814	mg/Kg - dry	0.814	3.09	4	08/02/23 14:39	AMP	V36073
2,4-Dimethylphenol	<0.505	mg/Kg - dry	0.505	1.55	4	08/02/23 14:39	AMP	V36073
Di-n-butyl phthalate	<0.501	mg/Kg - dry	0.501	3.09	4	08/02/23 14:39	AMP	V36073
4,6-Dinitro-2-methylphenol	<1.13	mg/Kg - dry	1.13	7.04	4	08/02/23 14:39	AMP	V36073
2,4-Dinitrophenol	<2.44	mg/Kg - dry	2.44	7.04	4	08/02/23 14:39	AMP	V36073
2,4-Dinitrotoluene	<0.451	mg/Kg - dry	0.451	3.09	4	08/02/23 14:39	AMP	V36073
2,6-Dinitrotoluene	<0.505	mg/Kg - dry	0.505	3.09	4	08/02/23 14:39	AMP	V36073
Di-n-Octyl Phthalate	<0.669	mg/Kg - dry	0.669	1.55	4	08/02/23 14:39	AMP	V36073
Fluoranthene	<0.576	mg/Kg - dry	0.576	3.09	4	08/02/23 14:39	AMP	V36073
Fluorene	<0.599	mg/Kg - dry	0.599	3.09	4	08/02/23 14:39	AMP	V36073
Hexachlorobenzene	<0.496	mg/Kg - dry	0.496	3.09	4	08/02/23 14:39	AMP	V36073
Hexachlorobutadiene	<0.456	mg/Kg - dry	0.456	3.09	4	08/02/23 14:39	AMP	V36073
Hexachlorocyclopentadiene	<0.735	mg/Kg - dry	0.735	3.09	4	08/02/23 14:39	AMP	V36073

Qualifiers/ Definitions
DF Dilution Factor
MQL Method Quantitation Limit
J Estimated value

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Report Number : **23-208-0056**

REPORT OF ANALYSIS

Lab No : **90855**
Sample ID : **SS-ED-48**

Matrix: **Solids**
Sampled: **7/25/2023 14:50**

Analytical Method: 8270E **Prep Batch(es):** **V36047** 08/01/23 09:50
Prep Method: 3546

Test	Results	Units	MDL	MQL	DF	Date / Time Analyzed	By	Analytical Batch
Hexachloroethane	<0.371	mg/Kg - dry	0.371	3.09	4	08/02/23 14:39	AMP	V36073
Indeno(1,2,3-cd)pyrene	<0.838	mg/Kg - dry	0.838	3.09	4	08/02/23 14:39	AMP	V36073
Isophorone	<0.894	mg/Kg - dry	0.894	3.09	4	08/02/23 14:39	AMP	V36073
1-Methylnaphthalene	<0.496	mg/Kg - dry	0.496	3.09	4	08/02/23 14:39	AMP	V36073
2-Methylnaphthalene	<0.468	mg/Kg - dry	0.468	3.09	4	08/02/23 14:39	AMP	V36073
2-Methylphenol	<0.454	mg/Kg - dry	0.454	3.09	4	08/02/23 14:39	AMP	V36073
3&4 Methylphenol	<0.398	mg/Kg - dry	0.398	3.09	4	08/02/23 14:39	AMP	V36073
Naphthalene	<0.674	mg/Kg - dry	0.674	3.09	4	08/02/23 14:39	AMP	V36073
2-Nitroaniline	<0.453	mg/Kg - dry	0.453	3.09	4	08/02/23 14:39	AMP	V36073
3-Nitroaniline	<0.562	mg/Kg - dry	0.562	3.09	4	08/02/23 14:39	AMP	V36073
4-Nitroaniline	<0.436	mg/Kg - dry	0.436	1.55	4	08/02/23 14:39	AMP	V36073
Nitrobenzene	<0.543	mg/Kg - dry	0.543	1.55	4	08/02/23 14:39	AMP	V36073
2-Nitrophenol	<0.415	mg/Kg - dry	0.415	3.09	4	08/02/23 14:39	AMP	V36073
4-Nitrophenol	<0.548	mg/Kg - dry	0.548	3.09	4	08/02/23 14:39	AMP	V36073
N-Nitrosodimethylamine	<1.23	mg/Kg - dry	1.23	3.09	4	08/02/23 14:39	AMP	V36073
N-Nitrosodiphenylamine	<0.847	mg/Kg - dry	0.847	3.09	4	08/02/23 14:39	AMP	V36073
N-Nitroso-di-n-propylamine	<0.552	mg/Kg - dry	0.552	3.09	4	08/02/23 14:39	AMP	V36073
Pentachlorophenol	<1.63	mg/Kg - dry	1.63	4.70	4	08/02/23 14:39	AMP	V36073
Phenanthrene	<0.974	mg/Kg - dry	0.974	3.09	4	08/02/23 14:39	AMP	V36073
Phenol	<0.524	mg/Kg - dry	0.524	3.09	4	08/02/23 14:39	AMP	V36073
Pyrene	<0.627	mg/Kg - dry	0.627	3.09	4	08/02/23 14:39	AMP	V36073
Pyridine	<0.371	mg/Kg - dry	0.371	1.55	4	08/02/23 14:39	AMP	V36073

Qualifiers/ Definitions
DF Dilution Factor
MQL Method Quantitation Limit
J Estimated value

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Report Number : **23-208-0056**

REPORT OF ANALYSIS

Lab No : **90855**
Sample ID : **SS-ED-48**

Matrix: **Solids**
Sampled: **7/25/2023 14:50**

Analytical Method: 8270E **Prep Batch(es):** **V36047** 08/01/23 09:50
Prep Method: 3546

Test	Results	Units	MDL	MQL	DF	Date / Time Analyzed	By	Analytical Batch
1,2,4-Trichlorobenzene	<0.501	mg/Kg - dry	0.501	3.09	4	08/02/23 14:39	AMP	V36073
2,4,5-Trichlorophenol	<0.450	mg/Kg - dry	0.450	3.09	4	08/02/23 14:39	AMP	V36073
2,4,6-Trichlorophenol	<0.451	mg/Kg - dry	0.451	3.09	4	08/02/23 14:39	AMP	V36073
Surrogate: Phenol-d5	64.4		Limits: 34-121%		4	08/02/23 14:39	AMP	8270E
Surrogate: 2-Fluorobiphenyl	73.7		Limits: 44-115%		4	08/02/23 14:39	AMP	V36073
Surrogate: 2-Fluorophenol	64.4		Limits: 35-115%		4	08/02/23 14:39	AMP	V36073
Surrogate: Nitrobenzene-d5	68.3		Limits: 37-122%		4	08/02/23 14:39	AMP	V36073
Surrogate: 4-Terphenyl-d14	80.8		Limits: 54-127%		4	08/02/23 14:39	AMP	V36073
Surrogate: 2,4,6-Tribromophenol	63.2		Limits: 39-132%		4	08/02/23 14:39	AMP	V36073

Qualifiers/ Definitions

DF Dilution Factor
MQL Method Quantitation Limit
J Estimated value

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REPORT OF ANALYSIS

Lab No : **90856**
Sample ID : **SS-ED-47**

Matrix: **Solids**
Sampled: **7/25/2023 14:58**

Test	Results	Units	MQL	DF	Date / Time Analyzed	By	Analytical Method
Moisture	**16.4**	%		1	08/01/23 11:05	CNC	SW-DRYWT
Lead	**173**	mg/Kg - dry	1.79	5	08/08/23 05:54	JKC	6010D

Qualifiers/ Definitions

DF Dilution Factor
MQL Method Quantitation Limit
J Estimated value

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REPORT OF ANALYSIS

Lab No : **90857**
Sample ID : **SS-ED-59**

Matrix: **Solids**
Sampled: **7/25/2023 15:10**

Test	Results	Units	MQL	DF	Date / Time Analyzed	By	Analytical Method
Moisture	**19.6**	%		1	08/01/23 11:05	CNC	SW-DRYWT
Lead	**277**	mg/Kg - dry	1.87	5	08/08/23 05:58	JKC	6010D

Qualifiers/ Definitions

DF Dilution Factor
MQL Method Quantitation Limit
J Estimated value

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REPORT OF ANALYSIS

Lab No : **90858**
Sample ID : **SS-ED-60**

Matrix: **Solids**
Sampled: **7/25/2023 15:16**

Test	Results	Units	MQL	DF	Date / Time Analyzed	By	Analytical Method
Moisture	**32.6**	%		1	08/01/23 11:05	CNC	SW-DRYWT
Lead	**1260**	mg/Kg - dry	8.90	20	08/08/23 06:03	JKC	6010D

Qualifiers/ Definitions

DF Dilution Factor
MQL Method Quantitation Limit
J Estimated value

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REPORT OF ANALYSIS

Lab No : **90859**
Sample ID : **SS-ED-55**

Matrix: **Solids**
Sampled: **7/25/2023 15:25**

Test	Results	Units	MQL	DF	Date / Time Analyzed	By	Analytical Method
Moisture	**28.3**	%		1	08/01/23 11:05	CNC	SW-DRYWT
Lead	**1950**	mg/Kg - dry	10.5	25	08/08/23 06:16	JKC	6010D

Qualifiers/ Definitions

DF Dilution Factor
MQL Method Quantitation Limit
J Estimated value

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Report Number : **23-208-0056**

REPORT OF ANALYSIS

Lab No : **90860**
Sample ID : **SS-ED-51**

Matrix: **Solids**
Sampled: **7/25/2023 15:38**

Test	Results	Units	MDL	MQL	DF	Date / Time Analyzed	By	Analytical Method
Moisture	**26.6**	%			1	08/01/23 17:10	CNC	SW-DRYWT
Antimony	**5.42**	mg/Kg - dry		0.341	5	08/04/23 11:46	CPW	6020B
Arsenic	**7.18**	mg/Kg - dry		0.341	5	08/04/23 11:46	CPW	6020B
Barium	**612**	mg/Kg - dry		0.340	5	08/04/23 11:46	CPW	6020B
Beryllium	**0.522**	mg/Kg - dry		0.341	5	08/03/23 19:52	BKN	6020B
Cadmium	**2.38**	mg/Kg - dry		0.341	5	08/04/23 11:46	CPW	6020B
Chromium	**34.5**	mg/Kg - dry		0.340	5	08/04/23 11:46	CPW	6020B
Cobalt	**6.40**	mg/Kg - dry		1.70	5	08/03/23 19:40	CPW	6020B
Copper	**647**	mg/Kg - dry		13.6	200	08/04/23 11:07	CPW	6020B
Lead	**1510**	mg/Kg - dry		0.341	5	08/04/23 11:46	CPW	6020B
Manganese	**482**	mg/Kg - dry		0.340	5	08/04/23 11:46	CPW	6020B
Mercury (Total)	**0.173**	mg/Kg - dry		0.0409	1	07/28/23 16:34	JKC	7471B
Nickel	**16.3**	mg/Kg - dry		0.341	5	08/04/23 11:46	CPW	6020B
Selenium	**0.531**	mg/Kg - dry		0.340	5	08/04/23 11:46	CPW	6020B
Silver	**1.05**	mg/Kg - dry		0.341	5	08/04/23 11:46	CPW	6020B
Thallium	<0.341	mg/Kg - dry		0.341	5	08/03/23 19:52	BKN	6020B
Vanadium	**6.40**	mg/Kg - dry		1.70	5	08/03/23 19:40	CPW	6020B
Zinc	**1550**	mg/Kg - dry		3.41	5	08/04/23 11:46	CPW	6020B

Qualifiers/ Definitions

DF Dilution Factor
MQL Method Quantitation Limit
J Estimated value

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REPORT OF ANALYSIS

Lab No : **90860**
Sample ID : **SS-ED-51**

Matrix: **Solids**
Sampled: **7/25/2023 15:38**

Analytical Method: 8270E **Prep Batch(es):** **V36047** 08/01/23 09:50
Prep Method: 3546

Test	Results	Units	MDL	MQL	DF	Date / Time Analyzed	By	Analytical Batch
Acenaphthene	<0.632	mg/Kg - dry	0.632	3.60	4	08/02/23 15:02	AMP	V36073
Acenaphthylene	<0.572	mg/Kg - dry	0.572	3.60	4	08/02/23 15:02	AMP	V36073
Aniline	<0.828	mg/Kg - dry	0.828	3.60	4	08/02/23 15:02	AMP	V36073
Anthracene	<0.779	mg/Kg - dry	0.779	3.60	4	08/02/23 15:02	AMP	V36073
Benzo(a)anthracene	<0.757	mg/Kg - dry	0.757	3.60	4	08/02/23 15:02	AMP	V36073
Benzo(a)pyrene	<0.801	mg/Kg - dry	0.801	3.60	4	08/02/23 15:02	AMP	V36073
Benzo(b)fluoranthene	<0.795	mg/Kg - dry	0.795	3.60	4	08/02/23 15:02	AMP	V36073
Benzo(g,h,i)perylene	<0.741	mg/Kg - dry	0.741	3.60	4	08/02/23 15:02	AMP	V36073
Benzo(k)fluoranthene	<0.746	mg/Kg - dry	0.746	3.60	4	08/02/23 15:02	AMP	V36073
Benzoic Acid	<3.16	mg/Kg - dry	3.16	10.9	4	08/02/23 15:02	AMP	V36073
Benzyl alcohol	<0.572	mg/Kg - dry	0.572	3.60	4	08/02/23 15:02	AMP	V36073
Bis(2-Chloroethoxy)methane	<0.643	mg/Kg - dry	0.643	3.60	4	08/02/23 15:02	AMP	V36073
Bis(2-Chloroethyl)ether	<0.583	mg/Kg - dry	0.583	3.60	4	08/02/23 15:02	AMP	V36073
Bis(2-Chloroisopropyl)ether	<0.741	mg/Kg - dry	0.741	1.80	4	08/02/23 15:02	AMP	V36073
Bis(2-ethylhexyl)phthalate	<0.653	mg/Kg - dry	0.653	3.60	4	08/02/23 15:02	AMP	V36073
4-Bromophenyl phenyl ether	<0.594	mg/Kg - dry	0.594	3.60	4	08/02/23 15:02	AMP	V36073
Butyl benzyl phthalate	<0.615	mg/Kg - dry	0.615	1.80	4	08/02/23 15:02	AMP	V36073
4-Chloro-3-methylphenol	<0.504	mg/Kg - dry	0.504	3.60	4	08/02/23 15:02	AMP	V36073
4-Chloroaniline	<0.610	mg/Kg - dry	0.610	1.80	4	08/02/23 15:02	AMP	V36073
2-Chloronaphthalene	<0.632	mg/Kg - dry	0.632	3.60	4	08/02/23 15:02	AMP	V36073
2-Chlorophenol	<0.535	mg/Kg - dry	0.535	3.60	4	08/02/23 15:02	AMP	V36073
4-Chlorophenyl phenyl ether	<0.686	mg/Kg - dry	0.686	5.45	4	08/02/23 15:02	AMP	V36073

Qualifiers/ Definitions
DF Dilution Factor
MQL Method Quantitation Limit
J Estimated value

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Report Number : **23-208-0056**

REPORT OF ANALYSIS

Lab No : **90860**
Sample ID : **SS-ED-51**

Matrix: **Solids**
Sampled: **7/25/2023 15:38**

Analytical Method: 8270E **Prep Batch(es):** **V36047** 08/01/23 09:50
Prep Method: 3546

Test	Results	Units	MDL	MQL	DF	Date / Time Analyzed	By	Analytical Batch
Chrysene	<0.773	mg/Kg - dry	0.773	3.60	4	08/02/23 15:02	AMP	V36073
Dibenz(a,h)anthracene	<1.25	mg/Kg - dry	1.25	3.60	4	08/02/23 15:02	AMP	V36073
Dibenzofuran	<0.648	mg/Kg - dry	0.648	3.60	4	08/02/23 15:02	AMP	V36073
1,2-Dichlorobenzene	<0.514	mg/Kg - dry	0.514	3.60	4	08/02/23 15:02	AMP	V36073
1,3-Dichlorobenzene	<0.529	mg/Kg - dry	0.529	3.60	4	08/02/23 15:02	AMP	V36073
1,4-Dichlorobenzene	<0.531	mg/Kg - dry	0.531	1.80	4	08/02/23 15:02	AMP	V36073
3,3'-Dichlorobenzidine	<0.801	mg/Kg - dry	0.801	3.60	4	08/02/23 15:02	AMP	V36073
2,4-Dichlorophenol	<0.521	mg/Kg - dry	0.521	3.60	4	08/02/23 15:02	AMP	V36073
Diethyl phthalate	<0.980	mg/Kg - dry	0.980	3.60	4	08/02/23 15:02	AMP	V36073
Dimethyl phthalate	<0.948	mg/Kg - dry	0.948	3.60	4	08/02/23 15:02	AMP	V36073
2,4-Dimethylphenol	<0.588	mg/Kg - dry	0.588	1.80	4	08/02/23 15:02	AMP	V36073
Di-n-butyl phthalate	<0.583	mg/Kg - dry	0.583	3.60	4	08/02/23 15:02	AMP	V36073
4,6-Dinitro-2-methylphenol	<1.31	mg/Kg - dry	1.31	8.17	4	08/02/23 15:02	AMP	V36073
2,4-Dinitrophenol	<2.83	mg/Kg - dry	2.83	8.17	4	08/02/23 15:02	AMP	V36073
2,4-Dinitrotoluene	<0.525	mg/Kg - dry	0.525	3.60	4	08/02/23 15:02	AMP	V36073
2,6-Dinitrotoluene	<0.588	mg/Kg - dry	0.588	3.60	4	08/02/23 15:02	AMP	V36073
Di-n-Octyl Phthalate	<0.779	mg/Kg - dry	0.779	1.80	4	08/02/23 15:02	AMP	V36073
Fluoranthene	<0.670	mg/Kg - dry	0.670	3.60	4	08/02/23 15:02	AMP	V36073
Fluorene	<0.697	mg/Kg - dry	0.697	3.60	4	08/02/23 15:02	AMP	V36073
Hexachlorobenzene	<0.577	mg/Kg - dry	0.577	3.60	4	08/02/23 15:02	AMP	V36073
Hexachlorobutadiene	<0.531	mg/Kg - dry	0.531	3.60	4	08/02/23 15:02	AMP	V36073
Hexachlorocyclopentadiene	<0.855	mg/Kg - dry	0.855	3.60	4	08/02/23 15:02	AMP	V36073

Qualifiers/ Definitions
DF Dilution Factor
MQL Method Quantitation Limit
J Estimated value

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Information :

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Report Number : **23-208-0056**

REPORT OF ANALYSIS

Lab No : **90860**
Sample ID : **SS-ED-51**

Matrix: **Solids**
Sampled: **7/25/2023 15:38**

Analytical Method: 8270E **Prep Batch(es):** **V36047** 08/01/23 09:50
Prep Method: 3546

Test	Results	Units	MDL	MQL	DF	Date / Time Analyzed	By	Analytical Batch
Hexachloroethane	<0.431	mg/Kg - dry	0.431	3.60	4	08/02/23 15:02	AMP	V36073
Indeno(1,2,3-cd)pyrene	<0.975	mg/Kg - dry	0.975	3.60	4	08/02/23 15:02	AMP	V36073
Isophorone	<1.04	mg/Kg - dry	1.04	3.60	4	08/02/23 15:02	AMP	V36073
1-Methylnaphthalene	<0.577	mg/Kg - dry	0.577	3.60	4	08/02/23 15:02	AMP	V36073
2-Methylnaphthalene	<0.544	mg/Kg - dry	0.544	3.60	4	08/02/23 15:02	AMP	V36073
2-Methylphenol	<0.528	mg/Kg - dry	0.528	3.60	4	08/02/23 15:02	AMP	V36073
3&4 Methylphenol	<0.463	mg/Kg - dry	0.463	3.60	4	08/02/23 15:02	AMP	V36073
Naphthalene	<0.784	mg/Kg - dry	0.784	3.60	4	08/02/23 15:02	AMP	V36073
2-Nitroaniline	<0.527	mg/Kg - dry	0.527	3.60	4	08/02/23 15:02	AMP	V36073
3-Nitroaniline	<0.653	mg/Kg - dry	0.653	3.60	4	08/02/23 15:02	AMP	V36073
4-Nitroaniline	<0.508	mg/Kg - dry	0.508	1.80	4	08/02/23 15:02	AMP	V36073
Nitrobenzene	<0.632	mg/Kg - dry	0.632	1.80	4	08/02/23 15:02	AMP	V36073
2-Nitrophenol	<0.483	mg/Kg - dry	0.483	3.60	4	08/02/23 15:02	AMP	V36073
4-Nitrophenol	<0.637	mg/Kg - dry	0.637	3.60	4	08/02/23 15:02	AMP	V36073
N-Nitrosodimethylamine	<1.43	mg/Kg - dry	1.43	3.60	4	08/02/23 15:02	AMP	V36073
N-Nitrosodiphenylamine	<0.986	mg/Kg - dry	0.986	3.60	4	08/02/23 15:02	AMP	V36073
N-Nitroso-di-n-propylamine	<0.643	mg/Kg - dry	0.643	3.60	4	08/02/23 15:02	AMP	V36073
Pentachlorophenol	<1.89	mg/Kg - dry	1.89	5.45	4	08/02/23 15:02	AMP	V36073
Phenanthrene	<1.13	mg/Kg - dry	1.13	3.60	4	08/02/23 15:02	AMP	V36073
Phenol	<0.610	mg/Kg - dry	0.610	3.60	4	08/02/23 15:02	AMP	V36073
Pyrene	<0.730	mg/Kg - dry	0.730	3.60	4	08/02/23 15:02	AMP	V36073
Pyridine	<0.431	mg/Kg - dry	0.431	1.80	4	08/02/23 15:02	AMP	V36073

Qualifiers/ Definitions
DF Dilution Factor
MQL Method Quantitation Limit
J Estimated value

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Report Number : **23-208-0056**

REPORT OF ANALYSIS

Lab No : **90860**
Sample ID : **SS-ED-51**

Matrix: **Solids**
Sampled: **7/25/2023 15:38**

Analytical Method: 8270E **Prep Batch(es):** **V36047** 08/01/23 09:50
Prep Method: 3546

Test	Results	Units	MDL	MQL	DF	Date / Time Analyzed	By	Analytical Batch
1,2,4-Trichlorobenzene	<0.583	mg/Kg - dry	0.583	3.60	4	08/02/23 15:02	AMP	V36073
2,4,5-Trichlorophenol	<0.524	mg/Kg - dry	0.524	3.60	4	08/02/23 15:02	AMP	V36073
2,4,6-Trichlorophenol	<0.525	mg/Kg - dry	0.525	3.60	4	08/02/23 15:02	AMP	V36073
Surrogate: Phenol-d5	60.5		Limits: 34-121%		4	08/02/23 15:02	AMP	8270E
Surrogate: 2-Fluorobiphenyl	67.1		Limits: 44-115%		4	08/02/23 15:02	AMP	V36073
Surrogate: 2-Fluorophenol	63.5		Limits: 35-115%		4	08/02/23 15:02	AMP	V36073
Surrogate: Nitrobenzene-d5	70.7		Limits: 37-122%		4	08/02/23 15:02	AMP	V36073
Surrogate: 4-Terphenyl-d14	76.0		Limits: 54-127%		4	08/02/23 15:02	AMP	V36073
Surrogate: 2,4,6-Tribromophenol	52.7		Limits: 39-132%		4	08/02/23 15:02	AMP	V36073

