

# FOCUSED PHASE II ENVIRONMENTAL SITE ASSESSMENT

3203 W. 71<sup>ST</sup> STREET  
CLEVELAND, OHIO 44102

JULY 2023

PREPARED FOR:  
**OHIO ENVIRONMENTAL PROTECTION AGENCY**  
**DIVISION OF ENVIRONMENTAL RESPONSE AND REVITALIZATION**  
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CLEVELAND, OHIO 44102

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## **1.0 INTRODUCTION**

The Mannik & Smith Group, Inc. (MSG) was contracted by the Ohio Environmental Protection Agency (EPA) to complete a Focused Phase II Environmental Site Assessment (ESA) at 3203 West 71<sup>st</sup> Street in Cleveland, Ohio 44102 (hereinafter referred to as the "Subject Property"). Figure 1 shows the Subject Property Location and Subject Property features are depicted on Figure 2.

The Subject Property is comprised of two parcels totaling 1.79 acres of undeveloped industrial land situated on the east side of West 71<sup>st</sup> Street and south of Dearborn Avenue. Access to the Site is from West 71<sup>st</sup> Street and Dearborn Avenue.

MSG completed a Phase I ESA of the Subject Property in February 2023. According to property ownership records, historical aerial photographs, Sanborn Maps, and city directories, the northern Subject Property parcel was formerly undeveloped land from the late 1930s to the early 1950s and the southern Subject Property parcel has never been developed. The northern Subject Property parcel was developed with at least one structure from the late 1960s through the late 2010s. According to city directories, Hull R. O. Company Inc. operated at the northern Subject Property parcel from at least 1966 to 1975, Rohco Inc. operated at the northern Subject Property Parcel from at least 1980 to 1985, and various commercial companies operated at the Subject Property parcel from at least 1990 to 2011. Vendetta Towing Inc. most recently occupied the former Subject Property building in 2018.

According to Sanborn Maps, three gasoline underground storage tanks (USTs) of unknown size were located on the northern Subject Property parcel from 1950 through 1971. However, no records pertaining to the installation or closure of USTs at the Subject Property were identified during the preparation of the Phase I ESA.

MSG's February 2023 Phase I ESA of the Subject Property identified the following Recognized Environmental Conditions (RECs) / Identified Areas (IAs):

- REC-1/IA-1:** Three gasoline USTs of unknown size were reported located on the northern Subject Property parcel from at least 1950 through 1971; however no records pertaining to the installation or closure of USTs at the Subject Property were identified during the preparation of this Phase I ESA. Accordingly, the potential presence of orphan USTs at the Subject Property and/or potential presence of former USTs with no closure documentation represents a REC/IA in connection with the Subject Property.
- REC-2/IA-2:** The SPILLS database identified one spill of an unknown size from an orphan drum of unknown contents on the Subject Property in April 2016. Additionally, the Ohio EPA provided limited records related to the former storage and handling of hazardous materials. The lack of information in the SPILLS database related to the type and quantity of material spilled, affected environmental media, and any subsequent cleanup activities, as well as the Ohio EPA records related to the former storage and handling of hazardous materials, this represents a REC/IA in connection with the Subject Property.

MSG completed this Focused Phase II ESA to investigate the above RECs/IAs and identify if a release of petroleum and/or hazardous substances has occurred at the northern Subject Property parcel addressed at 3203 W. 71<sup>st</sup> Street, Cleveland, Ohio. This report summarizes the findings of the field activities completed by MSG in May 2023. MSG completed the assessment of this Subject Property under Contract Number CSP904622-5, Mobilization Order #MS23-13.

## **2.0 GEOGRAPHICAL/GEOLOGICAL SETTING**

Understanding the physical setting of the Subject Property is essential to understanding the potential pathways and exposure routes that may exist. To understand local hydrogeologic conditions in the Subject Property vicinity, MSG compiled the following geologic information from publicly available resources:

### **2.1 Surficial Geology and Geologic Setting**

The Subject Property lies within the Huron-Erie Lake Plains Section of the Central Lowland Physiographic Province of North America. Specifically, the Subject Property lies within the Erie Lake Plain, which is characterized by low relief lake basin separated from Lake Erie by shoreline cliffs. Major streams are in deep gorges (Division of Geological Survey, 1998).

The Subject Property lies within an area containing Devonian-age Ohio Shale containing carbonaceous shale with carbonate/siderite concretions. MSG obtained soils information for the Subject Property vicinity from the Soil Survey of Cuyahoga County, Ohio (United States Department of Agriculture, 1977 and 2019). Soils on the Subject Property have been identified as belonging to the Urban Land (Ub) and Urban Land–Mahoning complex (UmB). These soils consist of areas where the original soils have been disturbed, removed, cut, and/or filled over by pavement, buildings, and other structures that obscure the original soils. The underlying Mahoning complex consists of silt loam, silty clay loam, silty clay, and clay loam.

### **2.2 Hydrogeology**

According to the Ohio Department of Natural Resources (ODNR) Ground Water Resources Map of Cuyahoga County, the Subject Property is underlain by impermeable clay deposits overlying shale or shaley limestone. Well yields typically less than three gallons per minute may be developed. Depth to the underlying shale bedrock is between 10 to 12 feet in the vicinity of the Subject Property (Crowell, 1992).

Potable water is available to the Subject Property and surrounding area from the City of Cleveland. MSG also reviewed the ODNR website for water well logs for the Subject Property and surrounding area. According to the online map reviewed for the Subject Property, no potable water wells are located on or near the Subject Property. Further, it is important to note that the Subject Property exists within a verified Ohio EPA Urban Setting Designation (USD) area, which precludes the use of groundwater for potable purposes.

### **3.0 FIELD ACTIVITIES AND SAMPLING PROCEDURES**

#### **3.1 Investigation Methods**

As described in Section 1.0 of this report, MSG's February 2023 Phase I ESA identified a total of two RECs/IA at the Subject Property. Accordingly, to identify if abandoned USTs may still be present at the or if a release of hazardous substances and/or petroleum occurred at the Subject Property, MSG completed Focused Phase II ESA activities that consisted of a geophysical survey, the installation of 22 soil borings (SB-1 through SB-22) and the installation of five temporary monitoring wells (TW-2, TW-4, TW-6, TW-8, and TW-10). Sample locations are depicted on Figure 2.

##### **3.1.1 Geophysical Survey**

Geophysical Imaging, Inc. (GII) performed a geophysical survey on April 17, 2023 of REC/IA-1 to identify if abandoned USTs might still be present at the Subject Property. GII completed a combined electromagnetic induction (EM) and ground-penetrating radar (GPR) survey at the designated survey locations.

GII performed the EM survey in "continuous survey" mode along 2.5-foot spaced transects using a GSSI EMP-400 multi-frequency EM profiler with an integrated global positioning system (GPS). Two EM exploration frequencies (9,000 Hz and 12,000 Hz) were selected for the Subject Property. In "continuous survey" mode, data are acquired at a fixed time interval while the operator walks along a survey line at a steady pace. Field measurements were automatically stored in a wireless data logger and later downloaded to a computer for processing.

GII performed the GPR survey along five-foot spaced profiles using a GSSI SIR-3000 GPR system with a 400-megahertz (MHz) dipole antenna mounted on a wheeled cart to scan the survey area. A survey wheel was used to acquire distance-based data at the density of 18 scans per foot. Anomalous reflective objects/structures were noted and marked on the ground surface during data acquisition. Field data were automatically stored in a data logger and later downloaded to a computer for processing.

Figures depicting the geophysical survey areas are contained in GII's Geophysical Survey Report (Appendix A).

##### **3.1.2 Soil Borings and Soil Sampling**

On May 22 and May 23, 2023, MSG advanced 22 soil borings (SB-1 through SB-22) with a track-mounted Geoprobe® 7822DT drill rig using direct push sampling techniques to a maximum depth of 20 feet below surface grade (bsg). MSG installed five deep (0-15 feet) soil borings within REC-1/IA-1 and five deep (up to 20 feet) and 12 shallow (0-2 feet) soil borings within REC-2/IA-2.

MSG collected soil samples continuously using a 3.25-inch diameter duel tube sampling system. The duel tube sampling system collects soil samples using a five-foot sample core barrel fitted with a polyvinyl chloride (PVC) liner.

MSG described each soil sample in the field by the Visual Manual Method consistent with the Unified Soil Classification System (USCS) with regard to texture and moisture content. Copies of boring logs are presented in Appendix B.

MSG collected soil samples on a continuous basis and screened each two-foot interval in the field for the presence of volatile organic compounds (VOCs) using a RAE Systems MiniRAE photoionization detector (PID). Field PID readings are presented on the boring logs (Appendix A). MSG submitted soil samples to the laboratory as follows:

- REC/IA-1:
  - Two soil samples from each of the deep borings (one from the interval above observed groundwater during drilling and one from the interval exhibiting the highest field screening reading).
- REC/IA-2:
  - Two soil samples from each of the deep borings (one from the zero to two foot interval and one from the interval exhibiting the highest field screening reading); and,
  - One soil sample from each shallow soil boring.

### 3.1.3 Groundwater Sampling

MSG converted five soil borings (SB-2, SB-4, SB-6, SB-8, and SB-10) into temporary groundwater monitoring wells TW-2, TW-4, TW-6, TW-8, and TW-10, respectively. MSG constructed the monitoring wells using 1.0-inch diameter, ten-foot long, 0.10-slot PVC screens and sufficient lengths of 1.0-inch diameter PVC risers to reach the ground surface.

MSG collected groundwater samples from the five temporary monitoring wells on May 22 and May 23, 2023 using low flow sampling methods with a peristaltic pump into laboratory provided bottles prepared with the preservative appropriate to the analytical method. MSG then placed all samples on ice in a cooler pending delivery to the laboratory. Upon the completion of groundwater sampling, MSG removed the temporary wells and backfilled the boreholes using a mixture soil removed from the hole and bentonite.

## 3.2 Laboratory Analysis

Upon collection, MSG placed the soil and groundwater samples in a cooler on ice. MSG delivered all samples under standard chain-of-custody procedures to VAP Certified Laboratory (CL) ALS Environmental (ALS) of Cincinnati, Ohio either by courier or by delivering the samples directly to ALS. Copies of the final analytical reports are provided in Appendix C.

### 3.2.1 Soil Samples

MSG submitted soil samples collected from borings SB-1 through SB-22 for laboratory analysis of the following based on COCs identified in the Phase I ESA for the Subject Property:

- Soil samples from REC/IA-1 (SB-1 through SB-5) were submitted for the following analyses:
  - Bureau of Underground Storage Tank Regulations (BUSTR) VOCs by EPA Method SW8260B;
  - Total lead by EPA Method SW6010B; and,
  - Polycyclic aromatic hydrocarbons (PAHs) by EPA Method SW8270C.
  - Total Petroleum Hydrocarbons (TPH) gasoline range organics (GRO) and diesel range organics (DRO) by EPA Method 8015A and 8015B.
- Soil samples from REC-2/IA-2 (SB-6 through SB-22) were submitted for the following analyses:
  - VOCs by EPA Method SW8260B;

- RCRA metals by EPA Methods SW6010B/SW7471A;
- Semi volatile organic compounds (SVOCs) by EPA Method SW8270C and,
- Polychlorinated biphenyls (PCBs) by EPA Method SW8282.

### 3.2.2 Groundwater Samples

MSG submitted groundwater samples collected from temporary wells TW-2, TW-4, TW-6, TW-8, and TW-10 for laboratory analysis of the following based on COCs identified in the Phase I ESA for the Subject Property:

- Groundwater samples from REC/IA-1 (TW-2 and TW-4) were submitted for the following analyses:
  - BUSTR VOCs by EPA Method SW8260B;
  - 1,2-Dibromoethane (EDB) by EPA Method 8011
  - Total lead by EPA Method SW6010B; and,
  - PAHs by EPA Method SW8270C.
- The groundwater sample from REC-2/IA-2 (TW-6, TW-8, and TW-10) were submitted for the following analysis:
  - VOCs by EPA Method SW8260B;
  - RCRA Metals by EPA Method SW6010B/7471A;
  - SVOCs by EPA Method SW8270C; and,
  - PCBs by EPA Method SW8282.

### 3.3 Field Quality Assurance and Quality Control Procedures

MSG employed field quality assurance and quality control (QA/QC) processes in accordance with standard industry practices and ensured that adequate QA/QC protocols were administered by following standard operating procedures (SOPs). Prior to use for screening samples, the PID was “zeroed-out” in ambient air and then calibrated with a 100 parts per million (ppm) isobutylene in air standard. All samples were transported to the laboratory on ice under chain-of-custody procedures. (Appendix C).



## 4.0 DATA EVALUATION

### 4.1 Geophysical Survey Results

The EM survey identified a strong EM in-phase ('metal') anomaly located at the western portion of the Subject Property. GII performed two targeted GPR linescans (Linescans A and B) in this anomaly area. Two hyperbolic reflection responses were identified on the GPR scans. The shape, strength and ring-down of these reflections are similar to the GPR response that is often observed over cylindrical-shaped steel objects such as USTs, large diameter metal pipes, or cylindrical-shaped metal containers. Based on the EM and GPR data, GII interpreted this anomaly area to represent two possible USTs. The EM survey also identified a strong EM in-phase ('metal') anomaly located at the southwestern portion of the Subject Property. GII performed two targeted GPR linescans (Linescans B and C) in this anomaly area. A cylindrical-shaped steel object was not identified on the GPR scans; however, it is not uncommon for some large metal objects to be undetectable to GPR when highly conductive backfill materials are present over the target. Based on the EM data, GII interpreted this anomaly area to represent a possible UST. Other strong EM metal anomalies identified during the survey were most likely associated with known aboveground interference, such as reinforced concrete sidewalks and a chain-link fence.

A copy of the GII's report is included in Appendix I.

### 4.2 Boring Log Descriptions

Logs of borings advanced for this Focused Phase II ESA are presented in Appendix B. Observations of the borings during drilling indicate that much of the property is underlain by clayey fill to approximately two feet bsg. The clayey fill is generally underlain by more permeable granular material consisting of silty sand to the termini of the borings at 15 to 20 feet bsg.

### 4.3 Analytical Results

MSG performed this Focused Phase II ESA sampling to assess the potential impacts to soil and groundwater from the RECs/IAs identified at the Subject Property MSG's February 2023 Phase I ESA. MSG compared the soil analytical results from REC/IA-1 to the BUSTR Closure Action Levels and Ohio VAP Residential, Commercial/Industrial, and Construction/Excavation Worker Generic Numerical Standards (GNS) for direct-contact and MSG compared the soil analytical results from REC/IA-2 to the Ohio VAP Residential, Commercial/Industrial, and Construction/Excavation Worker GNS for direct contact. Metals were the only constituents detected in the collected groundwater samples. Accordingly, MSG compared the groundwater analytical results to the Ohio VAP Unrestricted Potable Use Standards (UPUS).

#### 4.3.1 Soil Analytical Results – REC-1/IA-1

The attached Table 1 presents the analytical results of identified constituents in the soil samples collected from REC-1/IA-1, which are summarized as:

- Benzene was detected in the soil sample collected from SB-2 (0-2') below its BUSTR Closure Action Level and Ohio VAP Residential (unrestricted use) GNS. No other BUSTR VOCs were detected above their respective laboratory reporting limits;
- Benzo(a)pyrene was detected in the soil sample collected from SB-2 (0-2') above the BUSTR Closure Action Level and VAP Residential GNS; however, the concentration was below the VAP Commercial/Industrial and Construction/Excavation Worker GNS. Low levels of several PAHs were detected in shallow soil samples SB-2 (0-2'), SB-4 (0-2') and SB-5 (0-2') at

concentrations below their respective BUSTR Closure Action Levels and/or Ohio VAP Residential (unrestricted use) GNS;

- Low levels of TPH-DRO and ORO were detected in shallow soil samples SB-2 (0-2'), SB-4 (0-2') and SB-5 (0-2') at concentrations below their respective BUSTR Closure Action Levels; and,
- Lead was detected in all 10 of the soil samples submitted for analyses from REC-1/IA-1. The lead concentration in sample collected from SB-5 (0-2') was 880 mg/kg exceeding the Ohio VAP Residential, Commercial/Industrial, and Construction/Excavation Worker GNS. BUSTR does not have an Action Level for lead. The remaining lead concentrations ranged from were all below the Ohio VAP Residential (unrestricted use) GNS.

#### **4.3.2 Soil Analytical Results – REC-2/IA-2**

The attached Table 2 presents the analytical results of identified constituents in the collected soil samples collected from REC-2/IA-2, which are summarized as:

- Low levels of carbon disulfide, chloroform, and/or naphthalene were detected in one or more soil samples at concentrations below their respective Ohio VAP Residential (unrestricted use) GNS. No other VOCs were detected above their respective laboratory reporting limits;
- Benzo(a)pyrene was detected in the soil samples collected from SB-10 (0-2'), SB-6 (0-2'), and SB-22 (0-2') above the VAP Residential GNS, but below the VAP Commercial/Industrial and Construction/Excavation Worker GNS. Low levels of several other SVOCs were detected in several soil samples at concentrations below their respective Ohio VAP Residential (unrestricted use) GNS;
- Arsenic was detected in 20 of the 22 soil samples submitted for analyses at concentrations ranging from 6.3 to 27.0 mg/kg with 11 samples at or exceeding the Ohio VAP Residential GNS of 14.0 mg/kg, but below the VAP Commercial / Industrial GNS of 100 mg/kg and Construction/Excavation GNS of 760.0 mg/kg;
- Mercury was detected in 17 of the 22 soil samples submitted for analyses at concentrations ranging from 0.5 to 26.0 mg/kg with eight samples exceeding the Ohio VAP Residential GNS, Construction/Excavation GNS, and Commercial / Industrial GNS of 3.1 mg/kg; and,
- PCBs were not detected in any of the soil samples submitted for analyses above their laboratory reporting limits.

#### **4.3.3 Groundwater Analytical Results - REC-1/IA-1**

The attached Table 3 presents the analytical results of identified constituents in the collected groundwater samples from REC-1/IA-1, which are summarized as:

- BUSTR VOCs and PAHs were not detected above their laboratory reporting limits in either of the two groundwater samples (TW-2 and TW-4) collected from REC-1/IA-1; and,
- Lead was detected at TW-2 and TW-4 at concentrations of 26.0 and 410.0 µg/l above the UPUS of 15.0 µg/l. BUSTR has not promulgated a standard for lead.

#### **4.3.4 Groundwater Analytical Results - REC-2/IA-2**

The attached Table 3 presents the analytical results of identified constituents in the collected groundwater samples from REC-2/IA-2, which are summarized as:

- VOCs and SVOCs were not detected above their laboratory reporting limits in the three groundwater samples (TW-6, TW-8, and TW-10) collected from REC-2/IA-2.; and,
- Arsenic, total chromium, and lead were detected in all three groundwater samples (TW-6, TW-8, and TW-10) collected from REC-2/IA-2 at concentrations above their respective UPUS. Barium was detected in all three groundwater samples and mercury was detected in groundwater samples TW-8 and TW-10 at concentrations below their respective UPUS.

#### 4.4 Arsenic Background Evaluation

Occasionally, a risk based comparison standard (i.e. Ohio VAP GNS) is lower than the background concentration of a constituent in soil. This frequently occurs for naturally occurring metals in soils, especially arsenic. Accordingly, because arsenic detections in soil from this Focused Phase II ESA exceeded the Ohio VAP Residential (unrestricted use) GNS, MSG compared the arsenic concentrations in soil at the Subject Property with published background levels of arsenic in Cuyahoga County and the state of Ohio.

##### 4.4.1 Natural Occurrence of Arsenic in Soils

Arsenic is a naturally occurring element in the earth's crust and is present throughout the environment. Arsenic levels in soil vary widely and are found in urban areas as well as undeveloped areas in Ohio. Cox-Colvin (1996) completed a study of arsenic background concentrations around the state of Ohio in 1996. This study was undertaken to provide a statewide statistical evaluation of background metal concentrations in Ohio soils. Data were compiled from public Ohio EPA files for RCRA Closure, RCRA Corrective Action, and CERCLA projects. Background data from 64 environmental projects completed between 1984 and 1994 were used in the study. In this study, the authors determined that heavy metals found in these background studies fell into two distinct populations: background soils and "industrially-impacted" soils. Some of the heavy metals were determined to have both types of populations and arsenic was in the group of heavy metals that was found in the background soil population. They found that the data were log-normally distributed and after removing outliers, the background (unaffected by industrial activity) data set ranged from 0.5 to 56 mg/kg, with a median concentration of 5.72 mg/kg arsenic. Other studies defining arsenic concentrations in Ohio Soils include:

- Ohio EPA (October 2013) Division of Environmental Response and Revitalization (DERR) sampled and analyzed surface soils at 13 Cuyahoga County area properties for background concentrations of arsenic and other metals. The study indicated that concentrations of arsenic ranged from 4.6 to 33.1 mg/kg with a mean calculated to be 14.06 mg/kg and a representative background concentration determined to be 24.0 mg/kg.
- Venteris (April 2010) in a presentation at the North-Central Geological Society of America Sectional meeting collected samples at 348 locations in Ohio, selecting site minimizing anthropomorphic influences. Arsenic concentrations were found to range from 2 to 45.6 mg/Kg with a median value of 10 mg/Kg. The study concluded that arsenic naturally and commonly occurs at concentrations exceeding 20 mg/kg;
- Vosnakis, et. al. (2010), completed a study based upon 313 samples; and reported arsenic in Ohio soil ranging from 1.6 to 71.3 mg/Kg, with a median value of 10.1 mg/Kg.

##### 4.4.2 Arsenic Analytical Results

As noted in Section 4.3.2 and the attached Table 2, arsenic was detected in all 20 of the 22 soil samples at concentrations ranging between 6.7 to 27.0 mg/kg, with all but two of the detected concentrations below the Ohio EPA's calculated representative background concentration of

arsenic of 24.0 mg/kg in Cuyahoga County. Further, the two exceedances of the Ohio EPA Cuyahoga County background arsenic concentration were the same order of magnitude as the calculated background concentration and are within the degree of variability of published arsenic background concentrations in Ohio soils.

#### **4.5 Laboratory QA/QC Results**

MSG evaluated laboratory QA/QC by analyzing surrogate recoveries, Laboratory Control Samples (LCS) and Matrix Spike/Matrix Spike Duplicate (MS/MSD) samples for each sample delivery group (SDG) to evaluate the quality of the data reported by the laboratory. Following is a summary of MSG's review of the laboratory QA/QC report for the laboratory data packages submitted as part of this project (See Table 4). Copies of the laboratory reports are presented in Appendix C.

- The Chain-of-Custody forms were in good order;
- Samples arrived in good condition and within temperature limits;
- Samples were analyzed within hold times;
- LCS were in control; and,
- Method blanks were non-detect.

Based upon a review of the laboratory QA/QC documentation, MSG is of the opinion that the data generated as part of this Focused Phase II ESA are valid and representative of Subject Property conditions.

## 5.0 SUMMARY AND CONCLUSIONS

Based on the results of the Focused Phase II ESA, MSG concludes the following:

- The geophysical survey identified three anomalies interpreted to represent potential orphan USTs in the southwest portion of the Subject Property parcel addressed at 3203 W. 71<sup>st</sup> Street, Cleveland, Ohio in the general location as the three gasoline USTs depicted on the 1950 to 1971 Sanborn Maps identified during MSG's February 2023 Phase I ESA of the Subject Property;
- The data indicate that shallow subsurface soil in REC-1/IA-1 is impacted with lead at one location above the Ohio VAP Residential (unrestricted use), Construction / Excavation Worker, and Commercial / Industrial GNSs;
- Arsenic was detected in 20 of the 22 soil samples submitted from REC-2/IA-2 for analyses at concentrations ranging from 6.3 to 27.0 mg/kg with 11 samples at or exceeding the Ohio VAP Residential GNS of 14.0 mg/kg, but below the VAP Commercial / Industrial GNS of 100 mg/kg and Construction / Excavation Worker GNS of 760 mg/kg. Further, all but two of the detected arsenic concentrations are below the Ohio EPA's calculated background arsenic concentration in Cuyahoga County of 24.0 mg/kg and the remaining two that exceed that concentration are within published arsenic background concentration ranges in Ohio soils;
- Mercury was detected in 17 of the 22 soil samples submitted for analyses from REC-2/IA-2 at concentrations ranging from 0.5 to 26.0 mg/kg with eight samples exceeding the Ohio VAP Residential, Construction/Excavation, and Commercial / Industrial of 3.1 mg/kg;
- Benzo(a)pyrene was detected in the soil samples collected from SB-2 (0-2'), SB-10 (0-2'), SB-6 (0-2'), and SB-22 (0-2') above the BUSTR Closure Action Level and VAP Residential GNS; however, the concentrations were below the VAP Commercial/Industrial and Construction/Excavation Worker GNS;
- No other constituents were detected in the submitted soil samples above their respective BUSTR Action Levels and/or Ohio VAP Residential (unrestricted use) GNS;  
Lead was detected above UPUS in temporary monitoring wells TW-2, TW-4 TW-6, TW-8, and TW-10 and arsenic and chromium were detected above UPUS in temporary monitoring wells TW-6, TW-8, and TW-10; and,
- No other constituents were detected in the submitted groundwater samples above their respective laboratory reporting limits.

While the historical Sanborn Maps identified three USTs in the southwest portion of Subject Property parcel addressed at 3203 W. 71<sup>st</sup> Street, Cleveland, Ohio as "gasoline tanks," the soil laboratory analytical data from this area of the Subject Property suggest that at least one of these tanks contained middle or heavy distillate fuel such as diesel, heating oil, or used oil. Further, the geophysical survey indicates that these three USTs may still be present at the Subject Property.

That data indicate that near surface (0-2 feet) soils comprised primarily of fill materials at the Subject Property are impacted by benzo(a)pyrene, lead, and/or mercury in excess of Ohio VAP GNS and/or BUSTR Closure Action Levels. The lead and mercury concentrations above Ohio VAP GNS exceeded the Residential, Commercial/Industrial and Construction/Excavation Worker GNS, while the benzo(a)pyrene exceedances were above the Ohio VAP Residential, but below the Commercial/Industrial and Construction/Excavation Worker GNS. Further the detected arsenic concentrations across the Subject Property appear to be within the degree of variability of published arsenic background concentrations in Ohio soils.

The elevated metals results detected in the groundwater samples are likely indications of turbidity that results from the nature of sampling unfiltered water from a temporary well. Further, the groundwater samples were collected from a shallow perched aquifer that is generally not suitable for use as a drinking water source, there are no potable wells at or within 0.5-mile of the Subject Property, and the Subject Property is within a verified USD. Therefore, the drinking water exposure pathway is currently incomplete at the Subject Property. However, if a volunteer intends to seek a CNS for the Site through Ohio's VAP and/or to continue to keep the future drinking water exposure pathway

incomplete, an activity and use limitation (AUL) restricting the use of groundwater at the Site to non-potable uses through an Environmental Covenant (EC) may be necessary.

## 6.0 BIBLIOGRAPHY

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United States Department of Agriculture, Natural Resources Conservation Service, Web Soil Survey website: <http://websoilsurvey.nrcs.usda.gov> (Provided soil types for the Subject Property).

United States Department of Agriculture, et al. Soil Survey of Cuyahoga County, OH: 1980. (Obtained soil description for the Subject Property).

United States Geological Survey (USGS) 7.5-Minute topographic map for the Cleveland South, Cuyahoga County, OH quadrangle (dated 2019).

TABLES





**Table 1**  
**Soil Sample Results - REC/IA-1**  
**3203 W. 71st Street**  
**Cleveland, Ohio**

Soil Sample								SB-1 (0-2')	SB-1 (2-4')	SB-2 (0-2')	SB-2 (5-7')	SB-3 (0-2')	SB-3 (5-7')	SB-4 (0-2')	SB-4 (3-5')	SB-5 (0-2')	SB-5 (3-5')		
Laboratory ID								23051029-01	23051029-01	23051029-07	23051029-08	23051029-10	23051029-11	23051029-03	23051029-04	23051029-05	23051029-06		
Sample Date								05/22/23	05/22/23	05/22/23	05/22/23	05/22/23	05/22/23	05/22/23	05/22/23	05/22/23	05/22/23		
REC/IA Location								REC-1/IA-1											
Constituent	CAS #	Units	Ohio VAP Residential GNS	Ohio VAP Const/Exc GNS	Ohio VAP Comm/Ind GNS	BUSTR Class I Soil Action Levels	Analytical Method	Results											
<b>Inorganics</b>																			
Lead	7439-92-1	mg/kg	400	400	800	NA	EPA 6010B	19.0	16.0	58.0	12.0	11.0	13.0	58.0	9.8	880	12.0		
<b>Volatile Organic Compounds</b>																			
Benzene	71-43-2	mg/kg	28	1,200	130	1.67	EPA 8260	< 0.0052	< 0.0054	0.074	< 0.0050	< 0.0051	< 0.0061	< 0.0054	< 0.0046	< 0.0052	< 0.0053		
<b>Polycyclic Aromatic Hydrocarbons</b>																			
Anthracene	120-12-7	mg/kg	36,000	1,000,000	670,000	NA	EPA 8270	< 0.24	< 0.24	0.52	< 0.23	< 0.25	< 0.26	< 0.25	< 0.23	< 0.23	< 0.26		
Benzo(a)anthracene	56-55-3	mg/kg	23	9,600	610	12	EPA 8270	< 0.12	< 0.12	2.90	< 0.12	< 0.12	< 0.13	0.43	< 0.12	0.59	< 0.13		
Benzo(a)pyrene	50-32-8	mg/kg	2.3	230	62	1.2	EPA 8270	< 0.12	< 0.12	3.70	< 0.12	< 0.12	< 0.13	0.49	< 0.12	0.66	< 0.13		
Benzo(b)fluoranthene	205-99-2	mg/kg	23	10,000	620	12	EPA 8270	< 0.24	< 0.24	3.90	< 0.23	< 0.25	< 0.26	0.56	< 0.23	0.85	< 0.26		
Benzo(g,h,i)perylene	191-24-2	mg/kg	3,600	430,000	67,000	NA	EPA 8270	< 0.24	< 0.24	2.30	< 0.23	< 0.25	< 0.26	0.33	< 0.23	0.47	< 0.26		
Benzo(k)fluoranthene	207-08-9	mg/kg	230	100,000	6,200	120	EPA 8270	< 0.24	< 0.24	1.50	< 0.23	< 0.25	< 0.26	< 0.25	< 0.23	0.33	< 0.26		
Chrysene	218-01-9	mg/kg	2,300	1,000,000	62,000	1,200	EPA 8270	< 0.24	< 0.24	2.90	< 0.23	< 0.25	< 0.26	0.43	< 0.23	0.62	< 0.26		
Dibenz(a,h)anthracene	53-70-3	mg/kg	2.3	1,000	62	1.2	EPA 8270	< 0.12	< 0.12	0.49	< 0.12	< 0.12	< 0.13	< 0.12	< 0.12	0.12	< 0.13		
Fluoranthene	206-44-0	mg/kg	4,800	170,000	89,000	NA	EPA 8270	< 0.24	< 0.24	4.20	< 0.23	< 0.25	< 0.26	0.87	< 0.23	1.10	< 0.26		
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	23	10,000	620	12	EPA 8270	< 0.12	< 0.12	1.90	< 0.12	< 0.12	< 0.13	0.27	< 0.12	0.41	< 0.13		
Phenanthrene	85-01-8	mg/kg	36,000	1,000,000	670,000	NA	EPA 8270	< 0.24	< 0.24	1.60	< 0.23	< 0.25	< 0.26	0.42	< 0.23	0.55	< 0.26		
Pyrene	129-00-0	mg/kg	3,600	430,000	67,000	NA	EPA 8270	< 0.24	< 0.24	3.60	< 0.23	< 0.25	< 0.26	0.75	< 0.23	0.93	< 0.26		
<b>Total Petroleum Hydrocarbons</b>																			
TPH C6-C12		mg/kg		1,000		1,000	EPA 8015A	<2.4	<2.4	<2.3	<2.3	<2.5	<2.6	<2.5	<2.3	<2.3	<2.6		
TPH C10-C20		mg/kg		2,000		2,000	EPA 8015B	<16.0	<16.0	55.0	<15.0	<17.0	<17.0	17.0	<16.0	22.0	<17.0		
TPH C20-C34		mg/kg		5,000		5,000	EPA 8015B	<16.0	<16.0	120	<15.0	<17.0	<17.0	32.0	<16.0	56.0	<17.0		

NA -- Not Applicable (No BUSTR Action Level for this constituent)

mg/Kg - milligram per kilogram (ppm)

Highlighted cell indicates constituent above BUSTR Action Level and/or one or more Ohio EPA VAP Generic Numeric Standard (GNS)

**Table 2**  
**Soil Sample Results - REC/IA-2**  
**3203 W. 71st Street**  
**Cleveland, Ohio**

Soil Sample								SB-6 (0-2')	SB-6 (3-5')	SB-7 (0-2')	SB-7 (5-7')	SB-8 (0-2')	SB-8 (6-8')	SB-9 (0-2')	SB-9 (6-8')	SB-10 (0-2')	SB-10 (5-7')	SB-11 (0-2')	
Laboratory ID								23051029-14	23051029-15	23051029-12	23051029-13	23051029-16	23051029-17	23051029-20	23051029-21	23051029-18	23051029-19	23051093-01	
Sample Date								05/22/23	05/22/23	05/22/23	05/22/23	05/23/23	05/23/23	05/23/23	05/23/23	05/23/23	05/23/23	05/23/23	
REC/IA Location								REC-2/IA-2											
Constituent	CAS #	Units	Ohio VAP Residential GNS	Ohio VAP Const/Exc GNS	Ohio VAP Comm/Ind GNS	Cuyahoga County Background Levels <sup>1</sup>	Analytical Method	Results											
<b>Inorganics</b>																			
Arsenic	7440-38-2	mg/kg	14	760	100	24	EPA 6010B	14.0	6.0	14.0	<6.4	<5.8	17.0	8.4	12.0	14.0	22.0	6.3	
Barium	7440-39-3	mg/kg	30,000	350,000	760,000	98.9	EPA 6010B	51.0	42.0	24.0	<26.0	42.0	<24.0	62.0	<24.0	90.0	54.0	140	
Cadmium	7440-43-9	mg/kg	140	710	3,300	0.83	EPA 6010B	<1.2	<1.2	<1.2	<1.3	<1.2	<1.2	<1.1	<1.2	<1.2	<1.2	2.3	
Chromium, Total	7440-47-3	mg/kg	230,000	920,000	1,000,000	21.1	EPA 6010B	13.0	18.0	14.0	<13.0	<12.0	<12.0	14.0	<12.0	40.0	12.0	20.0	
Lead	7439-92-1	mg/kg	400	400	800	51.7	EPA 6010B	<24.0	28.0	<24.0	<26.0	<23.0	<24.0	43.0	<24.0	180	33.0	26.0	
Mercury	7439-97-6	mg/kg	3.1	3.1	3.1	0.097	EPA 7471	<0.33	<0.33	<0.34	<0.36	<0.34	<0.33	5.2	0.5	7.8	<0.37	1.2	
<b>Volatile Organic Compounds</b>																			
Carbon disulfide	75-15-0	mg/kg	740	740	740	NA	EPA 8260	< 0.0046	< 0.0046	< 0.0042	< 0.0058	< 0.0046	< 0.0055	< 0.0046	< 0.0049	< 0.0049	< 0.0049	<0.0054	
Chloroform	67-66-3	mg/kg	7.9	320	38	NA	EPA 8260	< 0.0046	< 0.0046	< 0.0042	< 0.0058	< 0.0046	< 0.0055	< 0.0046	< 0.0049	< 0.0049	< 0.0049	<0.0054	
Naphthalene	91-20-3	mg/kg	96	560	450	NA	EPA 8260	< 0.0046	< 0.0046	< 0.0042	< 0.0058	< 0.0046	< 0.0055	< 0.0046	< 0.0049	< 0.0049	< 0.0049	<0.0054	
<b>Polycyclic Aromatic Hydrocarbons</b>																			
1,3-Dinitrobenzene	99-65-0	mg/kg	13	1,600	250	NA	EPA 8270	<0.40	<0.40	<0.40	<0.43	<0.39	<0.41	<0.41	<0.42	<0.40	<0.42	<0.36	
1-Methylnaphthalene	90-12-0	mg/kg	350	31,000	1,500	NA	EPA 8270	< 0.24	< 0.24	< 0.24	<0.26	< 0.24	< 0.25	< 0.25	<0.26	0.45	< 0.25	<0.22	
2-Methylnaphthalene	91-57-6	mg/kg	480	5,200	6,000	NA	EPA 8270	< 0.24	< 0.24	< 0.24	<0.26	< 0.24	< 0.25	< 0.25	<0.26	0.56	< 0.25	<0.22	
Acenaphthene	83-32-9	mg/kg	7,200	290,000	1,000,000	NA	EPA 8270	< 0.24	< 0.24	< 0.24	<0.26	< 0.24	< 0.25	< 0.25	<0.26	0.55	< 0.25	<0.22	
Acenaphthylene	208-96-8	mg/kg	7,200	290,000	130,000	NA	EPA 8270	< 0.24	< 0.24	< 0.24	<0.26	< 0.24	< 0.25	< 0.25	<0.26	< 0.24	< 0.25	<0.22	
Anthracene	120-12-7	mg/kg	36,000	1,000,000	670,000	NA	EPA 8270	< 0.24	< 0.24	< 0.24	<0.26	< 0.24	< 0.25	< 0.25	<0.26	1.80	< 0.25	<0.22	
Benzo(a)anthracene	56-55-3	mg/kg	23	9,600	610	NA	EPA 8270	<0.12	<0.12	<0.12	<0.13	<0.12	<0.12	<0.12	<0.13	5.00	<0.13	0.45	
Benzo(a)pyrene	50-32-8	mg/kg	2.3	230	62	NA	EPA 8270	<0.12	<0.12	<0.12	<0.13	<0.12	<0.12	<0.12	<0.13	5.00	<0.13	0.44	
Benzo(b)fluoranthene	205-99-2	mg/kg	23	10,000	620	NA	EPA 8270	< 0.24	< 0.24	< 0.24	<0.26	< 0.24	< 0.25	< 0.25	<0.26	5.50	< 0.25	0.54	
Benzo(g,h,i)perylene	191-24-2	mg/kg	3,600	430,000	67,000	NA	EPA 8270	< 0.24	< 0.24	< 0.24	<0.26	< 0.24	< 0.25	< 0.25	<0.26	3.20	< 0.25	0.30	
Benzo(k)fluoranthene	207-08-9	mg/kg	230	100,000	6,200	NA	EPA 8270	< 0.24	< 0.24	< 0.24	<0.26	< 0.24	< 0.25	< 0.25	<0.26	2.20	< 0.25	0.25	
Butyl benzyl phthalate	85-68-7	mg/kg	5,700	590,000	37,000	NA	EPA 8270	<0.40	<0.40	<0.40	<0.43	<0.39	<0.41	<0.41	<0.42	<0.40	<0.42	0.55	
Carbazole	86-74-8	mg/kg	540	56,000	3,500	NA	EPA 8270	< 0.24	< 0.24	< 0.24	<0.26	< 0.24	< 0.25	< 0.25	<0.26	0.71	< 0.25	<0.22	
Chrysene	218-01-9	mg/kg	2,300	1,000,000	62,000	NA	EPA 8270	< 0.24	< 0.24	< 0.24	<0.26	< 0.24	< 0.25	< 0.25	<0.26	4.90	< 0.25	0.50	
Dibenz(a,h)anthracene	53-70-3	mg/kg	2.3	1,000	62	NA	EPA 8270	<0.12	<0.12	<0.12	<0.13	<0.12	<0.12	<0.12	<0.13	0.90	<0.13	<0.11	
Dibenzofuran	132-64-9	mg/kg	160	9,700	4,700	NA	EPA 8270	< 0.24	< 0.24	< 0.24	<0.26	< 0.24	< 0.25	< 0.25	<0.26	0.42	< 0.25	<0.22	
Di-n-butyl phthalate	84-74-2	mg/kg	NS	NS	NS	NA	EPA 8270	<0.40	<0.40	<0.40	<0.43	<0.39	<0.41	<0.41	<0.42	<0.40	<0.42	<0.36	
Fluoranthene	206-44-0	mg/kg	4,800	170,000	89,000	NA	EPA 8270	< 0.24	< 0.24	< 0.24	<0.26	< 0.24	< 0.25	< 0.25	<0.26	9.00	< 0.25	1.00	
Fluorene	86-73-7	mg/kg	4,800	580,000	89,000	NA	EPA 8270	< 0.24	< 0.24	< 0.24	<0.26	< 0.24	< 0.25	< 0.25	<0.26	0.57	< 0.25	<0.22	
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	23	10,000	620	NA	EPA 8270	<0.12	<0.12	<0.12	<0.13	<0.12	<0.12	<0.12	<0.13	2.80	<0.13	0.26	
Naphthalene	91-20-3	mg/kg	96	560	450	NA	EPA 8270	< 0.24	< 0.24	< 0.24	<0.26	< 0.24	< 0.25	< 0.25	<0.26	0.51	< 0.25	<0.22	
Phenanthrene	85-01-8	mg/kg	36,000	1,000,000	670,000	NA	EPA 8270	< 0.24	< 0.24	< 0.24	<0.26	< 0.24	< 0.25	< 0.25	<0.26	6.10	< 0.25	0.73	
Pyrene	129-00-0	mg/kg	3,600	430,000	67,000	NA	EPA 8270	< 0.24	< 0.24	< 0.24	<0.26	< 0.24	< 0.25	< 0.25	<0.26	7.30	< 0.25	0.81	

NS -- No Ohio VAP Standard available. Constituent is not a hazardous or petroleum-related substance as defined by the VAP statute (ORC 3746.01)

NA - Not Applicable

mg/Kg - milligram per kilogram (ppm)

Highlighted cell indicates constituent above one or more Ohio EPA VAP Standard

<sup>1</sup>Evaluation of Background Metal Soil Concentrations in Cuyahoga County - Cleveland Area Summary Report, Ohio EPA, Division of Environmental Response and Revitalization, Voluntary Action Program, March 2013

**Table 2**  
**Soil Sample Results - REC/IA-2**  
**3203 W. 71st Street**  
**Cleveland, Ohio**

Soil Sample								SB-12 (0-2')	SB-13 (0-2')	SB-14 (0-2')	SB-15 (0-2')	SB-16 (0-2')	SB-17 (0-2')	SB-18 (0-2')	SB-19 (0-2')	SB-20 (0-2')	SB-21 (0-2')	SB-22 (0-2')	
Laboratory ID								23051029-29	23051093-02	23051029-28	23051029-27	23051093-03	23051029-23	23051093-04	23051029-22	23051029-24	23051029-25	23051029-26	
Sample Date								05/23/23	05/23/23	05/23/23	05/23/23	05/23/23	05/23/23	05/23/23	05/23/23	05/23/23	05/23/23	05/23/23	
REC/IA Location								REC-2/IA-2											
Constituent	CAS #	Units	Ohio VAP Residential GNS	Ohio VAP Const/Exc GNS	Ohio VAP Comm/Ind GNS	Cuyahoga County Background Levels <sup>1</sup>	Analytical Method	Results											
<b>Inorganics</b>																			
Arsenic	7440-38-2	mg/kg	14	760	100	24	EPA 6010B	14.0	8.5	19.0	20.0	14.0	7.4	6.8	27.0	25.0	6.7	18.0	
Barium	7440-39-3	mg/kg	30,000	350,000	760,000	98.9	EPA 6010B	130	34.0	120	62.0	120	22.0 J	69.0	<24.0	160	81.0	130	
Cadmium	7440-43-9	mg/kg	140	710	3,300	0.83	EPA 6010B	<1.1	1.9	<1.2	<1.2	2.9	<1.1	1.6	<1.2	1.5	2.9	<1.1	
Chromium, Total	7440-47-3	mg/kg	230,000	920,000	1,000,000	21.1	EPA 6010B	12.0	<11.0	49.0	<12.0	38.0	<11.0	15.0	12.0	22.0	50.0	55.0	
Lead	7439-92-1	mg/kg	400	400	800	51.7	EPA 6010B	190	<23.0	150	<23.0	280	<22.0	<24.0	<24.0	280	53.0	280	
Mercury	7439-97-6	mg/kg	3.1	3.1	3.1	0.097	EPA 7471	0.48	<0.31	3.3	<0.33	10.0	0.82	<0.31	26.0	6.0	3.6	4.9	
<b>Volatile Organic Compounds</b>																			
Carbon disulfide	75-15-0	mg/kg	740	740	740	NA	EPA 8260	<0.0051	<0.0050	<0.0050	<0.0052	<0.0051	<0.0040	<0.0062	<0.0047	<0.0051	0.022	<0.0049	
Chloroform	67-66-3	mg/kg	7.9	320	38	NA	EPA 8260	<0.0051	0.0076	<0.0050	<0.0052	<0.0051	<0.0040	<0.0062	<0.0047	<0.0051	<0.0059	<0.0049	
Naphthalene	91-20-3	mg/kg	96	560	450	NA	EPA 8260	<0.0051	<0.0050	<0.0050	<0.0052	<0.0051	<0.0040	<0.0062	0.0095	<0.0051	<0.0059	<0.0049	
<b>Polycyclic Aromatic Hydrocarbons</b>																			
1,3-Dinitrobenzene	99-65-0	mg/kg	13	1,600	250	NA	EPA 8270	<0.38	<0.39	0.53	<0.40	<0.37	<0.38	<0.39	<0.39	<0.39	<0.37	<0.38	
1-Methylnaphthalene	90-12-0	mg/kg	350	31,000	1,500	NA	EPA 8270	<0.23	<0.24	0.71	<0.24	<0.24	<0.23	<0.24	<0.24	0.49	<0.22	0.92	
2-Methylnaphthalene	91-57-6	mg/kg	480	5,200	6,000	NA	EPA 8270	<0.23	<0.24	0.86	<0.24	<0.24	<0.23	<0.24	<0.24	0.58	<0.22	1.10	
Acenaphthene	83-32-9	mg/kg	7,200	290,000	1,000,000	NA	EPA 8270	<0.23	<0.24	<0.24	<0.24	<0.24	<0.23	<0.24	<0.24	<0.24	<0.22	0.95	
Acenaphthylene	208-96-8	mg/kg	7,200	290,000	130,000	NA	EPA 8270	<0.23	<0.24	<0.24	<0.24	<0.24	<0.23	<0.24	<0.24	<0.24	<0.22	0.32	
Anthracene	120-12-7	mg/kg	36,000	1,000,000	670,000	NA	EPA 8270	<0.23	<0.24	0.36	<0.24	<0.24	1.90	<0.23	<0.24	<0.24	<0.22	0.23	
Benzo(a)anthracene	56-55-3	mg/kg	23	9,600	610	NA	EPA 8270	0.54	<0.12	1.50	<0.12	5.70	0.12	<0.12	<0.12	1.30	1.10	6.60	
Benzo(a)pyrene	50-32-8	mg/kg	2.3	230	62	NA	EPA 8270	0.52	<0.12	1.60	<0.12	4.90	<0.11	<0.12	<0.12	1.30	1.00	5.90	
Benzo(b)fluoranthene	205-99-2	mg/kg	23	10,000	620	NA	EPA 8270	0.64	<0.24	2.10	<0.24	5.80	<0.23	<0.24	<0.24	1.60	1.20	7.40	
Benzo(g,h,i)perylene	191-24-2	mg/kg	3,600	430,000	67,000	NA	EPA 8270	0.28	<0.24	0.93	<0.24	2.60	<0.23	<0.24	<0.24	0.75	0.66	3.20	
Benzo(k)fluoranthene	207-08-9	mg/kg	230	100,000	6,200	NA	EPA 8270	<0.23	<0.24	0.73	<0.24	2.70	<0.23	<0.24	<0.24	0.54	0.41	2.80	
Butyl benzyl phthalate	85-68-7	mg/kg	5,700	590,000	37,000	NA	EPA 8270	<0.38	<0.39	<0.40	<0.40	<0.37	<0.38	<0.39	<0.39	<0.39	15.0	<0.38	
Carbazole	86-74-8	mg/kg	540	56,000	3,500	NA	EPA 8270	<0.23	<0.24	<0.24	<0.24	0.75	<0.23	<0.24	<0.24	<0.24	<0.22	0.97	
Chrysene	218-01-9	mg/kg	2,300	1,000,000	62,000	NA	EPA 8270	0.51	<0.24	1.70	<0.24	5.80	<0.23	<0.24	<0.24	1.40	1.10	7.40	
Dibenz(a,h)anthracene	53-70-3	mg/kg	2.3	1,000	62	NA	EPA 8270	<0.12	<0.12	0.26	<0.12	0.79	<0.11	<0.12	<0.12	0.24	0.17	0.94	
Dibenzofuran	132-64-9	mg/kg	160	9,700	4,700	NA	EPA 8270	<0.23	<0.24	0.25	<0.24	0.46	<0.23	<0.24	<0.24	<0.24	<0.22	0.82	
Di-n-butyl phthalate	84-74-2	mg/kg	NS	NS	NS	NA	EPA 8270	<0.38	<0.39	<0.40	<0.40	<0.37	<0.38	<0.39	<0.39	<0.39	0.49	<0.38	
Fluoranthene	206-44-0	mg/kg	4,800	170,000	89,000	NA	EPA 8270	0.85	<0.24	3.00	<0.24	12.0	0.24	<0.24	<0.24	2.40	2.20	15.0	
Fluorene	86-73-7	mg/kg	4,800	580,000	89,000	NA	EPA 8270	<0.23	<0.24	<0.24	<0.24	0.61	<0.23	<0.24	<0.24	<0.24	<0.22	1.20	
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	23	10,000	620	NA	EPA 8270	0.25	<0.12	0.84	<0.12	2.50	<0.11	<0.12	<0.12	0.72	0.57	1.30	
Naphthalene	91-20-3	mg/kg	96	560	450	NA	EPA 8270	<0.23	<0.24	0.69	<0.24	0.49	<0.23	<0.24	<0.24	0.35	<0.22	1.00	
Phenanthrene	85-01-8	mg/kg	36,000	1,000,000	670,000	NA	EPA 8270	0.42	<0.24	1.80	<0.24	7.70	<0.23	<0.24	<0.24	1.30	1.60	12.0	
Pyrene	129-00-0	mg/kg	3,600	430,000	67,000	NA	EPA 8270	0.72	<0.24	2.50	<0.24	9.30	<0.23	<0.24	<0.24	2.00	1.70	12.0	

NS -- No Ohio VAP Standard available. Constituent is not a hazardous or petroleum-related substance as defined by the VAP statute (ORC 3746.01)

NA - Not Applicable

mg/Kg - milligram per kilogram (ppm)

Highlighted cell indicates constituent above one or more Ohio EPA VAP Standard

<sup>1</sup>Evaluation of Background Metal Soil Concentrations in Cuyahoga County - Cleveland Area Summary Report, Ohio EPA, Division of Environmental Response and Revitalization, Voluntary Action Program, March 2013

**Table 3**  
**Groundwater Sample Results**  
**3203 W. 71st Street**  
**Cleveland, Ohio**

Temporary Well					TW-2	TW-4	TW-6	TW-8	TW-10
Laboratory ID					23051029-31	23051029-30	23051029-32	23051093-04	23051093-05
Sample Date					5/22/2023	5/22/2023	5/23/2023	5/23/2023	5/23/2023
Constituent	CAS #	Units	Ohio VAP UPUS	Analytical Method	Results				
<i>Inorganics (Total Concentrations)</i>									
Arsenic	7440-38-2	µg/L	10	EPA 6020B	---	---	180	190	260
Barium	7440-39-3	µg/L	2,000	EPA 6020B	---	---	280	560	430
Chromium, Total	7440-47-3	µg/L	100	EPA 6020B			140	140	200
Lead	7439-92-1	µg/L	15	EPA 6020B	26.0	410	170	240	290
Mercury	7439-97-6	µg/L	2	EPA 7470A	---	---	<0.25	1.5	0.5

µg/L - microgram per liter (ppb)

Highlighted cell indicates constituent above Ohio EPA VAP UPUS

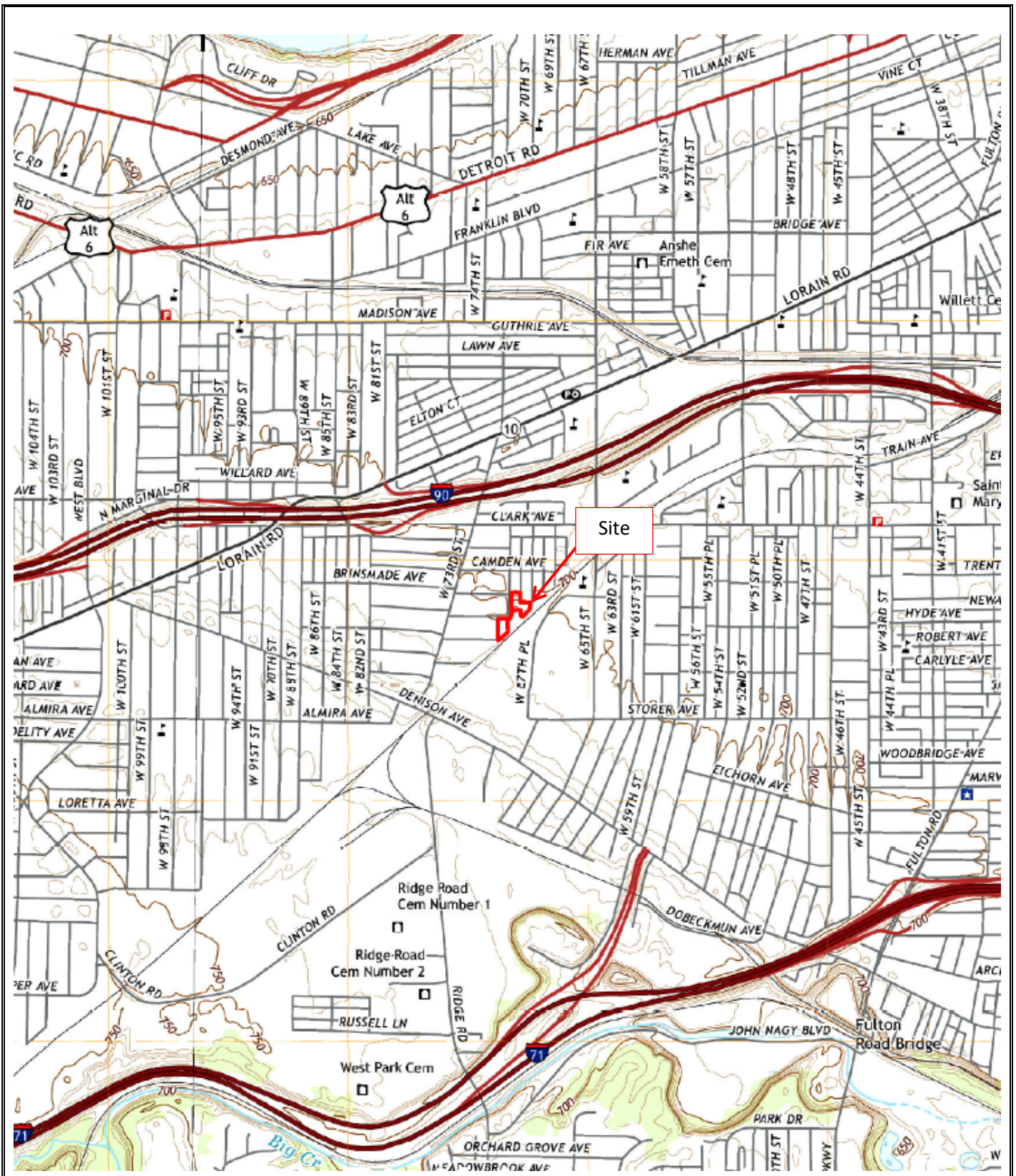
**Table 4**  
**Quality Assurance / Quality Control**  
**3203 W. 71st Street**  
**Cleveland, Ohio**

<b>Lab</b>	ALS	ALS
<b>SDG</b>	23051029	23051093
<b>Collection Date(s)</b>	5/22/23 - 5/23/23	05/23/23
<b>Collected by</b>	MSG	MSG
<b>Matrix</b>	Soil & Water	Soil & Water
<b>Chain of Custody</b>	Ok	Ok
<b>Cooler Temperature</b>	4.9 °C	5.3 °C
<b>Sample Preservation</b>	Ok	Ok
<b>Custody Seals</b>	No	No
<b>Bottles</b>	Lab Provided	Lab Provided
<b>Case Narrative</b>	QC sample results for this data met laboratory specifications.	QC sample results for this data met laboratory specifications.
<b>Lab Statement of Quality</b>	VAP Certified	VAP Certified
<b>Holding Times met?</b>	Yes	Yes
<b>Proper Methods</b>	Yes	Yes
<b>Reporting Limits acceptable</b>	Yes	Yes
<b>Surrogate recoveries within limits</b>	Yes	Yes
<b>Blanks</b>	Method Blanks Non-Detect	Method Blanks Non-Detect
<b>Duplicates</b>	Yes	None
<b>LCS within limits?</b>	In Control	In Control
<b>MS/MSD within limits?</b>	Yes	Yes
<b>MS/MSD client generated?</b>	No	No
<b>Overall Quality</b>	Acceptable	Acceptable

MB - Method Blank  
 ND - Non Detect  
 FB - Field Blank  
 PQL - Practical Quantification Limit  
 RPD - Relative Percent Difference  
 LCS - Laboratory Control Sample  
 MS/MSD - Matrix Spike / Matrix Spike Duplicate

FIGURES





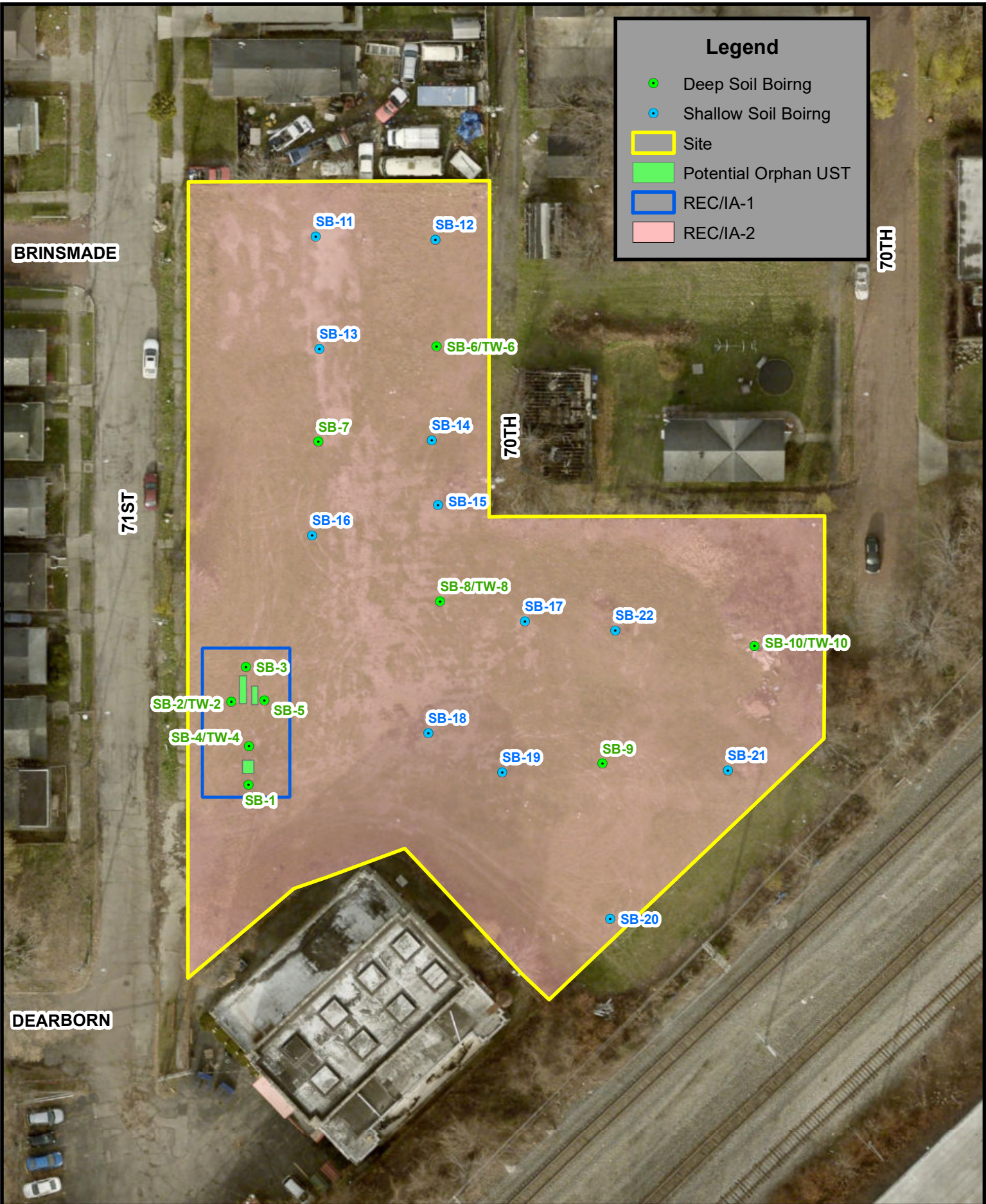
20600 Chagrin Blvd., Suite 500  
 Shaker Heights, Ohio 44122  
 Tel: 216.378.1490  
 Fax: 216.378.1497  
 www.MannikSmithGroup.com

**Figure 1:**  
**Site Location Map**  
 3203 W. 71<sup>st</sup> Street and  
 Dearborn Avenue,  
 Cleveland, Ohio

Notes: Map adapted from USGS,  
 2019 Cleveland South, Ohio and  
 Lakewood, Ohio Quadrangles  
 7.5 Minute series

Scale: 1 inch = 0.25 miles





BRINSMADE

71ST

70TH

70TH

DEARBORN

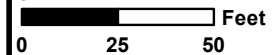
**Legend**

- Deep Soil Boirng
- Shallow Soil Boirng
- Site
- Potential Orphan UST
- REC/IA-1
- REC/IA-2

**Figure 2: Sample Location Map**  
**3203 W. 71st Street**  
**Cleveland, Ohio**

**Notes**

The Cuyahoga County photography, dated Fall 2021, is provided by Cuyahoga County GIS..





**APPENDIX A**  
**GEOPHYSICAL SURVEY REPORT**





**Geophysical Imaging, Inc.**  
3765 Timber Valley Dr  
Maumee, OH 43537  
Phone/fax: (419) 868-2902

April 21, 2023

GII Project No. 23-976

Matt Pesci  
Project Manager / Geologist  
The Mannik & Smith Group, Inc.  
1800 Indian Wood Circle  
Maumee, Ohio 43537

**Geophysical Survey Report  
3203 West 71st Street  
Cleveland, Ohio**

Dear Mr. Pesci:

This letter report summarizes the results and interpretations of the geophysical survey performed for The Mannik & Smith Group, Inc. (MSG) by Geophysical Imaging, Inc. (GII) at the above-referenced site. The purpose of the survey was to detect if abandoned underground storage tanks (USTs) are present at the site.

***Project Background***

According to MSG, USTs were historical present at the site. The status of the USTs is unknown.

***Field Activities and Data Processing***

On April 17, 2023, a combined electromagnetic induction (EM) and ground-penetrating radar (GPR) survey was conducted by GII in the area designated by MSG. Figure 1 depicts the approximate area surveyed and the general site features. The EM survey was performed in “continuous survey” mode along 2.5-foot spaced transects. GII used a GSSI EMP-400 multi-frequency EM profiler with integrated GPS. Two EM exploration frequencies (9,000 Hz and 12,000 Hz) were selected for the site. Prior to the EM survey, field, operator, and zero in-phase calibrations were performed at the site. In “continuous survey” mode, data are acquired at a fixed time interval while the operator walks along a survey line at a steady pace. Both in-phase (metal sensitive) and quadrature (terrain conductivity) measurements were acquired during the EM survey.



These measurements were automatically stored in a wireless data logger, and later downloaded to a computer for subsequent processing. Two software packages were utilized to define suspect areas, MagMap (supplied by E.G. & G. Geometrics) and SURFER (developed by Golden Software). Selected EM measurement contour maps are presented on Figures 2 and 3.

The GPR survey was performed along 5-foot spaced profiles. GII used a GSSI SIR-3000 GPR system with a 400-megahertz (MHz) dipole antenna mounted on a wheeled cart to scan the survey area. Several test scans were completed to observe the overall GPR responses to setup survey parameters prior to the GPR survey. A survey wheel was used to acquire distance-based data at the density of 18 scans per foot. Anomalous reflective objects/structures were noted and marked on the ground surface during the data acquisition. Additional linescans were performed to better understand anomalous targets. The GPR data were automatically stored in a data logger, and later downloaded to a computer for subsequent processing. The data processing consisted of Time-Zero Adjustment (time zero of the vertical scale aligned with the surface reflection) and Background Removal (horizontal banding) to the GPR scans. Targeted GPR linescans are presented on Figure 4.

### ***Results and Interpretations***

The EM survey identified a strong EM in-phase ('metal') anomalies located at the western portion of the site. Two targeted GPR linescans (Linescans A and B) were performed in this anomaly area. Two hyperbolic reflection responses were identified on the GPR scans. The shape, strength and ring-down of these reflections are similar to the GPR response that is often observed over cylindrical-shaped steel objects such as USTs, large diameter metal pipes or cylindrical-shaped metal containers. Based on the EM and GPR data, this anomaly area was interpreted to represent possible two USTs. The EM survey identified a strong EM 'metal' anomaly located at the southwestern portion of the site. Two targeted GPR linescans (Linescans B and C) were performed in this anomaly area. Cylindrical-shaped steel object was not identified on the GPR scans. It is not uncommon for some large metal objects to be undetectable to GPR when highly conductive backfill materials are present over the target. Based on the EM data, this anomaly area was interpreted to represent a possible UST. Other strong EM 'metal' anomalies identified during the survey were most likely associated with the known aboveground interference, such as reinforced concrete sidewalk and fence, etc.

### ***Survey Methods and Limitations***

The EM operates by driving a transmitter coil with an AC current at audio frequencies to generate a sinusoidal time-varying magnetic field. A receiver coil is positioned on or near the surface of the earth some distance away from the transmitter coil. The transmitted time-varying magnetic field generated by the transmitter coil induces secondary currents to flow in the subsurface, which in turn generate a secondary



(induced) magnetic field. Both the induced secondary field, along with the primary field, is detected and recorded at the receiver coil.

The EM instruments contain two sets of coils that are located within opposite sides of the tool. One set of coil is used to transmit a primary magnetic field, which generates electrical current in the ground. The created current then generates a secondary magnetic field, which is sensed by the coils in the receiver end of the instrument. Data is then collected on a control unit indicating the conductivity of the earth. The magnitude of the secondary field is broken into two orthogonal components. The two components of the secondary magnetic field are in-phase (real component) and the quadrature or out-of-phase (imaginary component). For instruments operating within the Low Induction Number (LIN) approximation, the magnitude of the quadrature component of the secondary field is linearly proportional to the apparent conductivity. The in-phase measurement is most sensitive to buried metallic objects and can be used locate buried steel reinforced structures, UST, large utility pipes, and other metallic targets. In the absence of a highly conductive material (e.g. metallic targets) in the subsurface, the magnitude of the in-phase component is dependant on the magnetic susceptibility of the subsurface. The EMP-400 allows multiple frequency measurements at each survey station. The depth of exploration depends on the operating frequencies, target size and shape, and host-target conductivity. Site conditions that can limit, even preclude EM data interpretation include: urban or developed areas, thunderstorms and nearby metallic objects at or above the ground surface such as parked vehicles near the survey stations, rebar concrete, metal siding, overhead power lines, metal fence/guard rail, and manhole covers, etc. Areas of a site that may be difficult or impossible to survey include: steep slopes, standing water areas, overgrown vegetation areas, and obstructed areas.

GPR operates by transmitting pulses of ultra high frequency radio waves (microwave electromagnetic energy) down into the ground through a transducer or antenna. When the transmitted signal enters the ground, it contacts objects or subsurface strata with different electrical conductivities and dielectric constants. Part of the ground penetrating radar waves reflect off of the object or interface; while the rest of the waves pass through to the next interface. The reflected signals return to the antenna, pass through the antenna, and are received by the digital control unit. The control unit registers the reflections against two-way travel time in nanoseconds (ns) and then amplifies the signals. The output signal voltage peaks are plotted on the GPR profile as different color bands by the digital control unit.

GPR waves with 400 MHz frequency typically can reach depths up to 12 feet below ground surface (bgs) in low conductivity materials such as dry sand or granite. Clays, shale, and other high conductivity materials or materials having high moisture, may attenuate or absorb GPR signals, greatly decreasing the depth of penetration to 3 feet bgs or less. Other site conditions that can limit even preclude GPR data acquisition and interpretation include: surface obstructions, uneven ground surface, standing water,



cellular tower, rebar concrete, small or shallow buried objects, and over-grown vegetation, etc.

### **Conclusions**

This geophysical survey has identified two anomalies, which may represent three buried USTs. The geophysical results presented herein are interpreted. No warranty, certification, or statement of fact, either expressed or implied, regarding actual subsurface conditions within the surveyed area(s) is contained herein. If uncertainties exist regarding the presence of geophysical anomalies, test pit excavations should be conducted to explore the actual subsurface conditions. No interpretation of subsurface conditions can be made for areas not surveyed or paved with rebar concrete. Please note that the survey data reflect site conditions on the day of the field survey.

GII greatly appreciates this opportunity to provide MSG with our geophysical survey service. If you have any questions, please contact me at (419) 868-2902.

Sincerely,

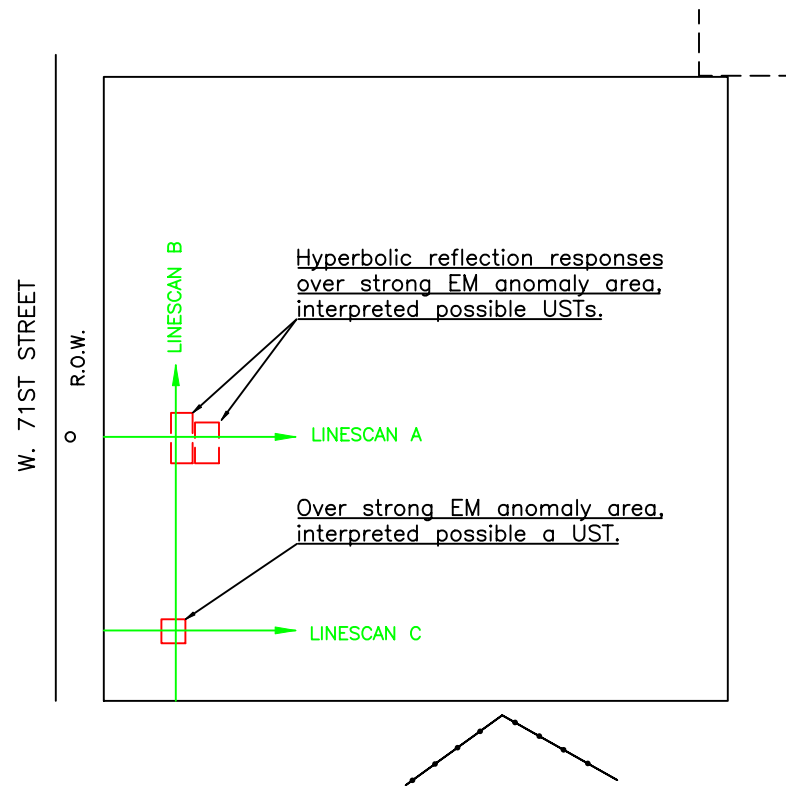
**Geophysical Imaging, Inc.**

A handwritten signature in blue ink, appearing to read "Ming He", is positioned above the printed name.

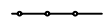

Ming He  
President/Geophysicist

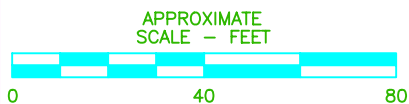
Attachments  
Figures 1 – 4

F:\GII\PROJECTS\23-976 MSG CLEVELAND OH\23-976 MSG CLEVELAND OH REPORT.DOC



**LEGEND:**

-  FENCE
-  LIGHT POLE



**FIGURE 1**  
**SURVEY DIAGRAM WITH**  
**GEOPHYSICAL INTERPRETATIONS**  
3203 WEST 71ST STREET  
CLEVELAND, OHIO

Client  
**THE MANNIK & SMITH GROUP, INC.**  
MAUMEE, OHIO

**GEOPHYSICAL IMAGING, INC.**  
3765 TIMBER VALLEY DR  
MAUMEE, OH 43537

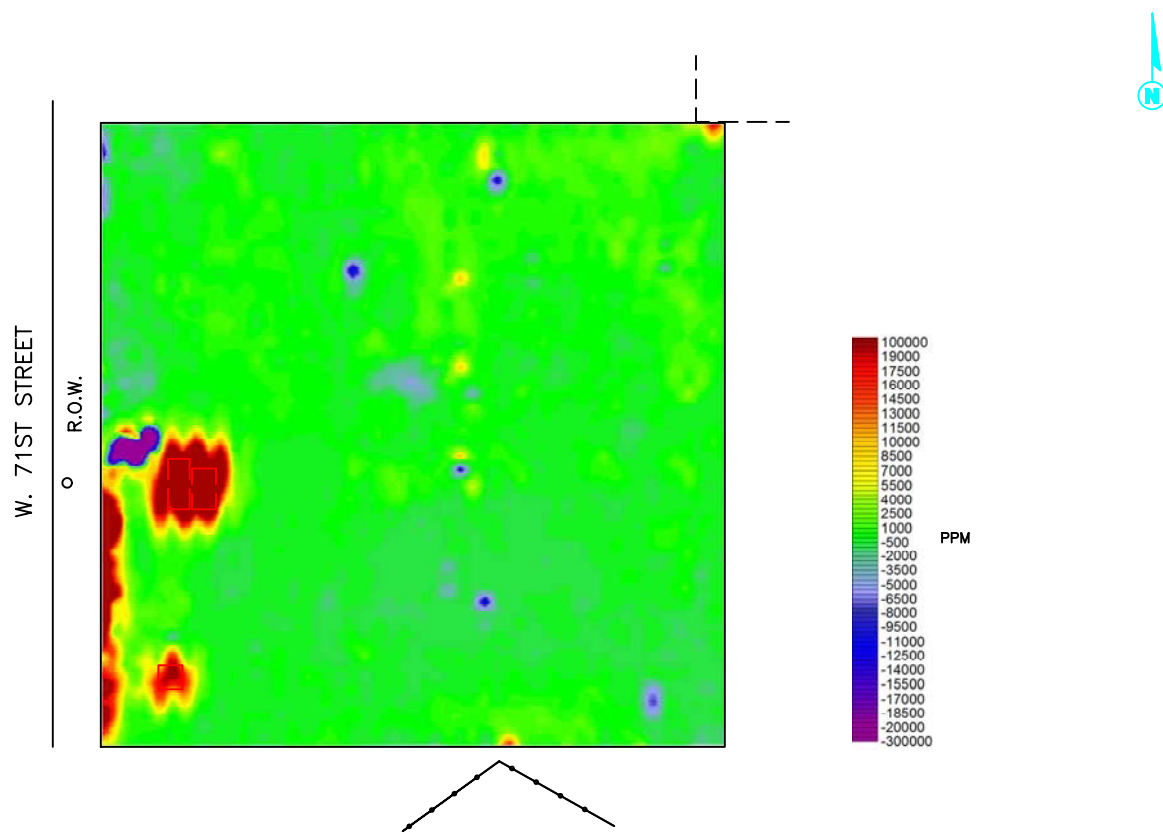
DRAWN MH

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DRAWING NAME

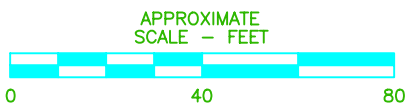
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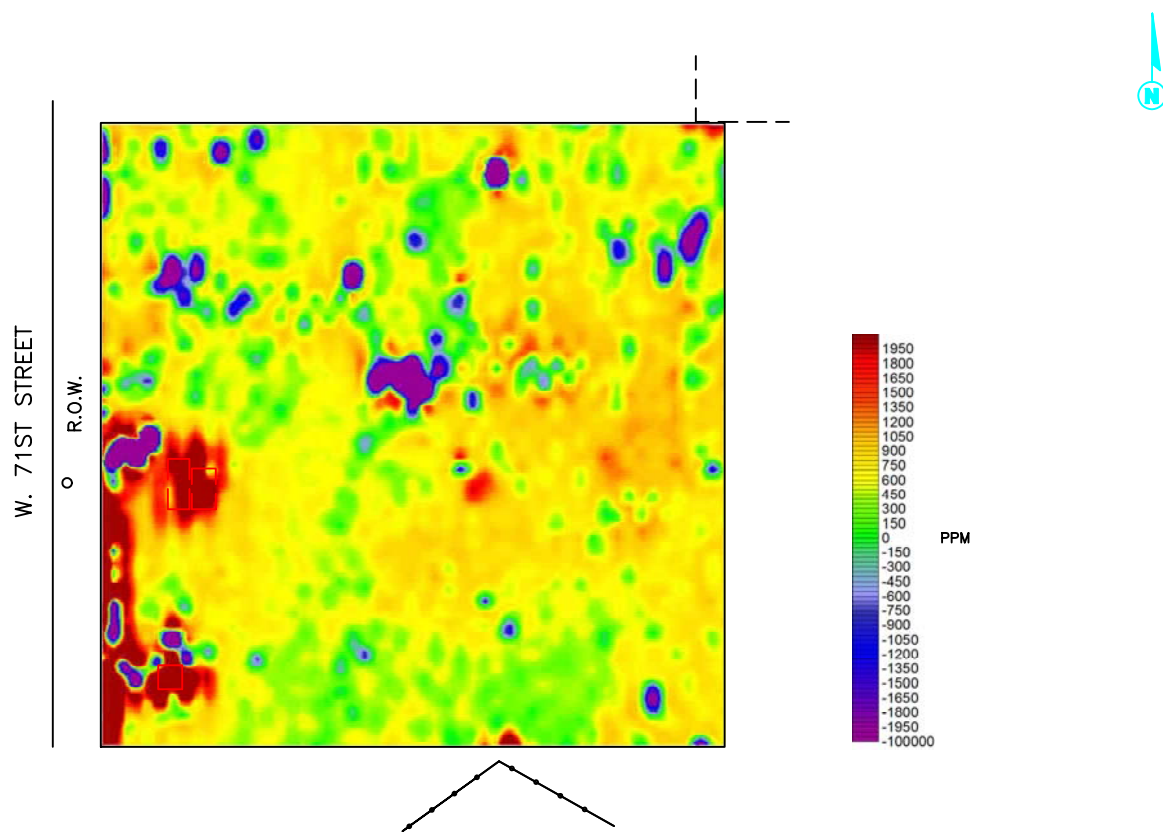


**LEGEND:**

- FENCE
- LIGHT POLE



<p>FIGURE 2 EM IN-PHASE (METAL SENSITIVE) CONTOUR MAP - 9,000 Hz 3203 WEST 71ST STREET CLEVELAND, OHIO</p>	<p>GEOPHYSICAL IMAGING, INC. 3765 TIMBER VALLEY DR MAUMEE, OH 43537</p>	
	<p>Client</p> <p>THE MANNIK &amp; SMITH GROUP, INC. MAUMEE, OHIO</p>	
<p>CHECKED</p> <p>DRAWING NAME</p> <p>23-976Fig2</p>		



**LEGEND:**

- FENCE
- LIGHT POLE

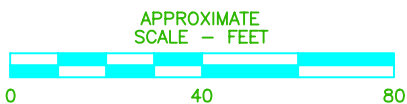


FIGURE 3  
 EM QUADRATURE (TERRAIN CONDUCTIVITY)  
 CONTOUR MAP - 9,000 Hz  
 3203 WEST 71ST STREET  
 CLEVELAND, OHIO

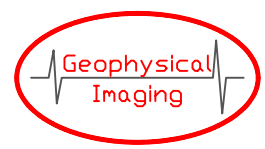
Client  
 THE MANNIK & SMITH GROUP, INC.  
 MAUMEE, OHIO

GEOPHYSICAL IMAGING, INC.  
 3765 TIMBER VALLEY DR  
 MAUMEE, OH 43537

DRAWN MH

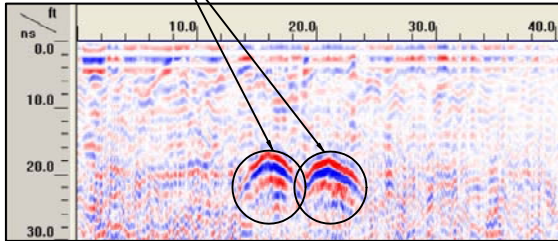
CHECKED

DRAWING NAME  
 23-976Fig3

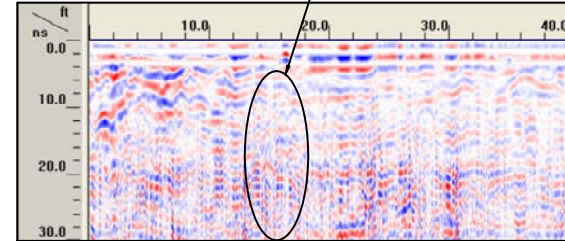




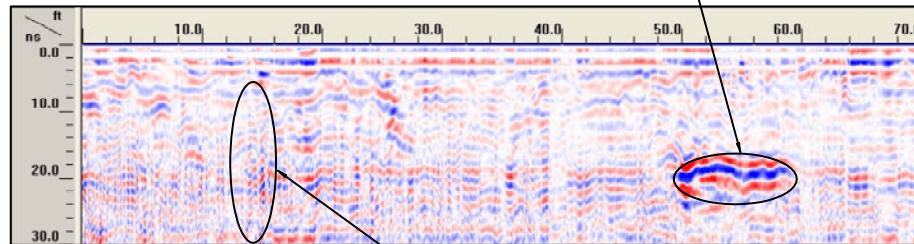
LINESCAN A: hyperbolic reflection responses over strong EM anomaly area, interpreted possible USTs.



LINESCAN C: over strong EM anomaly area, interpreted possible a UST.



LINESCAN B: along axis of the interpreted possible UST.



over strong EM anomaly area, interpreted possible a UST.

<p>FIGURE 4          TARGETED GPR LINESCAN          LINESCANS A, B, AND C          3203 WEST 71ST STREET          CLEVELAND, OHIO</p>		<p>GEOPHYSICAL IMAGING, INC.          3765 TIMBER VALLEY DR          MAUMEE, OH 43537</p>	
		<p>DRAWN MH</p>	
<p>Client          THE MANNIK &amp; SMITH GROUP, INC.          MAUMEE, OHIO</p>		<p>CHECKED          DRAWING NAME          23-976Fig4</p>	

**APPENDIX B  
BORING LOGS**


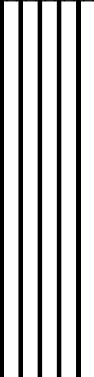
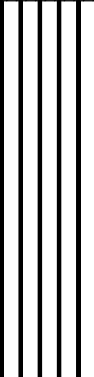
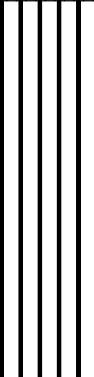
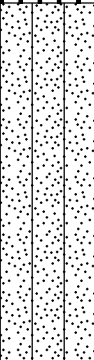

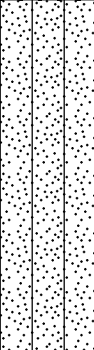
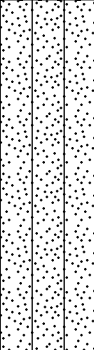
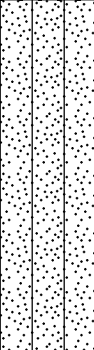




Project Number: 401.ODAAS003-19  
 Project Name: Hillson Nut  
 Site Location: 3203 W. 71st Street, Cleveland, Ohio  
 Client: Ohio EPA  
 MSG Personnel: John Thornburg

Approved By: Matt Pesci  
 Contractor: The Mannik & Smith Group, Inc.  
 Driller: Michael Harris  
 Drilling Method: Direct Push  
 Drill Rig: 7822DT

Start/End Date: 5/22/2023  
 Boring Depth: 15 feet  
 Northing: NA  
 Easting: NA  
 Ground Surface Elev.: NA

Depth (ft)	Elev. (ft.)	Graphic Log	Description	Number	Type	FID/PID (ppm)	Recovery (in.)	Remarks
			Brown silty <u>CLAY</u> , little fine to coarse sand, moist					
			Brown and gray <u>SILT</u> , some fine sand, moist	1	DP	0.0	24	
			@ 3.5 feet; becomes brown, with some very fine sand		DP	0.0	24	
5			Brown fine <u>SAND</u> , little silt, moist	2	DP	0.0	19	
			@ 7.7 feet; becomes gray, wet		DP	0.0	12	
			Gray <u>SILT</u> , little fine sand, wet		DP	0.0	24	
10			Gray fine <u>SAND</u> , little silt, wet	3	DP	0.0	24	
					DP	0.0	24	
15				4	DP	0.0	6	
			End of Soil Boring = 15 feet					



# Soil Boring / Monitoring Well Number: SB-02 / TW-2

**Project Number:** 401.ODAAS003-19  
**Project Name:** Hillson Nut  
**Site Location:** 3203 W. 71st Street, Cleveland, Ohio  
**Client:** Ohio EPA  
**MSG Personnel:** John Thornburg

**Contractor:** The Mannik & Smith Group, Inc.  
**Driller:** Michael Harris  
**Drilling Method:** Direct Push  
**Drill Rig:** 7822DT  
**Total Depth:** 15 feet

**MW Installation Date:** 5/22/2023  
**Northing:** NA  
**Easting:** NA  
**Ground Surface Elev.:** NA


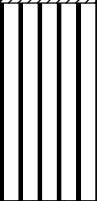

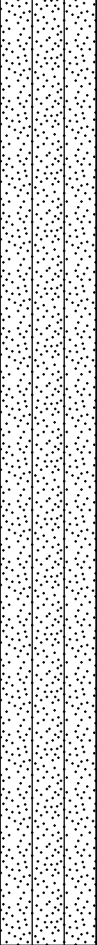
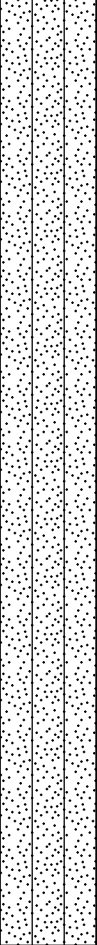
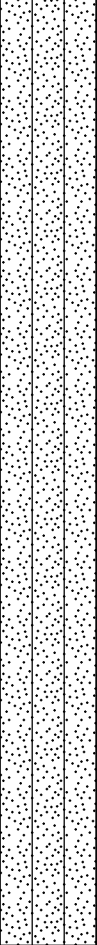
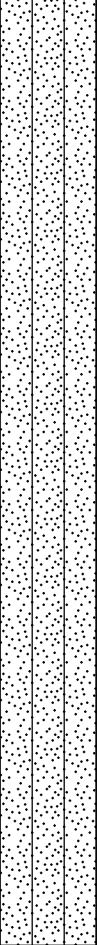
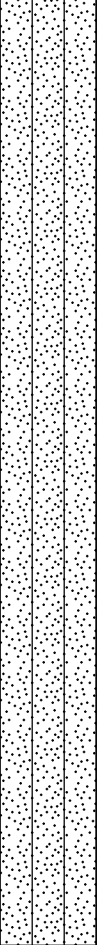
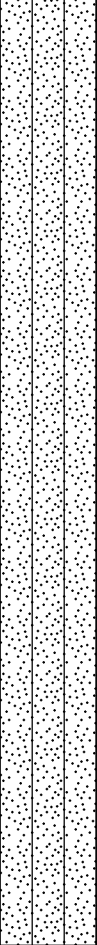
Depth (ft)	Elev. (ft.)	Well Diagram	Elev. (ft.)	Graphic Log	Description of Cuttings	Number	Type	FID/PID (ppm)	Recovery (in.)	Remarks	
		Casing Type: 1" PVC									
					Brown silty <b>CLAY</b> , little fine to coarse sand, trace brick, trace cinder, moist (Fill)	1	DP	0.0	24		
					Brown <b>SILT</b> , little fine sand, moist		DP	0.0	9		
5					Brown fine <b>SAND</b> , little silt, wet @ 7.6 feet	2	DP	0.0	12		
							DP	0.0	24		
					Gray silty <b>CLAY</b> , some fine to coarse sand, moist		DP	0.0	6		
10					Gray <b>SILT</b> , some fine sand, wet						
					Gray fine <b>SAND</b> , little silt, wet	3	DP	0.0	24		
							DP	0.0	24		
15						4	DP	0.0	7		
						End of Soil Boring = 15 feet					



Project Number: 401.ODAAS003-19  
 Project Name: Hillson Nut  
 Site Location: 3203 W. 71st Street, Cleveland, Ohio  
 Client: Ohio EPA  
 MSG Personnel: John Thornburg

Approved By: Matt Pesci  
 Contractor: The Mannik & Smith Group, Inc.  
 Driller: Michael Harris  
 Drilling Method: Direct Push  
 Drill Rig: 7822DT

Start/End Date: 5/22/2023  
 Boring Depth: 15 feet  
 Northing: NA  
 Easting: NA  
 Ground Surface Elev.: NA

Depth (ft)	Elev. (ft.)	Graphic Log	Description	Number	Type	FID/PID (ppm)	Recovery (in.)	Remarks
			Brown silty <b>CLAY</b> , little fine to coarse sand, trace brick, moist (Fill)					
			Brown <b>SILT</b> , some fine sand, moist	1	DP	0.0	24	
			Brown very <b>SAND</b> , little silt, moist		DP	0.0	20	
5				2	DP	0.0	12	
			@ 6.0 feet; becomes wet		DP	0.0	24	
10					DP	0.0	3	
			@ 10.0 feet; becomes gray		DP	0.0	24	
					DP	0.0	21	
15				4	DP	0.0	0	
			End of Soil Boring = 15 feet					



# Soil Boring / Monitoring Well Number: SB-04 / TW-4

**Project Number:** 401.ODAAS003-19  
**Project Name:** Hillson Nut  
**Site Location:** 3203 W. 71st Street, Cleveland, ohio  
**Client:** Ohio EPA  
**MSG Personnel:** John Thornburg

**Contractor:** The Mannik & Smith Group, Inc.  
**Driller:** Michael Harris  
**Drilling Method:** Direct Push  
**Drill Rig:** 7822DT  
**Total Depth:** 15 feet

**MW Installation Date:** 5/22/2023  
**Northing:** NA  
**Easting:** NA  
**Ground Surface Elev.:** NA










Depth (ft)	Elev. (ft.)	Well Diagram	Elev. (ft.)	Graphic Log	Description of Cuttings	Number	Type	FID/PID (ppm)	Recovery (in.)	Remarks	
		Casing Type: 1" PVC									
		<p>1" PVC Riser</p> <p>1" PVC Screen</p>			Brown silty <b>CLAY</b> , little fine to coarse sand, trace gravel, trace cinder block, moist (Fill)	1	DP	0.0	24		
					Brown <b>SILT</b> , some fine sand, moist		DP	0.0	24		
5					Brown fine <b>SAND</b> , little silt, moist  @ 5.3 feet; becomes wet	2	DP	0.0	17		
								DP	0.0	12	
								DP	0.0	24	
10					Gray silty fine <b>SAND</b> , wet	3	DP	0.0	6		
								DP	0.0	24	
							4	DP	0.0	16	
15						End of Soil Boring = 15 feet					



Project Number: 401.ODAAS003-19  
 Project Name: Hillson Nut  
 Site Location: 3203 W. 71st Street, Cleveland, ohio  
 Client: Ohio EPA  
 MSG Personnel: John Thornburg

Approved By: Matt Pesci  
 Contractor: The Mannik & Smith Group, Inc.  
 Driller: Michael Harris  
 Drilling Method: Direct Push  
 Drill Rig: 7822DT

Start/End Date: 5/22/2023  
 Boring Depth: 15 feet  
 Northing: NA  
 Easting: NA  
 Ground Surface Elev.: NA

Depth (ft)	Elev. (ft.)	Graphic Log	Description	Number	Type	FID/PID (ppm)	Recovery (in.)	Remarks
			Brown silty <b>CLAY</b> , little fine to coarse sand, trace fine gravel, moist (Fill)					
			Dark gray fine to coarse <b>SAND</b> , little cinder block, trace silt, moist	1	DP	0.0	24	
			Brown silty fine <b>SAND</b> , moist		DP	0.0	24	
5			@ 5.3 feet; becomes wet	2	DP	0.0	21	
					DP	0.0	24	
10			@ 10.0 feet; becomes gray		DP	0.0	5	
				3	DP	0.0	24	
					DP	0.0	24	
15				4	DP	0.0	6	
			End of Soil Boring = 15 feet					



# Soil Boring / Monitoring Well Number: SB-06 / TW-6

**Project Number:** 401.ODAAS003-19  
**Project Name:** Hillson Nut  
**Site Location:** 3203 W. 71st Street, Cleveland, Ohio  
**Client:** Ohio EPA  
**MSG Personnel:** John Thornburg

**Contractor:** The Mannik & Smith Group, Inc.  
**Driller:** Michael Harris  
**Drilling Method:** Direct Push  
**Drill Rig:** 7822DT  
**Total Depth:** 20 feet

**MW Installation Date:** 5/22/2023  
**Northing:** NA  
**Easting:** NA  
**Ground Surface Elev.:** NA

Depth (ft)	Elev. (ft.)	Well Diagram	Elev. (ft.)	Graphic Log	Description of Cuttings	Number	Type	FID/PID (ppm)	Recovery (in.)	Remarks		
		Casing Type: 1" PVC										
		<p>1" PVC Riser</p> <p>1" PVC Screen</p>			Dark brown silty <b>CLAY</b> , little fine to coarse sand, trace fine to coarse gravel, moist (Fill)	1	DP	0.0	24			
						Brown <b>SILT</b> , some fine sand, moist		DP	0.0	24		
5						Brown silty fine <b>SAND</b> , wet	2	DP	0.0	15		
									DP	0.0	12	
									DP	0.0	19	
10						@ 10.0 feet; becomes wet, with little fine gravel	3	DP	0.0	24		
									DP	0.0	17	
								4	DP	0.0	12	
									DP	0.0	24	
									DP	0.0	19	
20					End of Soil Boring = 20 feet							


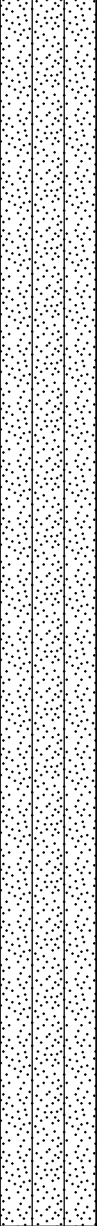




Project Number: 401.ODAAS003-19  
 Project Name: Hillson Nut  
 Site Location: 3203 W. 71st Street, Cleveland, Ohio  
 Client: Ohio EPA  
 MSG Personnel: John Thornburg

Approved By: Matt Pesci  
 Contractor: The Mannik & Smith Group, Inc.  
 Driller: Michael Harris  
 Drilling Method: Direct Push  
 Drill Rig: 7822DT

Start/End Date: 5/22/2023  
 Boring Depth: 15 feet  
 Northing: NA  
 Easting: NA  
 Ground Surface Elev.: NA

Depth (ft)	Elev. (ft.)	Graphic Log	Description	Number	Type	FID/PID (ppm)	Recovery (in.)	Remarks
			Dark brown silty <b>CLAY</b> , little fine to coarse sand, trace brick, moist (Fill)					
			Brown silty fine <b>SAND</b> , moist	1	DP	0.0	24	SB-7 (0-2') @ 1420
					DP	0.0	24	
5				2	DP	0.0	19	
					DP	0.0	12	SB-7 (5-7') @ 1425
			@ 7.3 feet; becomes gray		DP	0.0	24	
			@ 7.9 feet; becomes wet		DP	0.0	24	
10				3	DP	0.0	24	
					DP	0.0	24	
15				4	DP	0.0	6	
			End of Soil Boring = 15 feet					



# Soil Boring / Monitoring Well Number: SB-08 / TW-8

**Project Number:** 401.ODAAS003-19  
**Project Name:** Hillson Nut  
**Site Location:** 3203 W. 71st Street, Cleveland, Ohio  
**Client:** Ohio EPA  
**MSG Personnel:** John Thornburg

**Contractor:** The Mannik & Smith Group, Inc.  
**Driller:** Michael Harris  
**Drilling Method:** Direct Push  
**Drill Rig:** 7822DT  
**Total Depth:** 20 feet

**MW Installation Date:** 5/23/2023  
**Northing:** NA  
**Eastings:** NA  
**Ground Surface Elev.:** NA


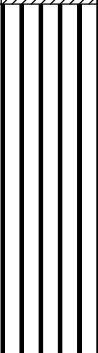
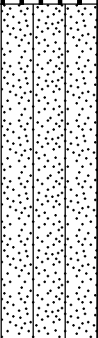
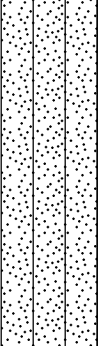
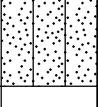

Depth (ft)	Elev. (ft.)	Well Diagram	Elev. (ft.)	Graphic Log	Description of Cuttings	Number	Type	FID/PID (ppm)	Recovery (in.)	Remarks	
		Casing Type: 1" PVC									
		<p>1" PVC Riser</p> <p>1" PVC Screen</p>			Gray silty <b>CLAY</b> , little fine to coarse sand, trace fine gravel, trace cinder block, moist (Fill)	1	DP	0.0	24		
						Brown silty fine <b>SAND</b> , moist		DP	0.0	24	
5							2	DP	0.0	12	
								DP	0.0	23	
						@ 7.7 feet; becomes gray		DP	0.0	0	
10						@ 10.0 feet; becomes wet	3	DP	0.0	24	
								DP	0.0	24	
15							4	DP	0.0	12	
								DP	0.0	24	
20								DP	0.0	21	
					End of Soil Boring = 20 feet						



Project Number: 401.ODAAS003-19  
 Project Name: Hillson Nut  
 Site Location: 3203 W. 71st Street, Cleveland, Ohio  
 Client: Ohio EPA  
 MSG Personnel: John Thornburg

Approved By: Matt Pesci  
 Contractor: The Mannik & Smith Group, Inc.  
 Driller: Michael Harris  
 Drilling Method: Direct Push  
 Drill Rig: 7822DT

Start/End Date: 5/23/2023  
 Boring Depth: 15 feet  
 Northing: NA  
 Easting: NA  
 Ground Surface Elev.: NA

Depth (ft)	Elev. (ft.)	Graphic Log	Description	Number	Type	FID/PID (ppm)	Recovery (in.)	Remarks
			Brown fine to medium <b>SAND</b> , trace fine gravel, trace cinder block, moist (Fill)	1	DP	0.0	24	SB-9 (0-2') @ 1240
			Brown and gray <b>SILT</b> , some fine sand, moist	2	DP	0.0	19	
5			Brown silty fine <b>SAND</b> , moist		DP	0.0	24	SB-9 (6-8') @ 1250
			@ 10.0 feet; becomes gray, wet		DP	0.0	4	
10				3	DP	0.0	24	
					DP	0.0	21	
15			End of Soil Boring = 15 feet	4	DP	0.0	0	



# Soil Boring / Monitoring Well Number: SB-10 / TW-10

**Project Number:** 401.ODAAS003-19  
**Project Name:** Hillson Nut  
**Site Location:** 3203 W. 71st Street, Cleveland, Ohio  
**Client:** Ohio EPA  
**MSG Personnel:** John Thornburg

**Contractor:** The Mannik & Smith Group, Inc.  
**Driller:** Michael Harris  
**Drilling Method:** Direct Push  
**Drill Rig:** 7822DT  
**Total Depth:** 20 feet

**MW Installation Date:** 5/23/2023  
**Northing:** NA  
**Easting:** NA  
**Ground Surface Elev.:** NA

Depth (ft)	Elev. (ft.)	Well Diagram	Elev. (ft.)	Graphic Log	Description of Cuttings	Number	Type	FID/PID (ppm)	Recovery (in.)	Remarks
		Casing Type: 1" PVC								
		<p>1" PVC Riser</p> <p>1" PVC Screen</p>			Brown silty <b>CLAY</b> , little fine to coarse sand, trace to coarse fine gravel, brick 1.2-1.6', moist (Fill)	1	DP	0.0	24	
					Brown and gray <b>SILT</b> , some fine sand, moist		DP	0.0	24	
5					Brown silty fine <b>SAND</b> , moist	2	DP	0.0	15	
					@ 6.4 feet; becomes wet		DP	0.0	24	
					@ 10.0 feet; becomes gray		DP	0.0	18	
10						3	DP	0.0	24	
							DP	0.0	24	
15						4	DP	0.0	17	
							DP	0.0	24	
20							DP	0.0	17	
					End of Soil Boring = 20 feet					





























**APPENDIX C**  
**LABORATORY REPORTS**





09-Jun-2023

Matt Pesci  
The Mannik & Smith Group, Inc.  
1160 Dublin Road  
Suite 100  
Columbus, OH 43215

Re: **Hillson Nut MS23-13; 401.ODAS003-19**

Work Order: **23051029**

Dear Matt,

ALS Environmental received 32 samples on 24-May-2023 09:53 AM for the analyses presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental and for only the analyses requested.

QC sample results for this data met laboratory specifications. Any exceptions are noted in the Case Narrative, or noted with qualifiers in the report or QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained from ALS Laboratory Group. Samples will be disposed in 30 days unless storage arrangements are made.

The total number of pages in this report is 224.

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

Sincerely,

**Rob Nieman**

Electronically approved by: Rob Nieman

Rob Nieman  
Project Manager

## Report of Laboratory Analysis

ADDRESS 4388 Glendale Milford Rd Cincinnati, OH 45242- | PHONE (513) 733-5336 | FAX (513) 733-5347

ALS GROUP USA, CORP Part of the ALS Laboratory Group A Campbell Brothers Limited Company

Environmental

[www.alsglobal.com](http://www.alsglobal.com)

RIGHT SOLUTIONS RIGHT PARTNER

**Client:** The Mannik & Smith Group, Inc.  
**Project:** Hillson Nut MS23-13; 401.ODAS003-19  
**Work Order:** 23051029

**Work Order Sample Summary**

<u>Lab Samp ID</u>	<u>Client Sample ID</u>	<u>Matrix</u>	<u>Tag Number</u>	<u>Collection Date</u>	<u>Date Received</u>	<u>Hold</u>
23051029-01	SB-1 (2-4')	Soil		5/22/2023 11:40	5/24/2023 09:53	<input type="checkbox"/>
23051029-02	SB-1 (0-2')	Soil		5/22/2023 11:45	5/24/2023 09:53	<input type="checkbox"/>
23051029-03	SB-4 (0-2')	Soil		5/22/2023 12:10	5/24/2023 09:53	<input type="checkbox"/>
23051029-04	SB-4 (3-5')	Soil		5/22/2023 12:15	5/24/2023 09:53	<input type="checkbox"/>
23051029-05	SB-5 (0-2')	Soil		5/22/2023 12:40	5/24/2023 09:53	<input type="checkbox"/>
23051029-06	SB-5 (3-5')	Soil		5/22/2023 12:50	5/24/2023 09:53	<input type="checkbox"/>
23051029-07	SB-2 (0-2')	Soil		5/22/2023 13:10	5/24/2023 09:53	<input type="checkbox"/>
23051029-08	SB-2 (5-7')	Soil		5/22/2023 13:15	5/24/2023 09:53	<input type="checkbox"/>
23051029-09	SB-2 (5-7') Dup	Soil		5/22/2023 13:20	5/24/2023 09:53	<input type="checkbox"/>
23051029-10	SB-3 (0-2')	Soil		5/22/2023 13:35	5/24/2023 09:53	<input type="checkbox"/>
23051029-11	SB-3 (5-7')	Soil		5/22/2023 13:45	5/24/2023 09:53	<input type="checkbox"/>
23051029-12	SB-7 (0-2')	Soil		5/22/2023 14:20	5/24/2023 09:53	<input type="checkbox"/>
23051029-13	SB-7 (5-7')	Soil		5/22/2023 14:25	5/24/2023 09:53	<input type="checkbox"/>
23051029-14	SB-6 (0-2')	Soil		5/22/2023 14:40	5/24/2023 09:53	<input type="checkbox"/>
23051029-15	SB-6 (3-5')	Soil		5/22/2023 14:55	5/24/2023 09:53	<input type="checkbox"/>
23051029-16	SB-8 (0-2')	Soil		5/23/2023 10:00	5/24/2023 09:53	<input type="checkbox"/>
23051029-17	SB-8 (6-8')	Soil		5/23/2023 10:10	5/24/2023 09:53	<input type="checkbox"/>
23051029-18	SB-10 (0-2')	Soil		5/23/2023 11:25	5/24/2023 09:53	<input type="checkbox"/>
23051029-19	SB-10 (5-7')	Soil		5/23/2023 11:40	5/24/2023 09:53	<input type="checkbox"/>
23051029-20	SB-9 (0-2')	Soil		5/23/2023 12:40	5/24/2023 09:53	<input type="checkbox"/>
23051029-21	SB-9 (6-8')	Soil		5/23/2023 12:50	5/24/2023 09:53	<input type="checkbox"/>
23051029-22	SB-19 (0-2')	Soil		5/23/2023 13:25	5/24/2023 09:53	<input type="checkbox"/>
23051029-23	SB-17 (0-2')	Soil		5/23/2023 13:30	5/24/2023 09:53	<input type="checkbox"/>
23051029-24	SB-20 (0-2')	Soil		5/23/2023 14:00	5/24/2023 09:53	<input type="checkbox"/>
23051029-25	SB-21 (0-2')	Soil		5/23/2023 14:15	5/24/2023 09:53	<input type="checkbox"/>
23051029-26	SB-22 (0-2')	Soil		5/23/2023 14:25	5/24/2023 09:53	<input type="checkbox"/>
23051029-27	SB-15 (0-2')	Soil		5/23/2023 14:35	5/24/2023 09:53	<input type="checkbox"/>
23051029-28	SB-14 (0-2')	Soil		5/23/2023 14:55	5/24/2023 09:53	<input type="checkbox"/>
23051029-29	SB-12 (0-2')	Soil		5/23/2023 15:25	5/24/2023 09:53	<input type="checkbox"/>
23051029-30	TW-4	Water		5/22/2023 16:00	5/24/2023 09:53	<input type="checkbox"/>
23051029-31	TW-2	Water		5/22/2023 16:45	5/24/2023 09:53	<input type="checkbox"/>
23051029-32	TW-6	Water		5/23/2023 15:00	5/24/2023 09:53	<input type="checkbox"/>

---

**Client:** The Mannik & Smith Group, Inc.  
**Project:** Hillson Nut MS23-13; 401.ODAS003-19  
**Work Order:** 23051029

---

**Case Narrative**

The analyses requested were analyzed according to Ohio Voluntary Action Program requirements. Affidavits are available upon request.

The analytical data provided relates directly to the samples received by ALS Laboratory Group and for only the analyses requested.

QC sample results for this data met laboratory specifications. Any exceptions are noted in the Case Narrative, or noted with qualifiers in the report or QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained from ALS Laboratory Group. Samples will be disposed in 30 days unless storage arrangements are made.

# ALS Environmental

Date: 09-Jun-23

**Client:** The Mannik & Smith Group, Inc.  
**Project:** Hillson Nut MS23-13; 401.ODAS003-19  
**Sample ID:** SB-1 (2-4')  
**Collection Date:** 5/22/2023 11:40 AM

**Work Order:** 23051029  
**Lab ID:** 23051029-01  
**Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
<b>DIESEL RANGE ORGANICS AND OIL RANGE ORGANICS</b>			<b>SW8015B</b>	Prep: SW3546	6/2/23 14:48	Analyst: <b>ECP</b>
TPH C10-C20	ND		16	mg/Kg-dry	1	6/5/2023 06:51 PM
TPH C20-C34	ND		16	mg/Kg-dry	1	6/5/2023 06:51 PM
<i>Surr: Nonane</i>	64.0		28.5-83.1	%REC	1	6/5/2023 06:51 PM
<i>Surr: Pentacosane</i>	79.2		30.6-143	%REC	1	6/5/2023 06:51 PM
<b>GASOLINE RANGE ORGANICS (C6-C12)</b>			<b>SW8015A</b>			Analyst: <b>JG</b>
TPH C6-C12	ND		2.4	mg/Kg-dry	1	5/24/2023 04:09 PM
<i>Surr: Cyclooctane</i>	98.5		55-135	%REC	1	5/24/2023 04:09 PM
<b>MOISTURE</b>			<b>SM2540B</b>			Analyst: <b>CW</b>
Moisture	17			% of sample	1	6/1/2023
<b>LEAD BY ICP</b>			<b>SW6010B</b>	Prep: SW3050B	6/1/23 16:00	Analyst: <b>SLT</b>
Lead	16		1.8	mg/Kg-dry	1	6/2/2023 11:53 AM
<b>PAH COMPOUNDS</b>			<b>SW8270C</b>	Prep: SW3546	6/2/23 14:46	Analyst: <b>GC</b>
1-Methylnaphthalene	ND		0.24	mg/Kg-dry	1	6/5/2023 11:02 AM
2-Methylnaphthalene	ND		0.24	mg/Kg-dry	1	6/5/2023 11:02 AM
Acenaphthene	ND		0.24	mg/Kg-dry	1	6/5/2023 11:02 AM
Acenaphthylene	ND		0.24	mg/Kg-dry	1	6/5/2023 11:02 AM
Anthracene	ND		0.24	mg/Kg-dry	1	6/5/2023 11:02 AM
Benzo(a)anthracene	ND		0.12	mg/Kg-dry	1	6/5/2023 11:02 AM
Benzo(a)pyrene	ND		0.12	mg/Kg-dry	1	6/5/2023 11:02 AM
Benzo(b)fluoranthene	ND		0.24	mg/Kg-dry	1	6/5/2023 11:02 AM
Benzo(g,h,i)perylene	ND		0.24	mg/Kg-dry	1	6/5/2023 11:02 AM
Benzo(k)fluoranthene	ND		0.24	mg/Kg-dry	1	6/5/2023 11:02 AM
Carbazole	ND		0.24	mg/Kg-dry	1	6/5/2023 11:02 AM
Chrysene	ND		0.24	mg/Kg-dry	1	6/5/2023 11:02 AM
Dibenzo(a,h)anthracene	ND		0.12	mg/Kg-dry	1	6/5/2023 11:02 AM
Dibenzofuran	ND		0.24	mg/Kg-dry	1	6/5/2023 11:02 AM
Fluoranthene	ND		0.24	mg/Kg-dry	1	6/5/2023 11:02 AM
Fluorene	ND		0.24	mg/Kg-dry	1	6/5/2023 11:02 AM
Indeno(1,2,3-cd)pyrene	ND		0.12	mg/Kg-dry	1	6/5/2023 11:02 AM
Naphthalene	ND		0.24	mg/Kg-dry	1	6/5/2023 11:02 AM
Phenanthrene	ND		0.24	mg/Kg-dry	1	6/5/2023 11:02 AM
Pyrene	ND		0.24	mg/Kg-dry	1	6/5/2023 11:02 AM
<i>Surr: 2-Fluorobiphenyl</i>	86.1		30-116	%REC	1	6/5/2023 11:02 AM
<b>VOLATILE ORGANIC COMPOUNDS</b>			<b>SW8260B</b>			Analyst: <b>LAK</b>
1,2,4-Trimethylbenzene	ND		0.0054	mg/Kg-dry	1	5/25/2023 01:59 PM
1,2-Dibromoethane	ND		0.00061	mg/Kg-dry	1	5/25/2023 01:59 PM

**Note:**

**ALS Environmental**

Date: 09-Jun-23

**Client:** The Mannik & Smith Group, Inc.  
**Project:** Hillson Nut MS23-13; 401.ODAS003-19  
**Sample ID:** SB-1 (2-4')  
**Collection Date:** 5/22/2023 11:40 AM

**Work Order:** 23051029  
**Lab ID:** 23051029-01  
**Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
1,2-Dichloroethane	ND		0.0054	mg/Kg-dry	1	5/25/2023 01:59 PM
Benzene	ND		0.0054	mg/Kg-dry	1	5/25/2023 01:59 PM
Ethylbenzene	ND		0.0054	mg/Kg-dry	1	5/25/2023 01:59 PM
m,p-Xylene	ND		0.0054	mg/Kg-dry	1	5/25/2023 01:59 PM
Methyl tert-butyl ether	ND		0.0054	mg/Kg-dry	1	5/25/2023 01:59 PM
Naphthalene	ND		0.0054	mg/Kg-dry	1	5/25/2023 01:59 PM
o-Xylene	ND		0.0054	mg/Kg-dry	1	5/25/2023 01:59 PM
Toluene	ND		0.0054	mg/Kg-dry	1	5/25/2023 01:59 PM
Xylenes, Total	ND		0.011	mg/Kg-dry	1	5/25/2023 01:59 PM
Surr: 4-Bromofluorobenzene	104		60-140	%REC	1	5/25/2023 01:59 PM
Surr: Dibromofluoromethane	78.0		60-140	%REC	1	5/25/2023 01:59 PM
Surr: Toluene-d8	97.6		60-140	%REC	1	5/25/2023 01:59 PM

**Note:**

# ALS Environmental

Date: 09-Jun-23

**Client:** The Mannik & Smith Group, Inc.  
**Project:** Hillson Nut MS23-13; 401.ODAS003-19  
**Sample ID:** SB-1 (0-2')  
**Collection Date:** 5/22/2023 11:45 AM

**Work Order:** 23051029  
**Lab ID:** 23051029-02  
**Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
<b>DIESEL RANGE ORGANICS AND OIL RANGE ORGANICS</b>			<b>SW8015B</b>	Prep: SW3546	6/2/23 14:48	Analyst: <b>ECP</b>
TPH C10-C20	ND		16	mg/Kg-dry	1	6/5/2023 07:08 PM
TPH C20-C34	ND		16	mg/Kg-dry	1	6/5/2023 07:08 PM
<i>Surr: Nonane</i>	50.2		28.5-83.1	%REC	1	6/5/2023 07:08 PM
<i>Surr: Pentacosane</i>	61.6		30.6-143	%REC	1	6/5/2023 07:08 PM
<b>GASOLINE RANGE ORGANICS (C6-C12)</b>			<b>SW8015A</b>			Analyst: <b>JG</b>
TPH C6-C12	ND		2.4	mg/Kg-dry	1	5/24/2023 04:34 PM
<i>Surr: Cyclooctane</i>	81.9		55-135	%REC	1	5/24/2023 04:34 PM
<b>MOISTURE</b>			<b>SM2540B</b>			Analyst: <b>CW</b>
Moisture	18			% of sample	1	6/1/2023
<b>LEAD BY ICP</b>			<b>SW6010B</b>	Prep: SW3050B	6/1/23 16:00	Analyst: <b>SLT</b>
Lead	19		1.8	mg/Kg-dry	1	6/2/2023 11:58 AM
<b>PAH COMPOUNDS</b>			<b>SW8270C</b>	Prep: SW3546	6/2/23 14:46	Analyst: <b>GC</b>
1-Methylnaphthalene	ND		0.24	mg/Kg-dry	1	6/5/2023 11:23 AM
2-Methylnaphthalene	ND		0.24	mg/Kg-dry	1	6/5/2023 11:23 AM
Acenaphthene	ND		0.24	mg/Kg-dry	1	6/5/2023 11:23 AM
Acenaphthylene	ND		0.24	mg/Kg-dry	1	6/5/2023 11:23 AM
Anthracene	ND		0.24	mg/Kg-dry	1	6/5/2023 11:23 AM
Benzo(a)anthracene	ND		0.12	mg/Kg-dry	1	6/5/2023 11:23 AM
Benzo(a)pyrene	ND		0.12	mg/Kg-dry	1	6/5/2023 11:23 AM
Benzo(b)fluoranthene	ND		0.24	mg/Kg-dry	1	6/5/2023 11:23 AM
Benzo(g,h,i)perylene	ND		0.24	mg/Kg-dry	1	6/5/2023 11:23 AM
Benzo(k)fluoranthene	ND		0.24	mg/Kg-dry	1	6/5/2023 11:23 AM
Carbazole	ND		0.24	mg/Kg-dry	1	6/5/2023 11:23 AM
Chrysene	ND		0.24	mg/Kg-dry	1	6/5/2023 11:23 AM
Dibenzo(a,h)anthracene	ND		0.12	mg/Kg-dry	1	6/5/2023 11:23 AM
Dibenzofuran	ND		0.24	mg/Kg-dry	1	6/5/2023 11:23 AM
Fluoranthene	ND		0.24	mg/Kg-dry	1	6/5/2023 11:23 AM
Fluorene	ND		0.24	mg/Kg-dry	1	6/5/2023 11:23 AM
Indeno(1,2,3-cd)pyrene	ND		0.12	mg/Kg-dry	1	6/5/2023 11:23 AM
Naphthalene	ND		0.24	mg/Kg-dry	1	6/5/2023 11:23 AM
Phenanthrene	ND		0.24	mg/Kg-dry	1	6/5/2023 11:23 AM
Pyrene	ND		0.24	mg/Kg-dry	1	6/5/2023 11:23 AM
<i>Surr: 2-Fluorobiphenyl</i>	79.5		30-116	%REC	1	6/5/2023 11:23 AM
<b>VOLATILE ORGANIC COMPOUNDS</b>			<b>SW8260B</b>			Analyst: <b>LAK</b>
1,2,4-Trimethylbenzene	ND		0.0052	mg/Kg-dry	1	5/25/2023 02:43 PM
1,2-Dibromoethane	ND		0.00058	mg/Kg-dry	1	5/25/2023 02:43 PM

**Note:**

# ALS Environmental

Date: 09-Jun-23

**Client:** The Mannik & Smith Group, Inc.  
**Project:** Hillson Nut MS23-13; 401.ODAS003-19  
**Sample ID:** SB-1 (0-2')  
**Collection Date:** 5/22/2023 11:45 AM

**Work Order:** 23051029  
**Lab ID:** 23051029-02  
**Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
1,2-Dichloroethane	ND		0.0052	mg/Kg-dry	1	5/25/2023 02:43 PM
Benzene	ND		0.0052	mg/Kg-dry	1	5/25/2023 02:43 PM
Ethylbenzene	ND		0.0052	mg/Kg-dry	1	5/25/2023 02:43 PM
m,p-Xylene	ND		0.0052	mg/Kg-dry	1	5/25/2023 02:43 PM
Methyl tert-butyl ether	ND		0.0052	mg/Kg-dry	1	5/25/2023 02:43 PM
Naphthalene	ND		0.0052	mg/Kg-dry	1	5/25/2023 02:43 PM
o-Xylene	ND		0.0052	mg/Kg-dry	1	5/25/2023 02:43 PM
Toluene	ND		0.0052	mg/Kg-dry	1	5/25/2023 02:43 PM
Xylenes, Total	ND		0.010	mg/Kg-dry	1	5/25/2023 02:43 PM
<i>Surr: 4-Bromofluorobenzene</i>	104		60-140	%REC	1	5/25/2023 02:43 PM
<i>Surr: Dibromofluoromethane</i>	89.1		60-140	%REC	1	5/25/2023 02:43 PM
<i>Surr: Toluene-d8</i>	122		60-140	%REC	1	5/25/2023 02:43 PM

**Note:**



# ALS Environmental

Date: 09-Jun-23

**Client:** The Mannik & Smith Group, Inc.  
**Project:** Hillson Nut MS23-13; 401.ODAS003-19  
**Sample ID:** SB-4 (0-2')  
**Collection Date:** 5/22/2023 12:10 PM

**Work Order:** 23051029  
**Lab ID:** 23051029-03  
**Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
<b>DIESEL RANGE ORGANICS AND OIL RANGE ORGANICS</b>			<b>SW8015B</b>	Prep: SW3546	6/2/23 14:48	Analyst: <b>ECP</b>
TPH C10-C20	17		16	mg/Kg-dry	1	6/5/2023 07:25 PM
TPH C20-C34	32		16	mg/Kg-dry	1	6/5/2023 07:25 PM
<i>Surr: Nonane</i>	47.6		28.5-83.1	%REC	1	6/5/2023 07:25 PM
<i>Surr: Pentacosane</i>	66.0		30.6-143	%REC	1	6/5/2023 07:25 PM
<b>GASOLINE RANGE ORGANICS (C6-C12)</b>			<b>SW8015A</b>			Analyst: <b>JG</b>
TPH C6-C12	ND		2.5	mg/Kg-dry	1	5/24/2023 05:00 PM
<i>Surr: Cyclooctane</i>	93.4		55-135	%REC	1	5/24/2023 05:00 PM
<b>MOISTURE</b>			<b>SM2540B</b>			Analyst: <b>CW</b>
Moisture	19			% of sample	1	6/1/2023
<b>LEAD BY ICP</b>			<b>SW6010B</b>	Prep: SW3050B	6/1/23 16:00	Analyst: <b>SLT</b>
Lead	58		1.7	mg/Kg-dry	1	6/2/2023 12:02 PM
<b>PAH COMPOUNDS</b>			<b>SW8270C</b>	Prep: SW3546	6/2/23 14:46	Analyst: <b>GC</b>
1-Methylnaphthalene	ND		0.25	mg/Kg-dry	1	6/5/2023 11:43 AM
2-Methylnaphthalene	ND		0.25	mg/Kg-dry	1	6/5/2023 11:43 AM
Acenaphthene	ND		0.25	mg/Kg-dry	1	6/5/2023 11:43 AM
Acenaphthylene	ND		0.25	mg/Kg-dry	1	6/5/2023 11:43 AM
Anthracene	ND		0.25	mg/Kg-dry	1	6/5/2023 11:43 AM
<b>Benzo(a)anthracene</b>	<b>0.43</b>		<b>0.12</b>	<b>mg/Kg-dry</b>	1	6/5/2023 11:43 AM
<b>Benzo(a)pyrene</b>	<b>0.49</b>		<b>0.12</b>	<b>mg/Kg-dry</b>	1	6/5/2023 11:43 AM
<b>Benzo(b)fluoranthene</b>	<b>0.56</b>		<b>0.25</b>	<b>mg/Kg-dry</b>	1	6/5/2023 11:43 AM
<b>Benzo(g,h,i)perylene</b>	<b>0.33</b>		<b>0.25</b>	<b>mg/Kg-dry</b>	1	6/5/2023 11:43 AM
Benzo(k)fluoranthene	ND		0.25	mg/Kg-dry	1	6/5/2023 11:43 AM
Carbazole	ND		0.25	mg/Kg-dry	1	6/5/2023 11:43 AM
<b>Chrysene</b>	<b>0.43</b>		<b>0.25</b>	<b>mg/Kg-dry</b>	1	6/5/2023 11:43 AM
Dibenzo(a,h)anthracene	ND		0.12	mg/Kg-dry	1	6/5/2023 11:43 AM
Dibenzofuran	ND		0.25	mg/Kg-dry	1	6/5/2023 11:43 AM
<b>Fluoranthene</b>	<b>0.87</b>		<b>0.25</b>	<b>mg/Kg-dry</b>	1	6/5/2023 11:43 AM
Fluorene	ND		0.25	mg/Kg-dry	1	6/5/2023 11:43 AM
<b>Indeno(1,2,3-cd)pyrene</b>	<b>0.27</b>		<b>0.12</b>	<b>mg/Kg-dry</b>	1	6/5/2023 11:43 AM
Naphthalene	ND		0.25	mg/Kg-dry	1	6/5/2023 11:43 AM
<b>Phenanthrene</b>	<b>0.42</b>		<b>0.25</b>	<b>mg/Kg-dry</b>	1	6/5/2023 11:43 AM
<b>Pyrene</b>	<b>0.75</b>		<b>0.25</b>	<b>mg/Kg-dry</b>	1	6/5/2023 11:43 AM
<i>Surr: 2-Fluorobiphenyl</i>	65.7		30-116	%REC	1	6/5/2023 11:43 AM
<b>VOLATILE ORGANIC COMPOUNDS</b>			<b>SW8260B</b>			Analyst: <b>LAK</b>
1,2,4-Trimethylbenzene	ND		0.0054	mg/Kg-dry	1	5/25/2023 03:06 PM
1,2-Dibromoethane	ND		0.00060	mg/Kg-dry	1	5/25/2023 03:06 PM

Note:

**ALS Environmental**

Date: 09-Jun-23

**Client:** The Mannik & Smith Group, Inc.  
**Project:** Hillson Nut MS23-13; 401.ODAS003-19  
**Sample ID:** SB-4 (0-2')  
**Collection Date:** 5/22/2023 12:10 PM

**Work Order:** 23051029  
**Lab ID:** 23051029-03  
**Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
1,2-Dichloroethane	ND		0.0054	mg/Kg-dry	1	5/25/2023 03:06 PM
Benzene	ND		0.0054	mg/Kg-dry	1	5/25/2023 03:06 PM
Ethylbenzene	ND		0.0054	mg/Kg-dry	1	5/25/2023 03:06 PM
m,p-Xylene	ND		0.0054	mg/Kg-dry	1	5/25/2023 03:06 PM
Methyl tert-butyl ether	ND		0.0054	mg/Kg-dry	1	5/25/2023 03:06 PM
Naphthalene	ND		0.0054	mg/Kg-dry	1	5/25/2023 03:06 PM
o-Xylene	ND		0.0054	mg/Kg-dry	1	5/25/2023 03:06 PM
Toluene	ND		0.0054	mg/Kg-dry	1	5/25/2023 03:06 PM
Xylenes, Total	ND		0.011	mg/Kg-dry	1	5/25/2023 03:06 PM
<i>Surr: 4-Bromofluorobenzene</i>	109		60-140	%REC	1	5/25/2023 03:06 PM
<i>Surr: Dibromofluoromethane</i>	99.2		60-140	%REC	1	5/25/2023 03:06 PM
<i>Surr: Toluene-d8</i>	97.1		60-140	%REC	1	5/25/2023 03:06 PM

**Note:**

# ALS Environmental

Date: 09-Jun-23

**Client:** The Mannik & Smith Group, Inc.  
**Project:** Hillson Nut MS23-13; 401.ODAS003-19  
**Sample ID:** SB-4 (3-5')  
**Collection Date:** 5/22/2023 12:15 PM

**Work Order:** 23051029  
**Lab ID:** 23051029-04  
**Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
<b>DIESEL RANGE ORGANICS AND OIL RANGE ORGANICS</b>			<b>SW8015B</b>	Prep: SW3546	6/2/23 14:48	Analyst: <b>ECP</b>
TPH C10-C20	ND		16	mg/Kg-dry	1	6/5/2023 07:42 PM
TPH C20-C34	ND		16	mg/Kg-dry	1	6/5/2023 07:42 PM
Surr: Nonane	55.2		28.5-83.1	%REC	1	6/5/2023 07:42 PM
Surr: Pentacosane	67.5		30.6-143	%REC	1	6/5/2023 07:42 PM
<b>GASOLINE RANGE ORGANICS (C6-C12)</b>			<b>SW8015A</b>			Analyst: <b>JG</b>
TPH C6-C12	ND		2.3	mg/Kg-dry	1	5/24/2023 05:25 PM
Surr: Cyclooctane	94.0		55-135	%REC	1	5/24/2023 05:25 PM
<b>MOISTURE</b>			<b>SM2540B</b>			Analyst: <b>CW</b>
Moisture	15			% of sample	1	6/1/2023
<b>LEAD BY ICP</b>			<b>SW6010B</b>	Prep: SW3050B	6/1/23 16:00	Analyst: <b>SLT</b>
Lead	9.8		1.7	mg/Kg-dry	1	6/2/2023 12:07 PM
<b>PAH COMPOUNDS</b>			<b>SW8270C</b>	Prep: SW3546	6/2/23 14:46	Analyst: <b>GC</b>
1-Methylnaphthalene	ND		0.23	mg/Kg-dry	1	6/5/2023 12:03 PM
2-Methylnaphthalene	ND		0.23	mg/Kg-dry	1	6/5/2023 12:03 PM
Acenaphthene	ND		0.23	mg/Kg-dry	1	6/5/2023 12:03 PM
Acenaphthylene	ND		0.23	mg/Kg-dry	1	6/5/2023 12:03 PM
Anthracene	ND		0.23	mg/Kg-dry	1	6/5/2023 12:03 PM
Benzo(a)anthracene	ND		0.12	mg/Kg-dry	1	6/5/2023 12:03 PM
Benzo(a)pyrene	ND		0.12	mg/Kg-dry	1	6/5/2023 12:03 PM
Benzo(b)fluoranthene	ND		0.23	mg/Kg-dry	1	6/5/2023 12:03 PM
Benzo(g,h,i)perylene	ND		0.23	mg/Kg-dry	1	6/5/2023 12:03 PM
Benzo(k)fluoranthene	ND		0.23	mg/Kg-dry	1	6/5/2023 12:03 PM
Carbazole	ND		0.23	mg/Kg-dry	1	6/5/2023 12:03 PM
Chrysene	ND		0.23	mg/Kg-dry	1	6/5/2023 12:03 PM
Dibenzo(a,h)anthracene	ND		0.12	mg/Kg-dry	1	6/5/2023 12:03 PM
Dibenzofuran	ND		0.23	mg/Kg-dry	1	6/5/2023 12:03 PM
Fluoranthene	ND		0.23	mg/Kg-dry	1	6/5/2023 12:03 PM
Fluorene	ND		0.23	mg/Kg-dry	1	6/5/2023 12:03 PM
Indeno(1,2,3-cd)pyrene	ND		0.12	mg/Kg-dry	1	6/5/2023 12:03 PM
Naphthalene	ND		0.23	mg/Kg-dry	1	6/5/2023 12:03 PM
Phenanthrene	ND		0.23	mg/Kg-dry	1	6/5/2023 12:03 PM
Pyrene	ND		0.23	mg/Kg-dry	1	6/5/2023 12:03 PM
Surr: 2-Fluorobiphenyl	82.4		30-116	%REC	1	6/5/2023 12:03 PM
<b>VOLATILE ORGANIC COMPOUNDS</b>			<b>SW8260B</b>			Analyst: <b>LAK</b>
1,2,4-Trimethylbenzene	ND		0.0046	mg/Kg-dry	1	5/25/2023 03:28 PM
1,2-Dibromoethane	ND		0.00052	mg/Kg-dry	1	5/25/2023 03:28 PM

Note:

# ALS Environmental

Date: 09-Jun-23

**Client:** The Mannik & Smith Group, Inc.  
**Project:** Hillson Nut MS23-13; 401.ODAS003-19  
**Sample ID:** SB-4 (3-5')  
**Collection Date:** 5/22/2023 12:15 PM

**Work Order:** 23051029  
**Lab ID:** 23051029-04  
**Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
1,2-Dichloroethane	ND		0.0046	mg/Kg-dry	1	5/25/2023 03:28 PM
Benzene	ND		0.0046	mg/Kg-dry	1	5/25/2023 03:28 PM
Ethylbenzene	ND		0.0046	mg/Kg-dry	1	5/25/2023 03:28 PM
m,p-Xylene	ND		0.0046	mg/Kg-dry	1	5/25/2023 03:28 PM
Methyl tert-butyl ether	ND		0.0046	mg/Kg-dry	1	5/25/2023 03:28 PM
Naphthalene	ND		0.0046	mg/Kg-dry	1	5/25/2023 03:28 PM
o-Xylene	ND		0.0046	mg/Kg-dry	1	5/25/2023 03:28 PM
Toluene	ND		0.0046	mg/Kg-dry	1	5/25/2023 03:28 PM
Xylenes, Total	ND		0.0093	mg/Kg-dry	1	5/25/2023 03:28 PM
<i>Surr: 4-Bromofluorobenzene</i>	95.1		60-140	%REC	1	5/25/2023 03:28 PM
<i>Surr: Dibromofluoromethane</i>	91.0		60-140	%REC	1	5/25/2023 03:28 PM
<i>Surr: Toluene-d8</i>	92.3		60-140	%REC	1	5/25/2023 03:28 PM

**Note:**

# ALS Environmental

Date: 09-Jun-23

**Client:** The Mannik & Smith Group, Inc.  
**Project:** Hillson Nut MS23-13; 401.ODAS003-19  
**Sample ID:** SB-5 (0-2')  
**Collection Date:** 5/22/2023 12:40 PM

**Work Order:** 23051029  
**Lab ID:** 23051029-05  
**Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
<b>DIESEL RANGE ORGANICS AND OIL RANGE ORGANICS</b>			<b>SW8015B</b>	Prep: SW3546	6/2/23 14:48	Analyst: <b>ECP</b>
TPH C10-C20	22		16	mg/Kg-dry	1	6/5/2023 07:59 PM
TPH C20-C34	56		16	mg/Kg-dry	1	6/5/2023 07:59 PM
Surr: Nonane	51.5		28.5-83.1	%REC	1	6/5/2023 07:59 PM
Surr: Pentacosane	71.0		30.6-143	%REC	1	6/5/2023 07:59 PM
<b>GASOLINE RANGE ORGANICS (C6-C12)</b>			<b>SW8015A</b>			Analyst: <b>JG</b>
TPH C6-C12	ND		2.3	mg/Kg-dry	1	5/24/2023 05:50 PM
Surr: Cyclooctane	100		55-135	%REC	1	5/24/2023 05:50 PM
<b>MOISTURE</b>			<b>SM2540B</b>			Analyst: <b>CW</b>
Moisture	14			% of sample	1	6/1/2023
<b>LEAD BY ICP</b>			<b>SW6010B</b>	Prep: SW3050B	6/6/23 12:30	Analyst: <b>SLT</b>
Lead	880		1.6	mg/Kg-dry	1	6/7/2023 12:19 PM
<b>PAH COMPOUNDS</b>			<b>SW8270C</b>	Prep: SW3546	6/2/23 14:46	Analyst: <b>GC</b>
1-Methylnaphthalene	ND		0.23	mg/Kg-dry	1	6/5/2023 12:24 PM
2-Methylnaphthalene	ND		0.23	mg/Kg-dry	1	6/5/2023 12:24 PM
Acenaphthene	ND		0.23	mg/Kg-dry	1	6/5/2023 12:24 PM
Acenaphthylene	ND		0.23	mg/Kg-dry	1	6/5/2023 12:24 PM
Anthracene	ND		0.23	mg/Kg-dry	1	6/5/2023 12:24 PM
Benzo(a)anthracene	0.59		0.12	mg/Kg-dry	1	6/5/2023 12:24 PM
Benzo(a)pyrene	0.66		0.12	mg/Kg-dry	1	6/5/2023 12:24 PM
Benzo(b)fluoranthene	0.85		0.23	mg/Kg-dry	1	6/5/2023 12:24 PM
Benzo(g,h,i)perylene	0.47		0.23	mg/Kg-dry	1	6/5/2023 12:24 PM
Benzo(k)fluoranthene	0.33		0.23	mg/Kg-dry	1	6/5/2023 12:24 PM
Carbazole	ND		0.23	mg/Kg-dry	1	6/5/2023 12:24 PM
Chrysene	0.62		0.23	mg/Kg-dry	1	6/5/2023 12:24 PM
Dibenzo(a,h)anthracene	0.12		0.12	mg/Kg-dry	1	6/5/2023 12:24 PM
Dibenzofuran	ND		0.23	mg/Kg-dry	1	6/5/2023 12:24 PM
Fluoranthene	1.1		0.23	mg/Kg-dry	1	6/5/2023 12:24 PM
Fluorene	ND		0.23	mg/Kg-dry	1	6/5/2023 12:24 PM
Indeno(1,2,3-cd)pyrene	0.41		0.12	mg/Kg-dry	1	6/5/2023 12:24 PM
Naphthalene	ND		0.23	mg/Kg-dry	1	6/5/2023 12:24 PM
Phenanthrene	0.55		0.23	mg/Kg-dry	1	6/5/2023 12:24 PM
Pyrene	0.93		0.23	mg/Kg-dry	1	6/5/2023 12:24 PM
Surr: 2-Fluorobiphenyl	75.5		30-116	%REC	1	6/5/2023 12:24 PM
<b>VOLATILE ORGANIC COMPOUNDS</b>			<b>SW8260B</b>			Analyst: <b>LAK</b>
1,2,4-Trimethylbenzene	ND		0.0052	mg/Kg-dry	1	5/25/2023 03:50 PM
1,2-Dibromoethane	ND		0.00058	mg/Kg-dry	1	5/25/2023 03:50 PM

Note:

# ALS Environmental

Date: 09-Jun-23

**Client:** The Mannik & Smith Group, Inc.  
**Project:** Hillson Nut MS23-13; 401.ODAS003-19  
**Sample ID:** SB-5 (0-2')  
**Collection Date:** 5/22/2023 12:40 PM

**Work Order:** 23051029  
**Lab ID:** 23051029-05  
**Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
1,2-Dichloroethane	ND		0.0052	mg/Kg-dry	1	5/25/2023 03:50 PM
Benzene	ND		0.0052	mg/Kg-dry	1	5/25/2023 03:50 PM
Ethylbenzene	ND		0.0052	mg/Kg-dry	1	5/25/2023 03:50 PM
m,p-Xylene	ND		0.0052	mg/Kg-dry	1	5/25/2023 03:50 PM
Methyl tert-butyl ether	ND		0.0052	mg/Kg-dry	1	5/25/2023 03:50 PM
Naphthalene	ND		0.0052	mg/Kg-dry	1	5/25/2023 03:50 PM
o-Xylene	ND		0.0052	mg/Kg-dry	1	5/25/2023 03:50 PM
Toluene	ND		0.0052	mg/Kg-dry	1	5/25/2023 03:50 PM
Xylenes, Total	ND		0.010	mg/Kg-dry	1	5/25/2023 03:50 PM
<i>Surr: 4-Bromofluorobenzene</i>	116		60-140	%REC	1	5/25/2023 03:50 PM
<i>Surr: Dibromofluoromethane</i>	99.6		60-140	%REC	1	5/25/2023 03:50 PM
<i>Surr: Toluene-d8</i>	96.5		60-140	%REC	1	5/25/2023 03:50 PM

**Note:**

# ALS Environmental

Date: 09-Jun-23

**Client:** The Mannik & Smith Group, Inc.  
**Project:** Hillson Nut MS23-13; 401.ODAS003-19  
**Sample ID:** SB-5 (3-5')  
**Collection Date:** 5/22/2023 12:50 PM

**Work Order:** 23051029  
**Lab ID:** 23051029-06  
**Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
<b>DIESEL RANGE ORGANICS AND OIL RANGE ORGANICS</b>			<b>SW8015B</b>	Prep: SW3546	6/2/23 14:48	Analyst: <b>ECP</b>
TPH C10-C20	ND		17	mg/Kg-dry	1	6/5/2023 08:16 PM
TPH C20-C34	ND		17	mg/Kg-dry	1	6/5/2023 08:16 PM
<i>Surr: Nonane</i>	54.3		28.5-83.1	%REC	1	6/5/2023 08:16 PM
<i>Surr: Pentacosane</i>	66.4		30.6-143	%REC	1	6/5/2023 08:16 PM
<b>GASOLINE RANGE ORGANICS (C6-C12)</b>			<b>SW8015A</b>			Analyst: <b>JG</b>
TPH C6-C12	ND		2.6	mg/Kg-dry	1	5/24/2023 07:06 PM
<i>Surr: Cyclooctane</i>	78.3		55-135	%REC	1	5/24/2023 07:06 PM
<b>MOISTURE</b>			<b>SM2540B</b>			Analyst: <b>CW</b>
Moisture	22			% of sample	1	6/1/2023
<b>LEAD BY ICP</b>			<b>SW6010B</b>	Prep: SW3050B	6/6/23 12:30	Analyst: <b>SLT</b>
Lead	12		1.6	mg/Kg-dry	1	6/7/2023 12:23 PM
<b>PAH COMPOUNDS</b>			<b>SW8270C</b>	Prep: SW3546	6/2/23 14:46	Analyst: <b>GC</b>
1-Methylnaphthalene	ND		0.26	mg/Kg-dry	1	6/5/2023 12:44 PM
2-Methylnaphthalene	ND		0.26	mg/Kg-dry	1	6/5/2023 12:44 PM
Acenaphthene	ND		0.26	mg/Kg-dry	1	6/5/2023 12:44 PM
Acenaphthylene	ND		0.26	mg/Kg-dry	1	6/5/2023 12:44 PM
Anthracene	ND		0.26	mg/Kg-dry	1	6/5/2023 12:44 PM
Benzo(a)anthracene	ND		0.13	mg/Kg-dry	1	6/5/2023 12:44 PM
Benzo(a)pyrene	ND		0.13	mg/Kg-dry	1	6/5/2023 12:44 PM
Benzo(b)fluoranthene	ND		0.26	mg/Kg-dry	1	6/5/2023 12:44 PM
Benzo(g,h,i)perylene	ND		0.26	mg/Kg-dry	1	6/5/2023 12:44 PM
Benzo(k)fluoranthene	ND		0.26	mg/Kg-dry	1	6/5/2023 12:44 PM
Carbazole	ND		0.26	mg/Kg-dry	1	6/5/2023 12:44 PM
Chrysene	ND		0.26	mg/Kg-dry	1	6/5/2023 12:44 PM
Dibenzo(a,h)anthracene	ND		0.13	mg/Kg-dry	1	6/5/2023 12:44 PM
Dibenzofuran	ND		0.26	mg/Kg-dry	1	6/5/2023 12:44 PM
Fluoranthene	ND		0.26	mg/Kg-dry	1	6/5/2023 12:44 PM
Fluorene	ND		0.26	mg/Kg-dry	1	6/5/2023 12:44 PM
Indeno(1,2,3-cd)pyrene	ND		0.13	mg/Kg-dry	1	6/5/2023 12:44 PM
Naphthalene	ND		0.26	mg/Kg-dry	1	6/5/2023 12:44 PM
Phenanthrene	ND		0.26	mg/Kg-dry	1	6/5/2023 12:44 PM
Pyrene	ND		0.26	mg/Kg-dry	1	6/5/2023 12:44 PM
<i>Surr: 2-Fluorobiphenyl</i>	80.0		30-116	%REC	1	6/5/2023 12:44 PM
<b>VOLATILE ORGANIC COMPOUNDS</b>			<b>SW8260B</b>			Analyst: <b>LAK</b>
1,2,4-Trimethylbenzene	ND		0.0053	mg/Kg-dry	1	5/25/2023 04:12 PM
1,2-Dibromoethane	ND		0.00059	mg/Kg-dry	1	5/25/2023 04:12 PM

**Note:**

**ALS Environmental**

Date: 09-Jun-23

**Client:** The Mannik & Smith Group, Inc.  
**Project:** Hillson Nut MS23-13; 401.ODAS003-19  
**Sample ID:** SB-5 (3-5')  
**Collection Date:** 5/22/2023 12:50 PM

**Work Order:** 23051029  
**Lab ID:** 23051029-06  
**Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
1,2-Dichloroethane	ND		0.0053	mg/Kg-dry	1	5/25/2023 04:12 PM
Benzene	ND		0.0053	mg/Kg-dry	1	5/25/2023 04:12 PM
Ethylbenzene	ND		0.0053	mg/Kg-dry	1	5/25/2023 04:12 PM
m,p-Xylene	ND		0.0053	mg/Kg-dry	1	5/25/2023 04:12 PM
Methyl tert-butyl ether	ND		0.0053	mg/Kg-dry	1	5/25/2023 04:12 PM
Naphthalene	ND		0.0053	mg/Kg-dry	1	5/25/2023 04:12 PM
o-Xylene	ND		0.0053	mg/Kg-dry	1	5/25/2023 04:12 PM
Toluene	ND		0.0053	mg/Kg-dry	1	5/25/2023 04:12 PM
Xylenes, Total	ND		0.011	mg/Kg-dry	1	5/25/2023 04:12 PM
Surr: 4-Bromofluorobenzene	103		60-140	%REC	1	5/25/2023 04:12 PM
Surr: Dibromofluoromethane	90.5		60-140	%REC	1	5/25/2023 04:12 PM
Surr: Toluene-d8	96.9		60-140	%REC	1	5/25/2023 04:12 PM

**Note:**



# ALS Environmental

Date: 09-Jun-23

**Client:** The Mannik & Smith Group, Inc.  
**Project:** Hillson Nut MS23-13; 401.ODAS003-19  
**Sample ID:** SB-2 (0-2')  
**Collection Date:** 5/22/2023 01:10 PM

**Work Order:** 23051029  
**Lab ID:** 23051029-07  
**Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
<b>DIESEL RANGE ORGANICS AND OIL RANGE ORGANICS</b>			<b>SW8015B</b>	Prep: SW3546	6/2/23 14:48	Analyst: <b>ECP</b>
TPH C10-C20	55		16	mg/Kg-dry	1	6/5/2023 08:33 PM
TPH C20-C34	120		16	mg/Kg-dry	1	6/5/2023 08:33 PM
Surr: Nonane	54.7		28.5-83.1	%REC	1	6/5/2023 08:33 PM
Surr: Pentacosane	89.6		30.6-143	%REC	1	6/5/2023 08:33 PM
<b>GASOLINE RANGE ORGANICS (C6-C12)</b>			<b>SW8015A</b>			Analyst: <b>JG</b>
TPH C6-C12	ND		2.3	mg/Kg-dry	1	5/24/2023 07:32 PM
Surr: Cyclooctane	87.5		55-135	%REC	1	5/24/2023 07:32 PM
<b>MOISTURE</b>			<b>SM2540B</b>			Analyst: <b>CW</b>
Moisture	15			% of sample	1	6/1/2023
<b>LEAD BY ICP</b>			<b>SW6010B</b>	Prep: SW3050B	6/6/23 12:30	Analyst: <b>SLT</b>
Lead	58		1.7	mg/Kg-dry	1	6/7/2023 12:27 PM
<b>PAH COMPOUNDS</b>			<b>SW8270C</b>	Prep: SW3546	6/2/23 14:46	Analyst: <b>GC</b>
1-Methylnaphthalene	ND		0.23	mg/Kg-dry	1	6/5/2023 01:04 PM
2-Methylnaphthalene	ND		0.23	mg/Kg-dry	1	6/5/2023 01:04 PM
Acenaphthene	ND		0.23	mg/Kg-dry	1	6/5/2023 01:04 PM
Acenaphthylene	ND		0.23	mg/Kg-dry	1	6/5/2023 01:04 PM
<b>Anthracene</b>	<b>0.52</b>		<b>0.23</b>	<b>mg/Kg-dry</b>	1	6/5/2023 01:04 PM
<b>Benzo(a)anthracene</b>	<b>2.9</b>		<b>0.12</b>	<b>mg/Kg-dry</b>	1	6/5/2023 01:04 PM
<b>Benzo(a)pyrene</b>	<b>3.7</b>		<b>0.12</b>	<b>mg/Kg-dry</b>	1	6/5/2023 01:04 PM
<b>Benzo(b)fluoranthene</b>	<b>3.9</b>		<b>0.23</b>	<b>mg/Kg-dry</b>	1	6/5/2023 01:04 PM
<b>Benzo(g,h,i)perylene</b>	<b>2.3</b>		<b>0.23</b>	<b>mg/Kg-dry</b>	1	6/5/2023 01:04 PM
<b>Benzo(k)fluoranthene</b>	<b>1.5</b>		<b>0.23</b>	<b>mg/Kg-dry</b>	1	6/5/2023 01:04 PM
Carbazole	ND		0.23	mg/Kg-dry	1	6/5/2023 01:04 PM
<b>Chrysene</b>	<b>2.9</b>		<b>0.23</b>	<b>mg/Kg-dry</b>	1	6/5/2023 01:04 PM
<b>Dibenzo(a,h)anthracene</b>	<b>0.49</b>		<b>0.12</b>	<b>mg/Kg-dry</b>	1	6/5/2023 01:04 PM
Dibenzofuran	ND		0.23	mg/Kg-dry	1	6/5/2023 01:04 PM
<b>Fluoranthene</b>	<b>4.2</b>		<b>2.3</b>	<b>mg/Kg-dry</b>	10	6/6/2023 12:31 PM
Fluorene	ND		0.23	mg/Kg-dry	1	6/5/2023 01:04 PM
<b>Indeno(1,2,3-cd)pyrene</b>	<b>1.9</b>		<b>0.12</b>	<b>mg/Kg-dry</b>	1	6/5/2023 01:04 PM
Naphthalene	ND		0.23	mg/Kg-dry	1	6/5/2023 01:04 PM
<b>Phenanthrene</b>	<b>1.6</b>		<b>0.23</b>	<b>mg/Kg-dry</b>	1	6/5/2023 01:04 PM
<b>Pyrene</b>	<b>3.6</b>		<b>2.3</b>	<b>mg/Kg-dry</b>	10	6/6/2023 12:31 PM
Surr: 2-Fluorobiphenyl	79.3		30-116	%REC	1	6/5/2023 01:04 PM
<b>VOLATILE ORGANIC COMPOUNDS</b>			<b>SW8260B</b>			Analyst: <b>SK</b>
1,2,4-Trimethylbenzene	ND		0.0047	mg/Kg-dry	1	5/26/2023 07:43 PM
1,2-Dibromoethane	ND		0.00052	mg/Kg-dry	1	5/26/2023 07:43 PM

Note:

# ALS Environmental

Date: 09-Jun-23

**Client:** The Mannik & Smith Group, Inc.  
**Project:** Hillson Nut MS23-13; 401.ODAS003-19  
**Sample ID:** SB-2 (0-2')  
**Collection Date:** 5/22/2023 01:10 PM

**Work Order:** 23051029  
**Lab ID:** 23051029-07  
**Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
1,2-Dichloroethane	ND		0.0047	mg/Kg-dry	1	5/26/2023 07:43 PM
<b>Benzene</b>	<b>0.074</b>		<b>0.0047</b>	<b>mg/Kg-dry</b>	1	5/26/2023 07:43 PM
Ethylbenzene	ND		0.0047	mg/Kg-dry	1	5/26/2023 07:43 PM
m,p-Xylene	ND		0.0047	mg/Kg-dry	1	5/26/2023 07:43 PM
Methyl tert-butyl ether	ND		0.0047	mg/Kg-dry	1	5/26/2023 07:43 PM
Naphthalene	ND		0.0047	mg/Kg-dry	1	5/26/2023 07:43 PM
o-Xylene	ND		0.0047	mg/Kg-dry	1	5/26/2023 07:43 PM
Toluene	ND		0.0047	mg/Kg-dry	1	5/26/2023 07:43 PM
Xylenes, Total	ND		0.0094	mg/Kg-dry	1	5/26/2023 07:43 PM
<i>Surr: 4-Bromofluorobenzene</i>	96.2		60-140	%REC	1	5/26/2023 07:43 PM
<i>Surr: Dibromofluoromethane</i>	118		60-140	%REC	1	5/26/2023 07:43 PM
<i>Surr: Toluene-d8</i>	105		60-140	%REC	1	5/26/2023 07:43 PM

**Note:**

# ALS Environmental

Date: 09-Jun-23

**Client:** The Mannik & Smith Group, Inc.  
**Project:** Hillson Nut MS23-13; 401.ODAS003-19  
**Sample ID:** SB-2 (5-7')  
**Collection Date:** 5/22/2023 01:15 PM

**Work Order:** 23051029  
**Lab ID:** 23051029-08  
**Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
<b>DIESEL RANGE ORGANICS AND OIL RANGE ORGANICS</b>			<b>SW8015B</b>	Prep: SW3546	6/2/23 14:48	Analyst: <b>ECP</b>
TPH C10-C20	ND		15	mg/Kg-dry	1	6/5/2023 08:50 PM
TPH C20-C34	ND		15	mg/Kg-dry	1	6/5/2023 08:50 PM
<i>Surr: Nonane</i>	62.5		28.5-83.1	%REC	1	6/5/2023 08:50 PM
<i>Surr: Pentacosane</i>	76.9		30.6-143	%REC	1	6/5/2023 08:50 PM
<b>GASOLINE RANGE ORGANICS (C6-C12)</b>			<b>SW8015A</b>			Analyst: <b>JG</b>
TPH C6-C12	ND		2.3	mg/Kg-dry	1	5/24/2023 07:57 PM
<i>Surr: Cyclooctane</i>	92.5		55-135	%REC	1	5/24/2023 07:57 PM
<b>MOISTURE</b>			<b>SM2540B</b>			Analyst: <b>CW</b>
Moisture	12			% of sample	1	6/1/2023
<b>LEAD BY ICP</b>			<b>SW6010B</b>	Prep: SW3050B	6/6/23 12:30	Analyst: <b>SLT</b>
Lead	12		1.6	mg/Kg-dry	1	6/7/2023 12:32 PM
<b>PAH COMPOUNDS</b>			<b>SW8270C</b>	Prep: SW3546	6/2/23 14:46	Analyst: <b>GC</b>
1-Methylnaphthalene	ND		0.23	mg/Kg-dry	1	6/5/2023 01:24 PM
2-Methylnaphthalene	ND		0.23	mg/Kg-dry	1	6/5/2023 01:24 PM
Acenaphthene	ND		0.23	mg/Kg-dry	1	6/5/2023 01:24 PM
Acenaphthylene	ND		0.23	mg/Kg-dry	1	6/5/2023 01:24 PM
Anthracene	ND		0.23	mg/Kg-dry	1	6/5/2023 01:24 PM
Benzo(a)anthracene	ND		0.11	mg/Kg-dry	1	6/5/2023 01:24 PM
Benzo(a)pyrene	ND		0.11	mg/Kg-dry	1	6/5/2023 01:24 PM
Benzo(b)fluoranthene	ND		0.23	mg/Kg-dry	1	6/5/2023 01:24 PM
Benzo(g,h,i)perylene	ND		0.23	mg/Kg-dry	1	6/5/2023 01:24 PM
Benzo(k)fluoranthene	ND		0.23	mg/Kg-dry	1	6/5/2023 01:24 PM
Carbazole	ND		0.23	mg/Kg-dry	1	6/5/2023 01:24 PM
Chrysene	ND		0.23	mg/Kg-dry	1	6/5/2023 01:24 PM
Dibenzo(a,h)anthracene	ND		0.11	mg/Kg-dry	1	6/5/2023 01:24 PM
Dibenzofuran	ND		0.23	mg/Kg-dry	1	6/5/2023 01:24 PM
Fluoranthene	ND		0.23	mg/Kg-dry	1	6/5/2023 01:24 PM
Fluorene	ND		0.23	mg/Kg-dry	1	6/5/2023 01:24 PM
Indeno(1,2,3-cd)pyrene	ND		0.11	mg/Kg-dry	1	6/5/2023 01:24 PM
Naphthalene	ND		0.23	mg/Kg-dry	1	6/5/2023 01:24 PM
Phenanthrene	ND		0.23	mg/Kg-dry	1	6/5/2023 01:24 PM
Pyrene	ND		0.23	mg/Kg-dry	1	6/5/2023 01:24 PM
<i>Surr: 2-Fluorobiphenyl</i>	95.8		30-116	%REC	1	6/5/2023 01:24 PM
<b>VOLATILE ORGANIC COMPOUNDS</b>			<b>SW8260B</b>			Analyst: <b>SK</b>
1,2,4-Trimethylbenzene	ND		0.0050	mg/Kg-dry	1	5/26/2023 08:08 PM
1,2-Dibromoethane	ND		0.00056	mg/Kg-dry	1	5/26/2023 08:08 PM

**Note:**

# ALS Environmental

Date: 09-Jun-23

**Client:** The Mannik & Smith Group, Inc.  
**Project:** Hillson Nut MS23-13; 401.ODAS003-19  
**Sample ID:** SB-2 (5-7')  
**Collection Date:** 5/22/2023 01:15 PM

**Work Order:** 23051029  
**Lab ID:** 23051029-08  
**Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
1,2-Dichloroethane	ND		0.0050	mg/Kg-dry	1	5/26/2023 08:08 PM
Benzene	ND		0.0050	mg/Kg-dry	1	5/26/2023 08:08 PM
Ethylbenzene	ND		0.0050	mg/Kg-dry	1	5/26/2023 08:08 PM
m,p-Xylene	ND		0.0050	mg/Kg-dry	1	5/26/2023 08:08 PM
Methyl tert-butyl ether	ND		0.0050	mg/Kg-dry	1	5/26/2023 08:08 PM
Naphthalene	ND		0.0050	mg/Kg-dry	1	5/26/2023 08:08 PM
o-Xylene	ND		0.0050	mg/Kg-dry	1	5/26/2023 08:08 PM
Toluene	ND		0.0050	mg/Kg-dry	1	5/26/2023 08:08 PM
Xylenes, Total	ND		0.010	mg/Kg-dry	1	5/26/2023 08:08 PM
Surr: 4-Bromofluorobenzene	94.8		60-140	%REC	1	5/26/2023 08:08 PM
Surr: Dibromofluoromethane	129		60-140	%REC	1	5/26/2023 08:08 PM
Surr: Toluene-d8	109		60-140	%REC	1	5/26/2023 08:08 PM

**Note:**

# ALS Environmental

Date: 09-Jun-23

**Client:** The Mannik & Smith Group, Inc.  
**Project:** Hillson Nut MS23-13; 401.ODAS003-19  
**Sample ID:** SB-2 (5-7') Dup  
**Collection Date:** 5/22/2023 01:20 PM

**Work Order:** 23051029  
**Lab ID:** 23051029-09  
**Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
<b>DIESEL RANGE ORGANICS AND OIL RANGE ORGANICS</b>			<b>SW8015B</b>	Prep: SW3546	6/2/23 14:48	Analyst: <b>ECP</b>
TPH C10-C20	ND		15	mg/Kg-dry	1	6/5/2023 09:07 PM
TPH C20-C34	ND		15	mg/Kg-dry	1	6/5/2023 09:07 PM
Surr: Nonane	61.6		28.5-83.1	%REC	1	6/5/2023 09:07 PM
Surr: Pentacosane	73.4		30.6-143	%REC	1	6/5/2023 09:07 PM
<b>GASOLINE RANGE ORGANICS (C6-C12)</b>			<b>SW8015A</b>			Analyst: <b>JG</b>
TPH C6-C12	ND		2.2	mg/Kg-dry	1	5/24/2023 08:22 PM
Surr: Cyclooctane	86.1		55-135	%REC	1	5/24/2023 08:22 PM
<b>MOISTURE</b>			<b>SM2540B</b>			Analyst: <b>CW</b>
Moisture	10			% of sample	1	6/1/2023
<b>LEAD BY ICP</b>			<b>SW6010B</b>	Prep: SW3050B	6/6/23 12:30	Analyst: <b>SLT</b>
Lead	7.7		1.4	mg/Kg-dry	1	6/7/2023 12:36 PM
<b>PAH COMPOUNDS</b>			<b>SW8270C</b>	Prep: SW3546	6/2/23 14:46	Analyst: <b>GC</b>
1-Methylnaphthalene	ND		0.22	mg/Kg-dry	1	6/5/2023 01:45 PM
2-Methylnaphthalene	ND		0.22	mg/Kg-dry	1	6/5/2023 01:45 PM
Acenaphthene	ND		0.22	mg/Kg-dry	1	6/5/2023 01:45 PM
Acenaphthylene	ND		0.22	mg/Kg-dry	1	6/5/2023 01:45 PM
Anthracene	ND		0.22	mg/Kg-dry	1	6/5/2023 01:45 PM
Benzo(a)anthracene	ND		0.11	mg/Kg-dry	1	6/5/2023 01:45 PM
Benzo(a)pyrene	ND		0.11	mg/Kg-dry	1	6/5/2023 01:45 PM
Benzo(b)fluoranthene	ND		0.22	mg/Kg-dry	1	6/5/2023 01:45 PM
Benzo(g,h,i)perylene	ND		0.22	mg/Kg-dry	1	6/5/2023 01:45 PM
Benzo(k)fluoranthene	ND		0.22	mg/Kg-dry	1	6/5/2023 01:45 PM
Carbazole	ND		0.22	mg/Kg-dry	1	6/5/2023 01:45 PM
Chrysene	ND		0.22	mg/Kg-dry	1	6/5/2023 01:45 PM
Dibenzo(a,h)anthracene	ND		0.11	mg/Kg-dry	1	6/5/2023 01:45 PM
Dibenzofuran	ND		0.22	mg/Kg-dry	1	6/5/2023 01:45 PM
Fluoranthene	ND		0.22	mg/Kg-dry	1	6/5/2023 01:45 PM
Fluorene	ND		0.22	mg/Kg-dry	1	6/5/2023 01:45 PM
Indeno(1,2,3-cd)pyrene	ND		0.11	mg/Kg-dry	1	6/5/2023 01:45 PM
Naphthalene	ND		0.22	mg/Kg-dry	1	6/5/2023 01:45 PM
Phenanthrene	ND		0.22	mg/Kg-dry	1	6/5/2023 01:45 PM
Pyrene	ND		0.22	mg/Kg-dry	1	6/5/2023 01:45 PM
Surr: 2-Fluorobiphenyl	93.7		30-116	%REC	1	6/5/2023 01:45 PM
<b>VOLATILE ORGANIC COMPOUNDS</b>			<b>SW8260B</b>			Analyst: <b>SK</b>
1,2,4-Trimethylbenzene	ND		0.0044	mg/Kg-dry	1	5/26/2023 08:32 PM
1,2-Dibromoethane	ND		0.00050	mg/Kg-dry	1	5/26/2023 08:32 PM

**Note:**

# ALS Environmental

Date: 09-Jun-23

**Client:** The Mannik & Smith Group, Inc.  
**Project:** Hillson Nut MS23-13; 401.ODAS003-19  
**Sample ID:** SB-2 (5-7') Dup  
**Collection Date:** 5/22/2023 01:20 PM

**Work Order:** 23051029  
**Lab ID:** 23051029-09  
**Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
1,2-Dichloroethane	ND		0.0044	mg/Kg-dry	1	5/26/2023 08:32 PM
Benzene	ND		0.0044	mg/Kg-dry	1	5/26/2023 08:32 PM
Ethylbenzene	ND		0.0044	mg/Kg-dry	1	5/26/2023 08:32 PM
m,p-Xylene	ND		0.0044	mg/Kg-dry	1	5/26/2023 08:32 PM
Methyl tert-butyl ether	ND		0.0044	mg/Kg-dry	1	5/26/2023 08:32 PM
Naphthalene	ND		0.0044	mg/Kg-dry	1	5/26/2023 08:32 PM
o-Xylene	ND		0.0044	mg/Kg-dry	1	5/26/2023 08:32 PM
Toluene	ND		0.0044	mg/Kg-dry	1	5/26/2023 08:32 PM
Xylenes, Total	ND		0.0088	mg/Kg-dry	1	5/26/2023 08:32 PM
<i>Surr: 4-Bromofluorobenzene</i>	95.0		60-140	%REC	1	5/26/2023 08:32 PM
<i>Surr: Dibromofluoromethane</i>	130		60-140	%REC	1	5/26/2023 08:32 PM
<i>Surr: Toluene-d8</i>	111		60-140	%REC	1	5/26/2023 08:32 PM

**Note:**

# ALS Environmental

Date: 09-Jun-23

**Client:** The Mannik & Smith Group, Inc.  
**Project:** Hillson Nut MS23-13; 401.ODAS003-19  
**Sample ID:** SB-3 (0-2')  
**Collection Date:** 5/22/2023 01:35 PM

**Work Order:** 23051029  
**Lab ID:** 23051029-10  
**Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
<b>DIESEL RANGE ORGANICS AND OIL RANGE ORGANICS</b>			<b>SW8015B</b>	Prep: SW3546	6/2/23 14:48	Analyst: <b>ECP</b>
TPH C10-C20	ND		17	mg/Kg-dry	1	6/5/2023 09:24 PM
TPH C20-C34	ND		17	mg/Kg-dry	1	6/5/2023 09:24 PM
Surr: Nonane	43.8		28.5-83.1	%REC	1	6/5/2023 09:24 PM
Surr: Pentacosane	56.1		30.6-143	%REC	1	6/5/2023 09:24 PM
<b>GASOLINE RANGE ORGANICS (C6-C12)</b>			<b>SW8015A</b>			Analyst: <b>JG</b>
TPH C6-C12	ND		2.5	mg/Kg-dry	1	5/24/2023 08:48 PM
Surr: Cyclooctane	79.4		55-135	%REC	1	5/24/2023 08:48 PM
<b>MOISTURE</b>			<b>SM2540B</b>			Analyst: <b>CW</b>
Moisture	20			% of sample	1	6/1/2023
<b>LEAD BY ICP</b>			<b>SW6010B</b>	Prep: SW3050B	6/6/23 12:30	Analyst: <b>SLT</b>
Lead	11		1.8	mg/Kg-dry	1	6/7/2023 12:40 PM
<b>PAH COMPOUNDS</b>			<b>SW8270C</b>	Prep: SW3546	6/2/23 14:46	Analyst: <b>GC</b>
1-Methylnaphthalene	ND		0.25	mg/Kg-dry	1	6/5/2023 02:05 PM
2-Methylnaphthalene	ND		0.25	mg/Kg-dry	1	6/5/2023 02:05 PM
Acenaphthene	ND		0.25	mg/Kg-dry	1	6/5/2023 02:05 PM
Acenaphthylene	ND		0.25	mg/Kg-dry	1	6/5/2023 02:05 PM
Anthracene	ND		0.25	mg/Kg-dry	1	6/5/2023 02:05 PM
Benzo(a)anthracene	ND		0.12	mg/Kg-dry	1	6/5/2023 02:05 PM
Benzo(a)pyrene	ND		0.12	mg/Kg-dry	1	6/5/2023 02:05 PM
Benzo(b)fluoranthene	ND		0.25	mg/Kg-dry	1	6/5/2023 02:05 PM
Benzo(g,h,i)perylene	ND		0.25	mg/Kg-dry	1	6/5/2023 02:05 PM
Benzo(k)fluoranthene	ND		0.25	mg/Kg-dry	1	6/5/2023 02:05 PM
Carbazole	ND		0.25	mg/Kg-dry	1	6/5/2023 02:05 PM
Chrysene	ND		0.25	mg/Kg-dry	1	6/5/2023 02:05 PM
Dibenzo(a,h)anthracene	ND		0.12	mg/Kg-dry	1	6/5/2023 02:05 PM
Dibenzofuran	ND		0.25	mg/Kg-dry	1	6/5/2023 02:05 PM
Fluoranthene	ND		0.25	mg/Kg-dry	1	6/5/2023 02:05 PM
Fluorene	ND		0.25	mg/Kg-dry	1	6/5/2023 02:05 PM
Indeno(1,2,3-cd)pyrene	ND		0.12	mg/Kg-dry	1	6/5/2023 02:05 PM
Naphthalene	ND		0.25	mg/Kg-dry	1	6/5/2023 02:05 PM
Phenanthrene	ND		0.25	mg/Kg-dry	1	6/5/2023 02:05 PM
Pyrene	ND		0.25	mg/Kg-dry	1	6/5/2023 02:05 PM
Surr: 2-Fluorobiphenyl	63.0		30-116	%REC	1	6/5/2023 02:05 PM
<b>VOLATILE ORGANIC COMPOUNDS</b>			<b>SW8260B</b>			Analyst: <b>LAK</b>
1,2,4-Trimethylbenzene	ND		0.0051	mg/Kg-dry	1	5/30/2023 06:55 PM
1,2-Dibromoethane	ND		0.00057	mg/Kg-dry	1	5/30/2023 06:55 PM

Note:

# ALS Environmental

Date: 09-Jun-23

**Client:** The Mannik & Smith Group, Inc.  
**Project:** Hillson Nut MS23-13; 401.ODAS003-19  
**Sample ID:** SB-3 (0-2')  
**Collection Date:** 5/22/2023 01:35 PM

**Work Order:** 23051029  
**Lab ID:** 23051029-10  
**Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
1,2-Dichloroethane	ND		0.0051	mg/Kg-dry	1	5/30/2023 06:55 PM
Benzene	ND		0.0051	mg/Kg-dry	1	5/30/2023 06:55 PM
Ethylbenzene	ND		0.0051	mg/Kg-dry	1	5/30/2023 06:55 PM
m,p-Xylene	ND		0.0051	mg/Kg-dry	1	5/30/2023 06:55 PM
Methyl tert-butyl ether	ND		0.0051	mg/Kg-dry	1	5/30/2023 06:55 PM
Naphthalene	ND		0.0051	mg/Kg-dry	1	5/30/2023 06:55 PM
o-Xylene	ND		0.0051	mg/Kg-dry	1	5/30/2023 06:55 PM
Toluene	ND		0.0051	mg/Kg-dry	1	5/30/2023 06:55 PM
Xylenes, Total	ND		0.010	mg/Kg-dry	1	5/30/2023 06:55 PM
<i>Surr: 4-Bromofluorobenzene</i>	101		60-140	%REC	1	5/30/2023 06:55 PM
<i>Surr: Dibromofluoromethane</i>	114		60-140	%REC	1	5/30/2023 06:55 PM
<i>Surr: Toluene-d8</i>	103		60-140	%REC	1	5/30/2023 06:55 PM

**Note:**



# ALS Environmental

Date: 09-Jun-23

**Client:** The Mannik & Smith Group, Inc.  
**Project:** Hillson Nut MS23-13; 401.ODAS003-19  
**Sample ID:** SB-3 (5-7')  
**Collection Date:** 5/22/2023 01:45 PM

**Work Order:** 23051029  
**Lab ID:** 23051029-11  
**Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
<b>DIESEL RANGE ORGANICS AND OIL RANGE ORGANICS</b>			<b>SW8015B</b>	Prep: SW3546	6/2/23 14:48	Analyst: <b>ECP</b>
TPH C10-C20	ND		17	mg/Kg-dry	1	6/5/2023 09:41 PM
TPH C20-C34	ND		17	mg/Kg-dry	1	6/5/2023 09:41 PM
Surr: Nonane	59.0		28.5-83.1	%REC	1	6/5/2023 09:41 PM
Surr: Pentacosane	74.4		30.6-143	%REC	1	6/5/2023 09:41 PM
<b>GASOLINE RANGE ORGANICS (C6-C12)</b>			<b>SW8015A</b>			Analyst: <b>JG</b>
TPH C6-C12	ND		2.6	mg/Kg-dry	1	5/24/2023 09:13 PM
Surr: Cyclooctane	97.2		55-135	%REC	1	5/24/2023 09:13 PM
<b>MOISTURE</b>			<b>SM2540B</b>			Analyst: <b>CW</b>
Moisture	23			% of sample	1	6/1/2023
<b>LEAD BY ICP</b>			<b>SW6010B</b>	Prep: SW3050B	6/6/23 12:30	Analyst: <b>SLT</b>
Lead	13		1.8	mg/Kg-dry	1	6/7/2023 12:53 PM
<b>PAH COMPOUNDS</b>			<b>SW8270C</b>	Prep: SW3546	6/2/23 14:46	Analyst: <b>GC</b>
1-Methylnaphthalene	ND		0.26	mg/Kg-dry	1	6/5/2023 02:26 PM
2-Methylnaphthalene	ND		0.26	mg/Kg-dry	1	6/5/2023 02:26 PM
Acenaphthene	ND		0.26	mg/Kg-dry	1	6/5/2023 02:26 PM
Acenaphthylene	ND		0.26	mg/Kg-dry	1	6/5/2023 02:26 PM
Anthracene	ND		0.26	mg/Kg-dry	1	6/5/2023 02:26 PM
Benzo(a)anthracene	ND		0.13	mg/Kg-dry	1	6/5/2023 02:26 PM
Benzo(a)pyrene	ND		0.13	mg/Kg-dry	1	6/5/2023 02:26 PM
Benzo(b)fluoranthene	ND		0.26	mg/Kg-dry	1	6/5/2023 02:26 PM
Benzo(g,h,i)perylene	ND		0.26	mg/Kg-dry	1	6/5/2023 02:26 PM
Benzo(k)fluoranthene	ND		0.26	mg/Kg-dry	1	6/5/2023 02:26 PM
Carbazole	ND		0.26	mg/Kg-dry	1	6/5/2023 02:26 PM
Chrysene	ND		0.26	mg/Kg-dry	1	6/5/2023 02:26 PM
Dibenzo(a,h)anthracene	ND		0.13	mg/Kg-dry	1	6/5/2023 02:26 PM
Dibenzofuran	ND		0.26	mg/Kg-dry	1	6/5/2023 02:26 PM
Fluoranthene	ND		0.26	mg/Kg-dry	1	6/5/2023 02:26 PM
Fluorene	ND		0.26	mg/Kg-dry	1	6/5/2023 02:26 PM
Indeno(1,2,3-cd)pyrene	ND		0.13	mg/Kg-dry	1	6/5/2023 02:26 PM
Naphthalene	ND		0.26	mg/Kg-dry	1	6/5/2023 02:26 PM
Phenanthrene	ND		0.26	mg/Kg-dry	1	6/5/2023 02:26 PM
Pyrene	ND		0.26	mg/Kg-dry	1	6/5/2023 02:26 PM
Surr: 2-Fluorobiphenyl	80.5		30-116	%REC	1	6/5/2023 02:26 PM
<b>VOLATILE ORGANIC COMPOUNDS</b>			<b>SW8260B</b>			Analyst: <b>LAK</b>
1,2,4-Trimethylbenzene	ND		0.0061	mg/Kg-dry	1	5/30/2023 07:17 PM
1,2-Dibromoethane	ND		0.00069	mg/Kg-dry	1	5/30/2023 07:17 PM

Note:

# ALS Environmental

Date: 09-Jun-23

**Client:** The Mannik & Smith Group, Inc.  
**Project:** Hillson Nut MS23-13; 401.ODAS003-19  
**Sample ID:** SB-3 (5-7')  
**Collection Date:** 5/22/2023 01:45 PM

**Work Order:** 23051029  
**Lab ID:** 23051029-11  
**Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
1,2-Dichloroethane	ND		0.0061	mg/Kg-dry	1	5/30/2023 07:17 PM
Benzene	ND		0.0061	mg/Kg-dry	1	5/30/2023 07:17 PM
Ethylbenzene	ND		0.0061	mg/Kg-dry	1	5/30/2023 07:17 PM
m,p-Xylene	ND		0.0061	mg/Kg-dry	1	5/30/2023 07:17 PM
Methyl tert-butyl ether	ND		0.0061	mg/Kg-dry	1	5/30/2023 07:17 PM
Naphthalene	ND		0.0061	mg/Kg-dry	1	5/30/2023 07:17 PM
o-Xylene	ND		0.0061	mg/Kg-dry	1	5/30/2023 07:17 PM
Toluene	ND		0.0061	mg/Kg-dry	1	5/30/2023 07:17 PM
Xylenes, Total	ND		0.012	mg/Kg-dry	1	5/30/2023 07:17 PM
Surr: 4-Bromofluorobenzene	96.9		60-140	%REC	1	5/30/2023 07:17 PM
Surr: Dibromofluoromethane	105		60-140	%REC	1	5/30/2023 07:17 PM
Surr: Toluene-d8	101		60-140	%REC	1	5/30/2023 07:17 PM

Note:

# ALS Environmental

Date: 09-Jun-23

**Client:** The Mannik & Smith Group, Inc.  
**Project:** Hillson Nut MS23-13; 401.ODAS003-19  
**Sample ID:** SB-7 (0-2')  
**Collection Date:** 5/22/2023 02:20 PM

**Work Order:** 23051029  
**Lab ID:** 23051029-12  
**Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
<b>PCBS</b>			<b>SW8082</b>	Prep: SW3546 6/2/23 14:34		Analyst: <b>TSA</b>
Aroclor 1016	ND		0.12	mg/Kg-dry	1	6/5/2023 07:59 PM
Aroclor 1221	ND		0.24	mg/Kg-dry	1	6/5/2023 07:59 PM
Aroclor 1232	ND		0.12	mg/Kg-dry	1	6/5/2023 07:59 PM
Aroclor 1242	ND		0.12	mg/Kg-dry	1	6/5/2023 07:59 PM
Aroclor 1248	ND		0.12	mg/Kg-dry	1	6/5/2023 07:59 PM
Aroclor 1254	ND		0.12	mg/Kg-dry	1	6/5/2023 07:59 PM
Aroclor 1260	ND		0.12	mg/Kg-dry	1	6/5/2023 07:59 PM
Aroclor 1262	ND		0.12	mg/Kg-dry	1	6/5/2023 07:59 PM
Aroclor 1268	ND		0.12	mg/Kg-dry	1	6/5/2023 07:59 PM
Surr: Decachlorobiphenyl	100		7.32-154	%REC	1	6/5/2023 07:59 PM
Surr: Tetrachloro-m-xylene	118		33.5-152	%REC	1	6/5/2023 07:59 PM
<b>MOISTURE</b>			<b>SM2540B</b>			Analyst: <b>CW</b>
Moisture	18			% of sample	1	6/1/2023
<b>MERCURY BY CVAA</b>			<b>SW7471A</b>	Prep: EPA 7471 6/2/23 11:36		Analyst: <b>SLT</b>
Mercury	ND		0.34	mg/Kg-dry	1	6/5/2023 11:01 AM
<b>METALS BY ICP</b>			<b>SW6010B</b>	Prep: SW3050B 6/2/23 10:43		Analyst: <b>SLT</b>
Arsenic	14		6.0	mg/Kg-dry	1	6/2/2023 03:30 PM
Barium	24	J	24	mg/Kg-dry	1	6/2/2023 03:30 PM
Cadmium	ND		1.2	mg/Kg-dry	1	6/2/2023 03:30 PM
Chromium	14		12	mg/Kg-dry	1	6/2/2023 03:30 PM
Lead	ND		24	mg/Kg-dry	1	6/2/2023 03:30 PM
Selenium	ND		3.6	mg/Kg-dry	1	6/2/2023 03:30 PM
Silver	ND		6.0	mg/Kg-dry	1	6/2/2023 03:30 PM
<b>SEMI-VOLATILE ORGANIC COMPOUNDS</b>			<b>SW8270C</b>	Prep: SW3546 5/30/23 11:26		Analyst: <b>RA</b>
1,2,4,5-Tetrachlorobenzene	ND		0.40	mg/Kg-dry	1	6/1/2023 03:24 PM
1,2,4-Trichlorobenzene	ND		0.40	mg/Kg-dry	1	6/1/2023 03:24 PM
1,2-Dichlorobenzene	ND		0.40	mg/Kg-dry	1	6/1/2023 03:24 PM
1,3-Dichlorobenzene	ND		0.40	mg/Kg-dry	1	6/1/2023 03:24 PM
1,3-Dinitrobenzene	ND		0.40	mg/Kg-dry	1	6/1/2023 03:24 PM
1,4-Dichlorobenzene	ND		0.40	mg/Kg-dry	1	6/1/2023 03:24 PM
1-Methylnaphthalene	ND		0.24	mg/Kg-dry	1	6/1/2023 03:24 PM
1-Naphthylamine	ND		0.40	mg/Kg-dry	1	6/1/2023 03:24 PM
2,3,4,6-Tetrachlorophenol	ND		0.40	mg/Kg-dry	1	6/1/2023 03:24 PM
2,4,5-Trichlorophenol	ND		0.40	mg/Kg-dry	1	6/1/2023 03:24 PM
2,4,6-Trichlorophenol	ND		0.40	mg/Kg-dry	1	6/1/2023 03:24 PM
2,4-Dichlorophenol	ND		0.40	mg/Kg-dry	1	6/1/2023 03:24 PM
2,4-Dimethylphenol	ND		0.40	mg/Kg-dry	1	6/1/2023 03:24 PM

Note:

# ALS Environmental

Date: 09-Jun-23

**Client:** The Mannik & Smith Group, Inc.  
**Project:** Hillson Nut MS23-13; 401.ODAS003-19  
**Sample ID:** SB-7 (0-2')  
**Collection Date:** 5/22/2023 02:20 PM

**Work Order:** 23051029  
**Lab ID:** 23051029-12  
**Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
2,4-Dinitrophenol	ND		2.0	mg/Kg-dry	1	6/1/2023 03:24 PM
2,4-Dinitrotoluene	ND		0.40	mg/Kg-dry	1	6/1/2023 03:24 PM
2,6-Dichlorophenol	ND		0.40	mg/Kg-dry	1	6/1/2023 03:24 PM
2,6-Dinitrotoluene	ND		0.40	mg/Kg-dry	1	6/1/2023 03:24 PM
2-Acetylaminofluorene	ND		0.40	mg/Kg-dry	1	6/1/2023 03:24 PM
2-Chloronaphthalene	ND		0.40	mg/Kg-dry	1	6/1/2023 03:24 PM
2-Chlorophenol	ND		0.40	mg/Kg-dry	1	6/1/2023 03:24 PM
2-Methylnaphthalene	ND		0.24	mg/Kg-dry	1	6/1/2023 03:24 PM
2-Methylphenol	ND		0.40	mg/Kg-dry	1	6/1/2023 03:24 PM
2-Naphthylamine	ND		0.40	mg/Kg-dry	1	6/1/2023 03:24 PM
2-Nitroaniline	ND		2.0	mg/Kg-dry	1	6/1/2023 03:24 PM
2-Nitrophenol	ND		0.40	mg/Kg-dry	1	6/1/2023 03:24 PM
2-Picoline	ND		0.40	mg/Kg-dry	1	6/1/2023 03:24 PM
3&4-Methylphenol	ND		0.40	mg/Kg-dry	1	6/1/2023 03:24 PM
3,3'-Dichlorobenzidine	ND		0.80	mg/Kg-dry	1	6/1/2023 03:24 PM
3-Methylcholanthrene	ND		0.40	mg/Kg-dry	1	6/1/2023 03:24 PM
3-Nitroaniline	ND		2.0	mg/Kg-dry	1	6/1/2023 03:24 PM
4,6-Dinitro-2-methylphenol	ND		2.0	mg/Kg-dry	1	6/1/2023 03:24 PM
4-Aminobiphenyl	ND		0.80	mg/Kg-dry	1	6/1/2023 03:24 PM
4-Bromophenyl phenyl ether	ND		0.40	mg/Kg-dry	1	6/1/2023 03:24 PM
4-Chloro-3-methylphenol	ND		0.80	mg/Kg-dry	1	6/1/2023 03:24 PM
4-Chloroaniline	ND		0.80	mg/Kg-dry	1	6/1/2023 03:24 PM
4-Chlorophenyl phenyl ether	ND		0.40	mg/Kg-dry	1	6/1/2023 03:24 PM
4-Nitroaniline	ND		0.80	mg/Kg-dry	1	6/1/2023 03:24 PM
4-Nitrophenol	ND		2.0	mg/Kg-dry	1	6/1/2023 03:24 PM
4-Nitroquinoline 1-oxide	ND		2.0	mg/Kg-dry	1	6/1/2023 03:24 PM
5-Nitro-o-toluidine	ND		0.40	mg/Kg-dry	1	6/1/2023 03:24 PM
7,12-Dimethylbenz(a)anthracene	ND		0.40	mg/Kg-dry	1	6/1/2023 03:24 PM
Acenaphthene	ND		0.24	mg/Kg-dry	1	6/1/2023 03:24 PM
Acenaphthylene	ND		0.24	mg/Kg-dry	1	6/1/2023 03:24 PM
Acetophenone	ND		0.40	mg/Kg-dry	1	6/1/2023 03:24 PM
Aniline	ND		0.40	mg/Kg-dry	1	6/1/2023 03:24 PM
Anthracene	ND		0.24	mg/Kg-dry	1	6/1/2023 03:24 PM
Azobenzene	ND		0.40	mg/Kg-dry	1	6/1/2023 03:24 PM
Benzidine	ND		0.40	mg/Kg-dry	1	6/1/2023 03:24 PM
Benzo(a)anthracene	ND		0.12	mg/Kg-dry	1	6/1/2023 03:24 PM
Benzo(a)pyrene	ND		0.12	mg/Kg-dry	1	6/1/2023 03:24 PM
Benzo(b)fluoranthene	ND		0.24	mg/Kg-dry	1	6/1/2023 03:24 PM
Benzo(g,h,i)perylene	ND		0.24	mg/Kg-dry	1	6/1/2023 03:24 PM
Benzo(k)fluoranthene	ND		0.24	mg/Kg-dry	1	6/1/2023 03:24 PM

**Note:**

# ALS Environmental

Date: 09-Jun-23

**Client:** The Mannik & Smith Group, Inc.  
**Project:** Hillson Nut MS23-13; 401.ODAS003-19  
**Sample ID:** SB-7 (0-2')  
**Collection Date:** 5/22/2023 02:20 PM

**Work Order:** 23051029  
**Lab ID:** 23051029-12  
**Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Benzyl alcohol	ND		0.80	mg/Kg-dry	1	6/1/2023 03:24 PM
Bis(2-chloroethoxy)methane	ND		0.40	mg/Kg-dry	1	6/1/2023 03:24 PM
Bis(2-chloroethyl)ether	ND		0.40	mg/Kg-dry	1	6/1/2023 03:24 PM
Bis(2-chloroisopropyl)ether	ND		0.40	mg/Kg-dry	1	6/1/2023 03:24 PM
Bis(2-ethylhexyl)phthalate	ND		0.40	mg/Kg-dry	1	6/1/2023 03:24 PM
Butyl benzyl phthalate	ND		0.40	mg/Kg-dry	1	6/1/2023 03:24 PM
Carbazole	ND		0.24	mg/Kg-dry	1	6/1/2023 03:24 PM
Chrysene	ND		0.24	mg/Kg-dry	1	6/1/2023 03:24 PM
Dibenzo(a,h)anthracene	ND		0.12	mg/Kg-dry	1	6/1/2023 03:24 PM
Dibenzofuran	ND		0.24	mg/Kg-dry	1	6/1/2023 03:24 PM
Diethyl phthalate	ND		0.40	mg/Kg-dry	1	6/1/2023 03:24 PM
Dimethyl phthalate	ND		0.40	mg/Kg-dry	1	6/1/2023 03:24 PM
Di-n-butyl phthalate	ND		0.40	mg/Kg-dry	1	6/1/2023 03:24 PM
Di-n-octyl phthalate	ND		0.40	mg/Kg-dry	1	6/1/2023 03:24 PM
Dinoseb	ND		0.40	mg/Kg-dry	1	6/1/2023 03:24 PM
Diphenylamine	ND		0.40	mg/Kg-dry	1	6/1/2023 03:24 PM
Ethyl methanesulfonate	ND		0.40	mg/Kg-dry	1	6/1/2023 03:24 PM
Fluoranthene	ND		0.24	mg/Kg-dry	1	6/1/2023 03:24 PM
Fluorene	ND		0.24	mg/Kg-dry	1	6/1/2023 03:24 PM
Hexachlorobenzene	ND		0.40	mg/Kg-dry	1	6/1/2023 03:24 PM
Hexachlorobutadiene	ND		0.40	mg/Kg-dry	1	6/1/2023 03:24 PM
Hexachlorocyclopentadiene	ND		0.40	mg/Kg-dry	1	6/1/2023 03:24 PM
Hexachloroethane	ND		0.40	mg/Kg-dry	1	6/1/2023 03:24 PM
Indeno(1,2,3-cd)pyrene	ND		0.12	mg/Kg-dry	1	6/1/2023 03:24 PM
Isophorone	ND		0.40	mg/Kg-dry	1	6/1/2023 03:24 PM
Isosafrole	ND		0.40	mg/Kg-dry	1	6/1/2023 03:24 PM
Methapyrilene	ND		2.0	mg/Kg-dry	1	6/1/2023 03:24 PM
Methyl methanesulfonate	ND		0.40	mg/Kg-dry	1	6/1/2023 03:24 PM
Naphthalene	ND		0.24	mg/Kg-dry	1	6/1/2023 03:24 PM
Nitrobenzene	ND		0.40	mg/Kg-dry	1	6/1/2023 03:24 PM
N-Nitrosodiethylamine	ND		0.40	mg/Kg-dry	1	6/1/2023 03:24 PM
N-Nitrosodimethylamine	ND		0.40	mg/Kg-dry	1	6/1/2023 03:24 PM
N-Nitroso-di-n-butylamine	ND		0.40	mg/Kg-dry	1	6/1/2023 03:24 PM
N-Nitrosodi-n-propylamine	ND		0.40	mg/Kg-dry	1	6/1/2023 03:24 PM
N-Nitrosomethylethylamine	ND		0.40	mg/Kg-dry	1	6/1/2023 03:24 PM
N-Nitrosomorpholine	ND		0.40	mg/Kg-dry	1	6/1/2023 03:24 PM
N-Nitrosopiperidine	ND		0.40	mg/Kg-dry	1	6/1/2023 03:24 PM
N-Nitrosopyrrolidine	ND		0.40	mg/Kg-dry	1	6/1/2023 03:24 PM
o-Toluidine	ND		2.0	mg/Kg-dry	1	6/1/2023 03:24 PM
p-Dimethylaminoazobenzene	ND		0.40	mg/Kg-dry	1	6/1/2023 03:24 PM

**Note:**

# ALS Environmental

Date: 09-Jun-23

**Client:** The Mannik & Smith Group, Inc.  
**Project:** Hillson Nut MS23-13; 401.ODAS003-19  
**Sample ID:** SB-7 (0-2')  
**Collection Date:** 5/22/2023 02:20 PM

**Work Order:** 23051029  
**Lab ID:** 23051029-12  
**Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Pentachlorobenzene	ND		0.40	mg/Kg-dry	1	6/1/2023 03:24 PM
Pentachloroethane	ND		0.40	mg/Kg-dry	1	6/1/2023 03:24 PM
Pentachloronitrobenzene	ND		0.80	mg/Kg-dry	1	6/1/2023 03:24 PM
Pentachlorophenol	ND		2.0	mg/Kg-dry	1	6/1/2023 03:24 PM
Phenacetin	ND		0.80	mg/Kg-dry	1	6/1/2023 03:24 PM
Phenanthrene	ND		0.24	mg/Kg-dry	1	6/1/2023 03:24 PM
Phenol	ND		0.40	mg/Kg-dry	1	6/1/2023 03:24 PM
Pyrene	ND		0.24	mg/Kg-dry	1	6/1/2023 03:24 PM
Pyridine	ND		0.40	mg/Kg-dry	1	6/1/2023 03:24 PM
Safrole	ND		0.40	mg/Kg-dry	1	6/1/2023 03:24 PM
<i>Surr: 2,4,6-Tribromophenol</i>	<i>67.7</i>		<i>14.2-136</i>	<i>%REC</i>	<i>1</i>	<i>6/1/2023 03:24 PM</i>
<i>Surr: 2-Fluorobiphenyl</i>	<i>60.7</i>		<i>30-116</i>	<i>%REC</i>	<i>1</i>	<i>6/1/2023 03:24 PM</i>
<i>Surr: 2-Fluorophenol</i>	<i>54.9</i>		<i>24-105</i>	<i>%REC</i>	<i>1</i>	<i>6/1/2023 03:24 PM</i>
<i>Surr: 4-Terphenyl-d14</i>	<i>71.2</i>		<i>27.3-138</i>	<i>%REC</i>	<i>1</i>	<i>6/1/2023 03:24 PM</i>
<i>Surr: Nitrobenzene-d5</i>	<i>54.9</i>		<i>23.7-109</i>	<i>%REC</i>	<i>1</i>	<i>6/1/2023 03:24 PM</i>
<i>Surr: Phenol-d5</i>	<i>51.1</i>		<i>24.9-103</i>	<i>%REC</i>	<i>1</i>	<i>6/1/2023 03:24 PM</i>

## VOLATILE ORGANIC COMPOUNDS

SW8260B

Analyst: LAK

1,1,1,2-Tetrachloroethane	ND		0.0042	mg/Kg-dry	1	5/30/2023 07:39 PM
1,1,1-Trichloroethane	ND		0.0042	mg/Kg-dry	1	5/30/2023 07:39 PM
1,1,2,2-Tetrachloroethane	ND		0.0042	mg/Kg-dry	1	5/30/2023 07:39 PM
1,1,2-Trichloroethane	ND		0.0042	mg/Kg-dry	1	5/30/2023 07:39 PM
1,1-Dichloroethane	ND		0.0042	mg/Kg-dry	1	5/30/2023 07:39 PM
1,1-Dichloroethene	ND		0.0042	mg/Kg-dry	1	5/30/2023 07:39 PM
1,1-Dichloropropene	ND		0.0042	mg/Kg-dry	1	5/30/2023 07:39 PM
1,2,3-Trichlorobenzene	ND		0.0042	mg/Kg-dry	1	5/30/2023 07:39 PM
1,2,3-Trichloropropane	ND		0.0042	mg/Kg-dry	1	5/30/2023 07:39 PM
1,2,4-Trichlorobenzene	ND		0.0042	mg/Kg-dry	1	5/30/2023 07:39 PM
1,2,4-Trimethylbenzene	ND		0.0042	mg/Kg-dry	1	5/30/2023 07:39 PM
1,2-Dibromo-3-chloropropane	ND		0.0042	mg/Kg-dry	1	5/30/2023 07:39 PM
1,2-Dibromoethane	ND		0.0042	mg/Kg-dry	1	5/30/2023 07:39 PM
1,2-Dichlorobenzene	ND		0.0042	mg/Kg-dry	1	5/30/2023 07:39 PM
1,2-Dichloroethane	ND		0.0042	mg/Kg-dry	1	5/30/2023 07:39 PM
1,2-Dichloropropane	ND		0.0042	mg/Kg-dry	1	5/30/2023 07:39 PM
1,3,5-Trimethylbenzene	ND		0.0042	mg/Kg-dry	1	5/30/2023 07:39 PM
1,3-Dichlorobenzene	ND		0.0042	mg/Kg-dry	1	5/30/2023 07:39 PM
1,3-Dichloropropane	ND		0.0042	mg/Kg-dry	1	5/30/2023 07:39 PM
1,4-Dichlorobenzene	ND		0.0042	mg/Kg-dry	1	5/30/2023 07:39 PM
2,2-Dichloropropane	ND		0.0042	mg/Kg-dry	1	5/30/2023 07:39 PM
2-Butanone	ND		0.042	mg/Kg-dry	1	5/30/2023 07:39 PM
2-Chlorotoluene	ND		0.0042	mg/Kg-dry	1	5/30/2023 07:39 PM

Note:

# ALS Environmental

Date: 09-Jun-23

**Client:** The Mannik & Smith Group, Inc.  
**Project:** Hillson Nut MS23-13; 401.ODAS003-19  
**Sample ID:** SB-7 (0-2')  
**Collection Date:** 5/22/2023 02:20 PM

**Work Order:** 23051029  
**Lab ID:** 23051029-12  
**Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
2-Hexanone	ND		0.0042	mg/Kg-dry	1	5/30/2023 07:39 PM
4-Chlorotoluene	ND		0.0042	mg/Kg-dry	1	5/30/2023 07:39 PM
4-Methyl-2-pentanone	ND		0.0042	mg/Kg-dry	1	5/30/2023 07:39 PM
Acetone	ND		0.042	mg/Kg-dry	1	5/30/2023 07:39 PM
Benzene	ND		0.0042	mg/Kg-dry	1	5/30/2023 07:39 PM
Bromobenzene	ND		0.0042	mg/Kg-dry	1	5/30/2023 07:39 PM
Bromochloromethane	ND		0.0042	mg/Kg-dry	1	5/30/2023 07:39 PM
Bromodichloromethane	ND		0.0042	mg/Kg-dry	1	5/30/2023 07:39 PM
Bromoform	ND		0.0042	mg/Kg-dry	1	5/30/2023 07:39 PM
Bromomethane	ND		0.0042	mg/Kg-dry	1	5/30/2023 07:39 PM
Carbon disulfide	ND		0.0042	mg/Kg-dry	1	5/30/2023 07:39 PM
Carbon tetrachloride	ND		0.0042	mg/Kg-dry	1	5/30/2023 07:39 PM
Chlorobenzene	ND		0.0042	mg/Kg-dry	1	5/30/2023 07:39 PM
Chloroethane	ND		0.0042	mg/Kg-dry	1	5/30/2023 07:39 PM
Chloroform	ND		0.0042	mg/Kg-dry	1	5/30/2023 07:39 PM
Chloromethane	ND		0.0042	mg/Kg-dry	1	5/30/2023 07:39 PM
cis-1,2-Dichloroethene	ND		0.0042	mg/Kg-dry	1	5/30/2023 07:39 PM
cis-1,3-Dichloropropene	ND		0.0042	mg/Kg-dry	1	5/30/2023 07:39 PM
Dibromochloromethane	ND		0.0042	mg/Kg-dry	1	5/30/2023 07:39 PM
Dibromomethane	ND		0.0042	mg/Kg-dry	1	5/30/2023 07:39 PM
Dichlorodifluoromethane	ND		0.0042	mg/Kg-dry	1	5/30/2023 07:39 PM
Ethylbenzene	ND		0.0042	mg/Kg-dry	1	5/30/2023 07:39 PM
Hexachlorobutadiene	ND		0.0042	mg/Kg-dry	1	5/30/2023 07:39 PM
Isopropylbenzene	ND		0.0042	mg/Kg-dry	1	5/30/2023 07:39 PM
m,p-Xylene	ND		0.0042	mg/Kg-dry	1	5/30/2023 07:39 PM
Methyl tert-butyl ether	ND		0.0042	mg/Kg-dry	1	5/30/2023 07:39 PM
Methylene chloride	ND		0.017	mg/Kg-dry	1	5/30/2023 07:39 PM
Naphthalene	ND		0.0042	mg/Kg-dry	1	5/30/2023 07:39 PM
n-Butylbenzene	ND		0.0042	mg/Kg-dry	1	5/30/2023 07:39 PM
n-Propylbenzene	ND		0.0042	mg/Kg-dry	1	5/30/2023 07:39 PM
o-Xylene	ND		0.0042	mg/Kg-dry	1	5/30/2023 07:39 PM
p-Isopropyltoluene	ND		0.0042	mg/Kg-dry	1	5/30/2023 07:39 PM
sec-Butylbenzene	ND		0.0042	mg/Kg-dry	1	5/30/2023 07:39 PM
Styrene	ND		0.0042	mg/Kg-dry	1	5/30/2023 07:39 PM
tert-Butylbenzene	ND		0.0042	mg/Kg-dry	1	5/30/2023 07:39 PM
Tetrachloroethene	ND		0.0042	mg/Kg-dry	1	5/30/2023 07:39 PM
Toluene	ND		0.0042	mg/Kg-dry	1	5/30/2023 07:39 PM
trans-1,2-Dichloroethene	ND		0.0042	mg/Kg-dry	1	5/30/2023 07:39 PM
trans-1,3-Dichloropropene	ND		0.0042	mg/Kg-dry	1	5/30/2023 07:39 PM
Trichloroethene	ND		0.0042	mg/Kg-dry	1	5/30/2023 07:39 PM

**Note:**

# ALS Environmental

Date: 09-Jun-23

**Client:** The Mannik & Smith Group, Inc.  
**Project:** Hillson Nut MS23-13; 401.ODAS003-19  
**Sample ID:** SB-7 (0-2')  
**Collection Date:** 5/22/2023 02:20 PM

**Work Order:** 23051029  
**Lab ID:** 23051029-12  
**Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Trichlorofluoromethane	ND		0.0042	mg/Kg-dry	1	5/30/2023 07:39 PM
Vinyl chloride	ND		0.0042	mg/Kg-dry	1	5/30/2023 07:39 PM
Xylenes, Total	ND		0.0083	mg/Kg-dry	1	5/30/2023 07:39 PM
<i>Surr: 4-Bromofluorobenzene</i>	99.0		60-140	%REC	1	5/30/2023 07:39 PM
<i>Surr: Dibromofluoromethane</i>	119		60-140	%REC	1	5/30/2023 07:39 PM
<i>Surr: Toluene-d8</i>	103		60-140	%REC	1	5/30/2023 07:39 PM

**Note:**



# ALS Environmental

Date: 09-Jun-23

**Client:** The Mannik & Smith Group, Inc.  
**Project:** Hillson Nut MS23-13; 401.ODAS003-19  
**Sample ID:** SB-7 (5-7')  
**Collection Date:** 5/22/2023 02:25 PM

**Work Order:** 23051029  
**Lab ID:** 23051029-13  
**Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
<b>PCBS</b>			<b>SW8082</b>	Prep: SW3546 6/2/23 14:34		Analyst: <b>TSA</b>
Aroclor 1016	ND		0.13	mg/Kg-dry	1	6/5/2023 08:48 PM
Aroclor 1221	ND		0.26	mg/Kg-dry	1	6/5/2023 08:48 PM
Aroclor 1232	ND		0.13	mg/Kg-dry	1	6/5/2023 08:48 PM
Aroclor 1242	ND		0.13	mg/Kg-dry	1	6/5/2023 08:48 PM
Aroclor 1248	ND		0.13	mg/Kg-dry	1	6/5/2023 08:48 PM
Aroclor 1254	ND		0.13	mg/Kg-dry	1	6/5/2023 08:48 PM
Aroclor 1260	ND		0.13	mg/Kg-dry	1	6/5/2023 08:48 PM
Aroclor 1262	ND		0.13	mg/Kg-dry	1	6/5/2023 08:48 PM
Aroclor 1268	ND		0.13	mg/Kg-dry	1	6/5/2023 08:48 PM
Surr: Decachlorobiphenyl	74.0		7.32-154	%REC	1	6/5/2023 08:48 PM
Surr: Tetrachloro-m-xylene	86.0		33.5-152	%REC	1	6/5/2023 08:48 PM
<b>MOISTURE</b>			<b>SM2540B</b>			Analyst: <b>CW</b>
Moisture	24			% of sample	1	6/1/2023
<b>MERCURY BY CVAA</b>			<b>SW7471A</b>	Prep: EPA 7471 6/2/23 11:36		Analyst: <b>SLT</b>
Mercury	ND		0.36	mg/Kg-dry	1	6/5/2023 11:03 AM
<b>METALS BY ICP</b>			<b>SW6010B</b>	Prep: SW3050B 6/2/23 10:43		Analyst: <b>SLT</b>
Arsenic	ND		6.4	mg/Kg-dry	1	6/2/2023 03:35 PM
Barium	ND		26	mg/Kg-dry	1	6/2/2023 03:35 PM
Cadmium	ND		1.3	mg/Kg-dry	1	6/2/2023 03:35 PM
Chromium	ND		13	mg/Kg-dry	1	6/2/2023 03:35 PM
Lead	ND		26	mg/Kg-dry	1	6/2/2023 03:35 PM
Selenium	ND		3.8	mg/Kg-dry	1	6/2/2023 03:35 PM
Silver	ND		6.4	mg/Kg-dry	1	6/2/2023 03:35 PM
<b>SEMI-VOLATILE ORGANIC COMPOUNDS</b>			<b>SW8270C</b>	Prep: SW3546 5/30/23 11:26		Analyst: <b>RA</b>
1,2,4,5-Tetrachlorobenzene	ND		0.43	mg/Kg-dry	1	6/1/2023 03:46 PM
1,2,4-Trichlorobenzene	ND		0.43	mg/Kg-dry	1	6/1/2023 03:46 PM
1,2-Dichlorobenzene	ND		0.43	mg/Kg-dry	1	6/1/2023 03:46 PM
1,3-Dichlorobenzene	ND		0.43	mg/Kg-dry	1	6/1/2023 03:46 PM
1,3-Dinitrobenzene	ND		0.43	mg/Kg-dry	1	6/1/2023 03:46 PM
1,4-Dichlorobenzene	ND		0.43	mg/Kg-dry	1	6/1/2023 03:46 PM
1-Methylnaphthalene	ND		0.26	mg/Kg-dry	1	6/1/2023 03:46 PM
1-Naphthylamine	ND		0.43	mg/Kg-dry	1	6/1/2023 03:46 PM
2,3,4,6-Tetrachlorophenol	ND		0.43	mg/Kg-dry	1	6/1/2023 03:46 PM
2,4,5-Trichlorophenol	ND		0.43	mg/Kg-dry	1	6/1/2023 03:46 PM
2,4,6-Trichlorophenol	ND		0.43	mg/Kg-dry	1	6/1/2023 03:46 PM
2,4-Dichlorophenol	ND		0.43	mg/Kg-dry	1	6/1/2023 03:46 PM
2,4-Dimethylphenol	ND		0.43	mg/Kg-dry	1	6/1/2023 03:46 PM

**Note:**

# ALS Environmental

Date: 09-Jun-23

**Client:** The Mannik & Smith Group, Inc.  
**Project:** Hillson Nut MS23-13; 401.ODAS003-19  
**Sample ID:** SB-7 (5-7')  
**Collection Date:** 5/22/2023 02:25 PM

**Work Order:** 23051029  
**Lab ID:** 23051029-13  
**Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
2,4-Dinitrophenol	ND		2.2	mg/Kg-dry	1	6/1/2023 03:46 PM
2,4-Dinitrotoluene	ND		0.43	mg/Kg-dry	1	6/1/2023 03:46 PM
2,6-Dichlorophenol	ND		0.43	mg/Kg-dry	1	6/1/2023 03:46 PM
2,6-Dinitrotoluene	ND		0.43	mg/Kg-dry	1	6/1/2023 03:46 PM
2-Acetylaminofluorene	ND		0.43	mg/Kg-dry	1	6/1/2023 03:46 PM
2-Chloronaphthalene	ND		0.43	mg/Kg-dry	1	6/1/2023 03:46 PM
2-Chlorophenol	ND		0.43	mg/Kg-dry	1	6/1/2023 03:46 PM
2-Methylnaphthalene	ND		0.26	mg/Kg-dry	1	6/1/2023 03:46 PM
2-Methylphenol	ND		0.43	mg/Kg-dry	1	6/1/2023 03:46 PM
2-Naphthylamine	ND		0.43	mg/Kg-dry	1	6/1/2023 03:46 PM
2-Nitroaniline	ND		2.2	mg/Kg-dry	1	6/1/2023 03:46 PM
2-Nitrophenol	ND		0.43	mg/Kg-dry	1	6/1/2023 03:46 PM
2-Picoline	ND		0.43	mg/Kg-dry	1	6/1/2023 03:46 PM
3&4-Methylphenol	ND		0.43	mg/Kg-dry	1	6/1/2023 03:46 PM
3,3'-Dichlorobenzidine	ND		0.86	mg/Kg-dry	1	6/1/2023 03:46 PM
3-Methylcholanthrene	ND		0.43	mg/Kg-dry	1	6/1/2023 03:46 PM
3-Nitroaniline	ND		2.2	mg/Kg-dry	1	6/1/2023 03:46 PM
4,6-Dinitro-2-methylphenol	ND		2.2	mg/Kg-dry	1	6/1/2023 03:46 PM
4-Aminobiphenyl	ND		0.86	mg/Kg-dry	1	6/1/2023 03:46 PM
4-Bromophenyl phenyl ether	ND		0.43	mg/Kg-dry	1	6/1/2023 03:46 PM
4-Chloro-3-methylphenol	ND		0.86	mg/Kg-dry	1	6/1/2023 03:46 PM
4-Chloroaniline	ND		0.86	mg/Kg-dry	1	6/1/2023 03:46 PM
4-Chlorophenyl phenyl ether	ND		0.43	mg/Kg-dry	1	6/1/2023 03:46 PM
4-Nitroaniline	ND		0.86	mg/Kg-dry	1	6/1/2023 03:46 PM
4-Nitrophenol	ND		2.2	mg/Kg-dry	1	6/1/2023 03:46 PM
4-Nitroquinoline 1-oxide	ND		2.2	mg/Kg-dry	1	6/1/2023 03:46 PM
5-Nitro-o-toluidine	ND		0.43	mg/Kg-dry	1	6/1/2023 03:46 PM
7,12-Dimethylbenz(a)anthracene	ND		0.43	mg/Kg-dry	1	6/1/2023 03:46 PM
Acenaphthene	ND		0.26	mg/Kg-dry	1	6/1/2023 03:46 PM
Acenaphthylene	ND		0.26	mg/Kg-dry	1	6/1/2023 03:46 PM
Acetophenone	ND		0.43	mg/Kg-dry	1	6/1/2023 03:46 PM
Aniline	ND		0.43	mg/Kg-dry	1	6/1/2023 03:46 PM
Anthracene	ND		0.26	mg/Kg-dry	1	6/1/2023 03:46 PM
Azobenzene	ND		0.43	mg/Kg-dry	1	6/1/2023 03:46 PM
Benzidine	ND		0.43	mg/Kg-dry	1	6/1/2023 03:46 PM
Benzo(a)anthracene	ND		0.13	mg/Kg-dry	1	6/1/2023 03:46 PM
Benzo(a)pyrene	ND		0.13	mg/Kg-dry	1	6/1/2023 03:46 PM
Benzo(b)fluoranthene	ND		0.26	mg/Kg-dry	1	6/1/2023 03:46 PM
Benzo(g,h,i)perylene	ND		0.26	mg/Kg-dry	1	6/1/2023 03:46 PM
Benzo(k)fluoranthene	ND		0.26	mg/Kg-dry	1	6/1/2023 03:46 PM

**Note:**

# ALS Environmental

Date: 09-Jun-23

**Client:** The Mannik & Smith Group, Inc.  
**Project:** Hillson Nut MS23-13; 401.ODAS003-19  
**Sample ID:** SB-7 (5-7')  
**Collection Date:** 5/22/2023 02:25 PM

**Work Order:** 23051029  
**Lab ID:** 23051029-13  
**Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Benzyl alcohol	ND		0.86	mg/Kg-dry	1	6/1/2023 03:46 PM
Bis(2-chloroethoxy)methane	ND		0.43	mg/Kg-dry	1	6/1/2023 03:46 PM
Bis(2-chloroethyl)ether	ND		0.43	mg/Kg-dry	1	6/1/2023 03:46 PM
Bis(2-chloroisopropyl)ether	ND		0.43	mg/Kg-dry	1	6/1/2023 03:46 PM
Bis(2-ethylhexyl)phthalate	ND		0.43	mg/Kg-dry	1	6/1/2023 03:46 PM
Butyl benzyl phthalate	ND		0.43	mg/Kg-dry	1	6/1/2023 03:46 PM
Carbazole	ND		0.26	mg/Kg-dry	1	6/1/2023 03:46 PM
Chrysene	ND		0.26	mg/Kg-dry	1	6/1/2023 03:46 PM
Dibenzo(a,h)anthracene	ND		0.13	mg/Kg-dry	1	6/1/2023 03:46 PM
Dibenzofuran	ND		0.26	mg/Kg-dry	1	6/1/2023 03:46 PM
Diethyl phthalate	ND		0.43	mg/Kg-dry	1	6/1/2023 03:46 PM
Dimethyl phthalate	ND		0.43	mg/Kg-dry	1	6/1/2023 03:46 PM
Di-n-butyl phthalate	ND		0.43	mg/Kg-dry	1	6/1/2023 03:46 PM
Di-n-octyl phthalate	ND		0.43	mg/Kg-dry	1	6/1/2023 03:46 PM
Dinoseb	ND		0.43	mg/Kg-dry	1	6/1/2023 03:46 PM
Diphenylamine	ND		0.43	mg/Kg-dry	1	6/1/2023 03:46 PM
Ethyl methanesulfonate	ND		0.43	mg/Kg-dry	1	6/1/2023 03:46 PM
Fluoranthene	ND		0.26	mg/Kg-dry	1	6/1/2023 03:46 PM
Fluorene	ND		0.26	mg/Kg-dry	1	6/1/2023 03:46 PM
Hexachlorobenzene	ND		0.43	mg/Kg-dry	1	6/1/2023 03:46 PM
Hexachlorobutadiene	ND		0.43	mg/Kg-dry	1	6/1/2023 03:46 PM
Hexachlorocyclopentadiene	ND		0.43	mg/Kg-dry	1	6/1/2023 03:46 PM
Hexachloroethane	ND		0.43	mg/Kg-dry	1	6/1/2023 03:46 PM
Indeno(1,2,3-cd)pyrene	ND		0.13	mg/Kg-dry	1	6/1/2023 03:46 PM
Isophorone	ND		0.43	mg/Kg-dry	1	6/1/2023 03:46 PM
Isosafrole	ND		0.43	mg/Kg-dry	1	6/1/2023 03:46 PM
Methapyrilene	ND		2.2	mg/Kg-dry	1	6/1/2023 03:46 PM
Methyl methanesulfonate	ND		0.43	mg/Kg-dry	1	6/1/2023 03:46 PM
Naphthalene	ND		0.26	mg/Kg-dry	1	6/1/2023 03:46 PM
Nitrobenzene	ND		0.43	mg/Kg-dry	1	6/1/2023 03:46 PM
N-Nitrosodiethylamine	ND		0.43	mg/Kg-dry	1	6/1/2023 03:46 PM
N-Nitrosodimethylamine	ND		0.43	mg/Kg-dry	1	6/1/2023 03:46 PM
N-Nitroso-di-n-butylamine	ND		0.43	mg/Kg-dry	1	6/1/2023 03:46 PM
N-Nitrosodi-n-propylamine	ND		0.43	mg/Kg-dry	1	6/1/2023 03:46 PM
N-Nitrosomethylethylamine	ND		0.43	mg/Kg-dry	1	6/1/2023 03:46 PM
N-Nitrosomorpholine	ND		0.43	mg/Kg-dry	1	6/1/2023 03:46 PM
N-Nitrosopiperidine	ND		0.43	mg/Kg-dry	1	6/1/2023 03:46 PM
N-Nitrosopyrrolidine	ND		0.43	mg/Kg-dry	1	6/1/2023 03:46 PM
o-Toluidine	ND		2.2	mg/Kg-dry	1	6/1/2023 03:46 PM
p-Dimethylaminoazobenzene	ND		0.43	mg/Kg-dry	1	6/1/2023 03:46 PM

**Note:**

# ALS Environmental

Date: 09-Jun-23

**Client:** The Mannik & Smith Group, Inc.  
**Project:** Hillson Nut MS23-13; 401.ODAS003-19  
**Sample ID:** SB-7 (5-7')  
**Collection Date:** 5/22/2023 02:25 PM

**Work Order:** 23051029  
**Lab ID:** 23051029-13  
**Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Pentachlorobenzene	ND		0.43	mg/Kg-dry	1	6/1/2023 03:46 PM
Pentachloroethane	ND		0.43	mg/Kg-dry	1	6/1/2023 03:46 PM
Pentachloronitrobenzene	ND		0.86	mg/Kg-dry	1	6/1/2023 03:46 PM
Pentachlorophenol	ND		2.2	mg/Kg-dry	1	6/1/2023 03:46 PM
Phenacetin	ND		0.86	mg/Kg-dry	1	6/1/2023 03:46 PM
Phenanthrene	ND		0.26	mg/Kg-dry	1	6/1/2023 03:46 PM
Phenol	ND		0.43	mg/Kg-dry	1	6/1/2023 03:46 PM
Pyrene	ND		0.26	mg/Kg-dry	1	6/1/2023 03:46 PM
Pyridine	ND		0.43	mg/Kg-dry	1	6/1/2023 03:46 PM
Safrole	ND		0.43	mg/Kg-dry	1	6/1/2023 03:46 PM
<i>Surr: 2,4,6-Tribromophenol</i>	<i>67.6</i>		<i>14.2-136</i>	<i>%REC</i>	<i>1</i>	<i>6/1/2023 03:46 PM</i>
<i>Surr: 2-Fluorobiphenyl</i>	<i>62.0</i>		<i>30-116</i>	<i>%REC</i>	<i>1</i>	<i>6/1/2023 03:46 PM</i>
<i>Surr: 2-Fluorophenol</i>	<i>54.4</i>		<i>24-105</i>	<i>%REC</i>	<i>1</i>	<i>6/1/2023 03:46 PM</i>
<i>Surr: 4-Terphenyl-d14</i>	<i>68.6</i>		<i>27.3-138</i>	<i>%REC</i>	<i>1</i>	<i>6/1/2023 03:46 PM</i>
<i>Surr: Nitrobenzene-d5</i>	<i>53.4</i>		<i>23.7-109</i>	<i>%REC</i>	<i>1</i>	<i>6/1/2023 03:46 PM</i>
<i>Surr: Phenol-d5</i>	<i>50.2</i>		<i>24.9-103</i>	<i>%REC</i>	<i>1</i>	<i>6/1/2023 03:46 PM</i>

## VOLATILE ORGANIC COMPOUNDS

SW8260B

Analyst: LAK

1,1,1,2-Tetrachloroethane	ND		0.0058	mg/Kg-dry	1	5/26/2023 01:07 PM
1,1,1-Trichloroethane	ND		0.0058	mg/Kg-dry	1	5/26/2023 01:07 PM
1,1,2,2-Tetrachloroethane	ND		0.0058	mg/Kg-dry	1	5/26/2023 01:07 PM
1,1,2-Trichloroethane	ND		0.0058	mg/Kg-dry	1	5/26/2023 01:07 PM
1,1-Dichloroethane	ND		0.0058	mg/Kg-dry	1	5/26/2023 01:07 PM
1,1-Dichloroethene	ND		0.0058	mg/Kg-dry	1	5/26/2023 01:07 PM
1,1-Dichloropropene	ND		0.0058	mg/Kg-dry	1	5/26/2023 01:07 PM
1,2,3-Trichlorobenzene	ND		0.0058	mg/Kg-dry	1	5/26/2023 01:07 PM
1,2,3-Trichloropropane	ND		0.0058	mg/Kg-dry	1	5/26/2023 01:07 PM
1,2,4-Trichlorobenzene	ND		0.0058	mg/Kg-dry	1	5/26/2023 01:07 PM
1,2,4-Trimethylbenzene	ND		0.0058	mg/Kg-dry	1	5/26/2023 01:07 PM
1,2-Dibromo-3-chloropropane	ND		0.0058	mg/Kg-dry	1	5/26/2023 01:07 PM
1,2-Dibromoethane	ND		0.0058	mg/Kg-dry	1	5/26/2023 01:07 PM
1,2-Dichlorobenzene	ND		0.0058	mg/Kg-dry	1	5/26/2023 01:07 PM
1,2-Dichloroethane	ND		0.0058	mg/Kg-dry	1	5/26/2023 01:07 PM
1,2-Dichloropropane	ND		0.0058	mg/Kg-dry	1	5/26/2023 01:07 PM
1,3,5-Trimethylbenzene	ND		0.0058	mg/Kg-dry	1	5/26/2023 01:07 PM
1,3-Dichlorobenzene	ND		0.0058	mg/Kg-dry	1	5/26/2023 01:07 PM
1,3-Dichloropropane	ND		0.0058	mg/Kg-dry	1	5/26/2023 01:07 PM
1,4-Dichlorobenzene	ND		0.0058	mg/Kg-dry	1	5/26/2023 01:07 PM
2,2-Dichloropropane	ND		0.0058	mg/Kg-dry	1	5/26/2023 01:07 PM
2-Butanone	ND		0.058	mg/Kg-dry	1	5/26/2023 01:07 PM
2-Chlorotoluene	ND		0.0058	mg/Kg-dry	1	5/26/2023 01:07 PM

Note:

# ALS Environmental

Date: 09-Jun-23

**Client:** The Mannik & Smith Group, Inc.  
**Project:** Hillson Nut MS23-13; 401.ODAS003-19  
**Sample ID:** SB-7 (5-7')  
**Collection Date:** 5/22/2023 02:25 PM

**Work Order:** 23051029  
**Lab ID:** 23051029-13  
**Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
2-Hexanone	ND		0.0058	mg/Kg-dry	1	5/26/2023 01:07 PM
4-Chlorotoluene	ND		0.0058	mg/Kg-dry	1	5/26/2023 01:07 PM
4-Methyl-2-pentanone	ND		0.0058	mg/Kg-dry	1	5/26/2023 01:07 PM
Acetone	ND		0.058	mg/Kg-dry	1	5/26/2023 01:07 PM
Benzene	ND		0.0058	mg/Kg-dry	1	5/26/2023 01:07 PM
Bromobenzene	ND		0.0058	mg/Kg-dry	1	5/26/2023 01:07 PM
Bromochloromethane	ND		0.0058	mg/Kg-dry	1	5/26/2023 01:07 PM
Bromodichloromethane	ND		0.0058	mg/Kg-dry	1	5/26/2023 01:07 PM
Bromoform	ND		0.0058	mg/Kg-dry	1	5/26/2023 01:07 PM
Bromomethane	ND		0.0058	mg/Kg-dry	1	5/26/2023 01:07 PM
Carbon disulfide	ND		0.0058	mg/Kg-dry	1	5/26/2023 01:07 PM
Carbon tetrachloride	ND		0.0058	mg/Kg-dry	1	5/26/2023 01:07 PM
Chlorobenzene	ND		0.0058	mg/Kg-dry	1	5/26/2023 01:07 PM
Chloroethane	ND		0.0058	mg/Kg-dry	1	5/26/2023 01:07 PM
Chloroform	ND		0.0058	mg/Kg-dry	1	5/26/2023 01:07 PM
Chloromethane	ND		0.0058	mg/Kg-dry	1	5/26/2023 01:07 PM
cis-1,2-Dichloroethene	ND		0.0058	mg/Kg-dry	1	5/26/2023 01:07 PM
cis-1,3-Dichloropropene	ND		0.0058	mg/Kg-dry	1	5/26/2023 01:07 PM
Dibromochloromethane	ND		0.0058	mg/Kg-dry	1	5/26/2023 01:07 PM
Dibromomethane	ND		0.0058	mg/Kg-dry	1	5/26/2023 01:07 PM
Dichlorodifluoromethane	ND		0.0058	mg/Kg-dry	1	5/26/2023 01:07 PM
Ethylbenzene	ND		0.0058	mg/Kg-dry	1	5/26/2023 01:07 PM
Hexachlorobutadiene	ND		0.0058	mg/Kg-dry	1	5/26/2023 01:07 PM
Isopropylbenzene	ND		0.0058	mg/Kg-dry	1	5/26/2023 01:07 PM
m,p-Xylene	ND		0.0058	mg/Kg-dry	1	5/26/2023 01:07 PM
Methyl tert-butyl ether	ND		0.0058	mg/Kg-dry	1	5/26/2023 01:07 PM
Methylene chloride	ND		0.023	mg/Kg-dry	1	5/26/2023 01:07 PM
Naphthalene	ND		0.0058	mg/Kg-dry	1	5/26/2023 01:07 PM
n-Butylbenzene	ND		0.0058	mg/Kg-dry	1	5/26/2023 01:07 PM
n-Propylbenzene	ND		0.0058	mg/Kg-dry	1	5/26/2023 01:07 PM
o-Xylene	ND		0.0058	mg/Kg-dry	1	5/26/2023 01:07 PM
p-Isopropyltoluene	ND		0.0058	mg/Kg-dry	1	5/26/2023 01:07 PM
sec-Butylbenzene	ND		0.0058	mg/Kg-dry	1	5/26/2023 01:07 PM
Styrene	ND		0.0058	mg/Kg-dry	1	5/26/2023 01:07 PM
tert-Butylbenzene	ND		0.0058	mg/Kg-dry	1	5/26/2023 01:07 PM
Tetrachloroethene	ND		0.0058	mg/Kg-dry	1	5/26/2023 01:07 PM
Toluene	ND		0.0058	mg/Kg-dry	1	5/26/2023 01:07 PM
trans-1,2-Dichloroethene	ND		0.0058	mg/Kg-dry	1	5/26/2023 01:07 PM
trans-1,3-Dichloropropene	ND		0.0058	mg/Kg-dry	1	5/26/2023 01:07 PM
Trichloroethene	ND		0.0058	mg/Kg-dry	1	5/26/2023 01:07 PM

**Note:**

# ALS Environmental

Date: 09-Jun-23

**Client:** The Mannik & Smith Group, Inc.  
**Project:** Hillson Nut MS23-13; 401.ODAS003-19  
**Sample ID:** SB-7 (5-7')  
**Collection Date:** 5/22/2023 02:25 PM

**Work Order:** 23051029  
**Lab ID:** 23051029-13  
**Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Trichlorofluoromethane	ND		0.0058	mg/Kg-dry	1	5/26/2023 01:07 PM
Vinyl chloride	ND		0.0058	mg/Kg-dry	1	5/26/2023 01:07 PM
Xylenes, Total	ND		0.012	mg/Kg-dry	1	5/26/2023 01:07 PM
<i>Surr: 4-Bromofluorobenzene</i>	91.3		60-140	%REC	1	5/26/2023 01:07 PM
<i>Surr: Dibromofluoromethane</i>	87.6		60-140	%REC	1	5/26/2023 01:07 PM
<i>Surr: Toluene-d8</i>	92.9		60-140	%REC	1	5/26/2023 01:07 PM

**Note:**

# ALS Environmental

Date: 09-Jun-23

**Client:** The Mannik & Smith Group, Inc.  
**Project:** Hillson Nut MS23-13; 401.ODAS003-19  
**Sample ID:** SB-6 (0-2')  
**Collection Date:** 5/22/2023 02:40 PM

**Work Order:** 23051029  
**Lab ID:** 23051029-14  
**Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
<b>PCBS</b>			<b>SW8082</b>	Prep: SW3546 6/2/23 14:34		Analyst: <b>TSA</b>
Aroclor 1016	ND		0.12	mg/Kg-dry	1	6/5/2023 09:04 PM
Aroclor 1221	ND		0.24	mg/Kg-dry	1	6/5/2023 09:04 PM
Aroclor 1232	ND		0.12	mg/Kg-dry	1	6/5/2023 09:04 PM
Aroclor 1242	ND		0.12	mg/Kg-dry	1	6/5/2023 09:04 PM
Aroclor 1248	ND		0.12	mg/Kg-dry	1	6/5/2023 09:04 PM
Aroclor 1254	ND		0.12	mg/Kg-dry	1	6/5/2023 09:04 PM
Aroclor 1260	ND		0.12	mg/Kg-dry	1	6/5/2023 09:04 PM
Aroclor 1262	ND		0.12	mg/Kg-dry	1	6/5/2023 09:04 PM
Aroclor 1268	ND		0.12	mg/Kg-dry	1	6/5/2023 09:04 PM
Surr: Decachlorobiphenyl	106		7.32-154	%REC	1	6/5/2023 09:04 PM
Surr: Tetrachloro-m-xylene	120		33.5-152	%REC	1	6/5/2023 09:04 PM
<b>MOISTURE</b>			<b>SM2540B</b>			Analyst: <b>CW</b>
Moisture	17			% of sample	1	6/1/2023
<b>MERCURY BY CVAA</b>			<b>SW7471A</b>	Prep: EPA 7471 6/2/23 11:36		Analyst: <b>SLT</b>
Mercury	ND		0.33	mg/Kg-dry	1	6/5/2023 11:05 AM
<b>METALS BY ICP</b>			<b>SW6010B</b>	Prep: SW3050B 6/2/23 10:43		Analyst: <b>SLT</b>
Arsenic	14		5.9	mg/Kg-dry	1	6/2/2023 05:26 PM
Barium	51		24	mg/Kg-dry	1	6/2/2023 05:26 PM
Cadmium	ND		1.2	mg/Kg-dry	1	6/2/2023 05:26 PM
Chromium	13		12	mg/Kg-dry	1	6/2/2023 05:26 PM
Lead	ND		24	mg/Kg-dry	1	6/2/2023 05:26 PM
Selenium	ND		3.5	mg/Kg-dry	1	6/2/2023 05:26 PM
Silver	ND		5.9	mg/Kg-dry	1	6/2/2023 05:26 PM
<b>SEMI-VOLATILE ORGANIC COMPOUNDS</b>			<b>SW8270C</b>	Prep: SW3546 5/30/23 11:26		Analyst: <b>RA</b>
1,2,4,5-Tetrachlorobenzene	ND		0.40	mg/Kg-dry	1	6/1/2023 04:08 PM
1,2,4-Trichlorobenzene	ND		0.40	mg/Kg-dry	1	6/1/2023 04:08 PM
1,2-Dichlorobenzene	ND		0.40	mg/Kg-dry	1	6/1/2023 04:08 PM
1,3-Dichlorobenzene	ND		0.40	mg/Kg-dry	1	6/1/2023 04:08 PM
1,3-Dinitrobenzene	ND		0.40	mg/Kg-dry	1	6/1/2023 04:08 PM
1,4-Dichlorobenzene	ND		0.40	mg/Kg-dry	1	6/1/2023 04:08 PM
1-Methylnaphthalene	ND		0.24	mg/Kg-dry	1	6/1/2023 04:08 PM
1-Naphthylamine	ND		0.40	mg/Kg-dry	1	6/1/2023 04:08 PM
2,3,4,6-Tetrachlorophenol	ND		0.40	mg/Kg-dry	1	6/1/2023 04:08 PM
2,4,5-Trichlorophenol	ND		0.40	mg/Kg-dry	1	6/1/2023 04:08 PM
2,4,6-Trichlorophenol	ND		0.40	mg/Kg-dry	1	6/1/2023 04:08 PM
2,4-Dichlorophenol	ND		0.40	mg/Kg-dry	1	6/1/2023 04:08 PM
2,4-Dimethylphenol	ND		0.40	mg/Kg-dry	1	6/1/2023 04:08 PM

Note:

# ALS Environmental

Date: 09-Jun-23

**Client:** The Mannik & Smith Group, Inc.  
**Project:** Hillson Nut MS23-13; 401.ODAS003-19  
**Sample ID:** SB-6 (0-2')  
**Collection Date:** 5/22/2023 02:40 PM