Qualifiers/ Definitions

DF Dilution Factor
MQL Method Quantitation Limit
J Estimated value

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REPORT OF ANALYSIS

Lab No : **90861**
Sample ID : **SS-ED-54**

Matrix: **Solids**
Sampled: **7/25/2023 15:48**

Test	Results	Units	MQL	DF	Date / Time Analyzed	By	Analytical Method
Moisture	**21.9**	%		1	08/01/23 17:10	CNC	SW-DRYWT
Lead	**886**	mg/Kg - dry	7.68	20	08/08/23 06:21	JKC	6010D

Qualifiers/ Definitions

DF Dilution Factor
MQL Method Quantitation Limit
J Estimated value

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REPORT OF ANALYSIS

Lab No : **90862**
Sample ID : **SS-ED-44**

Matrix: **Solids**
Sampled: **7/25/2023 15:55**

Test	Results	Units	MQL	DF	Date / Time Analyzed	By	Analytical Method
Moisture	**57.6**	%		1	08/01/23 17:10	CNC	SW-DRYWT
Lead	**1380**	mg/Kg - dry	7.08	10	08/08/23 06:25	JKC	6010D

Qualifiers/ Definitions

DF Dilution Factor
MQL Method Quantitation Limit
J Estimated value

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REPORT OF ANALYSIS

Lab No : **90863**
Sample ID : **SS-ED-45**

Matrix: **Solids**
Sampled: **7/25/2023 16:00**

Test	Results	Units	MQL	DF	Date / Time Analyzed	By	Analytical Method
Moisture	**34.0**	%		1	08/01/23 17:10	CNC	SW-DRYWT
Lead	**723**	mg/Kg - dry	4.55	10	08/09/23 01:04	JKC	6010D

Qualifiers/ Definitions

DF Dilution Factor
MQL Method Quantitation Limit
J Estimated value

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REPORT OF ANALYSIS

Lab No : **90864**
Sample ID : **SS-ED-61**

Matrix: **Solids**
Sampled: **7/25/2023 16:08**

Test	Results	Units	MQL	DF	Date / Time Analyzed	By	Analytical Method
Moisture	**27.3**	%		1	08/01/23 17:10	CNC	SW-DRYWT
Lead	**872**	mg/Kg - dry	8.25	20	08/09/23 01:08	JKC	6010D

Qualifiers/ Definitions

DF Dilution Factor
MQL Method Quantitation Limit
J Estimated value

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REPORT OF ANALYSIS

Lab No : **90865**
Sample ID : **SS-ED-62**

Matrix: **Solids**
Sampled: **7/25/2023 16:18**

Test	Results	Units	MQL	DF	Date / Time Analyzed	By	Analytical Method
Moisture	**24.6**	%		1	08/01/23 17:10	CNC	SW-DRYWT
Lead	**268**	mg/Kg - dry	1.99	5	08/09/23 01:13	JKC	6010D

Qualifiers/ Definitions

DF Dilution Factor
MQL Method Quantitation Limit
J Estimated value

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REPORT OF ANALYSIS

Lab No : **90866**
Sample ID : **SS-ED-Dup 1**

Matrix: **Solids**
Sampled: **7/25/2023 17:05**

Test	Results	Units	MQL	DF	Date / Time Analyzed	By	Analytical Method
Moisture	**27.7**	%		1	08/01/23 17:10	CNC	SW-DRYWT
Lead	**2210**	mg/Kg - dry	20.7	50	08/09/23 01:17	JKC	6010D

Qualifiers/ Definitions

DF Dilution Factor
MQL Method Quantitation Limit
J Estimated value

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REPORT OF ANALYSIS

Lab No : **90867**
Sample ID : **SS-ED-39 (1')**

Matrix: **Solids**
Sampled: **7/25/2023 16:33**

Test	Results	Units	MQL	DF	Date / Time Analyzed	By	Analytical Method
Moisture	**7.09**	%		1	08/01/23 17:10	CNC	SW-DRYWT
Lead	**12.8**	mg/Kg - dry	0.322	1	08/09/23 01:22	JKC	6010D

Qualifiers/ Definitions

DF Dilution Factor
MQL Method Quantitation Limit
J Estimated value

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Report Number : **23-208-0056**

REPORT OF ANALYSIS

Lab No : **90868**
Sample ID : **SS-ED-40 (1')**

Matrix: **Solids**
Sampled: **7/25/2023 16:36**

Test	Results	Units	MQL	DF	Date / Time Analyzed	By	Analytical Method
Moisture	**23.2**	%		1	08/01/23 17:10	CNC	SW-DRYWT
Lead	**3180**	mg/Kg - dry	19.5	50	08/09/23 01:48	JKC	6010D

Qualifiers/ Definitions

DF Dilution Factor
MQL Method Quantitation Limit
J Estimated value

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Report Number : **23-208-0056**

REPORT OF ANALYSIS

Lab No : **90869**
Sample ID : **SS-ED-51 (1')**

Matrix: **Solids**
Sampled: **7/25/2023 17:05**

Test	Results	Units	MQL	DF	Date / Time Analyzed	By	Analytical Method
Moisture	**20.9**	%		1	08/01/23 17:10	CNC	SW-DRYWT
Lead	**2530**	mg/Kg - dry	19.0	50	08/09/23 01:53	JKC	6010D

Qualifiers/ Definitions

DF Dilution Factor
MQL Method Quantitation Limit
J Estimated value

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Report Number : **23-208-0056**

REPORT OF ANALYSIS

Lab No : **90870**
Sample ID : **SS-ED-55 (1')**

Matrix: **Solids**
Sampled: **7/25/2023 16:50**

Test	Results	Units	MQL	DF	Date / Time Analyzed	By	Analytical Method
Moisture	**13.9**	%		1	08/01/23 17:10	CNC	SW-DRYWT
Lead	**1740**	mg/Kg - dry	17.4	50	08/09/23 01:57	JKC	6010D

Qualifiers/ Definitions

DF Dilution Factor
MQL Method Quantitation Limit
J Estimated value

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Quality Control Data

Client ID: **Mid-Atlantic Associates, Inc. - Raleigh**
Project Description: **R4370.00**
Report No: **23-208-0056**

QC Prep: V36074
QC Prep Batch Method: 3050B
QC Analytical Batch(es): V36316
Analysis Method: 6010D
Analysis Description: Metals Analysis

Lab Reagent Blank LRB-V36074 Matrix: SOL
Associated Lab Samples: 90852, 90853, 90854, 90856, 90857, 90858, 90859, 90861, 90862

Parameter	Units	Blank Result	MQL	Analyzed
Lead	mg/Kg	<0.300	0.300	08/07/23 17:01

Laboratory Control Sample LCS-V36074

Parameter	Units	Spike Conc.	LCS Result	LCS %Rec	% Rec Limits
Lead	mg/Kg	5.00	5.85	117	80-120

Matrix Spike & Matrix Spike Duplicate V 91220-MS-V36074 V 91220-MSD-V36074

Parameter	Units	Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS %Rec	MSD %Rec	%Rec Limits	RPD	Max RPD
Lead	mg/Kg	6.23	5.00	5.00	11.4	11.5	103	105	75-125	0.8	20

Post Digestion Spike V 91220-PDS-V36074

Parameter	Units	PDS Result	% Recovery	Analyzed
Lead	mg/Kg	16.5	106	08/07/23 18:20

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Quality Control Data

Client ID: Mid-Atlantic Associates, Inc. - Raleigh
Project Description: R4370.00
Report No: 23-208-0056

QC Prep: V36075
QC Prep Batch Method: 3050B
QC Analytical Batch(es): V36316,V36366
Analysis Method: 6010D
Analysis Description: Metals Analysis

Lab Reagent Blank LRB-V36075 Matrix: SOL
Associated Lab Samples: 90863, 90864, 90865, 90866, 90867, 90868, 90869, 90870

Parameter	Units	Blank Result	MQL	Analyzed
Lead	mg/Kg	<0.300	0.300	08/09/23 00:55

Laboratory Control Sample LCS-V36075

Parameter	Units	Spike Conc.	LCS Result	LCS %Rec	% Rec Limits
Lead	mg/Kg	5.00	5.40	108	80-120

Matrix Spike & Matrix Spike Duplicate V 90867-MS-V36075 V 90867-MSD-V36075

Parameter	Units	Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS %Rec	MSD %Rec	%Rec Limits	RPD	Max RPD
Lead	mg/Kg	13.4	5.00	4.95	19.9	21.6	130*	166*	75-125	8.1	20

Post Digestion Spike V 90867-PDS-V36075

Parameter	Units	PDS Result	% Recovery	Analyzed
Lead	mg/Kg	17.8	97.0	08/09/23 01:26

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Quality Control Data

Client ID: **Mid-Atlantic Associates, Inc. - Raleigh**
Project Description: **R4370.00**
Report No: **23-208-0056**

QC Prep: L696239
QC Prep Batch Method: 3050B
QC Analytical Batch(es): L696766,L696918,L698988,L698996
Analysis Method: 6020B
Analysis Description: Metals Analyses

Lab Reagent Blank LRB-L696239 Matrix: SOL
Associated Lab Samples: 90855, 90860

Parameter	Units	Blank Result	MQL	Analyzed
Antimony	mg/Kg	<0.250	0.250	08/03/23 19:16
Arsenic	mg/Kg	<0.250	0.250	08/03/23 19:16
Barium	mg/Kg	<0.250	0.250	08/03/23 19:16
Beryllium	mg/Kg	<0.250	0.250	08/03/23 19:16
Cadmium	mg/Kg	<0.250	0.250	08/03/23 19:16
Chromium	mg/Kg	<0.250	0.250	08/03/23 19:16
Cobalt	mg/Kg	<0.250	0.250	08/03/23 19:16
Copper	mg/Kg	<0.250	0.250	08/03/23 19:16
Lead	mg/Kg	<0.250	0.250	08/03/23 19:16
Manganese	mg/Kg	<0.250	0.250	08/03/23 19:16
Nickel	mg/Kg	<0.250	0.250	08/03/23 19:16
Selenium	mg/Kg	<0.250	0.250	08/03/23 19:16
Silver	mg/Kg	<0.250	0.250	08/03/23 19:16
Thallium	mg/Kg	<0.250	0.250	08/03/23 19:16
Vanadium	mg/Kg	<1.25	1.25	08/03/23 19:16
Zinc	mg/Kg	<2.50	2.50	08/03/23 19:16

Laboratory Control Sample LCS-L696239

Parameter	Units	Spike Conc.	LCS Result	LCS %Rec	% Rec Limits
Antimony	mg/Kg	5.00	4.57	91.0	80-120
Arsenic	mg/Kg	2.50	2.41	96.0	80-120
Barium	mg/Kg	5.00	4.56	91.0	80-120
Beryllium	mg/Kg	2.50	2.50	100	80-120
Cadmium	mg/Kg	0.500	0.478	96.0	80-120
Chromium	mg/Kg	5.00	4.84	97.0	80-120
Cobalt	mg/Kg	5.00	4.78	96.0	80-120

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Quality Control Data

Client ID: Mid-Atlantic Associates, Inc. - Raleigh
Project Description: R4370.00
Report No: 23-208-0056

QC Prep: L696239
QC Prep Batch Method: 3050B
QC Analytical Batch(es): L696766,L696918,L698988,L698996
Analysis Method: 6020B
Analysis Description: Metals Analyses

Laboratory Control Sample LCS-L696239

Parameter	Units	Spike Conc.	LCS Result	LCS %Rec	% Rec Limits
Copper	mg/Kg	2.50	2.44	98.0	80-120
Lead	mg/Kg	2.50	2.30	92.0	80-120
Manganese	mg/Kg	5.00	4.92	98.0	80-120
Nickel	mg/Kg	2.50	2.47	99.0	80-120
Selenium	mg/Kg	5.00	4.57	91.0	80-120
Silver	mg/Kg	0.500	0.456	91.0	80-120
Thallium	mg/Kg	0.500	0.473	95.0	80-120
Vanadium	mg/Kg	25.0	23.5	94.0	80-120
Zinc	mg/Kg	25.0	25.7	103	80-120

Matrix Spike & Matrix Spike Duplicate V 90860-MS-L696239 V 90860-MSD-L696239

Parameter	Units	Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS %Rec	MSD %Rec	%Rec Limits	RPD	Max RPD
Antimony	mg/Kg	4.48	4.93	4.65	3.94	5.63	0.0*	25.0*	75-125	35.3	80
Arsenic	mg/Kg	5.61	2.47	2.33	6.58	8.46	39.0*	123	75-125	25.0	80
Barium	mg/Kg	459	4.93	4.65	421	450	0.0*	0.0*	75-125	6.6	80
Beryllium	mg/Kg	0.383	2.47	2.33	2.54	2.43	87.0	88.0	75-125	4.4	80
Cadmium	mg/Kg	1.83	0.493	0.465	1.92	2.14	18.0*	67.0*	75-125	10.8	80
Chromium	mg/Kg	27.7	4.93	4.65	29.0	25.3	26.0*	0.0*	75-125	13.6	80
Cobalt	mg/Kg	4.90	4.93	4.65	8.54	9.26	74.0*	94.0	75-125	8.0	80
Copper	mg/Kg	475	2.47	2.33	422	515	0.0*	1720*	75-125	19.8	80
Lead	mg/Kg	1200	2.47	2.33	813	786	0.0*	0.0*	75-125	3.3	80
Manganese	mg/Kg	384	4.93	4.65	314	407	0.0*	495*	75-125	25.7	80
Nickel	mg/Kg	13.3	2.47	2.33	16.1	16.9	114	155*	75-125	4.8	80
Selenium	mg/Kg	0.466	4.93	4.65	4.08	3.93	73.0*	74.0*	75-125	3.7	80
Silver	mg/Kg	0.830	0.493	0.465	1.08	0.927	51.0*	21.0*	75-125	15.2	80

* QC Fail

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Quality Control Data

Client ID: **Mid-Atlantic Associates, Inc. - Raleigh**
Project Description: **R4370.00**
Report No: **23-208-0056**

QC Prep: L696239
QC Prep Batch Method: 3050B
QC Analytical Batch(es): L696766,L696918,L698988,L698996
Analysis Method: 6020B
Analysis Description: Metals Analyses

Matrix Spike & Matrix Spike Duplicate V 90860-MS-L696239 V 90860-MSD-L696239

Parameter	Units	Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS %Rec	MSD %Rec	%Rec Limits	RPD	Max RPD
Thallium	mg/Kg	<0.250	0.493	0.465	0.451	0.435	84.0	86.0	75-125	3.6	80
Vanadium	mg/Kg	9.95	24.7	23.3	29.2	27.4	78.0	75.0	75-125	6.3	80
Zinc	mg/Kg	1140	24.7	23.3	1000	991	0.0*	0.0*	75-125	0.9	80

Post Digestion Spike V 90860-PDS-L696239

Parameter	Units	PDS Result	% Recovery	Analyzed
Antimony	mg/Kg	2.63	94.0	08/04/23 11:59
Arsenic	mg/Kg	1.65	96.0	08/04/23 11:59
Cadmium	mg/Kg	0.395	95.0	08/04/23 11:59
Cobalt	mg/Kg	2.68	93.0	08/04/23 11:59
Copper	mg/Kg	2.44	102	08/04/23 11:26
Silver	mg/Kg	0.299	94.0	08/04/23 11:59
Vanadium	mg/Kg	11.9	92.0	08/04/23 11:59
Zinc	mg/Kg	116	92.0	08/04/23 11:59

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Quality Control Data

Client ID: **Mid-Atlantic Associates, Inc. - Raleigh**
Project Description: **R4370.00**
Report No: **23-208-0056**

QC Prep: V35873
QC Prep Batch Method: 7471B (Prep)
QC Analytical Batch(es): V35952
Analysis Method: 7471B
Analysis Description: Solids Total Mercury Analysis - CVAA

Lab Reagent Blank LRB-V35873 Matrix: SOL
Associated Lab Samples: 90855, 90860

Parameter	Units	Blank Result	MQL	Analyzed
Mercury (Total)	mg/Kg	<0.0300	0.0300	07/28/23 15:43

Laboratory Control Sample LCS-V35873

Parameter	Units	Spike Conc.	LCS Result	LCS %Rec	% Rec Limits
Mercury (Total)	mg/Kg	0.417	0.451	108	80-120

Matrix Spike & Matrix Spike Duplicate V 90819-MS-V35873 V 90819-MSD-V35873

Parameter	Units	Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS %Rec	MSD %Rec	%Rec Limits	RPD	Max RPD
Mercury (Total)	mg/Kg	<0.0300	0.410	0.397	0.400	0.362	98.0	91.0	80-120	9.9	20

Post Digestion Spike V 90819-PDS-V35873

Parameter	Units	PDS Result	% Recovery	Analyzed
Mercury (Total)	mg/Kg	0.200	101	07/28/23 16:15

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Quality Control Data

Client ID: **Mid-Atlantic Associates, Inc. - Raleigh**
Project Description: **R4370.00**
Report No: **23-208-0056**

QC Prep: V36047
QC Prep Batch Method: 3546
QC Analytical Batch(es): V36073
Analysis Method: 8270E
Analysis Description: Semivolatile Organic Compounds - GC/MS

Lab Reagent Blank LRB-V36047 Matrix: SOL
Associated Lab Samples: 90855, 90860

Parameter	Units	Blank Result	MDL	MQL	Analyzed	% Recovery	% Rec Limits
Acenaphthene	mg/Kg	<0.116	0.116	0.660	08/01/23 15:51		
Acenaphthylene	mg/Kg	<0.105	0.105	0.660	08/01/23 15:51		
Aniline	mg/Kg	<0.152	0.152	0.660	08/01/23 15:51		
Anthracene	mg/Kg	<0.143	0.143	0.660	08/01/23 15:51		
Benzo(a)anthracene	mg/Kg	<0.139	0.139	0.660	08/01/23 15:51		
Benzo(a)pyrene	mg/Kg	<0.147	0.147	0.660	08/01/23 15:51		
Benzo(b)fluoranthene	mg/Kg	<0.146	0.146	0.660	08/01/23 15:51		
Benzo(g,h,i)perylene	mg/Kg	<0.136	0.136	0.660	08/01/23 15:51		
Benzo(k)fluoranthene	mg/Kg	<0.137	0.137	0.660	08/01/23 15:51		
Benzoic Acid	mg/Kg	<0.580	0.580	2.00	08/01/23 15:51		
Benzyl alcohol	mg/Kg	<0.105	0.105	0.660	08/01/23 15:51		
Bis(2-Chloroethoxy)methane	mg/Kg	<0.118	0.118	0.660	08/01/23 15:51		
Bis(2-Chloroethyl)ether	mg/Kg	<0.107	0.107	0.660	08/01/23 15:51		
Bis(2-Chloroisopropyl)ether	mg/Kg	<0.136	0.136	0.330	08/01/23 15:51		
Bis(2-ethylhexyl)phthalate	mg/Kg	<0.120	0.120	0.660	08/01/23 15:51		
4-Bromophenyl phenyl ether	mg/Kg	<0.109	0.109	0.660	08/01/23 15:51		
Butyl benzyl phthalate	mg/Kg	<0.113	0.113	0.330	08/01/23 15:51		
4-Chloro-3-methylphenol	mg/Kg	<0.092	0.092	0.660	08/01/23 15:51		
4-Chloroaniline	mg/Kg	<0.112	0.112	0.330	08/01/23 15:51		
2-Chloronaphthalene	mg/Kg	<0.116	0.116	0.660	08/01/23 15:51		
2-Chlorophenol	mg/Kg	<0.098	0.098	0.660	08/01/23 15:51		
4-Chlorophenyl phenyl ether	mg/Kg	<0.126	0.126	1.00	08/01/23 15:51		
Chrysene	mg/Kg	<0.142	0.142	0.660	08/01/23 15:51		
Dibenz(a,h)anthracene	mg/Kg	<0.230	0.230	0.660	08/01/23 15:51		
Dibenzofuran	mg/Kg	<0.119	0.119	0.660	08/01/23 15:51		
1,2-Dichlorobenzene	mg/Kg	<0.094	0.094	0.660	08/01/23 15:51		
1,3-Dichlorobenzene	mg/Kg	<0.097	0.097	0.660	08/01/23 15:51		

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Quality Control Data

Client ID: **Mid-Atlantic Associates, Inc. - Raleigh**
Project Description: **R4370.00**
Report No: **23-208-0056**

QC Prep: V36047
QC Prep Batch Method: 3546
QC Analytical Batch(es): V36073
Analysis Method: 8270E
Analysis Description: Semivolatile Organic Compounds - GC/MS

Lab Reagent Blank LRB-V36047 Matrix: SOL
Associated Lab Samples: 90855, 90860

Parameter	Units	Blank Result	MDL	MQL	Analyzed	% Recovery	% Rec Limits
1,4-Dichlorobenzene	mg/Kg	<0.097	0.097	0.330	08/01/23 15:51		
3,3'-Dichlorobenzidine	mg/Kg	<0.147	0.147	0.660	08/01/23 15:51		
2,4-Dichlorophenol	mg/Kg	<0.095	0.095	0.660	08/01/23 15:51		
Diethyl phthalate	mg/Kg	<0.180	0.180	0.660	08/01/23 15:51		
Dimethyl phthalate	mg/Kg	<0.174	0.174	0.660	08/01/23 15:51		
2,4-Dimethylphenol	mg/Kg	<0.108	0.108	0.330	08/01/23 15:51		
Di-n-butyl phthalate	mg/Kg	<0.107	0.107	0.660	08/01/23 15:51		
4,6-Dinitro-2-methylphenol	mg/Kg	<0.240	0.240	1.50	08/01/23 15:51		
2,4-Dinitrophenol	mg/Kg	<0.520	0.520	1.50	08/01/23 15:51		
2,4-Dinitrotoluene	mg/Kg	<0.096	0.096	0.660	08/01/23 15:51		
2,6-Dinitrotoluene	mg/Kg	<0.108	0.108	0.660	08/01/23 15:51		
Di-n-Octyl Phthalate	mg/Kg	<0.143	0.143	0.330	08/01/23 15:51		
Fluoranthene	mg/Kg	<0.123	0.123	0.660	08/01/23 15:51		
Fluorene	mg/Kg	<0.128	0.128	0.660	08/01/23 15:51		
Hexachlorobenzene	mg/Kg	<0.106	0.106	0.660	08/01/23 15:51		
Hexachlorobutadiene	mg/Kg	<0.097	0.097	0.660	08/01/23 15:51		
Hexachlorocyclopentadiene	mg/Kg	<0.157	0.157	0.660	08/01/23 15:51		
Hexachloroethane	mg/Kg	<0.079	0.079	0.660	08/01/23 15:51		
Indeno(1,2,3-cd)pyrene	mg/Kg	<0.179	0.179	0.660	08/01/23 15:51		
Isophorone	mg/Kg	<0.191	0.191	0.660	08/01/23 15:51		
1-Methylnaphthalene	mg/Kg	<0.106	0.106	0.660	08/01/23 15:51		
2-Methylnaphthalene	mg/Kg	<0.100	0.100	0.660	08/01/23 15:51		
2-Methylphenol	mg/Kg	<0.097	0.097	0.660	08/01/23 15:51		
3&4 Methylphenol	mg/Kg	<0.084	0.084	0.660	08/01/23 15:51		
Naphthalene	mg/Kg	<0.144	0.144	0.660	08/01/23 15:51		
2-Nitroaniline	mg/Kg	<0.096	0.096	0.660	08/01/23 15:51		
3-Nitroaniline	mg/Kg	<0.120	0.120	0.660	08/01/23 15:51		