**Work Order:** 23051029  
**Lab ID:** 23051029-14  
**Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
2,4-Dinitrophenol	ND		2.0	mg/Kg-dry	1	6/1/2023 04:08 PM
2,4-Dinitrotoluene	ND		0.40	mg/Kg-dry	1	6/1/2023 04:08 PM
2,6-Dichlorophenol	ND		0.40	mg/Kg-dry	1	6/1/2023 04:08 PM
2,6-Dinitrotoluene	ND		0.40	mg/Kg-dry	1	6/1/2023 04:08 PM
2-Acetylaminofluorene	ND		0.40	mg/Kg-dry	1	6/1/2023 04:08 PM
2-Chloronaphthalene	ND		0.40	mg/Kg-dry	1	6/1/2023 04:08 PM
2-Chlorophenol	ND		0.40	mg/Kg-dry	1	6/1/2023 04:08 PM
2-Methylnaphthalene	ND		0.24	mg/Kg-dry	1	6/1/2023 04:08 PM
2-Methylphenol	ND		0.40	mg/Kg-dry	1	6/1/2023 04:08 PM
2-Naphthylamine	ND		0.40	mg/Kg-dry	1	6/1/2023 04:08 PM
2-Nitroaniline	ND		2.0	mg/Kg-dry	1	6/1/2023 04:08 PM
2-Nitrophenol	ND		0.40	mg/Kg-dry	1	6/1/2023 04:08 PM
2-Picoline	ND		0.40	mg/Kg-dry	1	6/1/2023 04:08 PM
3&4-Methylphenol	ND		0.40	mg/Kg-dry	1	6/1/2023 04:08 PM
3,3'-Dichlorobenzidine	ND		0.79	mg/Kg-dry	1	6/1/2023 04:08 PM
3-Methylcholanthrene	ND		0.40	mg/Kg-dry	1	6/1/2023 04:08 PM
3-Nitroaniline	ND		2.0	mg/Kg-dry	1	6/1/2023 04:08 PM
4,6-Dinitro-2-methylphenol	ND		2.0	mg/Kg-dry	1	6/1/2023 04:08 PM
4-Aminobiphenyl	ND		0.79	mg/Kg-dry	1	6/1/2023 04:08 PM
4-Bromophenyl phenyl ether	ND		0.40	mg/Kg-dry	1	6/1/2023 04:08 PM
4-Chloro-3-methylphenol	ND		0.79	mg/Kg-dry	1	6/1/2023 04:08 PM
4-Chloroaniline	ND		0.79	mg/Kg-dry	1	6/1/2023 04:08 PM
4-Chlorophenyl phenyl ether	ND		0.40	mg/Kg-dry	1	6/1/2023 04:08 PM
4-Nitroaniline	ND		0.79	mg/Kg-dry	1	6/1/2023 04:08 PM
4-Nitrophenol	ND		2.0	mg/Kg-dry	1	6/1/2023 04:08 PM
4-Nitroquinoline 1-oxide	ND		2.0	mg/Kg-dry	1	6/1/2023 04:08 PM
5-Nitro-o-toluidine	ND		0.40	mg/Kg-dry	1	6/1/2023 04:08 PM
7,12-Dimethylbenz(a)anthracene	ND		0.40	mg/Kg-dry	1	6/1/2023 04:08 PM
Acenaphthene	ND		0.24	mg/Kg-dry	1	6/1/2023 04:08 PM
Acenaphthylene	ND		0.24	mg/Kg-dry	1	6/1/2023 04:08 PM
Acetophenone	ND		0.40	mg/Kg-dry	1	6/1/2023 04:08 PM
Aniline	ND		0.40	mg/Kg-dry	1	6/1/2023 04:08 PM
Anthracene	ND		0.24	mg/Kg-dry	1	6/1/2023 04:08 PM
Azobenzene	ND		0.40	mg/Kg-dry	1	6/1/2023 04:08 PM
Benzidine	ND		0.40	mg/Kg-dry	1	6/1/2023 04:08 PM
Benzo(a)anthracene	ND		0.12	mg/Kg-dry	1	6/1/2023 04:08 PM
Benzo(a)pyrene	ND		0.12	mg/Kg-dry	1	6/1/2023 04:08 PM
Benzo(b)fluoranthene	ND		0.24	mg/Kg-dry	1	6/1/2023 04:08 PM
Benzo(g,h,i)perylene	ND		0.24	mg/Kg-dry	1	6/1/2023 04:08 PM
Benzo(k)fluoranthene	ND		0.24	mg/Kg-dry	1	6/1/2023 04:08 PM

**Note:**



# ALS Environmental

Date: 09-Jun-23

**Client:** The Mannik & Smith Group, Inc.  
**Project:** Hillson Nut MS23-13; 401.ODAS003-19  
**Sample ID:** SB-6 (0-2')  
**Collection Date:** 5/22/2023 02:40 PM

**Work Order:** 23051029  
**Lab ID:** 23051029-14  
**Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Benzyl alcohol	ND		0.79	mg/Kg-dry	1	6/1/2023 04:08 PM
Bis(2-chloroethoxy)methane	ND		0.40	mg/Kg-dry	1	6/1/2023 04:08 PM
Bis(2-chloroethyl)ether	ND		0.40	mg/Kg-dry	1	6/1/2023 04:08 PM
Bis(2-chloroisopropyl)ether	ND		0.40	mg/Kg-dry	1	6/1/2023 04:08 PM
Bis(2-ethylhexyl)phthalate	ND		0.40	mg/Kg-dry	1	6/1/2023 04:08 PM
Butyl benzyl phthalate	ND		0.40	mg/Kg-dry	1	6/1/2023 04:08 PM
Carbazole	ND		0.24	mg/Kg-dry	1	6/1/2023 04:08 PM
Chrysene	ND		0.24	mg/Kg-dry	1	6/1/2023 04:08 PM
Dibenzo(a,h)anthracene	ND		0.12	mg/Kg-dry	1	6/1/2023 04:08 PM
Dibenzofuran	ND		0.24	mg/Kg-dry	1	6/1/2023 04:08 PM
Diethyl phthalate	ND		0.40	mg/Kg-dry	1	6/1/2023 04:08 PM
Dimethyl phthalate	ND		0.40	mg/Kg-dry	1	6/1/2023 04:08 PM
Di-n-butyl phthalate	ND		0.40	mg/Kg-dry	1	6/1/2023 04:08 PM
Di-n-octyl phthalate	ND		0.40	mg/Kg-dry	1	6/1/2023 04:08 PM
Dinoseb	ND		0.40	mg/Kg-dry	1	6/1/2023 04:08 PM
Diphenylamine	ND		0.40	mg/Kg-dry	1	6/1/2023 04:08 PM
Ethyl methanesulfonate	ND		0.40	mg/Kg-dry	1	6/1/2023 04:08 PM
Fluoranthene	ND		0.24	mg/Kg-dry	1	6/1/2023 04:08 PM
Fluorene	ND		0.24	mg/Kg-dry	1	6/1/2023 04:08 PM
Hexachlorobenzene	ND		0.40	mg/Kg-dry	1	6/1/2023 04:08 PM
Hexachlorobutadiene	ND		0.40	mg/Kg-dry	1	6/1/2023 04:08 PM
Hexachlorocyclopentadiene	ND		0.40	mg/Kg-dry	1	6/1/2023 04:08 PM
Hexachloroethane	ND		0.40	mg/Kg-dry	1	6/1/2023 04:08 PM
Indeno(1,2,3-cd)pyrene	ND		0.12	mg/Kg-dry	1	6/1/2023 04:08 PM
Isophorone	ND		0.40	mg/Kg-dry	1	6/1/2023 04:08 PM
Isosafrole	ND		0.40	mg/Kg-dry	1	6/1/2023 04:08 PM
Methapyrilene	ND		2.0	mg/Kg-dry	1	6/1/2023 04:08 PM
Methyl methanesulfonate	ND		0.40	mg/Kg-dry	1	6/1/2023 04:08 PM
Naphthalene	ND		0.24	mg/Kg-dry	1	6/1/2023 04:08 PM
Nitrobenzene	ND		0.40	mg/Kg-dry	1	6/1/2023 04:08 PM
N-Nitrosodiethylamine	ND		0.40	mg/Kg-dry	1	6/1/2023 04:08 PM
N-Nitrosodimethylamine	ND		0.40	mg/Kg-dry	1	6/1/2023 04:08 PM
N-Nitroso-di-n-butylamine	ND		0.40	mg/Kg-dry	1	6/1/2023 04:08 PM
N-Nitrosodi-n-propylamine	ND		0.40	mg/Kg-dry	1	6/1/2023 04:08 PM
N-Nitrosomethylethylamine	ND		0.40	mg/Kg-dry	1	6/1/2023 04:08 PM
N-Nitrosomorpholine	ND		0.40	mg/Kg-dry	1	6/1/2023 04:08 PM
N-Nitrosopiperidine	ND		0.40	mg/Kg-dry	1	6/1/2023 04:08 PM
N-Nitrosopyrrolidine	ND		0.40	mg/Kg-dry	1	6/1/2023 04:08 PM
o-Toluidine	ND		2.0	mg/Kg-dry	1	6/1/2023 04:08 PM
p-Dimethylaminoazobenzene	ND		0.40	mg/Kg-dry	1	6/1/2023 04:08 PM

**Note:**

# ALS Environmental

Date: 09-Jun-23

**Client:** The Mannik & Smith Group, Inc.  
**Project:** Hillson Nut MS23-13; 401.ODAS003-19  
**Sample ID:** SB-6 (0-2')  
**Collection Date:** 5/22/2023 02:40 PM

**Work Order:** 23051029  
**Lab ID:** 23051029-14  
**Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Pentachlorobenzene	ND		0.40	mg/Kg-dry	1	6/1/2023 04:08 PM
Pentachloroethane	ND		0.40	mg/Kg-dry	1	6/1/2023 04:08 PM
Pentachloronitrobenzene	ND		0.79	mg/Kg-dry	1	6/1/2023 04:08 PM
Pentachlorophenol	ND		2.0	mg/Kg-dry	1	6/1/2023 04:08 PM
Phenacetin	ND		0.79	mg/Kg-dry	1	6/1/2023 04:08 PM
Phenanthrene	ND		0.24	mg/Kg-dry	1	6/1/2023 04:08 PM
Phenol	ND		0.40	mg/Kg-dry	1	6/1/2023 04:08 PM
Pyrene	ND		0.24	mg/Kg-dry	1	6/1/2023 04:08 PM
Pyridine	ND		0.40	mg/Kg-dry	1	6/1/2023 04:08 PM
Safrole	ND		0.40	mg/Kg-dry	1	6/1/2023 04:08 PM
<i>Surr: 2,4,6-Tribromophenol</i>	<i>51.1</i>		<i>14.2-136</i>	<i>%REC</i>	<i>1</i>	<i>6/1/2023 04:08 PM</i>
<i>Surr: 2-Fluorobiphenyl</i>	<i>53.7</i>		<i>30-116</i>	<i>%REC</i>	<i>1</i>	<i>6/1/2023 04:08 PM</i>
<i>Surr: 2-Fluorophenol</i>	<i>47.0</i>		<i>24-105</i>	<i>%REC</i>	<i>1</i>	<i>6/1/2023 04:08 PM</i>
<i>Surr: 4-Terphenyl-d14</i>	<i>61.4</i>		<i>27.3-138</i>	<i>%REC</i>	<i>1</i>	<i>6/1/2023 04:08 PM</i>
<i>Surr: Nitrobenzene-d5</i>	<i>46.0</i>		<i>23.7-109</i>	<i>%REC</i>	<i>1</i>	<i>6/1/2023 04:08 PM</i>
<i>Surr: Phenol-d5</i>	<i>43.4</i>		<i>24.9-103</i>	<i>%REC</i>	<i>1</i>	<i>6/1/2023 04:08 PM</i>

## VOLATILE ORGANIC COMPOUNDS

SW8260B

Analyst: LAK

1,1,1,2-Tetrachloroethane	ND		0.0046	mg/Kg-dry	1	5/26/2023 01:29 PM
1,1,1-Trichloroethane	ND		0.0046	mg/Kg-dry	1	5/26/2023 01:29 PM
1,1,2,2-Tetrachloroethane	ND		0.0046	mg/Kg-dry	1	5/26/2023 01:29 PM
1,1,2-Trichloroethane	ND		0.0046	mg/Kg-dry	1	5/26/2023 01:29 PM
1,1-Dichloroethane	ND		0.0046	mg/Kg-dry	1	5/26/2023 01:29 PM
1,1-Dichloroethene	ND		0.0046	mg/Kg-dry	1	5/26/2023 01:29 PM
1,1-Dichloropropene	ND		0.0046	mg/Kg-dry	1	5/26/2023 01:29 PM
1,2,3-Trichlorobenzene	ND		0.0046	mg/Kg-dry	1	5/26/2023 01:29 PM
1,2,3-Trichloropropane	ND		0.0046	mg/Kg-dry	1	5/26/2023 01:29 PM
1,2,4-Trichlorobenzene	ND		0.0046	mg/Kg-dry	1	5/26/2023 01:29 PM
1,2,4-Trimethylbenzene	ND		0.0046	mg/Kg-dry	1	5/26/2023 01:29 PM
1,2-Dibromo-3-chloropropane	ND		0.0046	mg/Kg-dry	1	5/26/2023 01:29 PM
1,2-Dibromoethane	ND		0.0046	mg/Kg-dry	1	5/26/2023 01:29 PM
1,2-Dichlorobenzene	ND		0.0046	mg/Kg-dry	1	5/26/2023 01:29 PM
1,2-Dichloroethane	ND		0.0046	mg/Kg-dry	1	5/26/2023 01:29 PM
1,2-Dichloropropane	ND		0.0046	mg/Kg-dry	1	5/26/2023 01:29 PM
1,3,5-Trimethylbenzene	ND		0.0046	mg/Kg-dry	1	5/26/2023 01:29 PM
1,3-Dichlorobenzene	ND		0.0046	mg/Kg-dry	1	5/26/2023 01:29 PM
1,3-Dichloropropane	ND		0.0046	mg/Kg-dry	1	5/26/2023 01:29 PM
1,4-Dichlorobenzene	ND		0.0046	mg/Kg-dry	1	5/26/2023 01:29 PM
2,2-Dichloropropane	ND		0.0046	mg/Kg-dry	1	5/26/2023 01:29 PM
2-Butanone	ND		0.046	mg/Kg-dry	1	5/26/2023 01:29 PM
2-Chlorotoluene	ND		0.0046	mg/Kg-dry	1	5/26/2023 01:29 PM

Note:

# ALS Environmental

Date: 09-Jun-23

**Client:** The Mannik & Smith Group, Inc.  
**Project:** Hillson Nut MS23-13; 401.ODAS003-19  
**Sample ID:** SB-6 (0-2')  
**Collection Date:** 5/22/2023 02:40 PM

**Work Order:** 23051029  
**Lab ID:** 23051029-14  
**Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
2-Hexanone	ND		0.0046	mg/Kg-dry	1	5/26/2023 01:29 PM
4-Chlorotoluene	ND		0.0046	mg/Kg-dry	1	5/26/2023 01:29 PM
4-Methyl-2-pentanone	ND		0.0046	mg/Kg-dry	1	5/26/2023 01:29 PM
Acetone	ND		0.046	mg/Kg-dry	1	5/26/2023 01:29 PM
Benzene	ND		0.0046	mg/Kg-dry	1	5/26/2023 01:29 PM
Bromobenzene	ND		0.0046	mg/Kg-dry	1	5/26/2023 01:29 PM
Bromochloromethane	ND		0.0046	mg/Kg-dry	1	5/26/2023 01:29 PM
Bromodichloromethane	ND		0.0046	mg/Kg-dry	1	5/26/2023 01:29 PM
Bromoform	ND		0.0046	mg/Kg-dry	1	5/26/2023 01:29 PM
Bromomethane	ND		0.0046	mg/Kg-dry	1	5/26/2023 01:29 PM
Carbon disulfide	ND		0.0046	mg/Kg-dry	1	5/26/2023 01:29 PM
Carbon tetrachloride	ND		0.0046	mg/Kg-dry	1	5/26/2023 01:29 PM
Chlorobenzene	ND		0.0046	mg/Kg-dry	1	5/26/2023 01:29 PM
Chloroethane	ND		0.0046	mg/Kg-dry	1	5/26/2023 01:29 PM
Chloroform	ND		0.0046	mg/Kg-dry	1	5/26/2023 01:29 PM
Chloromethane	ND		0.0046	mg/Kg-dry	1	5/26/2023 01:29 PM
cis-1,2-Dichloroethene	ND		0.0046	mg/Kg-dry	1	5/26/2023 01:29 PM
cis-1,3-Dichloropropene	ND		0.0046	mg/Kg-dry	1	5/26/2023 01:29 PM
Dibromochloromethane	ND		0.0046	mg/Kg-dry	1	5/26/2023 01:29 PM
Dibromomethane	ND		0.0046	mg/Kg-dry	1	5/26/2023 01:29 PM
Dichlorodifluoromethane	ND		0.0046	mg/Kg-dry	1	5/26/2023 01:29 PM
Ethylbenzene	ND		0.0046	mg/Kg-dry	1	5/26/2023 01:29 PM
Hexachlorobutadiene	ND		0.0046	mg/Kg-dry	1	5/26/2023 01:29 PM
Isopropylbenzene	ND		0.0046	mg/Kg-dry	1	5/26/2023 01:29 PM
m,p-Xylene	ND		0.0046	mg/Kg-dry	1	5/26/2023 01:29 PM
Methyl tert-butyl ether	ND		0.0046	mg/Kg-dry	1	5/26/2023 01:29 PM
Methylene chloride	ND		0.019	mg/Kg-dry	1	5/26/2023 01:29 PM
Naphthalene	ND		0.0046	mg/Kg-dry	1	5/26/2023 01:29 PM
n-Butylbenzene	ND		0.0046	mg/Kg-dry	1	5/26/2023 01:29 PM
n-Propylbenzene	ND		0.0046	mg/Kg-dry	1	5/26/2023 01:29 PM
o-Xylene	ND		0.0046	mg/Kg-dry	1	5/26/2023 01:29 PM
p-Isopropyltoluene	ND		0.0046	mg/Kg-dry	1	5/26/2023 01:29 PM
sec-Butylbenzene	ND		0.0046	mg/Kg-dry	1	5/26/2023 01:29 PM
Styrene	ND		0.0046	mg/Kg-dry	1	5/26/2023 01:29 PM
tert-Butylbenzene	ND		0.0046	mg/Kg-dry	1	5/26/2023 01:29 PM
Tetrachloroethene	ND		0.0046	mg/Kg-dry	1	5/26/2023 01:29 PM
Toluene	ND		0.0046	mg/Kg-dry	1	5/26/2023 01:29 PM
trans-1,2-Dichloroethene	ND		0.0046	mg/Kg-dry	1	5/26/2023 01:29 PM
trans-1,3-Dichloropropene	ND		0.0046	mg/Kg-dry	1	5/26/2023 01:29 PM
Trichloroethene	ND		0.0046	mg/Kg-dry	1	5/26/2023 01:29 PM

**Note:**

# ALS Environmental

Date: 09-Jun-23

**Client:** The Mannik & Smith Group, Inc.  
**Project:** Hillson Nut MS23-13; 401.ODAS003-19  
**Sample ID:** SB-6 (0-2')  
**Collection Date:** 5/22/2023 02:40 PM

**Work Order:** 23051029  
**Lab ID:** 23051029-14  
**Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Trichlorofluoromethane	ND		0.0046	mg/Kg-dry	1	5/26/2023 01:29 PM
Vinyl chloride	ND		0.0046	mg/Kg-dry	1	5/26/2023 01:29 PM
Xylenes, Total	ND		0.0093	mg/Kg-dry	1	5/26/2023 01:29 PM
<i>Surr: 4-Bromofluorobenzene</i>	90.2		60-140	%REC	1	5/26/2023 01:29 PM
<i>Surr: Dibromofluoromethane</i>	86.2		60-140	%REC	1	5/26/2023 01:29 PM
<i>Surr: Toluene-d8</i>	93.5		60-140	%REC	1	5/26/2023 01:29 PM

**Note:**

# ALS Environmental

Date: 09-Jun-23

**Client:** The Mannik & Smith Group, Inc.  
**Project:** Hillson Nut MS23-13; 401.ODAS003-19  
**Sample ID:** SB-6 (3-5')  
**Collection Date:** 5/22/2023 02:55 PM

**Work Order:** 23051029  
**Lab ID:** 23051029-15  
**Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
<b>PCBS</b>			<b>SW8082</b>	Prep: SW3546 6/2/23 14:34		Analyst: <b>TSA</b>
Aroclor 1016	ND		0.12	mg/Kg-dry	1	6/5/2023 09:20 PM
Aroclor 1221	ND		0.25	mg/Kg-dry	1	6/5/2023 09:20 PM
Aroclor 1232	ND		0.12	mg/Kg-dry	1	6/5/2023 09:20 PM
Aroclor 1242	ND		0.12	mg/Kg-dry	1	6/5/2023 09:20 PM
Aroclor 1248	ND		0.12	mg/Kg-dry	1	6/5/2023 09:20 PM
Aroclor 1254	ND		0.12	mg/Kg-dry	1	6/5/2023 09:20 PM
Aroclor 1260	ND		0.12	mg/Kg-dry	1	6/5/2023 09:20 PM
Aroclor 1262	ND		0.12	mg/Kg-dry	1	6/5/2023 09:20 PM
Aroclor 1268	ND		0.12	mg/Kg-dry	1	6/5/2023 09:20 PM
Surr: Decachlorobiphenyl	86.0		7.32-154	%REC	1	6/5/2023 09:20 PM
Surr: Tetrachloro-m-xylene	98.0		33.5-152	%REC	1	6/5/2023 09:20 PM
<b>MOISTURE</b>			<b>SM2540B</b>			Analyst: <b>CW</b>
Moisture	18			% of sample	1	6/1/2023
<b>MERCURY BY CVAA</b>			<b>SW7471A</b>	Prep: EPA 7471 6/2/23 11:36		Analyst: <b>SLT</b>
Mercury	ND		0.33	mg/Kg-dry	1	6/5/2023 11:07 AM
<b>METALS BY ICP</b>			<b>SW6010B</b>	Prep: SW3050B 6/2/23 10:43		Analyst: <b>SLT</b>
Arsenic	22		6.0	mg/Kg-dry	1	6/2/2023 05:39 PM
Barium	42		24	mg/Kg-dry	1	6/2/2023 05:39 PM
Cadmium	ND		1.2	mg/Kg-dry	1	6/2/2023 05:39 PM
Chromium	18		12	mg/Kg-dry	1	6/2/2023 05:39 PM
Lead	28		24	mg/Kg-dry	1	6/2/2023 05:39 PM
Selenium	ND		3.6	mg/Kg-dry	1	6/2/2023 05:39 PM
Silver	ND		6.0	mg/Kg-dry	1	6/2/2023 05:39 PM
<b>SEMI-VOLATILE ORGANIC COMPOUNDS</b>			<b>SW8270C</b>	Prep: SW3546 5/30/23 11:26		Analyst: <b>RA</b>
1,2,4,5-Tetrachlorobenzene	ND		0.40	mg/Kg-dry	1	6/1/2023 04:30 PM
1,2,4-Trichlorobenzene	ND		0.40	mg/Kg-dry	1	6/1/2023 04:30 PM
1,2-Dichlorobenzene	ND		0.40	mg/Kg-dry	1	6/1/2023 04:30 PM
1,3-Dichlorobenzene	ND		0.40	mg/Kg-dry	1	6/1/2023 04:30 PM
1,3-Dinitrobenzene	ND		0.40	mg/Kg-dry	1	6/1/2023 04:30 PM
1,4-Dichlorobenzene	ND		0.40	mg/Kg-dry	1	6/1/2023 04:30 PM
1-Methylnaphthalene	ND		0.24	mg/Kg-dry	1	6/1/2023 04:30 PM
1-Naphthylamine	ND		0.40	mg/Kg-dry	1	6/1/2023 04:30 PM
2,3,4,6-Tetrachlorophenol	ND		0.40	mg/Kg-dry	1	6/1/2023 04:30 PM
2,4,5-Trichlorophenol	ND		0.40	mg/Kg-dry	1	6/1/2023 04:30 PM
2,4,6-Trichlorophenol	ND		0.40	mg/Kg-dry	1	6/1/2023 04:30 PM
2,4-Dichlorophenol	ND		0.40	mg/Kg-dry	1	6/1/2023 04:30 PM
2,4-Dimethylphenol	ND		0.40	mg/Kg-dry	1	6/1/2023 04:30 PM

Note:

# ALS Environmental

Date: 09-Jun-23

**Client:** The Mannik & Smith Group, Inc.  
**Project:** Hillson Nut MS23-13; 401.ODAS003-19  
**Sample ID:** SB-6 (3-5')  
**Collection Date:** 5/22/2023 02:55 PM

**Work Order:** 23051029  
**Lab ID:** 23051029-15  
**Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
2,4-Dinitrophenol	ND		2.0	mg/Kg-dry	1	6/1/2023 04:30 PM
2,4-Dinitrotoluene	ND		0.40	mg/Kg-dry	1	6/1/2023 04:30 PM
2,6-Dichlorophenol	ND		0.40	mg/Kg-dry	1	6/1/2023 04:30 PM
2,6-Dinitrotoluene	ND		0.40	mg/Kg-dry	1	6/1/2023 04:30 PM
2-Acetylaminofluorene	ND		0.40	mg/Kg-dry	1	6/1/2023 04:30 PM
2-Chloronaphthalene	ND		0.40	mg/Kg-dry	1	6/1/2023 04:30 PM
2-Chlorophenol	ND		0.40	mg/Kg-dry	1	6/1/2023 04:30 PM
2-Methylnaphthalene	ND		0.24	mg/Kg-dry	1	6/1/2023 04:30 PM
2-Methylphenol	ND		0.40	mg/Kg-dry	1	6/1/2023 04:30 PM
2-Naphthylamine	ND		0.40	mg/Kg-dry	1	6/1/2023 04:30 PM
2-Nitroaniline	ND		2.0	mg/Kg-dry	1	6/1/2023 04:30 PM
2-Nitrophenol	ND		0.40	mg/Kg-dry	1	6/1/2023 04:30 PM
2-Picoline	ND		0.40	mg/Kg-dry	1	6/1/2023 04:30 PM
3&4-Methylphenol	ND		0.40	mg/Kg-dry	1	6/1/2023 04:30 PM
3,3'-Dichlorobenzidine	ND		0.80	mg/Kg-dry	1	6/1/2023 04:30 PM
3-Methylcholanthrene	ND		0.40	mg/Kg-dry	1	6/1/2023 04:30 PM
3-Nitroaniline	ND		2.0	mg/Kg-dry	1	6/1/2023 04:30 PM
4,6-Dinitro-2-methylphenol	ND		2.0	mg/Kg-dry	1	6/1/2023 04:30 PM
4-Aminobiphenyl	ND		0.80	mg/Kg-dry	1	6/1/2023 04:30 PM
4-Bromophenyl phenyl ether	ND		0.40	mg/Kg-dry	1	6/1/2023 04:30 PM
4-Chloro-3-methylphenol	ND		0.80	mg/Kg-dry	1	6/1/2023 04:30 PM
4-Chloroaniline	ND		0.80	mg/Kg-dry	1	6/1/2023 04:30 PM
4-Chlorophenyl phenyl ether	ND		0.40	mg/Kg-dry	1	6/1/2023 04:30 PM
4-Nitroaniline	ND		0.80	mg/Kg-dry	1	6/1/2023 04:30 PM
4-Nitrophenol	ND		2.0	mg/Kg-dry	1	6/1/2023 04:30 PM
4-Nitroquinoline 1-oxide	ND		2.0	mg/Kg-dry	1	6/1/2023 04:30 PM
5-Nitro-o-toluidine	ND		0.40	mg/Kg-dry	1	6/1/2023 04:30 PM
7,12-Dimethylbenz(a)anthracene	ND		0.40	mg/Kg-dry	1	6/1/2023 04:30 PM
Acenaphthene	ND		0.24	mg/Kg-dry	1	6/1/2023 04:30 PM
Acenaphthylene	ND		0.24	mg/Kg-dry	1	6/1/2023 04:30 PM
Acetophenone	ND		0.40	mg/Kg-dry	1	6/1/2023 04:30 PM
Aniline	ND		0.40	mg/Kg-dry	1	6/1/2023 04:30 PM
Anthracene	ND		0.24	mg/Kg-dry	1	6/1/2023 04:30 PM
Azobenzene	ND		0.40	mg/Kg-dry	1	6/1/2023 04:30 PM
Benzidine	ND		0.40	mg/Kg-dry	1	6/1/2023 04:30 PM
Benzo(a)anthracene	ND		0.12	mg/Kg-dry	1	6/1/2023 04:30 PM
Benzo(a)pyrene	ND		0.12	mg/Kg-dry	1	6/1/2023 04:30 PM
Benzo(b)fluoranthene	ND		0.24	mg/Kg-dry	1	6/1/2023 04:30 PM
Benzo(g,h,i)perylene	ND		0.24	mg/Kg-dry	1	6/1/2023 04:30 PM
Benzo(k)fluoranthene	ND		0.24	mg/Kg-dry	1	6/1/2023 04:30 PM

**Note:**

# ALS Environmental

Date: 09-Jun-23

**Client:** The Mannik & Smith Group, Inc.  
**Project:** Hillson Nut MS23-13; 401.ODAS003-19  
**Sample ID:** SB-6 (3-5')  
**Collection Date:** 5/22/2023 02:55 PM

**Work Order:** 23051029  
**Lab ID:** 23051029-15  
**Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Benzyl alcohol	ND		0.80	mg/Kg-dry	1	6/1/2023 04:30 PM
Bis(2-chloroethoxy)methane	ND		0.40	mg/Kg-dry	1	6/1/2023 04:30 PM
Bis(2-chloroethyl)ether	ND		0.40	mg/Kg-dry	1	6/1/2023 04:30 PM
Bis(2-chloroisopropyl)ether	ND		0.40	mg/Kg-dry	1	6/1/2023 04:30 PM
Bis(2-ethylhexyl)phthalate	ND		0.40	mg/Kg-dry	1	6/1/2023 04:30 PM
Butyl benzyl phthalate	ND		0.40	mg/Kg-dry	1	6/1/2023 04:30 PM
Carbazole	ND		0.24	mg/Kg-dry	1	6/1/2023 04:30 PM
Chrysene	ND		0.24	mg/Kg-dry	1	6/1/2023 04:30 PM
Dibenzo(a,h)anthracene	ND		0.12	mg/Kg-dry	1	6/1/2023 04:30 PM
Dibenzofuran	ND		0.24	mg/Kg-dry	1	6/1/2023 04:30 PM
Diethyl phthalate	ND		0.40	mg/Kg-dry	1	6/1/2023 04:30 PM
Dimethyl phthalate	ND		0.40	mg/Kg-dry	1	6/1/2023 04:30 PM
Di-n-butyl phthalate	ND		0.40	mg/Kg-dry	1	6/1/2023 04:30 PM
Di-n-octyl phthalate	ND		0.40	mg/Kg-dry	1	6/1/2023 04:30 PM
Dinoseb	ND		0.40	mg/Kg-dry	1	6/1/2023 04:30 PM
Diphenylamine	ND		0.40	mg/Kg-dry	1	6/1/2023 04:30 PM
Ethyl methanesulfonate	ND		0.40	mg/Kg-dry	1	6/1/2023 04:30 PM
Fluoranthene	ND		0.24	mg/Kg-dry	1	6/1/2023 04:30 PM
Fluorene	ND		0.24	mg/Kg-dry	1	6/1/2023 04:30 PM
Hexachlorobenzene	ND		0.40	mg/Kg-dry	1	6/1/2023 04:30 PM
Hexachlorobutadiene	ND		0.40	mg/Kg-dry	1	6/1/2023 04:30 PM
Hexachlorocyclopentadiene	ND		0.40	mg/Kg-dry	1	6/1/2023 04:30 PM
Hexachloroethane	ND		0.40	mg/Kg-dry	1	6/1/2023 04:30 PM
Indeno(1,2,3-cd)pyrene	ND		0.12	mg/Kg-dry	1	6/1/2023 04:30 PM
Isophorone	ND		0.40	mg/Kg-dry	1	6/1/2023 04:30 PM
Isosafrole	ND		0.40	mg/Kg-dry	1	6/1/2023 04:30 PM
Methapyrilene	ND		2.0	mg/Kg-dry	1	6/1/2023 04:30 PM
Methyl methanesulfonate	ND		0.40	mg/Kg-dry	1	6/1/2023 04:30 PM
Naphthalene	ND		0.24	mg/Kg-dry	1	6/1/2023 04:30 PM
Nitrobenzene	ND		0.40	mg/Kg-dry	1	6/1/2023 04:30 PM
N-Nitrosodiethylamine	ND		0.40	mg/Kg-dry	1	6/1/2023 04:30 PM
N-Nitrosodimethylamine	ND		0.40	mg/Kg-dry	1	6/1/2023 04:30 PM
N-Nitroso-di-n-butylamine	ND		0.40	mg/Kg-dry	1	6/1/2023 04:30 PM
N-Nitrosodi-n-propylamine	ND		0.40	mg/Kg-dry	1	6/1/2023 04:30 PM
N-Nitrosomethylethylamine	ND		0.40	mg/Kg-dry	1	6/1/2023 04:30 PM
N-Nitrosomorpholine	ND		0.40	mg/Kg-dry	1	6/1/2023 04:30 PM
N-Nitrosopiperidine	ND		0.40	mg/Kg-dry	1	6/1/2023 04:30 PM
N-Nitrosopyrrolidine	ND		0.40	mg/Kg-dry	1	6/1/2023 04:30 PM
o-Toluidine	ND		2.0	mg/Kg-dry	1	6/1/2023 04:30 PM
p-Dimethylaminoazobenzene	ND		0.40	mg/Kg-dry	1	6/1/2023 04:30 PM

**Note:**

# ALS Environmental

Date: 09-Jun-23

**Client:** The Mannik & Smith Group, Inc.  
**Project:** Hillson Nut MS23-13; 401.ODAS003-19  
**Sample ID:** SB-6 (3-5')  
**Collection Date:** 5/22/2023 02:55 PM

**Work Order:** 23051029  
**Lab ID:** 23051029-15  
**Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Pentachlorobenzene	ND		0.40	mg/Kg-dry	1	6/1/2023 04:30 PM
Pentachloroethane	ND		0.40	mg/Kg-dry	1	6/1/2023 04:30 PM
Pentachloronitrobenzene	ND		0.80	mg/Kg-dry	1	6/1/2023 04:30 PM
Pentachlorophenol	ND		2.0	mg/Kg-dry	1	6/1/2023 04:30 PM
Phenacetin	ND		0.80	mg/Kg-dry	1	6/1/2023 04:30 PM
Phenanthrene	ND		0.24	mg/Kg-dry	1	6/1/2023 04:30 PM
Phenol	ND		0.40	mg/Kg-dry	1	6/1/2023 04:30 PM
Pyrene	ND		0.24	mg/Kg-dry	1	6/1/2023 04:30 PM
Pyridine	ND		0.40	mg/Kg-dry	1	6/1/2023 04:30 PM
Safrole	ND		0.40	mg/Kg-dry	1	6/1/2023 04:30 PM
<i>Surr: 2,4,6-Tribromophenol</i>	60.7		14.2-136	%REC	1	6/1/2023 04:30 PM
<i>Surr: 2-Fluorobiphenyl</i>	58.8		30-116	%REC	1	6/1/2023 04:30 PM
<i>Surr: 2-Fluorophenol</i>	52.9		24-105	%REC	1	6/1/2023 04:30 PM
<i>Surr: 4-Terphenyl-d14</i>	66.5		27.3-138	%REC	1	6/1/2023 04:30 PM
<i>Surr: Nitrobenzene-d5</i>	52.4		23.7-109	%REC	1	6/1/2023 04:30 PM
<i>Surr: Phenol-d5</i>	48.3		24.9-103	%REC	1	6/1/2023 04:30 PM

## VOLATILE ORGANIC COMPOUNDS

SW8260B

Analyst: LAK

1,1,1,2-Tetrachloroethane	ND		0.0046	mg/Kg-dry	1	5/26/2023 01:51 PM
1,1,1-Trichloroethane	ND		0.0046	mg/Kg-dry	1	5/26/2023 01:51 PM
1,1,2,2-Tetrachloroethane	ND		0.0046	mg/Kg-dry	1	5/26/2023 01:51 PM
1,1,2-Trichloroethane	ND		0.0046	mg/Kg-dry	1	5/26/2023 01:51 PM
1,1-Dichloroethane	ND		0.0046	mg/Kg-dry	1	5/26/2023 01:51 PM
1,1-Dichloroethene	ND		0.0046	mg/Kg-dry	1	5/26/2023 01:51 PM
1,1-Dichloropropene	ND		0.0046	mg/Kg-dry	1	5/26/2023 01:51 PM
1,2,3-Trichlorobenzene	ND		0.0046	mg/Kg-dry	1	5/26/2023 01:51 PM
1,2,3-Trichloropropane	ND		0.0046	mg/Kg-dry	1	5/26/2023 01:51 PM
1,2,4-Trichlorobenzene	ND		0.0046	mg/Kg-dry	1	5/26/2023 01:51 PM
1,2,4-Trimethylbenzene	ND		0.0046	mg/Kg-dry	1	5/26/2023 01:51 PM
1,2-Dibromo-3-chloropropane	ND		0.0046	mg/Kg-dry	1	5/26/2023 01:51 PM
1,2-Dibromoethane	ND		0.0046	mg/Kg-dry	1	5/26/2023 01:51 PM
1,2-Dichlorobenzene	ND		0.0046	mg/Kg-dry	1	5/26/2023 01:51 PM
1,2-Dichloroethane	ND		0.0046	mg/Kg-dry	1	5/26/2023 01:51 PM
1,2-Dichloropropane	ND		0.0046	mg/Kg-dry	1	5/26/2023 01:51 PM
1,3,5-Trimethylbenzene	ND		0.0046	mg/Kg-dry	1	5/26/2023 01:51 PM
1,3-Dichlorobenzene	ND		0.0046	mg/Kg-dry	1	5/26/2023 01:51 PM
1,3-Dichloropropane	ND		0.0046	mg/Kg-dry	1	5/26/2023 01:51 PM
1,4-Dichlorobenzene	ND		0.0046	mg/Kg-dry	1	5/26/2023 01:51 PM
2,2-Dichloropropane	ND		0.0046	mg/Kg-dry	1	5/26/2023 01:51 PM
2-Butanone	ND		0.046	mg/Kg-dry	1	5/26/2023 01:51 PM
2-Chlorotoluene	ND		0.0046	mg/Kg-dry	1	5/26/2023 01:51 PM

Note:



# ALS Environmental

Date: 09-Jun-23

**Client:** The Mannik & Smith Group, Inc.  
**Project:** Hillson Nut MS23-13; 401.ODAS003-19  
**Sample ID:** SB-6 (3-5')  
**Collection Date:** 5/22/2023 02:55 PM

**Work Order:** 23051029  
**Lab ID:** 23051029-15  
**Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
2-Hexanone	ND		0.0046	mg/Kg-dry	1	5/26/2023 01:51 PM
4-Chlorotoluene	ND		0.0046	mg/Kg-dry	1	5/26/2023 01:51 PM
4-Methyl-2-pentanone	ND		0.0046	mg/Kg-dry	1	5/26/2023 01:51 PM
Acetone	ND		0.046	mg/Kg-dry	1	5/26/2023 01:51 PM
Benzene	ND		0.0046	mg/Kg-dry	1	5/26/2023 01:51 PM
Bromobenzene	ND		0.0046	mg/Kg-dry	1	5/26/2023 01:51 PM
Bromochloromethane	ND		0.0046	mg/Kg-dry	1	5/26/2023 01:51 PM
Bromodichloromethane	ND		0.0046	mg/Kg-dry	1	5/26/2023 01:51 PM
Bromoform	ND		0.0046	mg/Kg-dry	1	5/26/2023 01:51 PM
Bromomethane	ND		0.0046	mg/Kg-dry	1	5/26/2023 01:51 PM
Carbon disulfide	ND		0.0046	mg/Kg-dry	1	5/26/2023 01:51 PM
Carbon tetrachloride	ND		0.0046	mg/Kg-dry	1	5/26/2023 01:51 PM
Chlorobenzene	ND		0.0046	mg/Kg-dry	1	5/26/2023 01:51 PM
Chloroethane	ND		0.0046	mg/Kg-dry	1	5/26/2023 01:51 PM
Chloroform	ND		0.0046	mg/Kg-dry	1	5/26/2023 01:51 PM
Chloromethane	ND		0.0046	mg/Kg-dry	1	5/26/2023 01:51 PM
cis-1,2-Dichloroethene	ND		0.0046	mg/Kg-dry	1	5/26/2023 01:51 PM
cis-1,3-Dichloropropene	ND		0.0046	mg/Kg-dry	1	5/26/2023 01:51 PM
Dibromochloromethane	ND		0.0046	mg/Kg-dry	1	5/26/2023 01:51 PM
Dibromomethane	ND		0.0046	mg/Kg-dry	1	5/26/2023 01:51 PM
Dichlorodifluoromethane	ND		0.0046	mg/Kg-dry	1	5/26/2023 01:51 PM
Ethylbenzene	ND		0.0046	mg/Kg-dry	1	5/26/2023 01:51 PM
Hexachlorobutadiene	ND		0.0046	mg/Kg-dry	1	5/26/2023 01:51 PM
Isopropylbenzene	ND		0.0046	mg/Kg-dry	1	5/26/2023 01:51 PM
m,p-Xylene	ND		0.0046	mg/Kg-dry	1	5/26/2023 01:51 PM
Methyl tert-butyl ether	ND		0.0046	mg/Kg-dry	1	5/26/2023 01:51 PM
Methylene chloride	ND		0.018	mg/Kg-dry	1	5/26/2023 01:51 PM
Naphthalene	ND		0.0046	mg/Kg-dry	1	5/26/2023 01:51 PM
n-Butylbenzene	ND		0.0046	mg/Kg-dry	1	5/26/2023 01:51 PM
n-Propylbenzene	ND		0.0046	mg/Kg-dry	1	5/26/2023 01:51 PM
o-Xylene	ND		0.0046	mg/Kg-dry	1	5/26/2023 01:51 PM
p-Isopropyltoluene	ND		0.0046	mg/Kg-dry	1	5/26/2023 01:51 PM
sec-Butylbenzene	ND		0.0046	mg/Kg-dry	1	5/26/2023 01:51 PM
Styrene	ND		0.0046	mg/Kg-dry	1	5/26/2023 01:51 PM
tert-Butylbenzene	ND		0.0046	mg/Kg-dry	1	5/26/2023 01:51 PM
Tetrachloroethene	ND		0.0046	mg/Kg-dry	1	5/26/2023 01:51 PM
Toluene	ND		0.0046	mg/Kg-dry	1	5/26/2023 01:51 PM
trans-1,2-Dichloroethene	ND		0.0046	mg/Kg-dry	1	5/26/2023 01:51 PM
trans-1,3-Dichloropropene	ND		0.0046	mg/Kg-dry	1	5/26/2023 01:51 PM
Trichloroethene	ND		0.0046	mg/Kg-dry	1	5/26/2023 01:51 PM

**Note:**

# ALS Environmental

Date: 09-Jun-23

**Client:** The Mannik & Smith Group, Inc.  
**Project:** Hillson Nut MS23-13; 401.ODAS003-19  
**Sample ID:** SB-6 (3-5')  
**Collection Date:** 5/22/2023 02:55 PM

**Work Order:** 23051029  
**Lab ID:** 23051029-15  
**Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Trichlorofluoromethane	ND		0.0046	mg/Kg-dry	1	5/26/2023 01:51 PM
Vinyl chloride	ND		0.0046	mg/Kg-dry	1	5/26/2023 01:51 PM
Xylenes, Total	ND		0.0091	mg/Kg-dry	1	5/26/2023 01:51 PM
<i>Surr: 4-Bromofluorobenzene</i>	90.9		60-140	%REC	1	5/26/2023 01:51 PM
<i>Surr: Dibromofluoromethane</i>	85.7		60-140	%REC	1	5/26/2023 01:51 PM
<i>Surr: Toluene-d8</i>	91.3		60-140	%REC	1	5/26/2023 01:51 PM

**Note:**

# ALS Environmental

Date: 09-Jun-23

**Client:** The Mannik & Smith Group, Inc.  
**Project:** Hillson Nut MS23-13; 401.ODAS003-19  
**Sample ID:** SB-8 (0-2')  
**Collection Date:** 5/23/2023 10:00 AM

**Work Order:** 23051029  
**Lab ID:** 23051029-16  
**Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
<b>PCBS</b>			<b>SW8082</b>	Prep: SW3546	6/5/23 13:18	Analyst: <b>TSA</b>
Aroclor 1016	ND		0.12	mg/Kg-dry	1	6/7/2023 06:51 PM
Aroclor 1221	ND		0.24	mg/Kg-dry	1	6/7/2023 06:51 PM
Aroclor 1232	ND		0.12	mg/Kg-dry	1	6/7/2023 06:51 PM
Aroclor 1242	ND		0.12	mg/Kg-dry	1	6/7/2023 06:51 PM
Aroclor 1248	ND		0.12	mg/Kg-dry	1	6/7/2023 06:51 PM
Aroclor 1254	ND		0.12	mg/Kg-dry	1	6/7/2023 06:51 PM
Aroclor 1260	ND		0.12	mg/Kg-dry	1	6/7/2023 06:51 PM
Aroclor 1262	ND		0.12	mg/Kg-dry	1	6/7/2023 06:51 PM
Aroclor 1268	ND		0.12	mg/Kg-dry	1	6/7/2023 06:51 PM
Surr: Decachlorobiphenyl	96.0		7.32-154	%REC	1	6/7/2023 06:51 PM
Surr: Tetrachloro-m-xylene	112		33.5-152	%REC	1	6/7/2023 06:51 PM
<b>MOISTURE</b>			<b>SM2540B</b>			Analyst: <b>CW</b>
Moisture	16			% of sample	1	6/1/2023
<b>MERCURY BY CVAA</b>			<b>SW7471A</b>	Prep: EPA 7471	6/2/23 11:36	Analyst: <b>SLT</b>
Mercury	ND		0.34	mg/Kg-dry	1	6/5/2023 11:09 AM
<b>METALS BY ICP</b>			<b>SW6010B</b>	Prep: SW3050B	6/2/23 10:43	Analyst: <b>SLT</b>
Arsenic	ND		5.8	mg/Kg-dry	1	6/2/2023 05:44 PM
<b>Barium</b>	<b>42</b>		<b>23</b>	<b>mg/Kg-dry</b>	1	6/2/2023 05:44 PM
Cadmium	ND		1.2	mg/Kg-dry	1	6/2/2023 05:44 PM
Chromium	ND		12	mg/Kg-dry	1	6/2/2023 05:44 PM
Lead	ND		23	mg/Kg-dry	1	6/2/2023 05:44 PM
Selenium	ND		3.5	mg/Kg-dry	1	6/2/2023 05:44 PM
Silver	ND		5.8	mg/Kg-dry	1	6/2/2023 05:44 PM
<b>SEMI-VOLATILE ORGANIC COMPOUNDS</b>			<b>SW8270C</b>	Prep: SW3546	5/30/23 11:26	Analyst: <b>RA</b>
1,2,4,5-Tetrachlorobenzene	ND		0.39	mg/Kg-dry	1	6/1/2023 04:53 PM
1,2,4-Trichlorobenzene	ND		0.39	mg/Kg-dry	1	6/1/2023 04:53 PM
1,2-Dichlorobenzene	ND		0.39	mg/Kg-dry	1	6/1/2023 04:53 PM
1,3-Dichlorobenzene	ND		0.39	mg/Kg-dry	1	6/1/2023 04:53 PM
1,3-Dinitrobenzene	ND		0.39	mg/Kg-dry	1	6/1/2023 04:53 PM
1,4-Dichlorobenzene	ND		0.39	mg/Kg-dry	1	6/1/2023 04:53 PM
1-Methylnaphthalene	ND		0.24	mg/Kg-dry	1	6/1/2023 04:53 PM
1-Naphthylamine	ND		0.39	mg/Kg-dry	1	6/1/2023 04:53 PM
2,3,4,6-Tetrachlorophenol	ND		0.39	mg/Kg-dry	1	6/1/2023 04:53 PM
2,4,5-Trichlorophenol	ND		0.39	mg/Kg-dry	1	6/1/2023 04:53 PM
2,4,6-Trichlorophenol	ND		0.39	mg/Kg-dry	1	6/1/2023 04:53 PM
2,4-Dichlorophenol	ND		0.39	mg/Kg-dry	1	6/1/2023 04:53 PM
2,4-Dimethylphenol	ND		0.39	mg/Kg-dry	1	6/1/2023 04:53 PM

**Note:**

# ALS Environmental

Date: 09-Jun-23

**Client:** The Mannik & Smith Group, Inc.  
**Project:** Hillson Nut MS23-13; 401.ODAS003-19  
**Sample ID:** SB-8 (0-2')  
**Collection Date:** 5/23/2023 10:00 AM

**Work Order:** 23051029  
**Lab ID:** 23051029-16  
**Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
2,4-Dinitrophenol	ND		2.0	mg/Kg-dry	1	6/1/2023 04:53 PM
2,4-Dinitrotoluene	ND		0.39	mg/Kg-dry	1	6/1/2023 04:53 PM
2,6-Dichlorophenol	ND		0.39	mg/Kg-dry	1	6/1/2023 04:53 PM
2,6-Dinitrotoluene	ND		0.39	mg/Kg-dry	1	6/1/2023 04:53 PM
2-Acetylaminofluorene	ND		0.39	mg/Kg-dry	1	6/1/2023 04:53 PM
2-Chloronaphthalene	ND		0.39	mg/Kg-dry	1	6/1/2023 04:53 PM
2-Chlorophenol	ND		0.39	mg/Kg-dry	1	6/1/2023 04:53 PM
2-Methylnaphthalene	ND		0.24	mg/Kg-dry	1	6/1/2023 04:53 PM
2-Methylphenol	ND		0.39	mg/Kg-dry	1	6/1/2023 04:53 PM
2-Naphthylamine	ND		0.39	mg/Kg-dry	1	6/1/2023 04:53 PM
2-Nitroaniline	ND		2.0	mg/Kg-dry	1	6/1/2023 04:53 PM
2-Nitrophenol	ND		0.39	mg/Kg-dry	1	6/1/2023 04:53 PM
2-Picoline	ND		0.39	mg/Kg-dry	1	6/1/2023 04:53 PM
3&4-Methylphenol	ND		0.39	mg/Kg-dry	1	6/1/2023 04:53 PM
3,3'-Dichlorobenzidine	ND		0.78	mg/Kg-dry	1	6/1/2023 04:53 PM
3-Methylcholanthrene	ND		0.39	mg/Kg-dry	1	6/1/2023 04:53 PM
3-Nitroaniline	ND		2.0	mg/Kg-dry	1	6/1/2023 04:53 PM
4,6-Dinitro-2-methylphenol	ND		2.0	mg/Kg-dry	1	6/1/2023 04:53 PM
4-Aminobiphenyl	ND		0.78	mg/Kg-dry	1	6/1/2023 04:53 PM
4-Bromophenyl phenyl ether	ND		0.39	mg/Kg-dry	1	6/1/2023 04:53 PM
4-Chloro-3-methylphenol	ND		0.78	mg/Kg-dry	1	6/1/2023 04:53 PM
4-Chloroaniline	ND		0.78	mg/Kg-dry	1	6/1/2023 04:53 PM
4-Chlorophenyl phenyl ether	ND		0.39	mg/Kg-dry	1	6/1/2023 04:53 PM
4-Nitroaniline	ND		0.78	mg/Kg-dry	1	6/1/2023 04:53 PM
4-Nitrophenol	ND		2.0	mg/Kg-dry	1	6/1/2023 04:53 PM
4-Nitroquinoline 1-oxide	ND		2.0	mg/Kg-dry	1	6/1/2023 04:53 PM
5-Nitro-o-toluidine	ND		0.39	mg/Kg-dry	1	6/1/2023 04:53 PM
7,12-Dimethylbenz(a)anthracene	ND		0.39	mg/Kg-dry	1	6/1/2023 04:53 PM
Acenaphthene	ND		0.24	mg/Kg-dry	1	6/1/2023 04:53 PM
Acenaphthylene	ND		0.24	mg/Kg-dry	1	6/1/2023 04:53 PM
Acetophenone	ND		0.39	mg/Kg-dry	1	6/1/2023 04:53 PM
Aniline	ND		0.39	mg/Kg-dry	1	6/1/2023 04:53 PM
Anthracene	ND		0.24	mg/Kg-dry	1	6/1/2023 04:53 PM
Azobenzene	ND		0.39	mg/Kg-dry	1	6/1/2023 04:53 PM
Benzidine	ND		0.39	mg/Kg-dry	1	6/1/2023 04:53 PM
Benzo(a)anthracene	ND		0.12	mg/Kg-dry	1	6/1/2023 04:53 PM
Benzo(a)pyrene	ND		0.12	mg/Kg-dry	1	6/1/2023 04:53 PM
Benzo(b)fluoranthene	ND		0.24	mg/Kg-dry	1	6/1/2023 04:53 PM
Benzo(g,h,i)perylene	ND		0.24	mg/Kg-dry	1	6/1/2023 04:53 PM
Benzo(k)fluoranthene	ND		0.24	mg/Kg-dry	1	6/1/2023 04:53 PM

**Note:**

# ALS Environmental

Date: 09-Jun-23

**Client:** The Mannik & Smith Group, Inc.  
**Project:** Hillson Nut MS23-13; 401.ODAS003-19  
**Sample ID:** SB-8 (0-2')  
**Collection Date:** 5/23/2023 10:00 AM

**Work Order:** 23051029  
**Lab ID:** 23051029-16  
**Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Benzyl alcohol	ND		0.78	mg/Kg-dry	1	6/1/2023 04:53 PM
Bis(2-chloroethoxy)methane	ND		0.39	mg/Kg-dry	1	6/1/2023 04:53 PM
Bis(2-chloroethyl)ether	ND		0.39	mg/Kg-dry	1	6/1/2023 04:53 PM
Bis(2-chloroisopropyl)ether	ND		0.39	mg/Kg-dry	1	6/1/2023 04:53 PM
Bis(2-ethylhexyl)phthalate	ND		0.39	mg/Kg-dry	1	6/1/2023 04:53 PM
Butyl benzyl phthalate	ND		0.39	mg/Kg-dry	1	6/1/2023 04:53 PM
Carbazole	ND		0.24	mg/Kg-dry	1	6/1/2023 04:53 PM
Chrysene	ND		0.24	mg/Kg-dry	1	6/1/2023 04:53 PM
Dibenzo(a,h)anthracene	ND		0.12	mg/Kg-dry	1	6/1/2023 04:53 PM
Dibenzofuran	ND		0.24	mg/Kg-dry	1	6/1/2023 04:53 PM
Diethyl phthalate	ND		0.39	mg/Kg-dry	1	6/1/2023 04:53 PM
Dimethyl phthalate	ND		0.39	mg/Kg-dry	1	6/1/2023 04:53 PM
Di-n-butyl phthalate	ND		0.39	mg/Kg-dry	1	6/1/2023 04:53 PM
Di-n-octyl phthalate	ND		0.39	mg/Kg-dry	1	6/1/2023 04:53 PM
Dinoseb	ND		0.39	mg/Kg-dry	1	6/1/2023 04:53 PM
Diphenylamine	ND		0.39	mg/Kg-dry	1	6/1/2023 04:53 PM
Ethyl methanesulfonate	ND		0.39	mg/Kg-dry	1	6/1/2023 04:53 PM
Fluoranthene	ND		0.24	mg/Kg-dry	1	6/1/2023 04:53 PM
Fluorene	ND		0.24	mg/Kg-dry	1	6/1/2023 04:53 PM
Hexachlorobenzene	ND		0.39	mg/Kg-dry	1	6/1/2023 04:53 PM
Hexachlorobutadiene	ND		0.39	mg/Kg-dry	1	6/1/2023 04:53 PM
Hexachlorocyclopentadiene	ND		0.39	mg/Kg-dry	1	6/1/2023 04:53 PM
Hexachloroethane	ND		0.39	mg/Kg-dry	1	6/1/2023 04:53 PM
Indeno(1,2,3-cd)pyrene	ND		0.12	mg/Kg-dry	1	6/1/2023 04:53 PM
Isophorone	ND		0.39	mg/Kg-dry	1	6/1/2023 04:53 PM
Isosafrole	ND		0.39	mg/Kg-dry	1	6/1/2023 04:53 PM
Methapyrilene	ND		2.0	mg/Kg-dry	1	6/1/2023 04:53 PM
Methyl methanesulfonate	ND		0.39	mg/Kg-dry	1	6/1/2023 04:53 PM
Naphthalene	ND		0.24	mg/Kg-dry	1	6/1/2023 04:53 PM
Nitrobenzene	ND		0.39	mg/Kg-dry	1	6/1/2023 04:53 PM
N-Nitrosodiethylamine	ND		0.39	mg/Kg-dry	1	6/1/2023 04:53 PM
N-Nitrosodimethylamine	ND		0.39	mg/Kg-dry	1	6/1/2023 04:53 PM
N-Nitroso-di-n-butylamine	ND		0.39	mg/Kg-dry	1	6/1/2023 04:53 PM
N-Nitrosodi-n-propylamine	ND		0.39	mg/Kg-dry	1	6/1/2023 04:53 PM
N-Nitrosomethylethylamine	ND		0.39	mg/Kg-dry	1	6/1/2023 04:53 PM
N-Nitrosomorpholine	ND		0.39	mg/Kg-dry	1	6/1/2023 04:53 PM
N-Nitrosopiperidine	ND		0.39	mg/Kg-dry	1	6/1/2023 04:53 PM
N-Nitrosopyrrolidine	ND		0.39	mg/Kg-dry	1	6/1/2023 04:53 PM
o-Toluidine	ND		2.0	mg/Kg-dry	1	6/1/2023 04:53 PM
p-Dimethylaminoazobenzene	ND		0.39	mg/Kg-dry	1	6/1/2023 04:53 PM

**Note:**

# ALS Environmental

Date: 09-Jun-23

**Client:** The Mannik & Smith Group, Inc.  
**Project:** Hillson Nut MS23-13; 401.ODAS003-19  
**Sample ID:** SB-8 (0-2')  
**Collection Date:** 5/23/2023 10:00 AM

**Work Order:** 23051029  
**Lab ID:** 23051029-16  
**Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Pentachlorobenzene	ND		0.39	mg/Kg-dry	1	6/1/2023 04:53 PM
Pentachloroethane	ND		0.39	mg/Kg-dry	1	6/1/2023 04:53 PM
Pentachloronitrobenzene	ND		0.78	mg/Kg-dry	1	6/1/2023 04:53 PM
Pentachlorophenol	ND		2.0	mg/Kg-dry	1	6/1/2023 04:53 PM
Phenacetin	ND		0.78	mg/Kg-dry	1	6/1/2023 04:53 PM
Phenanthrene	ND		0.24	mg/Kg-dry	1	6/1/2023 04:53 PM
Phenol	ND		0.39	mg/Kg-dry	1	6/1/2023 04:53 PM
Pyrene	ND		0.24	mg/Kg-dry	1	6/1/2023 04:53 PM
Pyridine	ND		0.39	mg/Kg-dry	1	6/1/2023 04:53 PM
Safrole	ND		0.39	mg/Kg-dry	1	6/1/2023 04:53 PM
<i>Surr: 2,4,6-Tribromophenol</i>	59.7		14.2-136	%REC	1	6/1/2023 04:53 PM
<i>Surr: 2-Fluorobiphenyl</i>	58.8		30-116	%REC	1	6/1/2023 04:53 PM
<i>Surr: 2-Fluorophenol</i>	50.6		24-105	%REC	1	6/1/2023 04:53 PM
<i>Surr: 4-Terphenyl-d14</i>	63.5		27.3-138	%REC	1	6/1/2023 04:53 PM
<i>Surr: Nitrobenzene-d5</i>	50.3		23.7-109	%REC	1	6/1/2023 04:53 PM
<i>Surr: Phenol-d5</i>	45.7		24.9-103	%REC	1	6/1/2023 04:53 PM

## VOLATILE ORGANIC COMPOUNDS

SW8260B

Analyst: LAK

1,1,1,2-Tetrachloroethane	ND		0.0046	mg/Kg-dry	1	5/26/2023 02:13 PM
1,1,1-Trichloroethane	ND		0.0046	mg/Kg-dry	1	5/26/2023 02:13 PM
1,1,2,2-Tetrachloroethane	ND		0.0046	mg/Kg-dry	1	5/26/2023 02:13 PM
1,1,2-Trichloroethane	ND		0.0046	mg/Kg-dry	1	5/26/2023 02:13 PM
1,1-Dichloroethane	ND		0.0046	mg/Kg-dry	1	5/26/2023 02:13 PM
1,1-Dichloroethene	ND		0.0046	mg/Kg-dry	1	5/26/2023 02:13 PM
1,1-Dichloropropene	ND		0.0046	mg/Kg-dry	1	5/26/2023 02:13 PM
1,2,3-Trichlorobenzene	ND		0.0046	mg/Kg-dry	1	5/26/2023 02:13 PM
1,2,3-Trichloropropane	ND		0.0046	mg/Kg-dry	1	5/26/2023 02:13 PM
1,2,4-Trichlorobenzene	ND		0.0046	mg/Kg-dry	1	5/26/2023 02:13 PM
1,2,4-Trimethylbenzene	ND		0.0046	mg/Kg-dry	1	5/26/2023 02:13 PM
1,2-Dibromo-3-chloropropane	ND		0.0046	mg/Kg-dry	1	5/26/2023 02:13 PM
1,2-Dibromoethane	ND		0.0046	mg/Kg-dry	1	5/26/2023 02:13 PM
1,2-Dichlorobenzene	ND		0.0046	mg/Kg-dry	1	5/26/2023 02:13 PM
1,2-Dichloroethane	ND		0.0046	mg/Kg-dry	1	5/26/2023 02:13 PM
1,2-Dichloropropane	ND		0.0046	mg/Kg-dry	1	5/26/2023 02:13 PM
1,3,5-Trimethylbenzene	ND		0.0046	mg/Kg-dry	1	5/26/2023 02:13 PM
1,3-Dichlorobenzene	ND		0.0046	mg/Kg-dry	1	5/26/2023 02:13 PM
1,3-Dichloropropane	ND		0.0046	mg/Kg-dry	1	5/26/2023 02:13 PM
1,4-Dichlorobenzene	ND		0.0046	mg/Kg-dry	1	5/26/2023 02:13 PM
2,2-Dichloropropane	ND		0.0046	mg/Kg-dry	1	5/26/2023 02:13 PM
2-Butanone	ND		0.046	mg/Kg-dry	1	5/26/2023 02:13 PM
2-Chlorotoluene	ND		0.0046	mg/Kg-dry	1	5/26/2023 02:13 PM

Note:

# ALS Environmental

Date: 09-Jun-23

**Client:** The Mannik & Smith Group, Inc.  
**Project:** Hillson Nut MS23-13; 401.ODAS003-19  
**Sample ID:** SB-8 (0-2')  
**Collection Date:** 5/23/2023 10:00 AM

**Work Order:** 23051029  
**Lab ID:** 23051029-16  
**Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
2-Hexanone	ND		0.0046	mg/Kg-dry	1	5/26/2023 02:13 PM
4-Chlorotoluene	ND		0.0046	mg/Kg-dry	1	5/26/2023 02:13 PM
4-Methyl-2-pentanone	ND		0.0046	mg/Kg-dry	1	5/26/2023 02:13 PM
Acetone	ND		0.046	mg/Kg-dry	1	5/26/2023 02:13 PM
Benzene	ND		0.0046	mg/Kg-dry	1	5/26/2023 02:13 PM
Bromobenzene	ND		0.0046	mg/Kg-dry	1	5/26/2023 02:13 PM
Bromochloromethane	ND		0.0046	mg/Kg-dry	1	5/26/2023 02:13 PM
Bromodichloromethane	ND		0.0046	mg/Kg-dry	1	5/26/2023 02:13 PM
Bromoform	ND		0.0046	mg/Kg-dry	1	5/26/2023 02:13 PM
Bromomethane	ND		0.0046	mg/Kg-dry	1	5/26/2023 02:13 PM
Carbon disulfide	ND		0.0046	mg/Kg-dry	1	5/26/2023 02:13 PM
Carbon tetrachloride	ND		0.0046	mg/Kg-dry	1	5/26/2023 02:13 PM
Chlorobenzene	ND		0.0046	mg/Kg-dry	1	5/26/2023 02:13 PM
Chloroethane	ND		0.0046	mg/Kg-dry	1	5/26/2023 02:13 PM
Chloroform	ND		0.0046	mg/Kg-dry	1	5/26/2023 02:13 PM
Chloromethane	ND		0.0046	mg/Kg-dry	1	5/26/2023 02:13 PM
cis-1,2-Dichloroethene	ND		0.0046	mg/Kg-dry	1	5/26/2023 02:13 PM
cis-1,3-Dichloropropene	ND		0.0046	mg/Kg-dry	1	5/26/2023 02:13 PM
Dibromochloromethane	ND		0.0046	mg/Kg-dry	1	5/26/2023 02:13 PM
Dibromomethane	ND		0.0046	mg/Kg-dry	1	5/26/2023 02:13 PM
Dichlorodifluoromethane	ND		0.0046	mg/Kg-dry	1	5/26/2023 02:13 PM
Ethylbenzene	ND		0.0046	mg/Kg-dry	1	5/26/2023 02:13 PM
Hexachlorobutadiene	ND		0.0046	mg/Kg-dry	1	5/26/2023 02:13 PM
Isopropylbenzene	ND		0.0046	mg/Kg-dry	1	5/26/2023 02:13 PM
m,p-Xylene	ND		0.0046	mg/Kg-dry	1	5/26/2023 02:13 PM
Methyl tert-butyl ether	ND		0.0046	mg/Kg-dry	1	5/26/2023 02:13 PM
Methylene chloride	ND		0.018	mg/Kg-dry	1	5/26/2023 02:13 PM
Naphthalene	ND		0.0046	mg/Kg-dry	1	5/26/2023 02:13 PM
n-Butylbenzene	ND		0.0046	mg/Kg-dry	1	5/26/2023 02:13 PM
n-Propylbenzene	ND		0.0046	mg/Kg-dry	1	5/26/2023 02:13 PM
o-Xylene	ND		0.0046	mg/Kg-dry	1	5/26/2023 02:13 PM
p-Isopropyltoluene	ND		0.0046	mg/Kg-dry	1	5/26/2023 02:13 PM
sec-Butylbenzene	ND		0.0046	mg/Kg-dry	1	5/26/2023 02:13 PM
Styrene	ND		0.0046	mg/Kg-dry	1	5/26/2023 02:13 PM
tert-Butylbenzene	ND		0.0046	mg/Kg-dry	1	5/26/2023 02:13 PM
Tetrachloroethene	ND		0.0046	mg/Kg-dry	1	5/26/2023 02:13 PM
Toluene	ND		0.0046	mg/Kg-dry	1	5/26/2023 02:13 PM
trans-1,2-Dichloroethene	ND		0.0046	mg/Kg-dry	1	5/26/2023 02:13 PM
trans-1,3-Dichloropropene	ND		0.0046	mg/Kg-dry	1	5/26/2023 02:13 PM
Trichloroethene	ND		0.0046	mg/Kg-dry	1	5/26/2023 02:13 PM

**Note:**

# ALS Environmental

Date: 09-Jun-23

**Client:** The Mannik & Smith Group, Inc.  
**Project:** Hillson Nut MS23-13; 401.ODAS003-19  
**Sample ID:** SB-8 (0-2')  
**Collection Date:** 5/23/2023 10:00 AM

**Work Order:** 23051029  
**Lab ID:** 23051029-16  
**Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Trichlorofluoromethane	ND		0.0046	mg/Kg-dry	1	5/26/2023 02:13 PM
Vinyl chloride	ND		0.0046	mg/Kg-dry	1	5/26/2023 02:13 PM
Xylenes, Total	ND		0.0092	mg/Kg-dry	1	5/26/2023 02:13 PM
<i>Surr: 4-Bromofluorobenzene</i>	93.3		60-140	%REC	1	5/26/2023 02:13 PM
<i>Surr: Dibromofluoromethane</i>	86.5		60-140	%REC	1	5/26/2023 02:13 PM
<i>Surr: Toluene-d8</i>	92.2		60-140	%REC	1	5/26/2023 02:13 PM

**Note:**



# ALS Environmental

Date: 09-Jun-23

**Client:** The Mannik & Smith Group, Inc.  
**Project:** Hillson Nut MS23-13; 401.ODAS003-19  
**Sample ID:** SB-8 (6-8')  
**Collection Date:** 5/23/2023 10:10 AM

**Work Order:** 23051029  
**Lab ID:** 23051029-17  
**Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
<b>PCBS</b>			<b>SW8082</b>	Prep: SW3546 6/5/23 13:18		Analyst: <b>TSA</b>
Aroclor 1016	ND		0.12	mg/Kg-dry	1	6/7/2023 07:08 PM
Aroclor 1221	ND		0.25	mg/Kg-dry	1	6/7/2023 07:08 PM
Aroclor 1232	ND		0.12	mg/Kg-dry	1	6/7/2023 07:08 PM
Aroclor 1242	ND		0.12	mg/Kg-dry	1	6/7/2023 07:08 PM
Aroclor 1248	ND		0.12	mg/Kg-dry	1	6/7/2023 07:08 PM
Aroclor 1254	ND		0.12	mg/Kg-dry	1	6/7/2023 07:08 PM
Aroclor 1260	ND		0.12	mg/Kg-dry	1	6/7/2023 07:08 PM
Aroclor 1262	ND		0.12	mg/Kg-dry	1	6/7/2023 07:08 PM
Aroclor 1268	ND		0.12	mg/Kg-dry	1	6/7/2023 07:08 PM
Surr: Decachlorobiphenyl	106		7.32-154	%REC	1	6/7/2023 07:08 PM
Surr: Tetrachloro-m-xylene	120		33.5-152	%REC	1	6/7/2023 07:08 PM
<b>MOISTURE</b>			<b>SM2540B</b>			Analyst: <b>CW</b>
Moisture	<b>19</b>			% of sample	1	6/1/2023
<b>MERCURY BY CVAA</b>			<b>SW7471A</b>	Prep: EPA 7471 6/2/23 11:36		Analyst: <b>SLT</b>
Mercury	ND		0.35	mg/Kg-dry	1	6/5/2023 11:11 AM
<b>METALS BY ICP</b>			<b>SW6010B</b>	Prep: SW3050B 6/2/23 10:43		Analyst: <b>SLT</b>
Arsenic	<b>17</b>		<b>6.0</b>	mg/Kg-dry	1	6/2/2023 05:48 PM
Barium	ND		24	mg/Kg-dry	1	6/2/2023 05:48 PM
Cadmium	ND		1.2	mg/Kg-dry	1	6/2/2023 05:48 PM
Chromium	ND		12	mg/Kg-dry	1	6/2/2023 05:48 PM
Lead	ND		24	mg/Kg-dry	1	6/2/2023 05:48 PM
Selenium	ND		3.6	mg/Kg-dry	1	6/2/2023 05:48 PM
Silver	ND		6.0	mg/Kg-dry	1	6/2/2023 05:48 PM
<b>SEMI-VOLATILE ORGANIC COMPOUNDS</b>			<b>SW8270C</b>	Prep: SW3546 5/30/23 11:26		Analyst: <b>RA</b>
1,2,4,5-Tetrachlorobenzene	ND		0.41	mg/Kg-dry	1	6/1/2023 05:15 PM
1,2,4-Trichlorobenzene	ND		0.41	mg/Kg-dry	1	6/1/2023 05:15 PM
1,2-Dichlorobenzene	ND		0.41	mg/Kg-dry	1	6/1/2023 05:15 PM
1,3-Dichlorobenzene	ND		0.41	mg/Kg-dry	1	6/1/2023 05:15 PM
1,3-Dinitrobenzene	ND		0.41	mg/Kg-dry	1	6/1/2023 05:15 PM
1,4-Dichlorobenzene	ND		0.41	mg/Kg-dry	1	6/1/2023 05:15 PM
1-Methylnaphthalene	ND		0.25	mg/Kg-dry	1	6/1/2023 05:15 PM
1-Naphthylamine	ND		0.41	mg/Kg-dry	1	6/1/2023 05:15 PM
2,3,4,6-Tetrachlorophenol	ND		0.41	mg/Kg-dry	1	6/1/2023 05:15 PM
2,4,5-Trichlorophenol	ND		0.41	mg/Kg-dry	1	6/1/2023 05:15 PM
2,4,6-Trichlorophenol	ND		0.41	mg/Kg-dry	1	6/1/2023 05:15 PM
2,4-Dichlorophenol	ND		0.41	mg/Kg-dry	1	6/1/2023 05:15 PM
2,4-Dimethylphenol	ND		0.41	mg/Kg-dry	1	6/1/2023 05:15 PM

Note:

# ALS Environmental

Date: 09-Jun-23

**Client:** The Mannik & Smith Group, Inc.  
**Project:** Hillson Nut MS23-13; 401.ODAS003-19  
**Sample ID:** SB-8 (6-8')  
**Collection Date:** 5/23/2023 10:10 AM

**Work Order:** 23051029  
**Lab ID:** 23051029-17  
**Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
2,4-Dinitrophenol	ND		2.0	mg/Kg-dry	1	6/1/2023 05:15 PM
2,4-Dinitrotoluene	ND		0.41	mg/Kg-dry	1	6/1/2023 05:15 PM
2,6-Dichlorophenol	ND		0.41	mg/Kg-dry	1	6/1/2023 05:15 PM
2,6-Dinitrotoluene	ND		0.41	mg/Kg-dry	1	6/1/2023 05:15 PM
2-Acetylaminofluorene	ND		0.41	mg/Kg-dry	1	6/1/2023 05:15 PM
2-Chloronaphthalene	ND		0.41	mg/Kg-dry	1	6/1/2023 05:15 PM
2-Chlorophenol	ND		0.41	mg/Kg-dry	1	6/1/2023 05:15 PM
2-Methylnaphthalene	ND		0.25	mg/Kg-dry	1	6/1/2023 05:15 PM
2-Methylphenol	ND		0.41	mg/Kg-dry	1	6/1/2023 05:15 PM
2-Naphthylamine	ND		0.41	mg/Kg-dry	1	6/1/2023 05:15 PM
2-Nitroaniline	ND		2.0	mg/Kg-dry	1	6/1/2023 05:15 PM
2-Nitrophenol	ND		0.41	mg/Kg-dry	1	6/1/2023 05:15 PM
2-Picoline	ND		0.41	mg/Kg-dry	1	6/1/2023 05:15 PM
3&4-Methylphenol	ND		0.41	mg/Kg-dry	1	6/1/2023 05:15 PM
3,3'-Dichlorobenzidine	ND		0.82	mg/Kg-dry	1	6/1/2023 05:15 PM
3-Methylcholanthrene	ND		0.41	mg/Kg-dry	1	6/1/2023 05:15 PM
3-Nitroaniline	ND		2.0	mg/Kg-dry	1	6/1/2023 05:15 PM
4,6-Dinitro-2-methylphenol	ND		2.0	mg/Kg-dry	1	6/1/2023 05:15 PM
4-Aminobiphenyl	ND		0.82	mg/Kg-dry	1	6/1/2023 05:15 PM
4-Bromophenyl phenyl ether	ND		0.41	mg/Kg-dry	1	6/1/2023 05:15 PM
4-Chloro-3-methylphenol	ND		0.82	mg/Kg-dry	1	6/1/2023 05:15 PM
4-Chloroaniline	ND		0.82	mg/Kg-dry	1	6/1/2023 05:15 PM
4-Chlorophenyl phenyl ether	ND		0.41	mg/Kg-dry	1	6/1/2023 05:15 PM
4-Nitroaniline	ND		0.82	mg/Kg-dry	1	6/1/2023 05:15 PM
4-Nitrophenol	ND		2.0	mg/Kg-dry	1	6/1/2023 05:15 PM
4-Nitroquinoline 1-oxide	ND		2.0	mg/Kg-dry	1	6/1/2023 05:15 PM
5-Nitro-o-toluidine	ND		0.41	mg/Kg-dry	1	6/1/2023 05:15 PM
7,12-Dimethylbenz(a)anthracene	ND		0.41	mg/Kg-dry	1	6/1/2023 05:15 PM
Acenaphthene	ND		0.25	mg/Kg-dry	1	6/1/2023 05:15 PM
Acenaphthylene	ND		0.25	mg/Kg-dry	1	6/1/2023 05:15 PM
Acetophenone	ND		0.41	mg/Kg-dry	1	6/1/2023 05:15 PM
Aniline	ND		0.41	mg/Kg-dry	1	6/1/2023 05:15 PM
Anthracene	ND		0.25	mg/Kg-dry	1	6/1/2023 05:15 PM
Azobenzene	ND		0.41	mg/Kg-dry	1	6/1/2023 05:15 PM
Benzidine	ND		0.41	mg/Kg-dry	1	6/1/2023 05:15 PM
Benzo(a)anthracene	ND		0.12	mg/Kg-dry	1	6/1/2023 05:15 PM
Benzo(a)pyrene	ND		0.12	mg/Kg-dry	1	6/1/2023 05:15 PM
Benzo(b)fluoranthene	ND		0.25	mg/Kg-dry	1	6/1/2023 05:15 PM
Benzo(g,h,i)perylene	ND		0.25	mg/Kg-dry	1	6/1/2023 05:15 PM
Benzo(k)fluoranthene	ND		0.25	mg/Kg-dry	1	6/1/2023 05:15 PM

**Note:**

# ALS Environmental

Date: 09-Jun-23

**Client:** The Mannik & Smith Group, Inc.  
**Project:** Hillson Nut MS23-13; 401.ODAS003-19  
**Sample ID:** SB-8 (6-8')  
**Collection Date:** 5/23/2023 10:10 AM

**Work Order:** 23051029  
**Lab ID:** 23051029-17  
**Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Benzyl alcohol	ND		0.82	mg/Kg-dry	1	6/1/2023 05:15 PM
Bis(2-chloroethoxy)methane	ND		0.41	mg/Kg-dry	1	6/1/2023 05:15 PM
Bis(2-chloroethyl)ether	ND		0.41	mg/Kg-dry	1	6/1/2023 05:15 PM
Bis(2-chloroisopropyl)ether	ND		0.41	mg/Kg-dry	1	6/1/2023 05:15 PM
Bis(2-ethylhexyl)phthalate	ND		0.41	mg/Kg-dry	1	6/1/2023 05:15 PM
Butyl benzyl phthalate	ND		0.41	mg/Kg-dry	1	6/1/2023 05:15 PM
Carbazole	ND		0.25	mg/Kg-dry	1	6/1/2023 05:15 PM
Chrysene	ND		0.25	mg/Kg-dry	1	6/1/2023 05:15 PM
Dibenzo(a,h)anthracene	ND		0.12	mg/Kg-dry	1	6/1/2023 05:15 PM
Dibenzofuran	ND		0.25	mg/Kg-dry	1	6/1/2023 05:15 PM
Diethyl phthalate	ND		0.41	mg/Kg-dry	1	6/1/2023 05:15 PM
Dimethyl phthalate	ND		0.41	mg/Kg-dry	1	6/1/2023 05:15 PM
Di-n-butyl phthalate	ND		0.41	mg/Kg-dry	1	6/1/2023 05:15 PM
Di-n-octyl phthalate	ND		0.41	mg/Kg-dry	1	6/1/2023 05:15 PM
Dinoseb	ND		0.41	mg/Kg-dry	1	6/1/2023 05:15 PM
Diphenylamine	ND		0.41	mg/Kg-dry	1	6/1/2023 05:15 PM
Ethyl methanesulfonate	ND		0.41	mg/Kg-dry	1	6/1/2023 05:15 PM
Fluoranthene	ND		0.25	mg/Kg-dry	1	6/1/2023 05:15 PM
Fluorene	ND		0.25	mg/Kg-dry	1	6/1/2023 05:15 PM
Hexachlorobenzene	ND		0.41	mg/Kg-dry	1	6/1/2023 05:15 PM
Hexachlorobutadiene	ND		0.41	mg/Kg-dry	1	6/1/2023 05:15 PM
Hexachlorocyclopentadiene	ND		0.41	mg/Kg-dry	1	6/1/2023 05:15 PM
Hexachloroethane	ND		0.41	mg/Kg-dry	1	6/1/2023 05:15 PM
Indeno(1,2,3-cd)pyrene	ND		0.12	mg/Kg-dry	1	6/1/2023 05:15 PM
Isophorone	ND		0.41	mg/Kg-dry	1	6/1/2023 05:15 PM
Isosafrole	ND		0.41	mg/Kg-dry	1	6/1/2023 05:15 PM
Methapyrilene	ND		2.0	mg/Kg-dry	1	6/1/2023 05:15 PM
Methyl methanesulfonate	ND		0.41	mg/Kg-dry	1	6/1/2023 05:15 PM
Naphthalene	ND		0.25	mg/Kg-dry	1	6/1/2023 05:15 PM
Nitrobenzene	ND		0.41	mg/Kg-dry	1	6/1/2023 05:15 PM
N-Nitrosodiethylamine	ND		0.41	mg/Kg-dry	1	6/1/2023 05:15 PM
N-Nitrosodimethylamine	ND		0.41	mg/Kg-dry	1	6/1/2023 05:15 PM
N-Nitroso-di-n-butylamine	ND		0.41	mg/Kg-dry	1	6/1/2023 05:15 PM
N-Nitrosodi-n-propylamine	ND		0.41	mg/Kg-dry	1	6/1/2023 05:15 PM
N-Nitrosomethylethylamine	ND		0.41	mg/Kg-dry	1	6/1/2023 05:15 PM
N-Nitrosomorpholine	ND		0.41	mg/Kg-dry	1	6/1/2023 05:15 PM
N-Nitrosopiperidine	ND		0.41	mg/Kg-dry	1	6/1/2023 05:15 PM
N-Nitrosopyrrolidine	ND		0.41	mg/Kg-dry	1	6/1/2023 05:15 PM
o-Toluidine	ND		2.0	mg/Kg-dry	1	6/1/2023 05:15 PM
p-Dimethylaminoazobenzene	ND		0.41	mg/Kg-dry	1	6/1/2023 05:15 PM

**Note:**

# ALS Environmental

Date: 09-Jun-23

**Client:** The Mannik & Smith Group, Inc.  
**Project:** Hillson Nut MS23-13; 401.ODAS003-19  
**Sample ID:** SB-8 (6-8')  
**Collection Date:** 5/23/2023 10:10 AM

**Work Order:** 23051029  
**Lab ID:** 23051029-17  
**Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Pentachlorobenzene	ND		0.41	mg/Kg-dry	1	6/1/2023 05:15 PM
Pentachloroethane	ND		0.41	mg/Kg-dry	1	6/1/2023 05:15 PM
Pentachloronitrobenzene	ND		0.82	mg/Kg-dry	1	6/1/2023 05:15 PM
Pentachlorophenol	ND		2.0	mg/Kg-dry	1	6/1/2023 05:15 PM
Phenacetin	ND		0.82	mg/Kg-dry	1	6/1/2023 05:15 PM
Phenanthrene	ND		0.25	mg/Kg-dry	1	6/1/2023 05:15 PM
Phenol	ND		0.41	mg/Kg-dry	1	6/1/2023 05:15 PM
Pyrene	ND		0.25	mg/Kg-dry	1	6/1/2023 05:15 PM
Pyridine	ND		0.41	mg/Kg-dry	1	6/1/2023 05:15 PM
Safrole	ND		0.41	mg/Kg-dry	1	6/1/2023 05:15 PM
<i>Surr: 2,4,6-Tribromophenol</i>	<i>67.3</i>		<i>14.2-136</i>	<i>%REC</i>	<i>1</i>	<i>6/1/2023 05:15 PM</i>
<i>Surr: 2-Fluorobiphenyl</i>	<i>62.3</i>		<i>30-116</i>	<i>%REC</i>	<i>1</i>	<i>6/1/2023 05:15 PM</i>
<i>Surr: 2-Fluorophenol</i>	<i>55.0</i>		<i>24-105</i>	<i>%REC</i>	<i>1</i>	<i>6/1/2023 05:15 PM</i>
<i>Surr: 4-Terphenyl-d14</i>	<i>71.2</i>		<i>27.3-138</i>	<i>%REC</i>	<i>1</i>	<i>6/1/2023 05:15 PM</i>
<i>Surr: Nitrobenzene-d5</i>	<i>58.1</i>		<i>23.7-109</i>	<i>%REC</i>	<i>1</i>	<i>6/1/2023 05:15 PM</i>
<i>Surr: Phenol-d5</i>	<i>53.8</i>		<i>24.9-103</i>	<i>%REC</i>	<i>1</i>	<i>6/1/2023 05:15 PM</i>

## VOLATILE ORGANIC COMPOUNDS

SW8260B

Analyst: LAK

1,1,1,2-Tetrachloroethane	ND		0.0055	mg/Kg-dry	1	5/26/2023 02:36 PM
1,1,1-Trichloroethane	ND		0.0055	mg/Kg-dry	1	5/26/2023 02:36 PM
1,1,2,2-Tetrachloroethane	ND		0.0055	mg/Kg-dry	1	5/26/2023 02:36 PM
1,1,2-Trichloroethane	ND		0.0055	mg/Kg-dry	1	5/26/2023 02:36 PM
1,1-Dichloroethane	ND		0.0055	mg/Kg-dry	1	5/26/2023 02:36 PM
1,1-Dichloroethene	ND		0.0055	mg/Kg-dry	1	5/26/2023 02:36 PM
1,1-Dichloropropene	ND		0.0055	mg/Kg-dry	1	5/26/2023 02:36 PM
1,2,3-Trichlorobenzene	ND		0.0055	mg/Kg-dry	1	5/26/2023 02:36 PM
1,2,3-Trichloropropane	ND		0.0055	mg/Kg-dry	1	5/26/2023 02:36 PM
1,2,4-Trichlorobenzene	ND		0.0055	mg/Kg-dry	1	5/26/2023 02:36 PM
1,2,4-Trimethylbenzene	ND		0.0055	mg/Kg-dry	1	5/26/2023 02:36 PM
1,2-Dibromo-3-chloropropane	ND		0.0055	mg/Kg-dry	1	5/26/2023 02:36 PM
1,2-Dibromoethane	ND		0.0055	mg/Kg-dry	1	5/26/2023 02:36 PM
1,2-Dichlorobenzene	ND		0.0055	mg/Kg-dry	1	5/26/2023 02:36 PM
1,2-Dichloroethane	ND		0.0055	mg/Kg-dry	1	5/26/2023 02:36 PM
1,2-Dichloropropane	ND		0.0055	mg/Kg-dry	1	5/26/2023 02:36 PM
1,3,5-Trimethylbenzene	ND		0.0055	mg/Kg-dry	1	5/26/2023 02:36 PM
1,3-Dichlorobenzene	ND		0.0055	mg/Kg-dry	1	5/26/2023 02:36 PM
1,3-Dichloropropane	ND		0.0055	mg/Kg-dry	1	5/26/2023 02:36 PM
1,4-Dichlorobenzene	ND		0.0055	mg/Kg-dry	1	5/26/2023 02:36 PM
2,2-Dichloropropane	ND		0.0055	mg/Kg-dry	1	5/26/2023 02:36 PM
2-Butanone	ND		0.055	mg/Kg-dry	1	5/26/2023 02:36 PM
2-Chlorotoluene	ND		0.0055	mg/Kg-dry	1	5/26/2023 02:36 PM

Note:

# ALS Environmental

Date: 09-Jun-23

**Client:** The Mannik & Smith Group, Inc.  
**Project:** Hillson Nut MS23-13; 401.ODAS003-19  
**Sample ID:** SB-8 (6-8')  
**Collection Date:** 5/23/2023 10:10 AM

**Work Order:** 23051029  
**Lab ID:** 23051029-17  
**Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
2-Hexanone	ND		0.0055	mg/Kg-dry	1	5/26/2023 02:36 PM
4-Chlorotoluene	ND		0.0055	mg/Kg-dry	1	5/26/2023 02:36 PM
4-Methyl-2-pentanone	ND		0.0055	mg/Kg-dry	1	5/26/2023 02:36 PM
Acetone	ND		0.055	mg/Kg-dry	1	5/26/2023 02:36 PM
Benzene	ND		0.0055	mg/Kg-dry	1	5/26/2023 02:36 PM
Bromobenzene	ND		0.0055	mg/Kg-dry	1	5/26/2023 02:36 PM
Bromochloromethane	ND		0.0055	mg/Kg-dry	1	5/26/2023 02:36 PM
Bromodichloromethane	ND		0.0055	mg/Kg-dry	1	5/26/2023 02:36 PM
Bromoform	ND		0.0055	mg/Kg-dry	1	5/26/2023 02:36 PM
Bromomethane	ND		0.0055	mg/Kg-dry	1	5/26/2023 02:36 PM
Carbon disulfide	ND		0.0055	mg/Kg-dry	1	5/26/2023 02:36 PM
Carbon tetrachloride	ND		0.0055	mg/Kg-dry	1	5/26/2023 02:36 PM
Chlorobenzene	ND		0.0055	mg/Kg-dry	1	5/26/2023 02:36 PM
Chloroethane	ND		0.0055	mg/Kg-dry	1	5/26/2023 02:36 PM
Chloroform	ND		0.0055	mg/Kg-dry	1	5/26/2023 02:36 PM
Chloromethane	ND		0.0055	mg/Kg-dry	1	5/26/2023 02:36 PM
cis-1,2-Dichloroethene	ND		0.0055	mg/Kg-dry	1	5/26/2023 02:36 PM
cis-1,3-Dichloropropene	ND		0.0055	mg/Kg-dry	1	5/26/2023 02:36 PM
Dibromochloromethane	ND		0.0055	mg/Kg-dry	1	5/26/2023 02:36 PM
Dibromomethane	ND		0.0055	mg/Kg-dry	1	5/26/2023 02:36 PM
Dichlorodifluoromethane	ND		0.0055	mg/Kg-dry	1	5/26/2023 02:36 PM
Ethylbenzene	ND		0.0055	mg/Kg-dry	1	5/26/2023 02:36 PM
Hexachlorobutadiene	ND		0.0055	mg/Kg-dry	1	5/26/2023 02:36 PM
Isopropylbenzene	ND		0.0055	mg/Kg-dry	1	5/26/2023 02:36 PM
m,p-Xylene	ND		0.0055	mg/Kg-dry	1	5/26/2023 02:36 PM
Methyl tert-butyl ether	ND		0.0055	mg/Kg-dry	1	5/26/2023 02:36 PM
Methylene chloride	ND		0.022	mg/Kg-dry	1	5/26/2023 02:36 PM
Naphthalene	ND		0.0055	mg/Kg-dry	1	5/26/2023 02:36 PM
n-Butylbenzene	ND		0.0055	mg/Kg-dry	1	5/26/2023 02:36 PM
n-Propylbenzene	ND		0.0055	mg/Kg-dry	1	5/26/2023 02:36 PM
o-Xylene	ND		0.0055	mg/Kg-dry	1	5/26/2023 02:36 PM
p-Isopropyltoluene	ND		0.0055	mg/Kg-dry	1	5/26/2023 02:36 PM
sec-Butylbenzene	ND		0.0055	mg/Kg-dry	1	5/26/2023 02:36 PM
Styrene	ND		0.0055	mg/Kg-dry	1	5/26/2023 02:36 PM
tert-Butylbenzene	ND		0.0055	mg/Kg-dry	1	5/26/2023 02:36 PM
Tetrachloroethene	ND		0.0055	mg/Kg-dry	1	5/26/2023 02:36 PM
Toluene	ND		0.0055	mg/Kg-dry	1	5/26/2023 02:36 PM
trans-1,2-Dichloroethene	ND		0.0055	mg/Kg-dry	1	5/26/2023 02:36 PM
trans-1,3-Dichloropropene	ND		0.0055	mg/Kg-dry	1	5/26/2023 02:36 PM
Trichloroethene	ND		0.0055	mg/Kg-dry	1	5/26/2023 02:36 PM

**Note:**

# ALS Environmental

Date: 09-Jun-23

**Client:** The Mannik & Smith Group, Inc.  
**Project:** Hillson Nut MS23-13; 401.ODAS003-19  
**Sample ID:** SB-8 (6-8')  
**Collection Date:** 5/23/2023 10:10 AM

**Work Order:** 23051029  
**Lab ID:** 23051029-17  
**Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Trichlorofluoromethane	ND		0.0055	mg/Kg-dry	1	5/26/2023 02:36 PM
Vinyl chloride	ND		0.0055	mg/Kg-dry	1	5/26/2023 02:36 PM
Xylenes, Total	ND		0.011	mg/Kg-dry	1	5/26/2023 02:36 PM
<i>Surr: 4-Bromofluorobenzene</i>	91.6		60-140	%REC	1	5/26/2023 02:36 PM
<i>Surr: Dibromofluoromethane</i>	85.5		60-140	%REC	1	5/26/2023 02:36 PM
<i>Surr: Toluene-d8</i>	92.7		60-140	%REC	1	5/26/2023 02:36 PM

**Note:**

# ALS Environmental

Date: 09-Jun-23

**Client:** The Mannik & Smith Group, Inc.  
**Project:** Hillson Nut MS23-13; 401.ODAS003-19  
**Sample ID:** SB-10 (0-2')  
**Collection Date:** 5/23/2023 11:25 AM

**Work Order:** 23051029  
**Lab ID:** 23051029-18  
**Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
<b>PCBS</b>			<b>SW8082</b>	Prep: SW3546	6/5/23 13:18	Analyst: <b>TSA</b>
Aroclor 1016	ND		0.12	mg/Kg-dry	1	6/7/2023 07:24 PM
Aroclor 1221	ND		0.24	mg/Kg-dry	1	6/7/2023 07:24 PM
Aroclor 1232	ND		0.12	mg/Kg-dry	1	6/7/2023 07:24 PM
Aroclor 1242	ND		0.12	mg/Kg-dry	1	6/7/2023 07:24 PM
Aroclor 1248	ND		0.12	mg/Kg-dry	1	6/7/2023 07:24 PM
Aroclor 1254	ND		0.12	mg/Kg-dry	1	6/7/2023 07:24 PM
Aroclor 1260	ND		0.12	mg/Kg-dry	1	6/7/2023 07:24 PM
Aroclor 1262	ND		0.12	mg/Kg-dry	1	6/7/2023 07:24 PM
Aroclor 1268	ND		0.12	mg/Kg-dry	1	6/7/2023 07:24 PM
Surr: Decachlorobiphenyl	118		7.32-154	%REC	1	6/7/2023 07:24 PM
Surr: Tetrachloro-m-xylene	96.0		33.5-152	%REC	1	6/7/2023 07:24 PM
<b>MOISTURE</b>			<b>SM2540B</b>			Analyst: <b>CW</b>
Moisture	18			% of sample	1	6/1/2023
<b>MERCURY BY CVAA</b>			<b>SW7471A</b>	Prep: EPA 7471	6/2/23 11:36	Analyst: <b>SLT</b>
Mercury	7.8		3.5	mg/Kg-dry	10	6/5/2023 02:40 PM
<b>METALS BY ICP</b>			<b>SW6010B</b>	Prep: SW3050B	6/2/23 10:43	Analyst: <b>SLT</b>
Arsenic	14		5.8	mg/Kg-dry	1	6/2/2023 05:52 PM
Barium	90		23	mg/Kg-dry	1	6/2/2023 05:52 PM
Cadmium	ND		1.2	mg/Kg-dry	1	6/2/2023 05:52 PM
Chromium	40		12	mg/Kg-dry	1	6/2/2023 05:52 PM
Lead	180		23	mg/Kg-dry	1	6/2/2023 05:52 PM
Selenium	ND		3.5	mg/Kg-dry	1	6/2/2023 05:52 PM
Silver	ND		5.8	mg/Kg-dry	1	6/2/2023 05:52 PM
<b>SEMI-VOLATILE ORGANIC COMPOUNDS</b>			<b>SW8270C</b>	Prep: SW3546	5/30/23 11:26	Analyst: <b>RA</b>
1,2,4,5-Tetrachlorobenzene	ND		0.40	mg/Kg-dry	1	6/1/2023 05:38 PM
1,2,4-Trichlorobenzene	ND		0.40	mg/Kg-dry	1	6/1/2023 05:38 PM
1,2-Dichlorobenzene	ND		0.40	mg/Kg-dry	1	6/1/2023 05:38 PM
1,3-Dichlorobenzene	ND		0.40	mg/Kg-dry	1	6/1/2023 05:38 PM
1,3-Dinitrobenzene	ND		0.40	mg/Kg-dry	1	6/1/2023 05:38 PM
1,4-Dichlorobenzene	ND		0.40	mg/Kg-dry	1	6/1/2023 05:38 PM
<b>1-Methylnaphthalene</b>	<b>0.45</b>		<b>0.24</b>	<b>mg/Kg-dry</b>	1	6/1/2023 05:38 PM
1-Naphthylamine	ND		0.40	mg/Kg-dry	1	6/1/2023 05:38 PM
2,3,4,6-Tetrachlorophenol	ND		0.40	mg/Kg-dry	1	6/1/2023 05:38 PM
2,4,5-Trichlorophenol	ND		0.40	mg/Kg-dry	1	6/1/2023 05:38 PM
2,4,6-Trichlorophenol	ND		0.40	mg/Kg-dry	1	6/1/2023 05:38 PM
2,4-Dichlorophenol	ND		0.40	mg/Kg-dry	1	6/1/2023 05:38 PM
2,4-Dimethylphenol	ND		0.40	mg/Kg-dry	1	6/1/2023 05:38 PM

Note:

# ALS Environmental

Date: 09-Jun-23

**Client:** The Mannik & Smith Group, Inc.  
**Project:** Hillson Nut MS23-13; 401.ODAS003-19  
**Sample ID:** SB-10 (0-2')  
**Collection Date:** 5/23/2023 11:25 AM

**Work Order:** 23051029  
**Lab ID:** 23051029-18  
**Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
2,4-Dinitrophenol	ND		2.0	mg/Kg-dry	1	6/1/2023 05:38 PM
2,4-Dinitrotoluene	ND		0.40	mg/Kg-dry	1	6/1/2023 05:38 PM
2,6-Dichlorophenol	ND		0.40	mg/Kg-dry	1	6/1/2023 05:38 PM
2,6-Dinitrotoluene	ND		0.40	mg/Kg-dry	1	6/1/2023 05:38 PM
2-Acetylaminofluorene	ND		0.40	mg/Kg-dry	1	6/1/2023 05:38 PM
2-Chloronaphthalene	ND		0.40	mg/Kg-dry	1	6/1/2023 05:38 PM
2-Chlorophenol	ND		0.40	mg/Kg-dry	1	6/1/2023 05:38 PM
<b>2-Methylnaphthalene</b>	<b>0.56</b>		<b>0.24</b>	<b>mg/Kg-dry</b>	1	6/1/2023 05:38 PM
2-Methylphenol	ND		0.40	mg/Kg-dry	1	6/1/2023 05:38 PM
2-Naphthylamine	ND		0.40	mg/Kg-dry	1	6/1/2023 05:38 PM
2-Nitroaniline	ND		2.0	mg/Kg-dry	1	6/1/2023 05:38 PM
2-Nitrophenol	ND		0.40	mg/Kg-dry	1	6/1/2023 05:38 PM
2-Picoline	ND		0.40	mg/Kg-dry	1	6/1/2023 05:38 PM
3&4-Methylphenol	ND		0.40	mg/Kg-dry	1	6/1/2023 05:38 PM
3,3'-Dichlorobenzidine	ND		0.80	mg/Kg-dry	1	6/1/2023 05:38 PM
3-Methylcholanthrene	ND		0.40	mg/Kg-dry	1	6/1/2023 05:38 PM
3-Nitroaniline	ND		2.0	mg/Kg-dry	1	6/1/2023 05:38 PM
4,6-Dinitro-2-methylphenol	ND		2.0	mg/Kg-dry	1	6/1/2023 05:38 PM
4-Aminobiphenyl	ND		0.80	mg/Kg-dry	1	6/1/2023 05:38 PM
4-Bromophenyl phenyl ether	ND		0.40	mg/Kg-dry	1	6/1/2023 05:38 PM
4-Chloro-3-methylphenol	ND		0.80	mg/Kg-dry	1	6/1/2023 05:38 PM
4-Chloroaniline	ND		0.80	mg/Kg-dry	1	6/1/2023 05:38 PM
4-Chlorophenyl phenyl ether	ND		0.40	mg/Kg-dry	1	6/1/2023 05:38 PM
4-Nitroaniline	ND		0.80	mg/Kg-dry	1	6/1/2023 05:38 PM
4-Nitrophenol	ND		2.0	mg/Kg-dry	1	6/1/2023 05:38 PM
4-Nitroquinoline 1-oxide	ND		2.0	mg/Kg-dry	1	6/1/2023 05:38 PM
5-Nitro-o-toluidine	ND		0.40	mg/Kg-dry	1	6/1/2023 05:38 PM
7,12-Dimethylbenz(a)anthracene	ND		0.40	mg/Kg-dry	1	6/1/2023 05:38 PM
<b>Acenaphthene</b>	<b>0.55</b>		<b>0.24</b>	<b>mg/Kg-dry</b>	1	6/1/2023 05:38 PM
Acenaphthylene	ND		0.24	mg/Kg-dry	1	6/1/2023 05:38 PM
Acetophenone	ND		0.40	mg/Kg-dry	1	6/1/2023 05:38 PM
Aniline	ND		0.40	mg/Kg-dry	1	6/1/2023 05:38 PM
<b>Anthracene</b>	<b>1.8</b>		<b>0.24</b>	<b>mg/Kg-dry</b>	1	6/1/2023 05:38 PM
Azobenzene	ND		0.40	mg/Kg-dry	1	6/1/2023 05:38 PM
Benzidine	ND		0.40	mg/Kg-dry	1	6/1/2023 05:38 PM
<b>Benzo(a)anthracene</b>	<b>5.0</b>		<b>1.2</b>	<b>mg/Kg-dry</b>	10	6/2/2023 12:37 PM
<b>Benzo(a)pyrene</b>	<b>5.0</b>		<b>1.2</b>	<b>mg/Kg-dry</b>	10	6/2/2023 12:37 PM
<b>Benzo(b)fluoranthene</b>	<b>5.5</b>		<b>2.4</b>	<b>mg/Kg-dry</b>	10	6/2/2023 12:37 PM
<b>Benzo(g,h,i)perylene</b>	<b>3.2</b>		<b>0.24</b>	<b>mg/Kg-dry</b>	1	6/1/2023 05:38 PM
<b>Benzo(k)fluoranthene</b>	<b>2.2</b>		<b>0.24</b>	<b>mg/Kg-dry</b>	1	6/1/2023 05:38 PM

Note:



# ALS Environmental

Date: 09-Jun-23

**Client:** The Mannik & Smith Group, Inc.  
**Project:** Hillson Nut MS23-13; 401.ODAS003-19  
**Sample ID:** SB-10 (0-2')  
**Collection Date:** 5/23/2023 11:25 AM

**Work Order:** 23051029  
**Lab ID:** 23051029-18  
**Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Benzyl alcohol	ND		0.80	mg/Kg-dry	1	6/1/2023 05:38 PM
Bis(2-chloroethoxy)methane	ND		0.40	mg/Kg-dry	1	6/1/2023 05:38 PM
Bis(2-chloroethyl)ether	ND		0.40	mg/Kg-dry	1	6/1/2023 05:38 PM
Bis(2-chloroisopropyl)ether	ND		0.40	mg/Kg-dry	1	6/1/2023 05:38 PM
Bis(2-ethylhexyl)phthalate	ND		0.40	mg/Kg-dry	1	6/1/2023 05:38 PM
Butyl benzyl phthalate	ND		0.40	mg/Kg-dry	1	6/1/2023 05:38 PM
<b>Carbazole</b>	<b>0.71</b>		<b>0.24</b>	<b>mg/Kg-dry</b>	1	6/1/2023 05:38 PM
<b>Chrysene</b>	<b>4.9</b>		<b>2.4</b>	<b>mg/Kg-dry</b>	10	6/2/2023 12:37 PM
<b>Dibenzo(a,h)anthracene</b>	<b>0.90</b>		<b>0.12</b>	<b>mg/Kg-dry</b>	1	6/1/2023 05:38 PM
<b>Dibenzofuran</b>	<b>0.42</b>		<b>0.24</b>	<b>mg/Kg-dry</b>	1	6/1/2023 05:38 PM
Diethyl phthalate	ND		0.40	mg/Kg-dry	1	6/1/2023 05:38 PM
Dimethyl phthalate	ND		0.40	mg/Kg-dry	1	6/1/2023 05:38 PM
Di-n-butyl phthalate	ND		0.40	mg/Kg-dry	1	6/1/2023 05:38 PM
Di-n-octyl phthalate	ND		0.40	mg/Kg-dry	1	6/1/2023 05:38 PM
Dinoseb	ND		0.40	mg/Kg-dry	1	6/1/2023 05:38 PM
Diphenylamine	ND		0.40	mg/Kg-dry	1	6/1/2023 05:38 PM
Ethyl methanesulfonate	ND		0.40	mg/Kg-dry	1	6/1/2023 05:38 PM
<b>Fluoranthene</b>	<b>9.0</b>		<b>2.4</b>	<b>mg/Kg-dry</b>	10	6/2/2023 12:37 PM
<b>Fluorene</b>	<b>0.57</b>		<b>0.24</b>	<b>mg/Kg-dry</b>	1	6/1/2023 05:38 PM
Hexachlorobenzene	ND		0.40	mg/Kg-dry	1	6/1/2023 05:38 PM
Hexachlorobutadiene	ND		0.40	mg/Kg-dry	1	6/1/2023 05:38 PM
Hexachlorocyclopentadiene	ND		0.40	mg/Kg-dry	1	6/1/2023 05:38 PM
Hexachloroethane	ND		0.40	mg/Kg-dry	1	6/1/2023 05:38 PM
<b>Indeno(1,2,3-cd)pyrene</b>	<b>2.8</b>		<b>0.12</b>	<b>mg/Kg-dry</b>	1	6/1/2023 05:38 PM
Isophorone	ND		0.40	mg/Kg-dry	1	6/1/2023 05:38 PM
Isosafrole	ND		0.40	mg/Kg-dry	1	6/1/2023 05:38 PM
Methapyrilene	ND		2.0	mg/Kg-dry	1	6/1/2023 05:38 PM
Methyl methanesulfonate	ND		0.40	mg/Kg-dry	1	6/1/2023 05:38 PM
<b>Naphthalene</b>	<b>0.51</b>		<b>0.24</b>	<b>mg/Kg-dry</b>	1	6/1/2023 05:38 PM
Nitrobenzene	ND		0.40	mg/Kg-dry	1	6/1/2023 05:38 PM
N-Nitrosodiethylamine	ND		0.40	mg/Kg-dry	1	6/1/2023 05:38 PM
N-Nitrosodimethylamine	ND		0.40	mg/Kg-dry	1	6/1/2023 05:38 PM
N-Nitroso-di-n-butylamine	ND		0.40	mg/Kg-dry	1	6/1/2023 05:38 PM
N-Nitrosodi-n-propylamine	ND		0.40	mg/Kg-dry	1	6/1/2023 05:38 PM
N-Nitrosomethylethylamine	ND		0.40	mg/Kg-dry	1	6/1/2023 05:38 PM
N-Nitrosomorpholine	ND		0.40	mg/Kg-dry	1	6/1/2023 05:38 PM
N-Nitrosopiperidine	ND		0.40	mg/Kg-dry	1	6/1/2023 05:38 PM
N-Nitrosopyrrolidine	ND		0.40	mg/Kg-dry	1	6/1/2023 05:38 PM
o-Toluidine	ND		2.0	mg/Kg-dry	1	6/1/2023 05:38 PM
p-Dimethylaminoazobenzene	ND		0.40	mg/Kg-dry	1	6/1/2023 05:38 PM

**Note:**

# ALS Environmental

Date: 09-Jun-23

**Client:** The Mannik & Smith Group, Inc.  
**Project:** Hillson Nut MS23-13; 401.ODAS003-19  
**Sample ID:** SB-10 (0-2')  
**Collection Date:** 5/23/2023 11:25 AM

**Work Order:** 23051029  
**Lab ID:** 23051029-18  
**Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Pentachlorobenzene	ND		0.40	mg/Kg-dry	1	6/1/2023 05:38 PM
Pentachloroethane	ND		0.40	mg/Kg-dry	1	6/1/2023 05:38 PM
Pentachloronitrobenzene	ND		0.80	mg/Kg-dry	1	6/1/2023 05:38 PM
Pentachlorophenol	ND		2.0	mg/Kg-dry	1	6/1/2023 05:38 PM
Phenacetin	ND		0.80	mg/Kg-dry	1	6/1/2023 05:38 PM
<b>Phenanthrene</b>	<b>6.1</b>		<b>2.4</b>	<b>mg/Kg-dry</b>	10	6/2/2023 12:37 PM
Phenol	ND		0.40	mg/Kg-dry	1	6/1/2023 05:38 PM
<b>Pyrene</b>	<b>7.3</b>		<b>2.4</b>	<b>mg/Kg-dry</b>	10	6/2/2023 12:37 PM
Pyridine	ND		0.40	mg/Kg-dry	1	6/1/2023 05:38 PM
Safrole	ND		0.40	mg/Kg-dry	1	6/1/2023 05:38 PM
<i>Surr: 2,4,6-Tribromophenol</i>	<i>60.8</i>		<i>14.2-136</i>	<i>%REC</i>	1	6/1/2023 05:38 PM
<i>Surr: 2-Fluorobiphenyl</i>	<i>56.6</i>		<i>30-116</i>	<i>%REC</i>	1	6/1/2023 05:38 PM
<i>Surr: 2-Fluorophenol</i>	<i>44.6</i>		<i>24-105</i>	<i>%REC</i>	1	6/1/2023 05:38 PM
<i>Surr: 4-Terphenyl-d14</i>	<i>63.8</i>		<i>27.3-138</i>	<i>%REC</i>	1	6/1/2023 05:38 PM
<i>Surr: Nitrobenzene-d5</i>	<i>49.3</i>		<i>23.7-109</i>	<i>%REC</i>	1	6/1/2023 05:38 PM
<i>Surr: Phenol-d5</i>	<i>40.4</i>		<i>24.9-103</i>	<i>%REC</i>	1	6/1/2023 05:38 PM

## VOLATILE ORGANIC COMPOUNDS

SW8260B

Analyst: LAK

1,1,1,2-Tetrachloroethane	ND		0.0049	mg/Kg-dry	1	5/26/2023 03:20 PM
1,1,1-Trichloroethane	ND		0.0049	mg/Kg-dry	1	5/26/2023 03:20 PM
1,1,2,2-Tetrachloroethane	ND		0.0049	mg/Kg-dry	1	5/26/2023 03:20 PM
1,1,2-Trichloroethane	ND		0.0049	mg/Kg-dry	1	5/26/2023 03:20 PM
1,1-Dichloroethane	ND		0.0049	mg/Kg-dry	1	5/26/2023 03:20 PM
1,1-Dichloroethene	ND		0.0049	mg/Kg-dry	1	5/26/2023 03:20 PM
1,1-Dichloropropene	ND		0.0049	mg/Kg-dry	1	5/26/2023 03:20 PM
1,2,3-Trichlorobenzene	ND		0.0049	mg/Kg-dry	1	5/26/2023 03:20 PM
1,2,3-Trichloropropane	ND		0.0049	mg/Kg-dry	1	5/26/2023 03:20 PM
1,2,4-Trichlorobenzene	ND		0.0049	mg/Kg-dry	1	5/26/2023 03:20 PM
1,2,4-Trimethylbenzene	ND		0.0049	mg/Kg-dry	1	5/26/2023 03:20 PM
1,2-Dibromo-3-chloropropane	ND		0.0049	mg/Kg-dry	1	5/26/2023 03:20 PM
1,2-Dibromoethane	ND		0.0049	mg/Kg-dry	1	5/26/2023 03:20 PM
1,2-Dichlorobenzene	ND		0.0049	mg/Kg-dry	1	5/26/2023 03:20 PM
1,2-Dichloroethane	ND		0.0049	mg/Kg-dry	1	5/26/2023 03:20 PM
1,2-Dichloropropane	ND		0.0049	mg/Kg-dry	1	5/26/2023 03:20 PM
1,3,5-Trimethylbenzene	ND		0.0049	mg/Kg-dry	1	5/26/2023 03:20 PM
1,3-Dichlorobenzene	ND		0.0049	mg/Kg-dry	1	5/26/2023 03:20 PM
1,3-Dichloropropane	ND		0.0049	mg/Kg-dry	1	5/26/2023 03:20 PM
1,4-Dichlorobenzene	ND		0.0049	mg/Kg-dry	1	5/26/2023 03:20 PM
2,2-Dichloropropane	ND		0.0049	mg/Kg-dry	1	5/26/2023 03:20 PM
2-Butanone	ND		0.049	mg/Kg-dry	1	5/26/2023 03:20 PM
2-Chlorotoluene	ND		0.0049	mg/Kg-dry	1	5/26/2023 03:20 PM

Note:

# ALS Environmental

Date: 09-Jun-23

**Client:** The Mannik & Smith Group, Inc.  
**Project:** Hillson Nut MS23-13; 401.ODAS003-19  
**Sample ID:** SB-10 (0-2')  
**Collection Date:** 5/23/2023 11:25 AM

**Work Order:** 23051029  
**Lab ID:** 23051029-18  
**Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
2-Hexanone	ND		0.0049	mg/Kg-dry	1	5/26/2023 03:20 PM
4-Chlorotoluene	ND		0.0049	mg/Kg-dry	1	5/26/2023 03:20 PM
4-Methyl-2-pentanone	ND		0.0049	mg/Kg-dry	1	5/26/2023 03:20 PM
Acetone	ND		0.049	mg/Kg-dry	1	5/26/2023 03:20 PM
Benzene	ND		0.0049	mg/Kg-dry	1	5/26/2023 03:20 PM
Bromobenzene	ND		0.0049	mg/Kg-dry	1	5/26/2023 03:20 PM
Bromochloromethane	ND		0.0049	mg/Kg-dry	1	5/26/2023 03:20 PM
Bromodichloromethane	ND		0.0049	mg/Kg-dry	1	5/26/2023 03:20 PM
Bromoform	ND		0.0049	mg/Kg-dry	1	5/26/2023 03:20 PM
Bromomethane	ND		0.0049	mg/Kg-dry	1	5/26/2023 03:20 PM
Carbon disulfide	ND		0.0049	mg/Kg-dry	1	5/26/2023 03:20 PM
Carbon tetrachloride	ND		0.0049	mg/Kg-dry	1	5/26/2023 03:20 PM
Chlorobenzene	ND		0.0049	mg/Kg-dry	1	5/26/2023 03:20 PM
Chloroethane	ND		0.0049	mg/Kg-dry	1	5/26/2023 03:20 PM
Chloroform	ND		0.0049	mg/Kg-dry	1	5/26/2023 03:20 PM
Chloromethane	ND		0.0049	mg/Kg-dry	1	5/26/2023 03:20 PM
cis-1,2-Dichloroethene	ND		0.0049	mg/Kg-dry	1	5/26/2023 03:20 PM
cis-1,3-Dichloropropene	ND		0.0049	mg/Kg-dry	1	5/26/2023 03:20 PM
Dibromochloromethane	ND		0.0049	mg/Kg-dry	1	5/26/2023 03:20 PM
Dibromomethane	ND		0.0049	mg/Kg-dry	1	5/26/2023 03:20 PM
Dichlorodifluoromethane	ND		0.0049	mg/Kg-dry	1	5/26/2023 03:20 PM
Ethylbenzene	ND		0.0049	mg/Kg-dry	1	5/26/2023 03:20 PM
Hexachlorobutadiene	ND		0.0049	mg/Kg-dry	1	5/26/2023 03:20 PM
Isopropylbenzene	ND		0.0049	mg/Kg-dry	1	5/26/2023 03:20 PM
m,p-Xylene	ND		0.0049	mg/Kg-dry	1	5/26/2023 03:20 PM
Methyl tert-butyl ether	ND		0.0049	mg/Kg-dry	1	5/26/2023 03:20 PM
Methylene chloride	ND		0.020	mg/Kg-dry	1	5/26/2023 03:20 PM
Naphthalene	ND		0.0049	mg/Kg-dry	1	5/26/2023 03:20 PM
n-Butylbenzene	ND		0.0049	mg/Kg-dry	1	5/26/2023 03:20 PM
n-Propylbenzene	ND		0.0049	mg/Kg-dry	1	5/26/2023 03:20 PM
o-Xylene	ND		0.0049	mg/Kg-dry	1	5/26/2023 03:20 PM
p-Isopropyltoluene	ND		0.0049	mg/Kg-dry	1	5/26/2023 03:20 PM
sec-Butylbenzene	ND		0.0049	mg/Kg-dry	1	5/26/2023 03:20 PM
Styrene	ND		0.0049	mg/Kg-dry	1	5/26/2023 03:20 PM
tert-Butylbenzene	ND		0.0049	mg/Kg-dry	1	5/26/2023 03:20 PM
Tetrachloroethene	ND		0.0049	mg/Kg-dry	1	5/26/2023 03:20 PM
Toluene	ND		0.0049	mg/Kg-dry	1	5/26/2023 03:20 PM
trans-1,2-Dichloroethene	ND		0.0049	mg/Kg-dry	1	5/26/2023 03:20 PM
trans-1,3-Dichloropropene	ND		0.0049	mg/Kg-dry	1	5/26/2023 03:20 PM
Trichloroethene	ND		0.0049	mg/Kg-dry	1	5/26/2023 03:20 PM

**Note:**

# ALS Environmental

Date: 09-Jun-23

**Client:** The Mannik & Smith Group, Inc.  
**Project:** Hillson Nut MS23-13; 401.ODAS003-19  
**Sample ID:** SB-10 (0-2')  
**Collection Date:** 5/23/2023 11:25 AM

**Work Order:** 23051029  
**Lab ID:** 23051029-18  
**Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Trichlorofluoromethane	ND		0.0049	mg/Kg-dry	1	5/26/2023 03:20 PM
Vinyl chloride	ND		0.0049	mg/Kg-dry	1	5/26/2023 03:20 PM
Xylenes, Total	ND		0.0099	mg/Kg-dry	1	5/26/2023 03:20 PM
<i>Surr: 4-Bromofluorobenzene</i>	90.4		60-140	%REC	1	5/26/2023 03:20 PM
<i>Surr: Dibromofluoromethane</i>	88.2		60-140	%REC	1	5/26/2023 03:20 PM
<i>Surr: Toluene-d8</i>	91.8		60-140	%REC	1	5/26/2023 03:20 PM

**Note:**

# ALS Environmental

Date: 09-Jun-23

**Client:** The Mannik & Smith Group, Inc.  
**Project:** Hillson Nut MS23-13; 401.ODAS003-19  
**Sample ID:** SB-10 (5-7')  
**Collection Date:** 5/23/2023 11:40 AM

**Work Order:** 23051029  
**Lab ID:** 23051029-19  
**Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
<b>PCBS</b>			<b>SW8082</b>	Prep: SW3546 6/5/23 13:18		Analyst: <b>TSA</b>
Aroclor 1016	ND		0.13	mg/Kg-dry	1	6/7/2023 07:40 PM
Aroclor 1221	ND		0.25	mg/Kg-dry	1	6/7/2023 07:40 PM
Aroclor 1232	ND		0.13	mg/Kg-dry	1	6/7/2023 07:40 PM
Aroclor 1242	ND		0.13	mg/Kg-dry	1	6/7/2023 07:40 PM
Aroclor 1248	ND		0.13	mg/Kg-dry	1	6/7/2023 07:40 PM
Aroclor 1254	ND		0.13	mg/Kg-dry	1	6/7/2023 07:40 PM
Aroclor 1260	ND		0.13	mg/Kg-dry	1	6/7/2023 07:40 PM
Aroclor 1262	ND		0.13	mg/Kg-dry	1	6/7/2023 07:40 PM
Aroclor 1268	ND		0.13	mg/Kg-dry	1	6/7/2023 07:40 PM
Surr: Decachlorobiphenyl	94.0		7.32-154	%REC	1	6/7/2023 07:40 PM
Surr: Tetrachloro-m-xylene	100		33.5-152	%REC	1	6/7/2023 07:40 PM
<b>MOISTURE</b>			<b>SM2540B</b>			Analyst: <b>CW</b>
Moisture	21			% of sample	1	6/1/2023
<b>MERCURY BY CVAA</b>			<b>SW7471A</b>	Prep: EPA 7471 6/2/23 11:36		Analyst: <b>SLT</b>
Mercury	ND		0.37	mg/Kg-dry	1	6/5/2023 11:22 AM
<b>METALS BY ICP</b>			<b>SW6010B</b>	Prep: SW3050B 6/2/23 10:43		Analyst: <b>SLT</b>
Arsenic	22		6.1	mg/Kg-dry	1	6/2/2023 05:57 PM
Barium	54		25	mg/Kg-dry	1	6/2/2023 05:57 PM
Cadmium	ND		1.2	mg/Kg-dry	1	6/2/2023 05:57 PM
Chromium	18		12	mg/Kg-dry	1	6/2/2023 05:57 PM
Lead	33		25	mg/Kg-dry	1	6/2/2023 05:57 PM
Selenium	ND		3.7	mg/Kg-dry	1	6/2/2023 05:57 PM
Silver	ND		6.1	mg/Kg-dry	1	6/2/2023 05:57 PM
<b>SEMI-VOLATILE ORGANIC COMPOUNDS</b>			<b>SW8270C</b>	Prep: SW3546 5/30/23 11:26		Analyst: <b>RA</b>
1,2,4,5-Tetrachlorobenzene	ND		0.42	mg/Kg-dry	1	6/1/2023 06:01 PM
1,2,4-Trichlorobenzene	ND		0.42	mg/Kg-dry	1	6/1/2023 06:01 PM
1,2-Dichlorobenzene	ND		0.42	mg/Kg-dry	1	6/1/2023 06:01 PM
1,3-Dichlorobenzene	ND		0.42	mg/Kg-dry	1	6/1/2023 06:01 PM
1,3-Dinitrobenzene	ND		0.42	mg/Kg-dry	1	6/1/2023 06:01 PM
1,4-Dichlorobenzene	ND		0.42	mg/Kg-dry	1	6/1/2023 06:01 PM
1-Methylnaphthalene	ND		0.25	mg/Kg-dry	1	6/1/2023 06:01 PM
1-Naphthylamine	ND		0.42	mg/Kg-dry	1	6/1/2023 06:01 PM
2,3,4,6-Tetrachlorophenol	ND		0.42	mg/Kg-dry	1	6/1/2023 06:01 PM
2,4,5-Trichlorophenol	ND		0.42	mg/Kg-dry	1	6/1/2023 06:01 PM
2,4,6-Trichlorophenol	ND		0.42	mg/Kg-dry	1	6/1/2023 06:01 PM
2,4-Dichlorophenol	ND		0.42	mg/Kg-dry	1	6/1/2023 06:01 PM
2,4-Dimethylphenol	ND		0.42	mg/Kg-dry	1	6/1/2023 06:01 PM

Note:

# ALS Environmental

Date: 09-Jun-23

**Client:** The Mannik & Smith Group, Inc.  
**Project:** Hillson Nut MS23-13; 401.ODAS003-19  
**Sample ID:** SB-10 (5-7')  
**Collection Date:** 5/23/2023 11:40 AM

**Work Order:** 23051029  
**Lab ID:** 23051029-19  
**Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
2,4-Dinitrophenol	ND		2.1	mg/Kg-dry	1	6/1/2023 06:01 PM
2,4-Dinitrotoluene	ND		0.42	mg/Kg-dry	1	6/1/2023 06:01 PM
2,6-Dichlorophenol	ND		0.42	mg/Kg-dry	1	6/1/2023 06:01 PM
2,6-Dinitrotoluene	ND		0.42	mg/Kg-dry	1	6/1/2023 06:01 PM
2-Acetylaminofluorene	ND		0.42	mg/Kg-dry	1	6/1/2023 06:01 PM
2-Chloronaphthalene	ND		0.42	mg/Kg-dry	1	6/1/2023 06:01 PM
2-Chlorophenol	ND		0.42	mg/Kg-dry	1	6/1/2023 06:01 PM
2-Methylnaphthalene	ND		0.25	mg/Kg-dry	1	6/1/2023 06:01 PM
2-Methylphenol	ND		0.42	mg/Kg-dry	1	6/1/2023 06:01 PM
2-Naphthylamine	ND		0.42	mg/Kg-dry	1	6/1/2023 06:01 PM
2-Nitroaniline	ND		2.1	mg/Kg-dry	1	6/1/2023 06:01 PM
2-Nitrophenol	ND		0.42	mg/Kg-dry	1	6/1/2023 06:01 PM
2-Picoline	ND		0.42	mg/Kg-dry	1	6/1/2023 06:01 PM
3&4-Methylphenol	ND		0.42	mg/Kg-dry	1	6/1/2023 06:01 PM
3,3'-Dichlorobenzidine	ND		0.84	mg/Kg-dry	1	6/1/2023 06:01 PM
3-Methylcholanthrene	ND		0.42	mg/Kg-dry	1	6/1/2023 06:01 PM
3-Nitroaniline	ND		2.1	mg/Kg-dry	1	6/1/2023 06:01 PM
4,6-Dinitro-2-methylphenol	ND		2.1	mg/Kg-dry	1	6/1/2023 06:01 PM
4-Aminobiphenyl	ND		0.84	mg/Kg-dry	1	6/1/2023 06:01 PM
4-Bromophenyl phenyl ether	ND		0.42	mg/Kg-dry	1	6/1/2023 06:01 PM
4-Chloro-3-methylphenol	ND		0.84	mg/Kg-dry	1	6/1/2023 06:01 PM
4-Chloroaniline	ND		0.84	mg/Kg-dry	1	6/1/2023 06:01 PM
4-Chlorophenyl phenyl ether	ND		0.42	mg/Kg-dry	1	6/1/2023 06:01 PM
4-Nitroaniline	ND		0.84	mg/Kg-dry	1	6/1/2023 06:01 PM
4-Nitrophenol	ND		2.1	mg/Kg-dry	1	6/1/2023 06:01 PM
4-Nitroquinoline 1-oxide	ND		2.1	mg/Kg-dry	1	6/1/2023 06:01 PM
5-Nitro-o-toluidine	ND		0.42	mg/Kg-dry	1	6/1/2023 06:01 PM
7,12-Dimethylbenz(a)anthracene	ND		0.42	mg/Kg-dry	1	6/1/2023 06:01 PM
Acenaphthene	ND		0.25	mg/Kg-dry	1	6/1/2023 06:01 PM
Acenaphthylene	ND		0.25	mg/Kg-dry	1	6/1/2023 06:01 PM
Acetophenone	ND		0.42	mg/Kg-dry	1	6/1/2023 06:01 PM
Aniline	ND		0.42	mg/Kg-dry	1	6/1/2023 06:01 PM
Anthracene	ND		0.25	mg/Kg-dry	1	6/1/2023 06:01 PM
Azobenzene	ND		0.42	mg/Kg-dry	1	6/1/2023 06:01 PM
Benzidine	ND		0.42	mg/Kg-dry	1	6/1/2023 06:01 PM
Benzo(a)anthracene	ND		0.13	mg/Kg-dry	1	6/1/2023 06:01 PM
Benzo(a)pyrene	ND		0.13	mg/Kg-dry	1	6/1/2023 06:01 PM
Benzo(b)fluoranthene	ND		0.25	mg/Kg-dry	1	6/1/2023 06:01 PM
Benzo(g,h,i)perylene	ND		0.25	mg/Kg-dry	1	6/1/2023 06:01 PM
Benzo(k)fluoranthene	ND		0.25	mg/Kg-dry	1	6/1/2023 06:01 PM

**Note:**

# ALS Environmental

Date: 09-Jun-23

**Client:** The Mannik & Smith Group, Inc.  
**Project:** Hillson Nut MS23-13; 401.ODAS003-19  
**Sample ID:** SB-10 (5-7')  
**Collection Date:** 5/23/2023 11:40 AM

**Work Order:** 23051029  
**Lab ID:** 23051029-19  
**Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Benzyl alcohol	ND		0.84	mg/Kg-dry	1	6/1/2023 06:01 PM
Bis(2-chloroethoxy)methane	ND		0.42	mg/Kg-dry	1	6/1/2023 06:01 PM
Bis(2-chloroethyl)ether	ND		0.42	mg/Kg-dry	1	6/1/2023 06:01 PM
Bis(2-chloroisopropyl)ether	ND		0.42	mg/Kg-dry	1	6/1/2023 06:01 PM
Bis(2-ethylhexyl)phthalate	ND		0.42	mg/Kg-dry	1	6/1/2023 06:01 PM
Butyl benzyl phthalate	ND		0.42	mg/Kg-dry	1	6/1/2023 06:01 PM
Carbazole	ND		0.25	mg/Kg-dry	1	6/1/2023 06:01 PM
Chrysene	ND		0.25	mg/Kg-dry	1	6/1/2023 06:01 PM
Dibenzo(a,h)anthracene	ND		0.13	mg/Kg-dry	1	6/1/2023 06:01 PM
Dibenzofuran	ND		0.25	mg/Kg-dry	1	6/1/2023 06:01 PM
Diethyl phthalate	ND		0.42	mg/Kg-dry	1	6/1/2023 06:01 PM
Dimethyl phthalate	ND		0.42	mg/Kg-dry	1	6/1/2023 06:01 PM
Di-n-butyl phthalate	ND		0.42	mg/Kg-dry	1	6/1/2023 06:01 PM
Di-n-octyl phthalate	ND		0.42	mg/Kg-dry	1	6/1/2023 06:01 PM
Dinoseb	ND		0.42	mg/Kg-dry	1	6/1/2023 06:01 PM
Diphenylamine	ND		0.42	mg/Kg-dry	1	6/1/2023 06:01 PM
Ethyl methanesulfonate	ND		0.42	mg/Kg-dry	1	6/1/2023 06:01 PM
Fluoranthene	ND		0.25	mg/Kg-dry	1	6/1/2023 06:01 PM
Fluorene	ND		0.25	mg/Kg-dry	1	6/1/2023 06:01 PM
Hexachlorobenzene	ND		0.42	mg/Kg-dry	1	6/1/2023 06:01 PM
Hexachlorobutadiene	ND		0.42	mg/Kg-dry	1	6/1/2023 06:01 PM
Hexachlorocyclopentadiene	ND		0.42	mg/Kg-dry	1	6/1/2023 06:01 PM
Hexachloroethane	ND		0.42	mg/Kg-dry	1	6/1/2023 06:01 PM
Indeno(1,2,3-cd)pyrene	ND		0.13	mg/Kg-dry	1	6/1/2023 06:01 PM
Isophorone	ND		0.42	mg/Kg-dry	1	6/1/2023 06:01 PM
Isosafrole	ND		0.42	mg/Kg-dry	1	6/1/2023 06:01 PM
Methapyrilene	ND		2.1	mg/Kg-dry	1	6/1/2023 06:01 PM
Methyl methanesulfonate	ND		0.42	mg/Kg-dry	1	6/1/2023 06:01 PM
Naphthalene	ND		0.25	mg/Kg-dry	1	6/1/2023 06:01 PM
Nitrobenzene	ND		0.42	mg/Kg-dry	1	6/1/2023 06:01 PM
N-Nitrosodiethylamine	ND		0.42	mg/Kg-dry	1	6/1/2023 06:01 PM
N-Nitrosodimethylamine	ND		0.42	mg/Kg-dry	1	6/1/2023 06:01 PM
N-Nitroso-di-n-butylamine	ND		0.42	mg/Kg-dry	1	6/1/2023 06:01 PM
N-Nitrosodi-n-propylamine	ND		0.42	mg/Kg-dry	1	6/1/2023 06:01 PM
N-Nitrosomethylethylamine	ND		0.42	mg/Kg-dry	1	6/1/2023 06:01 PM
N-Nitrosomorpholine	ND		0.42	mg/Kg-dry	1	6/1/2023 06:01 PM
N-Nitrosopiperidine	ND		0.42	mg/Kg-dry	1	6/1/2023 06:01 PM
N-Nitrosopyrrolidine	ND		0.42	mg/Kg-dry	1	6/1/2023 06:01 PM
o-Toluidine	ND		2.1	mg/Kg-dry	1	6/1/2023 06:01 PM
p-Dimethylaminoazobenzene	ND		0.42	mg/Kg-dry	1	6/1/2023 06:01 PM

**Note:**

# ALS Environmental

Date: 09-Jun-23

**Client:** The Mannik & Smith Group, Inc.  
**Project:** Hillson Nut MS23-13; 401.ODAS003-19  
**Sample ID:** SB-10 (5-7')  
**Collection Date:** 5/23/2023 11:40 AM

**Work Order:** 23051029  
**Lab ID:** 23051029-19  
**Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Pentachlorobenzene	ND		0.42	mg/Kg-dry	1	6/1/2023 06:01 PM
Pentachloroethane	ND		0.42	mg/Kg-dry	1	6/1/2023 06:01 PM
Pentachloronitrobenzene	ND		0.84	mg/Kg-dry	1	6/1/2023 06:01 PM
Pentachlorophenol	ND		2.1	mg/Kg-dry	1	6/1/2023 06:01 PM
Phenacetin	ND		0.84	mg/Kg-dry	1	6/1/2023 06:01 PM
Phenanthrene	ND		0.25	mg/Kg-dry	1	6/1/2023 06:01 PM
Phenol	ND		0.42	mg/Kg-dry	1	6/1/2023 06:01 PM
Pyrene	ND		0.25	mg/Kg-dry	1	6/1/2023 06:01 PM
Pyridine	ND		0.42	mg/Kg-dry	1	6/1/2023 06:01 PM
Safrole	ND		0.42	mg/Kg-dry	1	6/1/2023 06:01 PM
<i>Surr: 2,4,6-Tribromophenol</i>	42.8		14.2-136	%REC	1	6/1/2023 06:01 PM
<i>Surr: 2-Fluorobiphenyl</i>	49.6		30-116	%REC	1	6/1/2023 06:01 PM
<i>Surr: 2-Fluorophenol</i>	37.4		24-105	%REC	1	6/1/2023 06:01 PM
<i>Surr: 4-Terphenyl-d14</i>	51.9		27.3-138	%REC	1	6/1/2023 06:01 PM
<i>Surr: Nitrobenzene-d5</i>	45.3		23.7-109	%REC	1	6/1/2023 06:01 PM
<i>Surr: Phenol-d5</i>	38.5		24.9-103	%REC	1	6/1/2023 06:01 PM

## VOLATILE ORGANIC COMPOUNDS

SW8260B

Analyst: LAK

1,1,1,2-Tetrachloroethane	ND		0.0049	mg/Kg-dry	1	5/26/2023 03:42 PM
1,1,1-Trichloroethane	ND		0.0049	mg/Kg-dry	1	5/26/2023 03:42 PM
1,1,2,2-Tetrachloroethane	ND		0.0049	mg/Kg-dry	1	5/26/2023 03:42 PM
1,1,2-Trichloroethane	ND		0.0049	mg/Kg-dry	1	5/26/2023 03:42 PM
1,1-Dichloroethane	ND		0.0049	mg/Kg-dry	1	5/26/2023 03:42 PM
1,1-Dichloroethene	ND		0.0049	mg/Kg-dry	1	5/26/2023 03:42 PM
1,1-Dichloropropene	ND		0.0049	mg/Kg-dry	1	5/26/2023 03:42 PM
1,2,3-Trichlorobenzene	ND		0.0049	mg/Kg-dry	1	5/26/2023 03:42 PM
1,2,3-Trichloropropane	ND		0.0049	mg/Kg-dry	1	5/26/2023 03:42 PM
1,2,4-Trichlorobenzene	ND		0.0049	mg/Kg-dry	1	5/26/2023 03:42 PM
1,2,4-Trimethylbenzene	ND		0.0049	mg/Kg-dry	1	5/26/2023 03:42 PM
1,2-Dibromo-3-chloropropane	ND		0.0049	mg/Kg-dry	1	5/26/2023 03:42 PM
1,2-Dibromoethane	ND		0.0049	mg/Kg-dry	1	5/26/2023 03:42 PM
1,2-Dichlorobenzene	ND		0.0049	mg/Kg-dry	1	5/26/2023 03:42 PM
1,2-Dichloroethane	ND		0.0049	mg/Kg-dry	1	5/26/2023 03:42 PM
1,2-Dichloropropane	ND		0.0049	mg/Kg-dry	1	5/26/2023 03:42 PM
1,3,5-Trimethylbenzene	ND		0.0049	mg/Kg-dry	1	5/26/2023 03:42 PM
1,3-Dichlorobenzene	ND		0.0049	mg/Kg-dry	1	5/26/2023 03:42 PM
1,3-Dichloropropane	ND		0.0049	mg/Kg-dry	1	5/26/2023 03:42 PM
1,4-Dichlorobenzene	ND		0.0049	mg/Kg-dry	1	5/26/2023 03:42 PM
2,2-Dichloropropane	ND		0.0049	mg/Kg-dry	1	5/26/2023 03:42 PM
2-Butanone	ND		0.049	mg/Kg-dry	1	5/26/2023 03:42 PM
2-Chlorotoluene	ND		0.0049	mg/Kg-dry	1	5/26/2023 03:42 PM

Note:



# ALS Environmental

Date: 09-Jun-23

**Client:** The Mannik & Smith Group, Inc.  
**Project:** Hillson Nut MS23-13; 401.ODAS003-19  
**Sample ID:** SB-10 (5-7')  
**Collection Date:** 5/23/2023 11:40 AM

**Work Order:** 23051029  
**Lab ID:** 23051029-19  
**Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
2-Hexanone	ND		0.0049	mg/Kg-dry	1	5/26/2023 03:42 PM
4-Chlorotoluene	ND		0.0049	mg/Kg-dry	1	5/26/2023 03:42 PM
4-Methyl-2-pentanone	ND		0.0049	mg/Kg-dry	1	5/26/2023 03:42 PM
Acetone	ND		0.049	mg/Kg-dry	1	5/26/2023 03:42 PM
Benzene	ND		0.0049	mg/Kg-dry	1	5/26/2023 03:42 PM
Bromobenzene	ND		0.0049	mg/Kg-dry	1	5/26/2023 03:42 PM
Bromochloromethane	ND		0.0049	mg/Kg-dry	1	5/26/2023 03:42 PM
Bromodichloromethane	ND		0.0049	mg/Kg-dry	1	5/26/2023 03:42 PM
Bromoform	ND		0.0049	mg/Kg-dry	1	5/26/2023 03:42 PM
Bromomethane	ND		0.0049	mg/Kg-dry	1	5/26/2023 03:42 PM
Carbon disulfide	ND		0.0049	mg/Kg-dry	1	5/26/2023 03:42 PM
Carbon tetrachloride	ND		0.0049	mg/Kg-dry	1	5/26/2023 03:42 PM
Chlorobenzene	ND		0.0049	mg/Kg-dry	1	5/26/2023 03:42 PM
Chloroethane	ND		0.0049	mg/Kg-dry	1	5/26/2023 03:42 PM
Chloroform	ND		0.0049	mg/Kg-dry	1	5/26/2023 03:42 PM
Chloromethane	ND		0.0049	mg/Kg-dry	1	5/26/2023 03:42 PM
cis-1,2-Dichloroethene	ND		0.0049	mg/Kg-dry	1	5/26/2023 03:42 PM
cis-1,3-Dichloropropene	ND		0.0049	mg/Kg-dry	1	5/26/2023 03:42 PM
Dibromochloromethane	ND		0.0049	mg/Kg-dry	1	5/26/2023 03:42 PM
Dibromomethane	ND		0.0049	mg/Kg-dry	1	5/26/2023 03:42 PM
Dichlorodifluoromethane	ND		0.0049	mg/Kg-dry	1	5/26/2023 03:42 PM
Ethylbenzene	ND		0.0049	mg/Kg-dry	1	5/26/2023 03:42 PM
Hexachlorobutadiene	ND		0.0049	mg/Kg-dry	1	5/26/2023 03:42 PM
Isopropylbenzene	ND		0.0049	mg/Kg-dry	1	5/26/2023 03:42 PM
m,p-Xylene	ND		0.0049	mg/Kg-dry	1	5/26/2023 03:42 PM
Methyl tert-butyl ether	ND		0.0049	mg/Kg-dry	1	5/26/2023 03:42 PM
Methylene chloride	ND		0.020	mg/Kg-dry	1	5/26/2023 03:42 PM
Naphthalene	ND		0.0049	mg/Kg-dry	1	5/26/2023 03:42 PM
n-Butylbenzene	ND		0.0049	mg/Kg-dry	1	5/26/2023 03:42 PM
n-Propylbenzene	ND		0.0049	mg/Kg-dry	1	5/26/2023 03:42 PM
o-Xylene	ND		0.0049	mg/Kg-dry	1	5/26/2023 03:42 PM
p-Isopropyltoluene	ND		0.0049	mg/Kg-dry	1	5/26/2023 03:42 PM
sec-Butylbenzene	ND		0.0049	mg/Kg-dry	1	5/26/2023 03:42 PM
Styrene	ND		0.0049	mg/Kg-dry	1	5/26/2023 03:42 PM
tert-Butylbenzene	ND		0.0049	mg/Kg-dry	1	5/26/2023 03:42 PM
Tetrachloroethene	ND		0.0049	mg/Kg-dry	1	5/26/2023 03:42 PM
Toluene	ND		0.0049	mg/Kg-dry	1	5/26/2023 03:42 PM
trans-1,2-Dichloroethene	ND		0.0049	mg/Kg-dry	1	5/26/2023 03:42 PM
trans-1,3-Dichloropropene	ND		0.0049	mg/Kg-dry	1	5/26/2023 03:42 PM
Trichloroethene	ND		0.0049	mg/Kg-dry	1	5/26/2023 03:42 PM

**Note:**

# ALS Environmental

Date: 09-Jun-23

**Client:** The Mannik & Smith Group, Inc.  
**Project:** Hillson Nut MS23-13; 401.ODAS003-19  
**Sample ID:** SB-10 (5-7')  
**Collection Date:** 5/23/2023 11:40 AM

**Work Order:** 23051029  
**Lab ID:** 23051029-19  
**Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Trichlorofluoromethane	ND		0.0049	mg/Kg-dry	1	5/26/2023 03:42 PM
Vinyl chloride	ND		0.0049	mg/Kg-dry	1	5/26/2023 03:42 PM
Xylenes, Total	ND		0.0099	mg/Kg-dry	1	5/26/2023 03:42 PM
<i>Surr: 4-Bromofluorobenzene</i>	89.5		60-140	%REC	1	5/26/2023 03:42 PM
<i>Surr: Dibromofluoromethane</i>	87.6		60-140	%REC	1	5/26/2023 03:42 PM
<i>Surr: Toluene-d8</i>	91.3		60-140	%REC	1	5/26/2023 03:42 PM

**Note:**

# ALS Environmental

Date: 09-Jun-23

**Client:** The Mannik & Smith Group, Inc.  
**Project:** Hillson Nut MS23-13; 401.ODAS003-19  
**Sample ID:** SB-9 (0-2')  
**Collection Date:** 5/23/2023 12:40 PM

**Work Order:** 23051029  
**Lab ID:** 23051029-20  
**Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
<b>PCBS</b>			<b>SW8082</b>	Prep: SW3546	6/5/23 13:18	Analyst: <b>TSA</b>
Aroclor 1016	ND		0.12	mg/Kg-dry	1	6/7/2023 07:56 PM
Aroclor 1221	ND		0.25	mg/Kg-dry	1	6/7/2023 07:56 PM
Aroclor 1232	ND		0.12	mg/Kg-dry	1	6/7/2023 07:56 PM
Aroclor 1242	ND		0.12	mg/Kg-dry	1	6/7/2023 07:56 PM
Aroclor 1248	ND		0.12	mg/Kg-dry	1	6/7/2023 07:56 PM
Aroclor 1254	ND		0.12	mg/Kg-dry	1	6/7/2023 07:56 PM
Aroclor 1260	ND		0.12	mg/Kg-dry	1	6/7/2023 07:56 PM
Aroclor 1262	ND		0.12	mg/Kg-dry	1	6/7/2023 07:56 PM
Aroclor 1268	ND		0.12	mg/Kg-dry	1	6/7/2023 07:56 PM
Surr: Decachlorobiphenyl	132		7.32-154	%REC	1	6/7/2023 07:56 PM
Surr: Tetrachloro-m-xylene	110		33.5-152	%REC	1	6/7/2023 07:56 PM
<b>MOISTURE</b>			<b>SM2540B</b>			Analyst: <b>CW</b>
Moisture	19			% of sample	1	6/1/2023
<b>MERCURY BY CVAA</b>			<b>SW7471A</b>	Prep: EPA 7471	6/2/23 11:36	Analyst: <b>SLT</b>
Mercury	5.2		1.8	mg/Kg-dry	5	6/5/2023 02:42 PM
<b>METALS BY ICP</b>			<b>SW6010B</b>	Prep: SW3050B	6/2/23 10:43	Analyst: <b>SLT</b>
Arsenic	8.4		5.6	mg/Kg-dry	1	6/2/2023 06:01 PM
Barium	62		23	mg/Kg-dry	1	6/2/2023 06:01 PM
Cadmium	ND		1.1	mg/Kg-dry	1	6/2/2023 06:01 PM
Chromium	14		11	mg/Kg-dry	1	6/2/2023 06:01 PM
Lead	43		23	mg/Kg-dry	1	6/2/2023 06:01 PM
Selenium	ND		3.4	mg/Kg-dry	1	6/2/2023 06:01 PM
Silver	ND		5.6	mg/Kg-dry	1	6/2/2023 06:01 PM
<b>SEMI-VOLATILE ORGANIC COMPOUNDS</b>			<b>SW8270C</b>	Prep: SW3546	5/30/23 11:26	Analyst: <b>RA</b>
1,2,4,5-Tetrachlorobenzene	ND		0.41	mg/Kg-dry	1	6/1/2023 06:24 PM
1,2,4-Trichlorobenzene	ND		0.41	mg/Kg-dry	1	6/1/2023 06:24 PM
1,2-Dichlorobenzene	ND		0.41	mg/Kg-dry	1	6/1/2023 06:24 PM
1,3-Dichlorobenzene	ND		0.41	mg/Kg-dry	1	6/1/2023 06:24 PM
1,3-Dinitrobenzene	ND		0.41	mg/Kg-dry	1	6/1/2023 06:24 PM
1,4-Dichlorobenzene	ND		0.41	mg/Kg-dry	1	6/1/2023 06:24 PM
1-Methylnaphthalene	ND		0.25	mg/Kg-dry	1	6/1/2023 06:24 PM
1-Naphthylamine	ND		0.41	mg/Kg-dry	1	6/1/2023 06:24 PM
2,3,4,6-Tetrachlorophenol	ND		0.41	mg/Kg-dry	1	6/1/2023 06:24 PM
2,4,5-Trichlorophenol	ND		0.41	mg/Kg-dry	1	6/1/2023 06:24 PM
2,4,6-Trichlorophenol	ND		0.41	mg/Kg-dry	1	6/1/2023 06:24 PM
2,4-Dichlorophenol	ND		0.41	mg/Kg-dry	1	6/1/2023 06:24 PM
2,4-Dimethylphenol	ND		0.41	mg/Kg-dry	1	6/1/2023 06:24 PM

Note:

# ALS Environmental

Date: 09-Jun-23

**Client:** The Mannik & Smith Group, Inc.  
**Project:** Hillson Nut MS23-13; 401.ODAS003-19  
**Sample ID:** SB-9 (0-2')  
**Collection Date:** 5/23/2023 12:40 PM

**Work Order:** 23051029  
**Lab ID:** 23051029-20  
**Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
2,4-Dinitrophenol	ND		2.0	mg/Kg-dry	1	6/1/2023 06:24 PM
2,4-Dinitrotoluene	ND		0.41	mg/Kg-dry	1	6/1/2023 06:24 PM
2,6-Dichlorophenol	ND		0.41	mg/Kg-dry	1	6/1/2023 06:24 PM
2,6-Dinitrotoluene	ND		0.41	mg/Kg-dry	1	6/1/2023 06:24 PM
2-Acetylaminofluorene	ND		0.41	mg/Kg-dry	1	6/1/2023 06:24 PM
2-Chloronaphthalene	ND		0.41	mg/Kg-dry	1	6/1/2023 06:24 PM
2-Chlorophenol	ND		0.41	mg/Kg-dry	1	6/1/2023 06:24 PM
2-Methylnaphthalene	ND		0.25	mg/Kg-dry	1	6/1/2023 06:24 PM
2-Methylphenol	ND		0.41	mg/Kg-dry	1	6/1/2023 06:24 PM
2-Naphthylamine	ND		0.41	mg/Kg-dry	1	6/1/2023 06:24 PM
2-Nitroaniline	ND		2.0	mg/Kg-dry	1	6/1/2023 06:24 PM
2-Nitrophenol	ND		0.41	mg/Kg-dry	1	6/1/2023 06:24 PM
2-Picoline	ND		0.41	mg/Kg-dry	1	6/1/2023 06:24 PM
3&4-Methylphenol	ND		0.41	mg/Kg-dry	1	6/1/2023 06:24 PM
3,3'-Dichlorobenzidine	ND		0.81	mg/Kg-dry	1	6/1/2023 06:24 PM
3-Methylcholanthrene	ND		0.41	mg/Kg-dry	1	6/1/2023 06:24 PM
3-Nitroaniline	ND		2.0	mg/Kg-dry	1	6/1/2023 06:24 PM
4,6-Dinitro-2-methylphenol	ND		2.0	mg/Kg-dry	1	6/1/2023 06:24 PM
4-Aminobiphenyl	ND		0.81	mg/Kg-dry	1	6/1/2023 06:24 PM
4-Bromophenyl phenyl ether	ND		0.41	mg/Kg-dry	1	6/1/2023 06:24 PM
4-Chloro-3-methylphenol	ND		0.81	mg/Kg-dry	1	6/1/2023 06:24 PM
4-Chloroaniline	ND		0.81	mg/Kg-dry	1	6/1/2023 06:24 PM
4-Chlorophenyl phenyl ether	ND		0.41	mg/Kg-dry	1	6/1/2023 06:24 PM
4-Nitroaniline	ND		0.81	mg/Kg-dry	1	6/1/2023 06:24 PM
4-Nitrophenol	ND		2.0	mg/Kg-dry	1	6/1/2023 06:24 PM
4-Nitroquinoline 1-oxide	ND		2.0	mg/Kg-dry	1	6/1/2023 06:24 PM
5-Nitro-o-toluidine	ND		0.41	mg/Kg-dry	1	6/1/2023 06:24 PM
7,12-Dimethylbenz(a)anthracene	ND		0.41	mg/Kg-dry	1	6/1/2023 06:24 PM
Acenaphthene	ND		0.25	mg/Kg-dry	1	6/1/2023 06:24 PM
Acenaphthylene	ND		0.25	mg/Kg-dry	1	6/1/2023 06:24 PM
Acetophenone	ND		0.41	mg/Kg-dry	1	6/1/2023 06:24 PM
Aniline	ND		0.41	mg/Kg-dry	1	6/1/2023 06:24 PM
Anthracene	ND		0.25	mg/Kg-dry	1	6/1/2023 06:24 PM
Azobenzene	ND		0.41	mg/Kg-dry	1	6/1/2023 06:24 PM
Benzidine	ND		0.41	mg/Kg-dry	1	6/1/2023 06:24 PM
Benzo(a)anthracene	ND		0.12	mg/Kg-dry	1	6/1/2023 06:24 PM
Benzo(a)pyrene	ND		0.12	mg/Kg-dry	1	6/1/2023 06:24 PM
Benzo(b)fluoranthene	ND		0.25	mg/Kg-dry	1	6/1/2023 06:24 PM
Benzo(g,h,i)perylene	ND		0.25	mg/Kg-dry	1	6/1/2023 06:24 PM
Benzo(k)fluoranthene	ND		0.25	mg/Kg-dry	1	6/1/2023 06:24 PM

**Note:**

# ALS Environmental

Date: 09-Jun-23

**Client:** The Mannik & Smith Group, Inc.  
**Project:** Hillson Nut MS23-13; 401.ODAS003-19  
**Sample ID:** SB-9 (0-2')  
**Collection Date:** 5/23/2023 12:40 PM

**Work Order:** 23051029  
**Lab ID:** 23051029-20  
**Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Benzyl alcohol	ND		0.81	mg/Kg-dry	1	6/1/2023 06:24 PM
Bis(2-chloroethoxy)methane	ND		0.41	mg/Kg-dry	1	6/1/2023 06:24 PM
Bis(2-chloroethyl)ether	ND		0.41	mg/Kg-dry	1	6/1/2023 06:24 PM
Bis(2-chloroisopropyl)ether	ND		0.41	mg/Kg-dry	1	6/1/2023 06:24 PM
Bis(2-ethylhexyl)phthalate	ND		0.41	mg/Kg-dry	1	6/1/2023 06:24 PM
Butyl benzyl phthalate	ND		0.41	mg/Kg-dry	1	6/1/2023 06:24 PM
Carbazole	ND		0.25	mg/Kg-dry	1	6/1/2023 06:24 PM
Chrysene	ND		0.25	mg/Kg-dry	1	6/1/2023 06:24 PM
Dibenzo(a,h)anthracene	ND		0.12	mg/Kg-dry	1	6/1/2023 06:24 PM
Dibenzofuran	ND		0.25	mg/Kg-dry	1	6/1/2023 06:24 PM
Diethyl phthalate	ND		0.41	mg/Kg-dry	1	6/1/2023 06:24 PM
Dimethyl phthalate	ND		0.41	mg/Kg-dry	1	6/1/2023 06:24 PM
Di-n-butyl phthalate	ND		0.41	mg/Kg-dry	1	6/1/2023 06:24 PM
Di-n-octyl phthalate	ND		0.41	mg/Kg-dry	1	6/1/2023 06:24 PM
Dinoseb	ND		0.41	mg/Kg-dry	1	6/1/2023 06:24 PM
Diphenylamine	ND		0.41	mg/Kg-dry	1	6/1/2023 06:24 PM
Ethyl methanesulfonate	ND		0.41	mg/Kg-dry	1	6/1/2023 06:24 PM
Fluoranthene	ND		0.25	mg/Kg-dry	1	6/1/2023 06:24 PM
Fluorene	ND		0.25	mg/Kg-dry	1	6/1/2023 06:24 PM
Hexachlorobenzene	ND		0.41	mg/Kg-dry	1	6/1/2023 06:24 PM
Hexachlorobutadiene	ND		0.41	mg/Kg-dry	1	6/1/2023 06:24 PM
Hexachlorocyclopentadiene	ND		0.41	mg/Kg-dry	1	6/1/2023 06:24 PM
Hexachloroethane	ND		0.41	mg/Kg-dry	1	6/1/2023 06:24 PM
Indeno(1,2,3-cd)pyrene	ND		0.12	mg/Kg-dry	1	6/1/2023 06:24 PM
Isophorone	ND		0.41	mg/Kg-dry	1	6/1/2023 06:24 PM
Isosafrole	ND		0.41	mg/Kg-dry	1	6/1/2023 06:24 PM
Methapyrilene	ND		2.0	mg/Kg-dry	1	6/1/2023 06:24 PM
Methyl methanesulfonate	ND		0.41	mg/Kg-dry	1	6/1/2023 06:24 PM
Naphthalene	ND		0.25	mg/Kg-dry	1	6/1/2023 06:24 PM
Nitrobenzene	ND		0.41	mg/Kg-dry	1	6/1/2023 06:24 PM
N-Nitrosodiethylamine	ND		0.41	mg/Kg-dry	1	6/1/2023 06:24 PM
N-Nitrosodimethylamine	ND		0.41	mg/Kg-dry	1	6/1/2023 06:24 PM
N-Nitroso-di-n-butylamine	ND		0.41	mg/Kg-dry	1	6/1/2023 06:24 PM
N-Nitrosodi-n-propylamine	ND		0.41	mg/Kg-dry	1	6/1/2023 06:24 PM
N-Nitrosomethylethylamine	ND		0.41	mg/Kg-dry	1	6/1/2023 06:24 PM
N-Nitrosomorpholine	ND		0.41	mg/Kg-dry	1	6/1/2023 06:24 PM
N-Nitrosopiperidine	ND		0.41	mg/Kg-dry	1	6/1/2023 06:24 PM
N-Nitrosopyrrolidine	ND		0.41	mg/Kg-dry	1	6/1/2023 06:24 PM
o-Toluidine	ND		2.0	mg/Kg-dry	1	6/1/2023 06:24 PM
p-Dimethylaminoazobenzene	ND		0.41	mg/Kg-dry	1	6/1/2023 06:24 PM

**Note:**

# ALS Environmental

Date: 09-Jun-23

**Client:** The Mannik & Smith Group, Inc.  
**Project:** Hillson Nut MS23-13; 401.ODAS003-19  
**Sample ID:** SB-9 (0-2')  
**Collection Date:** 5/23/2023 12:40 PM

**Work Order:** 23051029  
**Lab ID:** 23051029-20  
**Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Pentachlorobenzene	ND		0.41	mg/Kg-dry	1	6/1/2023 06:24 PM
Pentachloroethane	ND		0.41	mg/Kg-dry	1	6/1/2023 06:24 PM
Pentachloronitrobenzene	ND		0.81	mg/Kg-dry	1	6/1/2023 06:24 PM
Pentachlorophenol	ND		2.0	mg/Kg-dry	1	6/1/2023 06:24 PM
Phenacetin	ND		0.81	mg/Kg-dry	1	6/1/2023 06:24 PM
Phenanthrene	ND		0.25	mg/Kg-dry	1	6/1/2023 06:24 PM
Phenol	ND		0.41	mg/Kg-dry	1	6/1/2023 06:24 PM
Pyrene	ND		0.25	mg/Kg-dry	1	6/1/2023 06:24 PM
Pyridine	ND		0.41	mg/Kg-dry	1	6/1/2023 06:24 PM
Safrole	ND		0.41	mg/Kg-dry	1	6/1/2023 06:24 PM
<i>Surr: 2,4,6-Tribromophenol</i>	59.0		14.2-136	%REC	1	6/1/2023 06:24 PM
<i>Surr: 2-Fluorobiphenyl</i>	49.5		30-116	%REC	1	6/1/2023 06:24 PM
<i>Surr: 2-Fluorophenol</i>	41.5		24-105	%REC	1	6/1/2023 06:24 PM
<i>Surr: 4-Terphenyl-d14</i>	58.5		27.3-138	%REC	1	6/1/2023 06:24 PM
<i>Surr: Nitrobenzene-d5</i>	45.0		23.7-109	%REC	1	6/1/2023 06:24 PM
<i>Surr: Phenol-d5</i>	40.5		24.9-103	%REC	1	6/1/2023 06:24 PM

## VOLATILE ORGANIC COMPOUNDS

SW8260B

Analyst: LAK

1,1,1,2-Tetrachloroethane	ND		0.0046	mg/Kg-dry	1	5/26/2023 04:04 PM
1,1,1-Trichloroethane	ND		0.0046	mg/Kg-dry	1	5/26/2023 04:04 PM
1,1,2,2-Tetrachloroethane	ND		0.0046	mg/Kg-dry	1	5/26/2023 04:04 PM
1,1,2-Trichloroethane	ND		0.0046	mg/Kg-dry	1	5/26/2023 04:04 PM
1,1-Dichloroethane	ND		0.0046	mg/Kg-dry	1	5/26/2023 04:04 PM
1,1-Dichloroethene	ND		0.0046	mg/Kg-dry	1	5/26/2023 04:04 PM
1,1-Dichloropropene	ND		0.0046	mg/Kg-dry	1	5/26/2023 04:04 PM
1,2,3-Trichlorobenzene	ND		0.0046	mg/Kg-dry	1	5/26/2023 04:04 PM
1,2,3-Trichloropropane	ND		0.0046	mg/Kg-dry	1	5/26/2023 04:04 PM
1,2,4-Trichlorobenzene	ND		0.0046	mg/Kg-dry	1	5/26/2023 04:04 PM
1,2,4-Trimethylbenzene	ND		0.0046	mg/Kg-dry	1	5/26/2023 04:04 PM
1,2-Dibromo-3-chloropropane	ND		0.0046	mg/Kg-dry	1	5/26/2023 04:04 PM
1,2-Dibromoethane	ND		0.0046	mg/Kg-dry	1	5/26/2023 04:04 PM
1,2-Dichlorobenzene	ND		0.0046	mg/Kg-dry	1	5/26/2023 04:04 PM
1,2-Dichloroethane	ND		0.0046	mg/Kg-dry	1	5/26/2023 04:04 PM
1,2-Dichloropropane	ND		0.0046	mg/Kg-dry	1	5/26/2023 04:04 PM
1,3,5-Trimethylbenzene	ND		0.0046	mg/Kg-dry	1	5/26/2023 04:04 PM
1,3-Dichlorobenzene	ND		0.0046	mg/Kg-dry	1	5/26/2023 04:04 PM
1,3-Dichloropropane	ND		0.0046	mg/Kg-dry	1	5/26/2023 04:04 PM
1,4-Dichlorobenzene	ND		0.0046	mg/Kg-dry	1	5/26/2023 04:04 PM
2,2-Dichloropropane	ND		0.0046	mg/Kg-dry	1	5/26/2023 04:04 PM
2-Butanone	ND		0.046	mg/Kg-dry	1	5/26/2023 04:04 PM
2-Chlorotoluene	ND		0.0046	mg/Kg-dry	1	5/26/2023 04:04 PM

Note:

# ALS Environmental

Date: 09-Jun-23

**Client:** The Mannik & Smith Group, Inc.  
**Project:** Hillson Nut MS23-13; 401.ODAS003-19  
**Sample ID:** SB-9 (0-2')  
**Collection Date:** 5/23/2023 12:40 PM

**Work Order:** 23051029  
**Lab ID:** 23051029-20  
**Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
2-Hexanone	ND		0.0046	mg/Kg-dry	1	5/26/2023 04:04 PM
4-Chlorotoluene	ND		0.0046	mg/Kg-dry	1	5/26/2023 04:04 PM
4-Methyl-2-pentanone	ND		0.0046	mg/Kg-dry	1	5/26/2023 04:04 PM
Acetone	ND		0.046	mg/Kg-dry	1	5/26/2023 04:04 PM
Benzene	ND		0.0046	mg/Kg-dry	1	5/26/2023 04:04 PM
Bromobenzene	ND		0.0046	mg/Kg-dry	1	5/26/2023 04:04 PM
Bromochloromethane	ND		0.0046	mg/Kg-dry	1	5/26/2023 04:04 PM
Bromodichloromethane	ND		0.0046	mg/Kg-dry	1	5/26/2023 04:04 PM
Bromoform	ND		0.0046	mg/Kg-dry	1	5/26/2023 04:04 PM
Bromomethane	ND		0.0046	mg/Kg-dry	1	5/26/2023 04:04 PM
Carbon disulfide	ND		0.0046	mg/Kg-dry	1	5/26/2023 04:04 PM
Carbon tetrachloride	ND		0.0046	mg/Kg-dry	1	5/26/2023 04:04 PM
Chlorobenzene	ND		0.0046	mg/Kg-dry	1	5/26/2023 04:04 PM
Chloroethane	ND		0.0046	mg/Kg-dry	1	5/26/2023 04:04 PM
Chloroform	ND		0.0046	mg/Kg-dry	1	5/26/2023 04:04 PM
Chloromethane	ND		0.0046	mg/Kg-dry	1	5/26/2023 04:04 PM
cis-1,2-Dichloroethene	ND		0.0046	mg/Kg-dry	1	5/26/2023 04:04 PM
cis-1,3-Dichloropropene	ND		0.0046	mg/Kg-dry	1	5/26/2023 04:04 PM
Dibromochloromethane	ND		0.0046	mg/Kg-dry	1	5/26/2023 04:04 PM
Dibromomethane	ND		0.0046	mg/Kg-dry	1	5/26/2023 04:04 PM
Dichlorodifluoromethane	ND		0.0046	mg/Kg-dry	1	5/26/2023 04:04 PM
Ethylbenzene	ND		0.0046	mg/Kg-dry	1	5/26/2023 04:04 PM
Hexachlorobutadiene	ND		0.0046	mg/Kg-dry	1	5/26/2023 04:04 PM
Isopropylbenzene	ND		0.0046	mg/Kg-dry	1	5/26/2023 04:04 PM
m,p-Xylene	ND		0.0046	mg/Kg-dry	1	5/26/2023 04:04 PM
Methyl tert-butyl ether	ND		0.0046	mg/Kg-dry	1	5/26/2023 04:04 PM
Methylene chloride	ND		0.019	mg/Kg-dry	1	5/26/2023 04:04 PM
Naphthalene	ND		0.0046	mg/Kg-dry	1	5/26/2023 04:04 PM
n-Butylbenzene	ND		0.0046	mg/Kg-dry	1	5/26/2023 04:04 PM
n-Propylbenzene	ND		0.0046	mg/Kg-dry	1	5/26/2023 04:04 PM
o-Xylene	ND		0.0046	mg/Kg-dry	1	5/26/2023 04:04 PM
p-Isopropyltoluene	ND		0.0046	mg/Kg-dry	1	5/26/2023 04:04 PM
sec-Butylbenzene	ND		0.0046	mg/Kg-dry	1	5/26/2023 04:04 PM
Styrene	ND		0.0046	mg/Kg-dry	1	5/26/2023 04:04 PM
tert-Butylbenzene	ND		0.0046	mg/Kg-dry	1	5/26/2023 04:04 PM
Tetrachloroethene	ND		0.0046	mg/Kg-dry	1	5/26/2023 04:04 PM
Toluene	ND		0.0046	mg/Kg-dry	1	5/26/2023 04:04 PM
trans-1,2-Dichloroethene	ND		0.0046	mg/Kg-dry	1	5/26/2023 04:04 PM
trans-1,3-Dichloropropene	ND		0.0046	mg/Kg-dry	1	5/26/2023 04:04 PM
Trichloroethene	ND		0.0046	mg/Kg-dry	1	5/26/2023 04:04 PM

**Note:**

# ALS Environmental

Date: 09-Jun-23

**Client:** The Mannik & Smith Group, Inc.  
**Project:** Hillson Nut MS23-13; 401.ODAS003-19  
**Sample ID:** SB-9 (0-2')  
**Collection Date:** 5/23/2023 12:40 PM

**Work Order:** 23051029  
**Lab ID:** 23051029-20  
**Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Trichlorofluoromethane	ND		0.0046	mg/Kg-dry	1	5/26/2023 04:04 PM
Vinyl chloride	ND		0.0046	mg/Kg-dry	1	5/26/2023 04:04 PM
Xylenes, Total	ND		0.0093	mg/Kg-dry	1	5/26/2023 04:04 PM
<i>Surr: 4-Bromofluorobenzene</i>	88.8		60-140	%REC	1	5/26/2023 04:04 PM
<i>Surr: Dibromofluoromethane</i>	88.1		60-140	%REC	1	5/26/2023 04:04 PM
<i>Surr: Toluene-d8</i>	90.6		60-140	%REC	1	5/26/2023 04:04 PM

**Note:**



# ALS Environmental

Date: 09-Jun-23

**Client:** The Mannik & Smith Group, Inc.  
**Project:** Hillson Nut MS23-13; 401.ODAS003-19  
**Sample ID:** SB-9 (6-8')  
**Collection Date:** 5/23/2023 12:50 PM

**Work Order:** 23051029  
**Lab ID:** 23051029-21  
**Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
<b>PCBS</b>			<b>SW8082</b>	Prep: SW3546	6/5/23 13:18	Analyst: <b>TSA</b>
Aroclor 1016	ND		0.13	mg/Kg-dry	1	6/7/2023 08:12 PM
Aroclor 1221	ND		0.26	mg/Kg-dry	1	6/7/2023 08:12 PM
Aroclor 1232	ND		0.13	mg/Kg-dry	1	6/7/2023 08:12 PM
Aroclor 1242	ND		0.13	mg/Kg-dry	1	6/7/2023 08:12 PM
Aroclor 1248	ND		0.13	mg/Kg-dry	1	6/7/2023 08:12 PM
Aroclor 1254	ND		0.13	mg/Kg-dry	1	6/7/2023 08:12 PM
Aroclor 1260	ND		0.13	mg/Kg-dry	1	6/7/2023 08:12 PM
Aroclor 1262	ND		0.13	mg/Kg-dry	1	6/7/2023 08:12 PM
Aroclor 1268	ND		0.13	mg/Kg-dry	1	6/7/2023 08:12 PM
Surr: Decachlorobiphenyl	104		7.32-154	%REC	1	6/7/2023 08:12 PM
Surr: Tetrachloro-m-xylene	118		33.5-152	%REC	1	6/7/2023 08:12 PM
<b>MOISTURE</b>			<b>SM2540B</b>			Analyst: <b>CW</b>
Moisture	22			% of sample	1	6/1/2023
<b>MERCURY BY CVAA</b>			<b>SW7471A</b>	Prep: EPA 7471	6/2/23 11:36	Analyst: <b>SLT</b>
Mercury	0.50		0.37	mg/Kg-dry	1	6/5/2023 11:29 AM
<b>METALS BY ICP</b>			<b>SW6010B</b>	Prep: SW3050B	6/2/23 10:43	Analyst: <b>SLT</b>
Arsenic	12		6.0	mg/Kg-dry	1	6/2/2023 06:06 PM
Barium	ND		24	mg/Kg-dry	1	6/2/2023 06:06 PM
Cadmium	ND		1.2	mg/Kg-dry	1	6/2/2023 06:06 PM
Chromium	ND		12	mg/Kg-dry	1	6/2/2023 06:06 PM
Lead	ND		24	mg/Kg-dry	1	6/2/2023 06:06 PM
Selenium	ND		3.6	mg/Kg-dry	1	6/2/2023 06:06 PM
Silver	ND		6.0	mg/Kg-dry	1	6/2/2023 06:06 PM
<b>SEMI-VOLATILE ORGANIC COMPOUNDS</b>			<b>SW8270C</b>	Prep: SW3546	5/30/23 11:26	Analyst: <b>RA</b>
1,2,4,5-Tetrachlorobenzene	ND		0.42	mg/Kg-dry	1	6/1/2023 06:47 PM
1,2,4-Trichlorobenzene	ND		0.42	mg/Kg-dry	1	6/1/2023 06:47 PM
1,2-Dichlorobenzene	ND		0.42	mg/Kg-dry	1	6/1/2023 06:47 PM
1,3-Dichlorobenzene	ND		0.42	mg/Kg-dry	1	6/1/2023 06:47 PM
1,3-Dinitrobenzene	ND		0.42	mg/Kg-dry	1	6/1/2023 06:47 PM
1,4-Dichlorobenzene	ND		0.42	mg/Kg-dry	1	6/1/2023 06:47 PM
1-Methylnaphthalene	ND		0.26	mg/Kg-dry	1	6/1/2023 06:47 PM
1-Naphthylamine	ND		0.42	mg/Kg-dry	1	6/1/2023 06:47 PM
2,3,4,6-Tetrachlorophenol	ND		0.42	mg/Kg-dry	1	6/1/2023 06:47 PM
2,4,5-Trichlorophenol	ND		0.42	mg/Kg-dry	1	6/1/2023 06:47 PM
2,4,6-Trichlorophenol	ND		0.42	mg/Kg-dry	1	6/1/2023 06:47 PM
2,4-Dichlorophenol	ND		0.42	mg/Kg-dry	1	6/1/2023 06:47 PM
2,4-Dimethylphenol	ND		0.42	mg/Kg-dry	1	6/1/2023 06:47 PM

Note:

# ALS Environmental

Date: 09-Jun-23

**Client:** The Mannik & Smith Group, Inc.  
**Project:** Hillson Nut MS23-13; 401.ODAS003-19  
**Sample ID:** SB-9 (6-8')  
**Collection Date:** 5/23/2023 12:50 PM

**Work Order:** 23051029  
**Lab ID:** 23051029-21  
**Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
2,4-Dinitrophenol	ND		2.1	mg/Kg-dry	1	6/1/2023 06:47 PM
2,4-Dinitrotoluene	ND		0.42	mg/Kg-dry	1	6/1/2023 06:47 PM
2,6-Dichlorophenol	ND		0.42	mg/Kg-dry	1	6/1/2023 06:47 PM
2,6-Dinitrotoluene	ND		0.42	mg/Kg-dry	1	6/1/2023 06:47 PM
2-Acetylaminofluorene	ND		0.42	mg/Kg-dry	1	6/1/2023 06:47 PM
2-Chloronaphthalene	ND		0.42	mg/Kg-dry	1	6/1/2023 06:47 PM
2-Chlorophenol	ND		0.42	mg/Kg-dry	1	6/1/2023 06:47 PM
2-Methylnaphthalene	ND		0.26	mg/Kg-dry	1	6/1/2023 06:47 PM
2-Methylphenol	ND		0.42	mg/Kg-dry	1	6/1/2023 06:47 PM
2-Naphthylamine	ND		0.42	mg/Kg-dry	1	6/1/2023 06:47 PM
2-Nitroaniline	ND		2.1	mg/Kg-dry	1	6/1/2023 06:47 PM
2-Nitrophenol	ND		0.42	mg/Kg-dry	1	6/1/2023 06:47 PM
2-Picoline	ND		0.42	mg/Kg-dry	1	6/1/2023 06:47 PM
3&4-Methylphenol	ND		0.42	mg/Kg-dry	1	6/1/2023 06:47 PM
3,3'-Dichlorobenzidine	ND		0.85	mg/Kg-dry	1	6/1/2023 06:47 PM
3-Methylcholanthrene	ND		0.42	mg/Kg-dry	1	6/1/2023 06:47 PM
3-Nitroaniline	ND		2.1	mg/Kg-dry	1	6/1/2023 06:47 PM
4,6-Dinitro-2-methylphenol	ND		2.1	mg/Kg-dry	1	6/1/2023 06:47 PM
4-Aminobiphenyl	ND		0.85	mg/Kg-dry	1	6/1/2023 06:47 PM
4-Bromophenyl phenyl ether	ND		0.42	mg/Kg-dry	1	6/1/2023 06:47 PM
4-Chloro-3-methylphenol	ND		0.85	mg/Kg-dry	1	6/1/2023 06:47 PM
4-Chloroaniline	ND		0.85	mg/Kg-dry	1	6/1/2023 06:47 PM
4-Chlorophenyl phenyl ether	ND		0.42	mg/Kg-dry	1	6/1/2023 06:47 PM
4-Nitroaniline	ND		0.85	mg/Kg-dry	1	6/1/2023 06:47 PM
4-Nitrophenol	ND		2.1	mg/Kg-dry	1	6/1/2023 06:47 PM
4-Nitroquinoline 1-oxide	ND		2.1	mg/Kg-dry	1	6/1/2023 06:47 PM
5-Nitro-o-toluidine	ND		0.42	mg/Kg-dry	1	6/1/2023 06:47 PM
7,12-Dimethylbenz(a)anthracene	ND		0.42	mg/Kg-dry	1	6/1/2023 06:47 PM
Acenaphthene	ND		0.26	mg/Kg-dry	1	6/1/2023 06:47 PM
Acenaphthylene	ND		0.26	mg/Kg-dry	1	6/1/2023 06:47 PM
Acetophenone	ND		0.42	mg/Kg-dry	1	6/1/2023 06:47 PM
Aniline	ND		0.42	mg/Kg-dry	1	6/1/2023 06:47 PM
Anthracene	ND		0.26	mg/Kg-dry	1	6/1/2023 06:47 PM
Azobenzene	ND		0.42	mg/Kg-dry	1	6/1/2023 06:47 PM
Benzidine	ND		0.42	mg/Kg-dry	1	6/1/2023 06:47 PM
Benzo(a)anthracene	ND		0.13	mg/Kg-dry	1	6/1/2023 06:47 PM
Benzo(a)pyrene	ND		0.13	mg/Kg-dry	1	6/1/2023 06:47 PM
Benzo(b)fluoranthene	ND		0.26	mg/Kg-dry	1	6/1/2023 06:47 PM
Benzo(g,h,i)perylene	ND		0.26	mg/Kg-dry	1	6/1/2023 06:47 PM
Benzo(k)fluoranthene	ND		0.26	mg/Kg-dry	1	6/1/2023 06:47 PM

**Note:**

# ALS Environmental

Date: 09-Jun-23

**Client:** The Mannik & Smith Group, Inc.  
**Project:** Hillson Nut MS23-13; 401.ODAS003-19  
**Sample ID:** SB-9 (6-8')  
**Collection Date:** 5/23/2023 12:50 PM

**Work Order:** 23051029  
**Lab ID:** 23051029-21  
**Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Benzyl alcohol	ND		0.85	mg/Kg-dry	1	6/1/2023 06:47 PM
Bis(2-chloroethoxy)methane	ND		0.42	mg/Kg-dry	1	6/1/2023 06:47 PM
Bis(2-chloroethyl)ether	ND		0.42	mg/Kg-dry	1	6/1/2023 06:47 PM
Bis(2-chloroisopropyl)ether	ND		0.42	mg/Kg-dry	1	6/1/2023 06:47 PM
Bis(2-ethylhexyl)phthalate	ND		0.42	mg/Kg-dry	1	6/1/2023 06:47 PM
Butyl benzyl phthalate	ND		0.42	mg/Kg-dry	1	6/1/2023 06:47 PM
Carbazole	ND		0.26	mg/Kg-dry	1	6/1/2023 06:47 PM
Chrysene	ND		0.26	mg/Kg-dry	1	6/1/2023 06:47 PM
Dibenzo(a,h)anthracene	ND		0.13	mg/Kg-dry	1	6/1/2023 06:47 PM
Dibenzofuran	ND		0.26	mg/Kg-dry	1	6/1/2023 06:47 PM
Diethyl phthalate	ND		0.42	mg/Kg-dry	1	6/1/2023 06:47 PM
Dimethyl phthalate	ND		0.42	mg/Kg-dry	1	6/1/2023 06:47 PM
Di-n-butyl phthalate	ND		0.42	mg/Kg-dry	1	6/1/2023 06:47 PM
Di-n-octyl phthalate	ND		0.42	mg/Kg-dry	1	6/1/2023 06:47 PM
Dinoseb	ND		0.42	mg/Kg-dry	1	6/1/2023 06:47 PM
Diphenylamine	ND		0.42	mg/Kg-dry	1	6/1/2023 06:47 PM
Ethyl methanesulfonate	ND		0.42	mg/Kg-dry	1	6/1/2023 06:47 PM
Fluoranthene	ND		0.26	mg/Kg-dry	1	6/1/2023 06:47 PM
Fluorene	ND		0.26	mg/Kg-dry	1	6/1/2023 06:47 PM
Hexachlorobenzene	ND		0.42	mg/Kg-dry	1	6/1/2023 06:47 PM
Hexachlorobutadiene	ND		0.42	mg/Kg-dry	1	6/1/2023 06:47 PM
Hexachlorocyclopentadiene	ND		0.42	mg/Kg-dry	1	6/1/2023 06:47 PM
Hexachloroethane	ND		0.42	mg/Kg-dry	1	6/1/2023 06:47 PM
Indeno(1,2,3-cd)pyrene	ND		0.13	mg/Kg-dry	1	6/1/2023 06:47 PM
Isophorone	ND		0.42	mg/Kg-dry	1	6/1/2023 06:47 PM
Isosafrole	ND		0.42	mg/Kg-dry	1	6/1/2023 06:47 PM
Methapyrilene	ND		2.1	mg/Kg-dry	1	6/1/2023 06:47 PM
Methyl methanesulfonate	ND		0.42	mg/Kg-dry	1	6/1/2023 06:47 PM
Naphthalene	ND		0.26	mg/Kg-dry	1	6/1/2023 06:47 PM
Nitrobenzene	ND		0.42	mg/Kg-dry	1	6/1/2023 06:47 PM
N-Nitrosodiethylamine	ND		0.42	mg/Kg-dry	1	6/1/2023 06:47 PM
N-Nitrosodimethylamine	ND		0.42	mg/Kg-dry	1	6/1/2023 06:47 PM
N-Nitroso-di-n-butylamine	ND		0.42	mg/Kg-dry	1	6/1/2023 06:47 PM
N-Nitrosodi-n-propylamine	ND		0.42	mg/Kg-dry	1	6/1/2023 06:47 PM
N-Nitrosomethylethylamine	ND		0.42	mg/Kg-dry	1	6/1/2023 06:47 PM
N-Nitrosomorpholine	ND		0.42	mg/Kg-dry	1	6/1/2023 06:47 PM
N-Nitrosopiperidine	ND		0.42	mg/Kg-dry	1	6/1/2023 06:47 PM
N-Nitrosopyrrolidine	ND		0.42	mg/Kg-dry	1	6/1/2023 06:47 PM
o-Toluidine	ND		2.1	mg/Kg-dry	1	6/1/2023 06:47 PM
p-Dimethylaminoazobenzene	ND		0.42	mg/Kg-dry	1	6/1/2023 06:47 PM

**Note:**

# ALS Environmental

Date: 09-Jun-23

**Client:** The Mannik & Smith Group, Inc.  
**Project:** Hillson Nut MS23-13; 401.ODAS003-19  
**Sample ID:** SB-9 (6-8')  
**Collection Date:** 5/23/2023 12:50 PM

**Work Order:** 23051029  
**Lab ID:** 23051029-21  
**Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Pentachlorobenzene	ND		0.42	mg/Kg-dry	1	6/1/2023 06:47 PM
Pentachloroethane	ND		0.42	mg/Kg-dry	1	6/1/2023 06:47 PM
Pentachloronitrobenzene	ND		0.85	mg/Kg-dry	1	6/1/2023 06:47 PM
Pentachlorophenol	ND		2.1	mg/Kg-dry	1	6/1/2023 06:47 PM
Phenacetin	ND		0.85	mg/Kg-dry	1	6/1/2023 06:47 PM
Phenanthrene	ND		0.26	mg/Kg-dry	1	6/1/2023 06:47 PM
Phenol	ND		0.42	mg/Kg-dry	1	6/1/2023 06:47 PM
Pyrene	ND		0.26	mg/Kg-dry	1	6/1/2023 06:47 PM
Pyridine	ND		0.42	mg/Kg-dry	1	6/1/2023 06:47 PM
Safrole	ND		0.42	mg/Kg-dry	1	6/1/2023 06:47 PM
<i>Surr: 2,4,6-Tribromophenol</i>	62.4		14.2-136	%REC	1	6/1/2023 06:47 PM
<i>Surr: 2-Fluorobiphenyl</i>	58.1		30-116	%REC	1	6/1/2023 06:47 PM
<i>Surr: 2-Fluorophenol</i>	54.9		24-105	%REC	1	6/1/2023 06:47 PM
<i>Surr: 4-Terphenyl-d14</i>	63.8		27.3-138	%REC	1	6/1/2023 06:47 PM
<i>Surr: Nitrobenzene-d5</i>	54.6		23.7-109	%REC	1	6/1/2023 06:47 PM
<i>Surr: Phenol-d5</i>	50.5		24.9-103	%REC	1	6/1/2023 06:47 PM

## VOLATILE ORGANIC COMPOUNDS

SW8260B

Analyst: LAK

1,1,1,2-Tetrachloroethane	ND		0.0049	mg/Kg-dry	1	5/26/2023 04:26 PM
1,1,1-Trichloroethane	ND		0.0049	mg/Kg-dry	1	5/26/2023 04:26 PM
1,1,2,2-Tetrachloroethane	ND		0.0049	mg/Kg-dry	1	5/26/2023 04:26 PM
1,1,2-Trichloroethane	ND		0.0049	mg/Kg-dry	1	5/26/2023 04:26 PM
1,1-Dichloroethane	ND		0.0049	mg/Kg-dry	1	5/26/2023 04:26 PM
1,1-Dichloroethene	ND		0.0049	mg/Kg-dry	1	5/26/2023 04:26 PM
1,1-Dichloropropene	ND		0.0049	mg/Kg-dry	1	5/26/2023 04:26 PM
1,2,3-Trichlorobenzene	ND		0.0049	mg/Kg-dry	1	5/26/2023 04:26 PM
1,2,3-Trichloropropane	ND		0.0049	mg/Kg-dry	1	5/26/2023 04:26 PM
1,2,4-Trichlorobenzene	ND		0.0049	mg/Kg-dry	1	5/26/2023 04:26 PM
1,2,4-Trimethylbenzene	ND		0.0049	mg/Kg-dry	1	5/26/2023 04:26 PM
1,2-Dibromo-3-chloropropane	ND		0.0049	mg/Kg-dry	1	5/26/2023 04:26 PM
1,2-Dibromoethane	ND		0.0049	mg/Kg-dry	1	5/26/2023 04:26 PM
1,2-Dichlorobenzene	ND		0.0049	mg/Kg-dry	1	5/26/2023 04:26 PM
1,2-Dichloroethane	ND		0.0049	mg/Kg-dry	1	5/26/2023 04:26 PM
1,2-Dichloropropane	ND		0.0049	mg/Kg-dry	1	5/26/2023 04:26 PM
1,3,5-Trimethylbenzene	ND		0.0049	mg/Kg-dry	1	5/26/2023 04:26 PM
1,3-Dichlorobenzene	ND		0.0049	mg/Kg-dry	1	5/26/2023 04:26 PM
1,3-Dichloropropane	ND		0.0049	mg/Kg-dry	1	5/26/2023 04:26 PM
1,4-Dichlorobenzene	ND		0.0049	mg/Kg-dry	1	5/26/2023 04:26 PM
2,2-Dichloropropane	ND		0.0049	mg/Kg-dry	1	5/26/2023 04:26 PM
2-Butanone	ND		0.049	mg/Kg-dry	1	5/26/2023 04:26 PM
2-Chlorotoluene	ND		0.0049	mg/Kg-dry	1	5/26/2023 04:26 PM

Note:

# ALS Environmental

Date: 09-Jun-23

**Client:** The Mannik & Smith Group, Inc.  
**Project:** Hillson Nut MS23-13; 401.ODAS003-19  
**Sample ID:** SB-9 (6-8')  
**Collection Date:** 5/23/2023 12:50 PM

**Work Order:** 23051029  
**Lab ID:** 23051029-21  
**Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
2-Hexanone	ND		0.0049	mg/Kg-dry	1	5/26/2023 04:26 PM
4-Chlorotoluene	ND		0.0049	mg/Kg-dry	1	5/26/2023 04:26 PM
4-Methyl-2-pentanone	ND		0.0049	mg/Kg-dry	1	5/26/2023 04:26 PM
Acetone	ND		0.049	mg/Kg-dry	1	5/26/2023 04:26 PM
Benzene	ND		0.0049	mg/Kg-dry	1	5/26/2023 04:26 PM
Bromobenzene	ND		0.0049	mg/Kg-dry	1	5/26/2023 04:26 PM
Bromochloromethane	ND		0.0049	mg/Kg-dry	1	5/26/2023 04:26 PM
Bromodichloromethane	ND		0.0049	mg/Kg-dry	1	5/26/2023 04:26 PM
Bromoform	ND		0.0049	mg/Kg-dry	1	5/26/2023 04:26 PM
Bromomethane	ND		0.0049	mg/Kg-dry	1	5/26/2023 04:26 PM
Carbon disulfide	ND		0.0049	mg/Kg-dry	1	5/26/2023 04:26 PM
Carbon tetrachloride	ND		0.0049	mg/Kg-dry	1	5/26/2023 04:26 PM
Chlorobenzene	ND		0.0049	mg/Kg-dry	1	5/26/2023 04:26 PM
Chloroethane	ND		0.0049	mg/Kg-dry	1	5/26/2023 04:26 PM
Chloroform	ND		0.0049	mg/Kg-dry	1	5/26/2023 04:26 PM
Chloromethane	ND		0.0049	mg/Kg-dry	1	5/26/2023 04:26 PM
cis-1,2-Dichloroethene	ND		0.0049	mg/Kg-dry	1	5/26/2023 04:26 PM
cis-1,3-Dichloropropene	ND		0.0049	mg/Kg-dry	1	5/26/2023 04:26 PM
Dibromochloromethane	ND		0.0049	mg/Kg-dry	1	5/26/2023 04:26 PM
Dibromomethane	ND		0.0049	mg/Kg-dry	1	5/26/2023 04:26 PM
Dichlorodifluoromethane	ND		0.0049	mg/Kg-dry	1	5/26/2023 04:26 PM
Ethylbenzene	ND		0.0049	mg/Kg-dry	1	5/26/2023 04:26 PM
Hexachlorobutadiene	ND		0.0049	mg/Kg-dry	1	5/26/2023 04:26 PM
Isopropylbenzene	ND		0.0049	mg/Kg-dry	1	5/26/2023 04:26 PM
m,p-Xylene	ND		0.0049	mg/Kg-dry	1	5/26/2023 04:26 PM
Methyl tert-butyl ether	ND		0.0049	mg/Kg-dry	1	5/26/2023 04:26 PM
Methylene chloride	ND		0.019	mg/Kg-dry	1	5/26/2023 04:26 PM
Naphthalene	ND		0.0049	mg/Kg-dry	1	5/26/2023 04:26 PM
n-Butylbenzene	ND		0.0049	mg/Kg-dry	1	5/26/2023 04:26 PM
n-Propylbenzene	ND		0.0049	mg/Kg-dry	1	5/26/2023 04:26 PM
o-Xylene	ND		0.0049	mg/Kg-dry	1	5/26/2023 04:26 PM
p-Isopropyltoluene	ND		0.0049	mg/Kg-dry	1	5/26/2023 04:26 PM
sec-Butylbenzene	ND		0.0049	mg/Kg-dry	1	5/26/2023 04:26 PM
Styrene	ND		0.0049	mg/Kg-dry	1	5/26/2023 04:26 PM
tert-Butylbenzene	ND		0.0049	mg/Kg-dry	1	5/26/2023 04:26 PM
Tetrachloroethene	ND		0.0049	mg/Kg-dry	1	5/26/2023 04:26 PM
Toluene	ND		0.0049	mg/Kg-dry	1	5/26/2023 04:26 PM
trans-1,2-Dichloroethene	ND		0.0049	mg/Kg-dry	1	5/26/2023 04:26 PM
trans-1,3-Dichloropropene	ND		0.0049	mg/Kg-dry	1	5/26/2023 04:26 PM
Trichloroethene	ND		0.0049	mg/Kg-dry	1	5/26/2023 04:26 PM

**Note:**

# ALS Environmental

Date: 09-Jun-23

**Client:** The Mannik & Smith Group, Inc.  
**Project:** Hillson Nut MS23-13; 401.ODAS003-19  
**Sample ID:** SB-9 (6-8')  
**Collection Date:** 5/23/2023 12:50 PM

**Work Order:** 23051029  
**Lab ID:** 23051029-21  
**Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Trichlorofluoromethane	ND		0.0049	mg/Kg-dry	1	5/26/2023 04:26 PM
Vinyl chloride	ND		0.0049	mg/Kg-dry	1	5/26/2023 04:26 PM
Xylenes, Total	ND		0.0097	mg/Kg-dry	1	5/26/2023 04:26 PM
<i>Surr: 4-Bromofluorobenzene</i>	88.6		60-140	%REC	1	5/26/2023 04:26 PM
<i>Surr: Dibromofluoromethane</i>	89.1		60-140	%REC	1	5/26/2023 04:26 PM
<i>Surr: Toluene-d8</i>	89.8		60-140	%REC	1	5/26/2023 04:26 PM

**Note:**

# ALS Environmental

Date: 09-Jun-23

**Client:** The Mannik & Smith Group, Inc.  
**Project:** Hillson Nut MS23-13; 401.ODAS003-19  
**Sample ID:** SB-19 (0-2')  
**Collection Date:** 5/23/2023 01:25 PM

**Work Order:** 23051029  
**Lab ID:** 23051029-22  
**Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
<b>PCBS</b>			<b>SW8082</b>	Prep: SW3546	6/5/23 13:18	Analyst: <b>TSA</b>
Aroclor 1016	ND		0.12	mg/Kg-dry	1	6/7/2023 08:28 PM
Aroclor 1221	ND		0.24	mg/Kg-dry	1	6/7/2023 08:28 PM
Aroclor 1232	ND		0.12	mg/Kg-dry	1	6/7/2023 08:28 PM
Aroclor 1242	ND		0.12	mg/Kg-dry	1	6/7/2023 08:28 PM
Aroclor 1248	ND		0.12	mg/Kg-dry	1	6/7/2023 08:28 PM
Aroclor 1254	ND		0.12	mg/Kg-dry	1	6/7/2023 08:28 PM
Aroclor 1260	ND		0.12	mg/Kg-dry	1	6/7/2023 08:28 PM
Aroclor 1262	ND		0.12	mg/Kg-dry	1	6/7/2023 08:28 PM
Aroclor 1268	ND		0.12	mg/Kg-dry	1	6/7/2023 08:28 PM
Surr: Decachlorobiphenyl	104		7.32-154	%REC	1	6/7/2023 08:28 PM
Surr: Tetrachloro-m-xylene	116		33.5-152	%REC	1	6/7/2023 08:28 PM
<b>MOISTURE</b>			<b>SM2540B</b>			Analyst: <b>CW</b>
Moisture	16			% of sample	1	6/1/2023
<b>MERCURY BY CVAA</b>			<b>SW7471A</b>	Prep: EPA 7471	6/2/23 11:36	Analyst: <b>SLT</b>
Mercury	26		6.9	mg/Kg-dry	20	6/5/2023 02:44 PM
<b>METALS BY ICP</b>			<b>SW6010B</b>	Prep: SW3050B	6/2/23 10:43	Analyst: <b>SLT</b>
Arsenic	27		5.9	mg/Kg-dry	1	6/2/2023 06:10 PM
Barium	ND		24	mg/Kg-dry	1	6/2/2023 06:10 PM
Cadmium	ND		1.2	mg/Kg-dry	1	6/2/2023 06:10 PM
Chromium	12		12	mg/Kg-dry	1	6/2/2023 06:10 PM
Lead	ND		24	mg/Kg-dry	1	6/2/2023 06:10 PM
Selenium	ND		3.6	mg/Kg-dry	1	6/2/2023 06:10 PM
Silver	ND		5.9	mg/Kg-dry	1	6/2/2023 06:10 PM
<b>SEMI-VOLATILE ORGANIC COMPOUNDS</b>			<b>SW8270C</b>	Prep: SW3546	5/30/23 11:26	Analyst: <b>RA</b>
1,2,4,5-Tetrachlorobenzene	ND		0.39	mg/Kg-dry	1	6/1/2023 07:09 PM
1,2,4-Trichlorobenzene	ND		0.39	mg/Kg-dry	1	6/1/2023 07:09 PM
1,2-Dichlorobenzene	ND		0.39	mg/Kg-dry	1	6/1/2023 07:09 PM
1,3-Dichlorobenzene	ND		0.39	mg/Kg-dry	1	6/1/2023 07:09 PM
1,3-Dinitrobenzene	ND		0.39	mg/Kg-dry	1	6/1/2023 07:09 PM
1,4-Dichlorobenzene	ND		0.39	mg/Kg-dry	1	6/1/2023 07:09 PM
1-Methylnaphthalene	ND		0.24	mg/Kg-dry	1	6/1/2023 07:09 PM
1-Naphthylamine	ND		0.39	mg/Kg-dry	1	6/1/2023 07:09 PM
2,3,4,6-Tetrachlorophenol	ND		0.39	mg/Kg-dry	1	6/1/2023 07:09 PM
2,4,5-Trichlorophenol	ND		0.39	mg/Kg-dry	1	6/1/2023 07:09 PM
2,4,6-Trichlorophenol	ND		0.39	mg/Kg-dry	1	6/1/2023 07:09 PM
2,4-Dichlorophenol	ND		0.39	mg/Kg-dry	1	6/1/2023 07:09 PM
2,4-Dimethylphenol	ND		0.39	mg/Kg-dry	1	6/1/2023 07:09 PM

Note:

# ALS Environmental

Date: 09-Jun-23

**Client:** The Mannik & Smith Group, Inc.  
**Project:** Hillson Nut MS23-13; 401.ODAS003-19  
**Sample ID:** SB-19 (0-2')  
**Collection Date:** 5/23/2023 01:25 PM

**Work Order:** 23051029  
**Lab ID:** 23051029-22  
**Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
2,4-Dinitrophenol	ND		2.0	mg/Kg-dry	1	6/1/2023 07:09 PM
2,4-Dinitrotoluene	ND		0.39	mg/Kg-dry	1	6/1/2023 07:09 PM
2,6-Dichlorophenol	ND		0.39	mg/Kg-dry	1	6/1/2023 07:09 PM
2,6-Dinitrotoluene	ND		0.39	mg/Kg-dry	1	6/1/2023 07:09 PM
2-Acetylaminofluorene	ND		0.39	mg/Kg-dry	1	6/1/2023 07:09 PM
2-Chloronaphthalene	ND		0.39	mg/Kg-dry	1	6/1/2023 07:09 PM
2-Chlorophenol	ND		0.39	mg/Kg-dry	1	6/1/2023 07:09 PM
2-Methylnaphthalene	ND		0.24	mg/Kg-dry	1	6/1/2023 07:09 PM
2-Methylphenol	ND		0.39	mg/Kg-dry	1	6/1/2023 07:09 PM
2-Naphthylamine	ND		0.39	mg/Kg-dry	1	6/1/2023 07:09 PM
2-Nitroaniline	ND		2.0	mg/Kg-dry	1	6/1/2023 07:09 PM
2-Nitrophenol	ND		0.39	mg/Kg-dry	1	6/1/2023 07:09 PM
2-Picoline	ND		0.39	mg/Kg-dry	1	6/1/2023 07:09 PM
3&4-Methylphenol	ND		0.39	mg/Kg-dry	1	6/1/2023 07:09 PM
3,3'-Dichlorobenzidine	ND		0.79	mg/Kg-dry	1	6/1/2023 07:09 PM
3-Methylcholanthrene	ND		0.39	mg/Kg-dry	1	6/1/2023 07:09 PM
3-Nitroaniline	ND		2.0	mg/Kg-dry	1	6/1/2023 07:09 PM
4,6-Dinitro-2-methylphenol	ND		2.0	mg/Kg-dry	1	6/1/2023 07:09 PM
4-Aminobiphenyl	ND		0.79	mg/Kg-dry	1	6/1/2023 07:09 PM
4-Bromophenyl phenyl ether	ND		0.39	mg/Kg-dry	1	6/1/2023 07:09 PM
4-Chloro-3-methylphenol	ND		0.79	mg/Kg-dry	1	6/1/2023 07:09 PM
4-Chloroaniline	ND		0.79	mg/Kg-dry	1	6/1/2023 07:09 PM
4-Chlorophenyl phenyl ether	ND		0.39	mg/Kg-dry	1	6/1/2023 07:09 PM
4-Nitroaniline	ND		0.79	mg/Kg-dry	1	6/1/2023 07:09 PM
4-Nitrophenol	ND		2.0	mg/Kg-dry	1	6/1/2023 07:09 PM
4-Nitroquinoline 1-oxide	ND		2.0	mg/Kg-dry	1	6/1/2023 07:09 PM
5-Nitro-o-toluidine	ND		0.39	mg/Kg-dry	1	6/1/2023 07:09 PM
7,12-Dimethylbenz(a)anthracene	ND		0.39	mg/Kg-dry	1	6/1/2023 07:09 PM
Acenaphthene	ND		0.24	mg/Kg-dry	1	6/1/2023 07:09 PM
Acenaphthylene	ND		0.24	mg/Kg-dry	1	6/1/2023 07:09 PM
Acetophenone	ND		0.39	mg/Kg-dry	1	6/1/2023 07:09 PM
Aniline	ND		0.39	mg/Kg-dry	1	6/1/2023 07:09 PM
Anthracene	ND		0.24	mg/Kg-dry	1	6/1/2023 07:09 PM
Azobenzene	ND		0.39	mg/Kg-dry	1	6/1/2023 07:09 PM
Benzidine	ND		0.39	mg/Kg-dry	1	6/1/2023 07:09 PM
Benzo(a)anthracene	ND		0.12	mg/Kg-dry	1	6/1/2023 07:09 PM
Benzo(a)pyrene	ND		0.12	mg/Kg-dry	1	6/1/2023 07:09 PM
Benzo(b)fluoranthene	ND		0.24	mg/Kg-dry	1	6/1/2023 07:09 PM
Benzo(g,h,i)perylene	ND		0.24	mg/Kg-dry	1	6/1/2023 07:09 PM
Benzo(k)fluoranthene	ND		0.24	mg/Kg-dry	1	6/1/2023 07:09 PM

**Note:**



# ALS Environmental

Date: 09-Jun-23

**Client:** The Mannik & Smith Group, Inc.  
**Project:** Hillson Nut MS23-13; 401.ODAS003-19  
**Sample ID:** SB-19 (0-2')  
**Collection Date:** 5/23/2023 01:25 PM

**Work Order:** 23051029  
**Lab ID:** 23051029-22  
**Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Benzyl alcohol	ND		0.79	mg/Kg-dry	1	6/1/2023 07:09 PM
Bis(2-chloroethoxy)methane	ND		0.39	mg/Kg-dry	1	6/1/2023 07:09 PM
Bis(2-chloroethyl)ether	ND		0.39	mg/Kg-dry	1	6/1/2023 07:09 PM
Bis(2-chloroisopropyl)ether	ND		0.39	mg/Kg-dry	1	6/1/2023 07:09 PM
Bis(2-ethylhexyl)phthalate	ND		0.39	mg/Kg-dry	1	6/1/2023 07:09 PM
Butyl benzyl phthalate	ND		0.39	mg/Kg-dry	1	6/1/2023 07:09 PM
Carbazole	ND		0.24	mg/Kg-dry	1	6/1/2023 07:09 PM
Chrysene	ND		0.24	mg/Kg-dry	1	6/1/2023 07:09 PM
Dibenzo(a,h)anthracene	ND		0.12	mg/Kg-dry	1	6/1/2023 07:09 PM
Dibenzofuran	ND		0.24	mg/Kg-dry	1	6/1/2023 07:09 PM
Diethyl phthalate	ND		0.39	mg/Kg-dry	1	6/1/2023 07:09 PM
Dimethyl phthalate	ND		0.39	mg/Kg-dry	1	6/1/2023 07:09 PM
Di-n-butyl phthalate	ND		0.39	mg/Kg-dry	1	6/1/2023 07:09 PM
Di-n-octyl phthalate	ND		0.39	mg/Kg-dry	1	6/1/2023 07:09 PM
Dinoseb	ND		0.39	mg/Kg-dry	1	6/1/2023 07:09 PM
Diphenylamine	ND		0.39	mg/Kg-dry	1	6/1/2023 07:09 PM
Ethyl methanesulfonate	ND		0.39	mg/Kg-dry	1	6/1/2023 07:09 PM
Fluoranthene	ND		0.24	mg/Kg-dry	1	6/1/2023 07:09 PM
Fluorene	ND		0.24	mg/Kg-dry	1	6/1/2023 07:09 PM
Hexachlorobenzene	ND		0.39	mg/Kg-dry	1	6/1/2023 07:09 PM
Hexachlorobutadiene	ND		0.39	mg/Kg-dry	1	6/1/2023 07:09 PM
Hexachlorocyclopentadiene	ND		0.39	mg/Kg-dry	1	6/1/2023 07:09 PM
Hexachloroethane	ND		0.39	mg/Kg-dry	1	6/1/2023 07:09 PM
Indeno(1,2,3-cd)pyrene	ND		0.12	mg/Kg-dry	1	6/1/2023 07:09 PM
Isophorone	ND		0.39	mg/Kg-dry	1	6/1/2023 07:09 PM
Isosafrole	ND		0.39	mg/Kg-dry	1	6/1/2023 07:09 PM
Methapyrilene	ND		2.0	mg/Kg-dry	1	6/1/2023 07:09 PM
Methyl methanesulfonate	ND		0.39	mg/Kg-dry	1	6/1/2023 07:09 PM
Naphthalene	ND		0.24	mg/Kg-dry	1	6/1/2023 07:09 PM
Nitrobenzene	ND		0.39	mg/Kg-dry	1	6/1/2023 07:09 PM
N-Nitrosodiethylamine	ND		0.39	mg/Kg-dry	1	6/1/2023 07:09 PM
N-Nitrosodimethylamine	ND		0.39	mg/Kg-dry	1	6/1/2023 07:09 PM
N-Nitroso-di-n-butylamine	ND		0.39	mg/Kg-dry	1	6/1/2023 07:09 PM
N-Nitrosodi-n-propylamine	ND		0.39	mg/Kg-dry	1	6/1/2023 07:09 PM
N-Nitrosomethylethylamine	ND		0.39	mg/Kg-dry	1	6/1/2023 07:09 PM
N-Nitrosomorpholine	ND		0.39	mg/Kg-dry	1	6/1/2023 07:09 PM
N-Nitrosopiperidine	ND		0.39	mg/Kg-dry	1	6/1/2023 07:09 PM
N-Nitrosopyrrolidine	ND		0.39	mg/Kg-dry	1	6/1/2023 07:09 PM
o-Toluidine	ND		2.0	mg/Kg-dry	1	6/1/2023 07:09 PM
p-Dimethylaminoazobenzene	ND		0.39	mg/Kg-dry	1	6/1/2023 07:09 PM

**Note:**

# ALS Environmental

Date: 09-Jun-23

**Client:** The Mannik & Smith Group, Inc.  
**Project:** Hillson Nut MS23-13; 401.ODAS003-19  
**Sample ID:** SB-19 (0-2')  
**Collection Date:** 5/23/2023 01:25 PM

**Work Order:** 23051029  
**Lab ID:** 23051029-22  
**Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Pentachlorobenzene	ND		0.39	mg/Kg-dry	1	6/1/2023 07:09 PM
Pentachloroethane	ND		0.39	mg/Kg-dry	1	6/1/2023 07:09 PM
Pentachloronitrobenzene	ND		0.79	mg/Kg-dry	1	6/1/2023 07:09 PM
Pentachlorophenol	ND		2.0	mg/Kg-dry	1	6/1/2023 07:09 PM
Phenacetin	ND		0.79	mg/Kg-dry	1	6/1/2023 07:09 PM
Phenanthrene	ND		0.24	mg/Kg-dry	1	6/1/2023 07:09 PM
Phenol	ND		0.39	mg/Kg-dry	1	6/1/2023 07:09 PM
Pyrene	ND		0.24	mg/Kg-dry	1	6/1/2023 07:09 PM
Pyridine	ND		0.39	mg/Kg-dry	1	6/1/2023 07:09 PM
Safrole	ND		0.39	mg/Kg-dry	1	6/1/2023 07:09 PM
<i>Surr: 2,4,6-Tribromophenol</i>	70.1		14.2-136	%REC	1	6/1/2023 07:09 PM
<i>Surr: 2-Fluorobiphenyl</i>	61.5		30-116	%REC	1	6/1/2023 07:09 PM
<i>Surr: 2-Fluorophenol</i>	55.1		24-105	%REC	1	6/1/2023 07:09 PM
<i>Surr: 4-Terphenyl-d14</i>	65.4		27.3-138	%REC	1	6/1/2023 07:09 PM
<i>Surr: Nitrobenzene-d5</i>	55.5		23.7-109	%REC	1	6/1/2023 07:09 PM
<i>Surr: Phenol-d5</i>	49.5		24.9-103	%REC	1	6/1/2023 07:09 PM

## VOLATILE ORGANIC COMPOUNDS

SW8260B

Analyst: LAK

1,1,1,2-Tetrachloroethane	ND		0.0047	mg/Kg-dry	1	5/26/2023 04:49 PM
1,1,1-Trichloroethane	ND		0.0047	mg/Kg-dry	1	5/26/2023 04:49 PM
1,1,2,2-Tetrachloroethane	ND		0.0047	mg/Kg-dry	1	5/26/2023 04:49 PM
1,1,2-Trichloroethane	ND		0.0047	mg/Kg-dry	1	5/26/2023 04:49 PM
1,1-Dichloroethane	ND		0.0047	mg/Kg-dry	1	5/26/2023 04:49 PM
1,1-Dichloroethene	ND		0.0047	mg/Kg-dry	1	5/26/2023 04:49 PM
1,1-Dichloropropene	ND		0.0047	mg/Kg-dry	1	5/26/2023 04:49 PM
1,2,3-Trichlorobenzene	ND		0.0047	mg/Kg-dry	1	5/26/2023 04:49 PM
1,2,3-Trichloropropane	ND		0.0047	mg/Kg-dry	1	5/26/2023 04:49 PM
1,2,4-Trichlorobenzene	ND		0.0047	mg/Kg-dry	1	5/26/2023 04:49 PM
1,2,4-Trimethylbenzene	ND		0.0047	mg/Kg-dry	1	5/26/2023 04:49 PM
1,2-Dibromo-3-chloropropane	ND		0.0047	mg/Kg-dry	1	5/26/2023 04:49 PM
1,2-Dibromoethane	ND		0.0047	mg/Kg-dry	1	5/26/2023 04:49 PM
1,2-Dichlorobenzene	ND		0.0047	mg/Kg-dry	1	5/26/2023 04:49 PM
1,2-Dichloroethane	ND		0.0047	mg/Kg-dry	1	5/26/2023 04:49 PM
1,2-Dichloropropane	ND		0.0047	mg/Kg-dry	1	5/26/2023 04:49 PM
1,3,5-Trimethylbenzene	ND		0.0047	mg/Kg-dry	1	5/26/2023 04:49 PM
1,3-Dichlorobenzene	ND		0.0047	mg/Kg-dry	1	5/26/2023 04:49 PM
1,3-Dichloropropane	ND		0.0047	mg/Kg-dry	1	5/26/2023 04:49 PM
1,4-Dichlorobenzene	ND		0.0047	mg/Kg-dry	1	5/26/2023 04:49 PM
2,2-Dichloropropane	ND		0.0047	mg/Kg-dry	1	5/26/2023 04:49 PM
2-Butanone	ND		0.047	mg/Kg-dry	1	5/26/2023 04:49 PM
2-Chlorotoluene	ND		0.0047	mg/Kg-dry	1	5/26/2023 04:49 PM

Note:

# ALS Environmental

Date: 09-Jun-23

**Client:** The Mannik & Smith Group, Inc.  
**Project:** Hillson Nut MS23-13; 401.ODAS003-19  
**Sample ID:** SB-19 (0-2')  
**Collection Date:** 5/23/2023 01:25 PM

**Work Order:** 23051029  
**Lab ID:** 23051029-22  
**Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
2-Hexanone	ND		0.0047	mg/Kg-dry	1	5/26/2023 04:49 PM
4-Chlorotoluene	ND		0.0047	mg/Kg-dry	1	5/26/2023 04:49 PM
4-Methyl-2-pentanone	ND		0.0047	mg/Kg-dry	1	5/26/2023 04:49 PM
Acetone	ND		0.047	mg/Kg-dry	1	5/26/2023 04:49 PM
Benzene	ND		0.0047	mg/Kg-dry	1	5/26/2023 04:49 PM
Bromobenzene	ND		0.0047	mg/Kg-dry	1	5/26/2023 04:49 PM
Bromochloromethane	ND		0.0047	mg/Kg-dry	1	5/26/2023 04:49 PM
Bromodichloromethane	ND		0.0047	mg/Kg-dry	1	5/26/2023 04:49 PM
Bromoform	ND		0.0047	mg/Kg-dry	1	5/26/2023 04:49 PM
Bromomethane	ND		0.0047	mg/Kg-dry	1	5/26/2023 04:49 PM
Carbon disulfide	ND		0.0047	mg/Kg-dry	1	5/26/2023 04:49 PM
Carbon tetrachloride	ND		0.0047	mg/Kg-dry	1	5/26/2023 04:49 PM
Chlorobenzene	ND		0.0047	mg/Kg-dry	1	5/26/2023 04:49 PM
Chloroethane	ND		0.0047	mg/Kg-dry	1	5/26/2023 04:49 PM
Chloroform	ND		0.0047	mg/Kg-dry	1	5/26/2023 04:49 PM
Chloromethane	ND		0.0047	mg/Kg-dry	1	5/26/2023 04:49 PM
cis-1,2-Dichloroethene	ND		0.0047	mg/Kg-dry	1	5/26/2023 04:49 PM
cis-1,3-Dichloropropene	ND		0.0047	mg/Kg-dry	1	5/26/2023 04:49 PM
Dibromochloromethane	ND		0.0047	mg/Kg-dry	1	5/26/2023 04:49 PM
Dibromomethane	ND		0.0047	mg/Kg-dry	1	5/26/2023 04:49 PM
Dichlorodifluoromethane	ND		0.0047	mg/Kg-dry	1	5/26/2023 04:49 PM
Ethylbenzene	ND		0.0047	mg/Kg-dry	1	5/26/2023 04:49 PM
Hexachlorobutadiene	ND		0.0047	mg/Kg-dry	1	5/26/2023 04:49 PM
Isopropylbenzene	ND		0.0047	mg/Kg-dry	1	5/26/2023 04:49 PM
m,p-Xylene	ND		0.0047	mg/Kg-dry	1	5/26/2023 04:49 PM
Methyl tert-butyl ether	ND		0.0047	mg/Kg-dry	1	5/26/2023 04:49 PM
Methylene chloride	ND		0.019	mg/Kg-dry	1	5/26/2023 04:49 PM
<b>Naphthalene</b>	<b>0.0095</b>		<b>0.0047</b>	<b>mg/Kg-dry</b>	<b>1</b>	5/26/2023 04:49 PM
n-Butylbenzene	ND		0.0047	mg/Kg-dry	1	5/26/2023 04:49 PM
n-Propylbenzene	ND		0.0047	mg/Kg-dry	1	5/26/2023 04:49 PM
o-Xylene	ND		0.0047	mg/Kg-dry	1	5/26/2023 04:49 PM
p-Isopropyltoluene	ND		0.0047	mg/Kg-dry	1	5/26/2023 04:49 PM
sec-Butylbenzene	ND		0.0047	mg/Kg-dry	1	5/26/2023 04:49 PM
Styrene	ND		0.0047	mg/Kg-dry	1	5/26/2023 04:49 PM
tert-Butylbenzene	ND		0.0047	mg/Kg-dry	1	5/26/2023 04:49 PM
Tetrachloroethene	ND		0.0047	mg/Kg-dry	1	5/26/2023 04:49 PM
Toluene	ND		0.0047	mg/Kg-dry	1	5/26/2023 04:49 PM
trans-1,2-Dichloroethene	ND		0.0047	mg/Kg-dry	1	5/26/2023 04:49 PM
trans-1,3-Dichloropropene	ND		0.0047	mg/Kg-dry	1	5/26/2023 04:49 PM
Trichloroethene	ND		0.0047	mg/Kg-dry	1	5/26/2023 04:49 PM

**Note:**

# ALS Environmental

Date: 09-Jun-23

**Client:** The Mannik & Smith Group, Inc.  
**Project:** Hillson Nut MS23-13; 401.ODAS003-19  
**Sample ID:** SB-19 (0-2')  
**Collection Date:** 5/23/2023 01:25 PM

**Work Order:** 23051029  
**Lab ID:** 23051029-22  
**Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Trichlorofluoromethane	ND		0.0047	mg/Kg-dry	1	5/26/2023 04:49 PM
Vinyl chloride	ND		0.0047	mg/Kg-dry	1	5/26/2023 04:49 PM
Xylenes, Total	ND		0.0094	mg/Kg-dry	1	5/26/2023 04:49 PM
<i>Surr: 4-Bromofluorobenzene</i>	93.2		60-140	%REC	1	5/26/2023 04:49 PM
<i>Surr: Dibromofluoromethane</i>	87.3		60-140	%REC	1	5/26/2023 04:49 PM
<i>Surr: Toluene-d8</i>	90.0		60-140	%REC	1	5/26/2023 04:49 PM

**Note:**

# ALS Environmental

Date: 09-Jun-23

**Client:** The Mannik & Smith Group, Inc.  
**Project:** Hillson Nut MS23-13; 401.ODAS003-19  
**Sample ID:** SB-17 (0-2')  
**Collection Date:** 5/23/2023 01:30 PM

**Work Order:** 23051029  
**Lab ID:** 23051029-23  
**Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
<b>PCBS</b>			<b>SW8082</b>	Prep: SW3546 6/5/23 13:18		Analyst: <b>TSA</b>
Aroclor 1016	ND		0.11	mg/Kg-dry	1	6/7/2023 08:44 PM
Aroclor 1221	ND		0.23	mg/Kg-dry	1	6/7/2023 08:44 PM
Aroclor 1232	ND		0.11	mg/Kg-dry	1	6/7/2023 08:44 PM
Aroclor 1242	ND		0.11	mg/Kg-dry	1	6/7/2023 08:44 PM
Aroclor 1248	ND		0.11	mg/Kg-dry	1	6/7/2023 08:44 PM
Aroclor 1254	ND		0.11	mg/Kg-dry	1	6/7/2023 08:44 PM
Aroclor 1260	ND		0.11	mg/Kg-dry	1	6/7/2023 08:44 PM
Aroclor 1262	ND		0.11	mg/Kg-dry	1	6/7/2023 08:44 PM
Aroclor 1268	ND		0.11	mg/Kg-dry	1	6/7/2023 08:44 PM
Surr: Decachlorobiphenyl	120		7.32-154	%REC	1	6/7/2023 08:44 PM
Surr: Tetrachloro-m-xylene	130		33.5-152	%REC	1	6/7/2023 08:44 PM
<b>MOISTURE</b>			<b>SM2540B</b>			Analyst: <b>CW</b>
Moisture	12			% of sample	1	6/1/2023
<b>MERCURY BY CVAA</b>			<b>SW7471A</b>	Prep: EPA 7471 6/2/23 11:36		Analyst: <b>SLT</b>
Mercury	0.82		0.34	mg/Kg-dry	1	6/5/2023 11:37 AM
<b>METALS BY ICP</b>			<b>SW6010B</b>	Prep: SW3050B 6/2/23 10:43		Analyst: <b>SLT</b>
Arsenic	7.4		5.4	mg/Kg-dry	1	6/2/2023 06:15 PM
Barium	22	J	22	mg/Kg-dry	1	6/2/2023 06:15 PM
Cadmium	ND		1.1	mg/Kg-dry	1	6/2/2023 06:15 PM
Chromium	ND		11	mg/Kg-dry	1	6/2/2023 06:15 PM
Lead	ND		22	mg/Kg-dry	1	6/2/2023 06:15 PM
Selenium	ND		3.2	mg/Kg-dry	1	6/2/2023 06:15 PM
Silver	ND		5.4	mg/Kg-dry	1	6/2/2023 06:15 PM
<b>SEMI-VOLATILE ORGANIC COMPOUNDS</b>			<b>SW8270C</b>	Prep: SW3546 5/30/23 11:26		Analyst: <b>RA</b>
1,2,4,5-Tetrachlorobenzene	ND		0.38	mg/Kg-dry	1	6/1/2023 07:32 PM
1,2,4-Trichlorobenzene	ND		0.38	mg/Kg-dry	1	6/1/2023 07:32 PM
1,2-Dichlorobenzene	ND		0.38	mg/Kg-dry	1	6/1/2023 07:32 PM
1,3-Dichlorobenzene	ND		0.38	mg/Kg-dry	1	6/1/2023 07:32 PM
1,3-Dinitrobenzene	ND		0.38	mg/Kg-dry	1	6/1/2023 07:32 PM
1,4-Dichlorobenzene	ND		0.38	mg/Kg-dry	1	6/1/2023 07:32 PM
1-Methylnaphthalene	ND		0.23	mg/Kg-dry	1	6/1/2023 07:32 PM
1-Naphthylamine	ND		0.38	mg/Kg-dry	1	6/1/2023 07:32 PM
2,3,4,6-Tetrachlorophenol	ND		0.38	mg/Kg-dry	1	6/1/2023 07:32 PM
2,4,5-Trichlorophenol	ND		0.38	mg/Kg-dry	1	6/1/2023 07:32 PM
2,4,6-Trichlorophenol	ND		0.38	mg/Kg-dry	1	6/1/2023 07:32 PM
2,4-Dichlorophenol	ND		0.38	mg/Kg-dry	1	6/1/2023 07:32 PM
2,4-Dimethylphenol	ND		0.38	mg/Kg-dry	1	6/1/2023 07:32 PM

Note:

# ALS Environmental

Date: 09-Jun-23

Client: The Mannik & Smith Group, Inc.  
 Project: Hillson Nut MS23-13; 401.ODAS003-19  
 Sample ID: SB-17 (0-2')  
 Collection Date: 5/23/2023 01:30 PM

Work Order: 23051029  
 Lab ID: 23051029-23  
 Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
2,4-Dinitrophenol	ND		1.9	mg/Kg-dry	1	6/1/2023 07:32 PM
2,4-Dinitrotoluene	ND		0.38	mg/Kg-dry	1	6/1/2023 07:32 PM
2,6-Dichlorophenol	ND		0.38	mg/Kg-dry	1	6/1/2023 07:32 PM
2,6-Dinitrotoluene	ND		0.38	mg/Kg-dry	1	6/1/2023 07:32 PM
2-Acetylaminofluorene	ND		0.38	mg/Kg-dry	1	6/1/2023 07:32 PM
2-Chloronaphthalene	ND		0.38	mg/Kg-dry	1	6/1/2023 07:32 PM
2-Chlorophenol	ND		0.38	mg/Kg-dry	1	6/1/2023 07:32 PM
2-Methylnaphthalene	ND		0.23	mg/Kg-dry	1	6/1/2023 07:32 PM
2-Methylphenol	ND		0.38	mg/Kg-dry	1	6/1/2023 07:32 PM
2-Naphthylamine	ND		0.38	mg/Kg-dry	1	6/1/2023 07:32 PM
2-Nitroaniline	ND		1.9	mg/Kg-dry	1	6/1/2023 07:32 PM
2-Nitrophenol	ND		0.38	mg/Kg-dry	1	6/1/2023 07:32 PM
2-Picoline	ND		0.38	mg/Kg-dry	1	6/1/2023 07:32 PM
3&4-Methylphenol	ND		0.38	mg/Kg-dry	1	6/1/2023 07:32 PM
3,3'-Dichlorobenzidine	ND		0.75	mg/Kg-dry	1	6/1/2023 07:32 PM
3-Methylcholanthrene	ND		0.38	mg/Kg-dry	1	6/1/2023 07:32 PM
3-Nitroaniline	ND		1.9	mg/Kg-dry	1	6/1/2023 07:32 PM
4,6-Dinitro-2-methylphenol	ND		1.9	mg/Kg-dry	1	6/1/2023 07:32 PM
4-Aminobiphenyl	ND		0.75	mg/Kg-dry	1	6/1/2023 07:32 PM
4-Bromophenyl phenyl ether	ND		0.38	mg/Kg-dry	1	6/1/2023 07:32 PM
4-Chloro-3-methylphenol	ND		0.75	mg/Kg-dry	1	6/1/2023 07:32 PM
4-Chloroaniline	ND		0.75	mg/Kg-dry	1	6/1/2023 07:32 PM
4-Chlorophenyl phenyl ether	ND		0.38	mg/Kg-dry	1	6/1/2023 07:32 PM
4-Nitroaniline	ND		0.75	mg/Kg-dry	1	6/1/2023 07:32 PM
4-Nitrophenol	ND		1.9	mg/Kg-dry	1	6/1/2023 07:32 PM
4-Nitroquinoline 1-oxide	ND		1.9	mg/Kg-dry	1	6/1/2023 07:32 PM
5-Nitro-o-toluidine	ND		0.38	mg/Kg-dry	1	6/1/2023 07:32 PM
7,12-Dimethylbenz(a)anthracene	ND		0.38	mg/Kg-dry	1	6/1/2023 07:32 PM
Acenaphthene	ND		0.23	mg/Kg-dry	1	6/1/2023 07:32 PM
Acenaphthylene	ND		0.23	mg/Kg-dry	1	6/1/2023 07:32 PM
Acetophenone	ND		0.38	mg/Kg-dry	1	6/1/2023 07:32 PM
Aniline	ND		0.38	mg/Kg-dry	1	6/1/2023 07:32 PM
Anthracene	ND		0.23	mg/Kg-dry	1	6/1/2023 07:32 PM
Azobenzene	ND		0.38	mg/Kg-dry	1	6/1/2023 07:32 PM
Benzidine	ND		0.38	mg/Kg-dry	1	6/1/2023 07:32 PM
<b>Benzo(a)anthracene</b>	<b>0.12</b>		<b>0.11</b>	<b>mg/Kg-dry</b>	1	6/1/2023 07:32 PM
Benzo(a)pyrene	ND		0.11	mg/Kg-dry	1	6/1/2023 07:32 PM
Benzo(b)fluoranthene	ND		0.23	mg/Kg-dry	1	6/1/2023 07:32 PM
Benzo(g,h,i)perylene	ND		0.23	mg/Kg-dry	1	6/1/2023 07:32 PM
Benzo(k)fluoranthene	ND		0.23	mg/Kg-dry	1	6/1/2023 07:32 PM

Note:

# ALS Environmental

Date: 09-Jun-23

**Client:** The Mannik & Smith Group, Inc.  
**Project:** Hillson Nut MS23-13; 401.ODAS003-19  
**Sample ID:** SB-17 (0-2')  
**Collection Date:** 5/23/2023 01:30 PM

**Work Order:** 23051029  
**Lab ID:** 23051029-23  
**Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Benzyl alcohol	ND		0.75	mg/Kg-dry	1	6/1/2023 07:32 PM
Bis(2-chloroethoxy)methane	ND		0.38	mg/Kg-dry	1	6/1/2023 07:32 PM
Bis(2-chloroethyl)ether	ND		0.38	mg/Kg-dry	1	6/1/2023 07:32 PM
Bis(2-chloroisopropyl)ether	ND		0.38	mg/Kg-dry	1	6/1/2023 07:32 PM
Bis(2-ethylhexyl)phthalate	ND		0.38	mg/Kg-dry	1	6/1/2023 07:32 PM
Butyl benzyl phthalate	ND		0.38	mg/Kg-dry	1	6/1/2023 07:32 PM
Carbazole	ND		0.23	mg/Kg-dry	1	6/1/2023 07:32 PM
Chrysene	ND		0.23	mg/Kg-dry	1	6/1/2023 07:32 PM
Dibenzo(a,h)anthracene	ND		0.11	mg/Kg-dry	1	6/1/2023 07:32 PM
Dibenzofuran	ND		0.23	mg/Kg-dry	1	6/1/2023 07:32 PM
Diethyl phthalate	ND		0.38	mg/Kg-dry	1	6/1/2023 07:32 PM
Dimethyl phthalate	ND		0.38	mg/Kg-dry	1	6/1/2023 07:32 PM
Di-n-butyl phthalate	ND		0.38	mg/Kg-dry	1	6/1/2023 07:32 PM
Di-n-octyl phthalate	ND		0.38	mg/Kg-dry	1	6/1/2023 07:32 PM
Dinoseb	ND		0.38	mg/Kg-dry	1	6/1/2023 07:32 PM
Diphenylamine	ND		0.38	mg/Kg-dry	1	6/1/2023 07:32 PM
Ethyl methanesulfonate	ND		0.38	mg/Kg-dry	1	6/1/2023 07:32 PM
<b>Fluoranthene</b>	<b>0.24</b>		<b>0.23</b>	<b>mg/Kg-dry</b>	1	6/1/2023 07:32 PM
Fluorene	ND		0.23	mg/Kg-dry	1	6/1/2023 07:32 PM
Hexachlorobenzene	ND		0.38	mg/Kg-dry	1	6/1/2023 07:32 PM
Hexachlorobutadiene	ND		0.38	mg/Kg-dry	1	6/1/2023 07:32 PM
Hexachlorocyclopentadiene	ND		0.38	mg/Kg-dry	1	6/1/2023 07:32 PM
Hexachloroethane	ND		0.38	mg/Kg-dry	1	6/1/2023 07:32 PM
Indeno(1,2,3-cd)pyrene	ND		0.11	mg/Kg-dry	1	6/1/2023 07:32 PM
Isophorone	ND		0.38	mg/Kg-dry	1	6/1/2023 07:32 PM
Isosafrole	ND		0.38	mg/Kg-dry	1	6/1/2023 07:32 PM
Methapyrilene	ND		1.9	mg/Kg-dry	1	6/1/2023 07:32 PM
Methyl methanesulfonate	ND		0.38	mg/Kg-dry	1	6/1/2023 07:32 PM
Naphthalene	ND		0.23	mg/Kg-dry	1	6/1/2023 07:32 PM
Nitrobenzene	ND		0.38	mg/Kg-dry	1	6/1/2023 07:32 PM
N-Nitrosodiethylamine	ND		0.38	mg/Kg-dry	1	6/1/2023 07:32 PM
N-Nitrosodimethylamine	ND		0.38	mg/Kg-dry	1	6/1/2023 07:32 PM
N-Nitroso-di-n-butylamine	ND		0.38	mg/Kg-dry	1	6/1/2023 07:32 PM
N-Nitrosodi-n-propylamine	ND		0.38	mg/Kg-dry	1	6/1/2023 07:32 PM
N-Nitrosomethylethylamine	ND		0.38	mg/Kg-dry	1	6/1/2023 07:32 PM
N-Nitrosomorpholine	ND		0.38	mg/Kg-dry	1	6/1/2023 07:32 PM
N-Nitrosopiperidine	ND		0.38	mg/Kg-dry	1	6/1/2023 07:32 PM
N-Nitrosopyrrolidine	ND		0.38	mg/Kg-dry	1	6/1/2023 07:32 PM
o-Toluidine	ND		1.9	mg/Kg-dry	1	6/1/2023 07:32 PM
p-Dimethylaminoazobenzene	ND		0.38	mg/Kg-dry	1	6/1/2023 07:32 PM