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Quality Control Data

Client ID: **Mid-Atlantic Associates, Inc. - Raleigh**
Project Description: **R4370.00**
Report No: **23-208-0056**

QC Prep: V36047
QC Prep Batch Method: 3546
QC Analytical Batch(es): V36073
Analysis Method: 8270E
Analysis Description: Semivolatile Organic Compounds - GC/MS

Lab Reagent Blank LRB-V36047 Matrix: SOL
Associated Lab Samples: 90855, 90860

Parameter	Units	Blank Result	MDL	MQL	Analyzed	% Recovery	% Rec Limits
4-Nitroaniline	mg/Kg	<0.093	0.093	0.330	08/01/23 15:51		
Nitrobenzene	mg/Kg	<0.116	0.116	0.330	08/01/23 15:51		
2-Nitrophenol	mg/Kg	<0.088	0.088	0.660	08/01/23 15:51		
4-Nitrophenol	mg/Kg	<0.117	0.117	0.660	08/01/23 15:51		
N-Nitrosodimethylamine	mg/Kg	<0.263	0.263	0.660	08/01/23 15:51		
N-Nitrosodiphenylamine	mg/Kg	<0.181	0.181	0.660	08/01/23 15:51		
N-Nitroso-di-n-propylamine	mg/Kg	<0.118	0.118	0.660	08/01/23 15:51		
Pentachlorophenol	mg/Kg	<0.347	0.347	1.00	08/01/23 15:51		
Phenanthrene	mg/Kg	<0.208	0.208	0.660	08/01/23 15:51		
Phenol	mg/Kg	<0.112	0.112	0.660	08/01/23 15:51		
Pyrene	mg/Kg	<0.134	0.134	0.660	08/01/23 15:51		
Pyridine	mg/Kg	<0.079	0.079	0.330	08/01/23 15:51		
1,2,4-Trichlorobenzene	mg/Kg	<0.107	0.107	0.660	08/01/23 15:51		
2,4,5-Trichlorophenol	mg/Kg	<0.096	0.096	0.660	08/01/23 15:51		
2,4,6-Trichlorophenol	mg/Kg	<0.096	0.096	0.660	08/01/23 15:51		
2-Fluorobiphenyl (S)					08/01/23 15:51	94.0	44-115
2-Fluorophenol (S)					08/01/23 15:51	82.5	35-115
Nitrobenzene-d5 (S)					08/01/23 15:51	86.2	37-122
4-Terphenyl-d14 (S)					08/01/23 15:51	112	54-127
2,4,6-Tribromophenol (S)					08/01/23 15:51	78.6	39-132
Phenol-d5 (S)					08/01/23 15:51	78.0	34-121

Laboratory Control Sample & LCSD LCS-V36047 LCSD-V36047

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS %Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD
Acenaphthene	mg/Kg	1.67	1.46	1.52	87.4	91.0	40-123	4.0	20

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Quality Control Data

Client ID: Mid-Atlantic Associates, Inc. - Raleigh
Project Description: R4370.00
Report No: 23-208-0056

QC Prep: V36047
QC Prep Batch Method: 3546
QC Analytical Batch(es): V36073
Analysis Method: 8270E
Analysis Description: Semivolatile Organic Compounds - GC/MS

Laboratory Control Sample & LCSD LCS-V36047 LCSD-V36047

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS %Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD
Acenaphthylene	mg/Kg	1.67	1.47	1.53	88.0	91.6	32-132	4.0	20
Aniline	mg/Kg	1.67	2.71	2.82	162	169	12-197	3.9	20
Anthracene	mg/Kg	1.67	1.62	1.68	97.0	101	47-123	3.6	20
Benzo(a)anthracene	mg/Kg	1.67	1.66	1.70	99.4	102	49-126	2.3	20
Benzo(a)pyrene	mg/Kg	1.67	1.80	1.86	108	111	45-129	3.2	20
Benzo(b)fluoranthene	mg/Kg	1.67	1.70	1.85	102	111	45-132	8.4	20
Benzo(g,h,i)perylene	mg/Kg	1.67	1.66	1.74	99.4	104	43-134	4.7	20
Benzo(k)fluoranthene	mg/Kg	1.67	1.64	1.64	98.2	98.2	47-132	0.0	20
Benzoic Acid	mg/Kg	1.67	1.25	1.24	74.8	74.2	10-83	0.8	20
Benzyl alcohol	mg/Kg	1.67	1.48	1.59	88.6	95.2	29-122	7.1	20
Bis(2-Chloroethoxy)methane	mg/Kg	1.67	1.33	1.36	79.6	81.4	36-121	2.2	20
Bis(2-Chloroethyl)ether	mg/Kg	1.67	1.33	1.40	79.6	83.8	31-120	5.1	20
Bis(2-Chloroisopropyl)ether	mg/Kg	1.67	1.48	1.52	88.6	91.0	33-131	2.6	20
Bis(2-ethylhexyl)phthalate	mg/Kg	1.67	1.88	1.95	113	117	51-133	3.6	20
4-Bromophenyl phenyl ether	mg/Kg	1.67	1.64	1.71	98.2	102	46-124	4.1	20
Butyl benzyl phthalate	mg/Kg	1.67	1.85	1.95	111	117	48-132	5.2	20
4-Chloro-3-methylphenol	mg/Kg	1.67	1.35	1.41	80.8	84.4	45-122	4.3	20
4-Chloroaniline	mg/Kg	1.67	1.42	1.47	85.0	88.0	17-106	3.4	20
2-Chloronaphthalene	mg/Kg	1.67	1.48	1.52	88.6	91.0	41-114	2.6	20
2-Chlorophenol	mg/Kg	1.67	1.46	1.53	87.4	91.6	34-121	4.6	20
4-Chlorophenyl phenyl ether	mg/Kg	1.67	1.53	1.59	91.6	95.2	45-121	3.8	20
Chrysene	mg/Kg	1.67	1.57	1.64	94.0	98.2	50-124	4.3	20
Dibenz(a,h)anthracene	mg/Kg	1.67	1.52	1.56	91.0	93.4	45-134	2.5	20
Dibenzofuran	mg/Kg	1.67	1.47	1.53	88.0	91.6	44-120	4.0	20
1,2-Dichlorobenzene	mg/Kg	1.67	1.30	1.37	77.8	82.0	33-117	5.2	20
1,3-Dichlorobenzene	mg/Kg	1.67	1.31	1.35	78.4	80.8	30-115	3.0	20

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Quality Control Data

Client ID: **Mid-Atlantic Associates, Inc. - Raleigh**
Project Description: **R4370.00**
Report No: **23-208-0056**

QC Prep: V36047
QC Prep Batch Method: 3546
QC Analytical Batch(es): V36073
Analysis Method: 8270E
Analysis Description: Semivolatile Organic Compounds - GC/MS

Laboratory Control Sample & LCSD LCS-V36047 LCSD-V36047

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS %Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD
1,4-Dichlorobenzene	mg/Kg	1.67	1.29	1.35	77.2	80.8	31-115	4.5	20
3,3'-Dichlorobenzidine	mg/Kg	1.67	1.68	1.77	101	106	22-121	5.2	20
2,4-Dichlorophenol	mg/Kg	1.67	1.31	1.39	78.4	83.2	40-122	5.9	20
Diethyl phthalate	mg/Kg	1.67	1.56	1.68	93.4	101	50-124	7.4	20
Dimethyl phthalate	mg/Kg	1.67	1.60	1.67	95.8	100	48-124	4.2	20
2,4-Dimethylphenol	mg/Kg	1.67	1.74	1.82	104	109	30-127	4.4	20
Di-n-butyl phthalate	mg/Kg	1.67	1.78	1.84	107	110	51-128	3.3	20
4,6-Dinitro-2-methylphenol	mg/Kg	1.67	1.42	1.43	85.0	85.6	29-132	0.7	20
2,4-Dinitrophenol	mg/Kg	1.67	1.24	1.30	74.2	77.8	27-129	4.7	20
2,4-Dinitrotoluene	mg/Kg	1.67	1.60	1.66	95.8	99.4	48-126	3.6	20
2,6-Dinitrotoluene	mg/Kg	1.67	1.53	1.67	91.6	100	46-124	8.7	20
Di-n-Octyl Phthalate	mg/Kg	1.67	2.08	2.17	125	130	45-140	4.2	20
Fluoranthene	mg/Kg	1.67	1.48	1.53	88.6	91.6	50-127	3.3	20
Fluorene	mg/Kg	1.67	1.47	1.55	88.0	92.8	43-125	5.2	20
Hexachlorobenzene	mg/Kg	1.67	1.58	1.61	94.6	96.4	45-122	1.8	20
Hexachlorobutadiene	mg/Kg	1.67	1.22	1.30	73.0	77.8	32-123	6.3	20
Hexachlorocyclopentadiene	mg/Kg	1.67	1.10	1.22	65.8	73.0	32-117	10.3	20
Hexachloroethane	mg/Kg	1.67	1.23	1.28	73.6	76.6	28-117	3.9	20
Indeno(1,2,3-cd)pyrene	mg/Kg	1.67	1.73	1.82	104	109	45-133	5.0	20
Isophorone	mg/Kg	1.67	1.16	1.19	69.4	71.2	30-122	2.5	20
1-Methylnaphthalene	mg/Kg	1.67	1.21	1.26	72.4	75.4	40-119	4.0	20
2-Methylnaphthalene	mg/Kg	1.67	1.22	1.27	73.0	76.0	38-122	4.0	20
2-Methylphenol	mg/Kg	1.67	1.50	1.55	89.8	92.8	32-122	3.2	20
3&4 Methylphenol	mg/Kg	1.67	1.34	1.39	80.2	83.2	34-119	3.6	20
Naphthalene	mg/Kg	1.67	1.20	1.24	71.8	74.2	35-123	3.2	20
2-Nitroaniline	mg/Kg	1.67	1.61	1.75	96.4	105	44-127	8.3	20

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Quality Control Data

Client ID: **Mid-Atlantic Associates, Inc. - Raleigh**
Project Description: **R4370.00**
Report No: **23-208-0056**

QC Prep: V36047
QC Prep Batch Method: 3546
QC Analytical Batch(es): V36073
Analysis Method: 8270E
Analysis Description: Semivolatile Organic Compounds - GC/MS

Laboratory Control Sample & LCSD LCS-V36047 LCSD-V36047

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS %Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD
3-Nitroaniline	mg/Kg	1.67	1.67	1.75	100	105	33-119	4.6	20
4-Nitroaniline	mg/Kg	1.67	1.56	1.67	93.4	100	63-147	6.8	20
Nitrobenzene	mg/Kg	1.67	1.19	1.22	71.2	73.0	34-122	2.4	20
2-Nitrophenol	mg/Kg	1.67	1.28	1.36	76.6	81.4	36-123	6.0	20
4-Nitrophenol	mg/Kg	1.67	1.67	1.72	100	103	30-132	2.9	20
N-Nitrosodimethylamine	mg/Kg	1.67	1.17	1.21	70.0	72.4	10-146	3.3	20
N-Nitrosodiphenylamine	mg/Kg	1.67	1.94	1.96	116	117	38-127	1.0	20
N-Nitroso-di-n-propylamine	mg/Kg	1.67	1.47	1.51	88.0	90.4	36-120	2.6	20
Pentachlorophenol	mg/Kg	1.67	1.77	1.85	106	111	25-133	4.4	20
Phenanthrene	mg/Kg	1.67	1.54	1.61	92.2	96.4	50-121	4.4	20
Phenol	mg/Kg	1.67	1.41	1.43	84.4	85.6	34-121	1.4	20
Pyrene	mg/Kg	1.67	1.63	1.70	97.6	102	47-127	4.2	20
Pyridine	mg/Kg	1.67	0.951	0.973	56.9	58.2	10-80	2.2	20
1,2,4-Trichlorobenzene	mg/Kg	1.67	1.18	1.22	70.6	73.0	34-118	3.3	20
2,4,5-Trichlorophenol	mg/Kg	1.67	1.57	1.63	94.0	97.6	41-124	3.7	20
2,4,6-Trichlorophenol	mg/Kg	1.67	1.48	1.55	88.6	92.8	39-126	4.6	20
2-Fluorobiphenyl (S)					91.6	92.2	44-115		
2-Fluorophenol (S)					81.9	81.3	35-115		
Nitrobenzene-d5 (S)					75.4	74.8	37-122		
4-Terphenyl-d14 (S)					106	107	54-127		
2,4,6-Tribromophenol (S)					83.4	86.7	39-132		
Phenol-d5 (S)					77.7	77.1	34-121		

449 Springbrook Rd, Charlotte, NC 28217
Main 704.529.6364
www.waypointanalytical.com

Quality Control Data

Client ID: **Mid-Atlantic Associates, Inc. - Raleigh**
Project Description: **R4370.00**
Report No: **23-208-0056**

QC Analytical Batch: V36016
Analysis Method: SW-DRYWT
Analysis Description: Dry Weight Determination

Duplicate V 90841-DUP

Parameter	Units	Result	DUP Result	RPD	Max RPD	Analyzed
Moisture	%	24.8	24.4	1.6	20.0	08/01/23 11:05

Duplicate V 90858-DUP

Parameter	Units	Result	DUP Result	RPD	Max RPD	Analyzed
Moisture	%	32.6	32.0	1.8	20.0	08/01/23 11:05

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Quality Control Data

Client ID: **Mid-Atlantic Associates, Inc. - Raleigh**
Project Description: **R4370.00**
Report No: **23-208-0056**

QC Analytical Batch: V36036
Analysis Method: SW-DRYWT
Analysis Description: Dry Weight Determination

Duplicate V 90833-DUP

Parameter	Units	Result	DUP Result	RPD	Max RPD	Analyzed
Moisture	%	9.20	9.35	1.6	20.0	08/01/23 17:10

Duplicate V 90860-DUP

Parameter	Units	Result	DUP Result	RPD	Max RPD	Analyzed
Moisture	%	26.6	27.7	4.0	20.0	08/01/23 17:10

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Quality Control Data

Client ID: **Mid-Atlantic Associates, Inc. - Raleigh**
Project Description: **R4370.00**
Report No: **23-208-0056**

QC Analytical Batch: V36038
Analysis Method: SW-DRYWT
Analysis Description: Dry Weight Determination

Duplicate V 91132-DUP

Parameter	Units	Result	DUP Result	RPD	Max RPD	Analyzed
Moisture	%	17.8	17.6	1.1	20.0	08/01/23 17:10

Duplicate V 91138-DUP

Parameter	Units	Result	DUP Result	RPD	Max RPD	Analyzed
Moisture	%	8.17	8.99	9.5	20.0	08/01/23 17:10

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Shipment Receipt Form

Customer Number: **01139**
Customer Name: **Mid-Atlantic Associates, Inc. - Raleigh**
Report Number: **23-208-0056**

Shipping Method

○ Fed Ex	○ US Postal	○ Lab	○ Other :	
○ UPS	○ Client	◉ Courier	Thermometer ID:	IRT-15 2.6C

Shipping container/cooler uncompromised?	◉ Yes	○ No	
Number of coolers/boxes received	1		
Custody seals intact on shipping container/cooler?	○ Yes	○ No	◉ Not Present
Custody seals intact on sample bottles?	○ Yes	○ No	◉ Not Present
Chain of Custody (COC) present?	◉ Yes	○ No	
COC agrees with sample label(s)?	◉ Yes	○ No	
COC properly completed	◉ Yes	○ No	
Samples in proper containers?	◉ Yes	○ No	
Sample containers intact?	◉ Yes	○ No	
Sufficient sample volume for indicated test(s)?	◉ Yes	○ No	
All samples received within holding time?	◉ Yes	○ No	
Cooler temperature in compliance?	◉ Yes	○ No	
Cooler/Samples arrived at the laboratory on ice. Samples were considered acceptable as cooling process had begun.	◉ Yes	○ No	
Water - Sample containers properly preserved	○ Yes	○ No	◉ N/A
Water - VOA vials free of headspace	○ Yes	○ No	◉ N/A
Trip Blanks received with VOAs	○ Yes	○ No	◉ N/A
Soil VOA method 5035 – compliance criteria met	◉ Yes	○ No	○ N/A

☐ High concentration container (48 hr) ☐ Low concentration EnCore samplers (48 hr)
☐ High concentration pre-weighed (methanol -14 d) ☐ Low conc pre-weighed vials (Sod Bis -14 d)

Special precautions or instructions included?	○ Yes	◉ No

Comments:

Signature: Caitlyn Cummins Date & Time: 07/27/2023 14:38:02

Waypoint ANALYTICAL

449 Springbrook Road • Charlotte, NC 28217
Phone 704/529-6364 • Fax: 704/525-0409

CHAIN OF CUSTODY RECORD

PAGE 1 OF 3 QUOTE # TO ENSURE PROPER BILLING: KCC 7/28/23

Client Company Name: Mid-Atlantic Associates
Report To/Contact Name: Kevin Clay
Reporting Address: 409 Rogers View Ct Raleigh NC 27610
Phone: 704 609 0245 Fax (Yes)(No):
Email Address: KClay@maaonline.com
EDD Type: PDF ✓ Excel ✓ Other
Site Location Name: E Durham Pore
Site Location Physical Address:

Project Name:
Short Hold Analysis (Yes) (No) UST Project: (Yes) (No)
*Please ATTACH any project specific reporting (QC LEVEL I II III IV) provisions and/or QC Requirements
Invoice To:
Address:

Purchase Order No./Billing Reference
Requested Due Date ❏ 1 Day ❏ 2 Days ❏ 3 Days ❏ 4 Days ❏ 5 Days
"Working Days" ❏ 6-9 Days ☒ Standard 10 days ❏ Rush Work Must Be Pre Approved
Samples received after 15:00 will be processed next business day.
Turnaround time is based on business days, excluding weekends and holidays.
(SEE REVERSE FOR TERMS & CONDITIONS REGARDING SERVICES RENDERED BY WAYPOINT ANALYTICAL, LLC TO CLIENT)

LAB USE ONLY

	YES	NO	N/A
Samples INTACT upon arrival?	X		
Received IN ICE?	X		
PROPER PRESERVATIVES indicated?	X		
Received WITHIN HOLDING TIMES?	X		
CUSTODY SEALS INTACT?			X
VOLATILES rec'd W/OUT HEADSPACE?			X
PROPER CONTAINERS used?	X		

TEMP: Therm ID: IRT-15 Observed 2.6 °C /Corr. 2.6 °C

TO BE FILLED IN BY CLIENT/SAMPLING PERSONNEL
Certification: NC___ SC___ Other___ N/A___
Water Chlorinated: YES___ NO___
Samples Iced Upon Collection: YES___ NO___

Mid-Atlantic Associates, Inc. - Raleigh
R4370.00
23-208-0056
01139
07-27-2023
14:33:24

CLIENT SAMPLE DESCRIPTION	DATE COLLECTED	TIME COLLECTED MILITARY HOURS	MATRIX (SOIL, WATER, OR SLUDGE)	*TYPE SEE BELOW	NO.	SIZE	PRESERVATIVES	Lead 6010B	Haz List Metals	SVOC 8270					ID NO.
SS-ED-39	7/25/23	1428	Soil				Ice	✓							
SS-ED-40	↓	1433	↓				↓	✓							
SS-ED-41	↓	1440 (KCC 7/25)	↓				↓	✓							
SS-ED-48	↓	1450 (KCC 7/25)	↓				↓		✓	✓					
SS-ED-47	↓	1458	↓				↓	✓							
SS-ED-59	↓	1510 (KCC 7/25)	↓				↓	✓							
SS-ED-60	↓	1516 (KCC 7/25)	↓				↓	✓							
SS-ED-55	↓	1525	↓				↓		✓	✓					
SS-ED-51	↓	1538	↓				↓	✓							

PRESS DOWN FIRMLY - 2 COPIES

Sampler's Signature [signature] Sampled By (Print Name) Kevin Clay Affiliation Mid-Atlantic

Upon relinquishing this Chain of Custody is your authorization for Waypoint Analytical to proceed with the analyses as requested above. Any changes must be submitted in writing to the Waypoint Analytical Project Manager. There will be charges for any changes after analyses have been initialized.

Relinquished By (Signature)	Received By (Signature)	Date	Military/Hours
[signature]	Philip Paige	7-26-23	11:13
Philip Paige	Courier express	7-26-23	16:00
	Received For Waypoint Analytical By: Caitlyn [signature]	7/27/23	13:00

COC Group No.

Method of Shipment: NOTE: ALL SAMPLE COOLERS SHOULD BE TAPED SHUT WITH CUSTODY SEALS FOR TRANSPORTATION TO THE LABORATORY. SAMPLES ARE NOT ACCEPTED AND VERIFIED AGAINST COC UNTIL RECEIVED AT THE LABORATORY.