**Note:**

# ALS Environmental

Date: 09-Jun-23

**Client:** The Mannik & Smith Group, Inc.  
**Project:** Hillson Nut MS23-13; 401.ODAS003-19  
**Sample ID:** SB-17 (0-2')  
**Collection Date:** 5/23/2023 01:30 PM

**Work Order:** 23051029  
**Lab ID:** 23051029-23  
**Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Pentachlorobenzene	ND		0.38	mg/Kg-dry	1	6/1/2023 07:32 PM
Pentachloroethane	ND		0.38	mg/Kg-dry	1	6/1/2023 07:32 PM
Pentachloronitrobenzene	ND		0.75	mg/Kg-dry	1	6/1/2023 07:32 PM
Pentachlorophenol	ND		1.9	mg/Kg-dry	1	6/1/2023 07:32 PM
Phenacetin	ND		0.75	mg/Kg-dry	1	6/1/2023 07:32 PM
Phenanthrene	ND		0.23	mg/Kg-dry	1	6/1/2023 07:32 PM
Phenol	ND		0.38	mg/Kg-dry	1	6/1/2023 07:32 PM
Pyrene	ND		0.23	mg/Kg-dry	1	6/1/2023 07:32 PM
Pyridine	ND		0.38	mg/Kg-dry	1	6/1/2023 07:32 PM
Safrole	ND		0.38	mg/Kg-dry	1	6/1/2023 07:32 PM
<i>Surr: 2,4,6-Tribromophenol</i>	63.6		14.2-136	%REC	1	6/1/2023 07:32 PM
<i>Surr: 2-Fluorobiphenyl</i>	59.2		30-116	%REC	1	6/1/2023 07:32 PM
<i>Surr: 2-Fluorophenol</i>	54.5		24-105	%REC	1	6/1/2023 07:32 PM
<i>Surr: 4-Terphenyl-d14</i>	65.8		27.3-138	%REC	1	6/1/2023 07:32 PM
<i>Surr: Nitrobenzene-d5</i>	54.1		23.7-109	%REC	1	6/1/2023 07:32 PM
<i>Surr: Phenol-d5</i>	49.2		24.9-103	%REC	1	6/1/2023 07:32 PM

## VOLATILE ORGANIC COMPOUNDS

SW8260B

Analyst: LAK

1,1,1,2-Tetrachloroethane	ND		0.0040	mg/Kg-dry	1	5/26/2023 05:11 PM
1,1,1-Trichloroethane	ND		0.0040	mg/Kg-dry	1	5/26/2023 05:11 PM
1,1,2,2-Tetrachloroethane	ND		0.0040	mg/Kg-dry	1	5/26/2023 05:11 PM
1,1,2-Trichloroethane	ND		0.0040	mg/Kg-dry	1	5/26/2023 05:11 PM
1,1-Dichloroethane	ND		0.0040	mg/Kg-dry	1	5/26/2023 05:11 PM
1,1-Dichloroethene	ND		0.0040	mg/Kg-dry	1	5/26/2023 05:11 PM
1,1-Dichloropropene	ND		0.0040	mg/Kg-dry	1	5/26/2023 05:11 PM
1,2,3-Trichlorobenzene	ND		0.0040	mg/Kg-dry	1	5/26/2023 05:11 PM
1,2,3-Trichloropropane	ND		0.0040	mg/Kg-dry	1	5/26/2023 05:11 PM
1,2,4-Trichlorobenzene	ND		0.0040	mg/Kg-dry	1	5/26/2023 05:11 PM
1,2,4-Trimethylbenzene	ND		0.0040	mg/Kg-dry	1	5/26/2023 05:11 PM
1,2-Dibromo-3-chloropropane	ND		0.0040	mg/Kg-dry	1	5/26/2023 05:11 PM
1,2-Dibromoethane	ND		0.0040	mg/Kg-dry	1	5/26/2023 05:11 PM
1,2-Dichlorobenzene	ND		0.0040	mg/Kg-dry	1	5/26/2023 05:11 PM
1,2-Dichloroethane	ND		0.0040	mg/Kg-dry	1	5/26/2023 05:11 PM
1,2-Dichloropropane	ND		0.0040	mg/Kg-dry	1	5/26/2023 05:11 PM
1,3,5-Trimethylbenzene	ND		0.0040	mg/Kg-dry	1	5/26/2023 05:11 PM
1,3-Dichlorobenzene	ND		0.0040	mg/Kg-dry	1	5/26/2023 05:11 PM
1,3-Dichloropropane	ND		0.0040	mg/Kg-dry	1	5/26/2023 05:11 PM
1,4-Dichlorobenzene	ND		0.0040	mg/Kg-dry	1	5/26/2023 05:11 PM
2,2-Dichloropropane	ND		0.0040	mg/Kg-dry	1	5/26/2023 05:11 PM
2-Butanone	ND		0.040	mg/Kg-dry	1	5/26/2023 05:11 PM
2-Chlorotoluene	ND		0.0040	mg/Kg-dry	1	5/26/2023 05:11 PM

Note:



# ALS Environmental

Date: 09-Jun-23

**Client:** The Mannik & Smith Group, Inc.  
**Project:** Hillson Nut MS23-13; 401.ODAS003-19  
**Sample ID:** SB-17 (0-2')  
**Collection Date:** 5/23/2023 01:30 PM

**Work Order:** 23051029  
**Lab ID:** 23051029-23  
**Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
2-Hexanone	ND		0.0040	mg/Kg-dry	1	5/26/2023 05:11 PM
4-Chlorotoluene	ND		0.0040	mg/Kg-dry	1	5/26/2023 05:11 PM
4-Methyl-2-pentanone	ND		0.0040	mg/Kg-dry	1	5/26/2023 05:11 PM
Acetone	ND		0.040	mg/Kg-dry	1	5/26/2023 05:11 PM
Benzene	ND		0.0040	mg/Kg-dry	1	5/26/2023 05:11 PM
Bromobenzene	ND		0.0040	mg/Kg-dry	1	5/26/2023 05:11 PM
Bromochloromethane	ND		0.0040	mg/Kg-dry	1	5/26/2023 05:11 PM
Bromodichloromethane	ND		0.0040	mg/Kg-dry	1	5/26/2023 05:11 PM
Bromoform	ND		0.0040	mg/Kg-dry	1	5/26/2023 05:11 PM
Bromomethane	ND		0.0040	mg/Kg-dry	1	5/26/2023 05:11 PM
Carbon disulfide	ND		0.0040	mg/Kg-dry	1	5/26/2023 05:11 PM
Carbon tetrachloride	ND		0.0040	mg/Kg-dry	1	5/26/2023 05:11 PM
Chlorobenzene	ND		0.0040	mg/Kg-dry	1	5/26/2023 05:11 PM
Chloroethane	ND		0.0040	mg/Kg-dry	1	5/26/2023 05:11 PM
Chloroform	ND		0.0040	mg/Kg-dry	1	5/26/2023 05:11 PM
Chloromethane	ND		0.0040	mg/Kg-dry	1	5/26/2023 05:11 PM
cis-1,2-Dichloroethene	ND		0.0040	mg/Kg-dry	1	5/26/2023 05:11 PM
cis-1,3-Dichloropropene	ND		0.0040	mg/Kg-dry	1	5/26/2023 05:11 PM
Dibromochloromethane	ND		0.0040	mg/Kg-dry	1	5/26/2023 05:11 PM
Dibromomethane	ND		0.0040	mg/Kg-dry	1	5/26/2023 05:11 PM
Dichlorodifluoromethane	ND		0.0040	mg/Kg-dry	1	5/26/2023 05:11 PM
Ethylbenzene	ND		0.0040	mg/Kg-dry	1	5/26/2023 05:11 PM
Hexachlorobutadiene	ND		0.0040	mg/Kg-dry	1	5/26/2023 05:11 PM
Isopropylbenzene	ND		0.0040	mg/Kg-dry	1	5/26/2023 05:11 PM
m,p-Xylene	ND		0.0040	mg/Kg-dry	1	5/26/2023 05:11 PM
Methyl tert-butyl ether	ND		0.0040	mg/Kg-dry	1	5/26/2023 05:11 PM
Methylene chloride	ND		0.016	mg/Kg-dry	1	5/26/2023 05:11 PM
Naphthalene	ND		0.0040	mg/Kg-dry	1	5/26/2023 05:11 PM
n-Butylbenzene	ND		0.0040	mg/Kg-dry	1	5/26/2023 05:11 PM
n-Propylbenzene	ND		0.0040	mg/Kg-dry	1	5/26/2023 05:11 PM
o-Xylene	ND		0.0040	mg/Kg-dry	1	5/26/2023 05:11 PM
p-Isopropyltoluene	ND		0.0040	mg/Kg-dry	1	5/26/2023 05:11 PM
sec-Butylbenzene	ND		0.0040	mg/Kg-dry	1	5/26/2023 05:11 PM
Styrene	ND		0.0040	mg/Kg-dry	1	5/26/2023 05:11 PM
tert-Butylbenzene	ND		0.0040	mg/Kg-dry	1	5/26/2023 05:11 PM
Tetrachloroethene	ND		0.0040	mg/Kg-dry	1	5/26/2023 05:11 PM
Toluene	ND		0.0040	mg/Kg-dry	1	5/26/2023 05:11 PM
trans-1,2-Dichloroethene	ND		0.0040	mg/Kg-dry	1	5/26/2023 05:11 PM
trans-1,3-Dichloropropene	ND		0.0040	mg/Kg-dry	1	5/26/2023 05:11 PM
Trichloroethene	ND		0.0040	mg/Kg-dry	1	5/26/2023 05:11 PM

**Note:**

**ALS Environmental**

Date: 09-Jun-23

**Client:** The Mannik & Smith Group, Inc.  
**Project:** Hillson Nut MS23-13; 401.ODAS003-19  
**Sample ID:** SB-17 (0-2')  
**Collection Date:** 5/23/2023 01:30 PM

**Work Order:** 23051029  
**Lab ID:** 23051029-23  
**Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Trichlorofluoromethane	ND		0.0040	mg/Kg-dry	1	5/26/2023 05:11 PM
Vinyl chloride	ND		0.0040	mg/Kg-dry	1	5/26/2023 05:11 PM
Xylenes, Total	ND		0.0080	mg/Kg-dry	1	5/26/2023 05:11 PM
<i>Surr: 4-Bromofluorobenzene</i>	87.0		60-140	%REC	1	5/26/2023 05:11 PM
<i>Surr: Dibromofluoromethane</i>	91.5		60-140	%REC	1	5/26/2023 05:11 PM
<i>Surr: Toluene-d8</i>	91.5		60-140	%REC	1	5/26/2023 05:11 PM

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**Note:**

# ALS Environmental

Date: 09-Jun-23

**Client:** The Mannik & Smith Group, Inc.  
**Project:** Hillson Nut MS23-13; 401.ODAS003-19  
**Sample ID:** SB-20 (0-2')  
**Collection Date:** 5/23/2023 02:00 PM

**Work Order:** 23051029  
**Lab ID:** 23051029-24  
**Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
<b>PCBS</b>			<b>SW8082</b>	Prep: SW3546	6/5/23 13:18	Analyst: <b>TSA</b>
Aroclor 1016	ND		0.12	mg/Kg-dry	1	6/7/2023 09:01 PM
Aroclor 1221	ND		0.24	mg/Kg-dry	1	6/7/2023 09:01 PM
Aroclor 1232	ND		0.12	mg/Kg-dry	1	6/7/2023 09:01 PM
Aroclor 1242	ND		0.12	mg/Kg-dry	1	6/7/2023 09:01 PM
Aroclor 1248	ND		0.12	mg/Kg-dry	1	6/7/2023 09:01 PM
Aroclor 1254	ND		0.12	mg/Kg-dry	1	6/7/2023 09:01 PM
Aroclor 1260	ND		0.12	mg/Kg-dry	1	6/7/2023 09:01 PM
Aroclor 1262	ND		0.12	mg/Kg-dry	1	6/7/2023 09:01 PM
Aroclor 1268	ND		0.12	mg/Kg-dry	1	6/7/2023 09:01 PM
Surr: Decachlorobiphenyl	114		7.32-154	%REC	1	6/7/2023 09:01 PM
Surr: Tetrachloro-m-xylene	120		33.5-152	%REC	1	6/7/2023 09:01 PM
<b>MOISTURE</b>			<b>SM2540B</b>			Analyst: <b>CW</b>
Moisture	16			% of sample	1	6/1/2023
<b>MERCURY BY CVAA</b>			<b>SW7471A</b>	Prep: EPA 7471	6/2/23 11:36	Analyst: <b>SLT</b>
Mercury	6.0		1.7	mg/Kg-dry	5	6/5/2023 02:46 PM
<b>METALS BY ICP</b>			<b>SW6010B</b>	Prep: SW3050B	6/2/23 10:43	Analyst: <b>SLT</b>
Arsenic	25		5.7	mg/Kg-dry	1	6/2/2023 06:19 PM
Barium	160		23	mg/Kg-dry	1	6/2/2023 06:19 PM
Cadmium	1.5		1.1	mg/Kg-dry	1	6/2/2023 06:19 PM
Chromium	22		11	mg/Kg-dry	1	6/2/2023 06:19 PM
Lead	280		23	mg/Kg-dry	1	6/2/2023 06:19 PM
Selenium	ND		3.4	mg/Kg-dry	1	6/2/2023 06:19 PM
Silver	ND		5.7	mg/Kg-dry	1	6/2/2023 06:19 PM
<b>SEMI-VOLATILE ORGANIC COMPOUNDS</b>			<b>SW8270C</b>	Prep: SW3546	5/30/23 11:26	Analyst: <b>RA</b>
1,2,4,5-Tetrachlorobenzene	ND		0.39	mg/Kg-dry	1	6/1/2023 07:54 PM
1,2,4-Trichlorobenzene	ND		0.39	mg/Kg-dry	1	6/1/2023 07:54 PM
1,2-Dichlorobenzene	ND		0.39	mg/Kg-dry	1	6/1/2023 07:54 PM
1,3-Dichlorobenzene	ND		0.39	mg/Kg-dry	1	6/1/2023 07:54 PM
1,3-Dinitrobenzene	ND		0.39	mg/Kg-dry	1	6/1/2023 07:54 PM
1,4-Dichlorobenzene	ND		0.39	mg/Kg-dry	1	6/1/2023 07:54 PM
<b>1-Methylnaphthalene</b>	<b>0.49</b>		<b>0.24</b>	<b>mg/Kg-dry</b>	1	6/1/2023 07:54 PM
1-Naphthylamine	ND		0.39	mg/Kg-dry	1	6/1/2023 07:54 PM
2,3,4,6-Tetrachlorophenol	ND		0.39	mg/Kg-dry	1	6/1/2023 07:54 PM
2,4,5-Trichlorophenol	ND		0.39	mg/Kg-dry	1	6/1/2023 07:54 PM
2,4,6-Trichlorophenol	ND		0.39	mg/Kg-dry	1	6/1/2023 07:54 PM
2,4-Dichlorophenol	ND		0.39	mg/Kg-dry	1	6/1/2023 07:54 PM
2,4-Dimethylphenol	ND		0.39	mg/Kg-dry	1	6/1/2023 07:54 PM

Note:

# ALS Environmental

Date: 09-Jun-23

**Client:** The Mannik & Smith Group, Inc.  
**Project:** Hillson Nut MS23-13; 401.ODAS003-19  
**Sample ID:** SB-20 (0-2')  
**Collection Date:** 5/23/2023 02:00 PM

**Work Order:** 23051029  
**Lab ID:** 23051029-24  
**Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
2,4-Dinitrophenol	ND		2.0	mg/Kg-dry	1	6/1/2023 07:54 PM
2,4-Dinitrotoluene	ND		0.39	mg/Kg-dry	1	6/1/2023 07:54 PM
2,6-Dichlorophenol	ND		0.39	mg/Kg-dry	1	6/1/2023 07:54 PM
2,6-Dinitrotoluene	ND		0.39	mg/Kg-dry	1	6/1/2023 07:54 PM
2-Acetylaminofluorene	ND		0.39	mg/Kg-dry	1	6/1/2023 07:54 PM
2-Chloronaphthalene	ND		0.39	mg/Kg-dry	1	6/1/2023 07:54 PM
2-Chlorophenol	ND		0.39	mg/Kg-dry	1	6/1/2023 07:54 PM
<b>2-Methylnaphthalene</b>	<b>0.58</b>		<b>0.24</b>	<b>mg/Kg-dry</b>	1	6/1/2023 07:54 PM
2-Methylphenol	ND		0.39	mg/Kg-dry	1	6/1/2023 07:54 PM
2-Naphthylamine	ND		0.39	mg/Kg-dry	1	6/1/2023 07:54 PM
2-Nitroaniline	ND		2.0	mg/Kg-dry	1	6/1/2023 07:54 PM
2-Nitrophenol	ND		0.39	mg/Kg-dry	1	6/1/2023 07:54 PM
2-Picoline	ND		0.39	mg/Kg-dry	1	6/1/2023 07:54 PM
3&4-Methylphenol	ND		0.39	mg/Kg-dry	1	6/1/2023 07:54 PM
3,3'-Dichlorobenzidine	ND		0.79	mg/Kg-dry	1	6/1/2023 07:54 PM
3-Methylcholanthrene	ND		0.39	mg/Kg-dry	1	6/1/2023 07:54 PM
3-Nitroaniline	ND		2.0	mg/Kg-dry	1	6/1/2023 07:54 PM
4,6-Dinitro-2-methylphenol	ND		2.0	mg/Kg-dry	1	6/1/2023 07:54 PM
4-Aminobiphenyl	ND		0.79	mg/Kg-dry	1	6/1/2023 07:54 PM
4-Bromophenyl phenyl ether	ND		0.39	mg/Kg-dry	1	6/1/2023 07:54 PM
4-Chloro-3-methylphenol	ND		0.79	mg/Kg-dry	1	6/1/2023 07:54 PM
4-Chloroaniline	ND		0.79	mg/Kg-dry	1	6/1/2023 07:54 PM
4-Chlorophenyl phenyl ether	ND		0.39	mg/Kg-dry	1	6/1/2023 07:54 PM
4-Nitroaniline	ND		0.79	mg/Kg-dry	1	6/1/2023 07:54 PM
4-Nitrophenol	ND		2.0	mg/Kg-dry	1	6/1/2023 07:54 PM
4-Nitroquinoline 1-oxide	ND		2.0	mg/Kg-dry	1	6/1/2023 07:54 PM
5-Nitro-o-toluidine	ND		0.39	mg/Kg-dry	1	6/1/2023 07:54 PM
7,12-Dimethylbenz(a)anthracene	ND		0.39	mg/Kg-dry	1	6/1/2023 07:54 PM
Acenaphthene	ND		0.24	mg/Kg-dry	1	6/1/2023 07:54 PM
Acenaphthylene	ND		0.24	mg/Kg-dry	1	6/1/2023 07:54 PM
Acetophenone	ND		0.39	mg/Kg-dry	1	6/1/2023 07:54 PM
Aniline	ND		0.39	mg/Kg-dry	1	6/1/2023 07:54 PM
Anthracene	ND		0.24	mg/Kg-dry	1	6/1/2023 07:54 PM
Azobenzene	ND		0.39	mg/Kg-dry	1	6/1/2023 07:54 PM
Benzidine	ND		0.39	mg/Kg-dry	1	6/1/2023 07:54 PM
<b>Benzo(a)anthracene</b>	<b>1.3</b>		<b>0.12</b>	<b>mg/Kg-dry</b>	1	6/1/2023 07:54 PM
<b>Benzo(a)pyrene</b>	<b>1.3</b>		<b>0.12</b>	<b>mg/Kg-dry</b>	1	6/1/2023 07:54 PM
<b>Benzo(b)fluoranthene</b>	<b>1.6</b>		<b>0.24</b>	<b>mg/Kg-dry</b>	1	6/1/2023 07:54 PM
<b>Benzo(g,h,i)perylene</b>	<b>0.75</b>		<b>0.24</b>	<b>mg/Kg-dry</b>	1	6/1/2023 07:54 PM
<b>Benzo(k)fluoranthene</b>	<b>0.54</b>		<b>0.24</b>	<b>mg/Kg-dry</b>	1	6/1/2023 07:54 PM

Note:

# ALS Environmental

Date: 09-Jun-23

**Client:** The Mannik & Smith Group, Inc.  
**Project:** Hillson Nut MS23-13; 401.ODAS003-19  
**Sample ID:** SB-20 (0-2')  
**Collection Date:** 5/23/2023 02:00 PM

**Work Order:** 23051029  
**Lab ID:** 23051029-24  
**Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Benzyl alcohol	ND		0.79	mg/Kg-dry	1	6/1/2023 07:54 PM
Bis(2-chloroethoxy)methane	ND		0.39	mg/Kg-dry	1	6/1/2023 07:54 PM
Bis(2-chloroethyl)ether	ND		0.39	mg/Kg-dry	1	6/1/2023 07:54 PM
Bis(2-chloroisopropyl)ether	ND		0.39	mg/Kg-dry	1	6/1/2023 07:54 PM
Bis(2-ethylhexyl)phthalate	ND		0.39	mg/Kg-dry	1	6/1/2023 07:54 PM
Butyl benzyl phthalate	ND		0.39	mg/Kg-dry	1	6/1/2023 07:54 PM
Carbazole	ND		0.24	mg/Kg-dry	1	6/1/2023 07:54 PM
<b>Chrysene</b>	<b>1.4</b>		<b>0.24</b>	<b>mg/Kg-dry</b>	1	6/1/2023 07:54 PM
<b>Dibenzo(a,h)anthracene</b>	<b>0.24</b>		<b>0.12</b>	<b>mg/Kg-dry</b>	1	6/1/2023 07:54 PM
Dibenzofuran	ND		0.24	mg/Kg-dry	1	6/1/2023 07:54 PM
Diethyl phthalate	ND		0.39	mg/Kg-dry	1	6/1/2023 07:54 PM
Dimethyl phthalate	ND		0.39	mg/Kg-dry	1	6/1/2023 07:54 PM
Di-n-butyl phthalate	ND		0.39	mg/Kg-dry	1	6/1/2023 07:54 PM
Di-n-octyl phthalate	ND		0.39	mg/Kg-dry	1	6/1/2023 07:54 PM
Dinoseb	ND		0.39	mg/Kg-dry	1	6/1/2023 07:54 PM
Diphenylamine	ND		0.39	mg/Kg-dry	1	6/1/2023 07:54 PM
Ethyl methanesulfonate	ND		0.39	mg/Kg-dry	1	6/1/2023 07:54 PM
<b>Fluoranthene</b>	<b>2.4</b>		<b>0.24</b>	<b>mg/Kg-dry</b>	1	6/1/2023 07:54 PM
Fluorene	ND		0.24	mg/Kg-dry	1	6/1/2023 07:54 PM
Hexachlorobenzene	ND		0.39	mg/Kg-dry	1	6/1/2023 07:54 PM
Hexachlorobutadiene	ND		0.39	mg/Kg-dry	1	6/1/2023 07:54 PM
Hexachlorocyclopentadiene	ND		0.39	mg/Kg-dry	1	6/1/2023 07:54 PM
Hexachloroethane	ND		0.39	mg/Kg-dry	1	6/1/2023 07:54 PM
<b>Indeno(1,2,3-cd)pyrene</b>	<b>0.72</b>		<b>0.12</b>	<b>mg/Kg-dry</b>	1	6/1/2023 07:54 PM
Isophorone	ND		0.39	mg/Kg-dry	1	6/1/2023 07:54 PM
Isosafrole	ND		0.39	mg/Kg-dry	1	6/1/2023 07:54 PM
Methapyrilene	ND		2.0	mg/Kg-dry	1	6/1/2023 07:54 PM
Methyl methanesulfonate	ND		0.39	mg/Kg-dry	1	6/1/2023 07:54 PM
<b>Naphthalene</b>	<b>0.35</b>		<b>0.24</b>	<b>mg/Kg-dry</b>	1	6/1/2023 07:54 PM
Nitrobenzene	ND		0.39	mg/Kg-dry	1	6/1/2023 07:54 PM
N-Nitrosodiethylamine	ND		0.39	mg/Kg-dry	1	6/1/2023 07:54 PM
N-Nitrosodimethylamine	ND		0.39	mg/Kg-dry	1	6/1/2023 07:54 PM
N-Nitroso-di-n-butylamine	ND		0.39	mg/Kg-dry	1	6/1/2023 07:54 PM
N-Nitrosodi-n-propylamine	ND		0.39	mg/Kg-dry	1	6/1/2023 07:54 PM
N-Nitrosomethylethylamine	ND		0.39	mg/Kg-dry	1	6/1/2023 07:54 PM
N-Nitrosomorpholine	ND		0.39	mg/Kg-dry	1	6/1/2023 07:54 PM
N-Nitrosopiperidine	ND		0.39	mg/Kg-dry	1	6/1/2023 07:54 PM
N-Nitrosopyrrolidine	ND		0.39	mg/Kg-dry	1	6/1/2023 07:54 PM
o-Toluidine	ND		2.0	mg/Kg-dry	1	6/1/2023 07:54 PM
p-Dimethylaminoazobenzene	ND		0.39	mg/Kg-dry	1	6/1/2023 07:54 PM

**Note:**

# ALS Environmental

Date: 09-Jun-23

**Client:** The Mannik & Smith Group, Inc.  
**Project:** Hillson Nut MS23-13; 401.ODAS003-19  
**Sample ID:** SB-20 (0-2')  
**Collection Date:** 5/23/2023 02:00 PM

**Work Order:** 23051029  
**Lab ID:** 23051029-24  
**Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Pentachlorobenzene	ND		0.39	mg/Kg-dry	1	6/1/2023 07:54 PM
Pentachloroethane	ND		0.39	mg/Kg-dry	1	6/1/2023 07:54 PM
Pentachloronitrobenzene	ND		0.79	mg/Kg-dry	1	6/1/2023 07:54 PM
Pentachlorophenol	ND		2.0	mg/Kg-dry	1	6/1/2023 07:54 PM
Phenacetin	ND		0.79	mg/Kg-dry	1	6/1/2023 07:54 PM
<b>Phenanthrene</b>	<b>1.3</b>		<b>0.24</b>	<b>mg/Kg-dry</b>	1	6/1/2023 07:54 PM
Phenol	ND		0.39	mg/Kg-dry	1	6/1/2023 07:54 PM
<b>Pyrene</b>	<b>2.0</b>		<b>0.24</b>	<b>mg/Kg-dry</b>	1	6/1/2023 07:54 PM
Pyridine	ND		0.39	mg/Kg-dry	1	6/1/2023 07:54 PM
Safrole	ND		0.39	mg/Kg-dry	1	6/1/2023 07:54 PM
<i>Surr: 2,4,6-Tribromophenol</i>	<i>61.3</i>		<i>14.2-136</i>	<i>%REC</i>	1	6/1/2023 07:54 PM
<i>Surr: 2-Fluorobiphenyl</i>	<i>58.1</i>		<i>30-116</i>	<i>%REC</i>	1	6/1/2023 07:54 PM
<i>Surr: 2-Fluorophenol</i>	<i>39.8</i>		<i>24-105</i>	<i>%REC</i>	1	6/1/2023 07:54 PM
<i>Surr: 4-Terphenyl-d14</i>	<i>67.5</i>		<i>27.3-138</i>	<i>%REC</i>	1	6/1/2023 07:54 PM
<i>Surr: Nitrobenzene-d5</i>	<i>49.7</i>		<i>23.7-109</i>	<i>%REC</i>	1	6/1/2023 07:54 PM
<i>Surr: Phenol-d5</i>	<i>40.3</i>		<i>24.9-103</i>	<i>%REC</i>	1	6/1/2023 07:54 PM

## VOLATILE ORGANIC COMPOUNDS

SW8260B

Analyst: LAK

1,1,1,2-Tetrachloroethane	ND		0.0051	mg/Kg-dry	1	5/26/2023 05:33 PM
1,1,1-Trichloroethane	ND		0.0051	mg/Kg-dry	1	5/26/2023 05:33 PM
1,1,2,2-Tetrachloroethane	ND		0.0051	mg/Kg-dry	1	5/26/2023 05:33 PM
1,1,2-Trichloroethane	ND		0.0051	mg/Kg-dry	1	5/26/2023 05:33 PM
1,1-Dichloroethane	ND		0.0051	mg/Kg-dry	1	5/26/2023 05:33 PM
1,1-Dichloroethene	ND		0.0051	mg/Kg-dry	1	5/26/2023 05:33 PM
1,1-Dichloropropene	ND		0.0051	mg/Kg-dry	1	5/26/2023 05:33 PM
1,2,3-Trichlorobenzene	ND		0.0051	mg/Kg-dry	1	5/26/2023 05:33 PM
1,2,3-Trichloropropane	ND		0.0051	mg/Kg-dry	1	5/26/2023 05:33 PM
1,2,4-Trichlorobenzene	ND		0.0051	mg/Kg-dry	1	5/26/2023 05:33 PM
1,2,4-Trimethylbenzene	ND		0.0051	mg/Kg-dry	1	5/26/2023 05:33 PM
1,2-Dibromo-3-chloropropane	ND		0.0051	mg/Kg-dry	1	5/26/2023 05:33 PM
1,2-Dibromoethane	ND		0.0051	mg/Kg-dry	1	5/26/2023 05:33 PM
1,2-Dichlorobenzene	ND		0.0051	mg/Kg-dry	1	5/26/2023 05:33 PM
1,2-Dichloroethane	ND		0.0051	mg/Kg-dry	1	5/26/2023 05:33 PM
1,2-Dichloropropane	ND		0.0051	mg/Kg-dry	1	5/26/2023 05:33 PM
1,3,5-Trimethylbenzene	ND		0.0051	mg/Kg-dry	1	5/26/2023 05:33 PM
1,3-Dichlorobenzene	ND		0.0051	mg/Kg-dry	1	5/26/2023 05:33 PM
1,3-Dichloropropane	ND		0.0051	mg/Kg-dry	1	5/26/2023 05:33 PM
1,4-Dichlorobenzene	ND		0.0051	mg/Kg-dry	1	5/26/2023 05:33 PM
2,2-Dichloropropane	ND		0.0051	mg/Kg-dry	1	5/26/2023 05:33 PM
2-Butanone	ND		0.051	mg/Kg-dry	1	5/26/2023 05:33 PM
2-Chlorotoluene	ND		0.0051	mg/Kg-dry	1	5/26/2023 05:33 PM

Note:

# ALS Environmental

Date: 09-Jun-23

**Client:** The Mannik & Smith Group, Inc.  
**Project:** Hillson Nut MS23-13; 401.ODAS003-19  
**Sample ID:** SB-20 (0-2')  
**Collection Date:** 5/23/2023 02:00 PM

**Work Order:** 23051029  
**Lab ID:** 23051029-24  
**Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
2-Hexanone	ND		0.0051	mg/Kg-dry	1	5/26/2023 05:33 PM
4-Chlorotoluene	ND		0.0051	mg/Kg-dry	1	5/26/2023 05:33 PM
4-Methyl-2-pentanone	ND		0.0051	mg/Kg-dry	1	5/26/2023 05:33 PM
Acetone	ND		0.051	mg/Kg-dry	1	5/26/2023 05:33 PM
Benzene	ND		0.0051	mg/Kg-dry	1	5/26/2023 05:33 PM
Bromobenzene	ND		0.0051	mg/Kg-dry	1	5/26/2023 05:33 PM
Bromochloromethane	ND		0.0051	mg/Kg-dry	1	5/26/2023 05:33 PM
Bromodichloromethane	ND		0.0051	mg/Kg-dry	1	5/26/2023 05:33 PM
Bromoform	ND		0.0051	mg/Kg-dry	1	5/26/2023 05:33 PM
Bromomethane	ND		0.0051	mg/Kg-dry	1	5/26/2023 05:33 PM
Carbon disulfide	ND		0.0051	mg/Kg-dry	1	5/26/2023 05:33 PM
Carbon tetrachloride	ND		0.0051	mg/Kg-dry	1	5/26/2023 05:33 PM
Chlorobenzene	ND		0.0051	mg/Kg-dry	1	5/26/2023 05:33 PM
Chloroethane	ND		0.0051	mg/Kg-dry	1	5/26/2023 05:33 PM
Chloroform	ND		0.0051	mg/Kg-dry	1	5/26/2023 05:33 PM
Chloromethane	ND		0.0051	mg/Kg-dry	1	5/26/2023 05:33 PM
cis-1,2-Dichloroethene	ND		0.0051	mg/Kg-dry	1	5/26/2023 05:33 PM
cis-1,3-Dichloropropene	ND		0.0051	mg/Kg-dry	1	5/26/2023 05:33 PM
Dibromochloromethane	ND		0.0051	mg/Kg-dry	1	5/26/2023 05:33 PM
Dibromomethane	ND		0.0051	mg/Kg-dry	1	5/26/2023 05:33 PM
Dichlorodifluoromethane	ND		0.0051	mg/Kg-dry	1	5/26/2023 05:33 PM
Ethylbenzene	ND		0.0051	mg/Kg-dry	1	5/26/2023 05:33 PM
Hexachlorobutadiene	ND		0.0051	mg/Kg-dry	1	5/26/2023 05:33 PM
Isopropylbenzene	ND		0.0051	mg/Kg-dry	1	5/26/2023 05:33 PM
m,p-Xylene	ND		0.0051	mg/Kg-dry	1	5/26/2023 05:33 PM
Methyl tert-butyl ether	ND		0.0051	mg/Kg-dry	1	5/26/2023 05:33 PM
Methylene chloride	ND		0.021	mg/Kg-dry	1	5/26/2023 05:33 PM
Naphthalene	ND		0.0051	mg/Kg-dry	1	5/26/2023 05:33 PM
n-Butylbenzene	ND		0.0051	mg/Kg-dry	1	5/26/2023 05:33 PM
n-Propylbenzene	ND		0.0051	mg/Kg-dry	1	5/26/2023 05:33 PM
o-Xylene	ND		0.0051	mg/Kg-dry	1	5/26/2023 05:33 PM
p-Isopropyltoluene	ND		0.0051	mg/Kg-dry	1	5/26/2023 05:33 PM
sec-Butylbenzene	ND		0.0051	mg/Kg-dry	1	5/26/2023 05:33 PM
Styrene	ND		0.0051	mg/Kg-dry	1	5/26/2023 05:33 PM
tert-Butylbenzene	ND		0.0051	mg/Kg-dry	1	5/26/2023 05:33 PM
Tetrachloroethene	ND		0.0051	mg/Kg-dry	1	5/26/2023 05:33 PM
Toluene	ND		0.0051	mg/Kg-dry	1	5/26/2023 05:33 PM
trans-1,2-Dichloroethene	ND		0.0051	mg/Kg-dry	1	5/26/2023 05:33 PM
trans-1,3-Dichloropropene	ND		0.0051	mg/Kg-dry	1	5/26/2023 05:33 PM
Trichloroethene	ND		0.0051	mg/Kg-dry	1	5/26/2023 05:33 PM

**Note:**

# ALS Environmental

Date: 09-Jun-23

**Client:** The Mannik & Smith Group, Inc.  
**Project:** Hillson Nut MS23-13; 401.ODAS003-19  
**Sample ID:** SB-20 (0-2')  
**Collection Date:** 5/23/2023 02:00 PM

**Work Order:** 23051029  
**Lab ID:** 23051029-24  
**Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Trichlorofluoromethane	ND		0.0051	mg/Kg-dry	1	5/26/2023 05:33 PM
Vinyl chloride	ND		0.0051	mg/Kg-dry	1	5/26/2023 05:33 PM
Xylenes, Total	ND		0.010	mg/Kg-dry	1	5/26/2023 05:33 PM
<i>Surr: 4-Bromofluorobenzene</i>	91.8		60-140	%REC	1	5/26/2023 05:33 PM
<i>Surr: Dibromofluoromethane</i>	90.6		60-140	%REC	1	5/26/2023 05:33 PM
<i>Surr: Toluene-d8</i>	90.2		60-140	%REC	1	5/26/2023 05:33 PM

**Note:**



# ALS Environmental

Date: 09-Jun-23

**Client:** The Mannik & Smith Group, Inc.  
**Project:** Hillson Nut MS23-13; 401.ODAS003-19  
**Sample ID:** SB-21 (0-2')  
**Collection Date:** 5/23/2023 02:15 PM

**Work Order:** 23051029  
**Lab ID:** 23051029-25  
**Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
<b>PCBS</b>			<b>SW8082</b>	Prep: SW3546	6/5/23 13:18	Analyst: <b>TSA</b>
Aroclor 1016	ND		0.11	mg/Kg-dry	1	6/7/2023 09:17 PM
Aroclor 1221	ND		0.22	mg/Kg-dry	1	6/7/2023 09:17 PM
Aroclor 1232	ND		0.11	mg/Kg-dry	1	6/7/2023 09:17 PM
Aroclor 1242	ND		0.11	mg/Kg-dry	1	6/7/2023 09:17 PM
Aroclor 1248	ND		0.11	mg/Kg-dry	1	6/7/2023 09:17 PM
Aroclor 1254	ND		0.11	mg/Kg-dry	1	6/7/2023 09:17 PM
Aroclor 1260	ND		0.11	mg/Kg-dry	1	6/7/2023 09:17 PM
Aroclor 1262	ND		0.11	mg/Kg-dry	1	6/7/2023 09:17 PM
Aroclor 1268	ND		0.11	mg/Kg-dry	1	6/7/2023 09:17 PM
Surr: Decachlorobiphenyl	122		7.32-154	%REC	1	6/7/2023 09:17 PM
Surr: Tetrachloro-m-xylene	124		33.5-152	%REC	1	6/7/2023 09:17 PM
<b>MOISTURE</b>			<b>SM2540B</b>			Analyst: <b>CW</b>
Moisture	11			% of sample	1	6/1/2023
<b>MERCURY BY CVAA</b>			<b>SW7471A</b>	Prep: EPA 7471	6/2/23 11:36	Analyst: <b>SLT</b>
Mercury	3.6		1.6	mg/Kg-dry	5	6/5/2023 02:48 PM
<b>METALS BY ICP</b>			<b>SW6010B</b>	Prep: SW3050B	6/2/23 10:43	Analyst: <b>SLT</b>
Arsenic	6.7		5.5	mg/Kg-dry	1	6/2/2023 06:42 PM
Barium	81		22	mg/Kg-dry	1	6/2/2023 06:42 PM
Cadmium	2.9		1.1	mg/Kg-dry	1	6/2/2023 06:42 PM
Chromium	50		11	mg/Kg-dry	1	6/2/2023 06:42 PM
Lead	53		22	mg/Kg-dry	1	6/2/2023 06:42 PM
Selenium	ND		3.3	mg/Kg-dry	1	6/2/2023 06:42 PM
Silver	ND		5.5	mg/Kg-dry	1	6/2/2023 06:42 PM
<b>SEMI-VOLATILE ORGANIC COMPOUNDS</b>			<b>SW8270C</b>	Prep: SW3546	5/30/23 11:26	Analyst: <b>RA</b>
1,2,4,5-Tetrachlorobenzene	ND		0.37	mg/Kg-dry	1	6/1/2023 08:16 PM
1,2,4-Trichlorobenzene	ND		0.37	mg/Kg-dry	1	6/1/2023 08:16 PM
1,2-Dichlorobenzene	ND		0.37	mg/Kg-dry	1	6/1/2023 08:16 PM
1,3-Dichlorobenzene	ND		0.37	mg/Kg-dry	1	6/1/2023 08:16 PM
1,3-Dinitrobenzene	ND		0.37	mg/Kg-dry	1	6/1/2023 08:16 PM
1,4-Dichlorobenzene	ND		0.37	mg/Kg-dry	1	6/1/2023 08:16 PM
1-Methylnaphthalene	ND		0.22	mg/Kg-dry	1	6/1/2023 08:16 PM
1-Naphthylamine	ND		0.37	mg/Kg-dry	1	6/1/2023 08:16 PM
2,3,4,6-Tetrachlorophenol	ND		0.37	mg/Kg-dry	1	6/1/2023 08:16 PM
2,4,5-Trichlorophenol	ND		0.37	mg/Kg-dry	1	6/1/2023 08:16 PM
2,4,6-Trichlorophenol	ND		0.37	mg/Kg-dry	1	6/1/2023 08:16 PM
2,4-Dichlorophenol	ND		0.37	mg/Kg-dry	1	6/1/2023 08:16 PM
2,4-Dimethylphenol	ND		0.37	mg/Kg-dry	1	6/1/2023 08:16 PM

Note:

# ALS Environmental

Date: 09-Jun-23

**Client:** The Mannik & Smith Group, Inc.  
**Project:** Hillson Nut MS23-13; 401.ODAS003-19  
**Sample ID:** SB-21 (0-2')  
**Collection Date:** 5/23/2023 02:15 PM

**Work Order:** 23051029  
**Lab ID:** 23051029-25  
**Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
2,4-Dinitrophenol	ND		1.9	mg/Kg-dry	1	6/1/2023 08:16 PM
2,4-Dinitrotoluene	ND		0.37	mg/Kg-dry	1	6/1/2023 08:16 PM
2,6-Dichlorophenol	ND		0.37	mg/Kg-dry	1	6/1/2023 08:16 PM
2,6-Dinitrotoluene	ND		0.37	mg/Kg-dry	1	6/1/2023 08:16 PM
2-Acetylaminofluorene	ND		0.37	mg/Kg-dry	1	6/1/2023 08:16 PM
2-Chloronaphthalene	ND		0.37	mg/Kg-dry	1	6/1/2023 08:16 PM
2-Chlorophenol	ND		0.37	mg/Kg-dry	1	6/1/2023 08:16 PM
2-Methylnaphthalene	ND		0.22	mg/Kg-dry	1	6/1/2023 08:16 PM
2-Methylphenol	ND		0.37	mg/Kg-dry	1	6/1/2023 08:16 PM
2-Naphthylamine	ND		0.37	mg/Kg-dry	1	6/1/2023 08:16 PM
2-Nitroaniline	ND		1.9	mg/Kg-dry	1	6/1/2023 08:16 PM
2-Nitrophenol	ND		0.37	mg/Kg-dry	1	6/1/2023 08:16 PM
2-Picoline	ND		0.37	mg/Kg-dry	1	6/1/2023 08:16 PM
3&4-Methylphenol	ND		0.37	mg/Kg-dry	1	6/1/2023 08:16 PM
3,3'-Dichlorobenzidine	ND		0.74	mg/Kg-dry	1	6/1/2023 08:16 PM
3-Methylcholanthrene	ND		0.37	mg/Kg-dry	1	6/1/2023 08:16 PM
3-Nitroaniline	ND		1.9	mg/Kg-dry	1	6/1/2023 08:16 PM
4,6-Dinitro-2-methylphenol	ND		1.9	mg/Kg-dry	1	6/1/2023 08:16 PM
4-Aminobiphenyl	ND		0.74	mg/Kg-dry	1	6/1/2023 08:16 PM
4-Bromophenyl phenyl ether	ND		0.37	mg/Kg-dry	1	6/1/2023 08:16 PM
4-Chloro-3-methylphenol	ND		0.74	mg/Kg-dry	1	6/1/2023 08:16 PM
4-Chloroaniline	ND		0.74	mg/Kg-dry	1	6/1/2023 08:16 PM
4-Chlorophenyl phenyl ether	ND		0.37	mg/Kg-dry	1	6/1/2023 08:16 PM
4-Nitroaniline	ND		0.74	mg/Kg-dry	1	6/1/2023 08:16 PM
4-Nitrophenol	ND		1.9	mg/Kg-dry	1	6/1/2023 08:16 PM
4-Nitroquinoline 1-oxide	ND		1.9	mg/Kg-dry	1	6/1/2023 08:16 PM
5-Nitro-o-toluidine	ND		0.37	mg/Kg-dry	1	6/1/2023 08:16 PM
7,12-Dimethylbenz(a)anthracene	ND		0.37	mg/Kg-dry	1	6/1/2023 08:16 PM
Acenaphthene	ND		0.22	mg/Kg-dry	1	6/1/2023 08:16 PM
Acenaphthylene	ND		0.22	mg/Kg-dry	1	6/1/2023 08:16 PM
Acetophenone	ND		0.37	mg/Kg-dry	1	6/1/2023 08:16 PM
Aniline	ND		0.37	mg/Kg-dry	1	6/1/2023 08:16 PM
<b>Anthracene</b>	<b>0.36</b>		<b>0.22</b>	<b>mg/Kg-dry</b>	1	6/1/2023 08:16 PM
Azobenzene	ND		0.37	mg/Kg-dry	1	6/1/2023 08:16 PM
Benzidine	ND		0.37	mg/Kg-dry	1	6/1/2023 08:16 PM
<b>Benzo(a)anthracene</b>	<b>1.1</b>		<b>0.11</b>	<b>mg/Kg-dry</b>	1	6/1/2023 08:16 PM
<b>Benzo(a)pyrene</b>	<b>1.0</b>		<b>0.11</b>	<b>mg/Kg-dry</b>	1	6/1/2023 08:16 PM
<b>Benzo(b)fluoranthene</b>	<b>1.2</b>		<b>0.22</b>	<b>mg/Kg-dry</b>	1	6/1/2023 08:16 PM
<b>Benzo(g,h,i)perylene</b>	<b>0.66</b>		<b>0.22</b>	<b>mg/Kg-dry</b>	1	6/1/2023 08:16 PM
<b>Benzo(k)fluoranthene</b>	<b>0.41</b>		<b>0.22</b>	<b>mg/Kg-dry</b>	1	6/1/2023 08:16 PM

Note:

# ALS Environmental

Date: 09-Jun-23

**Client:** The Mannik & Smith Group, Inc.  
**Project:** Hillson Nut MS23-13; 401.ODAS003-19  
**Sample ID:** SB-21 (0-2')  
**Collection Date:** 5/23/2023 02:15 PM

**Work Order:** 23051029  
**Lab ID:** 23051029-25  
**Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Benzyl alcohol	ND		0.74	mg/Kg-dry	1	6/1/2023 08:16 PM
Bis(2-chloroethoxy)methane	ND		0.37	mg/Kg-dry	1	6/1/2023 08:16 PM
Bis(2-chloroethyl)ether	ND		0.37	mg/Kg-dry	1	6/1/2023 08:16 PM
Bis(2-chloroisopropyl)ether	ND		0.37	mg/Kg-dry	1	6/1/2023 08:16 PM
Bis(2-ethylhexyl)phthalate	ND		0.37	mg/Kg-dry	1	6/1/2023 08:16 PM
<b>Butyl benzyl phthalate</b>	<b>15</b>		<b>3.7</b>	<b>mg/Kg-dry</b>	<b>10</b>	6/2/2023 12:59 PM
Carbazole	ND		0.22	mg/Kg-dry	1	6/1/2023 08:16 PM
<b>Chrysene</b>	<b>1.1</b>		<b>0.22</b>	<b>mg/Kg-dry</b>	<b>1</b>	6/1/2023 08:16 PM
<b>Dibenzo(a,h)anthracene</b>	<b>0.17</b>		<b>0.11</b>	<b>mg/Kg-dry</b>	<b>1</b>	6/1/2023 08:16 PM
Dibenzofuran	ND		0.22	mg/Kg-dry	1	6/1/2023 08:16 PM
Diethyl phthalate	ND		0.37	mg/Kg-dry	1	6/1/2023 08:16 PM
Dimethyl phthalate	ND		0.37	mg/Kg-dry	1	6/1/2023 08:16 PM
<b>Di-n-butyl phthalate</b>	<b>0.49</b>		<b>0.37</b>	<b>mg/Kg-dry</b>	<b>1</b>	6/1/2023 08:16 PM
Di-n-octyl phthalate	ND		0.37	mg/Kg-dry	1	6/1/2023 08:16 PM
Dinoseb	ND		0.37	mg/Kg-dry	1	6/1/2023 08:16 PM
Diphenylamine	ND		0.37	mg/Kg-dry	1	6/1/2023 08:16 PM
Ethyl methanesulfonate	ND		0.37	mg/Kg-dry	1	6/1/2023 08:16 PM
<b>Fluoranthene</b>	<b>2.2</b>		<b>0.22</b>	<b>mg/Kg-dry</b>	<b>1</b>	6/1/2023 08:16 PM
Fluorene	ND		0.22	mg/Kg-dry	1	6/1/2023 08:16 PM
Hexachlorobenzene	ND		0.37	mg/Kg-dry	1	6/1/2023 08:16 PM
Hexachlorobutadiene	ND		0.37	mg/Kg-dry	1	6/1/2023 08:16 PM
Hexachlorocyclopentadiene	ND		0.37	mg/Kg-dry	1	6/1/2023 08:16 PM
Hexachloroethane	ND		0.37	mg/Kg-dry	1	6/1/2023 08:16 PM
<b>Indeno(1,2,3-cd)pyrene</b>	<b>0.57</b>		<b>0.11</b>	<b>mg/Kg-dry</b>	<b>1</b>	6/1/2023 08:16 PM
Isophorone	ND		0.37	mg/Kg-dry	1	6/1/2023 08:16 PM
Isosafrole	ND		0.37	mg/Kg-dry	1	6/1/2023 08:16 PM
Methapyrilene	ND		1.9	mg/Kg-dry	1	6/1/2023 08:16 PM
Methyl methanesulfonate	ND		0.37	mg/Kg-dry	1	6/1/2023 08:16 PM
Naphthalene	ND		0.22	mg/Kg-dry	1	6/1/2023 08:16 PM
Nitrobenzene	ND		0.37	mg/Kg-dry	1	6/1/2023 08:16 PM
N-Nitrosodiethylamine	ND		0.37	mg/Kg-dry	1	6/1/2023 08:16 PM
N-Nitrosodimethylamine	ND		0.37	mg/Kg-dry	1	6/1/2023 08:16 PM
N-Nitroso-di-n-butylamine	ND		0.37	mg/Kg-dry	1	6/1/2023 08:16 PM
N-Nitrosodi-n-propylamine	ND		0.37	mg/Kg-dry	1	6/1/2023 08:16 PM
N-Nitrosomethylethylamine	ND		0.37	mg/Kg-dry	1	6/1/2023 08:16 PM
N-Nitrosomorpholine	ND		0.37	mg/Kg-dry	1	6/1/2023 08:16 PM
N-Nitrosopiperidine	ND		0.37	mg/Kg-dry	1	6/1/2023 08:16 PM
N-Nitrosopyrrolidine	ND		0.37	mg/Kg-dry	1	6/1/2023 08:16 PM
o-Toluidine	ND		1.9	mg/Kg-dry	1	6/1/2023 08:16 PM
p-Dimethylaminoazobenzene	ND		0.37	mg/Kg-dry	1	6/1/2023 08:16 PM

**Note:**

# ALS Environmental

Date: 09-Jun-23

**Client:** The Mannik & Smith Group, Inc.  
**Project:** Hillson Nut MS23-13; 401.ODAS003-19  
**Sample ID:** SB-21 (0-2')  
**Collection Date:** 5/23/2023 02:15 PM

**Work Order:** 23051029  
**Lab ID:** 23051029-25  
**Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Pentachlorobenzene	ND		0.37	mg/Kg-dry	1	6/1/2023 08:16 PM
Pentachloroethane	ND		0.37	mg/Kg-dry	1	6/1/2023 08:16 PM
Pentachloronitrobenzene	ND		0.74	mg/Kg-dry	1	6/1/2023 08:16 PM
Pentachlorophenol	ND		1.9	mg/Kg-dry	1	6/1/2023 08:16 PM
Phenacetin	ND		0.74	mg/Kg-dry	1	6/1/2023 08:16 PM
<b>Phenanthrene</b>	<b>1.6</b>		<b>0.22</b>	<b>mg/Kg-dry</b>	1	6/1/2023 08:16 PM
Phenol	ND		0.37	mg/Kg-dry	1	6/1/2023 08:16 PM
<b>Pyrene</b>	<b>1.7</b>		<b>0.22</b>	<b>mg/Kg-dry</b>	1	6/1/2023 08:16 PM
Pyridine	ND		0.37	mg/Kg-dry	1	6/1/2023 08:16 PM
Safrole	ND		0.37	mg/Kg-dry	1	6/1/2023 08:16 PM
<i>Surr: 2,4,6-Tribromophenol</i>	1.58	S	14.2-136	%REC	1	6/1/2023 08:16 PM
<i>Surr: 2-Fluorobiphenyl</i>	63.8		30-116	%REC	1	6/1/2023 08:16 PM
<i>Surr: 2-Fluorophenol</i>	12.9	S	24-105	%REC	1	6/1/2023 08:16 PM
<i>Surr: 4-Terphenyl-d14</i>	65.9		27.3-138	%REC	1	6/1/2023 08:16 PM
<i>Surr: Nitrobenzene-d5</i>	50.9		23.7-109	%REC	1	6/1/2023 08:16 PM
<i>Surr: Phenol-d5</i>	33.4		24.9-103	%REC	1	6/1/2023 08:16 PM

## VOLATILE ORGANIC COMPOUNDS

SW8260B

Analyst: LAK

1,1,1,2-Tetrachloroethane	ND		0.0059	mg/Kg-dry	1	5/26/2023 05:55 PM
1,1,1-Trichloroethane	ND		0.0059	mg/Kg-dry	1	5/26/2023 05:55 PM
1,1,2,2-Tetrachloroethane	ND		0.0059	mg/Kg-dry	1	5/26/2023 05:55 PM
1,1,2-Trichloroethane	ND		0.0059	mg/Kg-dry	1	5/26/2023 05:55 PM
1,1-Dichloroethane	ND		0.0059	mg/Kg-dry	1	5/26/2023 05:55 PM
1,1-Dichloroethene	ND		0.0059	mg/Kg-dry	1	5/26/2023 05:55 PM
1,1-Dichloropropene	ND		0.0059	mg/Kg-dry	1	5/26/2023 05:55 PM
1,2,3-Trichlorobenzene	ND		0.0059	mg/Kg-dry	1	5/26/2023 05:55 PM
1,2,3-Trichloropropane	ND		0.0059	mg/Kg-dry	1	5/26/2023 05:55 PM
1,2,4-Trichlorobenzene	ND		0.0059	mg/Kg-dry	1	5/26/2023 05:55 PM
1,2,4-Trimethylbenzene	ND		0.0059	mg/Kg-dry	1	5/26/2023 05:55 PM
1,2-Dibromo-3-chloropropane	ND		0.0059	mg/Kg-dry	1	5/26/2023 05:55 PM
1,2-Dibromoethane	ND		0.0059	mg/Kg-dry	1	5/26/2023 05:55 PM
1,2-Dichlorobenzene	ND		0.0059	mg/Kg-dry	1	5/26/2023 05:55 PM
1,2-Dichloroethane	ND		0.0059	mg/Kg-dry	1	5/26/2023 05:55 PM
1,2-Dichloropropane	ND		0.0059	mg/Kg-dry	1	5/26/2023 05:55 PM
1,3,5-Trimethylbenzene	ND		0.0059	mg/Kg-dry	1	5/26/2023 05:55 PM
1,3-Dichlorobenzene	ND		0.0059	mg/Kg-dry	1	5/26/2023 05:55 PM
1,3-Dichloropropane	ND		0.0059	mg/Kg-dry	1	5/26/2023 05:55 PM
1,4-Dichlorobenzene	ND		0.0059	mg/Kg-dry	1	5/26/2023 05:55 PM
2,2-Dichloropropane	ND		0.0059	mg/Kg-dry	1	5/26/2023 05:55 PM
2-Butanone	ND		0.059	mg/Kg-dry	1	5/26/2023 05:55 PM
2-Chlorotoluene	ND		0.0059	mg/Kg-dry	1	5/26/2023 05:55 PM

Note:

# ALS Environmental

Date: 09-Jun-23

**Client:** The Mannik & Smith Group, Inc.  
**Project:** Hillson Nut MS23-13; 401.ODAS003-19  
**Sample ID:** SB-21 (0-2')  
**Collection Date:** 5/23/2023 02:15 PM

**Work Order:** 23051029  
**Lab ID:** 23051029-25  
**Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
2-Hexanone	ND		0.0059	mg/Kg-dry	1	5/26/2023 05:55 PM
4-Chlorotoluene	ND		0.0059	mg/Kg-dry	1	5/26/2023 05:55 PM
4-Methyl-2-pentanone	ND		0.0059	mg/Kg-dry	1	5/26/2023 05:55 PM
Acetone	ND		0.059	mg/Kg-dry	1	5/26/2023 05:55 PM
Benzene	ND		0.0059	mg/Kg-dry	1	5/26/2023 05:55 PM
Bromobenzene	ND		0.0059	mg/Kg-dry	1	5/26/2023 05:55 PM
Bromochloromethane	ND		0.0059	mg/Kg-dry	1	5/26/2023 05:55 PM
Bromodichloromethane	ND		0.0059	mg/Kg-dry	1	5/26/2023 05:55 PM
Bromoform	ND		0.0059	mg/Kg-dry	1	5/26/2023 05:55 PM
Bromomethane	ND		0.0059	mg/Kg-dry	1	5/26/2023 05:55 PM
<b>Carbon disulfide</b>	<b>0.022</b>		<b>0.0059</b>	<b>mg/Kg-dry</b>	1	5/26/2023 05:55 PM
Carbon tetrachloride	ND		0.0059	mg/Kg-dry	1	5/26/2023 05:55 PM
Chlorobenzene	ND		0.0059	mg/Kg-dry	1	5/26/2023 05:55 PM
Chloroethane	ND		0.0059	mg/Kg-dry	1	5/26/2023 05:55 PM
Chloroform	ND		0.0059	mg/Kg-dry	1	5/26/2023 05:55 PM
Chloromethane	ND		0.0059	mg/Kg-dry	1	5/26/2023 05:55 PM
cis-1,2-Dichloroethene	ND		0.0059	mg/Kg-dry	1	5/26/2023 05:55 PM
cis-1,3-Dichloropropene	ND		0.0059	mg/Kg-dry	1	5/26/2023 05:55 PM
Dibromochloromethane	ND		0.0059	mg/Kg-dry	1	5/26/2023 05:55 PM
Dibromomethane	ND		0.0059	mg/Kg-dry	1	5/26/2023 05:55 PM
Dichlorodifluoromethane	ND		0.0059	mg/Kg-dry	1	5/26/2023 05:55 PM
Ethylbenzene	ND		0.0059	mg/Kg-dry	1	5/26/2023 05:55 PM
Hexachlorobutadiene	ND		0.0059	mg/Kg-dry	1	5/26/2023 05:55 PM
Isopropylbenzene	ND		0.0059	mg/Kg-dry	1	5/26/2023 05:55 PM
m,p-Xylene	ND		0.0059	mg/Kg-dry	1	5/26/2023 05:55 PM
Methyl tert-butyl ether	ND		0.0059	mg/Kg-dry	1	5/26/2023 05:55 PM
Methylene chloride	ND		0.024	mg/Kg-dry	1	5/26/2023 05:55 PM
Naphthalene	ND		0.0059	mg/Kg-dry	1	5/26/2023 05:55 PM
n-Butylbenzene	ND		0.0059	mg/Kg-dry	1	5/26/2023 05:55 PM
n-Propylbenzene	ND		0.0059	mg/Kg-dry	1	5/26/2023 05:55 PM
o-Xylene	ND		0.0059	mg/Kg-dry	1	5/26/2023 05:55 PM
p-Isopropyltoluene	ND		0.0059	mg/Kg-dry	1	5/26/2023 05:55 PM
sec-Butylbenzene	ND		0.0059	mg/Kg-dry	1	5/26/2023 05:55 PM
Styrene	ND		0.0059	mg/Kg-dry	1	5/26/2023 05:55 PM
tert-Butylbenzene	ND		0.0059	mg/Kg-dry	1	5/26/2023 05:55 PM
Tetrachloroethene	ND		0.0059	mg/Kg-dry	1	5/26/2023 05:55 PM
Toluene	ND		0.0059	mg/Kg-dry	1	5/26/2023 05:55 PM
trans-1,2-Dichloroethene	ND		0.0059	mg/Kg-dry	1	5/26/2023 05:55 PM
trans-1,3-Dichloropropene	ND		0.0059	mg/Kg-dry	1	5/26/2023 05:55 PM
Trichloroethene	ND		0.0059	mg/Kg-dry	1	5/26/2023 05:55 PM

**Note:**

# ALS Environmental

Date: 09-Jun-23

**Client:** The Mannik & Smith Group, Inc.  
**Project:** Hillson Nut MS23-13; 401.ODAS003-19  
**Sample ID:** SB-21 (0-2')  
**Collection Date:** 5/23/2023 02:15 PM

**Work Order:** 23051029  
**Lab ID:** 23051029-25  
**Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Trichlorofluoromethane	ND		0.0059	mg/Kg-dry	1	5/26/2023 05:55 PM
Vinyl chloride	ND		0.0059	mg/Kg-dry	1	5/26/2023 05:55 PM
Xylenes, Total	ND		0.012	mg/Kg-dry	1	5/26/2023 05:55 PM
<i>Surr: 4-Bromofluorobenzene</i>	97.4		60-140	%REC	1	5/26/2023 05:55 PM
<i>Surr: Dibromofluoromethane</i>	93.6		60-140	%REC	1	5/26/2023 05:55 PM
<i>Surr: Toluene-d8</i>	89.5		60-140	%REC	1	5/26/2023 05:55 PM

**Note:**

# ALS Environmental

Date: 09-Jun-23

**Client:** The Mannik & Smith Group, Inc.  
**Project:** Hillson Nut MS23-13; 401.ODAS003-19  
**Sample ID:** SB-22 (0-2')  
**Collection Date:** 5/23/2023 02:25 PM

**Work Order:** 23051029  
**Lab ID:** 23051029-26  
**Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
<b>PCBS</b>			<b>SW8082</b>	Prep: SW3546 6/5/23 13:18		Analyst: <b>TSA</b>
Aroclor 1016	ND		0.11	mg/Kg-dry	1	6/7/2023 09:33 PM
Aroclor 1221	ND		0.23	mg/Kg-dry	1	6/7/2023 09:33 PM
Aroclor 1232	ND		0.11	mg/Kg-dry	1	6/7/2023 09:33 PM
Aroclor 1242	ND		0.11	mg/Kg-dry	1	6/7/2023 09:33 PM
Aroclor 1248	ND		0.11	mg/Kg-dry	1	6/7/2023 09:33 PM
Aroclor 1254	ND		0.11	mg/Kg-dry	1	6/7/2023 09:33 PM
Aroclor 1260	ND		0.11	mg/Kg-dry	1	6/7/2023 09:33 PM
Aroclor 1262	ND		0.11	mg/Kg-dry	1	6/7/2023 09:33 PM
Aroclor 1268	ND		0.11	mg/Kg-dry	1	6/7/2023 09:33 PM
Surr: Decachlorobiphenyl	116		7.32-154	%REC	1	6/7/2023 09:33 PM
Surr: Tetrachloro-m-xylene	112		33.5-152	%REC	1	6/7/2023 09:33 PM
<b>MOISTURE</b>			<b>SM2540B</b>			Analyst: <b>CW</b>
Moisture	12			% of sample	1	6/1/2023
<b>MERCURY BY CVAA</b>			<b>SW7471A</b>	Prep: EPA 7471 6/2/23 11:36		Analyst: <b>SLT</b>
Mercury	4.9		1.5	mg/Kg-dry	5	6/5/2023 02:55 PM
<b>METALS BY ICP</b>			<b>SW6010B</b>	Prep: SW3050B 6/2/23 10:43		Analyst: <b>SLT</b>
Arsenic	18		5.4	mg/Kg-dry	1	6/2/2023 06:47 PM
Barium	130		22	mg/Kg-dry	1	6/2/2023 06:47 PM
Cadmium	ND		1.1	mg/Kg-dry	1	6/2/2023 06:47 PM
Chromium	55		11	mg/Kg-dry	1	6/2/2023 06:47 PM
Lead	280		22	mg/Kg-dry	1	6/2/2023 06:47 PM
Selenium	ND		3.2	mg/Kg-dry	1	6/2/2023 06:47 PM
Silver	ND		5.4	mg/Kg-dry	1	6/2/2023 06:47 PM
<b>SEMI-VOLATILE ORGANIC COMPOUNDS</b>			<b>SW8270C</b>	Prep: SW3546 5/30/23 11:26		Analyst: <b>RA</b>
1,2,4,5-Tetrachlorobenzene	ND		0.38	mg/Kg-dry	1	6/1/2023 08:39 PM
1,2,4-Trichlorobenzene	ND		0.38	mg/Kg-dry	1	6/1/2023 08:39 PM
1,2-Dichlorobenzene	ND		0.38	mg/Kg-dry	1	6/1/2023 08:39 PM
1,3-Dichlorobenzene	ND		0.38	mg/Kg-dry	1	6/1/2023 08:39 PM
1,3-Dinitrobenzene	ND		0.38	mg/Kg-dry	1	6/1/2023 08:39 PM
1,4-Dichlorobenzene	ND		0.38	mg/Kg-dry	1	6/1/2023 08:39 PM
<b>1-Methylnaphthalene</b>	<b>0.92</b>		<b>0.23</b>	<b>mg/Kg-dry</b>	1	6/1/2023 08:39 PM
1-Naphthylamine	ND		0.38	mg/Kg-dry	1	6/1/2023 08:39 PM
2,3,4,6-Tetrachlorophenol	ND		0.38	mg/Kg-dry	1	6/1/2023 08:39 PM
2,4,5-Trichlorophenol	ND		0.38	mg/Kg-dry	1	6/1/2023 08:39 PM
2,4,6-Trichlorophenol	ND		0.38	mg/Kg-dry	1	6/1/2023 08:39 PM
2,4-Dichlorophenol	ND		0.38	mg/Kg-dry	1	6/1/2023 08:39 PM
2,4-Dimethylphenol	ND		0.38	mg/Kg-dry	1	6/1/2023 08:39 PM

Note:

# ALS Environmental

Date: 09-Jun-23

**Client:** The Mannik & Smith Group, Inc.  
**Project:** Hillson Nut MS23-13; 401.ODAS003-19  
**Sample ID:** SB-22 (0-2')  
**Collection Date:** 5/23/2023 02:25 PM

**Work Order:** 23051029  
**Lab ID:** 23051029-26  
**Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
2,4-Dinitrophenol	ND		1.9	mg/Kg-dry	1	6/1/2023 08:39 PM
2,4-Dinitrotoluene	ND		0.38	mg/Kg-dry	1	6/1/2023 08:39 PM
2,6-Dichlorophenol	ND		0.38	mg/Kg-dry	1	6/1/2023 08:39 PM
2,6-Dinitrotoluene	ND		0.38	mg/Kg-dry	1	6/1/2023 08:39 PM
2-Acetylaminofluorene	ND		0.38	mg/Kg-dry	1	6/1/2023 08:39 PM
2-Chloronaphthalene	ND		0.38	mg/Kg-dry	1	6/1/2023 08:39 PM
2-Chlorophenol	ND		0.38	mg/Kg-dry	1	6/1/2023 08:39 PM
<b>2-Methylnaphthalene</b>	<b>1.1</b>		<b>0.23</b>	<b>mg/Kg-dry</b>	1	6/1/2023 08:39 PM
2-Methylphenol	ND		0.38	mg/Kg-dry	1	6/1/2023 08:39 PM
2-Naphthylamine	ND		0.38	mg/Kg-dry	1	6/1/2023 08:39 PM
2-Nitroaniline	ND		1.9	mg/Kg-dry	1	6/1/2023 08:39 PM
2-Nitrophenol	ND		0.38	mg/Kg-dry	1	6/1/2023 08:39 PM
2-Picoline	ND		0.38	mg/Kg-dry	1	6/1/2023 08:39 PM
3&4-Methylphenol	ND		0.38	mg/Kg-dry	1	6/1/2023 08:39 PM
3,3'-Dichlorobenzidine	ND		0.75	mg/Kg-dry	1	6/1/2023 08:39 PM
3-Methylcholanthrene	ND		0.38	mg/Kg-dry	1	6/1/2023 08:39 PM
3-Nitroaniline	ND		1.9	mg/Kg-dry	1	6/1/2023 08:39 PM
4,6-Dinitro-2-methylphenol	ND		1.9	mg/Kg-dry	1	6/1/2023 08:39 PM
4-Aminobiphenyl	ND		0.75	mg/Kg-dry	1	6/1/2023 08:39 PM
4-Bromophenyl phenyl ether	ND		0.38	mg/Kg-dry	1	6/1/2023 08:39 PM
4-Chloro-3-methylphenol	ND		0.75	mg/Kg-dry	1	6/1/2023 08:39 PM
4-Chloroaniline	ND		0.75	mg/Kg-dry	1	6/1/2023 08:39 PM
4-Chlorophenyl phenyl ether	ND		0.38	mg/Kg-dry	1	6/1/2023 08:39 PM
4-Nitroaniline	ND		0.75	mg/Kg-dry	1	6/1/2023 08:39 PM
4-Nitrophenol	ND		1.9	mg/Kg-dry	1	6/1/2023 08:39 PM
4-Nitroquinoline 1-oxide	ND		1.9	mg/Kg-dry	1	6/1/2023 08:39 PM
5-Nitro-o-toluidine	ND		0.38	mg/Kg-dry	1	6/1/2023 08:39 PM
7,12-Dimethylbenz(a)anthracene	ND		0.38	mg/Kg-dry	1	6/1/2023 08:39 PM
<b>Acenaphthene</b>	<b>0.95</b>		<b>0.23</b>	<b>mg/Kg-dry</b>	1	6/1/2023 08:39 PM
<b>Acenaphthylene</b>	<b>0.32</b>		<b>0.23</b>	<b>mg/Kg-dry</b>	1	6/1/2023 08:39 PM
Acetophenone	ND		0.38	mg/Kg-dry	1	6/1/2023 08:39 PM
Aniline	ND		0.38	mg/Kg-dry	1	6/1/2023 08:39 PM
<b>Anthracene</b>	<b>3.0</b>		<b>0.23</b>	<b>mg/Kg-dry</b>	1	6/1/2023 08:39 PM
Azobenzene	ND		0.38	mg/Kg-dry	1	6/1/2023 08:39 PM
Benzidine	ND		0.38	mg/Kg-dry	1	6/1/2023 08:39 PM
<b>Benzo(a)anthracene</b>	<b>6.6</b>		<b>1.1</b>	<b>mg/Kg-dry</b>	10	6/2/2023 03:43 PM
<b>Benzo(a)pyrene</b>	<b>5.9</b>		<b>1.1</b>	<b>mg/Kg-dry</b>	10	6/2/2023 03:43 PM
<b>Benzo(b)fluoranthene</b>	<b>7.4</b>		<b>2.3</b>	<b>mg/Kg-dry</b>	10	6/2/2023 03:43 PM
<b>Benzo(g,h,i)perylene</b>	<b>3.2</b>		<b>0.23</b>	<b>mg/Kg-dry</b>	1	6/1/2023 08:39 PM
<b>Benzo(k)fluoranthene</b>	<b>2.8</b>		<b>0.23</b>	<b>mg/Kg-dry</b>	1	6/1/2023 08:39 PM

Note:



# ALS Environmental

Date: 09-Jun-23

**Client:** The Mannik & Smith Group, Inc.  
**Project:** Hillson Nut MS23-13; 401.ODAS003-19  
**Sample ID:** SB-22 (0-2')  
**Collection Date:** 5/23/2023 02:25 PM

**Work Order:** 23051029  
**Lab ID:** 23051029-26  
**Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Benzyl alcohol	ND		0.75	mg/Kg-dry	1	6/1/2023 08:39 PM
Bis(2-chloroethoxy)methane	ND		0.38	mg/Kg-dry	1	6/1/2023 08:39 PM
Bis(2-chloroethyl)ether	ND		0.38	mg/Kg-dry	1	6/1/2023 08:39 PM
Bis(2-chloroisopropyl)ether	ND		0.38	mg/Kg-dry	1	6/1/2023 08:39 PM
Bis(2-ethylhexyl)phthalate	ND		0.38	mg/Kg-dry	1	6/1/2023 08:39 PM
Butyl benzyl phthalate	ND		0.38	mg/Kg-dry	1	6/1/2023 08:39 PM
<b>Carbazole</b>	<b>0.97</b>		<b>0.23</b>	<b>mg/Kg-dry</b>	1	6/1/2023 08:39 PM
<b>Chrysene</b>	<b>7.4</b>		<b>2.3</b>	<b>mg/Kg-dry</b>	10	6/2/2023 03:43 PM
<b>Dibenzo(a,h)anthracene</b>	<b>0.94</b>		<b>0.11</b>	<b>mg/Kg-dry</b>	1	6/1/2023 08:39 PM
<b>Dibenzofuran</b>	<b>0.82</b>		<b>0.23</b>	<b>mg/Kg-dry</b>	1	6/1/2023 08:39 PM
Diethyl phthalate	ND		0.38	mg/Kg-dry	1	6/1/2023 08:39 PM
Dimethyl phthalate	ND		0.38	mg/Kg-dry	1	6/1/2023 08:39 PM
Di-n-butyl phthalate	ND		0.38	mg/Kg-dry	1	6/1/2023 08:39 PM
Di-n-octyl phthalate	ND		0.38	mg/Kg-dry	1	6/1/2023 08:39 PM
Dinoseb	ND		0.38	mg/Kg-dry	1	6/1/2023 08:39 PM
Diphenylamine	ND		0.38	mg/Kg-dry	1	6/1/2023 08:39 PM
Ethyl methanesulfonate	ND		0.38	mg/Kg-dry	1	6/1/2023 08:39 PM
<b>Fluoranthene</b>	<b>15</b>		<b>2.3</b>	<b>mg/Kg-dry</b>	10	6/2/2023 03:43 PM
<b>Fluorene</b>	<b>1.2</b>		<b>0.23</b>	<b>mg/Kg-dry</b>	1	6/1/2023 08:39 PM
Hexachlorobenzene	ND		0.38	mg/Kg-dry	1	6/1/2023 08:39 PM
Hexachlorobutadiene	ND		0.38	mg/Kg-dry	1	6/1/2023 08:39 PM
Hexachlorocyclopentadiene	ND		0.38	mg/Kg-dry	1	6/1/2023 08:39 PM
Hexachloroethane	ND		0.38	mg/Kg-dry	1	6/1/2023 08:39 PM
<b>Indeno(1,2,3-cd)pyrene</b>	<b>3.1</b>		<b>0.11</b>	<b>mg/Kg-dry</b>	1	6/1/2023 08:39 PM
Isophorone	ND		0.38	mg/Kg-dry	1	6/1/2023 08:39 PM
Isosafrole	ND		0.38	mg/Kg-dry	1	6/1/2023 08:39 PM
Methapyrilene	ND		1.9	mg/Kg-dry	1	6/1/2023 08:39 PM
Methyl methanesulfonate	ND		0.38	mg/Kg-dry	1	6/1/2023 08:39 PM
<b>Naphthalene</b>	<b>1.0</b>		<b>0.23</b>	<b>mg/Kg-dry</b>	1	6/1/2023 08:39 PM
Nitrobenzene	ND		0.38	mg/Kg-dry	1	6/1/2023 08:39 PM
N-Nitrosodiethylamine	ND		0.38	mg/Kg-dry	1	6/1/2023 08:39 PM
N-Nitrosodimethylamine	ND		0.38	mg/Kg-dry	1	6/1/2023 08:39 PM
N-Nitroso-di-n-butylamine	ND		0.38	mg/Kg-dry	1	6/1/2023 08:39 PM
N-Nitrosodi-n-propylamine	ND		0.38	mg/Kg-dry	1	6/1/2023 08:39 PM
N-Nitrosomethylethylamine	ND		0.38	mg/Kg-dry	1	6/1/2023 08:39 PM
N-Nitrosomorpholine	ND		0.38	mg/Kg-dry	1	6/1/2023 08:39 PM
N-Nitrosopiperidine	ND		0.38	mg/Kg-dry	1	6/1/2023 08:39 PM
N-Nitrosopyrrolidine	ND		0.38	mg/Kg-dry	1	6/1/2023 08:39 PM
o-Toluidine	ND		1.9	mg/Kg-dry	1	6/1/2023 08:39 PM
p-Dimethylaminoazobenzene	ND		0.38	mg/Kg-dry	1	6/1/2023 08:39 PM

**Note:**

# ALS Environmental

Date: 09-Jun-23

**Client:** The Mannik & Smith Group, Inc.  
**Project:** Hillson Nut MS23-13; 401.ODAS003-19  
**Sample ID:** SB-22 (0-2')  
**Collection Date:** 5/23/2023 02:25 PM

**Work Order:** 23051029  
**Lab ID:** 23051029-26  
**Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Pentachlorobenzene	ND		0.38	mg/Kg-dry	1	6/1/2023 08:39 PM
Pentachloroethane	ND		0.38	mg/Kg-dry	1	6/1/2023 08:39 PM
Pentachloronitrobenzene	ND		0.75	mg/Kg-dry	1	6/1/2023 08:39 PM
Pentachlorophenol	ND		1.9	mg/Kg-dry	1	6/1/2023 08:39 PM
Phenacetin	ND		0.75	mg/Kg-dry	1	6/1/2023 08:39 PM
<b>Phenanthrene</b>	<b>12</b>		<b>2.3</b>	<b>mg/Kg-dry</b>	10	6/2/2023 03:43 PM
Phenol	ND		0.38	mg/Kg-dry	1	6/1/2023 08:39 PM
<b>Pyrene</b>	<b>12</b>		<b>2.3</b>	<b>mg/Kg-dry</b>	10	6/2/2023 03:43 PM
Pyridine	ND		0.38	mg/Kg-dry	1	6/1/2023 08:39 PM
Safrole	ND		0.38	mg/Kg-dry	1	6/1/2023 08:39 PM
<i>Surr: 2,4,6-Tribromophenol</i>	<i>60.6</i>		<i>14.2-136</i>	<i>%REC</i>	1	6/1/2023 08:39 PM
<i>Surr: 2-Fluorobiphenyl</i>	<i>66.0</i>		<i>30-116</i>	<i>%REC</i>	1	6/1/2023 08:39 PM
<i>Surr: 2-Fluorophenol</i>	<i>46.6</i>		<i>24-105</i>	<i>%REC</i>	1	6/1/2023 08:39 PM
<i>Surr: 4-Terphenyl-d14</i>	<i>67.9</i>		<i>27.3-138</i>	<i>%REC</i>	1	6/1/2023 08:39 PM
<i>Surr: Nitrobenzene-d5</i>	<i>55.2</i>		<i>23.7-109</i>	<i>%REC</i>	1	6/1/2023 08:39 PM
<i>Surr: Phenol-d5</i>	<i>47.7</i>		<i>24.9-103</i>	<i>%REC</i>	1	6/1/2023 08:39 PM

## VOLATILE ORGANIC COMPOUNDS

SW8260B

Analyst: LAK

1,1,1,2-Tetrachloroethane	ND		0.0049	mg/Kg-dry	1	5/26/2023 06:17 PM
1,1,1-Trichloroethane	ND		0.0049	mg/Kg-dry	1	5/26/2023 06:17 PM
1,1,2,2-Tetrachloroethane	ND		0.0049	mg/Kg-dry	1	5/26/2023 06:17 PM
1,1,2-Trichloroethane	ND		0.0049	mg/Kg-dry	1	5/26/2023 06:17 PM
1,1-Dichloroethane	ND		0.0049	mg/Kg-dry	1	5/26/2023 06:17 PM
1,1-Dichloroethene	ND		0.0049	mg/Kg-dry	1	5/26/2023 06:17 PM
1,1-Dichloropropene	ND		0.0049	mg/Kg-dry	1	5/26/2023 06:17 PM
1,2,3-Trichlorobenzene	ND		0.0049	mg/Kg-dry	1	5/26/2023 06:17 PM
1,2,3-Trichloropropane	ND		0.0049	mg/Kg-dry	1	5/26/2023 06:17 PM
1,2,4-Trichlorobenzene	ND		0.0049	mg/Kg-dry	1	5/26/2023 06:17 PM
1,2,4-Trimethylbenzene	ND		0.0049	mg/Kg-dry	1	5/26/2023 06:17 PM
1,2-Dibromo-3-chloropropane	ND		0.0049	mg/Kg-dry	1	5/26/2023 06:17 PM
1,2-Dibromoethane	ND		0.0049	mg/Kg-dry	1	5/26/2023 06:17 PM
1,2-Dichlorobenzene	ND		0.0049	mg/Kg-dry	1	5/26/2023 06:17 PM
1,2-Dichloroethane	ND		0.0049	mg/Kg-dry	1	5/26/2023 06:17 PM
1,2-Dichloropropane	ND		0.0049	mg/Kg-dry	1	5/26/2023 06:17 PM
1,3,5-Trimethylbenzene	ND		0.0049	mg/Kg-dry	1	5/26/2023 06:17 PM
1,3-Dichlorobenzene	ND		0.0049	mg/Kg-dry	1	5/26/2023 06:17 PM
1,3-Dichloropropane	ND		0.0049	mg/Kg-dry	1	5/26/2023 06:17 PM
1,4-Dichlorobenzene	ND		0.0049	mg/Kg-dry	1	5/26/2023 06:17 PM
2,2-Dichloropropane	ND		0.0049	mg/Kg-dry	1	5/26/2023 06:17 PM
2-Butanone	ND		0.049	mg/Kg-dry	1	5/26/2023 06:17 PM
2-Chlorotoluene	ND		0.0049	mg/Kg-dry	1	5/26/2023 06:17 PM

Note:

# ALS Environmental

Date: 09-Jun-23

**Client:** The Mannik & Smith Group, Inc.  
**Project:** Hillson Nut MS23-13; 401.ODAS003-19  
**Sample ID:** SB-22 (0-2')  
**Collection Date:** 5/23/2023 02:25 PM

**Work Order:** 23051029  
**Lab ID:** 23051029-26  
**Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
2-Hexanone	ND		0.0049	mg/Kg-dry	1	5/26/2023 06:17 PM
4-Chlorotoluene	ND		0.0049	mg/Kg-dry	1	5/26/2023 06:17 PM
4-Methyl-2-pentanone	ND		0.0049	mg/Kg-dry	1	5/26/2023 06:17 PM
Acetone	ND		0.049	mg/Kg-dry	1	5/26/2023 06:17 PM
Benzene	ND		0.0049	mg/Kg-dry	1	5/26/2023 06:17 PM
Bromobenzene	ND		0.0049	mg/Kg-dry	1	5/26/2023 06:17 PM
Bromochloromethane	ND		0.0049	mg/Kg-dry	1	5/26/2023 06:17 PM
Bromodichloromethane	ND		0.0049	mg/Kg-dry	1	5/26/2023 06:17 PM
Bromoform	ND		0.0049	mg/Kg-dry	1	5/26/2023 06:17 PM
Bromomethane	ND		0.0049	mg/Kg-dry	1	5/26/2023 06:17 PM
Carbon disulfide	ND		0.0049	mg/Kg-dry	1	5/26/2023 06:17 PM
Carbon tetrachloride	ND		0.0049	mg/Kg-dry	1	5/26/2023 06:17 PM
Chlorobenzene	ND		0.0049	mg/Kg-dry	1	5/26/2023 06:17 PM
Chloroethane	ND		0.0049	mg/Kg-dry	1	5/26/2023 06:17 PM
Chloroform	ND		0.0049	mg/Kg-dry	1	5/26/2023 06:17 PM
Chloromethane	ND		0.0049	mg/Kg-dry	1	5/26/2023 06:17 PM
cis-1,2-Dichloroethene	ND		0.0049	mg/Kg-dry	1	5/26/2023 06:17 PM
cis-1,3-Dichloropropene	ND		0.0049	mg/Kg-dry	1	5/26/2023 06:17 PM
Dibromochloromethane	ND		0.0049	mg/Kg-dry	1	5/26/2023 06:17 PM
Dibromomethane	ND		0.0049	mg/Kg-dry	1	5/26/2023 06:17 PM
Dichlorodifluoromethane	ND		0.0049	mg/Kg-dry	1	5/26/2023 06:17 PM
Ethylbenzene	ND		0.0049	mg/Kg-dry	1	5/26/2023 06:17 PM
Hexachlorobutadiene	ND		0.0049	mg/Kg-dry	1	5/26/2023 06:17 PM
Isopropylbenzene	ND		0.0049	mg/Kg-dry	1	5/26/2023 06:17 PM
m,p-Xylene	ND		0.0049	mg/Kg-dry	1	5/26/2023 06:17 PM
Methyl tert-butyl ether	ND		0.0049	mg/Kg-dry	1	5/26/2023 06:17 PM
Methylene chloride	ND		0.019	mg/Kg-dry	1	5/26/2023 06:17 PM
Naphthalene	ND		0.0049	mg/Kg-dry	1	5/26/2023 06:17 PM
n-Butylbenzene	ND		0.0049	mg/Kg-dry	1	5/26/2023 06:17 PM
n-Propylbenzene	ND		0.0049	mg/Kg-dry	1	5/26/2023 06:17 PM
o-Xylene	ND		0.0049	mg/Kg-dry	1	5/26/2023 06:17 PM
p-Isopropyltoluene	ND		0.0049	mg/Kg-dry	1	5/26/2023 06:17 PM
sec-Butylbenzene	ND		0.0049	mg/Kg-dry	1	5/26/2023 06:17 PM
Styrene	ND		0.0049	mg/Kg-dry	1	5/26/2023 06:17 PM
tert-Butylbenzene	ND		0.0049	mg/Kg-dry	1	5/26/2023 06:17 PM
Tetrachloroethene	ND		0.0049	mg/Kg-dry	1	5/26/2023 06:17 PM
Toluene	ND		0.0049	mg/Kg-dry	1	5/26/2023 06:17 PM
trans-1,2-Dichloroethene	ND		0.0049	mg/Kg-dry	1	5/26/2023 06:17 PM
trans-1,3-Dichloropropene	ND		0.0049	mg/Kg-dry	1	5/26/2023 06:17 PM
Trichloroethene	ND		0.0049	mg/Kg-dry	1	5/26/2023 06:17 PM

**Note:**

# ALS Environmental

Date: 09-Jun-23

**Client:** The Mannik & Smith Group, Inc.  
**Project:** Hillson Nut MS23-13; 401.ODAS003-19  
**Sample ID:** SB-22 (0-2')  
**Collection Date:** 5/23/2023 02:25 PM

**Work Order:** 23051029  
**Lab ID:** 23051029-26  
**Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Trichlorofluoromethane	ND		0.0049	mg/Kg-dry	1	5/26/2023 06:17 PM
Vinyl chloride	ND		0.0049	mg/Kg-dry	1	5/26/2023 06:17 PM
Xylenes, Total	ND		0.0097	mg/Kg-dry	1	5/26/2023 06:17 PM
<i>Surr: 4-Bromofluorobenzene</i>	93.8		60-140	%REC	1	5/26/2023 06:17 PM
<i>Surr: Dibromofluoromethane</i>	93.6		60-140	%REC	1	5/26/2023 06:17 PM
<i>Surr: Toluene-d8</i>	88.8		60-140	%REC	1	5/26/2023 06:17 PM

**Note:**

# ALS Environmental

Date: 09-Jun-23

**Client:** The Mannik & Smith Group, Inc.  
**Project:** Hillson Nut MS23-13; 401.ODAS003-19  
**Sample ID:** SB-15 (0-2')  
**Collection Date:** 5/23/2023 02:35 PM

**Work Order:** 23051029  
**Lab ID:** 23051029-27  
**Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
<b>PCBS</b>			<b>SW8082</b>	Prep: SW3546	6/5/23 13:18	Analyst: <b>TSA</b>
Aroclor 1016	ND		0.12	mg/Kg-dry	1	6/7/2023 09:49 PM
Aroclor 1221	ND		0.24	mg/Kg-dry	1	6/7/2023 09:49 PM
Aroclor 1232	ND		0.12	mg/Kg-dry	1	6/7/2023 09:49 PM
Aroclor 1242	ND		0.12	mg/Kg-dry	1	6/7/2023 09:49 PM
Aroclor 1248	ND		0.12	mg/Kg-dry	1	6/7/2023 09:49 PM
Aroclor 1254	ND		0.12	mg/Kg-dry	1	6/7/2023 09:49 PM
Aroclor 1260	ND		0.12	mg/Kg-dry	1	6/7/2023 09:49 PM
Aroclor 1262	ND		0.12	mg/Kg-dry	1	6/7/2023 09:49 PM
Aroclor 1268	ND		0.12	mg/Kg-dry	1	6/7/2023 09:49 PM
Surr: Decachlorobiphenyl	110		7.32-154	%REC	1	6/7/2023 09:49 PM
Surr: Tetrachloro-m-xylene	124		33.5-152	%REC	1	6/7/2023 09:49 PM
<b>MOISTURE</b>			<b>SM2540B</b>			Analyst: <b>CW</b>
Moisture	18			% of sample	1	6/1/2023
<b>MERCURY BY CVAA</b>			<b>SW7471A</b>	Prep: EPA 7471	6/2/23 11:36	Analyst: <b>SLT</b>
Mercury	ND		0.33	mg/Kg-dry	1	6/5/2023 11:50 AM
<b>METALS BY ICP</b>			<b>SW6010B</b>	Prep: SW3050B	6/2/23 10:43	Analyst: <b>SLT</b>
Arsenic	20		5.9	mg/Kg-dry	1	6/2/2023 06:52 PM
Barium	62		23	mg/Kg-dry	1	6/2/2023 06:52 PM
Cadmium	ND		1.2	mg/Kg-dry	1	6/2/2023 06:52 PM
Chromium	ND		12	mg/Kg-dry	1	6/2/2023 06:52 PM
Lead	ND		23	mg/Kg-dry	1	6/2/2023 06:52 PM
Selenium	ND		3.5	mg/Kg-dry	1	6/2/2023 06:52 PM
Silver	ND		5.9	mg/Kg-dry	1	6/2/2023 06:52 PM
<b>SEMI-VOLATILE ORGANIC COMPOUNDS</b>			<b>SW8270C</b>	Prep: SW3546	5/31/23 11:37	Analyst: <b>GC</b>
1,2,4,5-Tetrachlorobenzene	ND		0.40	mg/Kg-dry	1	5/31/2023 08:09 PM
1,2,4-Trichlorobenzene	ND		0.40	mg/Kg-dry	1	5/31/2023 08:09 PM
1,2-Dichlorobenzene	ND		0.40	mg/Kg-dry	1	5/31/2023 08:09 PM
1,3-Dichlorobenzene	ND		0.40	mg/Kg-dry	1	5/31/2023 08:09 PM
1,3-Dinitrobenzene	ND		0.40	mg/Kg-dry	1	5/31/2023 08:09 PM
1,4-Dichlorobenzene	ND		0.40	mg/Kg-dry	1	5/31/2023 08:09 PM
1-Methylnaphthalene	ND		0.24	mg/Kg-dry	1	5/31/2023 08:09 PM
1-Naphthylamine	ND		0.40	mg/Kg-dry	1	5/31/2023 08:09 PM
2,3,4,6-Tetrachlorophenol	ND		0.40	mg/Kg-dry	1	5/31/2023 08:09 PM
2,4,5-Trichlorophenol	ND		0.40	mg/Kg-dry	1	5/31/2023 08:09 PM
2,4,6-Trichlorophenol	ND		0.40	mg/Kg-dry	1	5/31/2023 08:09 PM
2,4-Dichlorophenol	ND		0.40	mg/Kg-dry	1	5/31/2023 08:09 PM
2,4-Dimethylphenol	ND		0.40	mg/Kg-dry	1	5/31/2023 08:09 PM

Note:

# ALS Environmental

Date: 09-Jun-23

**Client:** The Mannik & Smith Group, Inc.  
**Project:** Hillson Nut MS23-13; 401.ODAS003-19  
**Sample ID:** SB-15 (0-2')  
**Collection Date:** 5/23/2023 02:35 PM

**Work Order:** 23051029  
**Lab ID:** 23051029-27  
**Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
2,4-Dinitrophenol	ND		2.0	mg/Kg-dry	1	5/31/2023 08:09 PM
2,4-Dinitrotoluene	ND		0.40	mg/Kg-dry	1	5/31/2023 08:09 PM
2,6-Dichlorophenol	ND		0.40	mg/Kg-dry	1	5/31/2023 08:09 PM
2,6-Dinitrotoluene	ND		0.40	mg/Kg-dry	1	5/31/2023 08:09 PM
2-Acetylaminofluorene	ND		0.40	mg/Kg-dry	1	5/31/2023 08:09 PM
2-Chloronaphthalene	ND		0.40	mg/Kg-dry	1	5/31/2023 08:09 PM
2-Chlorophenol	ND		0.40	mg/Kg-dry	1	5/31/2023 08:09 PM
2-Methylnaphthalene	ND		0.24	mg/Kg-dry	1	5/31/2023 08:09 PM
2-Methylphenol	ND		0.40	mg/Kg-dry	1	5/31/2023 08:09 PM
2-Naphthylamine	ND		0.40	mg/Kg-dry	1	5/31/2023 08:09 PM
2-Nitroaniline	ND		2.0	mg/Kg-dry	1	5/31/2023 08:09 PM
2-Nitrophenol	ND		0.40	mg/Kg-dry	1	5/31/2023 08:09 PM
2-Picoline	ND		0.40	mg/Kg-dry	1	5/31/2023 08:09 PM
3&4-Methylphenol	ND		0.40	mg/Kg-dry	1	5/31/2023 08:09 PM
3,3'-Dichlorobenzidine	ND		0.80	mg/Kg-dry	1	5/31/2023 08:09 PM
3-Methylcholanthrene	ND		0.40	mg/Kg-dry	1	5/31/2023 08:09 PM
3-Nitroaniline	ND		2.0	mg/Kg-dry	1	5/31/2023 08:09 PM
4,6-Dinitro-2-methylphenol	ND		2.0	mg/Kg-dry	1	5/31/2023 08:09 PM
4-Aminobiphenyl	ND		0.80	mg/Kg-dry	1	5/31/2023 08:09 PM
4-Bromophenyl phenyl ether	ND		0.40	mg/Kg-dry	1	5/31/2023 08:09 PM
4-Chloro-3-methylphenol	ND		0.80	mg/Kg-dry	1	5/31/2023 08:09 PM
4-Chloroaniline	ND		0.80	mg/Kg-dry	1	5/31/2023 08:09 PM
4-Chlorophenyl phenyl ether	ND		0.40	mg/Kg-dry	1	5/31/2023 08:09 PM
4-Nitroaniline	ND		0.80	mg/Kg-dry	1	5/31/2023 08:09 PM
4-Nitrophenol	ND		2.0	mg/Kg-dry	1	5/31/2023 08:09 PM
4-Nitroquinoline 1-oxide	ND		2.0	mg/Kg-dry	1	5/31/2023 08:09 PM
5-Nitro-o-toluidine	ND		0.40	mg/Kg-dry	1	5/31/2023 08:09 PM
7,12-Dimethylbenz(a)anthracene	ND		0.40	mg/Kg-dry	1	5/31/2023 08:09 PM
Acenaphthene	ND		0.24	mg/Kg-dry	1	5/31/2023 08:09 PM
Acenaphthylene	ND		0.24	mg/Kg-dry	1	5/31/2023 08:09 PM
Acetophenone	ND		0.40	mg/Kg-dry	1	5/31/2023 08:09 PM
Aniline	ND		0.40	mg/Kg-dry	1	5/31/2023 08:09 PM
Anthracene	ND		0.24	mg/Kg-dry	1	5/31/2023 08:09 PM
Azobenzene	ND		0.40	mg/Kg-dry	1	5/31/2023 08:09 PM
Benzidine	ND		0.40	mg/Kg-dry	1	5/31/2023 08:09 PM
Benzo(a)anthracene	ND		0.12	mg/Kg-dry	1	5/31/2023 08:09 PM
Benzo(a)pyrene	ND		0.12	mg/Kg-dry	1	5/31/2023 08:09 PM
Benzo(b)fluoranthene	ND		0.24	mg/Kg-dry	1	5/31/2023 08:09 PM
Benzo(g,h,i)perylene	ND		0.24	mg/Kg-dry	1	5/31/2023 08:09 PM
Benzo(k)fluoranthene	ND		0.24	mg/Kg-dry	1	5/31/2023 08:09 PM

**Note:**

# ALS Environmental

Date: 09-Jun-23

**Client:** The Mannik & Smith Group, Inc.  
**Project:** Hillson Nut MS23-13; 401.ODAS003-19  
**Sample ID:** SB-15 (0-2')  
**Collection Date:** 5/23/2023 02:35 PM

**Work Order:** 23051029  
**Lab ID:** 23051029-27  
**Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Benzyl alcohol	ND		0.80	mg/Kg-dry	1	5/31/2023 08:09 PM
Bis(2-chloroethoxy)methane	ND		0.40	mg/Kg-dry	1	5/31/2023 08:09 PM
Bis(2-chloroethyl)ether	ND		0.40	mg/Kg-dry	1	5/31/2023 08:09 PM
Bis(2-chloroisopropyl)ether	ND		0.40	mg/Kg-dry	1	5/31/2023 08:09 PM
Bis(2-ethylhexyl)phthalate	ND		0.40	mg/Kg-dry	1	5/31/2023 08:09 PM
Butyl benzyl phthalate	ND		0.40	mg/Kg-dry	1	5/31/2023 08:09 PM
Carbazole	ND		0.24	mg/Kg-dry	1	5/31/2023 08:09 PM
Chrysene	ND		0.24	mg/Kg-dry	1	5/31/2023 08:09 PM
Dibenzo(a,h)anthracene	ND		0.12	mg/Kg-dry	1	5/31/2023 08:09 PM
Dibenzofuran	ND		0.24	mg/Kg-dry	1	5/31/2023 08:09 PM
Diethyl phthalate	ND		0.40	mg/Kg-dry	1	5/31/2023 08:09 PM
Dimethyl phthalate	ND		0.40	mg/Kg-dry	1	5/31/2023 08:09 PM
Di-n-butyl phthalate	ND		0.40	mg/Kg-dry	1	5/31/2023 08:09 PM
Di-n-octyl phthalate	ND		0.40	mg/Kg-dry	1	5/31/2023 08:09 PM
Dinoseb	ND		0.40	mg/Kg-dry	1	5/31/2023 08:09 PM
Diphenylamine	ND		0.40	mg/Kg-dry	1	5/31/2023 08:09 PM
Ethyl methanesulfonate	ND		0.40	mg/Kg-dry	1	5/31/2023 08:09 PM
Fluoranthene	ND		0.24	mg/Kg-dry	1	5/31/2023 08:09 PM
Fluorene	ND		0.24	mg/Kg-dry	1	5/31/2023 08:09 PM
Hexachlorobenzene	ND		0.40	mg/Kg-dry	1	5/31/2023 08:09 PM
Hexachlorobutadiene	ND		0.40	mg/Kg-dry	1	5/31/2023 08:09 PM
Hexachlorocyclopentadiene	ND		0.40	mg/Kg-dry	1	5/31/2023 08:09 PM
Hexachloroethane	ND		0.40	mg/Kg-dry	1	5/31/2023 08:09 PM
Indeno(1,2,3-cd)pyrene	ND		0.12	mg/Kg-dry	1	5/31/2023 08:09 PM
Isophorone	ND		0.40	mg/Kg-dry	1	5/31/2023 08:09 PM
Isosafrole	ND		0.40	mg/Kg-dry	1	5/31/2023 08:09 PM
Methapyrilene	ND		2.0	mg/Kg-dry	1	5/31/2023 08:09 PM
Methyl methanesulfonate	ND		0.40	mg/Kg-dry	1	5/31/2023 08:09 PM
Naphthalene	ND		0.24	mg/Kg-dry	1	5/31/2023 08:09 PM
Nitrobenzene	ND		0.40	mg/Kg-dry	1	5/31/2023 08:09 PM
N-Nitrosodiethylamine	ND		0.40	mg/Kg-dry	1	5/31/2023 08:09 PM
N-Nitrosodimethylamine	ND		0.40	mg/Kg-dry	1	5/31/2023 08:09 PM
N-Nitroso-di-n-butylamine	ND		0.40	mg/Kg-dry	1	5/31/2023 08:09 PM
N-Nitrosodi-n-propylamine	ND		0.40	mg/Kg-dry	1	5/31/2023 08:09 PM
N-Nitrosomethylethylamine	ND		0.40	mg/Kg-dry	1	5/31/2023 08:09 PM
N-Nitrosomorpholine	ND		0.40	mg/Kg-dry	1	5/31/2023 08:09 PM
N-Nitrosopiperidine	ND		0.40	mg/Kg-dry	1	5/31/2023 08:09 PM
N-Nitrosopyrrolidine	ND		0.40	mg/Kg-dry	1	5/31/2023 08:09 PM
o-Toluidine	ND		2.0	mg/Kg-dry	1	5/31/2023 08:09 PM
p-Dimethylaminoazobenzene	ND		0.40	mg/Kg-dry	1	5/31/2023 08:09 PM

**Note:**

# ALS Environmental

Date: 09-Jun-23

**Client:** The Mannik & Smith Group, Inc.  
**Project:** Hillson Nut MS23-13; 401.ODAS003-19  
**Sample ID:** SB-15 (0-2')  
**Collection Date:** 5/23/2023 02:35 PM

**Work Order:** 23051029  
**Lab ID:** 23051029-27  
**Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Pentachlorobenzene	ND		0.40	mg/Kg-dry	1	5/31/2023 08:09 PM
Pentachloroethane	ND		0.40	mg/Kg-dry	1	5/31/2023 08:09 PM
Pentachloronitrobenzene	ND		0.80	mg/Kg-dry	1	5/31/2023 08:09 PM
Pentachlorophenol	ND		2.0	mg/Kg-dry	1	5/31/2023 08:09 PM
Phenacetin	ND		0.80	mg/Kg-dry	1	5/31/2023 08:09 PM
Phenanthrene	ND		0.24	mg/Kg-dry	1	5/31/2023 08:09 PM
Phenol	ND		0.40	mg/Kg-dry	1	5/31/2023 08:09 PM
Pyrene	ND		0.24	mg/Kg-dry	1	5/31/2023 08:09 PM
Pyridine	ND		0.40	mg/Kg-dry	1	5/31/2023 08:09 PM
Safrole	ND		0.40	mg/Kg-dry	1	5/31/2023 08:09 PM
<i>Surr: 2,4,6-Tribromophenol</i>	64.6		14.2-136	%REC	1	5/31/2023 08:09 PM
<i>Surr: 2-Fluorobiphenyl</i>	60.2		30-116	%REC	1	5/31/2023 08:09 PM
<i>Surr: 2-Fluorophenol</i>	54.9		24-105	%REC	1	5/31/2023 08:09 PM
<i>Surr: 4-Terphenyl-d14</i>	71.3		27.3-138	%REC	1	5/31/2023 08:09 PM
<i>Surr: Nitrobenzene-d5</i>	52.9		23.7-109	%REC	1	5/31/2023 08:09 PM
<i>Surr: Phenol-d5</i>	52.6		24.9-103	%REC	1	5/31/2023 08:09 PM

## VOLATILE ORGANIC COMPOUNDS

SW8260B

Analyst: LAK

1,1,1,2-Tetrachloroethane	ND		0.0052	mg/Kg-dry	1	5/26/2023 07:24 PM
1,1,1-Trichloroethane	ND		0.0052	mg/Kg-dry	1	5/26/2023 07:24 PM
1,1,2,2-Tetrachloroethane	ND		0.0052	mg/Kg-dry	1	5/26/2023 07:24 PM
1,1,2-Trichloroethane	ND		0.0052	mg/Kg-dry	1	5/26/2023 07:24 PM
1,1-Dichloroethane	ND		0.0052	mg/Kg-dry	1	5/26/2023 07:24 PM
1,1-Dichloroethene	ND		0.0052	mg/Kg-dry	1	5/26/2023 07:24 PM
1,1-Dichloropropene	ND		0.0052	mg/Kg-dry	1	5/26/2023 07:24 PM
1,2,3-Trichlorobenzene	ND		0.0052	mg/Kg-dry	1	5/26/2023 07:24 PM
1,2,3-Trichloropropane	ND		0.0052	mg/Kg-dry	1	5/26/2023 07:24 PM
1,2,4-Trichlorobenzene	ND		0.0052	mg/Kg-dry	1	5/26/2023 07:24 PM
1,2,4-Trimethylbenzene	ND		0.0052	mg/Kg-dry	1	5/26/2023 07:24 PM
1,2-Dibromo-3-chloropropane	ND		0.0052	mg/Kg-dry	1	5/26/2023 07:24 PM
1,2-Dibromoethane	ND		0.0052	mg/Kg-dry	1	5/26/2023 07:24 PM
1,2-Dichlorobenzene	ND		0.0052	mg/Kg-dry	1	5/26/2023 07:24 PM
1,2-Dichloroethane	ND		0.0052	mg/Kg-dry	1	5/26/2023 07:24 PM
1,2-Dichloropropane	ND		0.0052	mg/Kg-dry	1	5/26/2023 07:24 PM
1,3,5-Trimethylbenzene	ND		0.0052	mg/Kg-dry	1	5/26/2023 07:24 PM
1,3-Dichlorobenzene	ND		0.0052	mg/Kg-dry	1	5/26/2023 07:24 PM
1,3-Dichloropropane	ND		0.0052	mg/Kg-dry	1	5/26/2023 07:24 PM
1,4-Dichlorobenzene	ND		0.0052	mg/Kg-dry	1	5/26/2023 07:24 PM
2,2-Dichloropropane	ND		0.0052	mg/Kg-dry	1	5/26/2023 07:24 PM
2-Butanone	ND		0.052	mg/Kg-dry	1	5/26/2023 07:24 PM
2-Chlorotoluene	ND		0.0052	mg/Kg-dry	1	5/26/2023 07:24 PM

Note:



# ALS Environmental

Date: 09-Jun-23

**Client:** The Mannik & Smith Group, Inc.  
**Project:** Hillson Nut MS23-13; 401.ODAS003-19  
**Sample ID:** SB-15 (0-2')  
**Collection Date:** 5/23/2023 02:35 PM

**Work Order:** 23051029  
**Lab ID:** 23051029-27  
**Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
2-Hexanone	ND		0.0052	mg/Kg-dry	1	5/26/2023 07:24 PM
4-Chlorotoluene	ND		0.0052	mg/Kg-dry	1	5/26/2023 07:24 PM
4-Methyl-2-pentanone	ND		0.0052	mg/Kg-dry	1	5/26/2023 07:24 PM
Acetone	ND		0.052	mg/Kg-dry	1	5/26/2023 07:24 PM
Benzene	ND		0.0052	mg/Kg-dry	1	5/26/2023 07:24 PM
Bromobenzene	ND		0.0052	mg/Kg-dry	1	5/26/2023 07:24 PM
Bromochloromethane	ND		0.0052	mg/Kg-dry	1	5/26/2023 07:24 PM
Bromodichloromethane	ND		0.0052	mg/Kg-dry	1	5/26/2023 07:24 PM
Bromoform	ND		0.0052	mg/Kg-dry	1	5/26/2023 07:24 PM
Bromomethane	ND		0.0052	mg/Kg-dry	1	5/26/2023 07:24 PM
Carbon disulfide	ND		0.0052	mg/Kg-dry	1	5/26/2023 07:24 PM
Carbon tetrachloride	ND		0.0052	mg/Kg-dry	1	5/26/2023 07:24 PM
Chlorobenzene	ND		0.0052	mg/Kg-dry	1	5/26/2023 07:24 PM
Chloroethane	ND		0.0052	mg/Kg-dry	1	5/26/2023 07:24 PM
Chloroform	ND		0.0052	mg/Kg-dry	1	5/26/2023 07:24 PM
Chloromethane	ND		0.0052	mg/Kg-dry	1	5/26/2023 07:24 PM
cis-1,2-Dichloroethene	ND		0.0052	mg/Kg-dry	1	5/26/2023 07:24 PM
cis-1,3-Dichloropropene	ND		0.0052	mg/Kg-dry	1	5/26/2023 07:24 PM
Dibromochloromethane	ND		0.0052	mg/Kg-dry	1	5/26/2023 07:24 PM
Dibromomethane	ND		0.0052	mg/Kg-dry	1	5/26/2023 07:24 PM
Dichlorodifluoromethane	ND		0.0052	mg/Kg-dry	1	5/26/2023 07:24 PM
Ethylbenzene	ND		0.0052	mg/Kg-dry	1	5/26/2023 07:24 PM
Hexachlorobutadiene	ND		0.0052	mg/Kg-dry	1	5/26/2023 07:24 PM
Isopropylbenzene	ND		0.0052	mg/Kg-dry	1	5/26/2023 07:24 PM
m,p-Xylene	ND		0.0052	mg/Kg-dry	1	5/26/2023 07:24 PM
Methyl tert-butyl ether	ND		0.0052	mg/Kg-dry	1	5/26/2023 07:24 PM
Methylene chloride	ND		0.021	mg/Kg-dry	1	5/26/2023 07:24 PM
Naphthalene	ND		0.0052	mg/Kg-dry	1	5/26/2023 07:24 PM
n-Butylbenzene	ND		0.0052	mg/Kg-dry	1	5/26/2023 07:24 PM
n-Propylbenzene	ND		0.0052	mg/Kg-dry	1	5/26/2023 07:24 PM
o-Xylene	ND		0.0052	mg/Kg-dry	1	5/26/2023 07:24 PM
p-Isopropyltoluene	ND		0.0052	mg/Kg-dry	1	5/26/2023 07:24 PM
sec-Butylbenzene	ND		0.0052	mg/Kg-dry	1	5/26/2023 07:24 PM
Styrene	ND		0.0052	mg/Kg-dry	1	5/26/2023 07:24 PM
tert-Butylbenzene	ND		0.0052	mg/Kg-dry	1	5/26/2023 07:24 PM
Tetrachloroethene	ND		0.0052	mg/Kg-dry	1	5/26/2023 07:24 PM
Toluene	ND		0.0052	mg/Kg-dry	1	5/26/2023 07:24 PM
trans-1,2-Dichloroethene	ND		0.0052	mg/Kg-dry	1	5/26/2023 07:24 PM
trans-1,3-Dichloropropene	ND		0.0052	mg/Kg-dry	1	5/26/2023 07:24 PM
Trichloroethene	ND		0.0052	mg/Kg-dry	1	5/26/2023 07:24 PM

**Note:**

# ALS Environmental

Date: 09-Jun-23

**Client:** The Mannik & Smith Group, Inc.  
**Project:** Hillson Nut MS23-13; 401.ODAS003-19  
**Sample ID:** SB-15 (0-2')  
**Collection Date:** 5/23/2023 02:35 PM

**Work Order:** 23051029  
**Lab ID:** 23051029-27  
**Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Trichlorofluoromethane	ND		0.0052	mg/Kg-dry	1	5/26/2023 07:24 PM
Vinyl chloride	ND		0.0052	mg/Kg-dry	1	5/26/2023 07:24 PM
Xylenes, Total	ND		0.010	mg/Kg-dry	1	5/26/2023 07:24 PM
<i>Surr: 4-Bromofluorobenzene</i>	93.4		60-140	%REC	1	5/26/2023 07:24 PM
<i>Surr: Dibromofluoromethane</i>	97.9		60-140	%REC	1	5/26/2023 07:24 PM
<i>Surr: Toluene-d8</i>	91.6		60-140	%REC	1	5/26/2023 07:24 PM

**Note:**

# ALS Environmental

Date: 09-Jun-23

**Client:** The Mannik & Smith Group, Inc.  
**Project:** Hillson Nut MS23-13; 401.ODAS003-19  
**Sample ID:** SB-14 (0-2')  
**Collection Date:** 5/23/2023 02:55 PM

**Work Order:** 23051029  
**Lab ID:** 23051029-28  
**Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
<b>PCBS</b>			<b>SW8082</b>	Prep: SW3546	6/5/23 13:18	Analyst: <b>TSA</b>
Aroclor 1016	ND		0.12	mg/Kg-dry	1	6/7/2023 10:05 PM
Aroclor 1221	ND		0.24	mg/Kg-dry	1	6/7/2023 10:05 PM
Aroclor 1232	ND		0.12	mg/Kg-dry	1	6/7/2023 10:05 PM
Aroclor 1242	ND		0.12	mg/Kg-dry	1	6/7/2023 10:05 PM
Aroclor 1248	ND		0.12	mg/Kg-dry	1	6/7/2023 10:05 PM
Aroclor 1254	ND		0.12	mg/Kg-dry	1	6/7/2023 10:05 PM
Aroclor 1260	ND		0.12	mg/Kg-dry	1	6/7/2023 10:05 PM
Aroclor 1262	ND		0.12	mg/Kg-dry	1	6/7/2023 10:05 PM
Aroclor 1268	ND		0.12	mg/Kg-dry	1	6/7/2023 10:05 PM
Surr: Decachlorobiphenyl	110		7.32-154	%REC	1	6/7/2023 10:05 PM
Surr: Tetrachloro-m-xylene	110		33.5-152	%REC	1	6/7/2023 10:05 PM
<b>MOISTURE</b>			<b>SM2540B</b>			Analyst: <b>CW</b>
Moisture	18			% of sample	1	6/1/2023
<b>MERCURY BY CVAA</b>			<b>SW7471A</b>	Prep: EPA 7471	6/2/23 11:36	Analyst: <b>SLT</b>
Mercury	3.3		1.7	mg/Kg-dry	5	6/5/2023 02:57 PM
<b>METALS BY ICP</b>			<b>SW6010B</b>	Prep: SW3050B	6/2/23 10:43	Analyst: <b>SLT</b>
Arsenic	19		6.0	mg/Kg-dry	1	6/2/2023 06:56 PM
Barium	120		24	mg/Kg-dry	1	6/2/2023 06:56 PM
Cadmium	ND		1.2	mg/Kg-dry	1	6/2/2023 06:56 PM
Chromium	49		12	mg/Kg-dry	1	6/2/2023 06:56 PM
Lead	150		24	mg/Kg-dry	1	6/2/2023 06:56 PM
Selenium	ND		3.6	mg/Kg-dry	1	6/2/2023 06:56 PM
Silver	ND		6.0	mg/Kg-dry	1	6/2/2023 06:56 PM
<b>SEMI-VOLATILE ORGANIC COMPOUNDS</b>			<b>SW8270C</b>	Prep: SW3546	5/31/23 11:37	Analyst: <b>GC</b>
1,2,4,5-Tetrachlorobenzene	ND		0.40	mg/Kg-dry	1	5/31/2023 08:30 PM
1,2,4-Trichlorobenzene	ND		0.40	mg/Kg-dry	1	5/31/2023 08:30 PM
1,2-Dichlorobenzene	ND		0.40	mg/Kg-dry	1	5/31/2023 08:30 PM
1,3-Dichlorobenzene	ND		0.40	mg/Kg-dry	1	5/31/2023 08:30 PM
<b>1,3-Dinitrobenzene</b>	<b>0.53</b>		<b>0.40</b>	<b>mg/Kg-dry</b>	1	5/31/2023 08:30 PM
1,4-Dichlorobenzene	ND		0.40	mg/Kg-dry	1	5/31/2023 08:30 PM
<b>1-Methylnaphthalene</b>	<b>0.71</b>		<b>0.24</b>	<b>mg/Kg-dry</b>	1	5/31/2023 08:30 PM
1-Naphthylamine	ND		0.40	mg/Kg-dry	1	5/31/2023 08:30 PM
2,3,4,6-Tetrachlorophenol	ND		0.40	mg/Kg-dry	1	5/31/2023 08:30 PM
2,4,5-Trichlorophenol	ND		0.40	mg/Kg-dry	1	5/31/2023 08:30 PM
2,4,6-Trichlorophenol	ND		0.40	mg/Kg-dry	1	5/31/2023 08:30 PM
2,4-Dichlorophenol	ND		0.40	mg/Kg-dry	1	5/31/2023 08:30 PM
2,4-Dimethylphenol	ND		0.40	mg/Kg-dry	1	5/31/2023 08:30 PM