❏ Fed Ex ❏ UPS ❏ Hand-delivered ❏ Waypoint Analytical Field Service ❏ Other

Additional Comments:

LAB USE ONLY
Site Arrival Time:
Site Departure Time:
Field Tech Fee:
Mileage:

NPDES: ❏ NC ❏ SC ❏ | UST: ❏ NC ❏ SC ❏ | GROUNDWATER: ❏ NC ❏ SC ❏ | DRINKING WATER: ❏ NC ❏ SC ❏ | SOLID WASTE: ❏ NC ❏ SC ❏ | RCRA: ❏ NC ❏ SC | BRWNFLD ❏ NC ❏ SC | LANDFILL ❏ NC ❏ SC ❏ | OTHER: ❏ NC ❏ SC ❏

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Phone 704/529-6364 • Fax: 704/525-0409

CHAIN OF CUSTODY RECORD

PAGE 2 OF 3 QUOTE # TO ENSURE PROPER BILLING:

Project Name:
Short Hold Analysis (Yes) (No) UST Project: (Yes) (No)
*Please ATTACH any project specific reporting (QC LEVEL I II III IV) provisions and/or QC Requirements
Invoice To:
Address:

Client Company Name:
Report To/Contact Name:
Reporting Address: SEE P. 1
Phone: Fax (Yes)(No):
Email Address:
EDD Type: PDF Excel Other
Site Location Name:
Site Location Physical Address:

LAB USE ONLY

	YES	NO	N/A
Samples INTACT upon arrival?	X		
Received IN ICE?	X		
PROPER PRESERVATIVES indicated?	X		
Received WITHIN HOLDING TIMES?	X		
CUSTODY SEALS INTACT?			X
VOLATILES rec'd W/OUT HEADSPACE?			Y
PROPER CONTAINERS used?	X		

TEMP: Therm ID: IRT-15 Observed 2.6 °C /Corr. 2.6 °C

Purchase Order No./Billing Reference
Requested Due Date ☐ 1 Day ☐ 2 Days ☐ 3 Days ☐ 4 Days ☐ 5 Days
"Working Days" ☐ 6-9 Days ☑ Standard 10 days ☐ Rush Work Must Be Pre Approved
Samples received after 15:00 will be processed next business day.
Turnaround time is based on business days, excluding weekends and holidays.
(SEE REVERSE FOR TERMS & CONDITIONS REGARDING SERVICES RENDERED BY WAYPOINT ANALYTICAL, LLC TO CLIENT)

TO BE FILLED IN BY CLIENT/SAMPLING PERSONNEL
Certification: NC___ SC___ Other___ N/A___
Water Chlorinated: YES___ NO___
Samples Iced Upon Collection: YES___ NO___

CLIENT SAMPLE DESCRIPTION	DATE COLLECTED	TIME COLLECTED MILITARY HOURS	MATRIX (SOIL, WATER, OR SLUDGE)	SAMPLE CONTAINER *TYPE SEE BELOW	NO.	SIZE	PRESERVATIVES	ANALYSIS REQUESTED: Lead 6020B	Haz Tise metals	SVOC 8270				ID NO.
SS-ED-54	7/25/23	1548	Soil				Ice	✓						
SS-ED-44	↓	1555	↓				↓	↓						
SS-ED-45		1600												
SS-ED-61		1608												
SS-ED-62		1618												
SS-ED-Dup1		1705												
SS-ED-39(1')		1633												
SS-ED-40(1')		1636												
SS-ED-51(1')	↓	1705	↓				↓	↓						

23-208-0056
01139
07-27-2023
14:33:24
Mid-Atlantic Associates, Inc. - Raleigh
R4370.00

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Sampler's Signature [signature] Sampled By (Print Name) Kevin Clay Affiliation Mid-Atlantic

Upon relinquishing this Chain of Custody is your authorization for Waypoint Analytical to proceed with the analyses as requested above. Any changes must be submitted in writing to the Waypoint Analytical Project Manager. There will be charges for any changes after analyses have been initialized.

Relinquished By (Signature)	Received By (Signature)	Date	Military/Hours
[signature]	Phillip Paige	7-26-23	11:13
Phillip Paige	Courier express	7-26-23	16:00
	Received For Waypoint Analytical By: Caitlyn [signature]	7/27/23	13:00

Method of Shipment: NOTE: ALL SAMPLE COOLERS SHOULD BE TAPED SHUT WITH CUSTODY SEALS FOR TRANSPORTATION TO THE LABORATORY. SAMPLES ARE NOT ACCEPTED AND VERIFIED AGAINST COC UNTIL RECEIVED AT THE LABORATORY.
☐ Fed Ex ☐ UPS ☐ Hand-delivered ☐ Waypoint Analytical Field Service ☐ Other

COC Group No.

Additional Comments:

LAB USE ONLY
Site Arrival Time:
Site Departure Time:
Field Tech Fee:
Mileage:

NPDES: ☐ NC ☐ SC ☐ | UST: ☐ NC ☐ SC ☐ | GROUNDWATER: ☐ NC ☐ SC ☐ | DRINKING WATER: ☐ NC ☐ SC ☐ | SOLID WASTE: ☐ NC ☐ SC ☐ | RCRA: ☐ NC ☐ SC | BRWNFLD ☐ NC ☐ SC ☐ | LANDFILL ☐ NC ☐ SC ☐ | OTHER: ☐ NC ☐ SC ☐

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CHAIN OF CUSTODY RECORD

Waypoint ANALYTICAL
449 Springbrook Road • Charlotte, NC 28217
Phone 704/529-6364 • Fax: 704/525-0409

PAGE 3 OF 3 QUOTE # TO ENSURE PROPER BILLING:

Client Company Name:
Report To/Contact Name:
Reporting Address: See P. 1

Phone: Fax (Yes)(No):
Email Address:
EDD Type: PDF ___ Excel ___ Other
Site Location Name:
Site Location Physical Address:

Project Name:
Short Hold Analysis (Yes) (No) UST Project: (Yes) (No)
*Please ATTACH any project specific reporting (QC LEVEL I II III IV) provisions and/or QC Requirements
Invoice To:
Address:

Purchase Order No./Billing Reference
Requested Due Date ☐ 1 Day ☐ 2 Days ☐ 3 Days ☐ 4 Days ☐ 5 Days
"Working Days" ☐ 6-9 Days ☑ Standard 10 days ☐ Rush Work Must Be Pre Approved
Samples received after 15:00 will be processed next business day.
Turnaround time is based on business days, excluding weekends and holidays.
(SEE REVERSE FOR TERMS & CONDITIONS REGARDING SERVICES RENDERED BY WAYPOINT ANALYTICAL, LLC TO CLIENT)

LAB USE ONLY

	YES	NO	N/A
Samples INTACT upon arrival?	X		
Received IN ICE?	X		
PROPER PRESERVATIVES indicated?	X		
Received WITHIN HOLDING TIMES?	X		
CUSTODY SEALS INTACT?			X
VOLATILES rec'd W/OUT HEADSPACE?			X
PROPER CONTAINERS used?	X		

TEMP: Therm ID: IRT-15 Observed 2.6 °C /Corr. 2.6 °C

TO BE FILLED IN BY CLIENT/SAMPLING PERSONNEL

Certification: NC_____ SC_____
Other_____ N/A_____
Water Chlorinated: YES___ NO___
Samples Iced Upon Collection: YES___NO___

CLIENT SAMPLE DESCRIPTION	DATE COLLECTED	TIME COLLECTED MILITARY HOURS	MATRIX (SOIL, WATER, OR SLUDGE)	SAMPLE CONTAINER *TYPE SEE BELOW	NO.	SIZE	PRESERVATIVES	ANALYSIS REQUESTED Lead 6010B	ID NO.
SS-ED-55(1)	7/25/23	1650	Soil				Ice	✓	

7/25/23

Mid-Atlantic Associates, Inc. - Raleigh
R4370.00
01139
07-27-2023
14:33:24
23-208-0056

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Sampler's Signature: Kevin Clay Sampled By (Print Name) Kevin Clay Affiliation Mid-Atlantic

Upon relinquishing this Chain of Custody is your authorization for Waypoint Analytical to proceed with the analyses as requested above. Any changes must be submitted in writing to the Waypoint Analytical Project Manager. There will be charges for any changes after analyses have been initialized.

		Date	Military/Hours
Relinquished By: (Signature)	Received By: (Signature)	7-26-23	11:13
Relinquished By: (Signature)	Received By: (Signature) Courier Express	7-26-23	16:00
Relinquished By: (Signature)	Received For Waypoint Analytical By:	7/27/23	13:00

Method of Shipment: NOTE: ALL SAMPLE COOLERS SHOULD BE TAPED SHUT WITH CUSTODY SEALS FOR TRANSPORTATION TO THE LABORATORY. SAMPLES ARE NOT ACCEPTED AND VERIFIED AGAINST COC UNTIL RECEIVED AT THE LABORATORY.

☐ Fed Ex ☐ UPS ☐ Hand-delivered ☐ Waypoint Analytical Field Service ☐ Other

COC Group No.

Additional Comments:

LAB USE ONLY

Site Arrival Time:
Site Departure Time:
Field Tech Fee:
Mileage:

NPDES:	UST:	GROUNDWATER:	DRINKING WATER:	SOLID WASTE:	RCRA:	BRWNFLD	LANDFILL	OTHER:
☐ NC ☐ SC ☐	☐ NC ☐ SC ☐	☐ NC ☐ SC ☐	☐ NC ☐ SC ☐	☐ NC ☐ SC ☐	☐ NC ☐ SC ☐	☐ NC ☐ SC ☐	☐ NC ☐ SC ☐	☐ NC ☐ SC ☐

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Main 704.529.6364
www.waypointanalytical.com

8/16/2023

Mid-Atlantic Associates, Inc. - Raleigh
Kevin Clay
409 Rogers View Court
Raleigh, NC, 27610

Ref: Analytical Testing
Revised Lab Report Number: 23-208-0054
Client Project Description: R4370.00

Dear Kevin Clay:

Waypoint Analytical, LLC (Charlotte) received sample(s) on 7/27/2023 for the analyses presented in the following report.

The above referenced project has been analyzed per your instructions. The analyses were performed in accordance with the applicable analytical method.

The analytical data has been validated using standard quality control measures performed as required by the analytical method. Quality Assurance, method validations, instrumentation maintenance and calibration for all parameters were performed in accordance with guidelines established by the USEPA (including 40 CFR 136 Method Update Rule May 2021) unless otherwise indicated.

Certain parameters (chlorine, pH, dissolved oxygen, sulfite...) are required to be analyzed within 15 minutes of sampling. Usually, but not always, any field parameter analyzed at the laboratory is outside of this holding time. Refer to sample analysis time for confirmation of holding time compliance.

The results are shown on the attached Report of Analysis(s). Results for solid matrices are reported on an as-received basis unless otherwise indicated. This report shall not be reproduced except in full and relates only to the samples included in this report.

Please do not hesitate to contact me or client services if you have any questions or need additional information.

Sincerely,

Angela D Overcash
Senior Project Manager

Laboratory's liability in any claim relating to analyses performed shall be limited to, at laboratory's option, repeating the analysis in question at laboratory's expense, or the refund of the charges paid for performance of said analysis.

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Main 704.529.6364
www.waypointanalytical.com

Certification Summary

Laboratory ID: WP CNC: Waypoint Analytical Carolina, Inc. (C), Charlotte, NC

State	Program	Lab ID	Expiration Date
North Carolina	State Program	37735	07/31/2024
North Carolina	State Program	402	12/31/2023
South Carolina	State Program	99012	07/31/2023
South Carolina	State Program	99012	12/31/2022

Laboratory ID: WP MTN: Waypoint Analytical, LLC., Memphis, TN

State	Program	Lab ID	Expiration Date
Alabama	State Program	40750	02/29/2024
Arkansas	State Program	88-0650	02/07/2024
California	State Program	2904	06/30/2024
Florida	State Program - NELAP	E871157	06/30/2024
Georgia	State Program	C044	11/14/2025
Georgia	State Program	04015	06/30/2024
Illinois	State Program - NELAP	200078	10/10/2024
Kentucky	State Program	80215	06/30/2024
Kentucky	State Program	KY90047	12/31/2023
Louisiana	State Program - NELAP	LA037	12/31/2023
Louisiana	State Program - NELAP	04015	06/30/2024
Mississippi	State Program	MS	11/14/2025
North Carolina	State Program	47701	07/31/2024
North Carolina	State Program	415	12/31/2023
Pennsylvania	State Program - NELAP	68-03195	05/31/2024
South Carolina	State Program	84002	06/30/2023
Tennessee	State Program	02027	11/14/2025
Texas	State Program - NELAP	T104704180	09/30/2023
Virginia	State Program	00106	06/30/2024
Virginia	State Program - NELAP	460181	09/14/2023

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Main 704.529.6364
www.waypointanalytical.com

Sample Summary Table

Report Number: **23-208-0054**

Client Project Description: **R4370.00**

Lab No	Client Sample ID	Matrix	Date Collected	Date Received	Method	Lab ID
90801	SS-EE-49	Solids	07/26/2023 08:15	07/27/2023		
90802	SS-EE-39	Solids	07/26/2023 08:13	07/27/2023		
90803	SS-EE-104	Solids	07/26/2023 08:40	07/27/2023		
90803	SS-EE-104	Solids	07/26/2023 08:40	07/27/2023	6020B	WP MTN
90804	SS-EE-105	Solids	07/26/2023 08:50	07/27/2023		
90805	SS-EE-106	Solids	07/26/2023 09:00	07/27/2023		
90806	SS-EE-101	Solids	07/26/2023 09:10	07/27/2023		
90807	SS-EE-95	Solids	07/26/2023 09:25	07/27/2023		
90808	SS-EE-90	Solids	07/26/2023 09:35	07/27/2023		
90809	SS-EE-88	Solids	07/26/2023 09:43	07/27/2023		
90810	SS-EE-81	Solids	07/26/2023 10:05	07/27/2023		
90811	SS-EE-82	Solids	07/26/2023 10:13	07/27/2023		
90812	SS-EE-83	Solids	07/26/2023 10:20	07/27/2023		
90813	SS-EE-Playground	Solids	07/26/2023 11:24	07/27/2023		
90814	SS-EE-24	Solids	07/26/2023 12:15	07/27/2023		
90815	SS-EE-15	Solids	07/26/2023 12:23	07/27/2023		
90816	SS-EE-12	Solids	07/26/2023 12:30	07/27/2023		
90817	SS-EE-26	Solids	07/26/2023 12:35	07/27/2023		
90818	SS-EE-32	Solids	07/26/2023 12:40	07/27/2023		
90819	SS-EE-54	Solids	07/26/2023 13:00	07/27/2023		
90819	SS-EE-54	Solids	07/26/2023 13:00	07/27/2023	6020B	WP MTN
90820	SS-EE-66	Solids	07/26/2023 13:05	07/27/2023		
90821	SS-EE-Dup 1	Solids	07/26/2023 12:28	07/27/2023		
90822	SS-EE-81 (1')	Solids	07/26/2023 10:50	07/27/2023		
90823	SS-EE-82 (1')	Solids	07/26/2023 10:45	07/27/2023		

WP MTN - Memphis, TN: Waypoint Analytical - TN, Memphis, TN

449 Springbrook Rd, Charlotte, NC 28217
Main 704.529.6364
www.waypointanalytical.com

Summary of Detected Analytes

Project: R4370.00

Report Number: 23-208-0054

Client Sample ID / Method	Lab Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
SS-EE-49	**V 90801**					
6010D	Lead	86.9	mg/Kg - dry	0.366	08/02/2023 19:34	
SW-DRYWT	Moisture	18.2	%		07/28/2023 10:30	
SS-EE-39	**V 90802**					
6010D	Lead	30.4	mg/Kg - dry	0.394	08/02/2023 19:38	
SW-DRYWT	Moisture	24.0	%		07/28/2023 10:30	
SS-EE-104	**V 90803**					
6020B	Arsenic	0.377	mg/Kg - dry	0.256	08/03/2023 19:24	
6020B	Barium	9.56	mg/Kg - dry	0.255	08/03/2023 19:24	
6020B	Chromium	32.7	mg/Kg - dry	0.255	08/03/2023 19:24	
6020B	Cobalt	2.21	mg/Kg - dry	0.255	08/03/2023 19:24	
6020B	Copper	7.06	mg/Kg - dry	0.256	08/03/2023 19:24	
6020B	Lead	134	mg/Kg - dry	0.256	08/03/2023 19:24	
6020B	Manganese	67.7	mg/Kg - dry	0.255	08/03/2023 19:24	
6020B	Nickel	6.54	mg/Kg - dry	0.256	08/03/2023 19:24	
6020B	Vanadium	13.9	mg/Kg - dry	1.28	08/03/2023 19:24	
6020B	Zinc	18.2	mg/Kg - dry	2.56	08/03/2023 19:24	
SW-DRYWT	Moisture	2.32	%		07/28/2023 10:30	
SS-EE-105	**V 90804**					
6010D	Lead	148	mg/Kg - dry	1.62	08/08/2023 14:57	
SW-DRYWT	Moisture	7.20	%		07/28/2023 10:30	
SS-EE-106	**V 90805**					
6010D	Lead	76.5	mg/Kg - dry	0.378	08/02/2023 19:47	
SW-DRYWT	Moisture	20.8	%		07/28/2023 10:30	
SS-EE-101	**V 90806**					
6010D	Lead	995	mg/Kg - dry	6.03	08/08/2023 15:01	
SW-DRYWT	Moisture	0.574	%		07/31/2023 11:45	
SS-EE-95	**V 90807**					
6010D	Lead	197	mg/Kg - dry	1.51	08/08/2023 21:30	
SW-DRYWT	Moisture	0.764	%		07/31/2023 11:45	
SS-EE-90	**V 90808**					
6010D	Lead	435	mg/Kg - dry	3.08	08/08/2023 21:52	
SW-DRYWT	Moisture	2.64	%		07/31/2023 11:45	

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Summary of Detected Analytes

Project: R4370.00

Report Number: 23-208-0054

Client Sample ID / Method	Lab Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
SS-EE-88	**V 90809**					
6010D	Lead	296	mg/Kg - dry	3.28	08/09/2023 19:06	
SW-DRYWT	Moisture	8.55	%		07/31/2023 11:45	
SS-EE-81	**V 90810**					
6010D	Lead	322	mg/Kg - dry	3.16	08/09/2023 19:10	
SW-DRYWT	Moisture	5.14	%		07/31/2023 11:45	
SS-EE-82	**V 90811**					
6010D	Lead	183	mg/Kg - dry	1.55	08/08/2023 22:14	
SW-DRYWT	Moisture	3.49	%		07/31/2023 11:45	
SS-EE-83	**V 90812**					
6010D	Lead	328	mg/Kg - dry	3.04	08/08/2023 22:19	
SW-DRYWT	Moisture	1.45	%		07/31/2023 11:45	
SS-EE-Playground	**V 90813**					
6010D	Lead	13.2	mg/Kg - dry	0.357	08/08/2023 22:23	
SW-DRYWT	Moisture	16.1	%		07/31/2023 11:45	
SS-EE-24	**V 90814**					
6010D	Lead	772	mg/Kg - dry	7.33	08/08/2023 22:28	
SW-DRYWT	Moisture	18.1	%		07/31/2023 11:45	
SS-EE-15	**V 90815**					
6010D	Lead	222	mg/Kg - dry	1.61	08/08/2023 22:32	
SW-DRYWT	Moisture	6.84	%		07/31/2023 11:45	
SS-EE-12	**V 90816**					
6010D	Lead	203	mg/Kg - dry	1.67	08/08/2023 22:37	
SW-DRYWT	Moisture	10.3	%		07/31/2023 11:45	
SS-EE-26	**V 90817**					
6010D	Lead	35.2	mg/Kg - dry	0.361	08/08/2023 22:41	
SW-DRYWT	Moisture	17.0	%		07/31/2023 11:45	
SS-EE-32	**V 90818**					
6010D	Lead	146	mg/Kg - dry	1.78	08/08/2023 22:46	
SW-DRYWT	Moisture	15.6	%		08/01/2023 11:05	

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Summary of Detected Analytes

Project: R4370.00

Report Number: 23-208-0054

Client Sample ID / Method	Lab Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
SS-EE-54	**V 90819**					
6020B	Arsenic	4.52	mg/Kg - dry	0.266	08/03/2023 19:28	
6020B	Barium	26.1	mg/Kg - dry	0.266	08/03/2023 19:28	
6020B	Chromium	12.5	mg/Kg - dry	0.266	08/03/2023 19:28	
6020B	Cobalt	5.20	mg/Kg - dry	0.266	08/03/2023 19:28	
6020B	Copper	17.1	mg/Kg - dry	0.266	08/03/2023 19:28	
6020B	Lead	24.8	mg/Kg - dry	0.266	08/03/2023 19:28	
6020B	Manganese	169	mg/Kg - dry	0.266	08/03/2023 19:28	
6020B	Nickel	16.9	mg/Kg - dry	0.266	08/03/2023 19:28	
6020B	Vanadium	15.2	mg/Kg - dry	1.33	08/03/2023 19:28	
6020B	Zinc	52.0	mg/Kg - dry	2.66	08/03/2023 19:28	
SW-DRYWT	Moisture	6.07	%		08/01/2023 11:05	
SS-EE-66	**V 90820**					
6010D	Lead	33.1	mg/Kg - dry	0.316	08/08/2023 22:59	
SW-DRYWT	Moisture	5.08	%		08/01/2023 11:05	
SS-EE-Dup 1	**V 90821**					
6010D	Lead	366	mg/Kg - dry	3.16	08/08/2023 23:03	
SW-DRYWT	Moisture	5.19	%		08/01/2023 11:05	
SS-EE-81 (1')	**V 90822**					
6010D	Lead	49.0	mg/Kg - dry	0.318	08/08/2023 23:08	
SW-DRYWT	Moisture	5.80	%		08/01/2023 11:05	
SS-EE-82 (1')	**V 90823**					
6010D	Lead	28.0	mg/Kg - dry	0.337	08/08/2023 23:12	
SW-DRYWT	Moisture	11.2	%		08/01/2023 11:05	

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Client: Mid-Atlantic Associates, Inc. - Raleigh **CASE NARRATIVE**
Project: R4370.00
Lab Report Number: 23-208-0054
Date: 8/16/2023

Report Comments
Revised report: Revision 1
Co and V have been added to be reported.

Metals Analysis Method 6010D
Sample 90637 (SS-LY-60)
Analyte: Lead
QC Batch No: V36316/V36022
The matrix spike and/or the matrix spike duplicate was outside quality control acceptance ranges. A dilution test was performed and passed quality control acceptance ranges. No matrix interference is suspected.

Analyte: Lead
QC Batch No: V36421/V36022
LLC failed high. Result 10x concentration. Result not affected.

Sample 90807 (SS-EE-95)
Analyte: Lead
QC Batch No: V36366/V36025
The matrix spike and/or the matrix spike duplicate was outside quality control acceptance ranges. A dilution test was performed and passed quality control acceptance ranges. No matrix interference is suspected.

Metals Analyses Method 6020B
Sample 90860 (SS-ED-51)
Analyte: Silver
QC Batch No: L696918/L696239
The matrix spike and/or the matrix spike duplicate was outside quality control acceptance ranges. A post digestion spike was performed and passed quality control acceptance ranges. No matrix interference is suspected.

Sample 90860 (SS-ED-51)
Analyte: Arsenic
QC Batch No: L696918/L696239
The matrix spike and/or the matrix spike duplicate was outside quality control acceptance ranges. A post digestion spike was performed and passed quality control acceptance ranges. No matrix interference is suspected.

Sample 90860 (SS-ED-51)
Analyte: Barium
QC Batch No: L696918/L696239
The matrix spike, matrix spike duplicate and the dilution test were all outside of the quality control acceptance ranges. Matrix interference is suspected.