Note:

# ALS Environmental

Date: 09-Jun-23

Client: The Mannik & Smith Group, Inc.  
 Project: Hillson Nut MS23-13; 401.ODAS003-19  
 Sample ID: SB-14 (0-2')  
 Collection Date: 5/23/2023 02:55 PM

Work Order: 23051029  
 Lab ID: 23051029-28  
 Matrix: SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
2,4-Dinitrophenol	ND		2.0	mg/Kg-dry	1	5/31/2023 08:30 PM
2,4-Dinitrotoluene	ND		0.40	mg/Kg-dry	1	5/31/2023 08:30 PM
2,6-Dichlorophenol	ND		0.40	mg/Kg-dry	1	5/31/2023 08:30 PM
2,6-Dinitrotoluene	ND		0.40	mg/Kg-dry	1	5/31/2023 08:30 PM
2-Acetylaminofluorene	ND		0.40	mg/Kg-dry	1	5/31/2023 08:30 PM
2-Chloronaphthalene	ND		0.40	mg/Kg-dry	1	5/31/2023 08:30 PM
2-Chlorophenol	ND		0.40	mg/Kg-dry	1	5/31/2023 08:30 PM
<b>2-Methylnaphthalene</b>	<b>0.86</b>		<b>0.24</b>	<b>mg/Kg-dry</b>	1	5/31/2023 08:30 PM
2-Methylphenol	ND		0.40	mg/Kg-dry	1	5/31/2023 08:30 PM
2-Naphthylamine	ND		0.40	mg/Kg-dry	1	5/31/2023 08:30 PM
2-Nitroaniline	ND		2.0	mg/Kg-dry	1	5/31/2023 08:30 PM
2-Nitrophenol	ND		0.40	mg/Kg-dry	1	5/31/2023 08:30 PM
2-Picoline	ND		0.40	mg/Kg-dry	1	5/31/2023 08:30 PM
3&4-Methylphenol	ND		0.40	mg/Kg-dry	1	5/31/2023 08:30 PM
3,3`-Dichlorobenzidine	ND		0.80	mg/Kg-dry	1	5/31/2023 08:30 PM
3-Methylcholanthrene	ND		0.40	mg/Kg-dry	1	5/31/2023 08:30 PM
3-Nitroaniline	ND		2.0	mg/Kg-dry	1	5/31/2023 08:30 PM
4,6-Dinitro-2-methylphenol	ND		2.0	mg/Kg-dry	1	5/31/2023 08:30 PM
4-Aminobiphenyl	ND		0.80	mg/Kg-dry	1	5/31/2023 08:30 PM
4-Bromophenyl phenyl ether	ND		0.40	mg/Kg-dry	1	5/31/2023 08:30 PM
4-Chloro-3-methylphenol	ND		0.80	mg/Kg-dry	1	5/31/2023 08:30 PM
4-Chloroaniline	ND		0.80	mg/Kg-dry	1	5/31/2023 08:30 PM
4-Chlorophenyl phenyl ether	ND		0.40	mg/Kg-dry	1	5/31/2023 08:30 PM
4-Nitroaniline	ND		0.80	mg/Kg-dry	1	5/31/2023 08:30 PM
4-Nitrophenol	ND		2.0	mg/Kg-dry	1	5/31/2023 08:30 PM
4-Nitroquinoline 1-oxide	ND		2.0	mg/Kg-dry	1	5/31/2023 08:30 PM
5-Nitro-o-toluidine	ND		0.40	mg/Kg-dry	1	5/31/2023 08:30 PM
7,12-Dimethylbenz(a)anthracene	ND		0.40	mg/Kg-dry	1	5/31/2023 08:30 PM
Acenaphthene	ND		0.24	mg/Kg-dry	1	5/31/2023 08:30 PM
Acenaphthylene	ND		0.24	mg/Kg-dry	1	5/31/2023 08:30 PM
Acetophenone	ND		0.40	mg/Kg-dry	1	5/31/2023 08:30 PM
Aniline	ND		0.40	mg/Kg-dry	1	5/31/2023 08:30 PM
<b>Anthracene</b>	<b>0.36</b>		<b>0.24</b>	<b>mg/Kg-dry</b>	1	5/31/2023 08:30 PM
Azobenzene	ND		0.40	mg/Kg-dry	1	5/31/2023 08:30 PM
Benzidine	ND		0.40	mg/Kg-dry	1	5/31/2023 08:30 PM
<b>Benzo(a)anthracene</b>	<b>1.5</b>		<b>0.12</b>	<b>mg/Kg-dry</b>	1	5/31/2023 08:30 PM
<b>Benzo(a)pyrene</b>	<b>1.6</b>		<b>0.12</b>	<b>mg/Kg-dry</b>	1	5/31/2023 08:30 PM
<b>Benzo(b)fluoranthene</b>	<b>2.1</b>		<b>0.24</b>	<b>mg/Kg-dry</b>	1	5/31/2023 08:30 PM
<b>Benzo(g,h,i)perylene</b>	<b>0.93</b>		<b>0.24</b>	<b>mg/Kg-dry</b>	1	5/31/2023 08:30 PM
<b>Benzo(k)fluoranthene</b>	<b>0.73</b>		<b>0.24</b>	<b>mg/Kg-dry</b>	1	5/31/2023 08:30 PM

Note:

# ALS Environmental

Date: 09-Jun-23

**Client:** The Mannik & Smith Group, Inc.  
**Project:** Hillson Nut MS23-13; 401.ODAS003-19  
**Sample ID:** SB-14 (0-2')  
**Collection Date:** 5/23/2023 02:55 PM

**Work Order:** 23051029  
**Lab ID:** 23051029-28  
**Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Benzyl alcohol	ND		0.80	mg/Kg-dry	1	5/31/2023 08:30 PM
Bis(2-chloroethoxy)methane	ND		0.40	mg/Kg-dry	1	5/31/2023 08:30 PM
Bis(2-chloroethyl)ether	ND		0.40	mg/Kg-dry	1	5/31/2023 08:30 PM
Bis(2-chloroisopropyl)ether	ND		0.40	mg/Kg-dry	1	5/31/2023 08:30 PM
Bis(2-ethylhexyl)phthalate	ND		0.40	mg/Kg-dry	1	5/31/2023 08:30 PM
Butyl benzyl phthalate	ND		0.40	mg/Kg-dry	1	5/31/2023 08:30 PM
Carbazole	ND		0.24	mg/Kg-dry	1	5/31/2023 08:30 PM
<b>Chrysene</b>	<b>1.7</b>		<b>0.24</b>	<b>mg/Kg-dry</b>	1	5/31/2023 08:30 PM
<b>Dibenzo(a,h)anthracene</b>	<b>0.26</b>		<b>0.12</b>	<b>mg/Kg-dry</b>	1	5/31/2023 08:30 PM
<b>Dibenzofuran</b>	<b>0.25</b>		<b>0.24</b>	<b>mg/Kg-dry</b>	1	5/31/2023 08:30 PM
Diethyl phthalate	ND		0.40	mg/Kg-dry	1	5/31/2023 08:30 PM
Dimethyl phthalate	ND		0.40	mg/Kg-dry	1	5/31/2023 08:30 PM
Di-n-butyl phthalate	ND		0.40	mg/Kg-dry	1	5/31/2023 08:30 PM
Di-n-octyl phthalate	ND		0.40	mg/Kg-dry	1	5/31/2023 08:30 PM
Dinoseb	ND		0.40	mg/Kg-dry	1	5/31/2023 08:30 PM
Diphenylamine	ND		0.40	mg/Kg-dry	1	5/31/2023 08:30 PM
Ethyl methanesulfonate	ND		0.40	mg/Kg-dry	1	5/31/2023 08:30 PM
<b>Fluoranthene</b>	<b>3.0</b>		<b>0.24</b>	<b>mg/Kg-dry</b>	1	5/31/2023 08:30 PM
Fluorene	ND		0.24	mg/Kg-dry	1	5/31/2023 08:30 PM
Hexachlorobenzene	ND		0.40	mg/Kg-dry	1	5/31/2023 08:30 PM
Hexachlorobutadiene	ND		0.40	mg/Kg-dry	1	5/31/2023 08:30 PM
Hexachlorocyclopentadiene	ND		0.40	mg/Kg-dry	1	5/31/2023 08:30 PM
Hexachloroethane	ND		0.40	mg/Kg-dry	1	5/31/2023 08:30 PM
<b>Indeno(1,2,3-cd)pyrene</b>	<b>0.84</b>		<b>0.12</b>	<b>mg/Kg-dry</b>	1	5/31/2023 08:30 PM
Isophorone	ND		0.40	mg/Kg-dry	1	5/31/2023 08:30 PM
Isosafrole	ND		0.40	mg/Kg-dry	1	5/31/2023 08:30 PM
Methapyrilene	ND		2.0	mg/Kg-dry	1	5/31/2023 08:30 PM
Methyl methanesulfonate	ND		0.40	mg/Kg-dry	1	5/31/2023 08:30 PM
<b>Naphthalene</b>	<b>0.69</b>		<b>0.24</b>	<b>mg/Kg-dry</b>	1	5/31/2023 08:30 PM
Nitrobenzene	ND		0.40	mg/Kg-dry	1	5/31/2023 08:30 PM
N-Nitrosodiethylamine	ND		0.40	mg/Kg-dry	1	5/31/2023 08:30 PM
N-Nitrosodimethylamine	ND		0.40	mg/Kg-dry	1	5/31/2023 08:30 PM
N-Nitroso-di-n-butylamine	ND		0.40	mg/Kg-dry	1	5/31/2023 08:30 PM
N-Nitrosodi-n-propylamine	ND		0.40	mg/Kg-dry	1	5/31/2023 08:30 PM
N-Nitrosomethylethylamine	ND		0.40	mg/Kg-dry	1	5/31/2023 08:30 PM
N-Nitrosomorpholine	ND		0.40	mg/Kg-dry	1	5/31/2023 08:30 PM
N-Nitrosopiperidine	ND		0.40	mg/Kg-dry	1	5/31/2023 08:30 PM
N-Nitrosopyrrolidine	ND		0.40	mg/Kg-dry	1	5/31/2023 08:30 PM
o-Toluidine	ND		2.0	mg/Kg-dry	1	5/31/2023 08:30 PM
p-Dimethylaminoazobenzene	ND		0.40	mg/Kg-dry	1	5/31/2023 08:30 PM

**Note:**

# ALS Environmental

Date: 09-Jun-23

**Client:** The Mannik & Smith Group, Inc.  
**Project:** Hillson Nut MS23-13; 401.ODAS003-19  
**Sample ID:** SB-14 (0-2')  
**Collection Date:** 5/23/2023 02:55 PM

**Work Order:** 23051029  
**Lab ID:** 23051029-28  
**Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Pentachlorobenzene	ND		0.40	mg/Kg-dry	1	5/31/2023 08:30 PM
Pentachloroethane	ND		0.40	mg/Kg-dry	1	5/31/2023 08:30 PM
Pentachloronitrobenzene	ND		0.80	mg/Kg-dry	1	5/31/2023 08:30 PM
Pentachlorophenol	ND		2.0	mg/Kg-dry	1	5/31/2023 08:30 PM
Phenacetin	ND		0.80	mg/Kg-dry	1	5/31/2023 08:30 PM
<b>Phenanthrene</b>	<b>1.8</b>		<b>0.24</b>	<b>mg/Kg-dry</b>	1	5/31/2023 08:30 PM
Phenol	ND		0.40	mg/Kg-dry	1	5/31/2023 08:30 PM
<b>Pyrene</b>	<b>2.5</b>		<b>0.24</b>	<b>mg/Kg-dry</b>	1	5/31/2023 08:30 PM
Pyridine	ND		0.40	mg/Kg-dry	1	5/31/2023 08:30 PM
Safrole	ND		0.40	mg/Kg-dry	1	5/31/2023 08:30 PM
<i>Surr: 2,4,6-Tribromophenol</i>	<i>64.1</i>		<i>14.2-136</i>	<i>%REC</i>	1	5/31/2023 08:30 PM
<i>Surr: 2-Fluorobiphenyl</i>	<i>63.8</i>		<i>30-116</i>	<i>%REC</i>	1	5/31/2023 08:30 PM
<i>Surr: 2-Fluorophenol</i>	<i>53.6</i>		<i>24-105</i>	<i>%REC</i>	1	5/31/2023 08:30 PM
<i>Surr: 4-Terphenyl-d14</i>	<i>74.6</i>		<i>27.3-138</i>	<i>%REC</i>	1	5/31/2023 08:30 PM
<i>Surr: Nitrobenzene-d5</i>	<i>55.6</i>		<i>23.7-109</i>	<i>%REC</i>	1	5/31/2023 08:30 PM
<i>Surr: Phenol-d5</i>	<i>51.7</i>		<i>24.9-103</i>	<i>%REC</i>	1	5/31/2023 08:30 PM

## VOLATILE ORGANIC COMPOUNDS

SW8260B

Analyst: LAK

1,1,1,2-Tetrachloroethane	ND		0.0050	mg/Kg-dry	1	5/26/2023 06:39 PM
1,1,1-Trichloroethane	ND		0.0050	mg/Kg-dry	1	5/26/2023 06:39 PM
1,1,2,2-Tetrachloroethane	ND		0.0050	mg/Kg-dry	1	5/26/2023 06:39 PM
1,1,2-Trichloroethane	ND		0.0050	mg/Kg-dry	1	5/26/2023 06:39 PM
1,1-Dichloroethane	ND		0.0050	mg/Kg-dry	1	5/26/2023 06:39 PM
1,1-Dichloroethene	ND		0.0050	mg/Kg-dry	1	5/26/2023 06:39 PM
1,1-Dichloropropene	ND		0.0050	mg/Kg-dry	1	5/26/2023 06:39 PM
1,2,3-Trichlorobenzene	ND		0.0050	mg/Kg-dry	1	5/26/2023 06:39 PM
1,2,3-Trichloropropane	ND		0.0050	mg/Kg-dry	1	5/26/2023 06:39 PM
1,2,4-Trichlorobenzene	ND		0.0050	mg/Kg-dry	1	5/26/2023 06:39 PM
1,2,4-Trimethylbenzene	ND		0.0050	mg/Kg-dry	1	5/26/2023 06:39 PM
1,2-Dibromo-3-chloropropane	ND		0.0050	mg/Kg-dry	1	5/26/2023 06:39 PM
1,2-Dibromoethane	ND		0.0050	mg/Kg-dry	1	5/26/2023 06:39 PM
1,2-Dichlorobenzene	ND		0.0050	mg/Kg-dry	1	5/26/2023 06:39 PM
1,2-Dichloroethane	ND		0.0050	mg/Kg-dry	1	5/26/2023 06:39 PM
1,2-Dichloropropane	ND		0.0050	mg/Kg-dry	1	5/26/2023 06:39 PM
1,3,5-Trimethylbenzene	ND		0.0050	mg/Kg-dry	1	5/26/2023 06:39 PM
1,3-Dichlorobenzene	ND		0.0050	mg/Kg-dry	1	5/26/2023 06:39 PM
1,3-Dichloropropane	ND		0.0050	mg/Kg-dry	1	5/26/2023 06:39 PM
1,4-Dichlorobenzene	ND		0.0050	mg/Kg-dry	1	5/26/2023 06:39 PM
2,2-Dichloropropane	ND		0.0050	mg/Kg-dry	1	5/26/2023 06:39 PM
2-Butanone	ND		0.050	mg/Kg-dry	1	5/26/2023 06:39 PM
2-Chlorotoluene	ND		0.0050	mg/Kg-dry	1	5/26/2023 06:39 PM

Note:

# ALS Environmental

Date: 09-Jun-23

**Client:** The Mannik & Smith Group, Inc.  
**Project:** Hillson Nut MS23-13; 401.ODAS003-19  
**Sample ID:** SB-14 (0-2')  
**Collection Date:** 5/23/2023 02:55 PM

**Work Order:** 23051029  
**Lab ID:** 23051029-28  
**Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
2-Hexanone	ND		0.0050	mg/Kg-dry	1	5/26/2023 06:39 PM
4-Chlorotoluene	ND		0.0050	mg/Kg-dry	1	5/26/2023 06:39 PM
4-Methyl-2-pentanone	ND		0.0050	mg/Kg-dry	1	5/26/2023 06:39 PM
Acetone	ND		0.050	mg/Kg-dry	1	5/26/2023 06:39 PM
Benzene	ND		0.0050	mg/Kg-dry	1	5/26/2023 06:39 PM
Bromobenzene	ND		0.0050	mg/Kg-dry	1	5/26/2023 06:39 PM
Bromochloromethane	ND		0.0050	mg/Kg-dry	1	5/26/2023 06:39 PM
Bromodichloromethane	ND		0.0050	mg/Kg-dry	1	5/26/2023 06:39 PM
Bromoform	ND		0.0050	mg/Kg-dry	1	5/26/2023 06:39 PM
Bromomethane	ND		0.0050	mg/Kg-dry	1	5/26/2023 06:39 PM
Carbon disulfide	ND		0.0050	mg/Kg-dry	1	5/26/2023 06:39 PM
Carbon tetrachloride	ND		0.0050	mg/Kg-dry	1	5/26/2023 06:39 PM
Chlorobenzene	ND		0.0050	mg/Kg-dry	1	5/26/2023 06:39 PM
Chloroethane	ND		0.0050	mg/Kg-dry	1	5/26/2023 06:39 PM
Chloroform	ND		0.0050	mg/Kg-dry	1	5/26/2023 06:39 PM
Chloromethane	ND		0.0050	mg/Kg-dry	1	5/26/2023 06:39 PM
cis-1,2-Dichloroethene	ND		0.0050	mg/Kg-dry	1	5/26/2023 06:39 PM
cis-1,3-Dichloropropene	ND		0.0050	mg/Kg-dry	1	5/26/2023 06:39 PM
Dibromochloromethane	ND		0.0050	mg/Kg-dry	1	5/26/2023 06:39 PM
Dibromomethane	ND		0.0050	mg/Kg-dry	1	5/26/2023 06:39 PM
Dichlorodifluoromethane	ND		0.0050	mg/Kg-dry	1	5/26/2023 06:39 PM
Ethylbenzene	ND		0.0050	mg/Kg-dry	1	5/26/2023 06:39 PM
Hexachlorobutadiene	ND		0.0050	mg/Kg-dry	1	5/26/2023 06:39 PM
Isopropylbenzene	ND		0.0050	mg/Kg-dry	1	5/26/2023 06:39 PM
m,p-Xylene	ND		0.0050	mg/Kg-dry	1	5/26/2023 06:39 PM
Methyl tert-butyl ether	ND		0.0050	mg/Kg-dry	1	5/26/2023 06:39 PM
Methylene chloride	ND		0.020	mg/Kg-dry	1	5/26/2023 06:39 PM
Naphthalene	ND		0.0050	mg/Kg-dry	1	5/26/2023 06:39 PM
n-Butylbenzene	ND		0.0050	mg/Kg-dry	1	5/26/2023 06:39 PM
n-Propylbenzene	ND		0.0050	mg/Kg-dry	1	5/26/2023 06:39 PM
o-Xylene	ND		0.0050	mg/Kg-dry	1	5/26/2023 06:39 PM
p-Isopropyltoluene	ND		0.0050	mg/Kg-dry	1	5/26/2023 06:39 PM
sec-Butylbenzene	ND		0.0050	mg/Kg-dry	1	5/26/2023 06:39 PM
Styrene	ND		0.0050	mg/Kg-dry	1	5/26/2023 06:39 PM
tert-Butylbenzene	ND		0.0050	mg/Kg-dry	1	5/26/2023 06:39 PM
Tetrachloroethene	ND		0.0050	mg/Kg-dry	1	5/26/2023 06:39 PM
Toluene	ND		0.0050	mg/Kg-dry	1	5/26/2023 06:39 PM
trans-1,2-Dichloroethene	ND		0.0050	mg/Kg-dry	1	5/26/2023 06:39 PM
trans-1,3-Dichloropropene	ND		0.0050	mg/Kg-dry	1	5/26/2023 06:39 PM
Trichloroethene	ND		0.0050	mg/Kg-dry	1	5/26/2023 06:39 PM

**Note:**

# ALS Environmental

Date: 09-Jun-23

**Client:** The Mannik & Smith Group, Inc.  
**Project:** Hillson Nut MS23-13; 401.ODAS003-19  
**Sample ID:** SB-14 (0-2')  
**Collection Date:** 5/23/2023 02:55 PM

**Work Order:** 23051029  
**Lab ID:** 23051029-28  
**Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Trichlorofluoromethane	ND		0.0050	mg/Kg-dry	1	5/26/2023 06:39 PM
Vinyl chloride	ND		0.0050	mg/Kg-dry	1	5/26/2023 06:39 PM
Xylenes, Total	ND		0.010	mg/Kg-dry	1	5/26/2023 06:39 PM
<i>Surr: 4-Bromofluorobenzene</i>	90.9		60-140	%REC	1	5/26/2023 06:39 PM
<i>Surr: Dibromofluoromethane</i>	96.7		60-140	%REC	1	5/26/2023 06:39 PM
<i>Surr: Toluene-d8</i>	89.5		60-140	%REC	1	5/26/2023 06:39 PM

**Note:**



# ALS Environmental

Date: 09-Jun-23

**Client:** The Mannik & Smith Group, Inc.  
**Project:** Hillson Nut MS23-13; 401.ODAS003-19  
**Sample ID:** SB-12 (0-2')  
**Collection Date:** 5/23/2023 03:25 PM

**Work Order:** 23051029  
**Lab ID:** 23051029-29  
**Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
<b>PCBS</b>			<b>SW8082</b>	Prep: SW3546	6/5/23 13:18	Analyst: <b>TSA</b>
Aroclor 1016	ND		0.12	mg/Kg-dry	1	6/7/2023 10:54 PM
Aroclor 1221	ND		0.23	mg/Kg-dry	1	6/7/2023 10:54 PM
Aroclor 1232	ND		0.12	mg/Kg-dry	1	6/7/2023 10:54 PM
Aroclor 1242	ND		0.12	mg/Kg-dry	1	6/7/2023 10:54 PM
Aroclor 1248	ND		0.12	mg/Kg-dry	1	6/7/2023 10:54 PM
Aroclor 1254	ND		0.12	mg/Kg-dry	1	6/7/2023 10:54 PM
Aroclor 1260	ND		0.12	mg/Kg-dry	1	6/7/2023 10:54 PM
Aroclor 1262	ND		0.12	mg/Kg-dry	1	6/7/2023 10:54 PM
Aroclor 1268	ND		0.12	mg/Kg-dry	1	6/7/2023 10:54 PM
Surr: Decachlorobiphenyl	76.0		7.32-154	%REC	1	6/7/2023 10:54 PM
Surr: Tetrachloro-m-xylene	82.0		33.5-152	%REC	1	6/7/2023 10:54 PM
<b>MOISTURE</b>			<b>SM2540B</b>			Analyst: <b>CW</b>
Moisture	14			% of sample	1	6/1/2023
<b>MERCURY BY CVAA</b>			<b>SW7471A</b>	Prep: EPA 7471	6/2/23 11:36	Analyst: <b>SLT</b>
Mercury	0.48		0.31	mg/Kg-dry	1	6/5/2023 11:59 AM
<b>METALS BY ICP</b>			<b>SW6010B</b>	Prep: SW3050B	6/6/23 12:37	Analyst: <b>SRL</b>
Arsenic	14		5.3	mg/Kg-dry	1	6/7/2023 05:53 PM
Barium	130		21	mg/Kg-dry	1	6/7/2023 05:53 PM
Cadmium	ND		1.1	mg/Kg-dry	1	6/7/2023 05:53 PM
Chromium	12		11	mg/Kg-dry	1	6/7/2023 05:53 PM
Lead	190		21	mg/Kg-dry	1	6/7/2023 05:53 PM
Selenium	ND		3.2	mg/Kg-dry	1	6/7/2023 05:53 PM
Silver	ND		5.3	mg/Kg-dry	1	6/7/2023 05:53 PM
<b>SEMI-VOLATILE ORGANIC COMPOUNDS</b>			<b>SW8270C</b>	Prep: SW3546	5/31/23 11:37	Analyst: <b>GC</b>
1,2,4,5-Tetrachlorobenzene	ND		0.38	mg/Kg-dry	1	5/31/2023 08:50 PM
1,2,4-Trichlorobenzene	ND		0.38	mg/Kg-dry	1	5/31/2023 08:50 PM
1,2-Dichlorobenzene	ND		0.38	mg/Kg-dry	1	5/31/2023 08:50 PM
1,3-Dichlorobenzene	ND		0.38	mg/Kg-dry	1	5/31/2023 08:50 PM
1,3-Dinitrobenzene	ND		0.38	mg/Kg-dry	1	5/31/2023 08:50 PM
1,4-Dichlorobenzene	ND		0.38	mg/Kg-dry	1	5/31/2023 08:50 PM
1-Methylnaphthalene	ND		0.23	mg/Kg-dry	1	5/31/2023 08:50 PM
1-Naphthylamine	ND		0.38	mg/Kg-dry	1	5/31/2023 08:50 PM
2,3,4,6-Tetrachlorophenol	ND		0.38	mg/Kg-dry	1	5/31/2023 08:50 PM
2,4,5-Trichlorophenol	ND		0.38	mg/Kg-dry	1	5/31/2023 08:50 PM
2,4,6-Trichlorophenol	ND		0.38	mg/Kg-dry	1	5/31/2023 08:50 PM
2,4-Dichlorophenol	ND		0.38	mg/Kg-dry	1	5/31/2023 08:50 PM
2,4-Dimethylphenol	ND		0.38	mg/Kg-dry	1	5/31/2023 08:50 PM

Note:

# ALS Environmental

Date: 09-Jun-23

**Client:** The Mannik & Smith Group, Inc.  
**Project:** Hillson Nut MS23-13; 401.ODAS003-19  
**Sample ID:** SB-12 (0-2')  
**Collection Date:** 5/23/2023 03:25 PM

**Work Order:** 23051029  
**Lab ID:** 23051029-29  
**Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
2,4-Dinitrophenol	ND		1.9	mg/Kg-dry	1	5/31/2023 08:50 PM
2,4-Dinitrotoluene	ND		0.38	mg/Kg-dry	1	5/31/2023 08:50 PM
2,6-Dichlorophenol	ND		0.38	mg/Kg-dry	1	5/31/2023 08:50 PM
2,6-Dinitrotoluene	ND		0.38	mg/Kg-dry	1	5/31/2023 08:50 PM
2-Acetylaminofluorene	ND		0.38	mg/Kg-dry	1	5/31/2023 08:50 PM
2-Chloronaphthalene	ND		0.38	mg/Kg-dry	1	5/31/2023 08:50 PM
2-Chlorophenol	ND		0.38	mg/Kg-dry	1	5/31/2023 08:50 PM
2-Methylnaphthalene	ND		0.23	mg/Kg-dry	1	5/31/2023 08:50 PM
2-Methylphenol	ND		0.38	mg/Kg-dry	1	5/31/2023 08:50 PM
2-Naphthylamine	ND		0.38	mg/Kg-dry	1	5/31/2023 08:50 PM
2-Nitroaniline	ND		1.9	mg/Kg-dry	1	5/31/2023 08:50 PM
2-Nitrophenol	ND		0.38	mg/Kg-dry	1	5/31/2023 08:50 PM
2-Picoline	ND		0.38	mg/Kg-dry	1	5/31/2023 08:50 PM
3&4-Methylphenol	ND		0.38	mg/Kg-dry	1	5/31/2023 08:50 PM
3,3'-Dichlorobenzidine	ND		0.76	mg/Kg-dry	1	5/31/2023 08:50 PM
3-Methylcholanthrene	ND		0.38	mg/Kg-dry	1	5/31/2023 08:50 PM
3-Nitroaniline	ND		1.9	mg/Kg-dry	1	5/31/2023 08:50 PM
4,6-Dinitro-2-methylphenol	ND		1.9	mg/Kg-dry	1	5/31/2023 08:50 PM
4-Aminobiphenyl	ND		0.76	mg/Kg-dry	1	5/31/2023 08:50 PM
4-Bromophenyl phenyl ether	ND		0.38	mg/Kg-dry	1	5/31/2023 08:50 PM
4-Chloro-3-methylphenol	ND		0.76	mg/Kg-dry	1	5/31/2023 08:50 PM
4-Chloroaniline	ND		0.76	mg/Kg-dry	1	5/31/2023 08:50 PM
4-Chlorophenyl phenyl ether	ND		0.38	mg/Kg-dry	1	5/31/2023 08:50 PM
4-Nitroaniline	ND		0.76	mg/Kg-dry	1	5/31/2023 08:50 PM
4-Nitrophenol	ND		1.9	mg/Kg-dry	1	5/31/2023 08:50 PM
4-Nitroquinoline 1-oxide	ND		1.9	mg/Kg-dry	1	5/31/2023 08:50 PM
5-Nitro-o-toluidine	ND		0.38	mg/Kg-dry	1	5/31/2023 08:50 PM
7,12-Dimethylbenz(a)anthracene	ND		0.38	mg/Kg-dry	1	5/31/2023 08:50 PM
Acenaphthene	ND		0.23	mg/Kg-dry	1	5/31/2023 08:50 PM
Acenaphthylene	ND		0.23	mg/Kg-dry	1	5/31/2023 08:50 PM
Acetophenone	ND		0.38	mg/Kg-dry	1	5/31/2023 08:50 PM
Aniline	ND		0.38	mg/Kg-dry	1	5/31/2023 08:50 PM
Anthracene	ND		0.23	mg/Kg-dry	1	5/31/2023 08:50 PM
Azobenzene	ND		0.38	mg/Kg-dry	1	5/31/2023 08:50 PM
Benzidine	ND		0.38	mg/Kg-dry	1	5/31/2023 08:50 PM
<b>Benzo(a)anthracene</b>	<b>0.54</b>		<b>0.12</b>	<b>mg/Kg-dry</b>	1	5/31/2023 08:50 PM
<b>Benzo(a)pyrene</b>	<b>0.52</b>		<b>0.12</b>	<b>mg/Kg-dry</b>	1	5/31/2023 08:50 PM
<b>Benzo(b)fluoranthene</b>	<b>0.64</b>		<b>0.23</b>	<b>mg/Kg-dry</b>	1	5/31/2023 08:50 PM
<b>Benzo(g,h,i)perylene</b>	<b>0.28</b>		<b>0.23</b>	<b>mg/Kg-dry</b>	1	5/31/2023 08:50 PM
Benzo(k)fluoranthene	ND		0.23	mg/Kg-dry	1	5/31/2023 08:50 PM

Note:

# ALS Environmental

Date: 09-Jun-23

**Client:** The Mannik & Smith Group, Inc.  
**Project:** Hillson Nut MS23-13; 401.ODAS003-19  
**Sample ID:** SB-12 (0-2')  
**Collection Date:** 5/23/2023 03:25 PM

**Work Order:** 23051029  
**Lab ID:** 23051029-29  
**Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Benzyl alcohol	ND		0.76	mg/Kg-dry	1	5/31/2023 08:50 PM
Bis(2-chloroethoxy)methane	ND		0.38	mg/Kg-dry	1	5/31/2023 08:50 PM
Bis(2-chloroethyl)ether	ND		0.38	mg/Kg-dry	1	5/31/2023 08:50 PM
Bis(2-chloroisopropyl)ether	ND		0.38	mg/Kg-dry	1	5/31/2023 08:50 PM
Bis(2-ethylhexyl)phthalate	ND		0.38	mg/Kg-dry	1	5/31/2023 08:50 PM
Butyl benzyl phthalate	ND		0.38	mg/Kg-dry	1	5/31/2023 08:50 PM
Carbazole	ND		0.23	mg/Kg-dry	1	5/31/2023 08:50 PM
<b>Chrysene</b>	<b>0.51</b>		<b>0.23</b>	<b>mg/Kg-dry</b>	1	5/31/2023 08:50 PM
Dibenzo(a,h)anthracene	ND		0.12	mg/Kg-dry	1	5/31/2023 08:50 PM
Dibenzofuran	ND		0.23	mg/Kg-dry	1	5/31/2023 08:50 PM
Diethyl phthalate	ND		0.38	mg/Kg-dry	1	5/31/2023 08:50 PM
Dimethyl phthalate	ND		0.38	mg/Kg-dry	1	5/31/2023 08:50 PM
Di-n-butyl phthalate	ND		0.38	mg/Kg-dry	1	5/31/2023 08:50 PM
Di-n-octyl phthalate	ND		0.38	mg/Kg-dry	1	5/31/2023 08:50 PM
Dinoseb	ND		0.38	mg/Kg-dry	1	5/31/2023 08:50 PM
Diphenylamine	ND		0.38	mg/Kg-dry	1	5/31/2023 08:50 PM
Ethyl methanesulfonate	ND		0.38	mg/Kg-dry	1	5/31/2023 08:50 PM
<b>Fluoranthene</b>	<b>0.85</b>		<b>0.23</b>	<b>mg/Kg-dry</b>	1	5/31/2023 08:50 PM
Fluorene	ND		0.23	mg/Kg-dry	1	5/31/2023 08:50 PM
Hexachlorobenzene	ND		0.38	mg/Kg-dry	1	5/31/2023 08:50 PM
Hexachlorobutadiene	ND		0.38	mg/Kg-dry	1	5/31/2023 08:50 PM
Hexachlorocyclopentadiene	ND		0.38	mg/Kg-dry	1	5/31/2023 08:50 PM
Hexachloroethane	ND		0.38	mg/Kg-dry	1	5/31/2023 08:50 PM
<b>Indeno(1,2,3-cd)pyrene</b>	<b>0.25</b>		<b>0.12</b>	<b>mg/Kg-dry</b>	1	5/31/2023 08:50 PM
Isophorone	ND		0.38	mg/Kg-dry	1	5/31/2023 08:50 PM
Isosafrole	ND		0.38	mg/Kg-dry	1	5/31/2023 08:50 PM
Methapyrilene	ND		1.9	mg/Kg-dry	1	5/31/2023 08:50 PM
Methyl methanesulfonate	ND		0.38	mg/Kg-dry	1	5/31/2023 08:50 PM
Naphthalene	ND		0.23	mg/Kg-dry	1	5/31/2023 08:50 PM
Nitrobenzene	ND		0.38	mg/Kg-dry	1	5/31/2023 08:50 PM
N-Nitrosodiethylamine	ND		0.38	mg/Kg-dry	1	5/31/2023 08:50 PM
N-Nitrosodimethylamine	ND		0.38	mg/Kg-dry	1	5/31/2023 08:50 PM
N-Nitroso-di-n-butylamine	ND		0.38	mg/Kg-dry	1	5/31/2023 08:50 PM
N-Nitrosodi-n-propylamine	ND		0.38	mg/Kg-dry	1	5/31/2023 08:50 PM
N-Nitrosomethylethylamine	ND		0.38	mg/Kg-dry	1	5/31/2023 08:50 PM
N-Nitrosomorpholine	ND		0.38	mg/Kg-dry	1	5/31/2023 08:50 PM
N-Nitrosopiperidine	ND		0.38	mg/Kg-dry	1	5/31/2023 08:50 PM
N-Nitrosopyrrolidine	ND		0.38	mg/Kg-dry	1	5/31/2023 08:50 PM
o-Toluidine	ND		1.9	mg/Kg-dry	1	5/31/2023 08:50 PM
p-Dimethylaminoazobenzene	ND		0.38	mg/Kg-dry	1	5/31/2023 08:50 PM

**Note:**

# ALS Environmental

Date: 09-Jun-23

**Client:** The Mannik & Smith Group, Inc.  
**Project:** Hillson Nut MS23-13; 401.ODAS003-19  
**Sample ID:** SB-12 (0-2')  
**Collection Date:** 5/23/2023 03:25 PM

**Work Order:** 23051029  
**Lab ID:** 23051029-29  
**Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Pentachlorobenzene	ND		0.38	mg/Kg-dry	1	5/31/2023 08:50 PM
Pentachloroethane	ND		0.38	mg/Kg-dry	1	5/31/2023 08:50 PM
Pentachloronitrobenzene	ND		0.76	mg/Kg-dry	1	5/31/2023 08:50 PM
Pentachlorophenol	ND		1.9	mg/Kg-dry	1	5/31/2023 08:50 PM
Phenacetin	ND		0.76	mg/Kg-dry	1	5/31/2023 08:50 PM
<b>Phenanthrene</b>	<b>0.42</b>		<b>0.23</b>	<b>mg/Kg-dry</b>	1	5/31/2023 08:50 PM
Phenol	ND		0.38	mg/Kg-dry	1	5/31/2023 08:50 PM
<b>Pyrene</b>	<b>0.72</b>		<b>0.23</b>	<b>mg/Kg-dry</b>	1	5/31/2023 08:50 PM
Pyridine	ND		0.38	mg/Kg-dry	1	5/31/2023 08:50 PM
Safrole	ND		0.38	mg/Kg-dry	1	5/31/2023 08:50 PM
<i>Surr: 2,4,6-Tribromophenol</i>	<i>60.5</i>		<i>14.2-136</i>	<i>%REC</i>	1	5/31/2023 08:50 PM
<i>Surr: 2-Fluorobiphenyl</i>	<i>63.0</i>		<i>30-116</i>	<i>%REC</i>	1	5/31/2023 08:50 PM
<i>Surr: 2-Fluorophenol</i>	<i>51.7</i>		<i>24-105</i>	<i>%REC</i>	1	5/31/2023 08:50 PM
<i>Surr: 4-Terphenyl-d14</i>	<i>76.3</i>		<i>27.3-138</i>	<i>%REC</i>	1	5/31/2023 08:50 PM
<i>Surr: Nitrobenzene-d5</i>	<i>55.0</i>		<i>23.7-109</i>	<i>%REC</i>	1	5/31/2023 08:50 PM
<i>Surr: Phenol-d5</i>	<i>52.9</i>		<i>24.9-103</i>	<i>%REC</i>	1	5/31/2023 08:50 PM

## VOLATILE ORGANIC COMPOUNDS

SW8260B

Analyst: LAK

1,1,1,2-Tetrachloroethane	ND		0.0051	mg/Kg-dry	1	5/26/2023 07:02 PM
1,1,1-Trichloroethane	ND		0.0051	mg/Kg-dry	1	5/26/2023 07:02 PM
1,1,2,2-Tetrachloroethane	ND		0.0051	mg/Kg-dry	1	5/26/2023 07:02 PM
1,1,2-Trichloroethane	ND		0.0051	mg/Kg-dry	1	5/26/2023 07:02 PM
1,1-Dichloroethane	ND		0.0051	mg/Kg-dry	1	5/26/2023 07:02 PM
1,1-Dichloroethene	ND		0.0051	mg/Kg-dry	1	5/26/2023 07:02 PM
1,1-Dichloropropene	ND		0.0051	mg/Kg-dry	1	5/26/2023 07:02 PM
1,2,3-Trichlorobenzene	ND		0.0051	mg/Kg-dry	1	5/26/2023 07:02 PM
1,2,3-Trichloropropane	ND		0.0051	mg/Kg-dry	1	5/26/2023 07:02 PM
1,2,4-Trichlorobenzene	ND		0.0051	mg/Kg-dry	1	5/26/2023 07:02 PM
1,2,4-Trimethylbenzene	ND		0.0051	mg/Kg-dry	1	5/26/2023 07:02 PM
1,2-Dibromo-3-chloropropane	ND		0.0051	mg/Kg-dry	1	5/26/2023 07:02 PM
1,2-Dibromoethane	ND		0.0051	mg/Kg-dry	1	5/26/2023 07:02 PM
1,2-Dichlorobenzene	ND		0.0051	mg/Kg-dry	1	5/26/2023 07:02 PM
1,2-Dichloroethane	ND		0.0051	mg/Kg-dry	1	5/26/2023 07:02 PM
1,2-Dichloropropane	ND		0.0051	mg/Kg-dry	1	5/26/2023 07:02 PM
1,3,5-Trimethylbenzene	ND		0.0051	mg/Kg-dry	1	5/26/2023 07:02 PM
1,3-Dichlorobenzene	ND		0.0051	mg/Kg-dry	1	5/26/2023 07:02 PM
1,3-Dichloropropane	ND		0.0051	mg/Kg-dry	1	5/26/2023 07:02 PM
1,4-Dichlorobenzene	ND		0.0051	mg/Kg-dry	1	5/26/2023 07:02 PM
2,2-Dichloropropane	ND		0.0051	mg/Kg-dry	1	5/26/2023 07:02 PM
2-Butanone	ND		0.051	mg/Kg-dry	1	5/26/2023 07:02 PM
2-Chlorotoluene	ND		0.0051	mg/Kg-dry	1	5/26/2023 07:02 PM

Note:

# ALS Environmental

Date: 09-Jun-23

**Client:** The Mannik & Smith Group, Inc.  
**Project:** Hillson Nut MS23-13; 401.ODAS003-19  
**Sample ID:** SB-12 (0-2')  
**Collection Date:** 5/23/2023 03:25 PM

**Work Order:** 23051029  
**Lab ID:** 23051029-29  
**Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
2-Hexanone	ND		0.0051	mg/Kg-dry	1	5/26/2023 07:02 PM
4-Chlorotoluene	ND		0.0051	mg/Kg-dry	1	5/26/2023 07:02 PM
4-Methyl-2-pentanone	ND		0.0051	mg/Kg-dry	1	5/26/2023 07:02 PM
Acetone	ND		0.051	mg/Kg-dry	1	5/26/2023 07:02 PM
Benzene	ND		0.0051	mg/Kg-dry	1	5/26/2023 07:02 PM
Bromobenzene	ND		0.0051	mg/Kg-dry	1	5/26/2023 07:02 PM
Bromochloromethane	ND		0.0051	mg/Kg-dry	1	5/26/2023 07:02 PM
Bromodichloromethane	ND		0.0051	mg/Kg-dry	1	5/26/2023 07:02 PM
Bromoform	ND		0.0051	mg/Kg-dry	1	5/26/2023 07:02 PM
Bromomethane	ND		0.0051	mg/Kg-dry	1	5/26/2023 07:02 PM
Carbon disulfide	ND		0.0051	mg/Kg-dry	1	5/26/2023 07:02 PM
Carbon tetrachloride	ND		0.0051	mg/Kg-dry	1	5/26/2023 07:02 PM
Chlorobenzene	ND		0.0051	mg/Kg-dry	1	5/26/2023 07:02 PM
Chloroethane	ND		0.0051	mg/Kg-dry	1	5/26/2023 07:02 PM
Chloroform	ND		0.0051	mg/Kg-dry	1	5/26/2023 07:02 PM
Chloromethane	ND		0.0051	mg/Kg-dry	1	5/26/2023 07:02 PM
cis-1,2-Dichloroethene	ND		0.0051	mg/Kg-dry	1	5/26/2023 07:02 PM
cis-1,3-Dichloropropene	ND		0.0051	mg/Kg-dry	1	5/26/2023 07:02 PM
Dibromochloromethane	ND		0.0051	mg/Kg-dry	1	5/26/2023 07:02 PM
Dibromomethane	ND		0.0051	mg/Kg-dry	1	5/26/2023 07:02 PM
Dichlorodifluoromethane	ND		0.0051	mg/Kg-dry	1	5/26/2023 07:02 PM
Ethylbenzene	ND		0.0051	mg/Kg-dry	1	5/26/2023 07:02 PM
Hexachlorobutadiene	ND		0.0051	mg/Kg-dry	1	5/26/2023 07:02 PM
Isopropylbenzene	ND		0.0051	mg/Kg-dry	1	5/26/2023 07:02 PM
m,p-Xylene	ND		0.0051	mg/Kg-dry	1	5/26/2023 07:02 PM
Methyl tert-butyl ether	ND		0.0051	mg/Kg-dry	1	5/26/2023 07:02 PM
Methylene chloride	ND		0.020	mg/Kg-dry	1	5/26/2023 07:02 PM
Naphthalene	ND		0.0051	mg/Kg-dry	1	5/26/2023 07:02 PM
n-Butylbenzene	ND		0.0051	mg/Kg-dry	1	5/26/2023 07:02 PM
n-Propylbenzene	ND		0.0051	mg/Kg-dry	1	5/26/2023 07:02 PM
o-Xylene	ND		0.0051	mg/Kg-dry	1	5/26/2023 07:02 PM
p-Isopropyltoluene	ND		0.0051	mg/Kg-dry	1	5/26/2023 07:02 PM
sec-Butylbenzene	ND		0.0051	mg/Kg-dry	1	5/26/2023 07:02 PM
Styrene	ND		0.0051	mg/Kg-dry	1	5/26/2023 07:02 PM
tert-Butylbenzene	ND		0.0051	mg/Kg-dry	1	5/26/2023 07:02 PM
Tetrachloroethene	ND		0.0051	mg/Kg-dry	1	5/26/2023 07:02 PM
Toluene	ND		0.0051	mg/Kg-dry	1	5/26/2023 07:02 PM
trans-1,2-Dichloroethene	ND		0.0051	mg/Kg-dry	1	5/26/2023 07:02 PM
trans-1,3-Dichloropropene	ND		0.0051	mg/Kg-dry	1	5/26/2023 07:02 PM
Trichloroethene	ND		0.0051	mg/Kg-dry	1	5/26/2023 07:02 PM

**Note:**

# ALS Environmental

Date: 09-Jun-23

**Client:** The Mannik & Smith Group, Inc.  
**Project:** Hillson Nut MS23-13; 401.ODAS003-19  
**Sample ID:** SB-12 (0-2')  
**Collection Date:** 5/23/2023 03:25 PM

**Work Order:** 23051029  
**Lab ID:** 23051029-29  
**Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Trichlorofluoromethane	ND		0.0051	mg/Kg-dry	1	5/26/2023 07:02 PM
Vinyl chloride	ND		0.0051	mg/Kg-dry	1	5/26/2023 07:02 PM
Xylenes, Total	ND		0.010	mg/Kg-dry	1	5/26/2023 07:02 PM
<i>Surr: 4-Bromofluorobenzene</i>	94.5		60-140	%REC	1	5/26/2023 07:02 PM
<i>Surr: Dibromofluoromethane</i>	97.6		60-140	%REC	1	5/26/2023 07:02 PM
<i>Surr: Toluene-d8</i>	91.5		60-140	%REC	1	5/26/2023 07:02 PM

**Note:**

# ALS Environmental

Date: 09-Jun-23

**Client:** The Mannik & Smith Group, Inc.  
**Project:** Hillson Nut MS23-13; 401.ODAS003-19  
**Sample ID:** TW-4  
**Collection Date:** 5/22/2023 04:00 PM

**Work Order:** 23051029  
**Lab ID:** 23051029-30  
**Matrix:** WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
<b>METALS BY ICP</b>			<b>SW6010B</b>	Prep: SW3010A 5/25/23 13:12		Analyst: <b>SLT</b>
Lead	410		15	µg/L	1	5/25/2023 07:13 PM
<b>EDB BY EPA 8011</b>			<b>SW8011</b>	Prep: SW3511 5/26/23 15:57		Analyst: <b>ALSHN</b>
1,2-Dibromoethane	ND		0.050	µg/L	1	5/26/2023 05:41 PM
<b>PAH COMPOUNDS</b>			<b>SW8270C</b>	Prep: SW3511 5/26/23 15:57		Analyst: <b>GC</b>
1-Methylnaphthalene	ND		0.18	µg/L	1	5/27/2023 12:39 PM
2-Methylnaphthalene	ND		0.18	µg/L	1	5/27/2023 12:39 PM
Acenaphthene	ND		0.18	µg/L	1	5/27/2023 12:39 PM
Acenaphthylene	ND		0.18	µg/L	1	5/27/2023 12:39 PM
Anthracene	ND		0.18	µg/L	1	5/27/2023 12:39 PM
Benzo(a)anthracene	ND		0.18	µg/L	1	5/27/2023 12:39 PM
Benzo(a)pyrene	ND		0.14	µg/L	1	5/27/2023 12:39 PM
Benzo(b)fluoranthene	ND		0.14	µg/L	1	5/27/2023 12:39 PM
Benzo(g,h,i)perylene	ND		0.18	µg/L	1	5/27/2023 12:39 PM
Benzo(k)fluoranthene	ND		0.18	µg/L	1	5/27/2023 12:39 PM
Carbazole	ND		0.18	µg/L	1	5/27/2023 12:39 PM
Chrysene	ND		0.18	µg/L	1	5/27/2023 12:39 PM
Dibenzo(a,h)anthracene	ND		0.045	µg/L	1	5/27/2023 12:39 PM
Dibenzofuran	ND		0.18	µg/L	1	5/27/2023 12:39 PM
Fluoranthene	ND		0.18	µg/L	1	5/27/2023 12:39 PM
Fluorene	ND		0.18	µg/L	1	5/27/2023 12:39 PM
Indeno(1,2,3-cd)pyrene	ND		0.14	µg/L	1	5/27/2023 12:39 PM
Naphthalene	ND		0.18	µg/L	1	5/27/2023 12:39 PM
Phenanthrene	ND		0.18	µg/L	1	5/27/2023 12:39 PM
Pyrene	ND		0.18	µg/L	1	5/27/2023 12:39 PM
Surr: 2-Fluorobiphenyl	92.0		21.6-144	%REC	1	5/27/2023 12:39 PM
<b>VOLATILE ORGANIC COMPOUNDS</b>			<b>SW8260B</b>	Prep: SW3511 5/26/23 15:57		Analyst: <b>TJH</b>
1,2,4-Trimethylbenzene	ND		5.0	µg/L	1	5/31/2023 03:22 PM
1,2-Dichloroethane	ND		5.0	µg/L	1	5/31/2023 03:22 PM
Benzene	ND		5.0	µg/L	1	5/31/2023 03:22 PM
Ethylbenzene	ND		5.0	µg/L	1	5/31/2023 03:22 PM
m,p-Xylene	ND		5.0	µg/L	1	5/31/2023 03:22 PM
Methyl tert-butyl ether	ND		5.0	µg/L	1	5/31/2023 03:22 PM
Naphthalene	ND		1.4	µg/L	1	5/31/2023 03:22 PM
o-Xylene	ND		5.0	µg/L	1	5/31/2023 03:22 PM
Toluene	ND		5.0	µg/L	1	5/31/2023 03:22 PM
Xylenes, Total	ND		10	µg/L	1	5/31/2023 03:22 PM
Surr: 4-Bromofluorobenzene	102		61-131	%REC	1	5/31/2023 03:22 PM

**Note:**

**ALS Environmental**

Date: 09-Jun-23

**Client:** The Mannik & Smith Group, Inc.  
**Project:** Hillson Nut MS23-13; 401.ODAS003-19  
**Sample ID:** TW-4  
**Collection Date:** 5/22/2023 04:00 PM

**Work Order:** 23051029  
**Lab ID:** 23051029-30  
**Matrix:** WATER

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Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Surr: Dibromofluoromethane	110		72-137	%REC	1	5/31/2023 03:22 PM
Surr: Toluene-d8	104		80.4-119	%REC	1	5/31/2023 03:22 PM

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**Note:**



# ALS Environmental

Date: 09-Jun-23

**Client:** The Mannik & Smith Group, Inc.  
**Project:** Hillson Nut MS23-13; 401.ODAS003-19  
**Sample ID:** TW-2  
**Collection Date:** 5/22/2023 04:45 PM

**Work Order:** 23051029  
**Lab ID:** 23051029-31  
**Matrix:** WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
<b>METALS BY ICP</b>			<b>SW6010B</b>			
Lead	26		15	µg/L	1	5/25/2023 07:18 PM
<b>EDB BY EPA 8011</b>			<b>SW8011</b>			
1,2-Dibromoethane	ND		0.050	µg/L	1	5/26/2023 02:00 PM
<b>PAH COMPOUNDS</b>			<b>SW8270C</b>			
1-Methylnaphthalene	ND		0.18	µg/L	1	5/27/2023 12:55 PM
2-Methylnaphthalene	ND		0.18	µg/L	1	5/27/2023 12:55 PM
Acenaphthene	ND		0.18	µg/L	1	5/27/2023 12:55 PM
Acenaphthylene	ND		0.18	µg/L	1	5/27/2023 12:55 PM
Anthracene	ND		0.18	µg/L	1	5/27/2023 12:55 PM
Benzo(a)anthracene	ND		0.18	µg/L	1	5/27/2023 12:55 PM
Benzo(a)pyrene	ND		0.13	µg/L	1	5/27/2023 12:55 PM
Benzo(b)fluoranthene	ND		0.13	µg/L	1	5/27/2023 12:55 PM
Benzo(g,h,i)perylene	ND		0.18	µg/L	1	5/27/2023 12:55 PM
Benzo(k)fluoranthene	ND		0.18	µg/L	1	5/27/2023 12:55 PM
Carbazole	ND		0.18	µg/L	1	5/27/2023 12:55 PM
Chrysene	ND		0.18	µg/L	1	5/27/2023 12:55 PM
Dibenzo(a,h)anthracene	ND		0.044	µg/L	1	5/27/2023 12:55 PM
Dibenzofuran	ND		0.18	µg/L	1	5/27/2023 12:55 PM
Fluoranthene	ND		0.18	µg/L	1	5/27/2023 12:55 PM
Fluorene	ND		0.18	µg/L	1	5/27/2023 12:55 PM
Indeno(1,2,3-cd)pyrene	ND		0.13	µg/L	1	5/27/2023 12:55 PM
Naphthalene	ND		0.18	µg/L	1	5/27/2023 12:55 PM
Phenanthrene	ND		0.18	µg/L	1	5/27/2023 12:55 PM
Pyrene	ND		0.18	µg/L	1	5/27/2023 12:55 PM
Surr: 2-Fluorobiphenyl	90.6		21.6-144	%REC	1	5/27/2023 12:55 PM
<b>VOLATILE ORGANIC COMPOUNDS</b>			<b>SW8260B</b>			
1,2,4-Trimethylbenzene	ND		5.0	µg/L	1	5/31/2023 03:43 PM
1,2-Dichloroethane	ND		5.0	µg/L	1	5/31/2023 03:43 PM
Benzene	ND		5.0	µg/L	1	5/31/2023 03:43 PM
Ethylbenzene	ND		5.0	µg/L	1	5/31/2023 03:43 PM
m,p-Xylene	ND		5.0	µg/L	1	5/31/2023 03:43 PM
Methyl tert-butyl ether	ND		5.0	µg/L	1	5/31/2023 03:43 PM
Naphthalene	ND		1.4	µg/L	1	5/31/2023 03:43 PM
o-Xylene	ND		5.0	µg/L	1	5/31/2023 03:43 PM
Toluene	ND		5.0	µg/L	1	5/31/2023 03:43 PM
Xylenes, Total	ND		10	µg/L	1	5/31/2023 03:43 PM
Surr: 4-Bromofluorobenzene	100		61-131	%REC	1	5/31/2023 03:43 PM

**Note:**

# ALS Environmental

Date: 09-Jun-23

**Client:** The Mannik & Smith Group, Inc.  
**Project:** Hillson Nut MS23-13; 401.ODAS003-19  
**Sample ID:** TW-2  
**Collection Date:** 5/22/2023 04:45 PM

**Work Order:** 23051029  
**Lab ID:** 23051029-31  
**Matrix:** WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Surr: Dibromofluoromethane	111		72-137	%REC	1	5/31/2023 03:43 PM
Surr: Toluene-d8	102		80.4-119	%REC	1	5/31/2023 03:43 PM

**Note:**

**ALS Environmental**

Date: 09-Jun-23

**Client:** The Mannik & Smith Group, Inc.  
**Project:** Hillson Nut MS23-13; 401.ODAS003-19  
**Sample ID:** TW-6  
**Collection Date:** 5/23/2023 03:00 PM

**Work Order:** 23051029  
**Lab ID:** 23051029-32  
**Matrix:** WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
<b>PCBS</b>			<b>SW8082</b>		Prep: SW3510C 6/2/23 13:47	Analyst: <b>TSA</b>
Aroclor 1016	ND		1.0	µg/L	1	6/6/2023 07:02 AM
Aroclor 1221	ND		1.0	µg/L	1	6/6/2023 07:02 AM
Aroclor 1232	ND		1.0	µg/L	1	6/6/2023 07:02 AM
Aroclor 1242	ND		1.0	µg/L	1	6/6/2023 07:02 AM
Aroclor 1248	ND		1.0	µg/L	1	6/6/2023 07:02 AM
Aroclor 1254	ND		1.8	µg/L	1	6/6/2023 07:02 AM
Aroclor 1260	ND		1.8	µg/L	1	6/6/2023 07:02 AM
Surr: Decachlorobiphenyl	78.0		6.61-163	%REC	1	6/6/2023 07:02 AM
Surr: Tetrachloro-m-xylene	94.0		23.8-163	%REC	1	6/6/2023 07:02 AM
<b>MERCURY BY CVAA</b>			<b>SW7470A</b>		Prep: SW7470A 5/25/23 13:14	Analyst: <b>SLT</b>
Mercury	ND		0.25	µg/L	1	5/31/2023 11:08 AM
<b>METALS BY ICP</b>			<b>SW6010B</b>		Prep: SW3010A 5/25/23 13:12	Analyst: <b>SLT</b>
<b>Arsenic</b>	<b>180</b>		<b>10</b>	<b>µg/L</b>	1	5/25/2023 07:23 PM
<b>Barium</b>	<b>280</b>		<b>100</b>	<b>µg/L</b>	1	5/25/2023 07:23 PM
Cadmium	ND		50	µg/L	1	5/25/2023 07:23 PM
<b>Chromium</b>	<b>140</b>		<b>10</b>	<b>µg/L</b>	1	5/25/2023 07:23 PM
<b>Lead</b>	<b>170</b>		<b>15</b>	<b>µg/L</b>	1	5/25/2023 07:23 PM
Selenium	ND		30	µg/L	1	5/25/2023 07:23 PM
Silver	ND		50	µg/L	1	5/25/2023 07:23 PM
<b>SEMI-VOLATILE ORGANIC COMPOUNDS</b>			<b>SW8270C</b>		Prep: SW3510C 5/26/23 16:00	Analyst: <b>GC</b>
1,2,4,5-Tetrachlorobenzene	ND		10.0	µg/L	1	5/30/2023 09:08 PM
1,2,4-Trichlorobenzene	ND		10.0	µg/L	1	5/30/2023 09:08 PM
1,2-Dichlorobenzene	ND		10.0	µg/L	1	5/30/2023 09:08 PM
1,3-Dichlorobenzene	ND		10.0	µg/L	1	5/30/2023 09:08 PM
1,3-Dinitrobenzene	ND		10.0	µg/L	1	5/30/2023 09:08 PM
1,4-Dichlorobenzene	ND		10.0	µg/L	1	5/30/2023 09:08 PM
1-Methylnaphthalene	ND		0.200	µg/L	1	5/30/2023 09:08 PM
1-Naphthylamine	ND		10.0	µg/L	1	5/30/2023 09:08 PM
2,3,4,6-Tetrachlorophenol	ND		10.0	µg/L	1	5/30/2023 09:08 PM
2,4,5-Trichlorophenol	ND		10.0	µg/L	1	5/30/2023 09:08 PM
2,4,6-Trichlorophenol	ND		10.0	µg/L	1	5/30/2023 09:08 PM
2,4-Dichlorophenol	ND		10.0	µg/L	1	5/30/2023 09:08 PM
2,4-Dimethylphenol	ND		10.0	µg/L	1	5/30/2023 09:08 PM
2,4-Dinitrophenol	ND		10.0	µg/L	1	5/30/2023 09:08 PM
2,4-Dinitrotoluene	ND		10.0	µg/L	1	5/30/2023 09:08 PM
2,6-Dichlorophenol	ND		10.0	µg/L	1	5/30/2023 09:08 PM
2,6-Dinitrotoluene	ND		10.0	µg/L	1	5/30/2023 09:08 PM

**Note:**

# ALS Environmental

Date: 09-Jun-23

**Client:** The Mannik & Smith Group, Inc.  
**Project:** Hillson Nut MS23-13; 401.ODAS003-19  
**Sample ID:** TW-6  
**Collection Date:** 5/23/2023 03:00 PM

**Work Order:** 23051029  
**Lab ID:** 23051029-32  
**Matrix:** WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
2-Acetylaminofluorene	ND		10.0	µg/L	1	5/30/2023 09:08 PM
2-Chloronaphthalene	ND		10.0	µg/L	1	5/30/2023 09:08 PM
2-Chlorophenol	ND		10.0	µg/L	1	5/30/2023 09:08 PM
2-Methylnaphthalene	ND		0.200	µg/L	1	5/30/2023 09:08 PM
2-Methylphenol	ND		10.0	µg/L	1	5/30/2023 09:08 PM
2-Naphthylamine	ND		20.0	µg/L	1	5/30/2023 09:08 PM
2-Nitroaniline	ND		10.0	µg/L	1	5/30/2023 09:08 PM
2-Nitrophenol	ND		10.0	µg/L	1	5/30/2023 09:08 PM
2-Picoline	ND		20.0	µg/L	1	5/30/2023 09:08 PM
3&4-Methylphenol	ND		10.0	µg/L	1	5/30/2023 09:08 PM
3,3'-Dichlorobenzidine	ND		10.0	µg/L	1	5/30/2023 09:08 PM
3-Methylcholanthrene	ND		20.0	µg/L	1	5/30/2023 09:08 PM
3-Nitroaniline	ND		20.0	µg/L	1	5/30/2023 09:08 PM
4,6-Dinitro-2-methylphenol	ND		20.0	µg/L	1	5/30/2023 09:08 PM
4-Aminobiphenyl	ND		10.0	µg/L	1	5/30/2023 09:08 PM
4-Bromophenyl phenyl ether	ND		20.0	µg/L	1	5/30/2023 09:08 PM
4-Chloro-3-methylphenol	ND		20.0	µg/L	1	5/30/2023 09:08 PM
4-Chloroaniline	ND		10.0	µg/L	1	5/30/2023 09:08 PM
4-Chlorophenyl phenyl ether	ND		20.0	µg/L	1	5/30/2023 09:08 PM
4-Nitroaniline	ND		20.0	µg/L	1	5/30/2023 09:08 PM
4-Nitrophenol	ND		10.0	µg/L	1	5/30/2023 09:08 PM
4-Nitroquinoline 1-oxide	ND		10.0	µg/L	1	5/30/2023 09:08 PM
5-Nitro-o-toluidine	ND		10.0	µg/L	1	5/30/2023 09:08 PM
7,12-Dimethylbenz(a)anthracene	ND		10.0	µg/L	1	5/30/2023 09:08 PM
Acenaphthene	ND		0.200	µg/L	1	5/30/2023 09:08 PM
Acenaphthylene	ND		0.200	µg/L	1	5/30/2023 09:08 PM
Acetophenone	ND		10.0	µg/L	1	5/30/2023 09:08 PM
Aniline	ND		10.0	µg/L	1	5/30/2023 09:08 PM
Anthracene	ND		0.200	µg/L	1	5/30/2023 09:08 PM
Azobenzene	ND		10.0	µg/L	1	5/30/2023 09:08 PM
Benzidine	ND		10.0	µg/L	1	5/30/2023 09:08 PM
Benzo(a)anthracene	ND		0.200	µg/L	1	5/30/2023 09:08 PM
Benzo(a)pyrene	ND		0.200	µg/L	1	5/30/2023 09:08 PM
Benzo(b)fluoranthene	ND		0.200	µg/L	1	5/30/2023 09:08 PM
Benzo(g,h,i)perylene	ND		0.200	µg/L	1	5/30/2023 09:08 PM
Benzo(k)fluoranthene	ND		0.200	µg/L	1	5/30/2023 09:08 PM
Benzyl alcohol	ND		10.0	µg/L	1	5/30/2023 09:08 PM
Bis(2-chloroethoxy)methane	ND		10.0	µg/L	1	5/30/2023 09:08 PM
Bis(2-chloroethyl)ether	ND		10.0	µg/L	1	5/30/2023 09:08 PM
Bis(2-chloroisopropyl)ether	ND		10.0	µg/L	1	5/30/2023 09:08 PM

**Note:**

# ALS Environmental

Date: 09-Jun-23

**Client:** The Mannik & Smith Group, Inc.  
**Project:** Hillson Nut MS23-13; 401.ODAS003-19  
**Sample ID:** TW-6  
**Collection Date:** 5/23/2023 03:00 PM

**Work Order:** 23051029  
**Lab ID:** 23051029-32  
**Matrix:** WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Bis(2-ethylhexyl)phthalate	ND		10.0	µg/L	1	5/30/2023 09:08 PM
Butyl benzyl phthalate	ND		10.0	µg/L	1	5/30/2023 09:08 PM
Carbazole	ND		0.200	µg/L	1	5/30/2023 09:08 PM
Chrysene	ND		0.200	µg/L	1	5/30/2023 09:08 PM
Dibenzo(a,h)anthracene	ND		0.200	µg/L	1	5/30/2023 09:08 PM
Dibenzofuran	ND		10.0	µg/L	1	5/30/2023 09:08 PM
Diethyl phthalate	ND		10.0	µg/L	1	5/30/2023 09:08 PM
Dimethyl phthalate	ND		10.0	µg/L	1	5/30/2023 09:08 PM
Di-n-butyl phthalate	ND		10.0	µg/L	1	5/30/2023 09:08 PM
Di-n-octyl phthalate	ND		10.0	µg/L	1	5/30/2023 09:08 PM
Dinoseb	ND		20.0	µg/L	1	5/30/2023 09:08 PM
Diphenylamine	ND		10.0	µg/L	1	5/30/2023 09:08 PM
Ethyl methanesulfonate	ND		10.0	µg/L	1	5/30/2023 09:08 PM
Fluoranthene	ND		0.200	µg/L	1	5/30/2023 09:08 PM
Fluorene	ND		0.200	µg/L	1	5/30/2023 09:08 PM
Hexachlorobenzene	ND		10.0	µg/L	1	5/30/2023 09:08 PM
Hexachlorobutadiene	ND		10.0	µg/L	1	5/30/2023 09:08 PM
Hexachlorocyclopentadiene	ND		10.0	µg/L	1	5/30/2023 09:08 PM
Hexachloroethane	ND		10.0	µg/L	1	5/30/2023 09:08 PM
Indeno(1,2,3-cd)pyrene	ND		0.200	µg/L	1	5/30/2023 09:08 PM
Isophorone	ND		10.0	µg/L	1	5/30/2023 09:08 PM
Isosafrole	ND		10.0	µg/L	1	5/30/2023 09:08 PM
Methapyrilene	ND		10.0	µg/L	1	5/30/2023 09:08 PM
Methyl methanesulfonate	ND		10.0	µg/L	1	5/30/2023 09:08 PM
Naphthalene	ND		0.200	µg/L	1	5/30/2023 09:08 PM
Nitrobenzene	ND		10.0	µg/L	1	5/30/2023 09:08 PM
N-Nitrosodiethylamine	ND		10.0	µg/L	1	5/30/2023 09:08 PM
N-Nitrosodimethylamine	ND		10.0	µg/L	1	5/30/2023 09:08 PM
N-Nitroso-di-n-butylamine	ND		10.0	µg/L	1	5/30/2023 09:08 PM
N-Nitrosodi-n-propylamine	ND		10.0	µg/L	1	5/30/2023 09:08 PM
N-Nitrosomethylethylamine	ND		10.0	µg/L	1	5/30/2023 09:08 PM
N-Nitrosomorpholine	ND		10.0	µg/L	1	5/30/2023 09:08 PM
N-Nitrosopiperidine	ND		10.0	µg/L	1	5/30/2023 09:08 PM
N-Nitrosopyrrolidine	ND		10.0	µg/L	1	5/30/2023 09:08 PM
o-Toluidine	ND		10.0	µg/L	1	5/30/2023 09:08 PM
p-Dimethylaminoazobenzene	ND		10.0	µg/L	1	5/30/2023 09:08 PM
Pentachlorobenzene	ND		10.0	µg/L	1	5/30/2023 09:08 PM
Pentachloroethane	ND		10.0	µg/L	1	5/30/2023 09:08 PM
Pentachloronitrobenzene	ND		20.0	µg/L	1	5/30/2023 09:08 PM
Pentachlorophenol	ND		20.0	µg/L	1	5/30/2023 09:08 PM

**Note:**

# ALS Environmental

Date: 09-Jun-23

**Client:** The Mannik & Smith Group, Inc.  
**Project:** Hillson Nut MS23-13; 401.ODAS003-19  
**Sample ID:** TW-6  
**Collection Date:** 5/23/2023 03:00 PM

**Work Order:** 23051029  
**Lab ID:** 23051029-32  
**Matrix:** WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Phenacetin	ND		20.0	µg/L	1	5/30/2023 09:08 PM
Phenanthrene	ND		0.200	µg/L	1	5/30/2023 09:08 PM
Phenol	ND		10.0	µg/L	1	5/30/2023 09:08 PM
Pyrene	ND		0.200	µg/L	1	5/30/2023 09:08 PM
Pyridine	ND		10.0	µg/L	1	5/30/2023 09:08 PM
Safrole	ND		10.0	µg/L	1	5/30/2023 09:08 PM
Surr: 2,4,6-Tribromophenol	57.9		42.3-142	%REC	1	5/30/2023 09:08 PM
Surr: 2-Fluorobiphenyl	49.7		36.8-125	%REC	1	5/30/2023 09:08 PM
Surr: 2-Fluorophenol	31.8		12-89	%REC	1	5/30/2023 09:08 PM
Surr: 4-Terphenyl-d14	41.0		38.3-160	%REC	1	5/30/2023 09:08 PM
Surr: Nitrobenzene-d5	51.5		28-120	%REC	1	5/30/2023 09:08 PM
Surr: Phenol-d5	21.9		4.27-70.1	%REC	1	5/30/2023 09:08 PM

## VOLATILE ORGANIC COMPOUNDS

SW8260B

Analyst: TJH

1,1,1,2-Tetrachloroethane	ND		5.0	µg/L	1	5/31/2023 04:03 PM
1,1,1-Trichloroethane	ND		5.0	µg/L	1	5/31/2023 04:03 PM
1,1,2,2-Tetrachloroethane	ND		5.0	µg/L	1	5/31/2023 04:03 PM
1,1,2-Trichloroethane	ND		5.0	µg/L	1	5/31/2023 04:03 PM
1,1-Dichloroethane	ND		5.0	µg/L	1	5/31/2023 04:03 PM
1,1-Dichloroethene	ND		5.0	µg/L	1	5/31/2023 04:03 PM
1,1-Dichloropropene	ND		5.0	µg/L	1	5/31/2023 04:03 PM
1,2,3-Trichlorobenzene	ND		5.0	µg/L	1	5/31/2023 04:03 PM
1,2,3-Trichloropropane	ND		5.0	µg/L	1	5/31/2023 04:03 PM
1,2,4-Trichlorobenzene	ND		5.0	µg/L	1	5/31/2023 04:03 PM
1,2,4-Trimethylbenzene	ND		5.0	µg/L	1	5/31/2023 04:03 PM
1,2-Dibromo-3-chloropropane	ND		5.0	µg/L	1	5/31/2023 04:03 PM
1,2-Dibromoethane	ND		5.0	µg/L	1	5/31/2023 04:03 PM
1,2-Dichlorobenzene	ND		5.0	µg/L	1	5/31/2023 04:03 PM
1,2-Dichloroethane	ND		5.0	µg/L	1	5/31/2023 04:03 PM
1,2-Dichloropropane	ND		5.0	µg/L	1	5/31/2023 04:03 PM
1,3,5-Trimethylbenzene	ND		5.0	µg/L	1	5/31/2023 04:03 PM
1,3-Dichlorobenzene	ND		5.0	µg/L	1	5/31/2023 04:03 PM
1,3-Dichloropropane	ND		5.0	µg/L	1	5/31/2023 04:03 PM
1,4-Dichlorobenzene	ND		5.0	µg/L	1	5/31/2023 04:03 PM
2,2-Dichloropropane	ND		5.0	µg/L	1	5/31/2023 04:03 PM
2-Butanone	ND		50	µg/L	1	5/31/2023 04:03 PM
2-Chlorotoluene	ND		5.0	µg/L	1	5/31/2023 04:03 PM
2-Hexanone	ND		5.0	µg/L	1	5/31/2023 04:03 PM
4-Chlorotoluene	ND		5.0	µg/L	1	5/31/2023 04:03 PM
4-Methyl-2-pentanone	ND		5.0	µg/L	1	5/31/2023 04:03 PM
Acetone	ND		50	µg/L	1	5/31/2023 04:03 PM

Note:

# ALS Environmental

Date: 09-Jun-23

**Client:** The Mannik & Smith Group, Inc.  
**Project:** Hillson Nut MS23-13; 401.ODAS003-19  
**Sample ID:** TW-6  
**Collection Date:** 5/23/2023 03:00 PM

**Work Order:** 23051029  
**Lab ID:** 23051029-32  
**Matrix:** WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Benzene	ND		5.0	µg/L	1	5/31/2023 04:03 PM
Bromobenzene	ND		5.0	µg/L	1	5/31/2023 04:03 PM
Bromochloromethane	ND		5.0	µg/L	1	5/31/2023 04:03 PM
Bromodichloromethane	ND		5.0	µg/L	1	5/31/2023 04:03 PM
Bromoform	ND		5.0	µg/L	1	5/31/2023 04:03 PM
Bromomethane	ND		5.0	µg/L	1	5/31/2023 04:03 PM
Carbon disulfide	ND		5.0	µg/L	1	5/31/2023 04:03 PM
Carbon tetrachloride	ND		5.0	µg/L	1	5/31/2023 04:03 PM
Chlorobenzene	ND		5.0	µg/L	1	5/31/2023 04:03 PM
Chloroethane	ND		5.0	µg/L	1	5/31/2023 04:03 PM
Chloroform	ND		5.0	µg/L	1	5/31/2023 04:03 PM
Chloromethane	ND		5.0	µg/L	1	5/31/2023 04:03 PM
cis-1,2-Dichloroethene	ND		5.0	µg/L	1	5/31/2023 04:03 PM
cis-1,3-Dichloropropene	ND		5.0	µg/L	1	5/31/2023 04:03 PM
Dibromochloromethane	ND		5.0	µg/L	1	5/31/2023 04:03 PM
Dibromomethane	ND		5.0	µg/L	1	5/31/2023 04:03 PM
Dichlorodifluoromethane	ND		5.0	µg/L	1	5/31/2023 04:03 PM
Ethylbenzene	ND		5.0	µg/L	1	5/31/2023 04:03 PM
Hexachlorobutadiene	ND		5.0	µg/L	1	5/31/2023 04:03 PM
Isopropylbenzene	ND		5.0	µg/L	1	5/31/2023 04:03 PM
m,p-Xylene	ND		10	µg/L	1	5/31/2023 04:03 PM
Methyl tert-butyl ether	ND		5.0	µg/L	1	5/31/2023 04:03 PM
Methylene chloride	ND		5.0	µg/L	1	5/31/2023 04:03 PM
Naphthalene	ND		5.0	µg/L	1	5/31/2023 04:03 PM
n-Butylbenzene	ND		5.0	µg/L	1	5/31/2023 04:03 PM
n-Propylbenzene	ND		5.0	µg/L	1	5/31/2023 04:03 PM
o-Xylene	ND		5.0	µg/L	1	5/31/2023 04:03 PM
p-Isopropyltoluene	ND		5.0	µg/L	1	5/31/2023 04:03 PM
sec-Butylbenzene	ND		5.0	µg/L	1	5/31/2023 04:03 PM
Styrene	ND		5.0	µg/L	1	5/31/2023 04:03 PM
tert-Butylbenzene	ND		5.0	µg/L	1	5/31/2023 04:03 PM
Tetrachloroethene	ND		5.0	µg/L	1	5/31/2023 04:03 PM
Toluene	ND		5.0	µg/L	1	5/31/2023 04:03 PM
trans-1,2-Dichloroethene	ND		5.0	µg/L	1	5/31/2023 04:03 PM
trans-1,3-Dichloropropene	ND		5.0	µg/L	1	5/31/2023 04:03 PM
Trichloroethene	ND		5.0	µg/L	1	5/31/2023 04:03 PM
Trichlorofluoromethane	ND		5.0	µg/L	1	5/31/2023 04:03 PM
Vinyl chloride	ND		2.0	µg/L	1	5/31/2023 04:03 PM
Xylenes, Total	ND		15	µg/L	1	5/31/2023 04:03 PM
Surr: 4-Bromofluorobenzene	103		61-131	%REC	1	5/31/2023 04:03 PM

**Note:**

# ALS Environmental

Date: 09-Jun-23

**Client:** The Mannik & Smith Group, Inc.  
**Project:** Hillson Nut MS23-13; 401.ODAS003-19  
**Sample ID:** TW-6  
**Collection Date:** 5/23/2023 03:00 PM

**Work Order:** 23051029  
**Lab ID:** 23051029-32  
**Matrix:** WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Surr: Dibromofluoromethane	110		72-137	%REC	1	5/31/2023 04:03 PM
Surr: Toluene-d8	102		80.4-119	%REC	1	5/31/2023 04:03 PM

**Note:**



Client: The Mannik & Smith Group, Inc.

**QC BATCH REPORT**

Work Order: 23051029

Project: Hillson Nut MS23-13; 401.ODAS003-19

Batch ID: **91526**

Instrument ID **GC10**

Method: **SW8015B**

MBLK		Sample ID: <b>MBLK-91526-91526</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>6/5/2023 09:58 AM</b>		
Client ID:		Run ID: <b>GC10_230605A</b>		SeqNo: <b>3065110</b>		Prep Date: <b>6/2/2023</b>		DF: <b>1</b>		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Diesel (total)	ND	13								
TPH C10-C20	ND	13								
TPH C20-C34	ND	13								
Surr: Nonane	2.102	0	3.333	0	63.1	28.5-83.1	0			
Surr: Pentacosane	2.755	0	3.333	0	82.6	30.6-143	0			

LCS		Sample ID: <b>LCS-91526-91526</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>6/5/2023 10:15 AM</b>		
Client ID:		Run ID: <b>GC10_230605A</b>		SeqNo: <b>3065111</b>		Prep Date: <b>6/2/2023</b>		DF: <b>1</b>		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Diesel (total)	20.37	13	33.33	0	61.1	35.6-118	0			
Surr: Nonane	1.681	0	3.333	0	50.4	28.5-83.1	0			
Surr: Pentacosane	2.111	0	3.333	0	63.3	30.6-143	0			

MS		Sample ID: <b>23051189-03BMS</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>6/5/2023 10:32 AM</b>		
Client ID:		Run ID: <b>GC10_230605A</b>		SeqNo: <b>3065112</b>		Prep Date: <b>6/2/2023</b>		DF: <b>1</b>		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Diesel (total)	18.35	13	33.29	0	55.1	15.3-133	0			
Surr: Nonane	1.618	0	3.329	0	48.6	28.5-83.1	0			
Surr: Pentacosane	2.153	0	3.329	0	64.7	30.6-143	0			

MSD		Sample ID: <b>23051189-03BMSD</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>6/5/2023 10:49 AM</b>		
Client ID:		Run ID: <b>GC10_230605A</b>		SeqNo: <b>3065113</b>		Prep Date: <b>6/2/2023</b>		DF: <b>1</b>		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Diesel (total)	18.64	13	33.18	0	56.2	15.3-133	18.35	1.56	21	
Surr: Nonane	1.747	0	3.318	0	52.7	28.5-83.1	1.618	7.7		
Surr: Pentacosane	2.282	0	3.318	0	68.8	30.6-143	2.153	5.81		

The following samples were analyzed in this batch:

23051029-01C	23051029-02C	23051029-03C
23051029-04C	23051029-05C	23051029-06C
23051029-07C	23051029-08C	23051029-09C
23051029-10C	23051029-11C	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: The Mannik & Smith Group, Inc.  
 Work Order: 23051029  
 Project: Hillson Nut MS23-13; 401.ODAS003-19

# QC BATCH REPORT

Batch ID: **91536** Instrument ID **GC3** Method: **SW8082**

MBLK		Sample ID: <b>MBLK-91536-91536</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>6/5/2023 02:53 PM</b>		
Client ID:		Run ID: <b>GC3_230605B</b>				SeqNo: <b>3066607</b>		Prep Date: <b>6/2/2023</b>		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aroclor 1016	ND	0.10								
Aroclor 1221	ND	0.20								
Aroclor 1232	ND	0.10								
Aroclor 1242	ND	0.10								
Aroclor 1248	ND	0.10								
Aroclor 1254	ND	0.10								
Aroclor 1260	ND	0.10								
Aroclor 1262	ND	0.10								
Aroclor 1268	ND	0.10								
<i>Surr: Decachlorobiphenyl</i>	<i>0.06933</i>	<i>0</i>	<i>0.0667</i>	<i>0</i>	<i>104</i>	<i>7.32-154</i>	<i>0</i>			
<i>Surr: Tetrachloro-m-xylene</i>	<i>0.07333</i>	<i>0</i>	<i>0.0667</i>	<i>0</i>	<i>110</i>	<i>33.5-152</i>	<i>0</i>			

LCS		Sample ID: <b>LCS-91536-91536</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>6/5/2023 03:09 PM</b>		
Client ID:		Run ID: <b>GC3_230605B</b>				SeqNo: <b>3066608</b>		Prep Date: <b>6/2/2023</b>		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aroclor 1016	1.592	0.10	1.333	0	119	66.4-129	0			
Aroclor 1260	1.533	0.10	1.333	0	115	58.2-144	0			
<i>Surr: Decachlorobiphenyl</i>	<i>0.06933</i>	<i>0</i>	<i>0.0667</i>	<i>0</i>	<i>104</i>	<i>7.32-154</i>	<i>0</i>			
<i>Surr: Tetrachloro-m-xylene</i>	<i>0.07733</i>	<i>0</i>	<i>0.0667</i>	<i>0</i>	<i>116</i>	<i>33.5-152</i>	<i>0</i>			

MS		Sample ID: <b>23050911-55AMS</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>6/5/2023 03:25 PM</b>		
Client ID:		Run ID: <b>GC3_230605B</b>				SeqNo: <b>3066609</b>		Prep Date: <b>6/2/2023</b>		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aroclor 1016	1.495	0.10	1.331	0	112	34.7-137	0			
Aroclor 1260	1.51	0.10	1.331	0	113	27.1-140	0			
<i>Surr: Decachlorobiphenyl</i>	<i>0.06924</i>	<i>0</i>	<i>0.06661</i>	<i>0</i>	<i>104</i>	<i>7.32-154</i>	<i>0</i>			
<i>Surr: Tetrachloro-m-xylene</i>	<i>0.0719</i>	<i>0</i>	<i>0.06661</i>	<i>0</i>	<i>108</i>	<i>33.5-152</i>	<i>0</i>			

MSD		Sample ID: <b>23050911-55AMSD</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>6/5/2023 03:41 PM</b>		
Client ID:		Run ID: <b>GC3_230605B</b>				SeqNo: <b>3066610</b>		Prep Date: <b>6/2/2023</b>		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aroclor 1016	1.445	0.10	1.329	0	109	34.7-137	1.495	3.46	30	
Aroclor 1260	1.472	0.10	1.329	0	111	27.1-140	1.51	2.52	53	
<i>Surr: Decachlorobiphenyl</i>	<i>0.06644</i>	<i>0</i>	<i>0.06648</i>	<i>0</i>	<i>99.9</i>	<i>7.32-154</i>	<i>0.06924</i>	<i>4.12</i>		
<i>Surr: Tetrachloro-m-xylene</i>	<i>0.07176</i>	<i>0</i>	<i>0.06648</i>	<i>0</i>	<i>108</i>	<i>33.5-152</i>	<i>0.0719</i>	<i>0.2</i>		

The following samples were analyzed in this batch:

23051029-12B	23051029-13B	23051029-14B
23051029-15B		

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: The Mannik & Smith Group, Inc.  
 Work Order: 23051029  
 Project: Hillson Nut MS23-13; 401.ODAS003-19

# QC BATCH REPORT

Batch ID: **91548** Instrument ID **GC3** Method: **SW8082**

MBLK		Sample ID: <b>MBLK-91548-91548</b>				Units: <b>µg/L</b>		Analysis Date: <b>6/6/2023 06:14 AM</b>		
Client ID:		Run ID: <b>GC3_230605B</b>		SeqNo: <b>3066748</b>		Prep Date: <b>6/2/2023</b>		DF: <b>1</b>		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aroclor 1016	ND	0.50								
Aroclor 1221	ND	0.50								
Aroclor 1232	ND	0.50								
Aroclor 1242	ND	0.50								
Aroclor 1248	ND	0.50								
Aroclor 1254	ND	0.89								
Aroclor 1260	ND	0.89								
<i>Surr: Decachlorobiphenyl</i>	<i>0.215</i>	<i>0</i>	<i>0.5</i>	<i>0</i>	<i>43</i>	<i>6.61-163</i>	<i>0</i>			
<i>Surr: Tetrachloro-m-xylene</i>	<i>0.19</i>	<i>0</i>	<i>0.5</i>	<i>0</i>	<i>38</i>	<i>23.8-163</i>	<i>0</i>			

LCS		Sample ID: <b>LCS-91548-91548</b>				Units: <b>µg/L</b>		Analysis Date: <b>6/6/2023 06:30 AM</b>		
Client ID:		Run ID: <b>GC3_230605B</b>		SeqNo: <b>3066749</b>		Prep Date: <b>6/2/2023</b>		DF: <b>1</b>		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aroclor 1016	4.55	0.50	10	0	45.5	39.7-137	0			
Aroclor 1260	4.85	0.89	10	0	48.5	31.6-139	0			
<i>Surr: Decachlorobiphenyl</i>	<i>0.22</i>	<i>0</i>	<i>0.5</i>	<i>0</i>	<i>44</i>	<i>6.61-163</i>	<i>0</i>			
<i>Surr: Tetrachloro-m-xylene</i>	<i>0.215</i>	<i>0</i>	<i>0.5</i>	<i>0</i>	<i>43</i>	<i>23.8-163</i>	<i>0</i>			

The following samples were analyzed in this batch: 23051029-32C

Client: The Mannik & Smith Group, Inc.  
 Work Order: 23051029  
 Project: Hillson Nut MS23-13; 401.ODAS003-19

# QC BATCH REPORT

Batch ID: **91550** Instrument ID **GC3** Method: **SW8082**

MBLK		Sample ID: <b>MBLK-91550-91550</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>6/7/2023 05:47 PM</b>		
Client ID:		Run ID: <b>GC3_230607A</b>				SeqNo: <b>3070085</b>		Prep Date: <b>6/5/2023</b>		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aroclor 1016	ND	0.10								
Aroclor 1221	ND	0.20								
Aroclor 1232	ND	0.10								
Aroclor 1242	ND	0.10								
Aroclor 1248	ND	0.10								
Aroclor 1254	ND	0.10								
Aroclor 1260	ND	0.10								
Aroclor 1262	ND	0.10								
Aroclor 1268	ND	0.10								
<i>Surr: Decachlorobiphenyl</i>	<i>0.06933</i>	<i>0</i>	<i>0.0667</i>	<i>0</i>	<i>104</i>	<i>7.32-154</i>	<i>0</i>			
<i>Surr: Tetrachloro-m-xylene</i>	<i>0.07867</i>	<i>0</i>	<i>0.0667</i>	<i>0</i>	<i>118</i>	<i>33.5-152</i>	<i>0</i>			

LCS		Sample ID: <b>LCS-91550-91550</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>6/7/2023 06:03 PM</b>		
Client ID:		Run ID: <b>GC3_230607A</b>				SeqNo: <b>3070086</b>		Prep Date: <b>6/5/2023</b>		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aroclor 1016	1.631	0.10	1.333	0	122	66.4-129	0			
Aroclor 1260	1.555	0.10	1.333	0	117	58.2-144	0			
<i>Surr: Decachlorobiphenyl</i>	<i>0.07067</i>	<i>0</i>	<i>0.0667</i>	<i>0</i>	<i>106</i>	<i>7.32-154</i>	<i>0</i>			
<i>Surr: Tetrachloro-m-xylene</i>	<i>0.08</i>	<i>0</i>	<i>0.0667</i>	<i>0</i>	<i>120</i>	<i>33.5-152</i>	<i>0</i>			

MS		Sample ID: <b>23051084-05AMS</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>6/7/2023 06:19 PM</b>		
Client ID:		Run ID: <b>GC3_230607A</b>				SeqNo: <b>3070087</b>		Prep Date: <b>6/5/2023</b>		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aroclor 1016	1.222	0.10	1.33	0	91.8	34.7-137	0			
Aroclor 1260	1.404	0.10	1.33	0	106	27.1-140	0			
<i>Surr: Decachlorobiphenyl</i>	<i>0.05722</i>	<i>0</i>	<i>0.06657</i>	<i>0</i>	<i>86</i>	<i>7.32-154</i>	<i>0</i>			
<i>Surr: Tetrachloro-m-xylene</i>	<i>0.05456</i>	<i>0</i>	<i>0.06657</i>	<i>0</i>	<i>82</i>	<i>33.5-152</i>	<i>0</i>			

MSD		Sample ID: <b>23051084-05AMSD</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>6/7/2023 06:35 PM</b>		
Client ID:		Run ID: <b>GC3_230607A</b>				SeqNo: <b>3070088</b>		Prep Date: <b>6/5/2023</b>		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aroclor 1016	1.36	0.10	1.331	0	102	34.7-137	1.222	10.7	30	
Aroclor 1260	1.658	0.10	1.331	0	125	27.1-140	1.404	16.6	53	
<i>Surr: Decachlorobiphenyl</i>	<i>0.06924</i>	<i>0</i>	<i>0.06661</i>	<i>0</i>	<i>104</i>	<i>7.32-154</i>	<i>0.05722</i>	<i>19</i>		
<i>Surr: Tetrachloro-m-xylene</i>	<i>0.06525</i>	<i>0</i>	<i>0.06661</i>	<i>0</i>	<i>98</i>	<i>33.5-152</i>	<i>0.05456</i>	<i>17.8</i>		

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

**Client:** The Mannik & Smith Group, Inc.  
**Work Order:** 23051029  
**Project:** Hillson Nut MS23-13; 401.ODAS003-19

# QC BATCH REPORT

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Batch ID: **91550**      Instrument ID **GC3**      Method: **SW8082**

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**The following samples were analyzed in this batch:**

23051029-16B	23051029-17B	23051029-18B
23051029-19B	23051029-20B	23051029-21B
23051029-22B	23051029-23B	23051029-24B
23051029-25B	23051029-26B	23051029-27B
23051029-28B	23051029-29B	

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**Note:** See Qualifiers Page for a list of Qualifiers and their explanation.

Client: The Mannik & Smith Group, Inc.  
 Work Order: 23051029  
 Project: Hillson Nut MS23-13; 401.ODAS003-19

# QC BATCH REPORT

Batch ID: **R216840** Instrument ID **GC6** Method: **SW8015A**

MBLK		Sample ID: <b>mblk-R216840</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>5/24/2023 12:18 PM</b>			
Client ID:		Run ID: <b>GC6_230524B</b>				SeqNo: <b>3055421</b>		Prep Date:		DF: <b>1</b>	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
TPH C6-C12	1.95	2.0								J	
<i>Surr: Cyclooctane</i>	476.7	0	500	0	95.3	55-135	0				

LCS		Sample ID: <b>LCS-R216840</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>5/24/2023 11:01 AM</b>			
Client ID:		Run ID: <b>GC6_230524B</b>				SeqNo: <b>3055418</b>		Prep Date:		DF: <b>1</b>	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
TPH C6-C12	15.76	2.0	20	0	78.8	57.2-164	0				
<i>Surr: Cyclooctane</i>	568.8	0	500	0	114	55-135	0				

MS		Sample ID: <b>23050831-06B MS</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>5/24/2023 11:27 AM</b>			
Client ID:		Run ID: <b>GC6_230524B</b>				SeqNo: <b>3055419</b>		Prep Date:		DF: <b>1</b>	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
TPH C6-C12	17.25	2.0	20	0	86.2	42.3-144	0				
<i>Surr: Cyclooctane</i>	553.6	0	500	0	111	55-135	0				

MSD		Sample ID: <b>23050831-06B MSD</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>5/24/2023 11:52 AM</b>			
Client ID:		Run ID: <b>GC6_230524B</b>				SeqNo: <b>3055420</b>		Prep Date:		DF: <b>1</b>	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
TPH C6-C12	17.5	2.0	20	0	87.5	42.3-144	17.25	1.44	15.7		
<i>Surr: Cyclooctane</i>	558.2	0	500	0	112	55-135	553.6	0.833			

The following samples were analyzed in this batch:

23051029-01B	23051029-02B	23051029-03B
23051029-04B	23051029-05B	23051029-06B
23051029-07B	23051029-08B	23051029-09B
23051029-10B	23051029-11B	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: The Mannik & Smith Group, Inc.  
 Work Order: 23051029  
 Project: Hillson Nut MS23-13; 401.ODAS003-19

# QC BATCH REPORT

Batch ID: **91401** Instrument ID **HG2** Method: **SW7470A**

MBLK		Sample ID: <b>MBLK-91401-91401</b>				Units: <b>µg/L</b>		Analysis Date: <b>5/25/2023 04:03 PM</b>			
Client ID:		Run ID: <b>HG2_230525A</b>				SeqNo: <b>3056339</b>		Prep Date: <b>5/25/2023</b>		DF: <b>1</b>	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Mercury	ND	0.25									

LCS		Sample ID: <b>LCS-91401-91401</b>				Units: <b>µg/L</b>		Analysis Date: <b>5/25/2023 04:05 PM</b>			
Client ID:		Run ID: <b>HG2_230525A</b>				SeqNo: <b>3056340</b>		Prep Date: <b>5/25/2023</b>		DF: <b>1</b>	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Mercury	4.58	0.25	5	0	91.6	78.7-113	0				

LCSD		Sample ID: <b>LCSD-91401-91401</b>				Units: <b>µg/L</b>		Analysis Date: <b>5/25/2023 04:07 PM</b>			
Client ID:		Run ID: <b>HG2_230525A</b>				SeqNo: <b>3056341</b>		Prep Date: <b>5/25/2023</b>		DF: <b>1</b>	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Mercury	4.76	0.25	5	0	95.2	78.7-113	4.58	3.85	20		

MS		Sample ID: <b>23051092-05C MS</b>				Units: <b>µg/L</b>		Analysis Date: <b>5/31/2023 11:21 AM</b>			
Client ID:		Run ID: <b>HG2_230531A</b>				SeqNo: <b>3060402</b>		Prep Date: <b>5/25/2023</b>		DF: <b>1</b>	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Mercury	4.43	0.25	5	0	88.6	67.3-108	0				

MSD		Sample ID: <b>23051092-05C MSD</b>				Units: <b>µg/L</b>		Analysis Date: <b>5/31/2023 11:23 AM</b>			
Client ID:		Run ID: <b>HG2_230531A</b>				SeqNo: <b>3060403</b>		Prep Date: <b>5/25/2023</b>		DF: <b>1</b>	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Mercury	4.4	0.25	5	0	88	67.3-108	4.43	0.68	20		

The following samples were analyzed in this batch: 23051029-32D

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: The Mannik & Smith Group, Inc.  
 Work Order: 23051029  
 Project: Hillson Nut MS23-13; 401.ODAS003-19

# QC BATCH REPORT

Batch ID: **91492** Instrument ID **HG2** Method: **SW7471A**

<b>MBLK</b>		Sample ID: <b>MBLK-91492-91492</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>6/5/2023 10:54 AM</b>		
Client ID:		Run ID: <b>HG2_230605A</b>				SeqNo: <b>3065348</b>		Prep Date: <b>6/2/2023</b>		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Mercury ND 0.30

<b>LCS</b>		Sample ID: <b>LCS-91492-91492</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>6/5/2023 10:57 AM</b>		
Client ID:		Run ID: <b>HG2_230605A</b>				SeqNo: <b>3065349</b>		Prep Date: <b>6/2/2023</b>		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Mercury 0.8667 0.30 1.12 0 77.4 66.5-169 0

<b>LCSD</b>		Sample ID: <b>LCSD 91492-91492</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>6/5/2023 10:59 AM</b>		
Client ID:		Run ID: <b>HG2_230605A</b>				SeqNo: <b>3065350</b>		Prep Date: <b>6/2/2023</b>		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Mercury 0.9217 0.30 1.12 0 82.3 66.5-169 0

<b>MS</b>		Sample ID: <b>23051097-01B MS</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>6/5/2023 12:05 PM</b>		
Client ID:		Run ID: <b>HG2_230605A</b>				SeqNo: <b>3065364</b>		Prep Date: <b>6/2/2023</b>		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Mercury 0.9238 0.29 0.7933 0 116 69-147 0

<b>MSD</b>		Sample ID: <b>23051097-01B MSD</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>6/5/2023 12:07 PM</b>		
Client ID:		Run ID: <b>HG2_230605A</b>				SeqNo: <b>3065365</b>		Prep Date: <b>6/2/2023</b>		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Mercury 0.8444 0.29 0.7933 0 106 62.6-127 0.9238 8.98 20

The following samples were analyzed in this batch:

23051029-12B	23051029-13B	23051029-14B
23051029-15B	23051029-16B	23051029-17B
23051029-18B	23051029-19B	23051029-20B
23051029-21B	23051029-22B	23051029-23B
23051029-24B	23051029-25B	23051029-26B
23051029-27B	23051029-28B	23051029-29B

Note: See Qualifiers Page for a list of Qualifiers and their explanation.



Client: The Mannik & Smith Group, Inc.  
 Work Order: 23051029  
 Project: Hillson Nut MS23-13; 401.ODAS003-19

# QC BATCH REPORT

Batch ID: **91399** Instrument ID **ICP3** Method: **SW6010B**

MBLK		Sample ID: <b>MBLK-91399-91399</b>				Units: <b>mg/L</b>		Analysis Date: <b>5/25/2023 04:03 PM</b>		
Client ID:		Run ID: <b>ICP3_230525A</b>				SeqNo: <b>3056362</b>		Prep Date: <b>5/25/2023</b>		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	ND	0.010								
Barium	ND	0.10								
Cadmium	ND	0.0050								
Chromium	ND	0.010								
Selenium	ND	0.030								
Silver	ND	0.050								

LCS		Sample ID: <b>LCS-91399-91399</b>				Units: <b>mg/L</b>		Analysis Date: <b>5/25/2023 04:08 PM</b>		
Client ID:		Run ID: <b>ICP3_230525A</b>				SeqNo: <b>3056363</b>		Prep Date: <b>5/25/2023</b>		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	0.997	0.010	1.1	0	90.6	81.7-107	0			
Barium	0.9481	0.10	1.1	0	86.2	81.2-107	0			
Cadmium	1.006	0.0050	1.1	0	91.5	80-120	0			
Chromium	0.908	0.010	1.1	0	82.6	80-120	0			
Lead	0.9791	0.015	1.1	0	89	84.6-109	0			
Selenium	1	0.030	1.1	0	90.9	80-120	0			
Silver	0.9744	0.050	1.1	0	88.6	80-120	0			

LCSD		Sample ID: <b>LCSD-91399-91399</b>				Units: <b>mg/L</b>		Analysis Date: <b>5/25/2023 04:12 PM</b>		
Client ID:		Run ID: <b>ICP3_230525A</b>				SeqNo: <b>3056364</b>		Prep Date: <b>5/25/2023</b>		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	0.9976	0.010	1.1	0	90.7	81.7-107	0.997	0.0551	20	
Barium	0.9491	0.10	1.1	0	86.3	81.2-107	0.9481	0.104	20	
Cadmium	1.009	0.0050	1.1	0	91.8	77.6-114	1.006	0.317	20	
Chromium	0.9017	0.010	1.1	0	82	72.9-109	0.908	0.705	20	
Lead	0.9863	0.015	1.1	0	89.7	73.7-110	0.9791	0.728	20	
Selenium	1.006	0.030	1.1	0	91.5	70.7-106	1	0.603	20	
Silver	0.9696	0.050	1.1	0	88.2	77.5-99.3	0.9744	0.487	20	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: The Mannik & Smith Group, Inc.  
 Work Order: 23051029  
 Project: Hillson Nut MS23-13; 401.ODAS003-19

# QC BATCH REPORT

Batch ID: **91399** Instrument ID **ICP3** Method: **SW6010B**

MS				Sample ID: 23050905-07A MS			Units: mg/L		Analysis Date: 5/25/2023 06:11 PM		
Client ID:		Run ID: ICP3_230525A			SeqNo: 3056842		Prep Date: 5/25/2023		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Arsenic	1.009	0.010	1.1	0	91.7	75-125	0				
Barium	0.9479	0.10	1.1	0	86.2	75-125	0				
Cadmium	0.9991	0.0050	1.1	0	90.8	75-125	0				
Chromium	1.017	0.010	1.1	0	92.4	75-125	0				
Lead	0.9581	0.015	1.1	0	87.1	59.3-111	0				
Selenium	1.003	0.030	1.1	0	91.2	75-125	0				
Silver	0.9583	0.050	1.1	0	87.1	75-125	0				

MSD				Sample ID: 23050905-07A MSD			Units: mg/L		Analysis Date: 5/25/2023 06:16 PM		
Client ID:		Run ID: ICP3_230525A			SeqNo: 3056843		Prep Date: 5/25/2023		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Arsenic	0.988	0.010	1.1	0	89.8	73.2-107	1.009	2.07	20		
Barium	0.936	0.10	1.1	0	85.1	75-125	0.9479	1.26	20		
Cadmium	0.9882	0.0050	1.1	0	89.8	76.4-108	0.9991	1.1	20		
Chromium	1.007	0.010	1.1	0	91.6	73-104	1.017	0.956	20		
Lead	0.9437	0.015	1.1	0	85.8	59.3-111	0.9581	1.52	20		
Selenium	0.9937	0.030	1.1	0	90.3	71.3-104	1.003	0.893	20		
Silver	0.9422	0.050	1.1	0	85.6	74.6-98.9	0.9583	1.7	20		

The following samples were analyzed in this batch: 23051029-30D    23051029-31D    23051029-32D

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: The Mannik & Smith Group, Inc.  
 Work Order: 23051029  
 Project: Hillson Nut MS23-13; 401.ODAS003-19

# QC BATCH REPORT

Batch ID: **91528** Instrument ID **ICP3** Method: **SW6010B**

<b>MBLK</b>	Sample ID: <b>MBLK-91528-91528</b>				Units: <b>mg/Kg</b>			Analysis Date: <b>6/2/2023 11:03 AM</b>		
Client ID:	Run ID: <b>ICP3_230602A</b>			SeqNo: <b>3064126</b>		Prep Date: <b>6/1/2023</b>		DF: <b>1</b>		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Lead ND 1.5

<b>LCS</b>	Sample ID: <b>LCS-91528-91528</b>				Units: <b>mg/Kg</b>			Analysis Date: <b>6/2/2023 11:12 AM</b>		
Client ID:	Run ID: <b>ICP3_230602A</b>			SeqNo: <b>3064128</b>		Prep Date: <b>6/1/2023</b>		DF: <b>1</b>		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Lead 3200 1.5 3248 0 98.5 75-112 0

<b>MS</b>	Sample ID: <b>23051172-10BMS</b>				Units: <b>mg/Kg</b>			Analysis Date: <b>6/2/2023 01:07 PM</b>		
Client ID:	Run ID: <b>ICP3_230602A</b>			SeqNo: <b>3064149</b>		Prep Date: <b>6/1/2023</b>		DF: <b>1</b>		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Lead 936.5 1.5 987.2 116.7 83 70-130 0

<b>MSD</b>	Sample ID: <b>23051172-10BMSD</b>				Units: <b>mg/Kg</b>			Analysis Date: <b>6/2/2023 01:12 PM</b>		
Client ID:	Run ID: <b>ICP3_230602A</b>			SeqNo: <b>3064150</b>		Prep Date: <b>6/1/2023</b>		DF: <b>1</b>		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Lead 902.8 1.5 982.3 116.7 80 62.3-133 936.5 3.66 20

The following samples were analyzed in this batch:

23051029-01C	23051029-02C	23051029-03C
23051029-04C		

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: The Mannik & Smith Group, Inc.  
 Work Order: 23051029  
 Project: Hillson Nut MS23-13; 401.ODAS003-19

# QC BATCH REPORT

Batch ID: **91538** Instrument ID **ICP3** Method: **SW6010B**

MBLK		Sample ID: <b>MBLK-91538-91538</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>6/2/2023 02:59 PM</b>			
Client ID:		Run ID: <b>ICP3_230602B</b>				SeqNo: <b>3064328</b>		Prep Date: <b>6/2/2023</b>		DF: <b>1</b>	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Arsenic	ND	5.0									
Barium	ND	20									
Cadmium	ND	1.0									
Chromium	ND	10									
Lead	ND	20									
Selenium	ND	3.0									
Silver	ND	5.0									

LCS		Sample ID: <b>LCS-91538-91538</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>6/2/2023 03:03 PM</b>			
Client ID:		Run ID: <b>ICP3_230602B</b>				SeqNo: <b>3064329</b>		Prep Date: <b>6/2/2023</b>		DF: <b>1</b>	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Arsenic	100.2	5.0	100	0	100	80-120	0				
Barium	99.87	20	100	0	99.9	81.6-112	0				
Cadmium	101.3	1.0	100	0	101	87.2-119	0				
Chromium	93.6	10	100	0	93.6	74.6-110	0				
Lead	101.9	20	100	0	102	82.9-117	0				
Selenium	103.8	3.0	100	0	104	86.2-110	0				
Silver	95.94	5.0	100	0	95.9	77.1-118	0				

LCSD		Sample ID: <b>LCSD-91538-91538</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>6/2/2023 03:08 PM</b>			
Client ID:		Run ID: <b>ICP3_230602B</b>				SeqNo: <b>3064330</b>		Prep Date: <b>6/2/2023</b>		DF: <b>1</b>	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Arsenic	99.74	5.0	100	0	99.7	79.7-118	100.2	0.46	20		
Barium	99.57	20	100	0	99.6	81.6-112	99.87	0.301	20		
Cadmium	101.3	1.0	100	0	101	87.2-119	101.3	0	20		
Chromium	95.28	10	100	0	95.3	74.6-110	93.6	1.78	20		
Lead	101.4	20	100	0	101	82.9-117	101.9	0.492	20		
Selenium	103.3	3.0	100	0	103	86.2-110	103.8	0.483	20		
Silver	96.58	5.0	100	0	96.6	77.1-118	95.94	0.665	20		

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: The Mannik & Smith Group, Inc.  
 Work Order: 23051029  
 Project: Hillson Nut MS23-13; 401.ODAS003-19

# QC BATCH REPORT

Batch ID: **91538** Instrument ID **ICP3** Method: **SW6010B**

MS				Sample ID: 23060022-02A MS			Units: mg/Kg		Analysis Date: 6/2/2023 03:21 PM		
Client ID:		Run ID: ICP3_230602B			SeqNo: 3064333		Prep Date: 6/2/2023		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Arsenic	121.8	4.9	98.81	25.11	97.9	75-125	0				
Barium	145.5	20	98.81	61.77	84.7	75-125	0				
Cadmium	105.2	0.99	98.81	0.4968	106	75-125	0				
Chromium	110.8	9.9	98.81	12.12	99.8	69.3-116	0				
Lead	341.8	20	98.81	527.8	-188	69.3-107	0			SO	
Selenium	104.3	3.0	98.81	0	106	75-125	0				
Silver	101.4	4.9	98.81	0	103	75-125	0				

MSD				Sample ID: 23060022-02A MSD			Units: mg/Kg		Analysis Date: 6/2/2023 03:26 PM		
Client ID:		Run ID: ICP3_230602B			SeqNo: 3064334		Prep Date: 6/2/2023		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Arsenic	113.9	5.0	99.4	25.11	89.3	69.6-115	121.8	6.72	20		
Barium	136.7	20	99.4	61.77	75.4	60.1-114	145.5	6.22	20		
Cadmium	97.71	0.99	99.4	0.4968	97.8	69.1-120	105.2	7.41	20		
Chromium	100.3	9.9	99.4	12.12	88.7	69.3-116	110.8	9.92	20		
Lead	410.3	20	99.4	527.8	-118	69.3-107	341.8	18.2	20	SO	
Selenium	97.08	3.0	99.4	0	97.7	66.5-109	104.3	7.22	20		
Silver	94.37	5.0	99.4	0	94.9	70.3-116	101.4	7.16	20		

The following samples were analyzed in this batch:

23051029-12B	23051029-13B	23051029-14B
23051029-15B	23051029-16B	23051029-17B
23051029-18B	23051029-19B	23051029-20B
23051029-21B	23051029-22B	23051029-23B
23051029-24B	23051029-25B	23051029-26B
23051029-27B	23051029-28B	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: The Mannik & Smith Group, Inc.  
 Work Order: 23051029  
 Project: Hillson Nut MS23-13; 401.ODAS003-19

# QC BATCH REPORT

Batch ID: **91562** Instrument ID **ICP3** Method: **SW6010B**

MBLK		Sample ID: <b>MBLK-91562-91562</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>6/7/2023 12:06 PM</b>			
Client ID:		Run ID: <b>ICP3_230607A</b>				SeqNo: <b>3068771</b>		Prep Date: <b>6/6/2023</b>		DF: <b>1</b>	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	

Lead ND 1.5

LCS		Sample ID: <b>LCS-91562-91562</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>6/7/2023 12:14 PM</b>			
Client ID:		Run ID: <b>ICP3_230607A</b>				SeqNo: <b>3068773</b>		Prep Date: <b>6/6/2023</b>		DF: <b>1</b>	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	

Lead 3027 1.4 3248 0 93.2 75-112 0

MS		Sample ID: <b>23051029-11C MS</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>6/7/2023 12:57 PM</b>			
Client ID: <b>SB-3 (5-7')</b>		Run ID: <b>ICP3_230607A</b>				SeqNo: <b>3068781</b>		Prep Date: <b>6/6/2023</b>		DF: <b>1</b>	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	

Lead 971.1 1.5 991.1 10.15 97 70-130 0

MSD		Sample ID: <b>23051029-11C MSD</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>6/7/2023 01:02 PM</b>			
Client ID: <b>SB-3 (5-7')</b>		Run ID: <b>ICP3_230607A</b>				SeqNo: <b>3068782</b>		Prep Date: <b>6/6/2023</b>		DF: <b>1</b>	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	

Lead 793.8 1.2 833.3 10.15 94 62.3-133 971.1 20.1 20 R

The following samples were analyzed in this batch:

23051029-05C	23051029-06C	23051029-07C
23051029-08C	23051029-09C	23051029-10C
23051029-11C		

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: The Mannik & Smith Group, Inc.  
 Work Order: 23051029  
 Project: Hillson Nut MS23-13; 401.ODAS003-19

# QC BATCH REPORT

Batch ID: **91565** Instrument ID **ICP3** Method: **SW6010B**

MBLK		Sample ID: <b>MBLK-91565-91565</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>6/7/2023 05:32 PM</b>			
Client ID:		Run ID: <b>ICP3_230607B</b>				SeqNo: <b>3069226</b>		Prep Date: <b>6/6/2023</b>		DF: <b>1</b>	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Arsenic	ND	5.0									
Barium	ND	20									
Cadmium	ND	1.0									
Chromium	ND	10									
Lead	ND	20									
Selenium	ND	3.0									
Silver	ND	5.0									

MBLK		Sample ID: <b>MBLK-91565-91565</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>6/9/2023 09:43 AM</b>			
Client ID:		Run ID: <b>ICP3_230609A</b>				SeqNo: <b>3071270</b>		Prep Date: <b>6/6/2023</b>		DF: <b>1</b>	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Silver	ND	5.0									

LCS		Sample ID: <b>LCS-91565-91565</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>6/7/2023 05:44 PM</b>			
Client ID:		Run ID: <b>ICP3_230607B</b>				SeqNo: <b>3069227</b>		Prep Date: <b>6/6/2023</b>		DF: <b>1</b>	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Arsenic	96.67	5.0	100	0	96.7	80-120	0				
Barium	96.56	20	100	0	96.6	81.6-112	0				
Cadmium	102.6	1.0	100	0	103	87.2-119	0				
Chromium	92.66	10	100	0	92.7	74.6-110	0				
Lead	99.84	20	100	0	99.8	82.9-117	0				
Selenium	101.6	3.0	100	0	102	86.2-110	0				
Silver	89.92	5.0	100	0	89.9	77.1-118	0				

LCS		Sample ID: <b>LCS-91565-91565</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>6/9/2023 09:48 AM</b>			
Client ID:		Run ID: <b>ICP3_230609A</b>				SeqNo: <b>3071271</b>		Prep Date: <b>6/6/2023</b>		DF: <b>1</b>	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Silver	101.1	5.0	100	0	101	77.1-118	0				

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: The Mannik & Smith Group, Inc.  
 Work Order: 23051029  
 Project: Hillson Nut MS23-13; 401.ODAS003-19

# QC BATCH REPORT

Batch ID: **91565** Instrument ID **ICP3** Method: **SW6010B**

LCSD		Sample ID: <b>LCSD-91565-91565</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>6/7/2023 05:48 PM</b>			
Client ID:		Run ID: <b>ICP3_230607B</b>				SeqNo: <b>3069228</b>		Prep Date: <b>6/6/2023</b>		DF: <b>1</b>	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Arsenic	95.04	5.0	100	0	95	79.7-118	96.67	1.7	20		
Barium	95.38	20	100	0	95.4	81.6-112	96.56	1.23	20		
Cadmium	101.3	1.0	100	0	101	87.2-119	102.6	1.28	20		
Chromium	90.45	10	100	0	90.4	74.6-110	92.66	2.41	20		
Lead	98.03	20	100	0	98	82.9-117	99.84	1.83	20		
Selenium	99.56	3.0	100	0	99.6	86.2-110	101.6	2.03	20		
Silver	88.18	5.0	100	0	88.2	77.1-118	89.92	1.95	20		

LCSD		Sample ID: <b>LCSD-91565-91565</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>6/9/2023 09:52 AM</b>			
Client ID:		Run ID: <b>ICP3_230609A</b>				SeqNo: <b>3071272</b>		Prep Date: <b>6/6/2023</b>		DF: <b>1</b>	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Silver	100.8	5.0	100	0	101	77.1-118	101.1	0.297	20		

MS		Sample ID: <b>23051302-09BMS</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>6/7/2023 07:16 PM</b>			
Client ID:		Run ID: <b>ICP3_230607B</b>				SeqNo: <b>3069244</b>		Prep Date: <b>6/6/2023</b>		DF: <b>1</b>	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Arsenic	98.5	4.7	93.98	9.336	94.9	75-125	0				
Barium	159.8	19	93.98	97.26	66.5	75-125	0			S	
Cadmium	93.33	0.94	93.98	0	99.3	75-125	0				
Chromium	99.81	9.4	93.98	17.65	87.4	69.3-116	0				
Lead	100.9	19	93.98	18.48	87.7	69.3-107	0				
Selenium	86.29	2.8	93.98	0	91.8	75-125	0				

MS		Sample ID: <b>23051302-09BMS</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>6/9/2023 10:37 AM</b>			
Client ID:		Run ID: <b>ICP3_230609A</b>				SeqNo: <b>3071280</b>		Prep Date: <b>6/6/2023</b>		DF: <b>1</b>	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Silver	89.94	4.7	93.98	0	95.7	75-125	0				

Note: See Qualifiers Page for a list of Qualifiers and their explanation.