Sample 90860 (SS-ED-51)
Analyte: Cadmium
QC Batch No: L696918/L696239

The matrix spike and/or the matrix spike duplicate was outside quality control acceptance ranges. A post digestion spike was performed and passed quality control acceptance ranges. No matrix interference is suspected.

Sample 90860 (SS-ED-51)
Analyte: Cobalt
QC Batch No: L698988/L696239
The matrix spike and/or the matrix spike duplicate was outside quality control acceptance ranges. A post digestion spike was performed and passed quality control acceptance ranges. No matrix interference is suspected.

Sample 90860 (SS-ED-51)
Analyte: Chromium
QC Batch No: L696918/L696239
The matrix spike and/or the matrix spike duplicate was outside quality control acceptance ranges. A dilution test was performed and passed quality control acceptance ranges. No matrix interference is suspected.

Sample 90860 (SS-ED-51)
Analyte: Manganese
QC Batch No: L696918/L696239
The matrix spike, matrix spike duplicate and the dilution test were all outside of the quality control acceptance ranges. Matrix interference is suspected.

Sample 90860 (SS-ED-51)
Analyte: Nickel
QC Batch No: L696918/L696239
The matrix spike and/or the matrix spike duplicate was outside quality control acceptance ranges. A dilution test was performed and passed quality control acceptance ranges. No matrix interference is suspected.

Sample 90860 (SS-ED-51)
Analyte: Lead
QC Batch No: L696918/L696239
The matrix spike and/or the matrix spike duplicate was outside quality control acceptance ranges. A dilution test was performed and passed quality control acceptance ranges. No matrix interference is suspected.

Sample 90860 (SS-ED-51)
Analyte: Antimony
QC Batch No: L696918/L696239
The matrix spike and/or the matrix spike duplicate was outside quality control acceptance ranges. A post digestion spike was performed and passed quality control acceptance ranges. No matrix interference is suspected.

Sample 90860 (SS-ED-51)
Analyte: Selenium
QC Batch No: L696918/L696239
The matrix spike and/or the matrix spike duplicate was outside quality control acceptance ranges. A post digestion spike was performed and passed quality control acceptance ranges. No matrix interference is suspected.

Sample 90860 (SS-ED-51)
Analyte: Vanadium
QC Batch No: L698988/L696239

The matrix spike and/or the matrix spike duplicate was outside quality control acceptance ranges. A post digestion spike was performed and passed quality control acceptance ranges. No matrix interference is suspected.

Sample 90860 (SS-ED-51)
Analyte: Zinc
QC Batch No: L696918/L696239
The matrix spike, matrix spike duplicate and the dilution test were all outside of the quality control acceptance ranges. Matrix interference is suspected.

Semivolatile Organic Compounds - GC/MS Method 8270E
Sample 90803 (SS-EE-104)
QC Batch No: V36073/V36047
The sample was diluted due to the nature of the sample matrix. Reporting limits have been adjusted accordingly.

Sample 90819 (SS-EE-54)
QC Batch No: V36073/V36047
The sample was diluted due to the nature of the sample matrix. Reporting limits have been adjusted accordingly.

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Project R4370.00

Information :

Original Report Date : 08/10/2023
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Report Number : **23-208-0054**

REPORT OF ANALYSIS

Lab No : **90801**
Sample ID : **SS-EE-49**

Matrix: **Solids**
Sampled: **7/26/2023 8:15**

Test	Results	Units	MQL	DF	Date / Time Analyzed	By	Analytical Method
Moisture	**18.2**	%		1	07/28/23 10:30	CNC	SW-DRYWT
Lead	**86.9**	mg/Kg - dry	0.366	1	08/02/23 19:34	JKC	6010D

Qualifiers/ Definitions

DF Dilution Factor
MQL Method Quantitation Limit
J Estimated value

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Information :

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Report Number : **23-208-0054**

REPORT OF ANALYSIS

Lab No : **90802**
Sample ID : **SS-EE-39**

Matrix: **Solids**
Sampled: **7/26/2023 8:13**

Test	Results	Units	MQL	DF	Date / Time Analyzed	By	Analytical Method
Moisture	**24.0**	%		1	07/28/23 10:30	CNC	SW-DRYWT
Lead	**30.4**	mg/Kg - dry	0.394	1	08/02/23 19:38	JKC	6010D

Qualifiers/ Definitions

DF Dilution Factor
MQL Method Quantitation Limit
J Estimated value

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Report Number : **23-208-0054**

REPORT OF ANALYSIS

Lab No : **90803**
Sample ID : **SS-EE-104**

Matrix: **Solids**
Sampled: **7/26/2023 8:40**

Test	Results	Units	MDL	MQL	DF	Date / Time Analyzed	By	Analytical Method
Moisture	**2.32**	%			1	07/28/23 10:30	CNC	SW-DRYWT
Antimony	<0.256	mg/Kg - dry		0.256	5	08/03/23 19:24	CPW	6020B
Arsenic	**0.377**	mg/Kg - dry		0.256	5	08/03/23 19:24	CPW	6020B
Barium	**9.56**	mg/Kg - dry		0.255	5	08/03/23 19:24	CPW	6020B
Beryllium	<0.256	mg/Kg - dry		0.256	5	08/03/23 19:24	BKN	6020B
Cadmium	<0.256	mg/Kg - dry		0.256	5	08/03/23 19:24	CPW	6020B
Chromium	**32.7**	mg/Kg - dry		0.255	5	08/03/23 19:24	CPW	6020B
Cobalt	**2.21**	mg/Kg - dry		0.255	5	08/03/23 19:24	CPW	6020B
Copper	**7.06**	mg/Kg - dry		0.256	5	08/03/23 19:24	CPW	6020B
Lead	**134**	mg/Kg - dry		0.256	5	08/03/23 19:24	CPW	6020B
Manganese	**67.7**	mg/Kg - dry		0.255	5	08/03/23 19:24	CPW	6020B
Mercury (Total)	<0.0307	mg/Kg - dry		0.0307	1	07/28/23 16:04	JKC	7471B
Nickel	**6.54**	mg/Kg - dry		0.256	5	08/03/23 19:24	CPW	6020B
Selenium	<0.255	mg/Kg - dry		0.255	5	08/03/23 19:24	CPW	6020B
Silver	<0.256	mg/Kg - dry		0.256	5	08/03/23 19:24	CPW	6020B
Thallium	<0.256	mg/Kg - dry		0.256	5	08/03/23 19:24	BKN	6020B
Vanadium	**13.9**	mg/Kg - dry		1.28	5	08/03/23 19:24	CPW	6020B
Zinc	**18.2**	mg/Kg - dry		2.56	5	08/03/23 19:24	CPW	6020B

Qualifiers/ Definitions

DF Dilution Factor
MQL Method Quantitation Limit
J Estimated value

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Report Number : **23-208-0054**

REPORT OF ANALYSIS

Lab No : **90803**
Sample ID : **SS-EE-104**

Matrix: **Solids**
Sampled: **7/26/2023 8:40**

Analytical Method: 8270E **Prep Batch(es):** **V36047** 08/01/23 09:50
Prep Method: 3546

Test	Results	Units	MDL	MQL	DF	Date / Time Analyzed	By	Analytical Batch
Acenaphthene	<0.950	mg/Kg - dry	0.950	5.41	4	08/02/23 15:24	AMP	V36073
Acenaphthylene	<0.859	mg/Kg - dry	0.859	5.41	4	08/02/23 15:24	AMP	V36073
Aniline	<1.25	mg/Kg - dry	1.25	5.41	4	08/02/23 15:24	AMP	V36073
Anthracene	<1.17	mg/Kg - dry	1.17	5.41	4	08/02/23 15:24	AMP	V36073
Benzo(a)anthracene	<1.14	mg/Kg - dry	1.14	5.41	4	08/02/23 15:24	AMP	V36073
Benzo(a)pyrene	<1.21	mg/Kg - dry	1.21	5.41	4	08/02/23 15:24	AMP	V36073
Benzo(b)fluoranthene	<1.20	mg/Kg - dry	1.20	5.41	4	08/02/23 15:24	AMP	V36073
Benzo(g,h,i)perylene	<1.12	mg/Kg - dry	1.12	5.41	4	08/02/23 15:24	AMP	V36073
Benzo(k)fluoranthene	<1.13	mg/Kg - dry	1.13	5.41	4	08/02/23 15:24	AMP	V36073
Benzoic Acid	<4.75	mg/Kg - dry	4.75	16.4	4	08/02/23 15:24	AMP	V36073
Benzyl alcohol	<0.859	mg/Kg - dry	0.859	5.41	4	08/02/23 15:24	AMP	V36073
Bis(2-Chloroethoxy)methane	<0.966	mg/Kg - dry	0.966	5.41	4	08/02/23 15:24	AMP	V36073
Bis(2-Chloroethyl)ether	<0.876	mg/Kg - dry	0.876	5.41	4	08/02/23 15:24	AMP	V36073
Bis(2-Chloroisopropyl)ether	<1.12	mg/Kg - dry	1.12	2.70	4	08/02/23 15:24	AMP	V36073
Bis(2-ethylhexyl)phthalate	<0.982	mg/Kg - dry	0.982	5.41	4	08/02/23 15:24	AMP	V36073
4-Bromophenyl phenyl ether	<0.892	mg/Kg - dry	0.892	5.41	4	08/02/23 15:24	AMP	V36073
Butyl benzyl phthalate	<0.925	mg/Kg - dry	0.925	2.70	4	08/02/23 15:24	AMP	V36073
4-Chloro-3-methylphenol	<0.756	mg/Kg - dry	0.756	5.41	4	08/02/23 15:24	AMP	V36073
4-Chloroaniline	<0.917	mg/Kg - dry	0.917	2.70	4	08/02/23 15:24	AMP	V36073
2-Chloronaphthalene	<0.950	mg/Kg - dry	0.950	5.41	4	08/02/23 15:24	AMP	V36073
2-Chlorophenol	<0.804	mg/Kg - dry	0.804	5.41	4	08/02/23 15:24	AMP	V36073
4-Chlorophenyl phenyl ether	<1.03	mg/Kg - dry	1.03	8.19	4	08/02/23 15:24	AMP	V36073

Qualifiers/ Definitions
DF Dilution Factor
MQL Method Quantitation Limit
J Estimated value

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Report Number : **23-208-0054**

REPORT OF ANALYSIS

Lab No : **90803**
Sample ID : **SS-EE-104**

Matrix: **Solids**
Sampled: **7/26/2023 8:40**

Analytical Method: 8270E **Prep Batch(es):** **V36047** 08/01/23 09:50
Prep Method: 3546

Test	Results	Units	MDL	MQL	DF	Date / Time Analyzed	By	Analytical Batch
Chrysene	<1.17	mg/Kg - dry	1.17	5.41	4	08/02/23 15:24	AMP	V36073
Dibenz(a,h)anthracene	<1.88	mg/Kg - dry	1.88	5.41	4	08/02/23 15:24	AMP	V36073
Dibenzofuran	<0.974	mg/Kg - dry	0.974	5.41	4	08/02/23 15:24	AMP	V36073
1,2-Dichlorobenzene	<0.772	mg/Kg - dry	0.772	5.41	4	08/02/23 15:24	AMP	V36073
1,3-Dichlorobenzene	<0.796	mg/Kg - dry	0.796	5.41	4	08/02/23 15:24	AMP	V36073
1,4-Dichlorobenzene	<0.798	mg/Kg - dry	0.798	2.70	4	08/02/23 15:24	AMP	V36073
3,3'-Dichlorobenzidine	<1.21	mg/Kg - dry	1.21	5.41	4	08/02/23 15:24	AMP	V36073
2,4-Dichlorophenol	<0.784	mg/Kg - dry	0.784	5.41	4	08/02/23 15:24	AMP	V36073
Diethyl phthalate	<1.47	mg/Kg - dry	1.47	5.41	4	08/02/23 15:24	AMP	V36073
Dimethyl phthalate	<1.42	mg/Kg - dry	1.42	5.41	4	08/02/23 15:24	AMP	V36073
2,4-Dimethylphenol	<0.884	mg/Kg - dry	0.884	2.70	4	08/02/23 15:24	AMP	V36073
Di-n-butyl phthalate	<0.876	mg/Kg - dry	0.876	5.41	4	08/02/23 15:24	AMP	V36073
4,6-Dinitro-2-methylphenol	<1.97	mg/Kg - dry	1.97	12.3	4	08/02/23 15:24	AMP	V36073
2,4-Dinitrophenol	<4.26	mg/Kg - dry	4.26	12.3	4	08/02/23 15:24	AMP	V36073
2,4-Dinitrotoluene	<0.791	mg/Kg - dry	0.791	5.41	4	08/02/23 15:24	AMP	V36073
2,6-Dinitrotoluene	<0.884	mg/Kg - dry	0.884	5.41	4	08/02/23 15:24	AMP	V36073
Di-n-Octyl Phthalate	<1.17	mg/Kg - dry	1.17	2.70	4	08/02/23 15:24	AMP	V36073
Fluoranthene	<1.01	mg/Kg - dry	1.01	5.41	4	08/02/23 15:24	AMP	V36073
Fluorene	<1.04	mg/Kg - dry	1.04	5.41	4	08/02/23 15:24	AMP	V36073
Hexachlorobenzene	<0.868	mg/Kg - dry	0.868	5.41	4	08/02/23 15:24	AMP	V36073
Hexachlorobutadiene	<0.799	mg/Kg - dry	0.799	5.41	4	08/02/23 15:24	AMP	V36073
Hexachlorocyclopentadiene	<1.29	mg/Kg - dry	1.29	5.41	4	08/02/23 15:24	AMP	V36073

Qualifiers/ Definitions
DF Dilution Factor
MQL Method Quantitation Limit
J Estimated value

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Information :

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Received : 07/27/2023

Report Number : **23-208-0054**

REPORT OF ANALYSIS

Lab No : **90803**
Sample ID : **SS-EE-104**

Matrix: **Solids**
Sampled: **7/26/2023 8:40**

Analytical Method: 8270E **Prep Batch(es):** **V36047** 08/01/23 09:50
Prep Method: 3546

Test	Results	Units	MDL	MQL	DF	Date / Time Analyzed	By	Analytical Batch
Hexachloroethane	<0.649	mg/Kg - dry	0.649	5.41	4	08/02/23 15:24	AMP	V36073
Indeno(1,2,3-cd)pyrene	<1.46	mg/Kg - dry	1.46	5.41	4	08/02/23 15:24	AMP	V36073
Isophorone	<1.57	mg/Kg - dry	1.57	5.41	4	08/02/23 15:24	AMP	V36073
1-Methylnaphthalene	<0.868	mg/Kg - dry	0.868	5.41	4	08/02/23 15:24	AMP	V36073
2-Methylnaphthalene	<0.819	mg/Kg - dry	0.819	5.41	4	08/02/23 15:24	AMP	V36073
2-Methylphenol	<0.794	mg/Kg - dry	0.794	5.41	4	08/02/23 15:24	AMP	V36073
3&4 Methylphenol	<0.695	mg/Kg - dry	0.695	5.41	4	08/02/23 15:24	AMP	V36073
Naphthalene	<1.18	mg/Kg - dry	1.18	5.41	4	08/02/23 15:24	AMP	V36073
2-Nitroaniline	<0.792	mg/Kg - dry	0.792	5.41	4	08/02/23 15:24	AMP	V36073
3-Nitroaniline	<0.982	mg/Kg - dry	0.982	5.41	4	08/02/23 15:24	AMP	V36073
4-Nitroaniline	<0.763	mg/Kg - dry	0.763	2.70	4	08/02/23 15:24	AMP	V36073
Nitrobenzene	<0.950	mg/Kg - dry	0.950	2.70	4	08/02/23 15:24	AMP	V36073
2-Nitrophenol	<0.726	mg/Kg - dry	0.726	5.41	4	08/02/23 15:24	AMP	V36073
4-Nitrophenol	<0.958	mg/Kg - dry	0.958	5.41	4	08/02/23 15:24	AMP	V36073
N-Nitrosodimethylamine	<2.15	mg/Kg - dry	2.15	5.41	4	08/02/23 15:24	AMP	V36073
N-Nitrosodiphenylamine	<1.48	mg/Kg - dry	1.48	5.41	4	08/02/23 15:24	AMP	V36073
N-Nitroso-di-n-propylamine	<0.966	mg/Kg - dry	0.966	5.41	4	08/02/23 15:24	AMP	V36073
Pentachlorophenol	<2.85	mg/Kg - dry	2.85	8.19	4	08/02/23 15:24	AMP	V36073
Phenanthrene	<1.70	mg/Kg - dry	1.70	5.41	4	08/02/23 15:24	AMP	V36073
Phenol	<0.917	mg/Kg - dry	0.917	5.41	4	08/02/23 15:24	AMP	V36073
Pyrene	<1.10	mg/Kg - dry	1.10	5.41	4	08/02/23 15:24	AMP	V36073
Pyridine	<0.649	mg/Kg - dry	0.649	2.70	4	08/02/23 15:24	AMP	V36073

Qualifiers/ Definitions
DF Dilution Factor
MQL Method Quantitation Limit
J Estimated value

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Project R4370.00
Information :

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Report Number : **23-208-0054**

REPORT OF ANALYSIS

Lab No : **90803**
Sample ID : **SS-EE-104**

Matrix: **Solids**
Sampled: **7/26/2023 8:40**

Analytical Method: 8270E **Prep Batch(es):** **V36047** 08/01/23 09:50
Prep Method: 3546

Test	Results	Units	MDL	MQL	DF	Date / Time Analyzed	By	Analytical Batch
1,2,4-Trichlorobenzene	<0.876	mg/Kg - dry	0.876	5.41	4	08/02/23 15:24	AMP	V36073
2,4,5-Trichlorophenol	<0.788	mg/Kg - dry	0.788	5.41	4	08/02/23 15:24	AMP	V36073
2,4,6-Trichlorophenol	<0.791	mg/Kg - dry	0.791	5.41	4	08/02/23 15:24	AMP	V36073
Surrogate: Phenol-d5	56.8		Limits: 34-121%		4	08/02/23 15:24	AMP	8270E
Surrogate: 2-Fluorobiphenyl	68.3		Limits: 44-115%		4	08/02/23 15:24	AMP	V36073
Surrogate: 2-Fluorophenol	61.6		Limits: 35-115%		4	08/02/23 15:24	AMP	V36073
Surrogate: Nitrobenzene-d5	71.9		Limits: 37-122%		4	08/02/23 15:24	AMP	V36073
Surrogate: 4-Terphenyl-d14	71.9		Limits: 54-127%		4	08/02/23 15:24	AMP	V36073
Surrogate: 2,4,6-Tribromophenol	52.6		Limits: 39-132%		4	08/02/23 15:24	AMP	V36073

Qualifiers/ Definitions

DF Dilution Factor
MQL Method Quantitation Limit
J Estimated value

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Report Number : **23-208-0054**

REPORT OF ANALYSIS

Lab No : **90804**
Sample ID : **SS-EE-105**

Matrix: **Solids**
Sampled: **7/26/2023 8:50**

Test	Results	Units	MQL	DF	Date / Time Analyzed	By	Analytical Method
Moisture	**7.20**	%		1	07/28/23 10:30	CNC	SW-DRYWT
Lead	**148**	mg/Kg - dry	1.62	5	08/08/23 14:57	JKC	6010D

Qualifiers/ Definitions

DF Dilution Factor
MQL Method Quantitation Limit
J Estimated value

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REPORT OF ANALYSIS

Lab No : **90805**
Sample ID : **SS-EE-106**

Matrix: **Solids**
Sampled: **7/26/2023 9:00**

Test	Results	Units	MQL	DF	Date / Time Analyzed	By	Analytical Method
Moisture	**20.8**	%		1	07/28/23 10:30	CNC	SW-DRYWT
Lead	**76.5**	mg/Kg - dry	0.378	1	08/02/23 19:47	JKC	6010D

Qualifiers/ Definitions

DF Dilution Factor
MQL Method Quantitation Limit
J Estimated value

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REPORT OF ANALYSIS

Lab No : **90806**
Sample ID : **SS-EE-101**

Matrix: **Solids**
Sampled: **7/26/2023 9:10**

Test	Results	Units	MQL	DF	Date / Time Analyzed	By	Analytical Method
Moisture	**0.574**	%		1	07/31/23 11:45	CNC	SW-DRYWT
Lead	**995**	mg/Kg - dry	6.03	20	08/08/23 15:01	JKC	6010D

Qualifiers/ Definitions

DF Dilution Factor
MQL Method Quantitation Limit
J Estimated value

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REPORT OF ANALYSIS

Lab No : **90807**
Sample ID : **SS-EE-95**

Matrix: **Solids**
Sampled: **7/26/2023 9:25**

Test	Results	Units	MQL	DF	Date / Time Analyzed	By	Analytical Method
Moisture	**0.764**	%		1	07/31/23 11:45	CNC	SW-DRYWT
Lead	**197**	mg/Kg - dry	1.51	5	08/08/23 21:30	JKC	6010D

Qualifiers/ Definitions

DF Dilution Factor
MQL Method Quantitation Limit
J Estimated value

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REPORT OF ANALYSIS

Lab No : **90808**
Sample ID : **SS-EE-90**

Matrix: **Solids**
Sampled: **7/26/2023 9:35**

Test	Results	Units	MQL	DF	Date / Time Analyzed	By	Analytical Method
Moisture	**2.64**	%		1	07/31/23 11:45	CNC	SW-DRYWT
Lead	**435**	mg/Kg - dry	3.08	10	08/08/23 21:52	JKC	6010D

Qualifiers/ Definitions

DF Dilution Factor
MQL Method Quantitation Limit
J Estimated value

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Report Number : **23-208-0054**

REPORT OF ANALYSIS

Lab No : **90809**
Sample ID : **SS-EE-88**

Matrix: **Solids**
Sampled: **7/26/2023 9:43**

Test	Results	Units	MQL	DF	Date / Time Analyzed	By	Analytical Method
Moisture	**8.55**	%		1	07/31/23 11:45	CNC	SW-DRYWT
Lead	**296**	mg/Kg - dry	3.28	10	08/09/23 19:06	JKC	6010D

Qualifiers/ Definitions

DF Dilution Factor
MQL Method Quantitation Limit
J Estimated value

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REPORT OF ANALYSIS

Lab No : **90810**
Sample ID : **SS-EE-81**

Matrix: **Solids**
Sampled: **7/26/2023 10:05**

Test	Results	Units	MQL	DF	Date / Time Analyzed	By	Analytical Method
Moisture	**5.14**	%		1	07/31/23 11:45	CNC	SW-DRYWT
Lead	**322**	mg/Kg - dry	3.16	10	08/09/23 19:10	JKC	6010D

Qualifiers/ Definitions

DF Dilution Factor
MQL Method Quantitation Limit
J Estimated value

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REPORT OF ANALYSIS

Lab No : **90811**
Sample ID : **SS-EE-82**

Matrix: **Solids**
Sampled: **7/26/2023 10:13**

Test	Results	Units	MQL	DF	Date / Time Analyzed	By	Analytical Method
Moisture	**3.49**	%		1	07/31/23 11:45	CNC	SW-DRYWT
Lead	**183**	mg/Kg - dry	1.55	5	08/08/23 22:14	JKC	6010D

Qualifiers/ Definitions

DF Dilution Factor
MQL Method Quantitation Limit
J Estimated value

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REPORT OF ANALYSIS

Lab No : **90812**
Sample ID : **SS-EE-83**

Matrix: **Solids**
Sampled: **7/26/2023 10:20**

Test	Results	Units	MQL	DF	Date / Time Analyzed	By	Analytical Method
Moisture	**1.45**	%		1	07/31/23 11:45	CNC	SW-DRYWT
Lead	**328**	mg/Kg - dry	3.04	10	08/08/23 22:19	JKC	6010D

Qualifiers/ Definitions

DF Dilution Factor
MQL Method Quantitation Limit
J Estimated value

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REPORT OF ANALYSIS

Lab No : **90813**
Sample ID : **SS-EE-Playground**

Matrix: **Solids**
Sampled: **7/26/2023 11:24**

Test	Results	Units	MQL	DF	Date / Time Analyzed	By	Analytical Method
Moisture	**16.1**	%		1	07/31/23 11:45	CNC	SW-DRYWT
Lead	**13.2**	mg/Kg - dry	0.357	1	08/08/23 22:23	JKC	6010D

Qualifiers/ Definitions

DF Dilution Factor
MQL Method Quantitation Limit
J Estimated value

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REPORT OF ANALYSIS

Lab No : **90814**
Sample ID : **SS-EE-24**

Matrix: **Solids**
Sampled: **7/26/2023 12:15**

Test	Results	Units	MQL	DF	Date / Time Analyzed	By	Analytical Method
Moisture	**18.1**	%		1	07/31/23 11:45	CNC	SW-DRYWT
Lead	**772**	mg/Kg - dry	7.33	20	08/08/23 22:28	JKC	6010D

Qualifiers/ Definitions

DF Dilution Factor
MQL Method Quantitation Limit
J Estimated value

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REPORT OF ANALYSIS

Lab No : **90815**
Sample ID : **SS-EE-15**

Matrix: **Solids**
Sampled: **7/26/2023 12:23**

Test	Results	Units	MQL	DF	Date / Time Analyzed	By	Analytical Method
Moisture	**6.84**	%		1	07/31/23 11:45	CNC	SW-DRYWT
Lead	**222**	mg/Kg - dry	1.61	5	08/08/23 22:32	JKC	6010D

Qualifiers/ Definitions

DF Dilution Factor
MQL Method Quantitation Limit
J Estimated value

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Report Number : **23-208-0054**

REPORT OF ANALYSIS

Lab No : **90816**
Sample ID : **SS-EE-12**

Matrix: **Solids**
Sampled: **7/26/2023 12:30**

Test	Results	Units	MQL	DF	Date / Time Analyzed	By	Analytical Method
Moisture	**10.3**	%		1	07/31/23 11:45	CNC	SW-DRYWT
Lead	**203**	mg/Kg - dry	1.67	5	08/08/23 22:37	JKC	6010D

Qualifiers/ Definitions

DF Dilution Factor
MQL Method Quantitation Limit
J Estimated value

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REPORT OF ANALYSIS

Lab No : **90817**
Sample ID : **SS-EE-26**

Matrix: **Solids**
Sampled: **7/26/2023 12:35**

Test	Results	Units	MQL	DF	Date / Time Analyzed	By	Analytical Method
Moisture	**17.0**	%		1	07/31/23 11:45	CNC	SW-DRYWT
Lead	**35.2**	mg/Kg - dry	0.361	1	08/08/23 22:41	JKC	6010D

Qualifiers/ Definitions

DF Dilution Factor
MQL Method Quantitation Limit
J Estimated value

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REPORT OF ANALYSIS

Lab No : **90818**
Sample ID : **SS-EE-32**

Matrix: **Solids**
Sampled: **7/26/2023 12:40**

Test	Results	Units	MQL	DF	Date / Time Analyzed	By	Analytical Method
Moisture	**15.6**	%		1	08/01/23 11:05	CNC	SW-DRYWT
Lead	**146**	mg/Kg - dry	1.78	5	08/08/23 22:46	JKC	6010D

Qualifiers/ Definitions

DF Dilution Factor
MQL Method Quantitation Limit
J Estimated value

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Report Number : **23-208-0054**

REPORT OF ANALYSIS

Lab No : **90819**
Sample ID : **SS-EE-54**

Matrix: **Solids**
Sampled: **7/26/2023 13:00**

Test	Results	Units	MDL	MQL	DF	Date / Time Analyzed	By	Analytical Method
Moisture	**6.07**	%			1	08/01/23 11:05	CNC	SW-DRYWT
Antimony	<0.266	mg/Kg - dry		0.266	5	08/03/23 19:28	CPW	6020B
Arsenic	**4.52**	mg/Kg - dry		0.266	5	08/03/23 19:28	CPW	6020B
Barium	**26.1**	mg/Kg - dry		0.266	5	08/03/23 19:28	CPW	6020B
Beryllium	<0.266	mg/Kg - dry		0.266	5	08/03/23 19:28	BKN	6020B
Cadmium	<0.266	mg/Kg - dry		0.266	5	08/03/23 19:28	CPW	6020B
Chromium	**12.5**	mg/Kg - dry		0.266	5	08/03/23 19:28	CPW	6020B
Cobalt	**5.20**	mg/Kg - dry		0.266	5	08/03/23 19:28	CPW	6020B
Copper	**17.1**	mg/Kg - dry		0.266	5	08/03/23 19:28	CPW	6020B
Lead	**24.8**	mg/Kg - dry		0.266	5	08/03/23 19:28	CPW	6020B
Manganese	**169**	mg/Kg - dry		0.266	5	08/03/23 19:28	CPW	6020B
Mercury (Total)	<0.0319	mg/Kg - dry		0.0319	1	07/28/23 16:07	JKC	7471B
Nickel	**16.9**	mg/Kg - dry		0.266	5	08/03/23 19:28	CPW	6020B
Selenium	<0.266	mg/Kg - dry		0.266	5	08/03/23 19:28	CPW	6020B
Silver	<0.266	mg/Kg - dry		0.266	5	08/03/23 19:28	CPW	6020B
Thallium	<0.266	mg/Kg - dry		0.266	5	08/03/23 19:28	BKN	6020B
Vanadium	**15.2**	mg/Kg - dry		1.33	5	08/03/23 19:28	CPW	6020B
Zinc	**52.0**	mg/Kg - dry		2.66	5	08/03/23 19:28	CPW	6020B

Qualifiers/ Definitions

DF Dilution Factor
MQL Method Quantitation Limit
J Estimated value

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REPORT OF ANALYSIS

Lab No : **90819**
Sample ID : **SS-EE-54**

Matrix: **Solids**
Sampled: **7/26/2023 13:00**

Analytical Method: 8270E **Prep Batch(es):** **V36047** 08/01/23 09:50
Prep Method: 3546

Test	Results	Units	MDL	MQL	DF	Date / Time Analyzed	By	Analytical Batch
Acenaphthene	<0.493	mg/Kg - dry	0.493	2.81	4	08/02/23 13:32	AMP	V36073
Acenaphthylene	<0.447	mg/Kg - dry	0.447	2.81	4	08/02/23 13:32	AMP	V36073
Aniline	<0.647	mg/Kg - dry	0.647	2.81	4	08/02/23 13:32	AMP	V36073
Anthracene	<0.608	mg/Kg - dry	0.608	2.81	4	08/02/23 13:32	AMP	V36073
Benzo(a)anthracene	<0.591	mg/Kg - dry	0.591	2.81	4	08/02/23 13:32	AMP	V36073
Benzo(a)pyrene	<0.625	mg/Kg - dry	0.625	2.81	4	08/02/23 13:32	AMP	V36073
Benzo(b)fluoranthene	<0.621	mg/Kg - dry	0.621	2.81	4	08/02/23 13:32	AMP	V36073
Benzo(g,h,i)perylene	<0.579	mg/Kg - dry	0.579	2.81	4	08/02/23 13:32	AMP	V36073
Benzo(k)fluoranthene	<0.583	mg/Kg - dry	0.583	2.81	4	08/02/23 13:32	AMP	V36073
Benzoic Acid	<2.47	mg/Kg - dry	2.47	8.53	4	08/02/23 13:32	AMP	V36073
Benzyl alcohol	<0.447	mg/Kg - dry	0.447	2.81	4	08/02/23 13:32	AMP	V36073
Bis(2-Chloroethoxy)methane	<0.502	mg/Kg - dry	0.502	2.81	4	08/02/23 13:32	AMP	V36073
Bis(2-Chloroethyl)ether	<0.455	mg/Kg - dry	0.455	2.81	4	08/02/23 13:32	AMP	V36073
Bis(2-Chloroisopropyl)ether	<0.579	mg/Kg - dry	0.579	1.41	4	08/02/23 13:32	AMP	V36073
Bis(2-ethylhexyl)phthalate	<0.511	mg/Kg - dry	0.511	2.81	4	08/02/23 13:32	AMP	V36073
4-Bromophenyl phenyl ether	<0.464	mg/Kg - dry	0.464	2.81	4	08/02/23 13:32	AMP	V36073
Butyl benzyl phthalate	<0.481	mg/Kg - dry	0.481	1.41	4	08/02/23 13:32	AMP	V36073
4-Chloro-3-methylphenol	<0.393	mg/Kg - dry	0.393	2.81	4	08/02/23 13:32	AMP	V36073
4-Chloroaniline	<0.476	mg/Kg - dry	0.476	1.41	4	08/02/23 13:32	AMP	V36073
2-Chloronaphthalene	<0.493	mg/Kg - dry	0.493	2.81	4	08/02/23 13:32	AMP	V36073
2-Chlorophenol	<0.418	mg/Kg - dry	0.418	2.81	4	08/02/23 13:32	AMP	V36073
4-Chlorophenyl phenyl ether	<0.536	mg/Kg - dry	0.536	4.26	4	08/02/23 13:32	AMP	V36073

Qualifiers/ Definitions

DF Dilution Factor
MQL Method Quantitation Limit
J Estimated value

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Project R4370.00
Information :

Original Report Date : 08/10/2023
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Received : 07/27/2023

Report Number : **23-208-0054**

REPORT OF ANALYSIS

Lab No : **90819**
Sample ID : **SS-EE-54**

Matrix: **Solids**
Sampled: **7/26/2023 13:00**

Analytical Method: 8270E **Prep Batch(es):** **V36047** 08/01/23 09:50
Prep Method: 3546

Test	Results	Units	MDL	MQL	DF	Date / Time Analyzed	By	Analytical Batch
Chrysene	<0.604	mg/Kg - dry	0.604	2.81	4	08/02/23 13:32	AMP	V36073
Dibenz(a,h)anthracene	<0.979	mg/Kg - dry	0.979	2.81	4	08/02/23 13:32	AMP	V36073
Dibenzofuran	<0.506	mg/Kg - dry	0.506	2.81	4	08/02/23 13:32	AMP	V36073
1,2-Dichlorobenzene	<0.402	mg/Kg - dry	0.402	2.81	4	08/02/23 13:32	AMP	V36073
1,3-Dichlorobenzene	<0.414	mg/Kg - dry	0.414	2.81	4	08/02/23 13:32	AMP	V36073
1,4-Dichlorobenzene	<0.415	mg/Kg - dry	0.415	1.41	4	08/02/23 13:32	AMP	V36073
3,3'-Dichlorobenzidine	<0.625	mg/Kg - dry	0.625	2.81	4	08/02/23 13:32	AMP	V36073
2,4-Dichlorophenol	<0.407	mg/Kg - dry	0.407	2.81	4	08/02/23 13:32	AMP	V36073
Diethyl phthalate	<0.766	mg/Kg - dry	0.766	2.81	4	08/02/23 13:32	AMP	V36073
Dimethyl phthalate	<0.740	mg/Kg - dry	0.740	2.81	4	08/02/23 13:32	AMP	V36073
2,4-Dimethylphenol	<0.459	mg/Kg - dry	0.459	1.41	4	08/02/23 13:32	AMP	V36073
Di-n-butyl phthalate	<0.455	mg/Kg - dry	0.455	2.81	4	08/02/23 13:32	AMP	V36073
4,6-Dinitro-2-methylphenol	<1.02	mg/Kg - dry	1.02	6.39	4	08/02/23 13:32	AMP	V36073
2,4-Dinitrophenol	<2.21	mg/Kg - dry	2.21	6.39	4	08/02/23 13:32	AMP	V36073
2,4-Dinitrotoluene	<0.410	mg/Kg - dry	0.410	2.81	4	08/02/23 13:32	AMP	V36073
2,6-Dinitrotoluene	<0.459	mg/Kg - dry	0.459	2.81	4	08/02/23 13:32	AMP	V36073
Di-n-Octyl Phthalate	<0.608	mg/Kg - dry	0.608	1.41	4	08/02/23 13:32	AMP	V36073
Fluoranthene	<0.523	mg/Kg - dry	0.523	2.81	4	08/02/23 13:32	AMP	V36073
Fluorene	<0.545	mg/Kg - dry	0.545	2.81	4	08/02/23 13:32	AMP	V36073
Hexachlorobenzene	<0.451	mg/Kg - dry	0.451	2.81	4	08/02/23 13:32	AMP	V36073
Hexachlorobutadiene	<0.415	mg/Kg - dry	0.415	2.81	4	08/02/23 13:32	AMP	V36073
Hexachlorocyclopentadiene	<0.668	mg/Kg - dry	0.668	2.81	4	08/02/23 13:32	AMP	V36073

Qualifiers/ Definitions
DF Dilution Factor
MQL Method Quantitation Limit
J Estimated value

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Report Number : **23-208-0054**

REPORT OF ANALYSIS

Lab No : **90819**
Sample ID : **SS-EE-54**

Matrix: **Solids**
Sampled: **7/26/2023 13:00**

Analytical Method: 8270E **Prep Batch(es):** **V36047** 08/01/23 09:50
Prep Method: 3546

Test	Results	Units	MDL	MQL	DF	Date / Time Analyzed	By	Analytical Batch
Hexachloroethane	<0.337	mg/Kg - dry	0.337	2.81	4	08/02/23 13:32	AMP	V36073
Indeno(1,2,3-cd)pyrene	<0.762	mg/Kg - dry	0.762	2.81	4	08/02/23 13:32	AMP	V36073
Isophorone	<0.813	mg/Kg - dry	0.813	2.81	4	08/02/23 13:32	AMP	V36073
1-Methylnaphthalene	<0.451	mg/Kg - dry	0.451	2.81	4	08/02/23 13:32	AMP	V36073
2-Methylnaphthalene	<0.425	mg/Kg - dry	0.425	2.81	4	08/02/23 13:32	AMP	V36073
2-Methylphenol	<0.413	mg/Kg - dry	0.413	2.81	4	08/02/23 13:32	AMP	V36073
3&4 Methylphenol	<0.361	mg/Kg - dry	0.361	2.81	4	08/02/23 13:32	AMP	V36073
Naphthalene	<0.613	mg/Kg - dry	0.613	2.81	4	08/02/23 13:32	AMP	V36073
2-Nitroaniline	<0.412	mg/Kg - dry	0.412	2.81	4	08/02/23 13:32	AMP	V36073
3-Nitroaniline	<0.511	mg/Kg - dry	0.511	2.81	4	08/02/23 13:32	AMP	V36073
4-Nitroaniline	<0.397	mg/Kg - dry	0.397	1.41	4	08/02/23 13:32	AMP	V36073
Nitrobenzene	<0.493	mg/Kg - dry	0.493	1.41	4	08/02/23 13:32	AMP	V36073
2-Nitrophenol	<0.377	mg/Kg - dry	0.377	2.81	4	08/02/23 13:32	AMP	V36073
4-Nitrophenol	<0.498	mg/Kg - dry	0.498	2.81	4	08/02/23 13:32	AMP	V36073
N-Nitrosodimethylamine	<1.12	mg/Kg - dry	1.12	2.81	4	08/02/23 13:32	AMP	V36073
N-Nitrosodiphenylamine	<0.770	mg/Kg - dry	0.770	2.81	4	08/02/23 13:32	AMP	V36073
N-Nitroso-di-n-propylamine	<0.502	mg/Kg - dry	0.502	2.81	4	08/02/23 13:32	AMP	V36073
Pentachlorophenol	<1.48	mg/Kg - dry	1.48	4.26	4	08/02/23 13:32	AMP	V36073
Phenanthrene	<0.885	mg/Kg - dry	0.885	2.81	4	08/02/23 13:32	AMP	V36073
Phenol	<0.476	mg/Kg - dry	0.476	2.81	4	08/02/23 13:32	AMP	V36073
Pyrene	<0.570	mg/Kg - dry	0.570	2.81	4	08/02/23 13:32	AMP	V36073
Pyridine	<0.337	mg/Kg - dry	0.337	1.41	4	08/02/23 13:32	AMP	V36073

Qualifiers/ Definitions
DF Dilution Factor
MQL Method Quantitation Limit
J Estimated value

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Report Number : **23-208-0054**

REPORT OF ANALYSIS

Lab No : **90819**
Sample ID : **SS-EE-54**

Matrix: **Solids**
Sampled: **7/26/2023 13:00**

Analytical Method: 8270E **Prep Batch(es):** **V36047** 08/01/23 09:50
Prep Method: 3546

Test	Results	Units	MDL	MQL	DF	Date / Time Analyzed	By	Analytical Batch
1,2,4-Trichlorobenzene	<0.455	mg/Kg - dry	0.455	2.81	4	08/02/23 13:32	AMP	V36073
2,4,5-Trichlorophenol	<0.409	mg/Kg - dry	0.409	2.81	4	08/02/23 13:32	AMP	V36073
2,4,6-Trichlorophenol	<0.410	mg/Kg - dry	0.410	2.81	4	08/02/23 13:32	AMP	V36073
Surrogate: Phenol-d5	61.4		Limits: 34-121%		4	08/02/23 13:32	AMP	8270E
Surrogate: 2-Fluorobiphenyl	71.3		Limits: 44-115%		4	08/02/23 13:32	AMP	V36073
Surrogate: 2-Fluorophenol	62.6		Limits: 35-115%		4	08/02/23 13:32	AMP	V36073
Surrogate: Nitrobenzene-d5	67.7		Limits: 37-122%		4	08/02/23 13:32	AMP	V36073
Surrogate: 4-Terphenyl-d14	83.2		Limits: 54-127%		4	08/02/23 13:32	AMP	V36073
Surrogate: 2,4,6-Tribromophenol	64.4		Limits: 39-132%		4	08/02/23 13:32	AMP	V36073

Qualifiers/ Definitions

DF Dilution Factor
MQL Method Quantitation Limit
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Report Number : **23-208-0054**

REPORT OF ANALYSIS

Lab No : **90820**
Sample ID : **SS-EE-66**

Matrix: **Solids**
Sampled: **7/26/2023 13:05**

Test	Results	Units	MQL	DF	Date / Time Analyzed	By	Analytical Method
Moisture	**5.08**	%		1	08/01/23 11:05	CNC	SW-DRYWT
Lead	**33.1**	mg/Kg - dry	0.316	1	08/08/23 22:59	JKC	6010D

Qualifiers/ Definitions

DF Dilution Factor
MQL Method Quantitation Limit
J Estimated value

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Report Number : **23-208-0054**

REPORT OF ANALYSIS

Lab No : **90821**
Sample ID : **SS-EE-Dup 1**

Matrix: **Solids**
Sampled: **7/26/2023 12:28**

Test	Results	Units	MQL	DF	Date / Time Analyzed	By	Analytical Method
Moisture	**5.19**	%		1	08/01/23 11:05	CNC	SW-DRYWT
Lead	**366**	mg/Kg - dry	3.16	10	08/08/23 23:03	JKC	6010D

Qualifiers/ Definitions

DF Dilution Factor
MQL Method Quantitation Limit
J Estimated value

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Report Number : **23-208-0054**

REPORT OF ANALYSIS

Lab No : **90822**
Sample ID : **SS-EE-81 (1')**

Matrix: **Solids**
Sampled: **7/26/2023 10:50**

Test	Results	Units	MQL	DF	Date / Time Analyzed	By	Analytical Method
Moisture	**5.80**	%		1	08/01/23 11:05	CNC	SW-DRYWT
Lead	**49.0**	mg/Kg - dry	0.318	1	08/08/23 23:08	JKC	6010D

Qualifiers/ Definitions

DF Dilution Factor
MQL Method Quantitation Limit
J Estimated value

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Report Number : **23-208-0054**

REPORT OF ANALYSIS

Lab No : **90823**
Sample ID : **SS-EE-82 (1')**

Matrix: **Solids**
Sampled: **7/26/2023 10:45**

Test	Results	Units	MQL	DF	Date / Time Analyzed	By	Analytical Method
Moisture	**11.2**	%		1	08/01/23 11:05	CNC	SW-DRYWT
Lead	**28.0**	mg/Kg - dry	0.337	1	08/08/23 23:12	JKC	6010D

Qualifiers/ Definitions

DF Dilution Factor
MQL Method Quantitation Limit
J Estimated value

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Quality Control Data

Client ID: **Mid-Atlantic Associates, Inc. - Raleigh**
Project Description: **R4370.00**
Report No: **23-208-0054**

QC Prep: V36022
QC Prep Batch Method: 3050B
QC Analytical Batch(es): V36145,V36316
Analysis Method: 6010D
Analysis Description: Metals Analysis

Lab Reagent Blank LRB-V36022 Matrix: SOL
Associated Lab Samples: 90801, 90802, 90804, 90805, 90806

Parameter	Units	Blank Result	MQL	Analyzed
Lead	mg/Kg	<0.300	0.300	08/02/23 17:42

Laboratory Control Sample LCS-V36022

Parameter	Units	Spike Conc.	LCS Result	LCS %Rec	% Rec Limits
Lead	mg/Kg	5.00	5.98	120	80-120

Matrix Spike & Matrix Spike Duplicate V 90637-MS-V36022 V 90637-MSD-V36022

Parameter	Units	Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS %Rec	MSD %Rec	%Rec Limits	RPD	Max RPD
Lead	mg/Kg	177	5.00	5.00	195	171	360*	0.0*	75-125	13.1	20

Post Digestion Spike V 90637-PDS-V36022

Parameter	Units	PDS Result	% Recovery	Analyzed
Lead	mg/Kg	152	101	08/07/23 17:18

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Quality Control Data

Client ID: **Mid-Atlantic Associates, Inc. - Raleigh**
Project Description: **R4370.00**
Report No: **23-208-0054**

QC Prep: V36025
QC Prep Batch Method: 3050B
QC Analytical Batch(es): V36316,V36366
Analysis Method: 6010D
Analysis Description: Metals Analysis