Client: The Mannik & Smith Group, Inc.  
 Work Order: 23051029  
 Project: Hillson Nut MS23-13; 401.ODAS003-19

# QC BATCH REPORT

Batch ID: **91565** Instrument ID **ICP3** Method: **SW6010B**

MSD				Sample ID: 23051302-09BMSD			Units: mg/Kg		Analysis Date: 6/7/2023 07:21 PM		
Client ID:		Run ID: ICP3_230607B			SeqNo: 3069245		Prep Date: 6/6/2023		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Arsenic	95.51	4.7	93.55	9.336	92.1	69.6-115	98.5	3.08	20		
Barium	160.5	19	93.55	97.26	67.6	60.1-114	159.8	0.468	20		
Cadmium	91.98	0.94	93.55	0	98.3	69.1-120	93.33	1.45	20		
Chromium	99.44	9.4	93.55	17.65	87.4	69.3-116	99.81	0.375	20		
Lead	97.01	19	93.55	18.48	83.9	69.3-107	100.9	3.97	20		
Selenium	84.71	2.8	93.55	0	90.6	66.5-109	86.29	1.84	20		

MSD				Sample ID: 23051302-09BMSD			Units: mg/Kg		Analysis Date: 6/9/2023 10:42 AM		
Client ID:		Run ID: ICP3_230609A			SeqNo: 3071281		Prep Date: 6/6/2023		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Silver	88.24	4.7	93.55	0	94.3	70.3-116	89.94	1.91	20		

The following samples were analyzed in this batch:

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: The Mannik & Smith Group, Inc.  
 Work Order: 23051029  
 Project: Hillson Nut MS23-13; 401.ODAS003-19

# QC BATCH REPORT

Batch ID: **e217015f** Instrument ID **SUB** Method: **SW8011**

MBLK		Sample ID: <b>MBLK-217015-217015-e217015f</b>				Units: <b>µg/L</b>		Analysis Date: <b>5/26/2023 09:41 AM</b>		
Client ID:		Run ID: <b>SUB_230602D</b>				SeqNo: <b>3063785</b>		Prep Date: <b>5/25/2023</b>		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

1,2-Dibromoethane ND 0.050

LCS		Sample ID: <b>LCS-217015-217015-e217015f</b>				Units: <b>µg/L</b>		Analysis Date: <b>5/26/2023 09:56 AM</b>		
Client ID:		Run ID: <b>SUB_230602D</b>				SeqNo: <b>3063786</b>		Prep Date: <b>5/25/2023</b>		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

1,2-Dibromo-3-chloropropane

30.38 0.050 28.56 0 106 80-120 0

1,2-Dibromoethane

27.71 0.050 28.56 0 97 80-120 0

LCSD		Sample ID: <b>LCSD-217015-217015-e217015f</b>				Units: <b>µg/L</b>		Analysis Date: <b>5/26/2023 10:27 AM</b>		
Client ID:		Run ID: <b>SUB_230602D</b>				SeqNo: <b>3063787</b>		Prep Date: <b>5/25/2023</b>		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

1,2-Dibromo-3-chloropropane

31.67 0.050 28.56 0 111 80-120 30.38 4.16 30

1,2-Dibromoethane

28.26 0.050 28.56 0 98.9 80-120 27.71 1.97 30

MS		Sample ID: <b>23051974-13C MS</b>				Units: <b>µg/L</b>		Analysis Date: <b>5/26/2023 11:09 AM</b>		
Client ID:		Run ID: <b>SUB_230602D</b>				SeqNo: <b>3063788</b>		Prep Date: <b>5/25/2023</b>		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

1,2-Dibromo-3-chloropropane

28.92 0.050 28.56 0 101 75-125 0

1,2-Dibromoethane

27.12 0.050 28.56 0 95 75-125 0

MSD		Sample ID: <b>23051974-13C MSD</b>				Units: <b>µg/L</b>		Analysis Date: <b>5/26/2023 11:24 AM</b>		
Client ID:		Run ID: <b>SUB_230602D</b>				SeqNo: <b>3063789</b>		Prep Date: <b>5/25/2023</b>		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

1,2-Dibromo-3-chloropropane

30.92 0.050 28.56 0 108 75-125 28.92 6.68 30

1,2-Dibromoethane

29.99 0.050 28.56 0 105 75-125 27.12 10.1 30

The following samples were analyzed in this batch:

23051029-30B 23051029-31B

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

**Client:** The Mannik & Smith Group, Inc.  
**Work Order:** 23051029  
**Project:** Hillson Nut MS23-13; 401.ODAS003-19

# QC BATCH REPORT

Batch ID: **91418**      Instrument ID **SVMS3**      Method: **SW8270C**

MBLK		Sample ID: <b>MBLK-91418-91418</b>				Units: <b>µg/L</b>		Analysis Date: <b>5/27/2023 12:06 PM</b>		
Client ID:		Run ID: <b>SVMS3_230527A</b>		SeqNo: <b>3058857</b>		Prep Date: <b>5/26/2023</b>		DF: <b>1</b>		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1-Methylnaphthalene	ND	0.17								
2-Methylnaphthalene	ND	0.17								
Acenaphthene	ND	0.17								
Acenaphthylene	ND	0.17								
Anthracene	ND	0.17								
Benzo(a)anthracene	ND	0.17								
Benzo(a)pyrene	ND	0.13								
Benzo(b)fluoranthene	ND	0.13								
Benzo(g,h,i)perylene	ND	0.17								
Benzo(k)fluoranthene	ND	0.17								
Carbazole	ND	0.17								
Chrysene	ND	0.17								
Dibenzo(a,h)anthracene	ND	0.042								
Dibenzofuran	ND	0.17								
Fluoranthene	ND	0.17								
Fluorene	ND	0.17								
Indeno(1,2,3-cd)pyrene	ND	0.13								
Naphthalene	ND	0.17								
Phenanthrene	ND	0.17								
Pyrene	ND	0.17								
<i>Surr: 2-Fluorobiphenyl</i>	4.323	0	5	0	86.5	21.6-144		0		

**Note:** See Qualifiers Page for a list of Qualifiers and their explanation.

Client: The Mannik & Smith Group, Inc.  
 Work Order: 23051029  
 Project: Hillson Nut MS23-13; 401.ODAS003-19

# QC BATCH REPORT

Batch ID: **91418** Instrument ID **SVMS3** Method: **SW8270C**

LCS		Sample ID: <b>LCS-91418-91418</b>				Units: <b>µg/L</b>		Analysis Date: <b>5/27/2023 12:23 PM</b>		
Client ID:		Run ID: <b>SVMS3_230527A</b>		SeqNo: <b>3058858</b>		Prep Date: <b>5/26/2023</b>		DF: <b>1</b>		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Acenaphthene	4.093	0.18	5	0	81.9	56.5-130	0			
Acenaphthylene	4.266	0.18	5	0	85.3	61.2-142	0			
Anthracene	4.19	0.18	5	0	83.8	61.6-134	0			
Benzo(a)anthracene	3.538	0.18	5	0	70.8	49.1-127	0			
Benzo(a)pyrene	4.087	0.13	5	0	81.7	42.2-156	0			
Benzo(b)fluoranthene	3.552	0.13	5	0	71	57.9-130	0			
Benzo(g,h,i)perylene	3.55	0.18	5	0	71	43.9-155	0			
Benzo(k)fluoranthene	4.279	0.18	5	0	85.6	53.6-154	0			
Chrysene	4.316	0.18	5	0	86.3	60.2-143	0			
Dibenzo(a,h)anthracene	3.464	0.044	5	0	69.3	46-155	0			
Fluoranthene	4.397	0.18	5	0	87.9	58.7-140	0			
Fluorene	3.971	0.18	5	0	79.4	59.4-140	0			
Indeno(1,2,3-cd)pyrene	3.62	0.13	5	0	72.4	46-147	0			
Naphthalene	3.997	0.18	5	0	79.9	55.7-124	0			
Phenanthrene	4.1	0.18	5	0	82	51.6-139	0			
Pyrene	4.128	0.18	5	0	82.6	58-143	0			
<i>Surr: 2-Fluorobiphenyl</i>	<i>4.436</i>	<i>0</i>	<i>5</i>	<i>0</i>	<i>88.7</i>	<i>21.6-144</i>	<i>0</i>			

The following samples were analyzed in this batch: 23051029-30C 23051029-31C

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: The Mannik & Smith Group, Inc.  
 Work Order: 23051029  
 Project: Hillson Nut MS23-13; 401.ODAS003-19

# QC BATCH REPORT

Batch ID: 91420 Instrument ID SVMS4 Method: SW8270C

MBLK		Sample ID: MBLK-91420-91420			Units: µg/L		Analysis Date: 5/26/2023 04:11 PM			
Client ID:		Run ID: SVMS4_230526A			SeqNo: 3057781		Prep Date: 5/26/2023		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2,4,5-Tetrachlorobenzene	ND	10								
1,2,4-Trichlorobenzene	ND	10								
1,2-Dichlorobenzene	ND	10								
1,3-Dichlorobenzene	ND	10								
1,3-Dinitrobenzene	ND	10								
1,4-Dichlorobenzene	ND	10								
1-Methylnaphthalene	ND	0.20								
1-Naphthylamine	ND	10								
2,3,4,6-Tetrachlorophenol	ND	10								
2,4,5-Trichlorophenol	ND	10								
2,4,6-Trichlorophenol	ND	10								
2,4-Dichlorophenol	ND	10								
2,4-Dimethylphenol	ND	10								
2,4-Dinitrophenol	ND	10								
2,4-Dinitrotoluene	ND	10								
2,6-Dichlorophenol	ND	10								
2,6-Dinitrotoluene	ND	10								
2-Acetylaminofluorene	ND	10								
2-Chloronaphthalene	ND	10								
2-Chlorophenol	ND	10								
2-Methylnaphthalene	ND	0.20								
2-Methylphenol	ND	10								
2-Naphthylamine	ND	20								
2-Nitroaniline	ND	10								
2-Nitrophenol	ND	10								
2-Picoline	ND	20								
3&4-Methylphenol	ND	10								
3,3'-Dichlorobenzidine	ND	10								
3-Methylcholanthrene	ND	20								
3-Nitroaniline	ND	20								
4,6-Dinitro-2-methylphenol	ND	20								
4-Aminobiphenyl	ND	10								
4-Bromophenyl phenyl ether	ND	20								
4-Chloro-3-methylphenol	ND	20								
4-Chloroaniline	ND	10								
4-Chlorophenyl phenyl ether	ND	20								
4-Nitroaniline	ND	20								
4-Nitrophenol	ND	10								
4-Nitroquinoline 1-oxide	ND	10								
5-Nitro-o-toluidine	ND	10								
7,12-Dimethylbenz(a)anthracene	ND	10								
Acenaphthene	ND	0.20								

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

**Client:** The Mannik & Smith Group, Inc.  
**Work Order:** 23051029  
**Project:** Hillson Nut MS23-13; 401.ODAS003-19

## QC BATCH REPORT

Batch ID: <b>91420</b>	Instrument ID <b>SVMS4</b>	Method: <b>SW8270C</b>
Acenaphthylene	ND	0.20
Acetophenone	ND	10
Aniline	ND	10
Anthracene	ND	0.20
Azobenzene	ND	10
Benzidine	ND	10
Benzo(a)anthracene	ND	0.20
Benzo(a)pyrene	ND	0.20
Benzo(b)fluoranthene	ND	0.20
Benzo(g,h,i)perylene	ND	0.20
Benzo(k)fluoranthene	ND	0.20
Benzyl alcohol	ND	10
Bis(2-chloroethoxy)methane	ND	10
Bis(2-chloroethyl)ether	ND	10
Bis(2-chloroisopropyl)ether	ND	10
Bis(2-ethylhexyl)phthalate	ND	10
Butyl benzyl phthalate	ND	10
Carbazole	ND	0.20
Chrysene	ND	0.20
Dibenzo(a,h)anthracene	ND	0.20
Dibenzofuran	ND	10
Diethyl phthalate	ND	10
Dimethyl phthalate	ND	10
Di-n-butyl phthalate	ND	10
Di-n-octyl phthalate	ND	10
Dinoseb	ND	20
Diphenylamine	ND	10
Ethyl methanesulfonate	ND	10
Fluoranthene	ND	0.20
Fluorene	ND	0.20
Hexachlorobenzene	ND	10
Hexachlorobutadiene	ND	10
Hexachlorocyclopentadiene	ND	10
Hexachloroethane	ND	10
Indeno(1,2,3-cd)pyrene	ND	0.20
Isophorone	ND	10
Isosafrole	ND	10
Methapyrilene	ND	10
Methyl methanesulfonate	ND	10
Naphthalene	ND	0.20
Nitrobenzene	ND	10
N-Nitrosodiethylamine	ND	10
N-Nitrosodimethylamine	ND	10
N-Nitroso-di-n-butylamine	ND	10
N-Nitrosodi-n-propylamine	ND	10
N-Nitrosomethylethylamine	ND	10
N-Nitrosomorpholine	ND	10
N-Nitrosopiperidine	ND	10

**Note:** See Qualifiers Page for a list of Qualifiers and their explanation.

**Client:** The Mannik & Smith Group, Inc.  
**Work Order:** 23051029  
**Project:** Hillson Nut MS23-13; 401.ODAS003-19

## QC BATCH REPORT

Batch ID: <b>91420</b>	Instrument ID <b>SVMS4</b>	Method: <b>SW8270C</b>						
N-Nitrosopyrrolidine	ND	10						
o-Toluidine	ND	10						
p-Dimethylaminoazobenzene	ND	10						
Pentachlorobenzene	ND	10						
Pentachloroethane	ND	10						
Pentachloronitrobenzene	ND	20						
Pentachlorophenol	ND	20						
Phenacetin	ND	20						
Phenanthrene	ND	0.20						
Phenol	ND	10						
Pyrene	ND	0.20						
Pyridine	ND	10						
Safrole	ND	10						
<i>Surr: 2,4,6-Tribromophenol</i>	<i>309.9</i>	<i>0</i>	<i>400</i>	<i>0</i>	<i>77.5</i>	<i>42.3-142</i>	<i>0</i>	
<i>Surr: 2-Fluorobiphenyl</i>	<i>132.5</i>	<i>0</i>	<i>200</i>	<i>0</i>	<i>66.3</i>	<i>36.8-125</i>	<i>0</i>	
<i>Surr: 2-Fluorophenol</i>	<i>206.6</i>	<i>0</i>	<i>400</i>	<i>0</i>	<i>51.6</i>	<i>12-89</i>	<i>0</i>	
<i>Surr: 4-Terphenyl-d14</i>	<i>134</i>	<i>0</i>	<i>200</i>	<i>0</i>	<i>67</i>	<i>38.3-160</i>	<i>0</i>	
<i>Surr: Nitrobenzene-d5</i>	<i>161.8</i>	<i>0</i>	<i>200</i>	<i>0</i>	<i>80.9</i>	<i>28-120</i>	<i>0</i>	
<i>Surr: Phenol-d5</i>	<i>147.8</i>	<i>0</i>	<i>400</i>	<i>0</i>	<i>37</i>	<i>4.27-70.1</i>	<i>0</i>	

**Note:** See Qualifiers Page for a list of Qualifiers and their explanation.

Client: The Mannik & Smith Group, Inc.  
 Work Order: 23051029  
 Project: Hillson Nut MS23-13; 401.ODAS003-19

# QC BATCH REPORT

Batch ID: 91420 Instrument ID SVMS4 Method: SW8270C

MBLK		Sample ID: MBLK-91420-91420			Units: µg/L		Analysis Date: 5/30/2023 06:45 PM			
Client ID:		Run ID: SVMS4_230530A			SeqNo: 3060044		Prep Date: 5/26/2023		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2,4,5-Tetrachlorobenzene	ND	10								
1,2,4-Trichlorobenzene	ND	10								
1,2-Dichlorobenzene	ND	10								
1,3-Dichlorobenzene	ND	10								
1,3-Dinitrobenzene	ND	10								
1,4-Dichlorobenzene	ND	10								
1-Methylnaphthalene	ND	0.20								
1-Naphthylamine	ND	10								
2,3,4,6-Tetrachlorophenol	ND	10								
2,4,5-Trichlorophenol	ND	10								
2,4,6-Trichlorophenol	ND	10								
2,4-Dichlorophenol	ND	10								
2,4-Dimethylphenol	ND	10								
2,4-Dinitrophenol	ND	10								
2,4-Dinitrotoluene	ND	10								
2,6-Dichlorophenol	ND	10								
2,6-Dinitrotoluene	ND	10								
2-Acetylaminofluorene	ND	10								
2-Chloronaphthalene	ND	10								
2-Chlorophenol	ND	10								
2-Methylnaphthalene	ND	0.20								
2-Methylphenol	ND	10								
2-Naphthylamine	ND	20								
2-Nitroaniline	ND	10								
2-Nitrophenol	ND	10								
2-Picoline	ND	20								
3&4-Methylphenol	ND	10								
3,3'-Dichlorobenzidine	ND	10								
3-Methylcholanthrene	ND	20								
3-Nitroaniline	ND	20								
4,6-Dinitro-2-methylphenol	ND	20								
4-Aminobiphenyl	ND	10								
4-Bromophenyl phenyl ether	ND	20								
4-Chloro-3-methylphenol	ND	20								
4-Chloroaniline	ND	10								
4-Chlorophenyl phenyl ether	ND	20								
4-Nitroaniline	ND	20								
4-Nitrophenol	3.076	10								J
4-Nitroquinoline 1-oxide	ND	10								
5-Nitro-o-toluidine	ND	10								
7,12-Dimethylbenz(a)anthracene	ND	10								
Acenaphthene	ND	0.20								

Note: See Qualifiers Page for a list of Qualifiers and their explanation.



**Client:** The Mannik & Smith Group, Inc.  
**Work Order:** 23051029  
**Project:** Hillson Nut MS23-13; 401.ODAS003-19

## QC BATCH REPORT

Batch ID: <b>91420</b>	Instrument ID <b>SVMS4</b>	Method: <b>SW8270C</b>	
Acenaphthylene	ND	0.20	
Acetophenone	ND	10	
Aniline	ND	10	
Anthracene	ND	0.20	
Azobenzene	ND	10	
Benzidine	ND	10	
Benzo(a)anthracene	ND	0.20	
Benzo(a)pyrene	ND	0.20	
Benzo(b)fluoranthene	ND	0.20	
Benzo(g,h,i)perylene	ND	0.20	
Benzo(k)fluoranthene	ND	0.20	
Benzyl alcohol	3.776	10	J
Bis(2-chloroethoxy)methane	ND	10	
Bis(2-chloroethyl)ether	ND	10	
Bis(2-chloroisopropyl)ether	ND	10	
Bis(2-ethylhexyl)phthalate	ND	10	
Butyl benzyl phthalate	ND	10	
Carbazole	ND	0.20	
Chrysene	ND	0.20	
Dibenzo(a,h)anthracene	ND	0.20	
Dibenzofuran	ND	10	
Diethyl phthalate	ND	10	
Dimethyl phthalate	ND	10	
Di-n-butyl phthalate	ND	10	
Di-n-octyl phthalate	ND	10	
Dinoseb	ND	20	
Diphenylamine	ND	10	
Ethyl methanesulfonate	ND	10	
Fluoranthene	ND	0.20	
Fluorene	ND	0.20	
Hexachlorobenzene	ND	10	
Hexachlorobutadiene	ND	10	
Hexachlorocyclopentadiene	ND	10	
Hexachloroethane	ND	10	
Indeno(1,2,3-cd)pyrene	ND	0.20	
Isophorone	ND	10	
Isosafrole	ND	10	
Methapyrilene	ND	10	
Methyl methanesulfonate	ND	10	
Naphthalene	ND	0.20	
Nitrobenzene	ND	10	
N-Nitrosodiethylamine	ND	10	
N-Nitrosodimethylamine	ND	10	
N-Nitroso-di-n-butylamine	ND	10	
N-Nitrosodi-n-propylamine	ND	10	
N-Nitrosomethylethylamine	ND	10	
N-Nitrosomorpholine	ND	10	
N-Nitrosopiperidine	ND	10	

**Note:** See Qualifiers Page for a list of Qualifiers and their explanation.

**Client:** The Mannik & Smith Group, Inc.  
**Work Order:** 23051029  
**Project:** Hillson Nut MS23-13; 401.ODAS003-19

## QC BATCH REPORT

Batch ID: <b>91420</b>	Instrument ID <b>SVMS4</b>	Method: <b>SW8270C</b>					
N-Nitrosopyrrolidine	ND	10					
o-Toluidine	ND	10					
p-Dimethylaminoazobenzene	ND	10					
Pentachlorobenzene	ND	10					
Pentachloroethane	ND	10					
Pentachloronitrobenzene	ND	20					
Pentachlorophenol	ND	20					
Phenacetin	ND	20					
Phenanthrene	ND	0.20					
Phenol	ND	10					
Pyrene	ND	0.20					
Pyridine	ND	10					
Safrole	ND	10					
<i>Surr: 2,4,6-Tribromophenol</i>	262	0	400	0	65.5	42.3-142	0
<i>Surr: 2-Fluorobiphenyl</i>	111.5	0	200	0	55.8	36.8-125	0
<i>Surr: 2-Fluorophenol</i>	150.6	0	400	0	37.6	12-89	0
<i>Surr: 4-Terphenyl-d14</i>	106.5	0	200	0	53.3	38.3-160	0
<i>Surr: Nitrobenzene-d5</i>	120	0	200	0	60	28-120	0
<i>Surr: Phenol-d5</i>	106.8	0	400	0	26.7	4.27-70.1	0

**Note:** See Qualifiers Page for a list of Qualifiers and their explanation.

Client: The Mannik & Smith Group, Inc.  
 Work Order: 23051029  
 Project: Hillson Nut MS23-13; 401.ODAS003-19

# QC BATCH REPORT

Batch ID: 91420 Instrument ID SVMS4 Method: SW8270C

MBLK		Sample ID: MBLK-91420-91420			Units: µg/L		Analysis Date: 5/30/2023 06:45 PM			
Client ID:		Run ID: SVMS4_230530A			SeqNo: 3060229		Prep Date: 5/26/2023		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2,4,5-Tetrachlorobenzene	ND	10								
1,2,4-Trichlorobenzene	ND	10								
1,2-Dichlorobenzene	ND	10								
1,3-Dichlorobenzene	ND	10								
1,3-Dinitrobenzene	ND	10								
1,4-Dichlorobenzene	ND	10								
1-Methylnaphthalene	ND	5.0								
1-Naphthylamine	ND	10								
2,3,4,6-Tetrachlorophenol	ND	10								
2,4,5-Trichlorophenol	ND	10								
2,4,6-Trichlorophenol	ND	10								
2,4-Dichlorophenol	ND	10								
2,4-Dimethylphenol	ND	10								
2,4-Dinitrophenol	ND	10								
2,4-Dinitrotoluene	ND	10								
2,6-Dichlorophenol	ND	10								
2,6-Dinitrotoluene	ND	10								
2-Acetylaminofluorene	ND	10								
2-Chloronaphthalene	ND	10								
2-Chlorophenol	ND	10								
2-Methylnaphthalene	ND	5.0								
2-Methylphenol	ND	10								
2-Naphthylamine	ND	20								
2-Nitroaniline	ND	10								
2-Nitrophenol	ND	10								
2-Picoline	ND	20								
3&4-Methylphenol	ND	10								
3,3'-Dichlorobenzidine	ND	10								
3-Methylcholanthrene	ND	20								
3-Nitroaniline	ND	20								
4,6-Dinitro-2-methylphenol	ND	20								
4-Aminobiphenyl	ND	10								
4-Bromophenyl phenyl ether	ND	20								
4-Chloro-3-methylphenol	ND	20								
4-Chloroaniline	ND	10								
4-Chlorophenyl phenyl ether	ND	20								
4-Nitroaniline	ND	20								
4-Nitrophenol	3.076	10								J
4-Nitroquinoline 1-oxide	ND	10								
5-Nitro-o-toluidine	ND	10								
7,12-Dimethylbenz(a)anthracene	ND	10								
Acenaphthene	ND	5.0								

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

**Client:** The Mannik & Smith Group, Inc.  
**Work Order:** 23051029  
**Project:** Hillson Nut MS23-13; 401.ODAS003-19

## QC BATCH REPORT

Batch ID: <b>91420</b>	Instrument ID <b>SVMS4</b>	Method: <b>SW8270C</b>	
Acenaphthylene	ND	5.0	
Acetophenone	ND	10	
Aniline	ND	10	
Anthracene	ND	5.0	
Azobenzene	ND	10	
Benzidine	ND	10	
Benzo(a)anthracene	ND	5.0	
Benzo(a)pyrene	ND	5.0	
Benzo(b)fluoranthene	ND	5.0	
Benzo(g,h,i)perylene	ND	5.0	
Benzo(k)fluoranthene	ND	5.0	
Benzyl alcohol	3.776	10	J
Bis(2-chloroethoxy)methane	ND	10	
Bis(2-chloroethyl)ether	ND	10	
Bis(2-chloroisopropyl)ether	ND	10	
Bis(2-ethylhexyl)phthalate	ND	10	
Butyl benzyl phthalate	ND	10	
Carbazole	ND	10	
Chrysene	ND	5.0	
Dibenzo(a,h)anthracene	ND	5.0	
Dibenzofuran	ND	10	
Diethyl phthalate	ND	10	
Dimethyl phthalate	ND	10	
Di-n-butyl phthalate	ND	10	
Di-n-octyl phthalate	ND	10	
Dinoseb	ND	20	
Diphenylamine	ND	10	
Ethyl methanesulfonate	ND	10	
Fluoranthene	ND	5.0	
Fluorene	ND	5.0	
Hexachlorobenzene	ND	10	
Hexachlorobutadiene	ND	10	
Hexachlorocyclopentadiene	ND	10	
Hexachloroethane	ND	10	
Indeno(1,2,3-cd)pyrene	ND	5.0	
Isophorone	ND	10	
Isosafrole	ND	10	
Methapyrilene	ND	10	
Methyl methanesulfonate	ND	10	
Naphthalene	ND	5.0	
Nitrobenzene	ND	10	
N-Nitrosodiethylamine	ND	10	
N-Nitrosodimethylamine	ND	10	
N-Nitroso-di-n-butylamine	ND	10	
N-Nitrosodi-n-propylamine	ND	10	
N-Nitrosomethylethylamine	ND	10	
N-Nitrosomorpholine	ND	10	
N-Nitrosopiperidine	ND	10	

**Note:** See Qualifiers Page for a list of Qualifiers and their explanation.

**Client:** The Mannik & Smith Group, Inc.  
**Work Order:** 23051029  
**Project:** Hillson Nut MS23-13; 401.ODAS003-19

## QC BATCH REPORT

Batch ID: <b>91420</b>	Instrument ID <b>SVMS4</b>	Method: <b>SW8270C</b>					
N-Nitrosopyrrolidine	ND	10					
o-Toluidine	ND	10					
p-Dimethylaminoazobenzene	ND	10					
Pentachlorobenzene	ND	10					
Pentachloroethane	ND	10					
Pentachloronitrobenzene	ND	20					
Pentachlorophenol	ND	20					
Phenacetin	ND	20					
Phenanthrene	ND	5.0					
Phenol	ND	10					
Pyrene	ND	5.0					
Pyridine	ND	10					
Safrole	ND	10					
<i>Surr: 2,4,6-Tribromophenol</i>	262	0	400	0	65.5	35-120	0
<i>Surr: 2-Fluorobiphenyl</i>	111.5	0	200	0	55.8	38-105	0
<i>Surr: 2-Fluorophenol</i>	150.6	0	400	0	37.6	12-89	0
<i>Surr: 4-Terphenyl-d14</i>	106.5	0	200	0	53.3	42-125	0
<i>Surr: Nitrobenzene-d5</i>	120	0	200	0	60	28-120	0
<i>Surr: Phenol-d5</i>	106.8	0	400	0	26.7	10-62	0

**Note:** See Qualifiers Page for a list of Qualifiers and their explanation.

Client: The Mannik & Smith Group, Inc.  
 Work Order: 23051029  
 Project: Hillson Nut MS23-13; 401.ODAS003-19

# QC BATCH REPORT

Batch ID: **91420** Instrument ID **SVMS4** Method: **SW8270C**

LCS		Sample ID: <b>LCS-91420-91420</b>				Units: <b>µg/L</b>		Analysis Date: <b>6/2/2023 01:00 PM</b>		
Client ID:		Run ID: <b>SVMS4_230602A</b>		SeqNo: <b>3064001</b>		Prep Date: <b>5/26/2023</b>		DF: <b>1</b>		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2,4-Trichlorobenzene	45.63	10	50	0	91.3	33.3-96.9	0			
1,4-Dichlorobenzene	43.45	10	50	0	86.9	24.6-94.5	0			
2,4-Dinitrotoluene	52.2	10	50	0	104	58.9-126	0			
2-Chlorophenol	51.5	10	50	0	103	53-97.3	0			S
4-Chloro-3-methylphenol	53.03	20	50	0	106	58.1-110	0			
4-Nitrophenol	21.98	10	50	0	44	17.3-80.3	0			
Acenaphthene	49.08	0.20	50	0	98.2	40.1-123	0			
Acenaphthylene	54.93	0.20	50	0	110	59.3-126	0			
Anthracene	51.6	0.20	50	0	103	62.1-110	0			
Benzo(a)anthracene	52.14	0.20	50	0	104	55.5-112	0			
Benzo(a)pyrene	49.46	0.20	50	0	98.9	62.1-118	0			
Benzo(b)fluoranthene	48.59	0.20	50	0	97.2	59.9-113	0			
Benzo(g,h,i)perylene	47.28	0.20	50	0	94.6	42.3-123	0			
Benzo(k)fluoranthene	49.76	0.20	50	0	99.5	54.7-99.1	0			S
Carbazole	54.39	0.20	50	0	109	49.9-163	0			
Chrysene	47.35	0.20	50	0	94.7	63.1-116	0			
Dibenzo(a,h)anthracene	49.63	0.20	50	0	99.3	47.1-168	0			
Fluoranthene	51.6	0.20	50	0	103	62.1-121	0			
Fluorene	52.26	0.20	50	0	105	59.5-120	0			
Indeno(1,2,3-cd)pyrene	51.85	0.20	50	0	104	56.3-141	0			
Naphthalene	47.12	0.20	50	0	94.2	46.6-104	0			
N-Nitrosodi-n-propylamine	40.13	10	50	0	80.3	42.7-95.9	0			
Pentachlorophenol	46.33	20	50	0	92.7	34.1-130	0			
Phenanthrene	49.91	0.20	50	0	99.8	63-118	0			
Phenol	21.73	10	50	0	43.5	17.5-68	0			
Pyrene	48.57	0.20	50	0	97.1	42-125	0			
<i>Surr: 2,4,6-Tribromophenol</i>	<i>89.08</i>	<i>0</i>	<i>100</i>	<i>0</i>	<i>89.1</i>	<i>42.3-142</i>	<i>0</i>			
<i>Surr: 2-Fluorobiphenyl</i>	<i>45.48</i>	<i>0</i>	<i>50</i>	<i>0</i>	<i>91</i>	<i>36.8-125</i>	<i>0</i>			
<i>Surr: 2-Fluorophenol</i>	<i>62.07</i>	<i>0</i>	<i>100</i>	<i>0</i>	<i>62.1</i>	<i>12-89</i>	<i>0</i>			
<i>Surr: 4-Terphenyl-d14</i>	<i>44.46</i>	<i>0</i>	<i>50</i>	<i>0</i>	<i>88.9</i>	<i>38.3-160</i>	<i>0</i>			
<i>Surr: Nitrobenzene-d5</i>	<i>56.48</i>	<i>0</i>	<i>50</i>	<i>0</i>	<i>113</i>	<i>28-120</i>	<i>0</i>			
<i>Surr: Phenol-d5</i>	<i>42.33</i>	<i>0</i>	<i>100</i>	<i>0</i>	<i>42.3</i>	<i>4.27-70.1</i>	<i>0</i>			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: The Mannik & Smith Group, Inc.  
 Work Order: 23051029  
 Project: Hillson Nut MS23-13; 401.ODAS003-19

# QC BATCH REPORT

Batch ID: **91420** Instrument ID **SVMS4** Method: **SW8270C**

LCS		Sample ID: <b>LCS-91420-91420</b>				Units: <b>µg/L</b>		Analysis Date: <b>6/2/2023 01:00 PM</b>		
Client ID:		Run ID: <b>SVMS4_230602A</b>		SeqNo: <b>3064003</b>		Prep Date: <b>5/26/2023</b>		DF: <b>1</b>		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2,4-Trichlorobenzene	45.63	10	50	0	91.3	44-142	0			
1,2-Dichlorobenzene	48.74	10	50	0	97.5	32-129	0			
1,3-Dichlorobenzene	44.46	10	50	0	88.9	.1-172	0			
1,4-Dichlorobenzene	43.45	10	50	0	86.9	20-124	0			
2,4,6-Trichlorophenol	49.15	10	50	0	98.3	37-144	0			
2,4-Dichlorophenol	53.01	10	50	0	106	39-135	0			
2,4-Dimethylphenol	45.86	10	50	0	91.7	32-119	0			
2,4-Dinitrophenol	41.66	10	50	0	83.3	.1-191	0			
2,4-Dinitrotoluene	52.2	10	50	0	104	39-139	0			
2,6-Dinitrotoluene	51.82	10	50	0	104	50-158	0			
2-Chloronaphthalene	50.78	10	50	0	102	60-118	0			
2-Chlorophenol	51.5	10	50	0	103	23-134	0			
2-Nitrophenol	55.7	10	50	0	111	29-182	0			
4,6-Dinitro-2-methylphenol	44.61	20	50	0	89.2	.1-181	0			
4-Chloro-3-methylphenol	53.03	20	50	0	106	22-147	0			
4-Chlorophenyl phenyl ether	48.34	20	50	0	96.7	25-158	0			
4-Nitrophenol	21.98	10	50	0	44	.1-132	0			
Acenaphthene	49.08	5.0	50	0	98.2	47-145	0			
Acenaphthylene	54.93	5.0	50	0	110	33-145	0			
Anthracene	51.6	5.0	50	0	103	27-133	0			
Benzo(a)anthracene	52.14	5.0	50	0	104	33-143	0			
Benzo(a)pyrene	49.46	5.0	50	0	98.9	17-163	0			
Benzo(b)fluoranthene	48.59	5.0	50	0	97.2	24-159	0			
Benzo(g,h,i)perylene	47.28	5.0	50	0	94.6	.1-219	0			
Benzo(k)fluoranthene	49.76	5.0	50	0	99.5	11-162	0			
Bis(2-chloroethoxy)methane	56.61	10	50	0	113	33-184	0			
Bis(2-chloroethyl)ether	54.2	10	50	0	108	12-158	0			
Bis(2-chloroisopropyl)ether	61.22	10	50	0	122	36-166	0			
Bis(2-ethylhexyl)phthalate	51.46	10	50	0	103	8-158	0			
Butyl benzyl phthalate	52.44	10	50	0	105	.1-152	0			
Chrysene	47.35	5.0	50	0	94.7	17-168	0			
Dibenzo(a,h)anthracene	49.63	5.0	50	0	99.3	.1-227	0			
Diethyl phthalate	49.14	10	50	0	98.3	.1-114	0			
Dimethyl phthalate	48.98	10	50	0	98	.1-112	0			
Di-n-butyl phthalate	54.93	10	50	0	110	1-118	0			
Di-n-octyl phthalate	48.54	10	50	0	97.1	4-146	0			
Fluoranthene	51.6	5.0	50	0	103	26-137	0			
Fluorene	52.26	5.0	50	0	105	59-121	0			
Hexachlorobenzene	45.58	10	50	0	91.2	.1-152	0			
Hexachlorobutadiene	38.64	10	50	0	77.3	24-116	0			
Hexachloroethane	46.42	10	50	0	92.8	40-113	0			
Indeno(1,2,3-cd)pyrene	51.85	5.0	50	0	104	.1-171	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

**Client:** The Mannik & Smith Group, Inc.  
**Work Order:** 23051029  
**Project:** Hillson Nut MS23-13; 401.ODAS003-19

## QC BATCH REPORT

Batch ID: <b>91420</b>	Instrument ID <b>SVMS4</b>	Method: <b>SW8270C</b>						
Isophorone	55.14	10	50	0	110	21-196	0	
Naphthalene	47.12	5.0	50	0	94.2	21-133	0	
Nitrobenzene	58.72	10	50	0	117	35-180	0	
N-Nitrosodi-n-propylamine	40.13	10	50	0	80.3	.1-230	0	
Pentachlorophenol	46.33	20	50	0	92.7	14-176	0	
Phenanthrene	49.91	5.0	50	0	99.8	54-120	0	
Phenol	21.73	10	50	0	43.5	5-112	0	
Pyrene	48.57	5.0	50	0	97.1	52-115	0	
<i>Surr: 2,4,6-Tribromophenol</i>	<i>89.08</i>	<i>0</i>	<i>100</i>	<i>0</i>	<i>89.1</i>	<i>35-120</i>	<i>0</i>	
<i>Surr: 2-Fluorobiphenyl</i>	<i>45.48</i>	<i>0</i>	<i>50</i>	<i>0</i>	<i>91</i>	<i>38-105</i>	<i>0</i>	
<i>Surr: 2-Fluorophenol</i>	<i>62.07</i>	<i>0</i>	<i>100</i>	<i>0</i>	<i>62.1</i>	<i>12-89</i>	<i>0</i>	
<i>Surr: 4-Terphenyl-d14</i>	<i>44.46</i>	<i>0</i>	<i>50</i>	<i>0</i>	<i>88.9</i>	<i>42-125</i>	<i>0</i>	
<i>Surr: Nitrobenzene-d5</i>	<i>56.48</i>	<i>0</i>	<i>50</i>	<i>0</i>	<i>113</i>	<i>28-120</i>	<i>0</i>	
<i>Surr: Phenol-d5</i>	<i>42.33</i>	<i>0</i>	<i>100</i>	<i>0</i>	<i>42.3</i>	<i>10-62</i>	<i>0</i>	

**Note:** See Qualifiers Page for a list of Qualifiers and their explanation.



Client: The Mannik & Smith Group, Inc.  
 Work Order: 23051029  
 Project: Hillson Nut MS23-13; 401.ODAS003-19

# QC BATCH REPORT

Batch ID: **91420** Instrument ID **SVMS4** Method: **SW8270C**

MS		Sample ID: <b>23050961-01BMS</b>				Units: <b>µg/L</b>		Analysis Date: <b>6/2/2023 01:21 PM</b>		
Client ID:		Run ID: <b>SVMS4_230602A</b>		SeqNo: <b>3064055</b>		Prep Date: <b>5/26/2023</b>		DF: <b>1</b>		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2,4-Trichlorobenzene	42.1	10	50	0	84.2	60-140	0			
1,4-Dichlorobenzene	40.04	10	50	0	80.1	60-140	0			
2,4-Dinitrotoluene	45.73	10	50	0	91.5	60-140	0			
2-Chlorophenol	46.98	10	50	0	94	60-140	0			
4-Chloro-3-methylphenol	46.59	20	50	0	93.2	60-140	0			
4-Nitrophenol	13.82	10	50	2.964	21.7	60-140	0			S
Acenaphthene	43.33	0.20	50	0	86.7	60-140	0			
Acenaphthylene	49.5	0.20	50	0	99	60-140	0			
Anthracene	45.55	0.20	50	0	91.1	60-140	0			
Benzo(a)anthracene	46.79	0.20	50	0	93.6	60-140	0			
Benzo(a)pyrene	45.76	0.20	50	0	91.5	60-140	0			
Benzo(b)fluoranthene	43.42	0.20	50	0	86.8	60-140	0			
Benzo(g,h,i)perylene	45.8	0.20	50	0	91.6	60-140	0			
Benzo(k)fluoranthene	47.59	0.20	50	0	95.2	60-140	0			
Carbazole	47.3	0.20	50	0	94.6	60-140	0			
Chrysene	41.17	0.20	50	0	82.3	60-140	0			
Dibenzo(a,h)anthracene	47.39	0.20	50	0	94.8	60-140	0			
Dibenzofuran	44.57	10	50	0	89.1	60-140	0			
Fluoranthene	46.58	0.20	50	0	93.2	60-140	0			
Fluorene	47.95	0.20	50	0	95.9	60-140	0			
Indeno(1,2,3-cd)pyrene	49.56	0.20	50	0	99.1	60-140	0			
Naphthalene	42.5	0.20	50	0	85	60-140	0			
N-Nitrosodi-n-propylamine	35.75	10	50	0	71.5	60-140	0			
Pentachlorophenol	48.44	20	50	0	96.9	60-140	0			
Phenanthrene	44.74	0.20	50	0	89.5	60-140	0			
Phenol	20.35	10	50	0	40.7	60-140	0			S
Pyrene	43.88	0.20	50	0	87.8	60-140	0			
<i>Surr: 2,4,6-Tribromophenol</i>	<i>91.65</i>	<i>0</i>	<i>100</i>	<i>0</i>	<i>91.6</i>	<i>42.3-142</i>	<i>0</i>			
<i>Surr: 2-Fluorobiphenyl</i>	<i>62.26</i>	<i>0</i>	<i>50</i>	<i>0</i>	<i>125</i>	<i>36.8-125</i>	<i>0</i>			
<i>Surr: 2-Fluorophenol</i>	<i>56.52</i>	<i>0</i>	<i>100</i>	<i>0</i>	<i>56.5</i>	<i>12-89</i>	<i>0</i>			
<i>Surr: 4-Terphenyl-d14</i>	<i>31.8</i>	<i>0</i>	<i>50</i>	<i>0</i>	<i>63.6</i>	<i>38.3-160</i>	<i>0</i>			
<i>Surr: Nitrobenzene-d5</i>	<i>50.16</i>	<i>0</i>	<i>50</i>	<i>0</i>	<i>100</i>	<i>28-120</i>	<i>0</i>			
<i>Surr: Phenol-d5</i>	<i>38.88</i>	<i>0</i>	<i>100</i>	<i>0</i>	<i>38.9</i>	<i>4.27-70.1</i>	<i>0</i>			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: The Mannik & Smith Group, Inc.  
 Work Order: 23051029  
 Project: Hillson Nut MS23-13; 401.ODAS003-19

# QC BATCH REPORT

Batch ID: 91420 Instrument ID SVMS4 Method: SW8270C

MSD		Sample ID: 23050961-01BMSD				Units: µg/L		Analysis Date: 6/2/2023 01:41 PM		
Client ID:		Run ID: SVMS4_230602A			SeqNo: 3064056		Prep Date: 5/26/2023		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2,4-Trichlorobenzene	40.6	10	50	0	81.2	60-140	42.1	3.63	19.4	
1,4-Dichlorobenzene	37.37	10	50	0	74.7	60-140	40.04	6.89	6.87	R
2,4-Dinitrotoluene	47.62	10	50	0	95.2	60-140	45.73	4.05	12.8	
2-Chlorophenol	44.24	10	50	0	88.5	60-140	46.98	6.02	20	
4-Chloro-3-methylphenol	47.46	20	50	0	94.9	60-140	46.59	1.85	20	
4-Nitrophenol	16.54	10	50	2.964	27.2	60-140	13.82	18	18.9	S
Acenaphthene	44.34	0.20	50	0	88.7	60-140	43.33	2.32	14	
Acenaphthylene	49.53	0.20	50	0	99.1	60-140	49.5	0.0646	14.6	
Anthracene	47.54	0.20	50	0	95.1	60-140	45.55	4.28	17.6	
Benzo(a)anthracene	49.3	0.20	50	0	98.6	60-140	46.79	5.22	17.7	
Benzo(a)pyrene	45.99	0.20	50	0	92	60-140	45.76	0.514	14.8	
Benzo(b)fluoranthene	45.25	0.20	50	0	90.5	60-140	43.42	4.11	13.6	
Benzo(g,h,i)perylene	43.08	0.20	50	0	86.2	60-140	45.8	6.13	15.9	
Benzo(k)fluoranthene	45.66	0.20	50	0	91.3	60-140	47.59	4.13	14	
Carbazole	49.54	0.20	50	0	99.1	60-140	47.3	4.62	14.8	
Chrysene	43.6	0.20	50	0	87.2	60-140	41.17	5.73	14.4	
Dibenzo(a,h)anthracene	45.69	0.20	50	0	91.4	60-140	47.39	3.65	15.9	
Dibenzofuran	44.04	10	50	0	88.1	60-140	44.57	1.18	20	
Fluoranthene	47.37	0.20	50	0	94.7	60-140	46.58	1.68	15.2	
Fluorene	47.94	0.20	50	0	95.9	60-140	47.95	0.0167	15.9	
Indeno(1,2,3-cd)pyrene	47.84	0.20	50	0	95.7	60-140	49.56	3.54	14.9	
Naphthalene	41.79	0.20	50	0	83.6	60-140	42.5	1.7	20	
N-Nitrosodi-n-propylamine	34.79	10	50	0	69.6	60-140	35.75	2.73	20	
Pentachlorophenol	43.05	20	50	0	86.1	60-140	48.44	11.8	11.8	
Phenanthrene	45.98	0.20	50	0	92	60-140	44.74	2.73	20	
Phenol	19.07	10	50	0	38.1	60-140	20.35	6.49	17.5	S
Pyrene	44.72	0.20	50	0	89.4	60-140	43.88	1.9	20	
Surr: 2,4,6-Tribromophenol	81.92	0	100	0	81.9	42.3-142	91.65	11.2		
Surr: 2-Fluorobiphenyl	40.64	0	50	0	81.3	36.8-125	62.26	42		
Surr: 2-Fluorophenol	51.62	0	100	0	51.6	12-89	56.52	9.07		
Surr: 4-Terphenyl-d14	30.91	0	50	0	61.8	38.3-160	31.8	2.86		
Surr: Nitrobenzene-d5	48.14	0	50	0	96.3	28-120	50.16	4.11		
Surr: Phenol-d5	36.44	0	100	0	36.4	4.27-70.1	38.88	6.48		

The following samples were analyzed in this batch: 23051029-32B

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: The Mannik & Smith Group, Inc.  
 Work Order: 23051029  
 Project: Hillson Nut MS23-13; 401.ODAS003-19

# QC BATCH REPORT

Batch ID: **91422** Instrument ID **SVMS2** Method: **SW8270C**

MBLK		Sample ID: <b>MBLK-91422-91422</b>			Units: <b>µg/Kg</b>		Analysis Date: <b>6/1/2023 01:52 PM</b>			
Client ID:		Run ID: <b>SVMS2_230601A</b>			SeqNo: <b>3063736</b>		Prep Date: <b>5/30/2023</b>		DF: <b>1</b>	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2,4,5-Tetrachlorobenzene	ND	330								
1,2,4-Trichlorobenzene	ND	330								
1,2-Dichlorobenzene	ND	330								
1,3-Dichlorobenzene	ND	330								
1,3-Dinitrobenzene	ND	330								
1,4-Dichlorobenzene	ND	330								
1-Methylnaphthalene	ND	200								
1-Naphthylamine	ND	330								
2,3,4,6-Tetrachlorophenol	ND	330								
2,4,5-Trichlorophenol	ND	330								
2,4,6-Trichlorophenol	ND	330								
2,4-Dichlorophenol	ND	330								
2,4-Dimethylphenol	ND	330								
2,4-Dinitrophenol	ND	1,600								
2,4-Dinitrotoluene	ND	330								
2,6-Dichlorophenol	ND	330								
2,6-Dinitrotoluene	ND	330								
2-Acetylaminofluorene	ND	330								
2-Chloronaphthalene	ND	330								
2-Chlorophenol	ND	330								
2-Methylnaphthalene	ND	200								
2-Methylphenol	ND	330								
2-Naphthylamine	ND	330								
2-Nitroaniline	ND	1,600								
2-Nitrophenol	ND	330								
2-Picoline	ND	330								
3&4-Methylphenol	ND	330								
3,3'-Dichlorobenzidine	ND	660								
3-Methylcholanthrene	ND	330								
3-Nitroaniline	ND	1,600								
4,6-Dinitro-2-methylphenol	ND	1,600								
4-Aminobiphenyl	ND	660								
4-Bromophenyl phenyl ether	ND	330								
4-Chloro-3-methylphenol	ND	660								
4-Chloroaniline	ND	660								
4-Chlorophenyl phenyl ether	ND	330								
4-Nitroaniline	ND	660								
4-Nitrophenol	ND	1,600								
4-Nitroquinoline 1-oxide	ND	1,600								
5-Nitro-o-toluidine	ND	330								
7,12-Dimethylbenz(a)anthracene	ND	330								
Acenaphthene	ND	200								

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

**Client:** The Mannik & Smith Group, Inc.  
**Work Order:** 23051029  
**Project:** Hillson Nut MS23-13; 401.ODAS003-19

## QC BATCH REPORT

Batch ID: <b>91422</b>	Instrument ID <b>SVMS2</b>	Method: <b>SW8270C</b>
Acenaphthylene	ND	200
Acetophenone	ND	330
Aniline	ND	330
Anthracene	ND	200
Azobenzene	ND	330
Benzidine	ND	330
Benzo(a)anthracene	ND	100
Benzo(a)pyrene	ND	100
Benzo(b)fluoranthene	ND	200
Benzo(g,h,i)perylene	ND	200
Benzo(k)fluoranthene	ND	200
Benzyl alcohol	ND	660
Bis(2-chloroethoxy)methane	ND	330
Bis(2-chloroethyl)ether	ND	330
Bis(2-chloroisopropyl)ether	ND	330
Bis(2-ethylhexyl)phthalate	ND	330
Butyl benzyl phthalate	ND	330
Carbazole	ND	200
Chrysene	ND	200
Dibenzo(a,h)anthracene	ND	100
Dibenzofuran	ND	200
Diethyl phthalate	ND	330
Dimethyl phthalate	ND	330
Di-n-butyl phthalate	ND	330
Di-n-octyl phthalate	ND	330
Dinoseb	ND	330
Diphenylamine	ND	330
Ethyl methanesulfonate	ND	330
Fluoranthene	ND	200
Fluorene	ND	200
Hexachlorobenzene	ND	330
Hexachlorobutadiene	ND	330
Hexachlorocyclopentadiene	ND	330
Hexachloroethane	ND	330
Indeno(1,2,3-cd)pyrene	ND	100
Isophorone	ND	330
Isosafrole	ND	330
Methapyrilene	ND	1,600
Methyl methanesulfonate	ND	330
Naphthalene	ND	200
Nitrobenzene	ND	330
N-Nitrosodiethylamine	ND	330
N-Nitrosodimethylamine	ND	330
N-Nitroso-di-n-butylamine	ND	330
N-Nitrosodi-n-propylamine	ND	330
N-Nitrosomethylethylamine	ND	330
N-Nitrosomorpholine	ND	330
N-Nitrosopiperidine	ND	330

**Note:** See Qualifiers Page for a list of Qualifiers and their explanation.

**Client:** The Mannik & Smith Group, Inc.  
**Work Order:** 23051029  
**Project:** Hillson Nut MS23-13; 401.ODAS003-19

## QC BATCH REPORT

Batch ID: <b>91422</b>	Instrument ID <b>SVMS2</b>	Method: <b>SW8270C</b>						
N-Nitrosopyrrolidine	ND	330						
o-Toluidine	ND	1,600						
p-Dimethylaminoazobenzene	ND	330						
Pentachlorobenzene	ND	330						
Pentachloroethane	ND	330						
Pentachloronitrobenzene	ND	660						
Pentachlorophenol	ND	1,600						
Phenacetin	ND	660						
Phenanthrene	ND	200						
Phenol	ND	330						
Pyrene	ND	200						
Pyridine	ND	330						
Safrole	ND	330						
<i>Surr: 2,4,6-Tribromophenol</i>	4530	0	6660	0	68	14.2-136	0	
<i>Surr: 2-Fluorobiphenyl</i>	2116	0	3330	0	63.5	30-116	0	
<i>Surr: 2-Fluorophenol</i>	4147	0	6660	0	62.3	24-105	0	
<i>Surr: 4-Terphenyl-d14</i>	2585	0	3330	0	77.6	27.3-138	0	
<i>Surr: Nitrobenzene-d5</i>	2038	0	3330	0	61.2	23.7-109	0	
<i>Surr: Phenol-d5</i>	3739	0	6660	0	56.1	24.9-103	0	

**Note:** See Qualifiers Page for a list of Qualifiers and their explanation.

Client: The Mannik & Smith Group, Inc.  
 Work Order: 23051029  
 Project: Hillson Nut MS23-13; 401.ODAS003-19

# QC BATCH REPORT

Batch ID: **91422** Instrument ID **SVMS2** Method: **SW8270C**

LCS		Sample ID: <b>LCS-91422-91422</b>			Units: <b>µg/Kg</b>			Analysis Date: <b>6/1/2023 02:15 PM</b>		
Client ID:		Run ID: <b>SVMS2_230601A</b>			SeqNo: <b>3063737</b>		Prep Date: <b>5/30/2023</b>		DF: <b>1</b>	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2,4-Trichlorobenzene	1741	330	3330	0	52.3	39-104	0			
1,4-Dichlorobenzene	1541	330	3330	0	46.3	38.7-95.1	0			
2,4-Dinitrotoluene	2181	330	3330	0	65.5	58.8-123	0			
2-Chlorophenol	1507	330	3330	0	45.2	34.7-116	0			
4-Chloro-3-methylphenol	1743	660	3330	0	52.4	32.1-109	0			
4-Nitrophenol	2351	1,600	3330	0	70.6	36.2-146	0			
Acenaphthene	1986	200	3330	0	59.6	52-119	0			
Acenaphthylene	2189	200	3330	0	65.7	46-118	0			
Anthracene	2251	200	3330	0	67.6	56-109	0			
Benzo(a)anthracene	2476	100	3330	0	74.4	48-121	0			
Benzo(a)pyrene	2323	100	3330	0	69.8	40.1-114	0			
Benzo(b)fluoranthene	2285	200	3330	0	68.6	44-115	0			
Benzo(g,h,i)perylene	2178	200	3330	0	65.4	47.9-113	0			
Benzo(k)fluoranthene	2183	200	3330	0	65.5	39.5-116	0			
Carbazole	2401	200	3330	0	72.1	43.3-146	0			
Chrysene	2515	200	3330	0	75.5	49.2-115	0			
Dibenzo(a,h)anthracene	2345	100	3330	0	70.4	41.7-123	0			
Fluoranthene	2372	200	3330	0	71.2	52.7-118	0			
Fluorene	2207	200	3330	0	66.3	56.3-103	0			
Indeno(1,2,3-cd)pyrene	2322	100	3330	0	69.7	41.1-124	0			
Naphthalene	1633	200	3330	0	49	42.5-103	0			
N-Nitrosodi-n-propylamine	1436	330	3330	0	43.1	25.3-127	0			
Pentachlorophenol	2252	1,600	3330	0	67.6	22.1-105	0			
Phenanthrene	2254	200	3330	0	67.7	52.8-114	0			
Phenol	1535	330	3330	0	46.1	36.9-97.8	0			
Pyrene	2364	200	3330	0	71	50.7-109	0			
<i>Surr: 2,4,6-Tribromophenol</i>	4437	0	6660	0	66.6	14.2-136	0			
<i>Surr: 2-Fluorobiphenyl</i>	1815	0	3330	0	54.5	30-116	0			
<i>Surr: 2-Fluorophenol</i>	2728	0	6660	0	41	24-105	0			
<i>Surr: 4-Terphenyl-d14</i>	2188	0	3330	0	65.7	27.3-138	0			
<i>Surr: Nitrobenzene-d5</i>	1457	0	3330	0	43.8	23.7-109	0			
<i>Surr: Phenol-d5</i>	2674	0	6660	0	40.2	24.9-103	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: The Mannik & Smith Group, Inc.  
 Work Order: 23051029  
 Project: Hillson Nut MS23-13; 401.ODAS003-19

# QC BATCH REPORT

Batch ID: **91422** Instrument ID **SVMS2** Method: **SW8270C**

MS				Sample ID: <b>23051029-12BMS</b>		Units: <b>µg/Kg</b>		Analysis Date: <b>6/1/2023 02:39 PM</b>		
Client ID: <b>SB-7 (0-2')</b>			Run ID: <b>SVMS2_230601A</b>		SeqNo: <b>3063738</b>		Prep Date: <b>5/30/2023</b>		DF: <b>1</b>	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2,4-Trichlorobenzene	2164	330	3343	0	64.7	39-91.8	0			
1,4-Dichlorobenzene	1774	330	3343	0	53.1	32.9-90	0			
2,4-Dinitrotoluene	2053	330	3343	0	61.4	29.7-121	0			
2-Chlorophenol	1691	330	3343	0	50.6	33.3-109	0			
4-Chloro-3-methylphenol	1884	660	3343	0	56.4	35.8-116	0			
4-Nitrophenol	2052	1,700	3343	0	61.4	34.1-120	0			
Acenaphthene	2148	200	3343	0	64.2	44-108	0			
Acenaphthylene	2207	200	3343	0	66	43.6-110	0			
Anthracene	2201	200	3343	0	65.8	35.8-104	0			
Benzo(a)anthracene	2394	100	3343	0	71.6	47-114	0			
Benzo(a)pyrene	2284	100	3343	0	68.3	43.8-115	0			
Benzo(b)fluoranthene	2141	200	3343	0	64	40-106	0			
Benzo(g,h,i)perylene	2060	200	3343	0	61.6	38.2-110	0			
Benzo(k)fluoranthene	2236	200	3343	0	66.9	48.6-107	0			
Carbazole	2290	200	3343	0	68.5	28.5-114	0			
Chrysene	2445	200	3343	0	73.1	44.3-97.5	0			
Dibenzo(a,h)anthracene	2261	100	3343	0	67.6	46-116	0			
Fluoranthene	2292	200	3343	0	68.5	40.2-129	0			
Fluorene	2139	200	3343	0	64	42.8-106	0			
Indeno(1,2,3-cd)pyrene	2260	100	3343	0	67.6	33-115	0			
Naphthalene	1977	200	3343	0	59.1	18.2-126	0			
N-Nitrosodi-n-propylamine	1574	330	3343	0	47.1	23.5-76.2	0			
Pentachlorophenol	2211	1,700	3343	0	66.1	9.31-107	0			
Phenanthrene	2149	200	3343	0	64.3	31.2-127	0			
Phenol	1616	330	3343	0	48.3	25.9-90.3	0			
Pyrene	2272	200	3343	0	67.9	33.7-129	0			
<i>Surr: 2,4,6-Tribromophenol</i>	<i>4223</i>	<i>0</i>	<i>6687</i>	<i>0</i>	<i>63.2</i>	<i>14.2-136</i>	<i>0</i>			
<i>Surr: 2-Fluorobiphenyl</i>	<i>1954</i>	<i>0</i>	<i>3343</i>	<i>0</i>	<i>58.5</i>	<i>30-116</i>	<i>0</i>			
<i>Surr: 2-Fluorophenol</i>	<i>3177</i>	<i>0</i>	<i>6687</i>	<i>0</i>	<i>47.5</i>	<i>24-105</i>	<i>0</i>			
<i>Surr: 4-Terphenyl-d14</i>	<i>2130</i>	<i>0</i>	<i>3343</i>	<i>0</i>	<i>63.7</i>	<i>27.3-138</i>	<i>0</i>			
<i>Surr: Nitrobenzene-d5</i>	<i>1636</i>	<i>0</i>	<i>3343</i>	<i>0</i>	<i>48.9</i>	<i>23.7-109</i>	<i>0</i>			
<i>Surr: Phenol-d5</i>	<i>3010</i>	<i>0</i>	<i>6687</i>	<i>0</i>	<i>45</i>	<i>24.9-103</i>	<i>0</i>			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: The Mannik & Smith Group, Inc.  
 Work Order: 23051029  
 Project: Hillson Nut MS23-13; 401.ODAS003-19

# QC BATCH REPORT

Batch ID: 91422 Instrument ID SVMS2 Method: SW8270C

MSD				Sample ID: 23051029-12BMSD		Units: µg/Kg		Analysis Date: 6/1/2023 03:01 PM		
Client ID: SB-7 (0-2')		Run ID: SVMS2_230601A		SeqNo: 3063739		Prep Date: 5/30/2023		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2,4-Trichlorobenzene	2165	330	3319	0	65.2	39-91.8	2164	0.0674	18	
1,4-Dichlorobenzene	1891	330	3319	0	57	32.9-90	1774	6.4	20	
2,4-Dinitrotoluene	2136	330	3319	0	64.3	29.7-121	2053	3.95	20	
2-Chlorophenol	1852	330	3319	0	55.8	33.3-109	1691	9.05	20	
4-Chloro-3-methylphenol	1940	660	3319	0	58.5	35.8-116	1884	2.93	20	
4-Nitrophenol	2130	1,600	3319	0	64.2	34.1-120	2052	3.73	20	
Acenaphthene	2182	200	3319	0	65.7	44-108	2148	1.58	20	
Acenaphthylene	2277	200	3319	0	68.6	43.6-110	2207	3.13	20	
Anthracene	2245	200	3319	0	67.6	35.8-104	2201	1.97	24	
Benzo(a)anthracene	2397	100	3319	0	72.2	47-114	2394	0.157	21	
Benzo(a)pyrene	2268	100	3319	0	68.3	43.8-115	2284	0.704	20	
Benzo(b)fluoranthene	2103	200	3319	0	63.4	40-106	2141	1.8	20	
Benzo(g,h,i)perylene	2112	200	3319	0	63.6	38.2-110	2060	2.5	20	
Benzo(k)fluoranthene	2207	200	3319	0	66.5	48.6-107	2236	1.3	24	
Carbazole	2243	200	3319	0	67.6	28.5-114	2290	2.12	20	
Chrysene	2394	200	3319	0	72.1	44.3-97.5	2445	2.11	19	
Dibenzo(a,h)anthracene	2234	100	3319	0	67.3	46-116	2261	1.21	20	
Fluoranthene	2252	200	3319	0	67.9	40.2-129	2292	1.73	20	
Fluorene	2220	200	3319	0	66.9	42.8-106	2139	3.7	20	
Indeno(1,2,3-cd)pyrene	2242	100	3319	0	67.5	33-115	2260	0.822	20	
Naphthalene	1959	200	3319	0	59	18.2-126	1977	0.869	20	
N-Nitrosodi-n-propylamine	1623	330	3319	0	48.9	23.5-76.2	1574	3.06	17	
Pentachlorophenol	2324	1,600	3319	0	70	9.31-107	2211	5	20	
Phenanthrene	2208	200	3319	0	66.5	31.2-127	2149	2.69	20	
Phenol	1795	330	3319	0	54.1	25.9-90.3	1616	10.5	17	
Pyrene	2261	200	3319	0	68.1	33.7-129	2272	0.469	20	
Surr: 2,4,6-Tribromophenol	4387	0	6638	0	66.1	14.2-136	4223	3.82		
Surr: 2-Fluorobiphenyl	2029	0	3319	0	61.1	30-116	1954	3.72		
Surr: 2-Fluorophenol	3379	0	6638	0	50.9	24-105	3177	6.16		
Surr: 4-Terphenyl-d14	2134	0	3319	0	64.3	27.3-138	2130	0.205		
Surr: Nitrobenzene-d5	1726	0	3319	0	52	23.7-109	1636	5.34		
Surr: Phenol-d5	3330	0	6638	0	50.2	24.9-103	3010	10.1		

The following samples were analyzed in this batch:

23051029-12B	23051029-13B	23051029-14B
23051029-15B	23051029-16B	23051029-17B
23051029-18B	23051029-19B	23051029-20B
23051029-21B	23051029-22B	23051029-23B
23051029-24B	23051029-25B	23051029-26B

Note: See Qualifiers Page for a list of Qualifiers and their explanation.



Client: The Mannik & Smith Group, Inc.  
 Work Order: 23051029  
 Project: Hillson Nut MS23-13; 401.ODAS003-19

# QC BATCH REPORT

Batch ID: **91470** Instrument ID **SVMS1** Method: **SW8270C**

MBLK		Sample ID: <b>MBLK-91470-91470</b>			Units: <b>µg/Kg</b>		Analysis Date: <b>5/31/2023 06:47 PM</b>			
Client ID:		Run ID: <b>SVMS1_230531A</b>			SeqNo: <b>3062321</b>		Prep Date: <b>5/31/2023</b>		DF: <b>1</b>	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2,4,5-Tetrachlorobenzene	ND	330								
1,2,4-Trichlorobenzene	ND	330								
1,2-Dichlorobenzene	ND	330								
1,3-Dichlorobenzene	ND	330								
1,3-Dinitrobenzene	ND	330								
1,4-Dichlorobenzene	ND	330								
1-Methylnaphthalene	ND	200								
1-Naphthylamine	ND	330								
2,3,4,6-Tetrachlorophenol	ND	330								
2,4,5-Trichlorophenol	ND	330								
2,4,6-Trichlorophenol	ND	330								
2,4-Dichlorophenol	ND	330								
2,4-Dimethylphenol	ND	330								
2,4-Dinitrophenol	ND	1,600								
2,4-Dinitrotoluene	ND	330								
2,6-Dichlorophenol	ND	330								
2,6-Dinitrotoluene	ND	330								
2-Acetylaminofluorene	ND	330								
2-Chloronaphthalene	ND	330								
2-Chlorophenol	ND	330								
2-Methylnaphthalene	ND	200								
2-Methylphenol	ND	330								
2-Naphthylamine	ND	330								
2-Nitroaniline	ND	1,600								
2-Nitrophenol	ND	330								
2-Picoline	ND	330								
3&4-Methylphenol	ND	330								
3,3'-Dichlorobenzidine	ND	660								
3-Methylcholanthrene	ND	330								
3-Nitroaniline	ND	1,600								
4,6-Dinitro-2-methylphenol	ND	1,600								
4-Aminobiphenyl	ND	660								
4-Bromophenyl phenyl ether	ND	330								
4-Chloro-3-methylphenol	ND	660								
4-Chloroaniline	ND	660								
4-Chlorophenyl phenyl ether	ND	330								
4-Nitroaniline	ND	660								
4-Nitrophenol	ND	1,600								
4-Nitroquinoline 1-oxide	ND	1,600								
5-Nitro-o-toluidine	ND	330								
7,12-Dimethylbenz(a)anthracene	ND	330								
Acenaphthene	ND	200								

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

**Client:** The Mannik & Smith Group, Inc.  
**Work Order:** 23051029  
**Project:** Hillson Nut MS23-13; 401.ODAS003-19

## QC BATCH REPORT

Batch ID: <b>91470</b>	Instrument ID <b>SVMS1</b>	Method: <b>SW8270C</b>	
Acenaphthylene	ND	200	
Acetophenone	ND	330	
Aniline	ND	330	
Anthracene	ND	200	
Azobenzene	ND	330	
Benzidine	ND	330	
Benzo(a)anthracene	ND	100	
Benzo(a)pyrene	ND	100	
Benzo(b)fluoranthene	ND	200	
Benzo(g,h,i)perylene	ND	200	
Benzo(k)fluoranthene	ND	200	
Benzyl alcohol	ND	660	
Bis(2-chloroethoxy)methane	ND	330	
Bis(2-chloroethyl)ether	ND	330	
Bis(2-chloroisopropyl)ether	ND	330	
Bis(2-ethylhexyl)phthalate	ND	330	
Butyl benzyl phthalate	ND	330	
Carbazole	ND	200	
Chrysene	ND	200	
Dibenzo(a,h)anthracene	ND	100	
Dibenzofuran	ND	200	
Diethyl phthalate	ND	330	
Dimethyl phthalate	ND	330	
Di-n-butyl phthalate	64.67	330	J
Di-n-octyl phthalate	ND	330	
Dinoseb	ND	330	
Diphenylamine	ND	330	
Ethyl methanesulfonate	ND	330	
Fluoranthene	ND	200	
Fluorene	ND	200	
Hexachlorobenzene	ND	330	
Hexachlorobutadiene	ND	330	
Hexachlorocyclopentadiene	ND	330	
Hexachloroethane	ND	330	
Indeno(1,2,3-cd)pyrene	ND	100	
Isophorone	ND	330	
Isosafrole	ND	330	
Methapyrilene	ND	1,600	
Methyl methanesulfonate	ND	330	
Naphthalene	ND	200	
Nitrobenzene	ND	330	
N-Nitrosodiethylamine	ND	330	
N-Nitrosodimethylamine	ND	330	
N-Nitroso-di-n-butylamine	ND	330	
N-Nitrosodi-n-propylamine	ND	330	
N-Nitrosomethylethylamine	ND	330	
N-Nitrosomorpholine	ND	330	
N-Nitrosopiperidine	ND	330	

**Note:** See Qualifiers Page for a list of Qualifiers and their explanation.

**Client:** The Mannik & Smith Group, Inc.  
**Work Order:** 23051029  
**Project:** Hillson Nut MS23-13; 401.ODAS003-19

## QC BATCH REPORT

Batch ID: <b>91470</b>	Instrument ID <b>SVMS1</b>	Method: <b>SW8270C</b>						
N-Nitrosopyrrolidine	ND	330						
o-Toluidine	ND	1,600						
p-Dimethylaminoazobenzene	ND	330						
Pentachlorobenzene	ND	330						
Pentachloroethane	ND	330						
Pentachloronitrobenzene	ND	660						
Pentachlorophenol	ND	1,600						
Phenacetin	ND	660						
Phenanthrene	ND	200						
Phenol	ND	330						
Pyrene	ND	200						
Pyridine	ND	330						
Safrole	ND	330						
<i>Surr: 2,4,6-Tribromophenol</i>	<i>4546</i>	<i>0</i>	<i>6660</i>	<i>0</i>	<i>68.3</i>	<i>14.2-136</i>	<i>0</i>	
<i>Surr: 2-Fluorobiphenyl</i>	<i>2029</i>	<i>0</i>	<i>3330</i>	<i>0</i>	<i>60.9</i>	<i>30-116</i>	<i>0</i>	
<i>Surr: 2-Fluorophenol</i>	<i>3790</i>	<i>0</i>	<i>6660</i>	<i>0</i>	<i>56.9</i>	<i>24-105</i>	<i>0</i>	
<i>Surr: 4-Terphenyl-d14</i>	<i>2674</i>	<i>0</i>	<i>3330</i>	<i>0</i>	<i>80.3</i>	<i>27.3-138</i>	<i>0</i>	
<i>Surr: Nitrobenzene-d5</i>	<i>1771</i>	<i>0</i>	<i>3330</i>	<i>0</i>	<i>53.2</i>	<i>23.7-109</i>	<i>0</i>	
<i>Surr: Phenol-d5</i>	<i>3886</i>	<i>0</i>	<i>6660</i>	<i>0</i>	<i>58.3</i>	<i>24.9-103</i>	<i>0</i>	

**Note:** See Qualifiers Page for a list of Qualifiers and their explanation.

Client: The Mannik & Smith Group, Inc.  
 Work Order: 23051029  
 Project: Hillson Nut MS23-13; 401.ODAS003-19

# QC BATCH REPORT

Batch ID: **91470** Instrument ID **SVMS1** Method: **SW8270C**

LCS		Sample ID: <b>LCS-91470-91470</b>			Units: <b>µg/Kg</b>		Analysis Date: <b>5/31/2023 07:07 PM</b>			
Client ID:		Run ID: <b>SVMS1_230531A</b>			SeqNo: <b>3062322</b>		Prep Date: <b>5/31/2023</b>		DF: <b>1</b>	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2,4-Trichlorobenzene	1951	330	3330	0	58.6	39-104	0			
1,4-Dichlorobenzene	1816	330	3330	0	54.5	38.7-95.1	0			
2,4-Dinitrotoluene	2228	330	3330	0	66.9	58.8-123	0			
2-Chlorophenol	1767	330	3330	0	53.1	34.7-116	0			
4-Chloro-3-methylphenol	1825	660	3330	0	54.8	32.1-109	0			
4-Nitrophenol	2273	1,600	3330	0	68.3	36.2-146	0			
Acenaphthene	2003	200	3330	0	60.2	52-119	0			
Acenaphthylene	2146	200	3330	0	64.4	46-118	0			
Anthracene	2256	200	3330	0	67.7	56-109	0			
Benzo(a)anthracene	2445	100	3330	0	73.4	48-121	0			
Benzo(a)pyrene	2393	100	3330	0	71.9	40.1-114	0			
Benzo(b)fluoranthene	2251	200	3330	0	67.6	44-115	0			
Benzo(g,h,i)perylene	2197	200	3330	0	66	47.9-113	0			
Benzo(k)fluoranthene	2409	200	3330	0	72.3	39.5-116	0			
Carbazole	2354	200	3330	0	70.7	43.3-146	0			
Chrysene	2485	200	3330	0	74.6	49.2-115	0			
Dibenzo(a,h)anthracene	2273	100	3330	0	68.3	41.7-123	0			
Fluoranthene	2397	200	3330	0	72	52.7-118	0			
Fluorene	2107	200	3330	0	63.3	56.3-103	0			
Indeno(1,2,3-cd)pyrene	2264	100	3330	0	68	41.1-124	0			
Naphthalene	1841	200	3330	0	55.3	42.5-103	0			
N-Nitrosodi-n-propylamine	1273	330	3330	0	38.2	25.3-127	0			
Pentachlorophenol	2053	1,600	3330	0	61.6	22.1-105	0			
Phenanthrene	2247	200	3330	0	67.5	52.8-114	0			
Phenol	1755	330	3330	0	52.7	36.9-97.8	0			
Pyrene	2397	200	3330	0	72	50.7-109	0			
<i>Surr: 2,4,6-Tribromophenol</i>	4922	0	6660	0	73.9	14.2-136	0			
<i>Surr: 2-Fluorobiphenyl</i>	2125	0	3330	0	63.8	30-116	0			
<i>Surr: 2-Fluorophenol</i>	3601	0	6660	0	54.1	24-105	0			
<i>Surr: 4-Terphenyl-d14</i>	2718	0	3330	0	81.6	27.3-138	0			
<i>Surr: Nitrobenzene-d5</i>	1689	0	3330	0	50.7	23.7-109	0			
<i>Surr: Phenol-d5</i>	3747	0	6660	0	56.3	24.9-103	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: The Mannik & Smith Group, Inc.  
 Work Order: 23051029  
 Project: Hillson Nut MS23-13; 401.ODAS003-19

# QC BATCH REPORT

Batch ID: 91470 Instrument ID SVMS1 Method: SW8270C

MS				Sample ID: 23051029-27BMS		Units: µg/Kg		Analysis Date: 5/31/2023 07:28 PM		
Client ID: SB-15 (0-2')			Run ID: SVMS1_230531A		SeqNo: 3062323		Prep Date: 5/31/2023		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2,4-Trichlorobenzene	1738	330	3321	0	52.3	39-91.8	0			
1,4-Dichlorobenzene	1667	330	3321	0	50.2	32.9-90	0			
2,4-Dinitrotoluene	1530	330	3321	0	46.1	29.7-121	0			
2-Chlorophenol	1573	330	3321	0	47.4	33.3-109	0			
4-Chloro-3-methylphenol	1449	660	3321	0	43.6	35.8-116	0			
4-Nitrophenol	1040	1,600	3321	0	31.3	34.1-120	0			JS
Acenaphthene	1773	200	3321	0	53.4	44-108	0			
Acenaphthylene	1842	200	3321	0	55.5	43.6-110	0			
Anthracene	1897	200	3321	0	57.1	35.8-104	0			
Benzo(a)anthracene	1934	100	3321	0	58.2	47-114	0			
Benzo(a)pyrene	1846	100	3321	0	55.6	43.8-115	0			
Benzo(b)fluoranthene	1720	200	3321	0	51.8	40-106	0			
Benzo(g,h,i)perylene	1622	200	3321	0	48.8	38.2-110	0			
Benzo(k)fluoranthene	1841	200	3321	0	55.4	48.6-107	0			
Carbazole	1831	200	3321	0	55.1	28.5-114	0			
Chrysene	1929	200	3321	0	58.1	44.3-97.5	0			
Dibenzo(a,h)anthracene	1652	100	3321	0	49.7	46-116	0			
Fluoranthene	1944	200	3321	0	58.5	40.2-129	0			
Fluorene	1776	200	3321	0	53.5	42.8-106	0			
Indeno(1,2,3-cd)pyrene	1685	100	3321	0	50.7	33-115	0			
Naphthalene	1672	200	3321	0	50.4	18.2-126	0			
N-Nitrosodi-n-propylamine	1128	330	3321	0	34	23.5-76.2	0			
Pentachlorophenol	1329	1,600	3321	0	40	9.31-107	0			J
Phenanthrene	1884	200	3321	0	56.7	31.2-127	0			
Phenol	1538	330	3321	0	46.3	25.9-90.3	0			
Pyrene	1912	200	3321	0	57.6	33.7-129	0			
Surr: 2,4,6-Tribromophenol	3788	0	6642	0	57	14.2-136	0			
Surr: 2-Fluorobiphenyl	1896	0	3321	0	57.1	30-116	0			
Surr: 2-Fluorophenol	3202	0	6642	0	48.2	24-105	0			
Surr: 4-Terphenyl-d14	2108	0	3321	0	63.5	27.3-138	0			
Surr: Nitrobenzene-d5	1544	0	3321	0	46.5	23.7-109	0			
Surr: Phenol-d5	3276	0	6642	0	49.3	24.9-103	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: The Mannik & Smith Group, Inc.  
 Work Order: 23051029  
 Project: Hillson Nut MS23-13; 401.ODAS003-19

# QC BATCH REPORT

Batch ID: 91470 Instrument ID SVMS1 Method: SW8270C

MSD				Sample ID: 23051029-27BMSD				Units: µg/Kg		Analysis Date: 5/31/2023 07:48 PM	
Client ID: SB-15 (0-2')			Run ID: SVMS1_230531A			SeqNo: 3062324		Prep Date: 5/31/2023		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
1,2,4-Trichlorobenzene	1883	330	3334	0	56.5	39-91.8	1738	8.02	18		
1,4-Dichlorobenzene	1760	330	3334	0	52.8	32.9-90	1667	5.45	20		
2,4-Dinitrotoluene	1736	330	3334	0	52.1	29.7-121	1530	12.6	20		
2-Chlorophenol	1715	330	3334	0	51.4	33.3-109	1573	8.63	20		
4-Chloro-3-methylphenol	1692	660	3334	0	50.7	35.8-116	1449	15.5	20		
4-Nitrophenol	1422	1,700	3334	0	42.6	34.1-120	1040	0	20	J	
Acenaphthene	1953	200	3334	0	58.6	44-108	1773	9.66	20		
Acenaphthylene	2031	200	3334	0	60.9	43.6-110	1842	9.76	20		
Anthracene	2120	200	3334	0	63.6	35.8-104	1897	11.1	24		
Benzo(a)anthracene	2270	100	3334	0	68.1	47-114	1934	16	21		
Benzo(a)pyrene	2211	100	3334	0	66.3	43.8-115	1846	18	20		
Benzo(b)fluoranthene	2071	200	3334	0	62.1	40-106	1720	18.5	20		
Benzo(g,h,i)perylene	1950	200	3334	0	58.5	38.2-110	1622	18.4	20		
Benzo(k)fluoranthene	2195	200	3334	0	65.8	48.6-107	1841	17.5	24		
Carbazole	2103	200	3334	0	63.1	28.5-114	1831	13.8	20		
Chrysene	2262	200	3334	0	67.8	44.3-97.5	1929	15.9	19		
Dibenzo(a,h)anthracene	2029	100	3334	0	60.8	46-116	1652	20.5	20	R	
Fluoranthene	2248	200	3334	0	67.4	40.2-129	1944	14.5	20		
Fluorene	2019	200	3334	0	60.5	42.8-106	1776	12.8	20		
Indeno(1,2,3-cd)pyrene	2011	100	3334	0	60.3	33-115	1685	17.7	20		
Naphthalene	1783	200	3334	0	53.5	18.2-126	1672	6.42	20		
N-Nitrosodi-n-propylamine	1252	330	3334	0	37.5	23.5-76.2	1128	10.4	17		
Pentachlorophenol	1709	1,700	3334	0	51.3	9.31-107	1329	25	20	R	
Phenanthrene	2107	200	3334	0	63.2	31.2-127	1884	11.2	20		
Phenol	1707	330	3334	0	51.2	25.9-90.3	1538	10.4	17		
Pyrene	2178	200	3334	0	65.3	33.7-129	1912	13	20		
Surr: 2,4,6-Tribromophenol	4350	0	6669	0	65.2	14.2-136	3788	13.8			
Surr: 2-Fluorobiphenyl	1987	0	3334	0	59.6	30-116	1896	4.65			
Surr: 2-Fluorophenol	3350	0	6669	0	50.2	24-105	3202	4.51			
Surr: 4-Terphenyl-d14	2364	0	3334	0	70.9	27.3-138	2108	11.4			
Surr: Nitrobenzene-d5	1735	0	3334	0	52	23.7-109	1544	11.7			
Surr: Phenol-d5	3495	0	6669	0	52.4	24.9-103	3276	6.46			

The following samples were analyzed in this batch:

23051029-27B	23051029-28B	23051029-29B
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Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: The Mannik & Smith Group, Inc.  
 Work Order: 23051029  
 Project: Hillson Nut MS23-13; 401.ODAS003-19

# QC BATCH REPORT

Batch ID: **91527** Instrument ID **SVMS1** Method: **SW8270C**

MBLK		Sample ID: <b>MBLK-91527-91527</b>				Units: <b>µg/Kg</b>		Analysis Date: <b>6/2/2023 03:44 PM</b>		
Client ID:		Run ID: <b>SVMS1_230602A</b>		SeqNo: <b>3064802</b>		Prep Date: <b>6/2/2023</b>		DF: <b>1</b>		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1-Methylnaphthalene	ND	200								
2-Methylnaphthalene	ND	200								
Acenaphthene	ND	200								
Acenaphthylene	ND	200								
Anthracene	ND	200								
Benzo(a)anthracene	ND	100								
Benzo(a)pyrene	ND	100								
Benzo(b)fluoranthene	ND	200								
Benzo(g,h,i)perylene	ND	200								
Benzo(k)fluoranthene	ND	200								
Carbazole	ND	200								
Chrysene	ND	200								
Dibenzo(a,h)anthracene	ND	100								
Dibenzofuran	ND	200								
Fluoranthene	ND	200								
Fluorene	ND	200								
Indeno(1,2,3-cd)pyrene	ND	100								
Naphthalene	ND	200								
Phenanthrene	ND	200								
Pyrene	ND	200								
<i>Surr: 2-Fluorobiphenyl</i>	3098	0	3330		0	93	30-116		0	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: The Mannik & Smith Group, Inc.  
 Work Order: 23051029  
 Project: Hillson Nut MS23-13; 401.ODAS003-19

# QC BATCH REPORT

Batch ID: **91527** Instrument ID **SVMS1** Method: **SW8270C**

LCS		Sample ID: <b>LCS-91527-91527</b>				Units: <b>µg/Kg</b>		Analysis Date: <b>6/2/2023 04:04 PM</b>		
Client ID:		Run ID: <b>SVMS1_230602A</b>			SeqNo: <b>3064803</b>		Prep Date: <b>6/2/2023</b>		DF: <b>1</b>	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1-Methylnaphthalene	2591	200	3330	0	77.8	41-97.5	0			
2-Methylnaphthalene	2459	200	3330	0	73.9	49.2-90.1	0			
Acenaphthene	2625	200	3330	0	78.8	52-119	0			
Acenaphthylene	2813	200	3330	0	84.5	46-118	0			
Anthracene	2742	200	3330	0	82.3	53.8-114	0			
Benzo(a)anthracene	2978	100	3330	0	89.4	48-121	0			
Benzo(a)pyrene	2826	100	3330	0	84.9	40.1-114	0			
Benzo(b)fluoranthene	2663	200	3330	0	80	44-115	0			
Benzo(g,h,i)perylene	2452	200	3330	0	73.6	41.8-122	0			
Benzo(k)fluoranthene	2877	200	3330	0	86.4	39.5-116	0			
Carbazole	2749	200	3330	0	82.5	52.3-94.8	0			
Chrysene	2925	200	3330	0	87.8	49.2-115	0			
Dibenzo(a,h)anthracene	2595	100	3330	0	77.9	41.7-123	0			
Dibenzofuran	2674	200	3330	0	80.3	57.5-91	0			
Fluoranthene	2791	200	3330	0	83.8	52.7-118	0			
Fluorene	2667	200	3330	0	80.1	51.6-109	0			
Indeno(1,2,3-cd)pyrene	2553	100	3330	0	76.7	41.1-124	0			
Naphthalene	2541	200	3330	0	76.3	42.5-103	0			
Phenanthrene	2737	200	3330	0	82.2	49.7-100	0			
Pyrene	2767	200	3330	0	83.1	50.7-109	0			
<i>Surr: 2-Fluorobiphenyl</i>	2917	0	3330	0	87.6	30-116	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.



Client: The Mannik & Smith Group, Inc.  
 Work Order: 23051029  
 Project: Hillson Nut MS23-13; 401.ODAS003-19

# QC BATCH REPORT

Batch ID: **91527** Instrument ID **SVMS1** Method: **SW8270C**

MS		Sample ID: <b>23051189-03BMS</b>				Units: <b>µg/Kg</b>		Analysis Date: <b>6/2/2023 04:25 PM</b>		
Client ID:		Run ID: <b>SVMS1_230602A</b>			SeqNo: <b>3064804</b>		Prep Date: <b>6/2/2023</b>		DF: <b>1</b>	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1-Methylnaphthalene	1975	200	3337	0	59.2	34.7-108	0			
2-Methylnaphthalene	1872	200	3337	0	56.1	38.6-102	0			
Acenaphthene	2003	200	3337	0	60	44-108	0			
Acenaphthylene	2131	200	3337	0	63.9	43.6-110	0			
Anthracene	2027	200	3337	0	60.8	39.5-104	0			
Benzo(a)anthracene	2249	100	3337	0	67.4	47-114	0			
Benzo(a)pyrene	2117	100	3337	0	63.4	43.8-115	0			
Benzo(b)fluoranthene	1963	200	3337	0	58.8	40-106	0			
Benzo(g,h,i)perylene	1830	200	3337	0	54.9	38.2-110	0			
Benzo(k)fluoranthene	2196	200	3337	0	65.8	48.6-107	0			
Carbazole	2035	200	3337	0	61	41.9-101	0			
Chrysene	2247	200	3337	0	67.3	18.8-140	0			
Dibenzo(a,h)anthracene	1948	100	3337	0	58.4	46-116	0			
Dibenzofuran	2030	200	3337	0	60.8	42.7-98.2	0			
Fluoranthene	2075	200	3337	0	62.2	35.1-111	0			
Fluorene	1981	200	3337	0	59.4	42.8-106	0			
Indeno(1,2,3-cd)pyrene	1918	100	3337	0	57.5	33-115	0			
Naphthalene	1935	200	3337	0	58	18.2-126	0			
Phenanthrene	2025	200	3337	0	60.7	31.2-127	0			
Pyrene	2045	200	3337	0	61.3	33.7-129	0			
<i>Surr: 2-Fluorobiphenyl</i>	<i>2135</i>	<i>0</i>	<i>3337</i>	<i>0</i>	<i>64</i>	<i>30-116</i>	<i>0</i>			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: The Mannik & Smith Group, Inc.  
 Work Order: 23051029  
 Project: Hillson Nut MS23-13; 401.ODAS003-19

# QC BATCH REPORT

Batch ID: **91527** Instrument ID **SVMS1** Method: **SW8270C**

MSD				Sample ID: <b>23051189-03BMSD</b>		Units: <b>µg/Kg</b>		Analysis Date: <b>6/2/2023 04:46 PM</b>		
Client ID:		Run ID: <b>SVMS1_230602A</b>		SeqNo: <b>3064805</b>		Prep Date: <b>6/2/2023</b>		DF: <b>1</b>		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1-Methylnaphthalene	2019	200	3323	0	60.7	34.7-108	1975	2.17	20	
2-Methylnaphthalene	1899	200	3323	0	57.1	38.6-102	1872	1.44	20	
Acenaphthene	2063	200	3323	0	62.1	40-108	2003	2.95	20	
Acenaphthylene	2184	200	3323	0	65.7	43.6-110	2131	2.44	20	
Anthracene	2057	200	3323	0	61.9	39.5-104	2027	1.46	24	
Benzo(a)anthracene	2273	100	3323	0	68.4	47-114	2249	1.07	21	
Benzo(a)pyrene	2140	100	3323	0	64.4	43.8-115	2117	1.07	20	
Benzo(b)fluoranthene	1993	200	3323	0	60	40-106	1963	1.49	20	
Benzo(g,h,i)perylene	1850	200	3323	0	55.7	38.2-110	1830	1.09	20	
Benzo(k)fluoranthene	2225	200	3323	0	66.9	48.6-107	2196	1.29	24	
Carbazole	2036	200	3323	0	61.3	41.9-101	2035	0.0585	20	
Chrysene	2250	200	3323	0	67.7	18.8-140	2247	0.104	19	
Dibenzo(a,h)anthracene	1947	100	3323	0	58.6	46-116	1948	0.0236	20	
Dibenzofuran	2106	200	3323	0	63.4	42.7-98.2	2030	3.66	20	
Fluoranthene	2110	200	3323	0	63.5	35.1-111	2075	1.67	20	
Fluorene	2057	200	3323	0	61.9	42.8-106	1981	3.76	20	
Indeno(1,2,3-cd)pyrene	1933	100	3323	0	58.2	33-115	1918	0.777	20	
Naphthalene	1986	200	3323	0	59.8	18.2-126	1935	2.59	20	
Phenanthrene	2065	200	3323	0	62.1	31.2-127	2025	1.91	20	
Pyrene	2103	200	3323	0	63.3	33.7-129	2045	2.81	20	
<i>Surr: 2-Fluorobiphenyl</i>	<i>2218</i>	<i>0</i>	<i>3323</i>	<i>0</i>	<i>66.7</i>	<i>30-116</i>	<i>2135</i>	<i>3.8</i>		

The following samples were analyzed in this batch:

23051029-01C	23051029-02C	23051029-03C
23051029-04C	23051029-05C	23051029-06C
23051029-07C	23051029-08C	23051029-09C
23051029-10C	23051029-11C	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: The Mannik & Smith Group, Inc.  
 Work Order: 23051029  
 Project: Hillson Nut MS23-13; 401.ODAS003-19

# QC BATCH REPORT

Batch ID: **R216901** Instrument ID **VMS5** Method: **SW8260B**

MBLK		Sample ID: <b>MBLK-R216901</b>			Units: <b>µg/Kg</b>		Analysis Date: <b>5/25/2023 09:45 AM</b>			
Client ID:		Run ID: <b>VMS5_230525A</b>			SeqNo: <b>3056962</b>		Prep Date:		DF: <b>1</b>	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1,2-Tetrachloroethane	ND	5.0								
1,1,1-Trichloroethane	ND	5.0								
1,1,2,2-Tetrachloroethane	ND	5.0								
1,1,2-Trichloroethane	ND	5.0								
1,1-Dichloroethane	ND	5.0								
1,1-Dichloroethene	ND	5.0								
1,1-Dichloropropene	ND	5.0								
1,2,3-Trichlorobenzene	ND	5.0								
1,2,3-Trichloropropane	ND	5.0								
1,2,4-Trichlorobenzene	ND	5.0								
1,2,4-Trimethylbenzene	ND	5.0								
1,2-Dibromo-3-chloropropane	ND	5.0								
1,2-Dibromoethane	ND	5.0								
1,2-Dichlorobenzene	ND	5.0								
1,2-Dichloroethane	ND	5.0								
1,2-Dichloropropane	ND	5.0								
1,3,5-Trimethylbenzene	ND	5.0								
1,3-Dichlorobenzene	ND	5.0								
1,3-Dichloropropane	ND	5.0								
1,4-Dichlorobenzene	ND	5.0								
2,2-Dichloropropane	ND	5.0								
2-Butanone	ND	5.0								
2-Chlorotoluene	ND	5.0								
2-Hexanone	ND	5.0								
4-Chlorotoluene	ND	5.0								
4-Methyl-2-pentanone	ND	5.0								
Acetone	ND	5.0								
Benzene	ND	5.0								
Bromobenzene	ND	5.0								
Bromochloromethane	ND	5.0								
Bromodichloromethane	ND	5.0								
Bromoform	ND	5.0								
Bromomethane	ND	5.0								
Carbon disulfide	ND	5.0								
Carbon tetrachloride	ND	5.0								
Chlorobenzene	ND	5.0								
Chloroethane	ND	5.0								
Chloroform	ND	5.0								
Chloromethane	ND	5.0								
cis-1,2-Dichloroethene	ND	5.0								
cis-1,3-Dichloropropene	ND	5.0								
Dibromochloromethane	ND	5.0								

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

**Client:** The Mannik & Smith Group, Inc.  
**Work Order:** 23051029  
**Project:** Hillson Nut MS23-13; 401.ODAS003-19

# QC BATCH REPORT

Batch ID: <b>R216901</b>	Instrument ID <b>VMS5</b>	Method: <b>SW8260B</b>					
Dibromomethane	ND	5.0					
Dichlorodifluoromethane	ND	5.0					
Ethylbenzene	ND	5.0					
Hexachlorobutadiene	ND	5.0					
Isopropylbenzene	ND	5.0					
m,p-Xylene	ND	5.0					
Methyl tert-butyl ether	ND	5.0					
Methylene chloride	ND	20					
Naphthalene	1.14	5.0					J
n-Butylbenzene	ND	5.0					
n-Propylbenzene	ND	5.0					
o-Xylene	ND	5.0					
p-Isopropyltoluene	ND	5.0					
sec-Butylbenzene	ND	5.0					
Styrene	ND	5.0					
tert-Butylbenzene	ND	5.0					
Tetrachloroethene	ND	5.0					
Toluene	ND	5.0					
trans-1,2-Dichloroethene	ND	5.0					
trans-1,3-Dichloropropene	ND	5.0					
Trichloroethene	ND	5.0					
Trichlorofluoromethane	ND	5.0					
Vinyl chloride	ND	5.0					
Xylenes, Total	ND	10					
<i>Surr: 4-Bromofluorobenzene</i>	<i>50.2</i>	<i>0</i>	<i>50</i>	<i>0</i>	<i>100</i>	<i>60-140</i>	<i>0</i>
<i>Surr: Dibromofluoromethane</i>	<i>54.95</i>	<i>0</i>	<i>50</i>	<i>0</i>	<i>110</i>	<i>60-140</i>	<i>0</i>
<i>Surr: Toluene-d8</i>	<i>48.87</i>	<i>0</i>	<i>50</i>	<i>0</i>	<i>97.7</i>	<i>60-140</i>	<i>0</i>

**Note:** See Qualifiers Page for a list of Qualifiers and their explanation.

Client: The Mannik & Smith Group, Inc.  
 Work Order: 23051029  
 Project: Hillson Nut MS23-13; 401.ODAS003-19

# QC BATCH REPORT

Batch ID: **R216901** Instrument ID **VMS5** Method: **SW8260B**

LCS		Sample ID: <b>LCS-R216901</b>				Units: <b>µg/Kg</b>		Analysis Date: <b>5/25/2023 08:39 AM</b>		
Client ID:		Run ID: <b>VMS5_230525A</b>			SeqNo: <b>3056961</b>		Prep Date:		DF: <b>1</b>	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	44.02	5.0	50	0	88	53.6-149	0			
1,1-Dichloroethene	37.33	5.0	50	0	74.7	38.8-176	0			
1,2-Dichloroethane	43.2	5.0	50	0	86.4	54.4-145	0			
1,3-Dichlorobenzene	43.37	5.0	50	0	86.7	54.2-137	0			
1,4-Dichlorobenzene	43.47	5.0	50	0	86.9	52.8-135	0			
Benzene	46.32	5.0	50	0	92.6	56-148	0			
Carbon tetrachloride	45.72	5.0	50	0	91.4	51.9-151	0			
Chlorobenzene	45.13	5.0	50	0	90.3	55.4-137	0			
Chloroform	49.77	5.0	50	0	99.5	51.1-147	0			
cis-1,2-Dichloroethene	53.85	5.0	50	0	108	47.6-149	0			
Ethylbenzene	45.49	5.0	50	0	91	55.8-142	0			
m,p-Xylene	91.39	5.0	100	0	91.4	57.6-141	0			
Styrene	48.12	5.0	50	0	96.2	59.6-143	0			
Tetrachloroethene	33.28	5.0	50	0	66.6	56.2-160	0			
Toluene	45.35	5.0	50	0	90.7	56-143	0			
Trichloroethene	44.78	5.0	50	0	89.6	56.5-143	0			
<i>Surr: 4-Bromofluorobenzene</i>	<i>50.59</i>	<i>0</i>	<i>50</i>	<i>0</i>	<i>101</i>	<i>60-140</i>	<i>0</i>			
<i>Surr: Dibromofluoromethane</i>	<i>49.8</i>	<i>0</i>	<i>50</i>	<i>0</i>	<i>99.6</i>	<i>60-140</i>	<i>0</i>			
<i>Surr: Toluene-d8</i>	<i>49.55</i>	<i>0</i>	<i>50</i>	<i>0</i>	<i>99.1</i>	<i>60-140</i>	<i>0</i>			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: The Mannik & Smith Group, Inc.  
 Work Order: 23051029  
 Project: Hillson Nut MS23-13; 401.ODAS003-19

# QC BATCH REPORT

Batch ID: **R216901** Instrument ID **VMS5** Method: **SW8260B**

MS		Sample ID: <b>23051008-03 MS</b>				Units: <b>µg/Kg</b>		Analysis Date: <b>5/25/2023 06:25 PM</b>		
Client ID:		Run ID: <b>VMS5_230525A</b>			SeqNo: <b>3056984</b>		Prep Date:		DF: <b>1</b>	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	36.54	5.0	50	0	73.1	66.9-140	0			
1,1-Dichloroethane	41.1	5.0	50	0	82.2	41.4-161	0			
1,2-Dichloroethane	33.51	5.0	50	0	67	58.9-137	0			
1,3-Dichlorobenzene	28.37	5.0	50	0	56.7	42.5-150	0			
1,4-Dichlorobenzene	27.89	5.0	50	0	55.8	52.1-137	0			
Benzene	31.97	5.0	50	0	63.9	35.8-162	0			
Carbon tetrachloride	39.13	5.0	50	0	78.3	53.2-137	0			
Chlorobenzene	32.96	5.0	50	0	65.9	65.6-137	0			
Chloroform	33.73	5.0	50	0	67.5	58-130	0			
cis-1,2-Dichloroethene	31.17	5.0	50	0	62.3	52.9-138	0			
Ethylbenzene	32.05	5.0	50	0	64.1	57.5-134	0			
m,p-Xylene	64.27	10	100	0	64.3	56.4-135	0			
Styrene	32.93	5.0	50	0	65.9	60.9-135	0			
Tetrachloroethene	27.62	5.0	50	0	55.2	28.3-109	0			
Toluene	34.37	5.0	50	0	68.7	67.7-135	0			
Trichloroethene	37.74	5.0	50	0	75.5	56.5-136	0			
<i>Surr: 4-Bromofluorobenzene</i>	<i>46.68</i>	<i>0</i>	<i>50</i>	<i>0</i>	<i>93.4</i>	<i>60-140</i>	<i>0</i>			
<i>Surr: Dibromofluoromethane</i>	<i>45.72</i>	<i>0</i>	<i>50</i>	<i>0</i>	<i>91.4</i>	<i>60-140</i>	<i>0</i>			
<i>Surr: Toluene-d8</i>	<i>49.66</i>	<i>0</i>	<i>50</i>	<i>0</i>	<i>99.3</i>	<i>60-140</i>	<i>0</i>			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: The Mannik & Smith Group, Inc.  
 Work Order: 23051029  
 Project: Hillson Nut MS23-13; 401.ODAS003-19

# QC BATCH REPORT

Batch ID: **R216901** Instrument ID **VMS5** Method: **SW8260B**

MSD		Sample ID: <b>23051008-03A MSD</b>				Units: <b>µg/Kg</b>		Analysis Date: <b>5/25/2023 08:09 AM</b>		
Client ID:		Run ID: <b>VMS5_230525A</b>			SeqNo: <b>3056960</b>		Prep Date:		DF: <b>1</b>	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	38.78	5.0	50	0	77.6	66.9-140	33.39	14.9	31.2	
1,1-Dichloroethene	39.02	5.0	50	0	78	41.4-161	30.08	25.9	38.1	
1,2-Dichloroethane	37.69	5.0	50	0	75.4	58.9-137	32.06	16.1	26.2	
1,3-Dichlorobenzene	39.56	5.0	50	0	79.1	42.5-150	39.87	0.781	21	
1,4-Dichlorobenzene	38.99	5.0	50	0	78	52.1-137	39.32	0.843	28.7	
Benzene	40.77	5.0	50	0	81.5	35.8-162	40.54	0.566	23.6	
Carbon tetrachloride	39.19	5.0	50	0	78.4	53.2-137	28.23	32.5	32.3	R
Chlorobenzene	40.31	5.0	50	0	80.6	65.6-137	40.12	0.472	20	
Chloroform	43.9	5.0	50	0	87.8	58-130	41.31	6.08	28.2	
cis-1,2-Dichloroethene	48.58	5.0	50	0	97.2	52.9-138	45.61	6.31	23.7	
Ethylbenzene	40.97	5.0	50	0	81.9	57.5-134	39.05	4.8	24.9	
m,p-Xylene	82.91	10	100	0	82.9	56.4-135	77	7.39	25.1	
Styrene	42.5	5.0	50	0	85	60.9-135	43.29	1.84	22.8	
Tetrachloroethene	29.79	5.0	50	0	59.6	28.3-109	29.18	2.07	24.7	
Toluene	40.17	5.0	50	0	80.3	67.7-135	39.52	1.63	20	
Trichloroethene	39.58	5.0	50	0	79.2	56.5-136	41.13	3.84	20	
<i>Surr: 4-Bromofluorobenzene</i>	<i>50.74</i>	<i>0</i>	<i>50</i>	<i>0</i>	<i>101</i>	<i>60-140</i>	<i>52.33</i>	<i>3.09</i>		
<i>Surr: Dibromofluoromethane</i>	<i>48.56</i>	<i>0</i>	<i>50</i>	<i>0</i>	<i>97.1</i>	<i>60-140</i>	<i>47.95</i>	<i>1.26</i>		
<i>Surr: Toluene-d8</i>	<i>49.08</i>	<i>0</i>	<i>50</i>	<i>0</i>	<i>98.2</i>	<i>60-140</i>	<i>49.31</i>	<i>0.468</i>		

The following samples were analyzed in this batch:

23051029-01A	23051029-02A	23051029-03A
23051029-04A	23051029-05A	23051029-06A

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: The Mannik & Smith Group, Inc.  
 Work Order: 23051029  
 Project: Hillson Nut MS23-13; 401.ODAS003-19

# QC BATCH REPORT

Batch ID: **R216951** Instrument ID **VMS5** Method: **SW8260B**

MBLK		Sample ID: <b>MBLK-R216951</b>			Units: <b>µg/Kg</b>		Analysis Date: <b>5/26/2023 11:38 AM</b>			
Client ID:		Run ID: <b>VMS5_230526A</b>			SeqNo: <b>3058595</b>		Prep Date:		DF: <b>1</b>	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1,2-Tetrachloroethane	ND	5.0								
1,1,1-Trichloroethane	ND	5.0								
1,1,2,2-Tetrachloroethane	ND	5.0								
1,1,2-Trichloroethane	ND	5.0								
1,1-Dichloroethane	ND	5.0								
1,1-Dichloroethene	ND	5.0								
1,1-Dichloropropene	ND	5.0								
1,2,3-Trichlorobenzene	ND	5.0								
1,2,3-Trichloropropane	ND	5.0								
1,2,4-Trichlorobenzene	ND	5.0								
1,2,4-Trimethylbenzene	ND	5.0								
1,2-Dibromo-3-chloropropane	ND	5.0								
1,2-Dibromoethane	ND	5.0								
1,2-Dichlorobenzene	ND	5.0								
1,2-Dichloroethane	ND	5.0								
1,2-Dichloropropane	ND	5.0								
1,3,5-Trimethylbenzene	ND	5.0								
1,3-Dichlorobenzene	ND	5.0								
1,3-Dichloropropane	ND	5.0								
1,4-Dichlorobenzene	ND	5.0								
2,2-Dichloropropane	ND	5.0								
2-Butanone	ND	5.0								
2-Chlorotoluene	ND	5.0								
2-Hexanone	ND	5.0								
4-Chlorotoluene	ND	5.0								
4-Methyl-2-pentanone	ND	5.0								
Acetone	ND	5.0								
Benzene	ND	5.0								
Bromobenzene	ND	5.0								
Bromochloromethane	ND	5.0								
Bromodichloromethane	ND	5.0								
Bromoform	ND	5.0								
Bromomethane	ND	5.0								
Carbon disulfide	ND	5.0								
Carbon tetrachloride	ND	5.0								
Chlorobenzene	ND	5.0								
Chloroethane	ND	5.0								
Chloroform	ND	5.0								
Chloromethane	ND	5.0								
cis-1,2-Dichloroethene	ND	5.0								
cis-1,3-Dichloropropene	ND	5.0								
Dibromochloromethane	ND	5.0								

Note: See Qualifiers Page for a list of Qualifiers and their explanation.