Lab Reagent Blank LRB-V36025 Matrix: SOL

Associated Lab Samples: 90807, 90808, 90809, 90810, 90811, 90812, 90813, 90814, 90815, 90816, 90817, 90818, 90820, 90821, 90822, 90823

Parameter	Units	Blank Result	MQL	Analyzed
Lead	mg/Kg	<0.300	0.300	08/08/23 01:32

Laboratory Control Sample LCS-V36025

Parameter	Units	Spike Conc.	LCS Result	LCS %Rec	% Rec Limits
Lead	mg/Kg	5.00	5.30	106	80-120

Matrix Spike & Matrix Spike Duplicate V 90807-MS-V36025 V 90807-MSD-V36025

Parameter	Units	Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS %Rec	MSD %Rec	%Rec Limits	RPD	Max RPD
Lead	mg/Kg	195	5.00	5.00	190	190	0.0*	0.0*	75-125	0.0	20

Post Digestion Spike V 90807-PDS-V36025

Parameter	Units	PDS Result	% Recovery	Analyzed
Lead	mg/Kg	156	98.0	08/08/23 21:35

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Quality Control Data

Client ID: **Mid-Atlantic Associates, Inc. - Raleigh**
Project Description: **R4370.00**
Report No: **23-208-0054**

QC Prep: L696239
QC Prep Batch Method: 3050B
QC Analytical Batch(es): L696766,L696918,L698988,L698996
Analysis Method: 6020B
Analysis Description: Metals Analyses

Lab Reagent Blank LRB-L696239 Matrix: SOL
Associated Lab Samples: 90803, 90819

Parameter	Units	Blank Result	MQL	Analyzed
Antimony	mg/Kg	<0.250	0.250	08/03/23 19:16
Arsenic	mg/Kg	<0.250	0.250	08/03/23 19:16
Barium	mg/Kg	<0.250	0.250	08/03/23 19:16
Beryllium	mg/Kg	<0.250	0.250	08/03/23 19:16
Cadmium	mg/Kg	<0.250	0.250	08/03/23 19:16
Chromium	mg/Kg	<0.250	0.250	08/03/23 19:16
Cobalt	mg/Kg	<0.250	0.250	08/03/23 19:16
Copper	mg/Kg	<0.250	0.250	08/03/23 19:16
Lead	mg/Kg	<0.250	0.250	08/03/23 19:16
Manganese	mg/Kg	<0.250	0.250	08/03/23 19:16
Nickel	mg/Kg	<0.250	0.250	08/03/23 19:16
Selenium	mg/Kg	<0.250	0.250	08/03/23 19:16
Silver	mg/Kg	<0.250	0.250	08/03/23 19:16
Thallium	mg/Kg	<0.250	0.250	08/03/23 19:16
Vanadium	mg/Kg	<1.25	1.25	08/03/23 19:16
Zinc	mg/Kg	<2.50	2.50	08/03/23 19:16

Laboratory Control Sample LCS-L696239

Parameter	Units	Spike Conc.	LCS Result	LCS %Rec	% Rec Limits
Antimony	mg/Kg	5.00	4.57	91.0	80-120
Arsenic	mg/Kg	2.50	2.41	96.0	80-120
Barium	mg/Kg	5.00	4.56	91.0	80-120
Beryllium	mg/Kg	2.50	2.50	100	80-120
Cadmium	mg/Kg	0.500	0.478	96.0	80-120
Chromium	mg/Kg	5.00	4.84	97.0	80-120
Cobalt	mg/Kg	5.00	4.78	96.0	80-120

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Quality Control Data

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Project Description: **R4370.00**
Report No: **23-208-0054**

QC Prep: L696239
QC Prep Batch Method: 3050B
QC Analytical Batch(es): L696766,L696918,L698988,L698996
Analysis Method: 6020B
Analysis Description: Metals Analyses

Laboratory Control Sample LCS-L696239

Parameter	Units	Spike Conc.	LCS Result	LCS %Rec	% Rec Limits
Copper	mg/Kg	2.50	2.44	98.0	80-120
Lead	mg/Kg	2.50	2.30	92.0	80-120
Manganese	mg/Kg	5.00	4.92	98.0	80-120
Nickel	mg/Kg	2.50	2.47	99.0	80-120
Selenium	mg/Kg	5.00	4.57	91.0	80-120
Silver	mg/Kg	0.500	0.456	91.0	80-120
Thallium	mg/Kg	0.500	0.473	95.0	80-120
Vanadium	mg/Kg	25.0	23.5	94.0	80-120
Zinc	mg/Kg	25.0	25.7	103	80-120

Matrix Spike & Matrix Spike Duplicate V 90860-MS-L696239 V 90860-MSD-L696239

Parameter	Units	Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS %Rec	MSD %Rec	%Rec Limits	RPD	Max RPD
Antimony	mg/Kg	4.48	4.93	4.65	3.94	5.63	0.0*	25.0*	75-125	35.3	80
Arsenic	mg/Kg	5.61	2.47	2.33	6.58	8.46	39.0*	123	75-125	25.0	80
Barium	mg/Kg	459	4.93	4.65	421	450	0.0*	0.0*	75-125	6.6	80
Beryllium	mg/Kg	0.383	2.47	2.33	2.54	2.43	87.0	88.0	75-125	4.4	80
Cadmium	mg/Kg	1.83	0.493	0.465	1.92	2.14	18.0*	67.0*	75-125	10.8	80
Chromium	mg/Kg	27.7	4.93	4.65	29.0	25.3	26.0*	0.0*	75-125	13.6	80
Cobalt	mg/Kg	4.90	4.93	4.65	8.54	9.26	74.0*	94.0	75-125	8.0	80
Copper	mg/Kg	475	2.47	2.33	422	515	0.0*	1720*	75-125	19.8	80
Lead	mg/Kg	1200	2.47	2.33	813	786	0.0*	0.0*	75-125	3.3	80
Manganese	mg/Kg	384	4.93	4.65	314	407	0.0*	495*	75-125	25.7	80
Nickel	mg/Kg	13.3	2.47	2.33	16.1	16.9	114	155*	75-125	4.8	80
Selenium	mg/Kg	0.466	4.93	4.65	4.08	3.93	73.0*	74.0*	75-125	3.7	80
Silver	mg/Kg	0.830	0.493	0.465	1.08	0.927	51.0*	21.0*	75-125	15.2	80

* QC Fail

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Quality Control Data

Client ID: **Mid-Atlantic Associates, Inc. - Raleigh**
Project Description: **R4370.00**
Report No: **23-208-0054**

QC Prep: L696239
QC Prep Batch Method: 3050B
QC Analytical Batch(es): L696766,L696918,L698988,L698996
Analysis Method: 6020B
Analysis Description: Metals Analyses

Matrix Spike & Matrix Spike Duplicate V 90860-MS-L696239 V 90860-MSD-L696239

Parameter	Units	Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS %Rec	MSD %Rec	%Rec Limits	RPD	Max RPD
Thallium	mg/Kg	<0.250	0.493	0.465	0.451	0.435	84.0	86.0	75-125	3.6	80
Vanadium	mg/Kg	9.95	24.7	23.3	29.2	27.4	78.0	75.0	75-125	6.3	80
Zinc	mg/Kg	1140	24.7	23.3	1000	991	0.0*	0.0*	75-125	0.9	80

Post Digestion Spike V 90860-PDS-L696239

Parameter	Units	PDS Result	% Recovery	Analyzed
Antimony	mg/Kg	2.63	94.0	08/04/23 11:59
Arsenic	mg/Kg	1.65	96.0	08/04/23 11:59
Cadmium	mg/Kg	0.395	95.0	08/04/23 11:59
Cobalt	mg/Kg	2.68	93.0	08/04/23 11:59
Copper	mg/Kg	2.44	102	08/04/23 11:26
Silver	mg/Kg	0.299	94.0	08/04/23 11:59
Vanadium	mg/Kg	11.9	92.0	08/04/23 11:59
Zinc	mg/Kg	116	92.0	08/04/23 11:59

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Quality Control Data

Client ID: **Mid-Atlantic Associates, Inc. - Raleigh**
Project Description: **R4370.00**
Report No: **23-208-0054**

QC Prep: V35873
QC Prep Batch Method: 7471B (Prep)
QC Analytical Batch(es): V35952
Analysis Method: 7471B
Analysis Description: Solids Total Mercury Analysis - CVAA

Lab Reagent Blank LRB-V35873 Matrix: SOL
Associated Lab Samples: 90803, 90819

Parameter	Units	Blank Result	MQL	Analyzed
Mercury (Total)	mg/Kg	<0.0300	0.0300	07/28/23 15:43

Laboratory Control Sample LCS-V35873

Parameter	Units	Spike Conc.	LCS Result	LCS %Rec	% Rec Limits
Mercury (Total)	mg/Kg	0.417	0.451	108	80-120

Matrix Spike & Matrix Spike Duplicate V 90819-MS-V35873 V 90819-MSD-V35873

Parameter	Units	Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS %Rec	MSD %Rec	%Rec Limits	RPD	Max RPD
Mercury (Total)	mg/Kg	<0.0300	0.410	0.397	0.400	0.362	98.0	91.0	80-120	9.9	20

Post Digestion Spike V 90819-PDS-V35873

Parameter	Units	PDS Result	% Recovery	Analyzed
Mercury (Total)	mg/Kg	0.200	101	07/28/23 16:15

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Quality Control Data

Client ID: **Mid-Atlantic Associates, Inc. - Raleigh**
Project Description: **R4370.00**
Report No: **23-208-0054**

QC Prep: V36047
QC Prep Batch Method: 3546
QC Analytical Batch(es): V36073
Analysis Method: 8270E
Analysis Description: Semivolatile Organic Compounds - GC/MS

Lab Reagent Blank LRB-V36047 Matrix: SOL
Associated Lab Samples: 90803, 90819

Parameter	Units	Blank Result	MDL	MQL	Analyzed	% Recovery	% Rec Limits
Acenaphthene	mg/Kg	<0.116	0.116	0.660	08/01/23 15:51		
Acenaphthylene	mg/Kg	<0.105	0.105	0.660	08/01/23 15:51		
Aniline	mg/Kg	<0.152	0.152	0.660	08/01/23 15:51		
Anthracene	mg/Kg	<0.143	0.143	0.660	08/01/23 15:51		
Benzo(a)anthracene	mg/Kg	<0.139	0.139	0.660	08/01/23 15:51		
Benzo(a)pyrene	mg/Kg	<0.147	0.147	0.660	08/01/23 15:51		
Benzo(b)fluoranthene	mg/Kg	<0.146	0.146	0.660	08/01/23 15:51		
Benzo(g,h,i)perylene	mg/Kg	<0.136	0.136	0.660	08/01/23 15:51		
Benzo(k)fluoranthene	mg/Kg	<0.137	0.137	0.660	08/01/23 15:51		
Benzoic Acid	mg/Kg	<0.580	0.580	2.00	08/01/23 15:51		
Benzyl alcohol	mg/Kg	<0.105	0.105	0.660	08/01/23 15:51		
Bis(2-Chloroethoxy)methane	mg/Kg	<0.118	0.118	0.660	08/01/23 15:51		
Bis(2-Chloroethyl)ether	mg/Kg	<0.107	0.107	0.660	08/01/23 15:51		
Bis(2-Chloroisopropyl)ether	mg/Kg	<0.136	0.136	0.330	08/01/23 15:51		
Bis(2-ethylhexyl)phthalate	mg/Kg	<0.120	0.120	0.660	08/01/23 15:51		
4-Bromophenyl phenyl ether	mg/Kg	<0.109	0.109	0.660	08/01/23 15:51		
Butyl benzyl phthalate	mg/Kg	<0.113	0.113	0.330	08/01/23 15:51		
4-Chloro-3-methylphenol	mg/Kg	<0.092	0.092	0.660	08/01/23 15:51		
4-Chloroaniline	mg/Kg	<0.112	0.112	0.330	08/01/23 15:51		
2-Chloronaphthalene	mg/Kg	<0.116	0.116	0.660	08/01/23 15:51		
2-Chlorophenol	mg/Kg	<0.098	0.098	0.660	08/01/23 15:51		
4-Chlorophenyl phenyl ether	mg/Kg	<0.126	0.126	1.00	08/01/23 15:51		
Chrysene	mg/Kg	<0.142	0.142	0.660	08/01/23 15:51		
Dibenz(a,h)anthracene	mg/Kg	<0.230	0.230	0.660	08/01/23 15:51		
Dibenzofuran	mg/Kg	<0.119	0.119	0.660	08/01/23 15:51		
1,2-Dichlorobenzene	mg/Kg	<0.094	0.094	0.660	08/01/23 15:51		
1,3-Dichlorobenzene	mg/Kg	<0.097	0.097	0.660	08/01/23 15:51		

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Quality Control Data

Client ID: **Mid-Atlantic Associates, Inc. - Raleigh**
Project Description: **R4370.00**
Report No: **23-208-0054**

QC Prep: V36047
QC Prep Batch Method: 3546
QC Analytical Batch(es): V36073
Analysis Method: 8270E
Analysis Description: Semivolatile Organic Compounds - GC/MS

Lab Reagent Blank LRB-V36047 Matrix: SOL
Associated Lab Samples: 90803, 90819

Parameter	Units	Blank Result	MDL	MQL	Analyzed	% Recovery	% Rec Limits
1,4-Dichlorobenzene	mg/Kg	<0.097	0.097	0.330	08/01/23 15:51		
3,3'-Dichlorobenzidine	mg/Kg	<0.147	0.147	0.660	08/01/23 15:51		
2,4-Dichlorophenol	mg/Kg	<0.095	0.095	0.660	08/01/23 15:51		
Diethyl phthalate	mg/Kg	<0.180	0.180	0.660	08/01/23 15:51		
Dimethyl phthalate	mg/Kg	<0.174	0.174	0.660	08/01/23 15:51		
2,4-Dimethylphenol	mg/Kg	<0.108	0.108	0.330	08/01/23 15:51		
Di-n-butyl phthalate	mg/Kg	<0.107	0.107	0.660	08/01/23 15:51		
4,6-Dinitro-2-methylphenol	mg/Kg	<0.240	0.240	1.50	08/01/23 15:51		
2,4-Dinitrophenol	mg/Kg	<0.520	0.520	1.50	08/01/23 15:51		
2,4-Dinitrotoluene	mg/Kg	<0.096	0.096	0.660	08/01/23 15:51		
2,6-Dinitrotoluene	mg/Kg	<0.108	0.108	0.660	08/01/23 15:51		
Di-n-Octyl Phthalate	mg/Kg	<0.143	0.143	0.330	08/01/23 15:51		
Fluoranthene	mg/Kg	<0.123	0.123	0.660	08/01/23 15:51		
Fluorene	mg/Kg	<0.128	0.128	0.660	08/01/23 15:51		
Hexachlorobenzene	mg/Kg	<0.106	0.106	0.660	08/01/23 15:51		
Hexachlorobutadiene	mg/Kg	<0.097	0.097	0.660	08/01/23 15:51		
Hexachlorocyclopentadiene	mg/Kg	<0.157	0.157	0.660	08/01/23 15:51		
Hexachloroethane	mg/Kg	<0.079	0.079	0.660	08/01/23 15:51		
Indeno(1,2,3-cd)pyrene	mg/Kg	<0.179	0.179	0.660	08/01/23 15:51		
Isophorone	mg/Kg	<0.191	0.191	0.660	08/01/23 15:51		
1-Methylnaphthalene	mg/Kg	<0.106	0.106	0.660	08/01/23 15:51		
2-Methylnaphthalene	mg/Kg	<0.100	0.100	0.660	08/01/23 15:51		
2-Methylphenol	mg/Kg	<0.097	0.097	0.660	08/01/23 15:51		
3&4 Methylphenol	mg/Kg	<0.084	0.084	0.660	08/01/23 15:51		
Naphthalene	mg/Kg	<0.144	0.144	0.660	08/01/23 15:51		
2-Nitroaniline	mg/Kg	<0.096	0.096	0.660	08/01/23 15:51		
3-Nitroaniline	mg/Kg	<0.120	0.120	0.660	08/01/23 15:51		

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Quality Control Data

Client ID: **Mid-Atlantic Associates, Inc. - Raleigh**
Project Description: **R4370.00**
Report No: **23-208-0054**

QC Prep: V36047
QC Prep Batch Method: 3546
QC Analytical Batch(es): V36073
Analysis Method: 8270E
Analysis Description: Semivolatile Organic Compounds - GC/MS

Lab Reagent Blank LRB-V36047 Matrix: SOL
Associated Lab Samples: 90803, 90819

Parameter	Units	Blank Result	MDL	MQL	Analyzed	% Recovery	% Rec Limits
4-Nitroaniline	mg/Kg	<0.093	0.093	0.330	08/01/23 15:51		
Nitrobenzene	mg/Kg	<0.116	0.116	0.330	08/01/23 15:51		
2-Nitrophenol	mg/Kg	<0.088	0.088	0.660	08/01/23 15:51		
4-Nitrophenol	mg/Kg	<0.117	0.117	0.660	08/01/23 15:51		
N-Nitrosodimethylamine	mg/Kg	<0.263	0.263	0.660	08/01/23 15:51		
N-Nitrosodiphenylamine	mg/Kg	<0.181	0.181	0.660	08/01/23 15:51		
N-Nitroso-di-n-propylamine	mg/Kg	<0.118	0.118	0.660	08/01/23 15:51		
Pentachlorophenol	mg/Kg	<0.347	0.347	1.00	08/01/23 15:51		
Phenanthrene	mg/Kg	<0.208	0.208	0.660	08/01/23 15:51		
Phenol	mg/Kg	<0.112	0.112	0.660	08/01/23 15:51		
Pyrene	mg/Kg	<0.134	0.134	0.660	08/01/23 15:51		
Pyridine	mg/Kg	<0.079	0.079	0.330	08/01/23 15:51		
1,2,4-Trichlorobenzene	mg/Kg	<0.107	0.107	0.660	08/01/23 15:51		
2,4,5-Trichlorophenol	mg/Kg	<0.096	0.096	0.660	08/01/23 15:51		
2,4,6-Trichlorophenol	mg/Kg	<0.096	0.096	0.660	08/01/23 15:51		
2-Fluorobiphenyl (S)					08/01/23 15:51	94.0	44-115
2-Fluorophenol (S)					08/01/23 15:51	82.5	35-115
Nitrobenzene-d5 (S)					08/01/23 15:51	86.2	37-122
4-Terphenyl-d14 (S)					08/01/23 15:51	112	54-127
2,4,6-Tribromophenol (S)					08/01/23 15:51	78.6	39-132
Phenol-d5 (S)					08/01/23 15:51	78.0	34-121

Laboratory Control Sample & LCSD LCS-V36047 LCSD-V36047

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS %Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD
Acenaphthene	mg/Kg	1.67	1.46	1.52	87.4	91.0	40-123	4.0	20

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Quality Control Data

Client ID: Mid-Atlantic Associates, Inc. - Raleigh
Project Description: R4370.00
Report No: 23-208-0054

QC Prep: V36047
QC Prep Batch Method: 3546
QC Analytical Batch(es): V36073
Analysis Method: 8270E
Analysis Description: Semivolatile Organic Compounds - GC/MS

Laboratory Control Sample & LCSD LCS-V36047 LCSD-V36047

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS %Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD
Acenaphthylene	mg/Kg	1.67	1.47	1.53	88.0	91.6	32-132	4.0	20
Aniline	mg/Kg	1.67	2.71	2.82	162	169	12-197	3.9	20
Anthracene	mg/Kg	1.67	1.62	1.68	97.0	101	47-123	3.6	20
Benzo(a)anthracene	mg/Kg	1.67	1.66	1.70	99.4	102	49-126	2.3	20
Benzo(a)pyrene	mg/Kg	1.67	1.80	1.86	108	111	45-129	3.2	20
Benzo(b)fluoranthene	mg/Kg	1.67	1.70	1.85	102	111	45-132	8.4	20
Benzo(g,h,i)perylene	mg/Kg	1.67	1.66	1.74	99.4	104	43-134	4.7	20
Benzo(k)fluoranthene	mg/Kg	1.67	1.64	1.64	98.2	98.2	47-132	0.0	20
Benzoic Acid	mg/Kg	1.67	1.25	1.24	74.8	74.2	10-83	0.8	20
Benzyl alcohol	mg/Kg	1.67	1.48	1.59	88.6	95.2	29-122	7.1	20
Bis(2-Chloroethoxy)methane	mg/Kg	1.67	1.33	1.36	79.6	81.4	36-121	2.2	20
Bis(2-Chloroethyl)ether	mg/Kg	1.67	1.33	1.40	79.6	83.8	31-120	5.1	20
Bis(2-Chloroisopropyl)ether	mg/Kg	1.67	1.48	1.52	88.6	91.0	33-131	2.6	20
Bis(2-ethylhexyl)phthalate	mg/Kg	1.67	1.88	1.95	113	117	51-133	3.6	20
4-Bromophenyl phenyl ether	mg/Kg	1.67	1.64	1.71	98.2	102	46-124	4.1	20
Butyl benzyl phthalate	mg/Kg	1.67	1.85	1.95	111	117	48-132	5.2	20
4-Chloro-3-methylphenol	mg/Kg	1.67	1.35	1.41	80.8	84.4	45-122	4.3	20
4-Chloroaniline	mg/Kg	1.67	1.42	1.47	85.0	88.0	17-106	3.4	20
2-Chloronaphthalene	mg/Kg	1.67	1.48	1.52	88.6	91.0	41-114	2.6	20
2-Chlorophenol	mg/Kg	1.67	1.46	1.53	87.4	91.6	34-121	4.6	20
4-Chlorophenyl phenyl ether	mg/Kg	1.67	1.53	1.59	91.6	95.2	45-121	3.8	20
Chrysene	mg/Kg	1.67	1.57	1.64	94.0	98.2	50-124	4.3	20
Dibenz(a,h)anthracene	mg/Kg	1.67	1.52	1.56	91.0	93.4	45-134	2.5	20
Dibenzofuran	mg/Kg	1.67	1.47	1.53	88.0	91.6	44-120	4.0	20
1,2-Dichlorobenzene	mg/Kg	1.67	1.30	1.37	77.8	82.0	33-117	5.2	20
1,3-Dichlorobenzene	mg/Kg	1.67	1.31	1.35	78.4	80.8	30-115	3.0	20

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Quality Control Data

Client ID: Mid-Atlantic Associates, Inc. - Raleigh
Project Description: R4370.00
Report No: 23-208-0054

QC Prep: V36047
QC Prep Batch Method: 3546
QC Analytical Batch(es): V36073
Analysis Method: 8270E
Analysis Description: Semivolatile Organic Compounds - GC/MS

Laboratory Control Sample & LCSD LCS-V36047 LCSD-V36047

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS %Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD
1,4-Dichlorobenzene	mg/Kg	1.67	1.29	1.35	77.2	80.8	31-115	4.5	20
3,3'-Dichlorobenzidine	mg/Kg	1.67	1.68	1.77	101	106	22-121	5.2	20
2,4-Dichlorophenol	mg/Kg	1.67	1.31	1.39	78.4	83.2	40-122	5.9	20
Diethyl phthalate	mg/Kg	1.67	1.56	1.68	93.4	101	50-124	7.4	20
Dimethyl phthalate	mg/Kg	1.67	1.60	1.67	95.8	100	48-124	4.2	20
2,4-Dimethylphenol	mg/Kg	1.67	1.74	1.82	104	109	30-127	4.4	20
Di-n-butyl phthalate	mg/Kg	1.67	1.78	1.84	107	110	51-128	3.3	20
4,6-Dinitro-2-methylphenol	mg/Kg	1.67	1.42	1.43	85.0	85.6	29-132	0.7	20
2,4-Dinitrophenol	mg/Kg	1.67	1.24	1.30	74.2	77.8	27-129	4.7	20
2,4-Dinitrotoluene	mg/Kg	1.67	1.60	1.66	95.8	99.4	48-126	3.6	20
2,6-Dinitrotoluene	mg/Kg	1.67	1.53	1.67	91.6	100	46-124	8.7	20
Di-n-Octyl Phthalate	mg/Kg	1.67	2.08	2.17	125	130	45-140	4.2	20
Fluoranthene	mg/Kg	1.67	1.48	1.53	88.6	91.6	50-127	3.3	20
Fluorene	mg/Kg	1.67	1.47	1.55	88.0	92.8	43-125	5.2	20
Hexachlorobenzene	mg/Kg	1.67	1.58	1.61	94.6	96.4	45-122	1.8	20
Hexachlorobutadiene	mg/Kg	1.67	1.22	1.30	73.0	77.8	32-123	6.3	20
Hexachlorocyclopentadiene	mg/Kg	1.67	1.10	1.22	65.8	73.0	32-117	10.3	20
Hexachloroethane	mg/Kg	1.67	1.23	1.28	73.6	76.6	28-117	3.9	20
Indeno(1,2,3-cd)pyrene	mg/Kg	1.67	1.73	1.82	104	109	45-133	5.0	20
Isophorone	mg/Kg	1.67	1.16	1.19	69.4	71.2	30-122	2.5	20
1-Methylnaphthalene	mg/Kg	1.67	1.21	1.26	72.4	75.4	40-119	4.0	20
2-Methylnaphthalene	mg/Kg	1.67	1.22	1.27	73.0	76.0	38-122	4.0	20
2-Methylphenol	mg/Kg	1.67	1.50	1.55	89.8	92.8	32-122	3.2	20
3&4 Methylphenol	mg/Kg	1.67	1.34	1.39	80.2	83.2	34-119	3.6	20
Naphthalene	mg/Kg	1.67	1.20	1.24	71.8	74.2	35-123	3.2	20
2-Nitroaniline	mg/Kg	1.67	1.61	1.75	96.4	105	44-127	8.3	20

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Quality Control Data

Client ID: **Mid-Atlantic Associates, Inc. - Raleigh**
Project Description: **R4370.00**
Report No: **23-208-0054**

QC Prep: V36047
QC Prep Batch Method: 3546
QC Analytical Batch(es): V36073
Analysis Method: 8270E
Analysis Description: Semivolatile Organic Compounds - GC/MS

Laboratory Control Sample & LCSD LCS-V36047 LCSD-V36047

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS %Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD
3-Nitroaniline	mg/Kg	1.67	1.67	1.75	100	105	33-119	4.6	20
4-Nitroaniline	mg/Kg	1.67	1.56	1.67	93.4	100	63-147	6.8	20
Nitrobenzene	mg/Kg	1.67	1.19	1.22	71.2	73.0	34-122	2.4	20
2-Nitrophenol	mg/Kg	1.67	1.28	1.36	76.6	81.4	36-123	6.0	20
4-Nitrophenol	mg/Kg	1.67	1.67	1.72	100	103	30-132	2.9	20
N-Nitrosodimethylamine	mg/Kg	1.67	1.17	1.21	70.0	72.4	10-146	3.3	20
N-Nitrosodiphenylamine	mg/Kg	1.67	1.94	1.96	116	117	38-127	1.0	20
N-Nitroso-di-n-propylamine	mg/Kg	1.67	1.47	1.51	88.0	90.4	36-120	2.6	20
Pentachlorophenol	mg/Kg	1.67	1.77	1.85	106	111	25-133	4.4	20
Phenanthrene	mg/Kg	1.67	1.54	1.61	92.2	96.4	50-121	4.4	20
Phenol	mg/Kg	1.67	1.41	1.43	84.4	85.6	34-121	1.4	20
Pyrene	mg/Kg	1.67	1.63	1.70	97.6	102	47-127	4.2	20
Pyridine	mg/Kg	1.67	0.951	0.973	56.9	58.2	10-80	2.2	20
1,2,4-Trichlorobenzene	mg/Kg	1.67	1.18	1.22	70.6	73.0	34-118	3.3	20
2,4,5-Trichlorophenol	mg/Kg	1.67	1.57	1.63	94.0	97.6	41-124	3.7	20
2,4,6-Trichlorophenol	mg/Kg	1.67	1.48	1.55	88.6	92.8	39-126	4.6	20
2-Fluorobiphenyl (S)					91.6	92.2	44-115		
2-Fluorophenol (S)					81.9	81.3	35-115		
Nitrobenzene-d5 (S)					75.4	74.8	37-122		
4-Terphenyl-d14 (S)					106	107	54-127		
2,4,6-Tribromophenol (S)					83.4	86.7	39-132		
Phenol-d5 (S)					77.7	77.1	34-121		

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Quality Control Data

Client ID: **Mid-Atlantic Associates, Inc. - Raleigh**
Project Description: **R4370.00**
Report No: **23-208-0054**

QC Analytical Batch: V35860
Analysis Method: SW-DRYWT
Analysis Description: Dry Weight Determination

Duplicate V 90644-DUP

Parameter	Units	Result	DUP Result	RPD	Max RPD	Analyzed
Moisture	%	17.1	18.5	7.8	20.0	07/28/23 10:30

Duplicate V 90677-DUP

Parameter	Units	Result	DUP Result	RPD	Max RPD	Analyzed
Moisture	%	24.2	23.4	3.3	20.0	07/28/23 10:30

449 Springbrook Rd, Charlotte, NC 28217
Main 704.529.6364
www.waypointanalytical.com

Quality Control Data

Client ID: **Mid-Atlantic Associates, Inc. - Raleigh**
Project Description: **R4370.00**
Report No: **23-208-0054**

QC Analytical Batch: V35955
Analysis Method: SW-DRYWT
Analysis Description: Dry Weight Determination

Duplicate V 90806-DUP

Parameter	Units	Result	DUP Result	RPD	Max RPD	Analyzed
Moisture	%	0.574	0.621	7.8	20.0	07/31/23 11:45

Duplicate V 91019-DUP

Parameter	Units	Result	DUP Result	RPD	Max RPD	Analyzed
Moisture	%	16.2	13.4	18.9	20.0	07/31/23 11:45

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Quality Control Data

Client ID: **Mid-Atlantic Associates, Inc. - Raleigh**
Project Description: **R4370.00**
Report No: **23-208-0054**

QC Analytical Batch: V36018
Analysis Method: SW-DRYWT
Analysis Description: Dry Weight Determination

Duplicate V 90820-DUP

Parameter	Units	Result	DUP Result	RPD	Max RPD	Analyzed
Moisture	%	5.08	4.98	1.9	20.0	08/01/23 11:05

Waypoint ANALYTICAL
449 Springbrook Rd, Charlotte, NC 28217
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Shipment Receipt Form

Customer Number: **01139**
Customer Name: **Mid-Atlantic Associates, Inc. - Raleigh**
Report Number: **23-208-0054**

Shipping Method

○ Fed Ex	○ US Postal	○ Lab	○ Other :	
○ UPS	○ Client	◉ Courier	Thermometer ID:	IRT-15 2.6C

Shipping container/cooler uncompromised?	◉ Yes	○ No	
Number of coolers/boxes received	1		
Custody seals intact on shipping container/cooler?	○ Yes	○ No	◉ Not Present
Custody seals intact on sample bottles?	○ Yes	○ No	◉ Not Present
Chain of Custody (COC) present?	◉ Yes	○ No	
COC agrees with sample label(s)?	◉ Yes	○ No	
COC properly completed	◉ Yes	○ No	
Samples in proper containers?	◉ Yes	○ No	
Sample containers intact?	◉ Yes	○ No	
Sufficient sample volume for indicated test(s)?	◉ Yes	○ No	
All samples received within holding time?	◉ Yes	○ No	
Cooler temperature in compliance?	◉ Yes	○ No	
Cooler/Samples arrived at the laboratory on ice. Samples were considered acceptable as cooling process had begun.	◉ Yes	○ No	
Water - Sample containers properly preserved	○ Yes	○ No	◉ N/A
Water - VOA vials free of headspace	○ Yes	○ No	◉ N/A
Trip Blanks received with VOAs	○ Yes	○ No	◉ N/A
Soil VOA method 5035 – compliance criteria met	◉ Yes	○ No	○ N/A

☐ High concentration container (48 hr) ☐ Low concentration EnCore samplers (48 hr)
☐ High concentration pre-weighed (methanol -14 d) ☐ Low conc pre-weighed vials (Sod Bis -14 d)

Special precautions or instructions included?	○ Yes	◉ No

Comments:

Signature: Caitlyn Cummins Date & Time: 07/27/2023 13:57:00

CHAIN OF CUSTODY RECORD

Waypoint ANALYTICAL
449 Springbrook Road • Charlotte, NC 28217
Phone 704/529-6364 • Fax: 704/525-0409

PAGE 1 OF 3 QUOTE # TO ENSURE PROPER BILLING:

Client Company Name: Mid-Atlantic Associates
Report To/Contact Name: Kevin Clay
Reporting Address: 409 Rogers View Ct Raleigh NC 27610
Phone: 704 [illegible] Fax (Yes)(No):
Email Address: KClay@Maanalytic.com
EDD Type: PDF ✓ Excel ✓ Other
Site Location Name: East End Park
Site Location Physical Address:

Project Name:
Short Hold Analysis (Yes) (No) UST Project: (Yes) (No)
*Please ATTACH any project specific reporting (QC LEVEL I II III IV) provisions and/or QC Requirements
Invoice To:
Address:

Purchase Order No./Billing Reference
Requested Due Date ☐ 1 Day ☐ 2 Days ☐ 3 Days ☐ 4 Days ☐ 5 Days
"Working Days" ☐ 6-9 Days ☑ Standard 10 days ☐ Rush Work Must Be Pre Approved
Samples received after 15:00 will be processed next business day.
Turnaround time is based on business days, excluding weekends and holidays.
(SEE REVERSE FOR TERMS & CONDITIONS REGARDING SERVICES RENDERED BY WAYPOINT ANALYTICAL, LLC TO CLIENT)

LAB USE ONLY

	YES	NO	N/A
Samples INTACT upon arrival?	X		
Received IN ICE?	X		
PROPER PRESERVATIVES indicated?	X		
Received WITHIN HOLDING TIMES?	X		
CUSTODY SEALS INTACT?			X
VOLATILES rec'd W/OUT HEADSPACE?			X
PROPER CONTAINERS used?	X		

TEMP: Therm ID: IR T-15 Observed 2.6 °C /Corr. 2.6 °C

TO BE FILLED IN BY CLIENT/SAMPLING PERSONNEL
Certification: NC_____ SC_____
Other_____ N/A_____
Water Chlorinated: YES___ NO___
Samples Iced Upon Collection: YES___ NO___

CLIENT SAMPLE DESCRIPTION	DATE COLLECTED	TIME COLLECTED MILITARY HOURS	MATRIX (SOIL, WATER, OR SLUDGE)	SAMPLE CONTAINER *TYPE SEE BELOW	NO.	SIZE	PRESERVATIVES	ANALYSIS REQUESTED: Lead 6020B ✓	Haz ITS Metals ✓	SVOCs 8270 ✓	REMARKS	ID NO.
SS-EE-49	7/26/23	815	Soil				Ice	✓				
SS-EE-39		813						✓				
SS-EE-104		840							✓	✓		
SS-EE-105		850						✓				
SS-EE-106		900										
SS-EE-101		910										
SS-EE-95		925										
SS-EE-90		935										
SS-EE-88		943										

23-208-0054
01139
07-27-2023
13:52:01
Mid-Atlantic Associates, Inc. - Raleigh
R4370.00

PRESS DOWN FIRMLY - 2 COPIES

Sampler's Signature: [signature] Sampled By (Print Name): Kevin Clay Affiliation: MAA

Upon relinquishing this Chain of Custody is your authorization for Waypoint Analytical to proceed with the analyses as requested above. Any changes must be submitted in writing to the Waypoint Analytical Project Manager. There will be charges for any changes after analyses have been initialized.

		Date	Military/Hours
Relinquished By: (Signature) BOglesby	Received By: (Signature) Philip Paige	7-26-23	13:00
Relinquished By: (Signature) Philip Paige	Received By: (Signature) Courier express	7-26-23	16:00
Relinquished By: (Signature)	Received For Waypoint Analytical By: Cathy [illegible]	7/27/23	13:00

Method of Shipment: NOTE: ALL SAMPLE COOLERS SHOULD BE TAPED SHUT WITH CUSTODY SEALS FOR TRANSPORTATION TO THE LABORATORY. SAMPLES ARE NOT ACCEPTED AND VERIFIED AGAINST COC UNTIL RECEIVED AT THE LABORATORY.
☐ Fed Ex ☐ UPS ☐ Hand-delivered ☐ Waypoint Analytical Field Services ☐ Other
COC Group No.

Additional Comments:

LAB USE ONLY
Site Arrival Time:
Site Departure Time:
Field Tech Fee:
Mileage:

SEE REVERSE FOR TERMS & CONDITIONS

NPDES:	UST:	GROUNDWATER:	DRINKING WATER:	SOLID WASTE:	RCRA:	BRWNFLD	LANDFILL	OTHER:
☐ NC ☐ SC ☐	☐ NC ☐ SC ☐	☐ NC ☐ SC ☐	☐ NC ☐ SC ☐	☐ NC ☐ SC ☐	☐ NC ☐ SC ☐	☐ NC ☐ SC ☐	☐ NC ☐ SC ☐	☐ NC ☐ SC ☐

ORIGINAL

Waypoint ANALYTICAL
449 Springbrook Road • Charlotte, NC 28217
Phone 704/529-6364 • Fax: 704/525-0409

CHAIN OF CUSTODY RECORD

PAGE 2 OF 3 QUOTE # TO ENSURE PROPER BILLING:

Client Company Name:
Report To/Contact Name: SEE P. 1
Reporting Address:
Phone: Fax (Yes)(No):
Email Address:
EDD Type: PDF Excel Other
Site Location Name:
Site Location Physical Address:

Project Name:
Short Hold Analysis (Yes) (No) UST Project: (Yes) (No)
*Please ATTACH any project specific reporting (QC LEVEL I II III IV) provisions and/or QC Requirements
Invoice To:
Address:

Purchase Order No./Billing Reference
Requested Due Date ❑ 1 Day ❑ 2 Days ❑ 3 Days ❑ 4 Days ❑ 5 Days
"Working Days" ❑ 6-9 Days ❑ Standard 10 days ❑ Rush Work Must Be Pre Approved
Samples received after 15:00 will be processed next business day.
Turnaround time is based on business days, excluding weekends and holidays.
(SEE REVERSE FOR TERMS & CONDITIONS REGARDING SERVICES RENDERED BY WAYPOINT ANALYTICAL, LLC TO CLIENT)

LAB USE ONLY

	YES	NO	N/A
Samples INTACT upon arrival?	X		
Received IN ICE?	X		
PROPER PRESERVATIVES indicated?	X		
Received WITHIN HOLDING TIMES?	X		
CUSTODY SEALS INTACT?			X
VOLATILES rec'd W/OUT HEADSPACE?			X
PROPER CONTAINERS used?	X		

TEMP: Therm ID: WT-15 Observed 2.6 °C /Corr. 2.6 °C

TO BE FILLED IN BY CLIENT/SAMPLING PERSONNEL
Certification: NC____ SC____
Other____ N/A____
Water Chlorinated: YES___ NO___
Samples Iced Upon Collection: YES___ NO___

CLIENT SAMPLE DESCRIPTION	DATE COLLECTED	TIME COLLECTED MILITARY HOURS	MATRIX (SOIL, WATER, OR SLUDGE)	*TYPE SEE BELOW	NO.	SIZE	PRESERVATIVES	Lead 6010	Haz Lite Metals	SVOC 8270					REMARKS	ID NO.
SS-EE-81	7/26/23	1005	Soil				Ice	✓								
SS-EE-86	↓	1013	↓				↓	↓								
SS-EE-83	↓	1020	↓				↓	↓								
SS-EE-Playground	↓	1124	↓				↓	↓								
SS-EE-24	↓	1215	↓				↓	↓								
SS-EE-15	↓	1223	↓				↓	↓								
SS-EE-12	↓	~~1228~~ 1230	↓				↓	↓								
SS-EE-26	↓	~~1230~~ 1235	↓				↓	↓								
SS-EE32	↓	~~1235~~ 1240	↓				↓	↓								

KRC 7/26

23-208-0054
01139
07-27-2023
13:52:01
Mid-Atlantic Associates, Inc. - Raleigh
R4370.00

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Sampler's Signature [signature] Sampled By (Print Name) Kevin Clay Affiliation MAA

Upon relinquishing, this Chain of Custody is your authorization for Waypoint Analytical to proceed with the analyses as requested above. Any changes must be submitted in writing to the Waypoint Analytical Project Manager. There will be charges for any changes after analyses have been initialized.

Relinquished By: (Signature)	Received By: (Signature)	Date	Military/Hours
B Oglesby	Philip Paige	7-26-23	13:00
Philip Paige	Courier express	7-26-23	16:00
	Received For Waypoint Analytical By: Caitlyn [signature]	7/27/23	13:00

Method of Shipment NOTE: ALL SAMPLE COOLERS SHOULD BE TAPED SHUT WITH CUSTODY SEALS FOR TRANSPORTATION TO THE LABORATORY. SAMPLES ARE NOT ACCEPTED AND VERIFIED AGAINST COC UNTIL RECEIVED AT THE LABORATORY.

COC Group No.

❑ Fed Ex ❑ UPS ❑ Hand-delivered ❑ Waypoint Analytical Field Service ❑ Other

Additional Comments:

LAB USE ONLY
Site Arrival Time:
Site Departure Time:
Field Tech Fee:
Mileage:

NPDES: ❑ NC ❑ SC ❑ | UST: ❑ NC ❑ SC ❑ | GROUNDWATER: ❑ NC ❑ SC ❑ | DRINKING WATER: ❑ NC ❑ SC ❑ | SOLID WASTE: ❑ NC ❑ SC ❑ | RCRA: ❑ NC ❑ SC | BRWNFLD ❑ NC ❑ SC ❑ | LANDFILL ❑ NC ❑ SC ❑ | OTHER: ❑ NC ❑ SC ❑

SEE REVERSE FOR TERMS & CONDITIONS

ORIGINAL

Waypoint ANALYTICAL

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Phone 704/529-6364 • Fax: 704/525-0409

CHAIN OF CUSTODY RECORD

PAGE 3 OF 3 QUOTE # TO ENSURE PROPER BILLING:

Project Name:
Short Hold Analysis (Yes) (No) UST Project: (Yes) (No)
*Please ATTACH any project specific reporting (QC LEVEL I II III IV) provisions and/or QC Requirements
Invoice To:
Address:

Client Company Name:
Report To/Contact Name: SEE P. 1
Reporting Address:
Phone: Fax (Yes)(No):
Email Address:
EDD Type: PDF Excel Other
Site Location Name:
Site Location Physical Address:

Purchase Order No./Billing Reference
Requested Due Date ❑ 1 Day ❑ 2 Days ❑ 3 Days ❑ 4 Days ❑ 5 Days
"Working Days" ❑ 6-9 Days ☑ Standard 10 days ❑ Rush Work Must Be Pre Approved
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Turnaround time is based on business days, excluding weekends and holidays.
(SEE REVERSE FOR TERMS & CONDITIONS REGARDING SERVICES RENDERED BY WAYPOINT ANALYTICAL, LLC TO CLIENT)

LAB USE ONLY

	YES	NO	N/A
Samples INTACT upon arrival?	X		
Received IN ICE?	X		
PROPER PRESERVATIVES indicated?	X		
Received WITHIN HOLDING TIMES?	X		
CUSTODY SEALS INTACT?			X
VOLATILES rec'd W/OUT HEADSPACE?			X
PROPER CONTAINERS used?	X		

TEMP: Therm ID: IRT-15 Observed 2.6 °C /Corr. 2.6 °C

TO BE FILLED IN BY CLIENT/SAMPLING PERSONNEL
Certification: NC____ SC____
Other____ N/A____
Water Chlorinated: YES___ NO___
Samples Iced Upon Collection: YES___ NO___

CLIENT SAMPLE DESCRIPTION	DATE COLLECTED	TIME COLLECTED MILITARY HOURS	MATRIX (SOIL, WATER, OR SLUDGE)	SAMPLE CONTAINER *TYPE SEE BELOW	NO.	SIZE	PRESERVATIVES	Lead 6020B	Haz Waste	SVOC 8270					REMARKS	ID NO.
SS-EE-54	7/26/23	~~1240~~ 1300	Soil				Ice		✓	✓						
SS-EE-66	↓	~~1300~~ 1305	↓				↓	✓								
SS-EE-Dup 1	↓	1228	↓				↓	✓								
SS-EE-81(1')	↓	1050	↓				↓	✓								
SS-EE-82(1')	↓	1045	↓				↓	✓								

23-208-0054
01139
07-27-2023
13:52:01
Mid-Atlantic Associates, Inc. - Raleigh
R4370.00

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Boglusby	Philip Paige	7-26-23	13:00
Philip Paige	Courier express	7-26-23	16:00
	Received For Waypoint Analytical By: Caitlyn [signature]	7/27/23	13:00

Additional Comments:

LAB USE ONLY
Site Arrival Time:
Site Departure Time:
Field Tech Fee:
Mileage:

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COC Group No.

❑ Fed Ex ❑ UPS ❑ Hand-delivered ❑ Waypoint Analytical Field Service ❑ Other

NPDES:	UST:	GROUNDWATER:	DRINKING WATER:	SOLID WASTE:	RCRA:	BRWNFLD	LANDFILL	OTHER:
❑ NC ❑ SC	❑ NC ❑ SC	❑ NC ❑ SC	❑ NC ❑ SC	❑ NC ❑ SC	❑ NC ❑ SC	❑ NC ❑ SC	❑ NC ❑ SC	❑ NC ❑ SC

SEE REVERSE FOR TERMS & CONDITIONS

ORIGINAL