**Client:** The Mannik & Smith Group, Inc.  
**Work Order:** 23051029  
**Project:** Hillson Nut MS23-13; 401.ODAS003-19

# QC BATCH REPORT

Batch ID: <b>R216951</b>	Instrument ID <b>VMS5</b>	Method: <b>SW8260B</b>					
Dibromomethane	ND	5.0					
Dichlorodifluoromethane	ND	5.0					
Ethylbenzene	ND	5.0					
Hexachlorobutadiene	ND	5.0					
Isopropylbenzene	ND	5.0					
m,p-Xylene	ND	10					
Methyl tert-butyl ether	ND	5.0					
Methylene chloride	ND	20					
Naphthalene	ND	5.0					
n-Butylbenzene	ND	5.0					
n-Propylbenzene	ND	5.0					
o-Xylene	ND	5.0					
p-Isopropyltoluene	ND	5.0					
sec-Butylbenzene	ND	5.0					
Styrene	ND	5.0					
tert-Butylbenzene	ND	5.0					
Tetrachloroethene	ND	5.0					
Toluene	ND	5.0					
trans-1,2-Dichloroethene	ND	5.0					
trans-1,3-Dichloropropene	ND	5.0					
Trichloroethene	ND	5.0					
Trichlorofluoromethane	ND	5.0					
Vinyl chloride	ND	5.0					
Xylenes, Total	ND	15					
<i>Surr: 4-Bromofluorobenzene</i>	<i>46.34</i>	<i>0</i>	<i>50</i>	<i>0</i>	<i>92.7</i>	<i>60-140</i>	<i>0</i>
<i>Surr: Dibromofluoromethane</i>	<i>47.6</i>	<i>0</i>	<i>50</i>	<i>0</i>	<i>95.2</i>	<i>60-140</i>	<i>0</i>
<i>Surr: Toluene-d8</i>	<i>45.87</i>	<i>0</i>	<i>50</i>	<i>0</i>	<i>91.7</i>	<i>60-140</i>	<i>0</i>

**Note:** See Qualifiers Page for a list of Qualifiers and their explanation.

Client: The Mannik & Smith Group, Inc.  
 Work Order: 23051029  
 Project: Hillson Nut MS23-13; 401.ODAS003-19

# QC BATCH REPORT

Batch ID: **R216951** Instrument ID **VMS5** Method: **SW8260B**

LCS		Sample ID: <b>LCS-R216951</b>				Units: <b>µg/Kg</b>		Analysis Date: <b>5/26/2023 09:08 AM</b>		
Client ID:		Run ID: <b>VMS5_230526A</b>			SeqNo: <b>3058592</b>		Prep Date:		DF: <b>1</b>	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	42.86	5.0	50	0	85.7	53.6-149	0			
1,1-Dichloroethene	41.06	5.0	50	0	82.1	38.8-176	0			
1,2-Dichloroethane	39.48	5.0	50	0	79	54.4-145	0			
1,3-Dichlorobenzene	42.08	5.0	50	0	84.2	58.4-144	0			
1,4-Dichlorobenzene	41.09	5.0	50	0	82.2	55.3-144	0			
Benzene	38.48	5.0	50	0	77	56-148	0			
Carbon tetrachloride	46.51	5.0	50	0	93	51.9-151	0			
Chlorobenzene	44.06	5.0	50	0	88.1	55.4-137	0			
Chloroform	39.79	5.0	50	0	79.6	51.1-147	0			
cis-1,2-Dichloroethene	37.31	5.0	50	0	74.6	47.6-149	0			
Ethylbenzene	41.36	5.0	50	0	82.7	55.8-142	0			
m,p-Xylene	85.3	10	100	0	85.3	57.6-141	0			
Styrene	45.96	5.0	50	0	91.9	59.6-143	0			
Tetrachloroethene	35.19	5.0	50	0	70.4	35.6-132	0			
Toluene	39.93	5.0	50	0	79.9	56-143	0			
Trichloroethene	45.38	5.0	50	0	90.8	56.5-143	0			
<i>Surr: 4-Bromofluorobenzene</i>	<i>46.47</i>	<i>0</i>	<i>50</i>	<i>0</i>	<i>92.9</i>	<i>60-140</i>	<i>0</i>			
<i>Surr: Dibromofluoromethane</i>	<i>44.63</i>	<i>0</i>	<i>50</i>	<i>0</i>	<i>89.3</i>	<i>60-140</i>	<i>0</i>			
<i>Surr: Toluene-d8</i>	<i>46.62</i>	<i>0</i>	<i>50</i>	<i>0</i>	<i>93.2</i>	<i>60-140</i>	<i>0</i>			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: The Mannik & Smith Group, Inc.  
 Work Order: 23051029  
 Project: Hillson Nut MS23-13; 401.ODAS003-19

# QC BATCH REPORT

Batch ID: **R216951** Instrument ID **VMS5** Method: **SW8260B**

MS		Sample ID: <b>23050962-06A MS</b>				Units: <b>µg/Kg</b>		Analysis Date: <b>5/26/2023 10:32 AM</b>		
Client ID:		Run ID: <b>VMS5_230526A</b>			SeqNo: <b>3058593</b>		Prep Date:		DF: <b>1</b>	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	42.77	5.0	50	0	85.5	66.9-140	0			
1,1-Dichloroethane	37.49	5.0	50	0	75	41.4-161	0			
1,2-Dichloroethane	40.13	5.0	50	0	80.3	58.9-137	0			
1,3-Dichlorobenzene	41.21	5.0	50	0	82.4	42.5-150	0			
1,4-Dichlorobenzene	41.15	5.0	50	0	82.3	52.1-137	0			
Benzene	37.28	5.0	50	0	74.6	35.8-162	0			
Carbon tetrachloride	44.5	5.0	50	0	89	53.2-137	0			
Chlorobenzene	41.72	5.0	50	0	83.4	65.6-137	0			
Chloroform	39.33	5.0	50	0	78.7	58-130	0			
cis-1,2-Dichloroethene	37.23	5.0	50	0	74.5	52.9-138	0			
Ethylbenzene	39.39	5.0	50	0	78.8	57.5-134	0			
m,p-Xylene	81.06	10	100	0	81.1	56.4-135	0			
Styrene	44.24	5.0	50	0	88.5	60.9-135	0			
Tetrachloroethene	33.84	5.0	50	0	67.7	28.3-109	0			
Toluene	38.91	5.0	50	0	77.8	67.7-135	0			
Trichloroethene	44.03	5.0	50	0	88.1	56.5-136	0			
<i>Surr: 4-Bromofluorobenzene</i>	<i>46.5</i>	<i>0</i>	<i>50</i>	<i>0</i>	<i>93</i>	<i>60-140</i>	<i>0</i>			
<i>Surr: Dibromofluoromethane</i>	<i>44.87</i>	<i>0</i>	<i>50</i>	<i>0</i>	<i>89.7</i>	<i>60-140</i>	<i>0</i>			
<i>Surr: Toluene-d8</i>	<i>46.77</i>	<i>0</i>	<i>50</i>	<i>0</i>	<i>93.5</i>	<i>60-140</i>	<i>0</i>			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: The Mannik & Smith Group, Inc.  
 Work Order: 23051029  
 Project: Hillson Nut MS23-13; 401.ODAS003-19

# QC BATCH REPORT

Batch ID: **R216951** Instrument ID **VMS5** Method: **SW8260B**

MSD		Sample ID: 23050962-06A MSD				Units: µg/Kg		Analysis Date: 5/26/2023 10:54 AM		
Client ID:		Run ID: VMS5_230526A			SeqNo: 3058594		Prep Date:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	41.72	5.0	50	0	83.4	66.9-140	42.77	2.49	31.2	
1,1-Dichloroethene	36.2	5.0	50	0	72.4	41.4-161	37.49	3.5	38.1	
1,2-Dichloroethane	39.08	5.0	50	0	78.2	58.9-137	40.13	2.65	26.2	
1,3-Dichlorobenzene	36.68	5.0	50	0	73.4	42.5-150	41.21	11.6	21	
1,4-Dichlorobenzene	36.47	5.0	50	0	72.9	52.1-137	41.15	12.1	28.7	
Benzene	36.06	5.0	50	0	72.1	35.8-162	37.28	3.33	23.6	
Carbon tetrachloride	44.26	5.0	50	0	88.5	53.2-137	44.5	0.541	32.3	
Chlorobenzene	39.76	5.0	50	0	79.5	65.6-137	41.72	4.81	20	
Chloroform	38.27	5.0	50	0	76.5	58-130	39.33	2.73	28.2	
cis-1,2-Dichloroethene	35.12	5.0	50	0	70.2	52.9-138	37.23	5.83	23.7	
Ethylbenzene	37.26	5.0	50	0	74.5	57.5-134	39.39	5.56	24.9	
m,p-Xylene	77.05	10	100	0	77	56.4-135	81.06	5.07	25.1	
Styrene	41.42	5.0	50	0	82.8	60.9-135	44.24	6.58	22.8	
Tetrachloroethene	32.76	5.0	50	0	65.5	28.3-109	33.84	3.24	24.7	
Toluene	36.82	5.0	50	0	73.6	67.7-135	38.91	5.52	20	
Trichloroethene	43.07	5.0	50	0	86.1	56.5-136	44.03	2.2	20	
Surr: 4-Bromofluorobenzene	45.18	0	50	0	90.4	60-140	46.5	2.88		
Surr: Dibromofluoromethane	45.55	0	50	0	91.1	60-140	44.87	1.5		
Surr: Toluene-d8	46.72	0	50	0	93.4	60-140	46.77	0.107		

The following samples were analyzed in this batch:

23051029-13A	23051029-14A	23051029-15A
23051029-16A	23051029-17A	23051029-18A
23051029-19A	23051029-20A	23051029-21A
23051029-22A	23051029-23A	23051029-24A
23051029-25A	23051029-26A	23051029-27A
23051029-28A	23051029-29A	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: The Mannik & Smith Group, Inc.  
 Work Order: 23051029  
 Project: Hillson Nut MS23-13; 401.ODAS003-19

# QC BATCH REPORT

Batch ID: **R216984** Instrument ID **VMS2** Method: **SW8260B**

MBLK		Sample ID: <b>MBLK-R216984</b>			Units: <b>µg/Kg</b>		Analysis Date: <b>5/26/2023 12:59 PM</b>			
Client ID:		Run ID: <b>VMS2_230526B</b>			SeqNo: <b>3059314</b>		Prep Date:		DF: <b>1</b>	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1,2-Tetrachloroethane	ND	5.0								
1,1,1-Trichloroethane	ND	5.0								
1,1,2,2-Tetrachloroethane	ND	5.0								
1,1,2-Trichloroethane	ND	5.0								
1,1-Dichloroethane	ND	5.0								
1,1-Dichloroethene	ND	5.0								
1,1-Dichloropropene	ND	5.0								
1,2,3-Trichlorobenzene	ND	5.0								
1,2,3-Trichloropropane	ND	5.0								
1,2,4-Trichlorobenzene	ND	5.0								
1,2,4-Trimethylbenzene	ND	5.0								
1,2-Dibromo-3-chloropropane	ND	5.0								
1,2-Dibromoethane	ND	5.0								
1,2-Dichlorobenzene	ND	5.0								
1,2-Dichloroethane	ND	5.0								
1,2-Dichloropropane	ND	5.0								
1,3,5-Trimethylbenzene	ND	5.0								
1,3-Dichlorobenzene	ND	5.0								
1,3-Dichloropropane	ND	5.0								
1,4-Dichlorobenzene	ND	5.0								
2,2-Dichloropropane	ND	5.0								
2-Butanone	ND	5.0								
2-Chlorotoluene	ND	5.0								
2-Hexanone	ND	5.0								
4-Chlorotoluene	ND	5.0								
4-Methyl-2-pentanone	ND	5.0								
Acetone	3.74	5.0								J
Benzene	ND	5.0								
Bromobenzene	ND	5.0								
Bromochloromethane	ND	5.0								
Bromodichloromethane	ND	5.0								
Bromoform	ND	5.0								
Bromomethane	ND	5.0								
Carbon disulfide	ND	5.0								
Carbon tetrachloride	ND	5.0								
Chlorobenzene	ND	5.0								
Chloroethane	ND	5.0								
Chloroform	ND	5.0								
Chloromethane	ND	5.0								
cis-1,2-Dichloroethene	ND	5.0								
cis-1,3-Dichloropropene	ND	5.0								
Dibromochloromethane	ND	5.0								

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

**Client:** The Mannik & Smith Group, Inc.  
**Work Order:** 23051029  
**Project:** Hillson Nut MS23-13; 401.ODAS003-19

# QC BATCH REPORT

Batch ID: <b>R216984</b>	Instrument ID <b>VMS2</b>	Method: <b>SW8260B</b>					
Dibromomethane	ND	5.0					
Dichlorodifluoromethane	ND	5.0					
Ethylbenzene	ND	5.0					
Hexachlorobutadiene	ND	5.0					
Isopropylbenzene	ND	5.0					
m,p-Xylene	ND	5.0					
Methyl tert-butyl ether	ND	5.0					
Methylene chloride	ND	20					
Naphthalene	ND	5.0					
n-Butylbenzene	ND	5.0					
n-Propylbenzene	ND	5.0					
o-Xylene	ND	5.0					
p-Isopropyltoluene	ND	5.0					
sec-Butylbenzene	ND	5.0					
Styrene	ND	5.0					
tert-Butylbenzene	ND	5.0					
Tetrachloroethene	ND	5.0					
Toluene	ND	5.0					
trans-1,2-Dichloroethene	ND	5.0					
trans-1,3-Dichloropropene	ND	5.0					
Trichloroethene	ND	5.0					
Trichlorofluoromethane	ND	5.0					
Vinyl chloride	ND	5.0					
Xylenes, Total	ND	10					
<i>Surr: 4-Bromofluorobenzene</i>	<i>47.41</i>	<i>0</i>	<i>50</i>	<i>0</i>	<i>94.8</i>	<i>60-140</i>	<i>0</i>
<i>Surr: Dibromofluoromethane</i>	<i>62.56</i>	<i>0</i>	<i>50</i>	<i>0</i>	<i>125</i>	<i>60-140</i>	<i>0</i>
<i>Surr: Toluene-d8</i>	<i>54.47</i>	<i>0</i>	<i>50</i>	<i>0</i>	<i>109</i>	<i>60-140</i>	<i>0</i>

**Note:** See Qualifiers Page for a list of Qualifiers and their explanation.

Client: The Mannik & Smith Group, Inc.  
 Work Order: 23051029  
 Project: Hillson Nut MS23-13; 401.ODAS003-19

# QC BATCH REPORT

Batch ID: **R216984** Instrument ID **VMS2** Method: **SW8260B**

LCS		Sample ID: <b>LCS-R216984</b>				Units: <b>µg/Kg</b>		Analysis Date: <b>5/26/2023 11:19 AM</b>		
Client ID:		Run ID: <b>VMS2_230526B</b>			SeqNo: <b>3059311</b>		Prep Date:		DF: <b>1</b>	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	47.84	5.0	50	0	95.7	53.6-149	0			
1,1-Dichloroethene	51.15	5.0	50	0	102	38.8-176	0			
1,2-Dichloroethane	53.91	5.0	50	0	108	54.4-145	0			
1,3-Dichlorobenzene	50.54	5.0	50	0	101	54.2-137	0			
1,4-Dichlorobenzene	50.27	5.0	50	0	101	52.8-135	0			
Benzene	51.04	5.0	50	0	102	56-148	0			
Carbon tetrachloride	48.49	5.0	50	0	97	51.9-151	0			
Chlorobenzene	48.61	5.0	50	0	97.2	55.4-137	0			
Chloroform	52.5	5.0	50	0	105	51.1-147	0			
cis-1,2-Dichloroethene	50.62	5.0	50	0	101	47.6-149	0			
Ethylbenzene	49.19	5.0	50	0	98.4	55.8-142	0			
m,p-Xylene	100.4	5.0	100	0	100	57.6-141	0			
Styrene	53.08	5.0	50	0	106	59.6-143	0			
Tetrachloroethene	36.51	5.0	50	0	73	56.2-160	0			
Toluene	51.31	5.0	50	0	103	56-143	0			
Trichloroethene	48.3	5.0	50	0	96.6	56.5-143	0			
<i>Surr: 4-Bromofluorobenzene</i>	<i>47.96</i>	<i>0</i>	<i>50</i>	<i>0</i>	<i>95.9</i>	<i>60-140</i>	<i>0</i>			
<i>Surr: Dibromofluoromethane</i>	<i>51.68</i>	<i>0</i>	<i>50</i>	<i>0</i>	<i>103</i>	<i>60-140</i>	<i>0</i>			
<i>Surr: Toluene-d8</i>	<i>51.95</i>	<i>0</i>	<i>50</i>	<i>0</i>	<i>104</i>	<i>60-140</i>	<i>0</i>			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: The Mannik & Smith Group, Inc.  
 Work Order: 23051029  
 Project: Hillson Nut MS23-13; 401.ODAS003-19

# QC BATCH REPORT

Batch ID: **R216984** Instrument ID **VMS2** Method: **SW8260B**

MS		Sample ID: <b>23050962-06A MS</b>				Units: <b>µg/Kg</b>		Analysis Date: <b>5/26/2023 11:44 AM</b>		
Client ID:		Run ID: <b>VMS2_230526B</b>		SeqNo: <b>3059312</b>		Prep Date:		DF: <b>1</b>		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	38.42	5.0	50	0	76.8	66.9-140	0			
1,1-Dichloroethane	39.56	5.0	50	0	79.1	41.4-161	0			
1,2-Dichloroethane	44.54	5.0	50	0	89.1	58.9-137	0			
1,3-Dichlorobenzene	39.72	5.0	50	0	79.4	42.5-150	0			
1,4-Dichlorobenzene	39.86	5.0	50	0	79.7	52.1-137	0			
Benzene	42.01	5.0	50	0	84	35.8-162	0			
Carbon tetrachloride	38.52	5.0	50	0	77	53.2-137	0			
Chlorobenzene	39.71	5.0	50	0	79.4	65.6-137	0			
Chloroform	42.12	5.0	50	0	84.2	58-130	0			
cis-1,2-Dichloroethene	40.76	5.0	50	0	81.5	52.9-138	0			
Ethylbenzene	38.59	5.0	50	0	77.2	57.5-134	0			
m,p-Xylene	78.95	5.0	100	0	79	56.4-135	0			
Styrene	41.35	5.0	50	0	82.7	60.9-135	0			
Tetrachloroethene	29.43	5.0	50	0	58.9	28.3-109	0			
Toluene	41.77	5.0	50	0	83.5	67.7-135	0			
Trichloroethene	38.78	5.0	50	0	77.6	56.5-136	0			
<i>Surr: 4-Bromofluorobenzene</i>	<i>49.43</i>	<i>0</i>	<i>50</i>	<i>0</i>	<i>98.9</i>	<i>60-140</i>	<i>0</i>			
<i>Surr: Dibromofluoromethane</i>	<i>50.25</i>	<i>0</i>	<i>50</i>	<i>0</i>	<i>100</i>	<i>60-140</i>	<i>0</i>			
<i>Surr: Toluene-d8</i>	<i>51.25</i>	<i>0</i>	<i>50</i>	<i>0</i>	<i>102</i>	<i>60-140</i>	<i>0</i>			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.



Client: The Mannik & Smith Group, Inc.  
 Work Order: 23051029  
 Project: Hillson Nut MS23-13; 401.ODAS003-19

# QC BATCH REPORT

Batch ID: **R216984** Instrument ID **VMS2** Method: **SW8260B**

MSD		Sample ID: 23050962-06A MSD				Units: µg/Kg		Analysis Date: 5/26/2023 12:09 PM		
Client ID:		Run ID: VMS2_230526B			SeqNo: 3059313		Prep Date:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	46.53	5.0	50	0	93.1	66.9-140	38.42	19.1	31.2	
1,1-Dichloroethene	48.12	5.0	50	0	96.2	41.4-161	39.56	19.5	38.1	
1,2-Dichloroethane	52.39	5.0	50	0	105	58.9-137	44.54	16.2	26.2	
1,3-Dichlorobenzene	48.22	5.0	50	0	96.4	42.5-150	39.72	19.3	21	
1,4-Dichlorobenzene	48.13	5.0	50	0	96.3	52.1-137	39.86	18.8	28.7	
Benzene	51.08	5.0	50	0	102	35.8-162	42.01	19.5	23.6	
Carbon tetrachloride	46.98	5.0	50	0	94	53.2-137	38.52	19.8	32.3	
Chlorobenzene	48.21	5.0	50	0	96.4	65.6-137	39.71	19.3	20	
Chloroform	51.38	5.0	50	0	103	58-130	42.12	19.8	28.2	
cis-1,2-Dichloroethene	50.08	5.0	50	0	100	52.9-138	40.76	20.5	23.7	
Ethylbenzene	48.65	5.0	50	0	97.3	57.5-134	38.59	23.1	24.9	
m,p-Xylene	98.64	5.0	100	0	98.6	56.4-135	78.95	22.2	25.1	
Styrene	50.75	5.0	50	0	102	60.9-135	41.35	20.4	22.8	
Tetrachloroethene	36.07	5.0	50	0	72.1	28.3-109	29.43	20.3	24.7	
Toluene	50.74	5.0	50	0	101	67.7-135	41.77	19.4	20	
Trichloroethene	47.63	5.0	50	0	95.3	56.5-136	38.78	20.5	20	R
<i>Surr: 4-Bromofluorobenzene</i>	<i>49.37</i>	<i>0</i>	<i>50</i>	<i>0</i>	<i>98.7</i>	<i>60-140</i>	<i>49.43</i>	<i>0.121</i>		
<i>Surr: Dibromofluoromethane</i>	<i>50.25</i>	<i>0</i>	<i>50</i>	<i>0</i>	<i>100</i>	<i>60-140</i>	<i>50.25</i>	<i>0</i>		
<i>Surr: Toluene-d8</i>	<i>51.2</i>	<i>0</i>	<i>50</i>	<i>0</i>	<i>102</i>	<i>60-140</i>	<i>51.25</i>	<i>0.0976</i>		

The following samples were analyzed in this batch:

23051029-07A	23051029-08A	23051029-09A
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Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: The Mannik & Smith Group, Inc.  
 Work Order: 23051029  
 Project: Hillson Nut MS23-13; 401.ODAS003-19

# QC BATCH REPORT

Batch ID: **R217003** Instrument ID **VMS5** Method: **SW8260B**

MBLK		Sample ID: <b>MBLK-R217003</b>			Units: <b>µg/Kg</b>		Analysis Date: <b>5/30/2023 12:18 PM</b>			
Client ID:		Run ID: <b>VMS5_230530A</b>			SeqNo: <b>3059942</b>		Prep Date:		DF: <b>1</b>	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1,2-Tetrachloroethane	ND	5.0								
1,1,1-Trichloroethane	ND	5.0								
1,1,2,2-Tetrachloroethane	ND	5.0								
1,1,2-Trichloroethane	ND	5.0								
1,1-Dichloroethane	ND	5.0								
1,1-Dichloroethene	ND	5.0								
1,1-Dichloropropene	ND	5.0								
1,2,3-Trichlorobenzene	ND	5.0								
1,2,3-Trichloropropane	ND	5.0								
1,2,4-Trichlorobenzene	ND	5.0								
1,2,4-Trimethylbenzene	ND	5.0								
1,2-Dibromo-3-chloropropane	ND	5.0								
1,2-Dibromoethane	ND	5.0								
1,2-Dichlorobenzene	ND	5.0								
1,2-Dichloroethane	ND	5.0								
1,2-Dichloropropane	ND	5.0								
1,3,5-Trimethylbenzene	ND	5.0								
1,3-Dichlorobenzene	ND	5.0								
1,3-Dichloropropane	ND	5.0								
1,4-Dichlorobenzene	ND	5.0								
2,2-Dichloropropane	ND	5.0								
2-Butanone	ND	5.0								
2-Chlorotoluene	ND	5.0								
2-Hexanone	ND	5.0								
4-Chlorotoluene	ND	5.0								
4-Methyl-2-pentanone	ND	5.0								
Acetone	ND	5.0								
Benzene	ND	5.0								
Bromobenzene	ND	5.0								
Bromochloromethane	ND	5.0								
Bromodichloromethane	ND	5.0								
Bromoform	ND	5.0								
Bromomethane	ND	5.0								
Carbon disulfide	ND	5.0								
Carbon tetrachloride	ND	5.0								
Chlorobenzene	ND	5.0								
Chloroethane	ND	5.0								
Chloroform	ND	5.0								
Chloromethane	ND	5.0								
cis-1,2-Dichloroethene	ND	5.0								
cis-1,3-Dichloropropene	ND	5.0								
Dibromochloromethane	ND	5.0								

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

**Client:** The Mannik & Smith Group, Inc.  
**Work Order:** 23051029  
**Project:** Hillson Nut MS23-13; 401.ODAS003-19

# QC BATCH REPORT

Batch ID: <b>R217003</b>	Instrument ID <b>VMS5</b>	Method: <b>SW8260B</b>					
Dibromomethane	ND	5.0					
Dichlorodifluoromethane	ND	5.0					
Ethylbenzene	ND	5.0					
Hexachlorobutadiene	ND	5.0					
Isopropylbenzene	ND	5.0					
m,p-Xylene	ND	10					
Methyl tert-butyl ether	ND	5.0					
Methylene chloride	ND	20					
Naphthalene	ND	5.0					
n-Butylbenzene	ND	5.0					
n-Propylbenzene	ND	5.0					
o-Xylene	ND	5.0					
p-Isopropyltoluene	ND	5.0					
sec-Butylbenzene	ND	5.0					
Styrene	ND	5.0					
tert-Butylbenzene	ND	5.0					
Tetrachloroethene	ND	5.0					
Toluene	ND	5.0					
trans-1,2-Dichloroethene	ND	5.0					
trans-1,3-Dichloropropene	ND	5.0					
Trichloroethene	ND	5.0					
Trichlorofluoromethane	ND	5.0					
Vinyl chloride	ND	5.0					
Xylenes, Total	ND	15					
<i>Surr: 4-Bromofluorobenzene</i>	<i>49.48</i>	<i>0</i>	<i>50</i>	<i>0</i>	<i>99</i>	<i>60-140</i>	<i>0</i>
<i>Surr: Dibromofluoromethane</i>	<i>49.65</i>	<i>0</i>	<i>50</i>	<i>0</i>	<i>99.3</i>	<i>60-140</i>	<i>0</i>
<i>Surr: Toluene-d8</i>	<i>55.47</i>	<i>0</i>	<i>50</i>	<i>0</i>	<i>111</i>	<i>60-140</i>	<i>0</i>

**Note:** See Qualifiers Page for a list of Qualifiers and their explanation.

Client: The Mannik & Smith Group, Inc.  
 Work Order: 23051029  
 Project: Hillson Nut MS23-13; 401.ODAS003-19

# QC BATCH REPORT

Batch ID: **R217003** Instrument ID **VMS5** Method: **SW8260B**

LCS		Sample ID: <b>LCS-R217003</b>				Units: <b>µg/Kg</b>		Analysis Date: <b>5/30/2023 11:18 AM</b>		
Client ID:		Run ID: <b>VMS5_230530A</b>			SeqNo: <b>3059940</b>		Prep Date:		DF: <b>1</b>	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	48.53	5.0	50	0	97.1	53.6-149	0			
1,1-Dichloroethene	54.23	5.0	50	0	108	38.8-176	0			
1,2-Dichloroethane	47.7	5.0	50	0	95.4	54.4-145	0			
1,3-Dichlorobenzene	49.86	5.0	50	0	99.7	58.4-144	0			
1,4-Dichlorobenzene	49	5.0	50	0	98	55.3-144	0			
Benzene	47.4	5.0	50	0	94.8	56-148	0			
Carbon tetrachloride	49.84	5.0	50	0	99.7	51.9-151	0			
Chlorobenzene	49.79	5.0	50	0	99.6	55.4-137	0			
Chloroform	53.18	5.0	50	0	106	51.1-147	0			
cis-1,2-Dichloroethene	48.56	5.0	50	0	97.1	47.6-149	0			
Ethylbenzene	48.18	5.0	50	0	96.4	55.8-142	0			
m,p-Xylene	100.4	10	100	0	100	57.6-141	0			
Styrene	50.95	5.0	50	0	102	59.6-143	0			
Tetrachloroethene	35.09	5.0	50	0	70.2	35.6-132	0			
Toluene	51.05	5.0	50	0	102	56-143	0			
Trichloroethene	47.24	5.0	50	0	94.5	56.5-143	0			
<i>Surr: 4-Bromofluorobenzene</i>	<i>49.99</i>	<i>0</i>	<i>50</i>	<i>0</i>	<i>100</i>	<i>60-140</i>	<i>0</i>			
<i>Surr: Dibromofluoromethane</i>	<i>49.2</i>	<i>0</i>	<i>50</i>	<i>0</i>	<i>98.4</i>	<i>60-140</i>	<i>0</i>			
<i>Surr: Toluene-d8</i>	<i>51.05</i>	<i>0</i>	<i>50</i>	<i>0</i>	<i>102</i>	<i>60-140</i>	<i>0</i>			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: The Mannik & Smith Group, Inc.  
 Work Order: 23051029  
 Project: Hillson Nut MS23-13; 401.ODAS003-19

# QC BATCH REPORT

Batch ID: **R217003** Instrument ID **VMS5** Method: **SW8260B**

MS		Sample ID: <b>23051033-03A MS</b>				Units: <b>µg/Kg</b>		Analysis Date: <b>5/30/2023 02:09 PM</b>		
Client ID:		Run ID: <b>VMS5_230530A</b>			SeqNo: <b>3059949</b>		Prep Date:		DF: <b>1</b>	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	38.65	5.0	50	0	77.3	66.9-140	0			
1,1-Dichloroethane	42.82	5.0	50	0	85.6	41.4-161	0			
1,2-Dichloroethane	36.6	5.0	50	0	73.2	58.9-137	0			
1,3-Dichlorobenzene	35.19	5.0	50	0	70.4	42.5-150	0			
1,4-Dichlorobenzene	34.83	5.0	50	0	69.7	52.1-137	0			
Benzene	34.85	5.0	50	0	69.7	35.8-162	0			
Carbon tetrachloride	41.1	5.0	50	0	82.2	53.2-137	0			
Chlorobenzene	35.87	5.0	50	0	71.7	65.6-137	0			
Chloroform	38.55	5.0	50	0	77.1	58-130	0			
cis-1,2-Dichloroethene	35.67	5.0	50	0	71.3	52.9-138	0			
Ethylbenzene	34.45	5.0	50	0	68.9	57.5-134	0			
m,p-Xylene	72.94	10	100	0	72.9	56.4-135	0			
Styrene	36.55	5.0	50	0	73.1	60.9-135	0			
Tetrachloroethene	27.77	5.0	50	0	55.5	28.3-109	0			
Toluene	36.96	5.0	50	0	73.9	67.7-135	0			
Trichloroethene	35.86	5.0	50	0	71.7	56.5-136	0			
<i>Surr: 4-Bromofluorobenzene</i>	<i>49.09</i>	<i>0</i>	<i>50</i>	<i>0</i>	<i>98.2</i>	<i>60-140</i>	<i>0</i>			
<i>Surr: Dibromofluoromethane</i>	<i>47.71</i>	<i>0</i>	<i>50</i>	<i>0</i>	<i>95.4</i>	<i>60-140</i>	<i>0</i>			
<i>Surr: Toluene-d8</i>	<i>50.06</i>	<i>0</i>	<i>50</i>	<i>0</i>	<i>100</i>	<i>60-140</i>	<i>0</i>			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: The Mannik & Smith Group, Inc.  
 Work Order: 23051029  
 Project: Hillson Nut MS23-13; 401.ODAS003-19

# QC BATCH REPORT

Batch ID: **R217003** Instrument ID **VMS5** Method: **SW8260B**

MSD		Sample ID: 23051033-03A MSD				Units: µg/Kg		Analysis Date: 5/30/2023 03:04 PM		
Client ID:		Run ID: VMS5_230530A			SeqNo: 3059953		Prep Date:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	33.68	5.0	50	0	67.4	66.9-140	38.65	13.7	31.2	
1,1-Dichloroethene	36.44	5.0	50	0	72.9	41.4-161	42.82	16.1	38.1	
1,2-Dichloroethane	33.22	5.0	50	0	66.4	58.9-137	36.6	9.68	26.2	
1,3-Dichlorobenzene	33.31	5.0	50	0	66.6	42.5-150	35.19	5.49	21	
1,4-Dichlorobenzene	32.48	5.0	50	0	65	52.1-137	34.83	6.98	28.7	
Benzene	32.12	5.0	50	0	64.2	35.8-162	34.85	8.15	23.6	
Carbon tetrachloride	35.13	5.0	50	0	70.3	53.2-137	41.1	15.7	32.3	
Chlorobenzene	32.88	5.0	50	0	65.8	65.6-137	35.87	8.7	20	
Chloroform	36.56	5.0	50	0	73.1	58-130	38.55	5.3	28.2	
cis-1,2-Dichloroethene	36.88	5.0	50	0	73.8	52.9-138	35.67	3.34	23.7	
Ethylbenzene	31.64	5.0	50	0	63.3	57.5-134	34.45	8.5	24.9	
m,p-Xylene	66.81	10	100	0	66.8	56.4-135	72.94	8.77	25.1	
Styrene	33.34	5.0	50	0	66.7	60.9-135	36.55	9.19	22.8	
Tetrachloroethene	23.65	5.0	50	0	47.3	28.3-109	27.77	16	24.7	
Toluene	33.77	5.0	50	0	67.5	67.7-135	36.96	9.02	20	S
Trichloroethene	31.16	5.0	50	0	62.3	56.5-136	35.86	14	20	
<i>Surr: 4-Bromofluorobenzene</i>	<i>50.61</i>	<i>0</i>	<i>50</i>	<i>0</i>	<i>101</i>	<i>60-140</i>	<i>49.09</i>	<i>3.05</i>		
<i>Surr: Dibromofluoromethane</i>	<i>50.69</i>	<i>0</i>	<i>50</i>	<i>0</i>	<i>101</i>	<i>60-140</i>	<i>47.71</i>	<i>6.06</i>		
<i>Surr: Toluene-d8</i>	<i>50.67</i>	<i>0</i>	<i>50</i>	<i>0</i>	<i>101</i>	<i>60-140</i>	<i>50.06</i>	<i>1.21</i>		

The following samples were analyzed in this batch: 23051029-10A    23051029-11A    23051029-12A

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: The Mannik & Smith Group, Inc.  
 Work Order: 23051029  
 Project: Hillson Nut MS23-13; 401.ODAS003-19

# QC BATCH REPORT

Batch ID: **R217022** Instrument ID **VMS6** Method: **SW8260B**

MBLK		Sample ID: <b>MBLK-R217022</b>			Units: <b>µg/L</b>		Analysis Date: <b>5/31/2023 01:40 PM</b>			
Client ID:		Run ID: <b>VMS6_230531A</b>			SeqNo: <b>3061481</b>		Prep Date:		DF: <b>1</b>	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1,2-Tetrachloroethane	ND	5.0								
1,1,1-Trichloroethane	ND	5.0								
1,1,2,2-Tetrachloroethane	ND	5.0								
1,1,2-Trichloroethane	ND	5.0								
1,1-Dichloroethane	ND	5.0								
1,1-Dichloroethene	ND	5.0								
1,1-Dichloropropene	ND	5.0								
1,2,3-Trichlorobenzene	ND	5.0								
1,2,3-Trichloropropane	ND	5.0								
1,2,4-Trichlorobenzene	ND	5.0								
1,2,4-Trimethylbenzene	ND	5.0								
1,2-Dibromo-3-chloropropane	ND	5.0								
1,2-Dibromoethane	ND	5.0								
1,2-Dichlorobenzene	ND	5.0								
1,2-Dichloroethane	ND	5.0								
1,2-Dichloropropane	ND	5.0								
1,3,5-Trimethylbenzene	ND	5.0								
1,3-Dichlorobenzene	ND	5.0								
1,3-Dichloropropane	ND	5.0								
1,4-Dichlorobenzene	ND	5.0								
2,2-Dichloropropane	ND	5.0								
2-Butanone	ND	5.0								
2-Chlorotoluene	ND	5.0								
2-Hexanone	ND	5.0								
4-Chlorotoluene	ND	5.0								
4-Methyl-2-pentanone	ND	5.0								
Acetone	ND	5.0								
Benzene	ND	5.0								
Bromobenzene	ND	5.0								
Bromochloromethane	ND	5.0								
Bromodichloromethane	ND	5.0								
Bromoform	ND	5.0								
Bromomethane	ND	5.0								
Carbon disulfide	ND	5.0								
Carbon tetrachloride	ND	5.0								
Chlorobenzene	ND	5.0								
Chloroethane	ND	5.0								
Chloroform	ND	5.0								
Chloromethane	ND	5.0								
cis-1,2-Dichloroethene	ND	5.0								
cis-1,3-Dichloropropene	ND	5.0								
Dibromochloromethane	ND	5.0								

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

**Client:** The Mannik & Smith Group, Inc.  
**Work Order:** 23051029  
**Project:** Hillson Nut MS23-13; 401.ODAS003-19

## QC BATCH REPORT

Batch ID: <b>R217022</b>	Instrument ID <b>VMS6</b>	Method: <b>SW8260B</b>					
Dibromomethane	ND	5.0					
Dichlorodifluoromethane	ND	5.0					
Ethylbenzene	ND	5.0					
Hexachlorobutadiene	ND	5.0					
Isopropylbenzene	ND	5.0					
m,p-Xylene	ND	10					
Methyl tert-butyl ether	ND	5.0					
Methylene chloride	ND	5.0					
Naphthalene	ND	5.0					
n-Butylbenzene	ND	5.0					
n-Propylbenzene	ND	5.0					
o-Xylene	ND	5.0					
p-Isopropyltoluene	ND	5.0					
sec-Butylbenzene	ND	5.0					
Styrene	ND	5.0					
tert-Butylbenzene	ND	5.0					
Tetrachloroethene	ND	5.0					
Toluene	ND	5.0					
trans-1,2-Dichloroethene	ND	5.0					
trans-1,3-Dichloropropene	ND	5.0					
Trichloroethene	ND	5.0					
Trichlorofluoromethane	ND	5.0					
Vinyl chloride	ND	2.0					
Xylenes, Total	ND	15					
<i>Surr: 4-Bromofluorobenzene</i>	<i>53.05</i>	<i>0</i>	<i>50</i>	<i>0</i>	<i>106</i>	<i>61-131</i>	<i>0</i>
<i>Surr: Dibromofluoromethane</i>	<i>54.51</i>	<i>0</i>	<i>50</i>	<i>0</i>	<i>109</i>	<i>72-137</i>	<i>0</i>
<i>Surr: Toluene-d8</i>	<i>50.84</i>	<i>0</i>	<i>50</i>	<i>0</i>	<i>102</i>	<i>80.4-119</i>	<i>0</i>

**Note:** See Qualifiers Page for a list of Qualifiers and their explanation.



Client: The Mannik & Smith Group, Inc.  
 Work Order: 23051029  
 Project: Hillson Nut MS23-13; 401.ODAS003-19

# QC BATCH REPORT

Batch ID: **R217022** Instrument ID **VMS6** Method: **SW8260B**

LCS		Sample ID: <b>LCS-R217022</b>				Units: <b>µg/L</b>		Analysis Date: <b>5/31/2023 11:36 AM</b>		
Client ID:		Run ID: <b>VMS6_230531A</b>			SeqNo: <b>3061477</b>		Prep Date:		DF: <b>1</b>	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	52.33	5.0	50	0	105	48.4-140	0			
1,1-Dichloroethene	49.64	5.0	50	0	99.3	45.5-150	0			
1,2-Dichloroethane	54.02	5.0	50	0	108	46.5-141	0			
1,3-Dichlorobenzene	51.33	5.0	50	0	103	42.5-133	0			
1,4-Dichlorobenzene	48.72	5.0	50	0	97.4	38.9-136	0			
Benzene	47.71	5.0	50	0	95.4	50.7-134	0			
Carbon tetrachloride	55.28	5.0	50	0	111	45.5-143	0			
Chlorobenzene	51.75	5.0	50	0	104	45-133	0			
Chloroform	52.66	5.0	50	0	105	52.4-136	0			
cis-1,2-Dichloroethene	50.04	5.0	50	0	100	49.7-138	0			
Ethylbenzene	52.27	5.0	50	0	105	37.8-145	0			
m,p-Xylene	112.6	10	100	0	113	25.1-163	0			
Methyl tert-butyl ether	51.33	5.0	50	0	103	26.7-174	0			
Styrene	57.22	5.0	50	0	114	26.3-172	0			
Tetrachloroethene	51.15	5.0	50	0	102	37.3-139	0			
Toluene	51.05	5.0	50	0	102	44-135	0			
Trichloroethene	52.74	5.0	50	0	105	45.9-140	0			
Xylenes, Total	170.6	15	150	0	114	47.3-132	0			
<i>Surr: 4-Bromofluorobenzene</i>	48.86	0	50	0	97.7	61-131	0			
<i>Surr: Dibromofluoromethane</i>	49.42	0	50	0	98.8	72-137	0			
<i>Surr: Toluene-d8</i>	49.87	0	50	0	99.7	80.4-119	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: The Mannik & Smith Group, Inc.  
 Work Order: 23051029  
 Project: Hillson Nut MS23-13; 401.ODAS003-19

# QC BATCH REPORT

Batch ID: **R217022** Instrument ID **VMS6** Method: **SW8260B**

MS		Sample ID: <b>23051018-01A MS</b>				Units: <b>µg/L</b>		Analysis Date: <b>5/31/2023 12:38 PM</b>		
Client ID:		Run ID: <b>VMS6_230531A</b>			SeqNo: <b>3061480</b>		Prep Date:		DF: <b>1</b>	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	53.86	5.0	50	0	108	40.4-134	0			
1,1-Dichloroethane	49.18	5.0	50	0	98.4	45.3-151	0			
1,2-Dichloroethane	67.68	5.0	50	0	135	37-139	0			
1,3-Dichlorobenzene	57.68	5.0	50	0	115	42.9-121	0			
1,4-Dichlorobenzene	54.56	5.0	50	0	109	53.4-129	0			
Benzene	53.28	5.0	50	0	107	37.4-144	0			
Carbon tetrachloride	56.57	5.0	50	0	113	33.8-150	0			
Chlorobenzene	57.9	5.0	50	0	116	52.4-132	0			
Chloroform	58.71	5.0	50	0	117	45.5-135	0			
cis-1,2-Dichloroethene	56.7	5.0	50	0	113	35.2-150	0			
Ethylbenzene	56.88	5.0	50	0	114	46.5-146	0			
m,p-Xylene	121.3	10	100	0	121	38.2-167	0			
Styrene	65.42	5.0	50	0	131	20.9-184	0			
Tetrachloroethene	51.75	5.0	50	0	104	55.2-134	0			
Toluene	55.42	5.0	50	0	111	32.7-140	0			
Trichloroethene	55.87	5.0	50	0	112	29.1-153	0			
Xylenes, Total	185.5	15	150	0	124	43.6-148	0			
<i>Surr: 4-Bromofluorobenzene</i>	<i>49.43</i>	<i>0</i>	<i>50</i>	<i>0</i>	<i>98.9</i>	<i>61-131</i>	<i>0</i>			
<i>Surr: Dibromofluoromethane</i>	<i>48.49</i>	<i>0</i>	<i>50</i>	<i>0</i>	<i>97</i>	<i>72-137</i>	<i>0</i>			
<i>Surr: Toluene-d8</i>	<i>51.13</i>	<i>0</i>	<i>50</i>	<i>0</i>	<i>102</i>	<i>80.4-119</i>	<i>0</i>			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: The Mannik & Smith Group, Inc.  
 Work Order: 23051029  
 Project: Hillson Nut MS23-13; 401.ODAS003-19

# QC BATCH REPORT

Batch ID: **R217022** Instrument ID **VMS6** Method: **SW8260B**

MSD		Sample ID: 23051018-01A MSD				Units: µg/L		Analysis Date: 5/31/2023 12:17 PM		
Client ID:		Run ID: VMS6_230531A			SeqNo: 3061479		Prep Date:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	60.47	5.0	50	0	121	40.4-134	53.86	11.6	20	
1,1-Dichloroethene	56.84	5.0	50	0	114	45.3-151	49.18	14.5	20	
1,2-Dichloroethane	68.06	5.0	50	0	136	37-139	67.68	0.56	20	
1,3-Dichlorobenzene	58.56	5.0	50	0	117	42.9-121	57.68	1.51	20	
1,4-Dichlorobenzene	57.57	5.0	50	0	115	53.4-129	54.56	5.37	20	
Benzene	57.52	5.0	50	0	115	37.4-144	53.28	7.65	20	
Carbon tetrachloride	63.17	5.0	50	0	126	33.8-150	56.57	11	20	
Chlorobenzene	60.68	5.0	50	0	121	52.4-132	57.9	4.69	20	
Chloroform	63.45	5.0	50	0	127	45.5-135	58.71	7.76	20	
cis-1,2-Dichloroethene	61.54	5.0	50	0	123	35.2-150	56.7	8.19	21	
Ethylbenzene	61.64	5.0	50	0	123	46.5-146	56.88	8.03	20	
m,p-Xylene	131.5	10	100	0	131	38.2-167	121.3	8.05	20	
Styrene	69.01	5.0	50	0	138	20.9-184	65.42	5.34	20	
Tetrachloroethene	56.93	5.0	50	0	114	55.2-134	51.75	9.53	20	
Toluene	59.33	5.0	50	0	119	32.7-140	55.42	6.81	20	
Trichloroethene	60.59	5.0	50	0	121	29.1-153	55.87	8.11	20	
Xylenes, Total	200.6	15	150	0	134	43.6-148	185.5	7.81	20	
<i>Surr: 4-Bromofluorobenzene</i>	<i>49.86</i>	<i>0</i>	<i>50</i>	<i>0</i>	<i>99.7</i>	<i>61-131</i>	<i>49.43</i>	<i>0.866</i>		
<i>Surr: Dibromofluoromethane</i>	<i>50.2</i>	<i>0</i>	<i>50</i>	<i>0</i>	<i>100</i>	<i>72-137</i>	<i>48.49</i>	<i>3.47</i>		
<i>Surr: Toluene-d8</i>	<i>50.95</i>	<i>0</i>	<i>50</i>	<i>0</i>	<i>102</i>	<i>80.4-119</i>	<i>51.13</i>	<i>0.353</i>		

The following samples were analyzed in this batch:

23051029-30A	23051029-31A	23051029-32A
--------------	--------------	--------------

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

**Client:** The Mannik & Smith Group, Inc.  
**Project:** Hillson Nut MS23-13; 401.ODAS003-19  
**WorkOrder:** 23051029

**QUALIFIERS,  
ACRONYMS, UNITS**

<u>Qualifier</u>	<u>Description</u>
*	Value exceeds Regulatory Limit
a	Not accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
J	Analyte detected below quantitation limit
n	Not offered for accreditation
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL

<u>Acronym</u>	<u>Description</u>
DUP	Method Duplicate
E	EPA Method
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
MBLK	Method Blank
MDL	Method Detection Limit
MQL	Method Quantitation Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PDS	Post Digestion Spike
PQL	Practical Quantitation Limit
SDL	Sample Detection Limit
SW	SW-846 Method

<u>Units Reported</u>	<u>Description</u>
% of sample	
µg/L	
mg/Kg-dry	

Sample Receipt Checklist

Client Name: **MANNIK&SMITH-COLUMBUS**

Date/Time Received: **24-May-23 09:53**

Work Order: **23051029**

Received by: **AB1**

Checklist completed by Alec Bolender 24-May-23  
eSignature | Date

Reviewed by: Rob Nieman 30-May-23  
eSignature | Date

Matrices: soil;water

Carrier name: Courier

- Shipping container/cooler in good condition? Yes  No  Not Present
- Custody seals intact on shipping container/cooler? Yes  No  Not Present
- Custody seals intact on sample bottles? Yes  No  Not Present
- Chain of custody present? Yes  No
- Chain of custody signed when relinquished and received? Yes  No
- Chain of custody agrees with sample labels? Yes  No
- Samples in proper container/bottle? Yes  No
- Sample containers intact? Yes  No
- Sufficient sample volume for indicated test? Yes  No
- All samples received within holding time? Yes  No
- Container/Temp Blank temperature in compliance? Yes  No
- Sample(s) received on ice? Yes  No

Temperature(s)/Thermometer(s):

Cooler(s)/Kit(s):

Date/Time sample(s) sent to storage:

Water - VOA vials have zero headspace? Yes  No  No VOA vials submitted

Water - pH acceptable upon receipt? Yes  No  N/A

pH adjusted? Yes  No  N/A

pH adjusted by:

Login Notes:



Client Contacted: \_\_\_\_\_ Date Contacted: \_\_\_\_\_ Person Contacted: \_\_\_\_\_

Contacted By: \_\_\_\_\_ Regarding: \_\_\_\_\_

Comments:

CorrectiveAction:



Ship To: **ALS | Environmental**  
 4388 Glendale Milford Rd.  
 Cincinnati, Ohio 45242  
 Phone: (513) 733-5336  
 Fax: (513) 733-5347

# Field Chain-of-Custody Record

Page **1** of **4**  
 REV 10/2017

**68341**

**23051029**

Date: 5/23/23 Purchase Order No.: \_\_\_\_\_  
 Company Name: The Mannik Smith Group, Inc. Project No: 161005003-19  
 Address: 1169 Dublin Rd Sampling Site: Hilsen Diet  
Columbus Ohio 43215 State: MS23-13 Zip: \_\_\_\_\_  
 Person to Contact: Matt Pesci Billing Address (if different): Ohio EPA  
 Email Address: mposie.manniksmithgroup.com OERR.  
 Telephone: 614-222-2022 Ext: 2028 Laboratory Government Center P.O. 1049  
 Alternate Contact: John Morhous Columbus, OH 43216-1049

REGULAR  Status  
 RUSH  Status  
 RESULTS REQUIRED BY: (Date)  
 CONTACT ALS ENVIRONMENTAL PRIOR TO SENDING SAMPLES

OH VAP:  YES  NO  
 BUSTR:  YES  NO  
 NELAC:  YES  NO

Preservation Key #	Sample Type / Matrix Key Abbr.	# of Sample Containers	ANALYSIS REQUESTED
9	5	3	BUSTR VOC (benzene) PAH, TPH, DRG, lead TPH GRD
9	5	3	
9	5	3	
9	5	3	
9	5	3	
9	5	3	
9	5	3	
9	5	3	
9	5	3	
9	5	3	
9	5	3	
9	5	3	
9	5	3	
9	5	3	

Matrix Key: A - Air B - Bulk S - Soil W - Water  
 Preservation Key: 1 - HCl 2 - HNO<sub>3</sub> 3 - H<sub>2</sub>SO<sub>4</sub> 4 - NaOH 5 - Na<sub>2</sub>S<sub>2</sub>O<sub>8</sub> 6 - NaHSO<sub>4</sub> 7 - NaOH/ZnAcetate 8 - Other 9 - 4°C

ALS LAB USE ONLY	COOLER TEMP: <b>4.9</b> °C	TAKEN WITH IR#:	119063	119069
COOLING METHOD:	NONE	COOLER	WET ICE	DRY ICE
DELIVERY METHOD:	CLIENT	DRY BOX	FEDEX	UPS
STD MAIL	PRTY MAIL	ALS	COURIER	OTHER:
CUSTODY SEALS:	NOT REQUIRED	COOLER	PACKAGE	SAMPLES
pH ADJUSTMENTS:				

Failure to complete all portions of this form may delay analysis. Please fill in this form LEGIBLY.

Relinquished By: (Signature)	Time / Date	Received By: (Signature)	Time / Date
<i>[Signature]</i>	1520 5/23/23	<i>[Signature]</i>	1530 5/23/23
Relinquished By: (Signature)	Time / Date	Received By: (Signature)	Time / Date
<i>[Signature]</i>	0945 5/24/23	<i>[Signature]</i>	0945 5/24/23
Relinquished By: (Signature)	Time / Date	Received By: (Signature)	Time / Date
<i>[Signature]</i>		<i>[Signature]</i>	

Notes:



Ship To: **ALS | Environmental**  
 4388 Glendale Milford Rd.  
 Cincinnati, Ohio 45242  
 Phone: (513) 733-5336  
 Fax: (513) 733-5347

# Field Chain-of-Custody Record

Page 2 of 4  
 AD 5-24-23 **68843** REV 10/2017

**2305 1029**

Date: 5/22/23 Purchase Order No.: \_\_\_\_\_  
 Company Name: Mannik & Smith Group Project No.: 401.0045003-19  
 Address: 1160 Dublin Rd Sampling Site: Hillson WA  
Columbus OH 43215 Zip 43215-13  
 Person to Contact: Matt Pesci Billing Address (if different): Ohio EPA, DERR  
 Email Address: mpesci@mmniksmithgroup.com leapass@turnermed.com le.1049  
 Telephone: 614-891-2222 Ex 2088 Columbus, Ohio 43216-1049  
 Alternate Contact: John Thornburg

ALS Lab ID	Sample ID / Description	Date	Time
11	SB-3 (5-7)	5/22/23	1345
12	SB-7 (0-2)	5/22/23	1420
13	SB-7 (5-7)	5/22/23	1425
14	SB-6 (0-2)	5/22/23	1440
15	SB-6 (3-8)	5/22/23	1455
16	SB-8 (6-2)	5/23/23	1000
17	SB-8 (6-8)	5/23/23	1010
18	SB-10 (0-2)	5/23/23	1125
19	SB-10 (5-7)	5/23/23	1140
20	SB-9 (0-2)	5/23/23	1240

Notes:

Matrix Key: A - Air B - Bulk S - Soil W - Water  
 Preservation Key: 1 - HCl 2 - HNO<sub>3</sub> 3 - H<sub>2</sub>SO<sub>4</sub> 4 - NaOH 5 - Na<sub>2</sub>S<sub>2</sub>O<sub>8</sub> 6 - NaHSO<sub>4</sub> 7 - NaOH/ZnAcetate 8 - Other 9 - 4°C

Failure to complete all portions of this form may delay analysis. Please fill in this form LEGIBLY.

Relinquished By: (Signature) [Signature] Time / Date 1530 5/24/23  
 Relinquished By: (Signature) [Signature] Time / Date 0945 5/24/23  
 Relinquished By: (Signature) [Signature] Time / Date 0945 5/24/23

Received By: (Signature) [Signature] Time / Date 1530 5/24/23  
 Received By: (Signature) [Signature] Time / Date 0945 5/24/23  
 Received By: (Signature) [Signature] Time / Date 0945 5/24/23

REGULAR Status  RUSH Status   
 RESULTS REQUIRED BY: (Date) \_\_\_\_\_  
 CONTACT ALS ENVIRONMENTAL PRIOR TO SENDING SAMPLES

OH VAP:  YES  NO BUSTR:  YES  NO NELAC:  YES  NO

ANALYSIS REQUESTED

Preservation Key # Sample Type / Matrix Key Abbr. # of Sample Containers

ANALYSIS REQUESTED

ALS Lab ID	Sample ID / Description	Date	Time	Analysis Requested
11	SB-3 (5-7)	5/22/23	1345	BUSTR VOC (ferrous), PAH, TPH DRG, lead, TPH GRD, VOC (ferrous), SVOC, PAH Metals, PCBs
12	SB-7 (0-2)	5/22/23	1420	
13	SB-7 (5-7)	5/22/23	1425	
14	SB-6 (0-2)	5/22/23	1440	
15	SB-6 (3-8)	5/22/23	1455	
16	SB-8 (6-2)	5/23/23	1000	
17	SB-8 (6-8)	5/23/23	1010	
18	SB-10 (0-2)	5/23/23	1125	
19	SB-10 (5-7)	5/23/23	1140	
20	SB-9 (0-2)	5/23/23	1240	

ALS LAB USE ONLY **120258**

COOLER TEMP: **4.9** °C TAKEN WITH IR#: 119063 119059

COOLING METHOD: NONE COOLER WET ICE DRY ICE ICE PACK

DELIVERY METHOD: CLIENT DROP BOX FEDEX UPS

STD MAIL PRTY MAIL ALS COURIER OTHER: \_\_\_\_\_

CUSTODY SEALS: NOT REQUIRED COOLER PACKAGE SAMPLES

pH ADJUSTMENTS: \_\_\_\_\_



Ship To: **ALS | Environmental**  
4388 Glendale Milford Rd.  
Cincinnati, Ohio 45242  
Phone: (513) 733-5336  
Fax: (513) 733-5347

# Field Chain-of-Custody Record

Page 3 of 4  
AB 5-21-23

68844

REV 10/2017

23051029

Date: 5/23/23  
Purchase Order No.:  
Company Name: Mannik Smith Group  
Project No.: 401.0045003-19  
Address: 1160 Dublin Rd.  
Columbus OH 43215  
City State Zip  
Person to Contact: Matt Pesci  
Billing Address (if different): Ohio EPA  
Email Address: mpesci@manniksmithgroup.com  
DIR AR  
Telephone #1: 614-222-2222  
Ex 2088  
Alternate Contact: John Thornburg  
Columbus, OH 43216-1049

REGULAR Status  
 RUSH Status  
RESULTS REQUIRED BY: (Date)  
CONTACT ALS ENVIRONMENTAL PRIOR TO SENDING SAMPLES

OH VAP:  YES  NO  
BUSTR:  YES  NO  
NELAC:  YES  NO

### ANALYSIS REQUESTED

Preservation Key #	Sample Type / Matrix Key Abbr.	# of Sample Containers	Analysis Requested
9	VOC (terncore)	2	1
9	SPEC, ACRA Metals (PSS)	2	1
9		2	1
9		2	1
9		2	1
9		2	1
9		2	1
9		2	1
9		2	1
9		2	1
9		2	1

Notes:

Preservation Key: 1 - HCl, 2 - HNO<sub>3</sub>, 3 - H<sub>2</sub>SO<sub>4</sub>, 4 - NaOH, 5 - Na<sub>2</sub>S<sub>2</sub>O<sub>8</sub>, 6 - NaHSO<sub>4</sub>, 7 - NaOH/ZnAcetate, 8 - Other, 9 - 4°C, Matrix Key: A - Air, B - Bulk, S - Soil, W - Water

Failure to complete all portions of this form may delay analysis. Please fill in this form LEGIBLY.

Relinquished By: (Signature)	<u>[Signature]</u>	Time / Date	<u>1520 5/23/23</u>
Relinquished By: (Signature)	<u>[Signature]</u>	Time / Date	<u>0945 5/24/23</u>
Relinquished By: (Signature)	<u>[Signature]</u>	Time / Date	<u>524 5/23/23</u>

ALS LAB USE ONLY  
COOLER TEMP: 4.9 °C  
TAKEN WITH IR#: 119063  
COOLING METHOD: NONE  
CLIENT: ALS  
DELIVERY METHOD: FEDEX  
STD MAIL: ALS  
CUSTODY SEALS: NOT REQUIRED  
pH ADJUSTMENTS:





Ship To: **ALS | Environmental**  
 4388 Glendale Milford Rd.  
 Cincinnati, Ohio 45242  
 Phone: (513) 733-5336  
 Fax: (513) 733-5347

# Field Chain-of-Custody Record

Page 4 of 4

40 82423 68846

REV 10/2017

REGULAR  Status  
 RUSH  Status  
 RESULTS REQUIRED BY: (Date)  
 CONTACT ALS ENVIRONMENTAL PRIOR TO SENDING SAMPLES

OH VAP:  YES  NO  
 BUSTR:  YES  NO  
 NELAC:  YES  NO

Date: 5/23/23  
 Purchase Order No.:  
 Company Name: Merritt-Smith Group  
 Project No.: 401 045003-19  
 Address: 1160 Dublin Rd  
 Sampling Site: Hickson Nut  
Columbus OH 43215  
 Billing Address (if different): Ohio EPA  
 Person to Contact: Matt Pesci  
 Email Address: mpesci@merrittsmithgroup.com  
 Telephone: 614 891-2222  
 Alternate Contact: John Thornburg  
Columbus, OH 43246-1049

ALS Lab ID	Sample ID / Description	Date	Time
<u>30</u>	<u>TW-4</u>	<u>5/23/23</u>	<u>1600</u>
<u>31</u>	<u>TW-2</u>	<u>5/23/23</u>	<u>1645</u>
<u>32</u>	<u>TW-6</u>	<u>5/23/23</u>	<u>1500</u>

Notes:

Preservation Key #	Sample Type / Matrix Key Abbr.	# of Sample Containers	ANALYSIS REQUESTED
			EDB (HCL) PATH (C-4) Lead (HNO3) VOC (HCL) SVOC (C-4) RCRA Metals (HNO3)
			BUSTR VEGs (HCL) PCBs (C-4)

Matrix Key: A - Air B - Bulk S - Soil W - Water  
 9 - 4°C 8 - Other 7 - NaHSO<sub>4</sub> 6 - NaHSO<sub>3</sub> 5 - Na<sub>2</sub>S<sub>2</sub>O<sub>8</sub> 4 - NaOH 3 - H<sub>2</sub>SO<sub>4</sub>

ALS LAB USE ONLY 120258  
 COOLER TEMP: 4.9 °C TAKEN WITH IR#: 119063 119059 ICE PACK  
 COOLING METHOD: NONE COOLER WET ICE DRY ICE FEDEX UPS  
 DELIVERY METHOD: CLIENT DROP-BOX FEDEX  
 STD MAIL PRTY MAIL ALS COURIER OTHER:  
 CUSTODY SEALS: NOT REQUIRED COOLER PACKAGE SAMPLES  
 pH ADJUSTMENTS:

Failure to complete all portions of this form may delay analysis. Please fill in this form LEGIBLY.

Relinquished By: (Signature) <u>[Signature]</u>	Time / Date <u>1500 5/23/23</u>	Received By: (Signature) <u>[Signature]</u>	Time / Date <u>1530 5/23/23</u>
Relinquished By: (Signature) <u>[Signature]</u>	Time / Date <u>0945 5/24/23</u>	Received By: (Signature) <u>[Signature]</u>	Time / Date <u>524 5/23 0953</u>
Relinquished By: (Signature) <u>[Signature]</u>	Time / Date <u>ALS</u>	Received By: (Signature) <u>[Signature]</u>	Time / Date <u>ALS</u>



05-Jun-2023

Matt Pesci  
The Mannik & Smith Group, Inc.  
1160 Dublin Road  
Suite 100  
Columbus, OH 43215

Re: **Hillson Nut; MS23-13; 401ODAS003-19**

Work Order: **23051093**

Dear Matt,

ALS Environmental received 6 samples on 24-May-2023 03:00 PM for the analyses presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental and for only the analyses requested.

QC sample results for this data met laboratory specifications. Any exceptions are noted in the Case Narrative, or noted with qualifiers in the report or QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained from ALS Laboratory Group. Samples will be disposed in 30 days unless storage arrangements are made.

The total number of pages in this report is 76.

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

Sincerely,

**Rob Nieman**

Electronically approved by: Rob Nieman

Rob Nieman  
Project Manager

## Report of Laboratory Analysis

ADDRESS 4388 Glendale Milford Rd Cincinnati, OH 45242- | PHONE (513) 733-5336 | FAX (513) 733-5347

ALS GROUP USA, CORP Part of the ALS Laboratory Group A Campbell Brothers Limited Company

Environmental 

[www.alsglobal.com](http://www.alsglobal.com)

RIGHT SOLUTIONS RIGHT PARTNER

**Client:** The Mannik & Smith Group, Inc.  
**Project:** Hillson Nut; MS23-13; 401ODAS003-19  
**Work Order:** 23051093

**Work Order Sample Summary**

<u>Lab Samp ID</u>	<u>Client Sample ID</u>	<u>Matrix</u>	<u>Tag Number</u>	<u>Collection Date</u>	<u>Date Received</u>	<u>Hold</u>
23051093-01	SB-11 (0-2')	Soil		5/23/2023 15:40	5/24/2023 15:00	<input type="checkbox"/>
23051093-02	SB-13 (0-2')	Soil		5/23/2023 15:50	5/24/2023 15:00	<input type="checkbox"/>
23051093-03	SB-16 (0-2')	Soil		5/23/2023 16:10	5/24/2023 15:00	<input type="checkbox"/>
23051093-04	SB-18 (0-2')	Soil		5/23/2023 16:30	5/24/2023 15:00	<input type="checkbox"/>
23051093-05	TW-10	Water		5/23/2023 15:45	5/24/2023 15:00	<input type="checkbox"/>
23051093-06	TW-8	Water		5/23/2023 16:00	5/24/2023 15:00	<input type="checkbox"/>

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**Client:** The Mannik & Smith Group, Inc.  
**Project:** Hillson Nut; MS23-13; 401ODAS003-19  
**Work Order:** 23051093

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**Case Narrative**

The analyses requested were analyzed according to Ohio Voluntary Action Program requirements. Affidavits are available upon request.

The analytical data provided relates directly to the samples received by ALS Laboratory Group and for only the analyses requested.

QC sample results for this data met laboratory specifications. Any exceptions are noted in the Case Narrative, or noted with qualifiers in the report or QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained from ALS Laboratory Group. Samples will be disposed in 30 days unless storage arrangements are made.

# ALS Environmental

Date: 05-Jun-23

**Client:** The Mannik & Smith Group, Inc.  
**Project:** Hillson Nut; MS23-13; 401ODAS003-19  
**Sample ID:** SB-11 (0-2')  
**Collection Date:** 5/23/2023 03:40 PM

**Work Order:** 23051093  
**Lab ID:** 23051093-01  
**Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
<b>PCBS</b>			<b>SW8082</b>	Prep: SW3546 5/31/23 17:07		Analyst: <b>TSA</b>
Aroclor 1016	ND		0.11	mg/Kg-dry	1	6/1/2023 05:36 AM
Aroclor 1221	ND		0.22	mg/Kg-dry	1	6/1/2023 05:36 AM
Aroclor 1232	ND		0.11	mg/Kg-dry	1	6/1/2023 05:36 AM
Aroclor 1242	ND		0.11	mg/Kg-dry	1	6/1/2023 05:36 AM
Aroclor 1248	ND		0.11	mg/Kg-dry	1	6/1/2023 05:36 AM
Aroclor 1254	ND		0.11	mg/Kg-dry	1	6/1/2023 05:36 AM
Aroclor 1260	ND		0.11	mg/Kg-dry	1	6/1/2023 05:36 AM
Aroclor 1262	ND		0.11	mg/Kg-dry	1	6/1/2023 05:36 AM
Aroclor 1268	ND		0.11	mg/Kg-dry	1	6/1/2023 05:36 AM
Surr: Decachlorobiphenyl	96.0		7.32-154	%REC	1	6/1/2023 05:36 AM
Surr: Tetrachloro-m-xylene	82.0		33.5-152	%REC	1	6/1/2023 05:36 AM
<b>MOISTURE</b>			<b>SM2540B</b>			Analyst: <b>CW</b>
Moisture	8.0			% of sample	1	6/1/2023
<b>MERCURY BY CVAA</b>			<b>SW7471A</b>	Prep: EPA 7471 5/30/23 13:51		Analyst: <b>SLT</b>
Mercury	1.2		0.32	mg/Kg-dry	1	6/2/2023 01:23 PM
<b>METALS BY ICP</b>			<b>SW6010B</b>	Prep: SW3050B 5/30/23 12:24		Analyst: <b>SLT</b>
Arsenic	6.3		5.0	mg/Kg-dry	1	5/30/2023 04:43 PM
Barium	140		20	mg/Kg-dry	1	5/30/2023 04:43 PM
Cadmium	2.3		1.0	mg/Kg-dry	1	5/30/2023 04:43 PM
Chromium	20		10	mg/Kg-dry	1	5/30/2023 04:43 PM
Lead	26		20	mg/Kg-dry	1	5/30/2023 04:43 PM
Selenium	ND		3.0	mg/Kg-dry	1	5/30/2023 04:43 PM
Silver	ND		5.0	mg/Kg-dry	1	5/30/2023 04:43 PM
<b>SEMI-VOLATILE ORGANIC COMPOUNDS</b>			<b>SW8270C</b>	Prep: SW3546 5/30/23 11:26		Analyst: <b>RA</b>
1,2,4,5-Tetrachlorobenzene	ND		0.36	mg/Kg-dry	1	6/1/2023 09:01 PM
1,2,4-Trichlorobenzene	ND		0.36	mg/Kg-dry	1	6/1/2023 09:01 PM
1,2-Dichlorobenzene	ND		0.36	mg/Kg-dry	1	6/1/2023 09:01 PM
1,3-Dichlorobenzene	ND		0.36	mg/Kg-dry	1	6/1/2023 09:01 PM
1,3-Dinitrobenzene	ND		0.36	mg/Kg-dry	1	6/1/2023 09:01 PM
1,4-Dichlorobenzene	ND		0.36	mg/Kg-dry	1	6/1/2023 09:01 PM
1-Methylnaphthalene	ND		0.22	mg/Kg-dry	1	6/1/2023 09:01 PM
1-Naphthylamine	ND		0.36	mg/Kg-dry	1	6/1/2023 09:01 PM
2,3,4,6-Tetrachlorophenol	ND		0.36	mg/Kg-dry	1	6/1/2023 09:01 PM
2,4,5-Trichlorophenol	ND		0.36	mg/Kg-dry	1	6/1/2023 09:01 PM
2,4,6-Trichlorophenol	ND		0.36	mg/Kg-dry	1	6/1/2023 09:01 PM
2,4-Dichlorophenol	ND		0.36	mg/Kg-dry	1	6/1/2023 09:01 PM
2,4-Dimethylphenol	ND		0.36	mg/Kg-dry	1	6/1/2023 09:01 PM

Note:

# ALS Environmental

Date: 05-Jun-23

**Client:** The Mannik & Smith Group, Inc.  
**Project:** Hillson Nut; MS23-13; 401ODAS003-19  
**Sample ID:** SB-11 (0-2')  
**Collection Date:** 5/23/2023 03:40 PM

**Work Order:** 23051093  
**Lab ID:** 23051093-01  
**Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
2,4-Dinitrophenol	ND		1.8	mg/Kg-dry	1	6/1/2023 09:01 PM
2,4-Dinitrotoluene	ND		0.36	mg/Kg-dry	1	6/1/2023 09:01 PM
2,6-Dichlorophenol	ND		0.36	mg/Kg-dry	1	6/1/2023 09:01 PM
2,6-Dinitrotoluene	ND		0.36	mg/Kg-dry	1	6/1/2023 09:01 PM
2-Acetylaminofluorene	ND		0.36	mg/Kg-dry	1	6/1/2023 09:01 PM
2-Chloronaphthalene	ND		0.36	mg/Kg-dry	1	6/1/2023 09:01 PM
2-Chlorophenol	ND		0.36	mg/Kg-dry	1	6/1/2023 09:01 PM
2-Methylnaphthalene	ND		0.22	mg/Kg-dry	1	6/1/2023 09:01 PM
2-Methylphenol	ND		0.36	mg/Kg-dry	1	6/1/2023 09:01 PM
2-Naphthylamine	ND		0.36	mg/Kg-dry	1	6/1/2023 09:01 PM
2-Nitroaniline	ND		1.8	mg/Kg-dry	1	6/1/2023 09:01 PM
2-Nitrophenol	ND		0.36	mg/Kg-dry	1	6/1/2023 09:01 PM
2-Picoline	ND		0.36	mg/Kg-dry	1	6/1/2023 09:01 PM
3&4-Methylphenol	ND		0.36	mg/Kg-dry	1	6/1/2023 09:01 PM
3,3'-Dichlorobenzidine	ND		0.71	mg/Kg-dry	1	6/1/2023 09:01 PM
3-Methylcholanthrene	ND		0.36	mg/Kg-dry	1	6/1/2023 09:01 PM
3-Nitroaniline	ND		1.8	mg/Kg-dry	1	6/1/2023 09:01 PM
4,6-Dinitro-2-methylphenol	ND		1.8	mg/Kg-dry	1	6/1/2023 09:01 PM
4-Aminobiphenyl	ND		0.71	mg/Kg-dry	1	6/1/2023 09:01 PM
4-Bromophenyl phenyl ether	ND		0.36	mg/Kg-dry	1	6/1/2023 09:01 PM
4-Chloro-3-methylphenol	ND		0.71	mg/Kg-dry	1	6/1/2023 09:01 PM
4-Chloroaniline	ND		0.71	mg/Kg-dry	1	6/1/2023 09:01 PM
4-Chlorophenyl phenyl ether	ND		0.36	mg/Kg-dry	1	6/1/2023 09:01 PM
4-Nitroaniline	ND		0.71	mg/Kg-dry	1	6/1/2023 09:01 PM
4-Nitrophenol	ND		1.8	mg/Kg-dry	1	6/1/2023 09:01 PM
4-Nitroquinoline 1-oxide	ND		1.8	mg/Kg-dry	1	6/1/2023 09:01 PM
5-Nitro-o-toluidine	ND		0.36	mg/Kg-dry	1	6/1/2023 09:01 PM
7,12-Dimethylbenz(a)anthracene	ND		0.36	mg/Kg-dry	1	6/1/2023 09:01 PM
Acenaphthene	ND		0.22	mg/Kg-dry	1	6/1/2023 09:01 PM
Acenaphthylene	ND		0.22	mg/Kg-dry	1	6/1/2023 09:01 PM
Acetophenone	ND		0.36	mg/Kg-dry	1	6/1/2023 09:01 PM
Aniline	ND		0.36	mg/Kg-dry	1	6/1/2023 09:01 PM
Anthracene	ND		0.22	mg/Kg-dry	1	6/1/2023 09:01 PM
Azobenzene	ND		0.36	mg/Kg-dry	1	6/1/2023 09:01 PM
Benzidine	ND		0.36	mg/Kg-dry	1	6/1/2023 09:01 PM
<b>Benzo(a)anthracene</b>	<b>0.45</b>		<b>0.11</b>	<b>mg/Kg-dry</b>	1	6/1/2023 09:01 PM
<b>Benzo(a)pyrene</b>	<b>0.44</b>		<b>0.11</b>	<b>mg/Kg-dry</b>	1	6/1/2023 09:01 PM
<b>Benzo(b)fluoranthene</b>	<b>0.54</b>		<b>0.22</b>	<b>mg/Kg-dry</b>	1	6/1/2023 09:01 PM
<b>Benzo(g,h,i)perylene</b>	<b>0.30</b>		<b>0.22</b>	<b>mg/Kg-dry</b>	1	6/1/2023 09:01 PM
<b>Benzo(k)fluoranthene</b>	<b>0.25</b>		<b>0.22</b>	<b>mg/Kg-dry</b>	1	6/1/2023 09:01 PM

Note:

# ALS Environmental

Date: 05-Jun-23

**Client:** The Mannik & Smith Group, Inc.  
**Project:** Hillson Nut; MS23-13; 401ODAS003-19  
**Sample ID:** SB-11 (0-2')  
**Collection Date:** 5/23/2023 03:40 PM

**Work Order:** 23051093  
**Lab ID:** 23051093-01  
**Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Benzyl alcohol	ND		0.71	mg/Kg-dry	1	6/1/2023 09:01 PM
Bis(2-chloroethoxy)methane	ND		0.36	mg/Kg-dry	1	6/1/2023 09:01 PM
Bis(2-chloroethyl)ether	ND		0.36	mg/Kg-dry	1	6/1/2023 09:01 PM
Bis(2-chloroisopropyl)ether	ND		0.36	mg/Kg-dry	1	6/1/2023 09:01 PM
Bis(2-ethylhexyl)phthalate	ND		0.36	mg/Kg-dry	1	6/1/2023 09:01 PM
<b>Butyl benzyl phthalate</b>	<b>0.55</b>		<b>0.36</b>	<b>mg/Kg-dry</b>	1	6/1/2023 09:01 PM
Carbazole	ND		0.22	mg/Kg-dry	1	6/1/2023 09:01 PM
<b>Chrysene</b>	<b>0.50</b>		<b>0.22</b>	<b>mg/Kg-dry</b>	1	6/1/2023 09:01 PM
Dibenzo(a,h)anthracene	ND		0.11	mg/Kg-dry	1	6/1/2023 09:01 PM
Dibenzofuran	ND		0.22	mg/Kg-dry	1	6/1/2023 09:01 PM
Diethyl phthalate	ND		0.36	mg/Kg-dry	1	6/1/2023 09:01 PM
Dimethyl phthalate	ND		0.36	mg/Kg-dry	1	6/1/2023 09:01 PM
Di-n-butyl phthalate	ND		0.36	mg/Kg-dry	1	6/1/2023 09:01 PM
Di-n-octyl phthalate	ND		0.36	mg/Kg-dry	1	6/1/2023 09:01 PM
Dinoseb	ND		0.36	mg/Kg-dry	1	6/1/2023 09:01 PM
Diphenylamine	ND		0.36	mg/Kg-dry	1	6/1/2023 09:01 PM
Ethyl methanesulfonate	ND		0.36	mg/Kg-dry	1	6/1/2023 09:01 PM
<b>Fluoranthene</b>	<b>1.0</b>		<b>0.22</b>	<b>mg/Kg-dry</b>	1	6/1/2023 09:01 PM
Fluorene	ND		0.22	mg/Kg-dry	1	6/1/2023 09:01 PM
Hexachlorobenzene	ND		0.36	mg/Kg-dry	1	6/1/2023 09:01 PM
Hexachlorobutadiene	ND		0.36	mg/Kg-dry	1	6/1/2023 09:01 PM
Hexachlorocyclopentadiene	ND		0.36	mg/Kg-dry	1	6/1/2023 09:01 PM
Hexachloroethane	ND		0.36	mg/Kg-dry	1	6/1/2023 09:01 PM
<b>Indeno(1,2,3-cd)pyrene</b>	<b>0.26</b>		<b>0.11</b>	<b>mg/Kg-dry</b>	1	6/1/2023 09:01 PM
Isophorone	ND		0.36	mg/Kg-dry	1	6/1/2023 09:01 PM
Isosafrole	ND		0.36	mg/Kg-dry	1	6/1/2023 09:01 PM
Methapyrilene	ND		1.8	mg/Kg-dry	1	6/1/2023 09:01 PM
Methyl methanesulfonate	ND		0.36	mg/Kg-dry	1	6/1/2023 09:01 PM
Naphthalene	ND		0.22	mg/Kg-dry	1	6/1/2023 09:01 PM
Nitrobenzene	ND		0.36	mg/Kg-dry	1	6/1/2023 09:01 PM
N-Nitrosodiethylamine	ND		0.36	mg/Kg-dry	1	6/1/2023 09:01 PM
N-Nitrosodimethylamine	ND		0.36	mg/Kg-dry	1	6/1/2023 09:01 PM
N-Nitroso-di-n-butylamine	ND		0.36	mg/Kg-dry	1	6/1/2023 09:01 PM
N-Nitrosodi-n-propylamine	ND		0.36	mg/Kg-dry	1	6/1/2023 09:01 PM
N-Nitrosomethylethylamine	ND		0.36	mg/Kg-dry	1	6/1/2023 09:01 PM
N-Nitrosomorpholine	ND		0.36	mg/Kg-dry	1	6/1/2023 09:01 PM
N-Nitrosopiperidine	ND		0.36	mg/Kg-dry	1	6/1/2023 09:01 PM
N-Nitrosopyrrolidine	ND		0.36	mg/Kg-dry	1	6/1/2023 09:01 PM
o-Toluidine	ND		1.8	mg/Kg-dry	1	6/1/2023 09:01 PM
p-Dimethylaminoazobenzene	ND		0.36	mg/Kg-dry	1	6/1/2023 09:01 PM

**Note:**

# ALS Environmental

Date: 05-Jun-23

**Client:** The Mannik & Smith Group, Inc.  
**Project:** Hillson Nut; MS23-13; 401ODAS003-19  
**Sample ID:** SB-11 (0-2')  
**Collection Date:** 5/23/2023 03:40 PM

**Work Order:** 23051093  
**Lab ID:** 23051093-01  
**Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Pentachlorobenzene	ND		0.36	mg/Kg-dry	1	6/1/2023 09:01 PM
Pentachloroethane	ND		0.36	mg/Kg-dry	1	6/1/2023 09:01 PM
Pentachloronitrobenzene	ND		0.71	mg/Kg-dry	1	6/1/2023 09:01 PM
Pentachlorophenol	ND		1.8	mg/Kg-dry	1	6/1/2023 09:01 PM
Phenacetin	ND		0.71	mg/Kg-dry	1	6/1/2023 09:01 PM
<b>Phenanthrene</b>	<b>0.73</b>		<b>0.22</b>	<b>mg/Kg-dry</b>	1	6/1/2023 09:01 PM
Phenol	ND		0.36	mg/Kg-dry	1	6/1/2023 09:01 PM
<b>Pyrene</b>	<b>0.81</b>		<b>0.22</b>	<b>mg/Kg-dry</b>	1	6/1/2023 09:01 PM
Pyridine	ND		0.36	mg/Kg-dry	1	6/1/2023 09:01 PM
Safrole	ND		0.36	mg/Kg-dry	1	6/1/2023 09:01 PM
<i>Surr: 2,4,6-Tribromophenol</i>	0.591	S	14.2-136	%REC	1	6/1/2023 09:01 PM
<i>Surr: 2-Fluorobiphenyl</i>	63.6		30-116	%REC	1	6/1/2023 09:01 PM
<i>Surr: 2-Fluorophenol</i>	2.07	S	24-105	%REC	1	6/1/2023 09:01 PM
<i>Surr: 4-Terphenyl-d14</i>	64.3		27.3-138	%REC	1	6/1/2023 09:01 PM
<i>Surr: Nitrobenzene-d5</i>	49.0		23.7-109	%REC	1	6/1/2023 09:01 PM
<i>Surr: Phenol-d5</i>	17.1	S	24.9-103	%REC	1	6/1/2023 09:01 PM

## VOLATILE ORGANIC COMPOUNDS

SW8260B

Analyst: LAK

1,1,1,2-Tetrachloroethane	ND		0.0054	mg/Kg-dry	1	5/25/2023 04:57 PM
1,1,1-Trichloroethane	ND		0.0054	mg/Kg-dry	1	5/25/2023 04:57 PM
1,1,2,2-Tetrachloroethane	ND		0.0054	mg/Kg-dry	1	5/25/2023 04:57 PM
1,1,2-Trichloroethane	ND		0.0054	mg/Kg-dry	1	5/25/2023 04:57 PM
1,1-Dichloroethane	ND		0.0054	mg/Kg-dry	1	5/25/2023 04:57 PM
1,1-Dichloroethene	ND		0.0054	mg/Kg-dry	1	5/25/2023 04:57 PM
1,1-Dichloropropene	ND		0.0054	mg/Kg-dry	1	5/25/2023 04:57 PM
1,2,3-Trichlorobenzene	ND		0.0054	mg/Kg-dry	1	5/25/2023 04:57 PM
1,2,3-Trichloropropane	ND		0.0054	mg/Kg-dry	1	5/25/2023 04:57 PM
1,2,4-Trichlorobenzene	ND		0.0054	mg/Kg-dry	1	5/25/2023 04:57 PM
1,2,4-Trimethylbenzene	ND		0.0054	mg/Kg-dry	1	5/25/2023 04:57 PM
1,2-Dibromo-3-chloropropane	ND		0.0054	mg/Kg-dry	1	5/25/2023 04:57 PM
1,2-Dibromoethane	ND		0.0054	mg/Kg-dry	1	5/25/2023 04:57 PM
1,2-Dichlorobenzene	ND		0.0054	mg/Kg-dry	1	5/25/2023 04:57 PM
1,2-Dichloroethane	ND		0.0054	mg/Kg-dry	1	5/25/2023 04:57 PM
1,2-Dichloropropane	ND		0.0054	mg/Kg-dry	1	5/25/2023 04:57 PM
1,3,5-Trimethylbenzene	ND		0.0054	mg/Kg-dry	1	5/25/2023 04:57 PM
1,3-Dichlorobenzene	ND		0.0054	mg/Kg-dry	1	5/25/2023 04:57 PM
1,3-Dichloropropane	ND		0.0054	mg/Kg-dry	1	5/25/2023 04:57 PM
1,4-Dichlorobenzene	ND		0.0054	mg/Kg-dry	1	5/25/2023 04:57 PM
2,2-Dichloropropane	ND		0.0054	mg/Kg-dry	1	5/25/2023 04:57 PM
2-Butanone	ND		0.054	mg/Kg-dry	1	5/25/2023 04:57 PM
2-Chlorotoluene	ND		0.0054	mg/Kg-dry	1	5/25/2023 04:57 PM

Note:



# ALS Environmental

Date: 05-Jun-23

**Client:** The Mannik & Smith Group, Inc.  
**Project:** Hillson Nut; MS23-13; 401ODAS003-19  
**Sample ID:** SB-11 (0-2')  
**Collection Date:** 5/23/2023 03:40 PM

**Work Order:** 23051093  
**Lab ID:** 23051093-01  
**Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
2-Hexanone	ND		0.0054	mg/Kg-dry	1	5/25/2023 04:57 PM
4-Chlorotoluene	ND		0.0054	mg/Kg-dry	1	5/25/2023 04:57 PM
4-Methyl-2-pentanone	ND		0.0054	mg/Kg-dry	1	5/25/2023 04:57 PM
Acetone	ND		0.054	mg/Kg-dry	1	5/25/2023 04:57 PM
Benzene	ND		0.0054	mg/Kg-dry	1	5/25/2023 04:57 PM
Bromobenzene	ND		0.0054	mg/Kg-dry	1	5/25/2023 04:57 PM
Bromochloromethane	ND		0.0054	mg/Kg-dry	1	5/25/2023 04:57 PM
Bromodichloromethane	ND		0.0054	mg/Kg-dry	1	5/25/2023 04:57 PM
Bromoform	ND		0.0054	mg/Kg-dry	1	5/25/2023 04:57 PM
Bromomethane	ND		0.0054	mg/Kg-dry	1	5/25/2023 04:57 PM
Carbon disulfide	ND		0.0054	mg/Kg-dry	1	5/25/2023 04:57 PM
Carbon tetrachloride	ND		0.0054	mg/Kg-dry	1	5/25/2023 04:57 PM
Chlorobenzene	ND		0.0054	mg/Kg-dry	1	5/25/2023 04:57 PM
Chloroethane	ND		0.0054	mg/Kg-dry	1	5/25/2023 04:57 PM
Chloroform	ND		0.0054	mg/Kg-dry	1	5/25/2023 04:57 PM
Chloromethane	ND		0.0054	mg/Kg-dry	1	5/25/2023 04:57 PM
cis-1,2-Dichloroethene	ND		0.0054	mg/Kg-dry	1	5/25/2023 04:57 PM
cis-1,3-Dichloropropene	ND		0.0054	mg/Kg-dry	1	5/25/2023 04:57 PM
Dibromochloromethane	ND		0.0054	mg/Kg-dry	1	5/25/2023 04:57 PM
Dibromomethane	ND		0.0054	mg/Kg-dry	1	5/25/2023 04:57 PM
Dichlorodifluoromethane	ND		0.0054	mg/Kg-dry	1	5/25/2023 04:57 PM
Ethylbenzene	ND		0.0054	mg/Kg-dry	1	5/25/2023 04:57 PM
Hexachlorobutadiene	ND		0.0054	mg/Kg-dry	1	5/25/2023 04:57 PM
Isopropylbenzene	ND		0.0054	mg/Kg-dry	1	5/25/2023 04:57 PM
m,p-Xylene	ND		0.0054	mg/Kg-dry	1	5/25/2023 04:57 PM
Methyl tert-butyl ether	ND		0.0054	mg/Kg-dry	1	5/25/2023 04:57 PM
Methylene chloride	ND		0.022	mg/Kg-dry	1	5/25/2023 04:57 PM
Naphthalene	ND		0.0054	mg/Kg-dry	1	5/25/2023 04:57 PM
n-Butylbenzene	ND		0.0054	mg/Kg-dry	1	5/25/2023 04:57 PM
n-Propylbenzene	ND		0.0054	mg/Kg-dry	1	5/25/2023 04:57 PM
o-Xylene	ND		0.0054	mg/Kg-dry	1	5/25/2023 04:57 PM
p-Isopropyltoluene	ND		0.0054	mg/Kg-dry	1	5/25/2023 04:57 PM
sec-Butylbenzene	ND		0.0054	mg/Kg-dry	1	5/25/2023 04:57 PM
Styrene	ND		0.0054	mg/Kg-dry	1	5/25/2023 04:57 PM
tert-Butylbenzene	ND		0.0054	mg/Kg-dry	1	5/25/2023 04:57 PM
Tetrachloroethene	ND		0.0054	mg/Kg-dry	1	5/25/2023 04:57 PM
Toluene	ND		0.0054	mg/Kg-dry	1	5/25/2023 04:57 PM
trans-1,2-Dichloroethene	ND		0.0054	mg/Kg-dry	1	5/25/2023 04:57 PM
trans-1,3-Dichloropropene	ND		0.0054	mg/Kg-dry	1	5/25/2023 04:57 PM
Trichloroethene	ND		0.0054	mg/Kg-dry	1	5/25/2023 04:57 PM

**Note:**

# ALS Environmental

Date: 05-Jun-23

**Client:** The Mannik & Smith Group, Inc.  
**Project:** Hillson Nut; MS23-13; 401ODAS003-19  
**Sample ID:** SB-11 (0-2')  
**Collection Date:** 5/23/2023 03:40 PM

**Work Order:** 23051093  
**Lab ID:** 23051093-01  
**Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Trichlorofluoromethane	ND		0.0054	mg/Kg-dry	1	5/25/2023 04:57 PM
Vinyl chloride	ND		0.0054	mg/Kg-dry	1	5/25/2023 04:57 PM
Xylenes, Total	ND		0.011	mg/Kg-dry	1	5/25/2023 04:57 PM
<i>Surr: 4-Bromofluorobenzene</i>	105		60-140	%REC	1	5/25/2023 04:57 PM
<i>Surr: Dibromofluoromethane</i>	101		60-140	%REC	1	5/25/2023 04:57 PM
<i>Surr: Toluene-d8</i>	97.3		60-140	%REC	1	5/25/2023 04:57 PM

**Note:**

# ALS Environmental

Date: 05-Jun-23

**Client:** The Mannik & Smith Group, Inc.  
**Project:** Hillson Nut; MS23-13; 401ODAS003-19  
**Sample ID:** SB-13 (0-2')  
**Collection Date:** 5/23/2023 03:50 PM

**Work Order:** 23051093  
**Lab ID:** 23051093-02  
**Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
<b>PCBS</b>			<b>SW8082</b>	Prep: SW3546 5/31/23 17:07		Analyst: <b>TSA</b>
Aroclor 1016	ND		0.12	mg/Kg-dry	1	6/1/2023 05:52 AM
Aroclor 1221	ND		0.24	mg/Kg-dry	1	6/1/2023 05:52 AM
Aroclor 1232	ND		0.12	mg/Kg-dry	1	6/1/2023 05:52 AM
Aroclor 1242	ND		0.12	mg/Kg-dry	1	6/1/2023 05:52 AM
Aroclor 1248	ND		0.12	mg/Kg-dry	1	6/1/2023 05:52 AM
Aroclor 1254	ND		0.12	mg/Kg-dry	1	6/1/2023 05:52 AM
Aroclor 1260	ND		0.12	mg/Kg-dry	1	6/1/2023 05:52 AM
Aroclor 1262	ND		0.12	mg/Kg-dry	1	6/1/2023 05:52 AM
Aroclor 1268	ND		0.12	mg/Kg-dry	1	6/1/2023 05:52 AM
Surr: Decachlorobiphenyl	78.0		7.32-154	%REC	1	6/1/2023 05:52 AM
Surr: Tetrachloro-m-xylene	78.0		33.5-152	%REC	1	6/1/2023 05:52 AM
<b>MOISTURE</b>			<b>SM2540B</b>			Analyst: <b>CW</b>
Moisture	16			% of sample	1	6/1/2023
<b>MERCURY BY CVAA</b>			<b>SW7471A</b>	Prep: EPA 7471 5/30/23 13:51		Analyst: <b>SLT</b>
Mercury	ND		0.31	mg/Kg-dry	1	6/2/2023 01:29 PM
<b>METALS BY ICP</b>			<b>SW6010B</b>	Prep: SW3050B 5/30/23 12:24		Analyst: <b>SLT</b>
Arsenic	8.5		5.7	mg/Kg-dry	1	5/30/2023 04:57 PM
Barium	34		23	mg/Kg-dry	1	5/30/2023 04:57 PM
Cadmium	1.9		1.1	mg/Kg-dry	1	5/30/2023 04:57 PM
Chromium	ND		11	mg/Kg-dry	1	5/30/2023 04:57 PM
Lead	ND		23	mg/Kg-dry	1	5/30/2023 04:57 PM
Selenium	ND		3.4	mg/Kg-dry	1	5/30/2023 04:57 PM
Silver	ND		5.7	mg/Kg-dry	1	5/30/2023 04:57 PM
<b>SEMI-VOLATILE ORGANIC COMPOUNDS</b>			<b>SW8270C</b>	Prep: SW3546 5/30/23 11:26		Analyst: <b>RA</b>
1,2,4,5-Tetrachlorobenzene	ND		0.39	mg/Kg-dry	1	6/1/2023 09:23 PM
1,2,4-Trichlorobenzene	ND		0.39	mg/Kg-dry	1	6/1/2023 09:23 PM
1,2-Dichlorobenzene	ND		0.39	mg/Kg-dry	1	6/1/2023 09:23 PM
1,3-Dichlorobenzene	ND		0.39	mg/Kg-dry	1	6/1/2023 09:23 PM
1,3-Dinitrobenzene	ND		0.39	mg/Kg-dry	1	6/1/2023 09:23 PM
1,4-Dichlorobenzene	ND		0.39	mg/Kg-dry	1	6/1/2023 09:23 PM
1-Methylnaphthalene	ND		0.24	mg/Kg-dry	1	6/1/2023 09:23 PM
1-Naphthylamine	ND		0.39	mg/Kg-dry	1	6/1/2023 09:23 PM
2,3,4,6-Tetrachlorophenol	ND		0.39	mg/Kg-dry	1	6/1/2023 09:23 PM
2,4,5-Trichlorophenol	ND		0.39	mg/Kg-dry	1	6/1/2023 09:23 PM
2,4,6-Trichlorophenol	ND		0.39	mg/Kg-dry	1	6/1/2023 09:23 PM
2,4-Dichlorophenol	ND		0.39	mg/Kg-dry	1	6/1/2023 09:23 PM
2,4-Dimethylphenol	ND		0.39	mg/Kg-dry	1	6/1/2023 09:23 PM

Note:

# ALS Environmental

Date: 05-Jun-23

**Client:** The Mannik & Smith Group, Inc.  
**Project:** Hillson Nut; MS23-13; 401ODAS003-19  
**Sample ID:** SB-13 (0-2')  
**Collection Date:** 5/23/2023 03:50 PM

**Work Order:** 23051093  
**Lab ID:** 23051093-02  
**Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
2,4-Dinitrophenol	ND		1.9	mg/Kg-dry	1	6/1/2023 09:23 PM
2,4-Dinitrotoluene	ND		0.39	mg/Kg-dry	1	6/1/2023 09:23 PM
2,6-Dichlorophenol	ND		0.39	mg/Kg-dry	1	6/1/2023 09:23 PM
2,6-Dinitrotoluene	ND		0.39	mg/Kg-dry	1	6/1/2023 09:23 PM
2-Acetylaminofluorene	ND		0.39	mg/Kg-dry	1	6/1/2023 09:23 PM
2-Chloronaphthalene	ND		0.39	mg/Kg-dry	1	6/1/2023 09:23 PM
2-Chlorophenol	ND		0.39	mg/Kg-dry	1	6/1/2023 09:23 PM
2-Methylnaphthalene	ND		0.24	mg/Kg-dry	1	6/1/2023 09:23 PM
2-Methylphenol	ND		0.39	mg/Kg-dry	1	6/1/2023 09:23 PM
2-Naphthylamine	ND		0.39	mg/Kg-dry	1	6/1/2023 09:23 PM
2-Nitroaniline	ND		1.9	mg/Kg-dry	1	6/1/2023 09:23 PM
2-Nitrophenol	ND		0.39	mg/Kg-dry	1	6/1/2023 09:23 PM
2-Picoline	ND		0.39	mg/Kg-dry	1	6/1/2023 09:23 PM
3&4-Methylphenol	ND		0.39	mg/Kg-dry	1	6/1/2023 09:23 PM
3,3'-Dichlorobenzidine	ND		0.78	mg/Kg-dry	1	6/1/2023 09:23 PM
3-Methylcholanthrene	ND		0.39	mg/Kg-dry	1	6/1/2023 09:23 PM
3-Nitroaniline	ND		1.9	mg/Kg-dry	1	6/1/2023 09:23 PM
4,6-Dinitro-2-methylphenol	ND		1.9	mg/Kg-dry	1	6/1/2023 09:23 PM
4-Aminobiphenyl	ND		0.78	mg/Kg-dry	1	6/1/2023 09:23 PM
4-Bromophenyl phenyl ether	ND		0.39	mg/Kg-dry	1	6/1/2023 09:23 PM
4-Chloro-3-methylphenol	ND		0.78	mg/Kg-dry	1	6/1/2023 09:23 PM
4-Chloroaniline	ND		0.78	mg/Kg-dry	1	6/1/2023 09:23 PM
4-Chlorophenyl phenyl ether	ND		0.39	mg/Kg-dry	1	6/1/2023 09:23 PM
4-Nitroaniline	ND		0.78	mg/Kg-dry	1	6/1/2023 09:23 PM
4-Nitrophenol	ND		1.9	mg/Kg-dry	1	6/1/2023 09:23 PM
4-Nitroquinoline 1-oxide	ND		1.9	mg/Kg-dry	1	6/1/2023 09:23 PM
5-Nitro-o-toluidine	ND		0.39	mg/Kg-dry	1	6/1/2023 09:23 PM
7,12-Dimethylbenz(a)anthracene	ND		0.39	mg/Kg-dry	1	6/1/2023 09:23 PM
Acenaphthene	ND		0.24	mg/Kg-dry	1	6/1/2023 09:23 PM
Acenaphthylene	ND		0.24	mg/Kg-dry	1	6/1/2023 09:23 PM
Acetophenone	ND		0.39	mg/Kg-dry	1	6/1/2023 09:23 PM
Aniline	ND		0.39	mg/Kg-dry	1	6/1/2023 09:23 PM
Anthracene	ND		0.24	mg/Kg-dry	1	6/1/2023 09:23 PM
Azobenzene	ND		0.39	mg/Kg-dry	1	6/1/2023 09:23 PM
Benzidine	ND		0.39	mg/Kg-dry	1	6/1/2023 09:23 PM
Benzo(a)anthracene	ND		0.12	mg/Kg-dry	1	6/1/2023 09:23 PM
Benzo(a)pyrene	ND		0.12	mg/Kg-dry	1	6/1/2023 09:23 PM
Benzo(b)fluoranthene	ND		0.24	mg/Kg-dry	1	6/1/2023 09:23 PM
Benzo(g,h,i)perylene	ND		0.24	mg/Kg-dry	1	6/1/2023 09:23 PM
Benzo(k)fluoranthene	ND		0.24	mg/Kg-dry	1	6/1/2023 09:23 PM

**Note:**

# ALS Environmental

Date: 05-Jun-23

**Client:** The Mannik & Smith Group, Inc.  
**Project:** Hillson Nut; MS23-13; 401ODAS003-19  
**Sample ID:** SB-13 (0-2')  
**Collection Date:** 5/23/2023 03:50 PM

**Work Order:** 23051093  
**Lab ID:** 23051093-02  
**Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Benzyl alcohol	ND		0.78	mg/Kg-dry	1	6/1/2023 09:23 PM
Bis(2-chloroethoxy)methane	ND		0.39	mg/Kg-dry	1	6/1/2023 09:23 PM
Bis(2-chloroethyl)ether	ND		0.39	mg/Kg-dry	1	6/1/2023 09:23 PM
Bis(2-chloroisopropyl)ether	ND		0.39	mg/Kg-dry	1	6/1/2023 09:23 PM
Bis(2-ethylhexyl)phthalate	ND		0.39	mg/Kg-dry	1	6/1/2023 09:23 PM
Butyl benzyl phthalate	ND		0.39	mg/Kg-dry	1	6/1/2023 09:23 PM
Carbazole	ND		0.24	mg/Kg-dry	1	6/1/2023 09:23 PM
Chrysene	ND		0.24	mg/Kg-dry	1	6/1/2023 09:23 PM
Dibenzo(a,h)anthracene	ND		0.12	mg/Kg-dry	1	6/1/2023 09:23 PM
Dibenzofuran	ND		0.24	mg/Kg-dry	1	6/1/2023 09:23 PM
Diethyl phthalate	ND		0.39	mg/Kg-dry	1	6/1/2023 09:23 PM
Dimethyl phthalate	ND		0.39	mg/Kg-dry	1	6/1/2023 09:23 PM
Di-n-butyl phthalate	ND		0.39	mg/Kg-dry	1	6/1/2023 09:23 PM
Di-n-octyl phthalate	ND		0.39	mg/Kg-dry	1	6/1/2023 09:23 PM
Dinoseb	ND		0.39	mg/Kg-dry	1	6/1/2023 09:23 PM
Diphenylamine	ND		0.39	mg/Kg-dry	1	6/1/2023 09:23 PM
Ethyl methanesulfonate	ND		0.39	mg/Kg-dry	1	6/1/2023 09:23 PM
Fluoranthene	ND		0.24	mg/Kg-dry	1	6/1/2023 09:23 PM
Fluorene	ND		0.24	mg/Kg-dry	1	6/1/2023 09:23 PM
Hexachlorobenzene	ND		0.39	mg/Kg-dry	1	6/1/2023 09:23 PM
Hexachlorobutadiene	ND		0.39	mg/Kg-dry	1	6/1/2023 09:23 PM
Hexachlorocyclopentadiene	ND		0.39	mg/Kg-dry	1	6/1/2023 09:23 PM
Hexachloroethane	ND		0.39	mg/Kg-dry	1	6/1/2023 09:23 PM
Indeno(1,2,3-cd)pyrene	ND		0.12	mg/Kg-dry	1	6/1/2023 09:23 PM
Isophorone	ND		0.39	mg/Kg-dry	1	6/1/2023 09:23 PM
Isosafrole	ND		0.39	mg/Kg-dry	1	6/1/2023 09:23 PM
Methapyrilene	ND		1.9	mg/Kg-dry	1	6/1/2023 09:23 PM
Methyl methanesulfonate	ND		0.39	mg/Kg-dry	1	6/1/2023 09:23 PM
Naphthalene	ND		0.24	mg/Kg-dry	1	6/1/2023 09:23 PM
Nitrobenzene	ND		0.39	mg/Kg-dry	1	6/1/2023 09:23 PM
N-Nitrosodiethylamine	ND		0.39	mg/Kg-dry	1	6/1/2023 09:23 PM
N-Nitrosodimethylamine	ND		0.39	mg/Kg-dry	1	6/1/2023 09:23 PM
N-Nitroso-di-n-butylamine	ND		0.39	mg/Kg-dry	1	6/1/2023 09:23 PM
N-Nitrosodi-n-propylamine	ND		0.39	mg/Kg-dry	1	6/1/2023 09:23 PM
N-Nitrosomethylethylamine	ND		0.39	mg/Kg-dry	1	6/1/2023 09:23 PM
N-Nitrosomorpholine	ND		0.39	mg/Kg-dry	1	6/1/2023 09:23 PM
N-Nitrosopiperidine	ND		0.39	mg/Kg-dry	1	6/1/2023 09:23 PM
N-Nitrosopyrrolidine	ND		0.39	mg/Kg-dry	1	6/1/2023 09:23 PM
o-Toluidine	ND		1.9	mg/Kg-dry	1	6/1/2023 09:23 PM
p-Dimethylaminoazobenzene	ND		0.39	mg/Kg-dry	1	6/1/2023 09:23 PM

**Note:**

# ALS Environmental

Date: 05-Jun-23

**Client:** The Mannik & Smith Group, Inc.  
**Project:** Hillson Nut; MS23-13; 401ODAS003-19  
**Sample ID:** SB-13 (0-2')  
**Collection Date:** 5/23/2023 03:50 PM

**Work Order:** 23051093  
**Lab ID:** 23051093-02  
**Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Pentachlorobenzene	ND		0.39	mg/Kg-dry	1	6/1/2023 09:23 PM
Pentachloroethane	ND		0.39	mg/Kg-dry	1	6/1/2023 09:23 PM
Pentachloronitrobenzene	ND		0.78	mg/Kg-dry	1	6/1/2023 09:23 PM
Pentachlorophenol	ND		1.9	mg/Kg-dry	1	6/1/2023 09:23 PM
Phenacetin	ND		0.78	mg/Kg-dry	1	6/1/2023 09:23 PM
Phenanthrene	ND		0.24	mg/Kg-dry	1	6/1/2023 09:23 PM
Phenol	ND		0.39	mg/Kg-dry	1	6/1/2023 09:23 PM
Pyrene	ND		0.24	mg/Kg-dry	1	6/1/2023 09:23 PM
Pyridine	ND		0.39	mg/Kg-dry	1	6/1/2023 09:23 PM
Safrole	ND		0.39	mg/Kg-dry	1	6/1/2023 09:23 PM
<i>Surr: 2,4,6-Tribromophenol</i>	70.0		14.2-136	%REC	1	6/1/2023 09:23 PM
<i>Surr: 2-Fluorobiphenyl</i>	62.3		30-116	%REC	1	6/1/2023 09:23 PM
<i>Surr: 2-Fluorophenol</i>	53.8		24-105	%REC	1	6/1/2023 09:23 PM
<i>Surr: 4-Terphenyl-d14</i>	62.8		27.3-138	%REC	1	6/1/2023 09:23 PM
<i>Surr: Nitrobenzene-d5</i>	53.8		23.7-109	%REC	1	6/1/2023 09:23 PM
<i>Surr: Phenol-d5</i>	50.2		24.9-103	%REC	1	6/1/2023 09:23 PM

## VOLATILE ORGANIC COMPOUNDS

SW8260B

Analyst: LAK

1,1,1,2-Tetrachloroethane	ND		0.0050	mg/Kg-dry	1	5/25/2023 05:19 PM
1,1,1-Trichloroethane	ND		0.0050	mg/Kg-dry	1	5/25/2023 05:19 PM
1,1,2,2-Tetrachloroethane	ND		0.0050	mg/Kg-dry	1	5/25/2023 05:19 PM
1,1,2-Trichloroethane	ND		0.0050	mg/Kg-dry	1	5/25/2023 05:19 PM
1,1-Dichloroethane	ND		0.0050	mg/Kg-dry	1	5/25/2023 05:19 PM
1,1-Dichloroethene	ND		0.0050	mg/Kg-dry	1	5/25/2023 05:19 PM
1,1-Dichloropropene	ND		0.0050	mg/Kg-dry	1	5/25/2023 05:19 PM
1,2,3-Trichlorobenzene	ND		0.0050	mg/Kg-dry	1	5/25/2023 05:19 PM
1,2,3-Trichloropropane	ND		0.0050	mg/Kg-dry	1	5/25/2023 05:19 PM
1,2,4-Trichlorobenzene	ND		0.0050	mg/Kg-dry	1	5/25/2023 05:19 PM
1,2,4-Trimethylbenzene	ND		0.0050	mg/Kg-dry	1	5/25/2023 05:19 PM
1,2-Dibromo-3-chloropropane	ND		0.0050	mg/Kg-dry	1	5/25/2023 05:19 PM
1,2-Dibromoethane	ND		0.0050	mg/Kg-dry	1	5/25/2023 05:19 PM
1,2-Dichlorobenzene	ND		0.0050	mg/Kg-dry	1	5/25/2023 05:19 PM
1,2-Dichloroethane	ND		0.0050	mg/Kg-dry	1	5/25/2023 05:19 PM
1,2-Dichloropropane	ND		0.0050	mg/Kg-dry	1	5/25/2023 05:19 PM
1,3,5-Trimethylbenzene	ND		0.0050	mg/Kg-dry	1	5/25/2023 05:19 PM
1,3-Dichlorobenzene	ND		0.0050	mg/Kg-dry	1	5/25/2023 05:19 PM
1,3-Dichloropropane	ND		0.0050	mg/Kg-dry	1	5/25/2023 05:19 PM
1,4-Dichlorobenzene	ND		0.0050	mg/Kg-dry	1	5/25/2023 05:19 PM
2,2-Dichloropropane	ND		0.0050	mg/Kg-dry	1	5/25/2023 05:19 PM
2-Butanone	ND		0.050	mg/Kg-dry	1	5/25/2023 05:19 PM
2-Chlorotoluene	ND		0.0050	mg/Kg-dry	1	5/25/2023 05:19 PM

Note:

# ALS Environmental

Date: 05-Jun-23

**Client:** The Mannik & Smith Group, Inc.  
**Project:** Hillson Nut; MS23-13; 401ODAS003-19  
**Sample ID:** SB-13 (0-2')  
**Collection Date:** 5/23/2023 03:50 PM

**Work Order:** 23051093  
**Lab ID:** 23051093-02  
**Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
2-Hexanone	ND		0.0050	mg/Kg-dry	1	5/25/2023 05:19 PM
4-Chlorotoluene	ND		0.0050	mg/Kg-dry	1	5/25/2023 05:19 PM
4-Methyl-2-pentanone	ND		0.0050	mg/Kg-dry	1	5/25/2023 05:19 PM
Acetone	ND		0.050	mg/Kg-dry	1	5/25/2023 05:19 PM
Benzene	ND		0.0050	mg/Kg-dry	1	5/25/2023 05:19 PM
Bromobenzene	ND		0.0050	mg/Kg-dry	1	5/25/2023 05:19 PM
Bromochloromethane	ND		0.0050	mg/Kg-dry	1	5/25/2023 05:19 PM
Bromodichloromethane	ND		0.0050	mg/Kg-dry	1	5/25/2023 05:19 PM
Bromoform	ND		0.0050	mg/Kg-dry	1	5/25/2023 05:19 PM
Bromomethane	ND		0.0050	mg/Kg-dry	1	5/25/2023 05:19 PM
Carbon disulfide	ND		0.0050	mg/Kg-dry	1	5/25/2023 05:19 PM
Carbon tetrachloride	ND		0.0050	mg/Kg-dry	1	5/25/2023 05:19 PM
Chlorobenzene	ND		0.0050	mg/Kg-dry	1	5/25/2023 05:19 PM
Chloroethane	ND		0.0050	mg/Kg-dry	1	5/25/2023 05:19 PM
<b>Chloroform</b>	<b>0.0076</b>		<b>0.0050</b>	<b>mg/Kg-dry</b>	1	5/25/2023 05:19 PM
Chloromethane	ND		0.0050	mg/Kg-dry	1	5/25/2023 05:19 PM
cis-1,2-Dichloroethene	ND		0.0050	mg/Kg-dry	1	5/25/2023 05:19 PM
cis-1,3-Dichloropropene	ND		0.0050	mg/Kg-dry	1	5/25/2023 05:19 PM
Dibromochloromethane	ND		0.0050	mg/Kg-dry	1	5/25/2023 05:19 PM
Dibromomethane	ND		0.0050	mg/Kg-dry	1	5/25/2023 05:19 PM
Dichlorodifluoromethane	ND		0.0050	mg/Kg-dry	1	5/25/2023 05:19 PM
Ethylbenzene	ND		0.0050	mg/Kg-dry	1	5/25/2023 05:19 PM
Hexachlorobutadiene	ND		0.0050	mg/Kg-dry	1	5/25/2023 05:19 PM
Isopropylbenzene	ND		0.0050	mg/Kg-dry	1	5/25/2023 05:19 PM
m,p-Xylene	ND		0.0050	mg/Kg-dry	1	5/25/2023 05:19 PM
Methyl tert-butyl ether	ND		0.0050	mg/Kg-dry	1	5/25/2023 05:19 PM
Methylene chloride	ND		0.020	mg/Kg-dry	1	5/25/2023 05:19 PM
Naphthalene	ND		0.0050	mg/Kg-dry	1	5/25/2023 05:19 PM
n-Butylbenzene	ND		0.0050	mg/Kg-dry	1	5/25/2023 05:19 PM
n-Propylbenzene	ND		0.0050	mg/Kg-dry	1	5/25/2023 05:19 PM
o-Xylene	ND		0.0050	mg/Kg-dry	1	5/25/2023 05:19 PM
p-Isopropyltoluene	ND		0.0050	mg/Kg-dry	1	5/25/2023 05:19 PM
sec-Butylbenzene	ND		0.0050	mg/Kg-dry	1	5/25/2023 05:19 PM
Styrene	ND		0.0050	mg/Kg-dry	1	5/25/2023 05:19 PM
tert-Butylbenzene	ND		0.0050	mg/Kg-dry	1	5/25/2023 05:19 PM
Tetrachloroethene	ND		0.0050	mg/Kg-dry	1	5/25/2023 05:19 PM
Toluene	ND		0.0050	mg/Kg-dry	1	5/25/2023 05:19 PM
trans-1,2-Dichloroethene	ND		0.0050	mg/Kg-dry	1	5/25/2023 05:19 PM
trans-1,3-Dichloropropene	ND		0.0050	mg/Kg-dry	1	5/25/2023 05:19 PM
Trichloroethene	ND		0.0050	mg/Kg-dry	1	5/25/2023 05:19 PM

**Note:**

# ALS Environmental

Date: 05-Jun-23

**Client:** The Mannik & Smith Group, Inc.  
**Project:** Hillson Nut; MS23-13; 401ODAS003-19  
**Sample ID:** SB-13 (0-2')  
**Collection Date:** 5/23/2023 03:50 PM

**Work Order:** 23051093  
**Lab ID:** 23051093-02  
**Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Trichlorofluoromethane	ND		0.0050	mg/Kg-dry	1	5/25/2023 05:19 PM
Vinyl chloride	ND		0.0050	mg/Kg-dry	1	5/25/2023 05:19 PM
Xylenes, Total	ND		0.0099	mg/Kg-dry	1	5/25/2023 05:19 PM
<i>Surr: 4-Bromofluorobenzene</i>	103		60-140	%REC	1	5/25/2023 05:19 PM
<i>Surr: Dibromofluoromethane</i>	104		60-140	%REC	1	5/25/2023 05:19 PM
<i>Surr: Toluene-d8</i>	97.9		60-140	%REC	1	5/25/2023 05:19 PM

**Note:**



# ALS Environmental

Date: 05-Jun-23

**Client:** The Mannik & Smith Group, Inc.  
**Project:** Hillson Nut; MS23-13; 401ODAS003-19  
**Sample ID:** SB-16 (0-2')  
**Collection Date:** 5/23/2023 04:10 PM

**Work Order:** 23051093  
**Lab ID:** 23051093-03  
**Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
<b>PCBS</b>			<b>SW8082</b>	Prep: SW3546 5/31/23 17:07		Analyst: <b>TSA</b>
Aroclor 1016	ND		0.11	mg/Kg-dry	1	6/1/2023 06:08 AM
Aroclor 1221	ND		0.23	mg/Kg-dry	1	6/1/2023 06:08 AM
Aroclor 1232	ND		0.11	mg/Kg-dry	1	6/1/2023 06:08 AM
Aroclor 1242	ND		0.11	mg/Kg-dry	1	6/1/2023 06:08 AM
Aroclor 1248	ND		0.11	mg/Kg-dry	1	6/1/2023 06:08 AM
Aroclor 1254	ND		0.11	mg/Kg-dry	1	6/1/2023 06:08 AM
Aroclor 1260	ND		0.11	mg/Kg-dry	1	6/1/2023 06:08 AM
Aroclor 1262	ND		0.11	mg/Kg-dry	1	6/1/2023 06:08 AM
Aroclor 1268	ND		0.11	mg/Kg-dry	1	6/1/2023 06:08 AM
Surr: Decachlorobiphenyl	88.0		7.32-154	%REC	1	6/1/2023 06:08 AM
Surr: Tetrachloro-m-xylene	76.0		33.5-152	%REC	1	6/1/2023 06:08 AM
<b>MOISTURE</b>			<b>SM2540B</b>			Analyst: <b>CW</b>
Moisture	12			% of sample	1	6/1/2023
<b>MERCURY BY CVAA</b>			<b>SW7471A</b>	Prep: EPA 7471 5/30/23 13:51		Analyst: <b>SLT</b>
Mercury	10		3.0	mg/Kg-dry	10	6/2/2023 02:25 PM
<b>METALS BY ICP</b>			<b>SW6010B</b>	Prep: SW3050B 5/30/23 12:24		Analyst: <b>SLT</b>
Arsenic	14		5.3	mg/Kg-dry	1	5/30/2023 05:02 PM
Barium	120		21	mg/Kg-dry	1	5/30/2023 05:02 PM
Cadmium	2.9		1.1	mg/Kg-dry	1	5/30/2023 05:02 PM
Chromium	38		11	mg/Kg-dry	1	5/30/2023 05:02 PM
Lead	280		21	mg/Kg-dry	1	5/30/2023 05:02 PM
Selenium	ND		3.2	mg/Kg-dry	1	5/30/2023 05:02 PM
Silver	ND		5.3	mg/Kg-dry	1	5/30/2023 05:02 PM
<b>SEMI-VOLATILE ORGANIC COMPOUNDS</b>			<b>SW8270C</b>	Prep: SW3546 5/30/23 11:26		Analyst: <b>RA</b>
1,2,4,5-Tetrachlorobenzene	ND		0.37	mg/Kg-dry	1	6/1/2023 09:46 PM
1,2,4-Trichlorobenzene	ND		0.37	mg/Kg-dry	1	6/1/2023 09:46 PM
1,2-Dichlorobenzene	ND		0.37	mg/Kg-dry	1	6/1/2023 09:46 PM
1,3-Dichlorobenzene	ND		0.37	mg/Kg-dry	1	6/1/2023 09:46 PM
1,3-Dinitrobenzene	ND		0.37	mg/Kg-dry	1	6/1/2023 09:46 PM
1,4-Dichlorobenzene	ND		0.37	mg/Kg-dry	1	6/1/2023 09:46 PM
<b>1-Methylnaphthalene</b>	<b>0.58</b>		<b>0.23</b>	<b>mg/Kg-dry</b>	1	6/1/2023 09:46 PM
1-Naphthylamine	ND		0.37	mg/Kg-dry	1	6/1/2023 09:46 PM
2,3,4,6-Tetrachlorophenol	ND		0.37	mg/Kg-dry	1	6/1/2023 09:46 PM
2,4,5-Trichlorophenol	ND		0.37	mg/Kg-dry	1	6/1/2023 09:46 PM
2,4,6-Trichlorophenol	ND		0.37	mg/Kg-dry	1	6/1/2023 09:46 PM
2,4-Dichlorophenol	ND		0.37	mg/Kg-dry	1	6/1/2023 09:46 PM
2,4-Dimethylphenol	ND		0.37	mg/Kg-dry	1	6/1/2023 09:46 PM

Note:

# ALS Environmental

Date: 05-Jun-23

**Client:** The Mannik & Smith Group, Inc.  
**Project:** Hillson Nut; MS23-13; 401ODAS003-19  
**Sample ID:** SB-16 (0-2')  
**Collection Date:** 5/23/2023 04:10 PM

**Work Order:** 23051093  
**Lab ID:** 23051093-03  
**Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
2,4-Dinitrophenol	ND		1.9	mg/Kg-dry	1	6/1/2023 09:46 PM
2,4-Dinitrotoluene	ND		0.37	mg/Kg-dry	1	6/1/2023 09:46 PM
2,6-Dichlorophenol	ND		0.37	mg/Kg-dry	1	6/1/2023 09:46 PM
2,6-Dinitrotoluene	ND		0.37	mg/Kg-dry	1	6/1/2023 09:46 PM
2-Acetylaminofluorene	ND		0.37	mg/Kg-dry	1	6/1/2023 09:46 PM
2-Chloronaphthalene	ND		0.37	mg/Kg-dry	1	6/1/2023 09:46 PM
2-Chlorophenol	ND		0.37	mg/Kg-dry	1	6/1/2023 09:46 PM
<b>2-Methylnaphthalene</b>	<b>0.64</b>		<b>0.23</b>	<b>mg/Kg-dry</b>	1	6/1/2023 09:46 PM
2-Methylphenol	ND		0.37	mg/Kg-dry	1	6/1/2023 09:46 PM
2-Naphthylamine	ND		0.37	mg/Kg-dry	1	6/1/2023 09:46 PM
2-Nitroaniline	ND		1.9	mg/Kg-dry	1	6/1/2023 09:46 PM
2-Nitrophenol	ND		0.37	mg/Kg-dry	1	6/1/2023 09:46 PM
2-Picoline	ND		0.37	mg/Kg-dry	1	6/1/2023 09:46 PM
3&4-Methylphenol	ND		0.37	mg/Kg-dry	1	6/1/2023 09:46 PM
3,3'-Dichlorobenzidine	ND		0.75	mg/Kg-dry	1	6/1/2023 09:46 PM
3-Methylcholanthrene	ND		0.37	mg/Kg-dry	1	6/1/2023 09:46 PM
3-Nitroaniline	ND		1.9	mg/Kg-dry	1	6/1/2023 09:46 PM
4,6-Dinitro-2-methylphenol	ND		1.9	mg/Kg-dry	1	6/1/2023 09:46 PM
4-Aminobiphenyl	ND		0.75	mg/Kg-dry	1	6/1/2023 09:46 PM
4-Bromophenyl phenyl ether	ND		0.37	mg/Kg-dry	1	6/1/2023 09:46 PM
4-Chloro-3-methylphenol	ND		0.75	mg/Kg-dry	1	6/1/2023 09:46 PM
4-Chloroaniline	ND		0.75	mg/Kg-dry	1	6/1/2023 09:46 PM
4-Chlorophenyl phenyl ether	ND		0.37	mg/Kg-dry	1	6/1/2023 09:46 PM
4-Nitroaniline	ND		0.75	mg/Kg-dry	1	6/1/2023 09:46 PM
4-Nitrophenol	ND		1.9	mg/Kg-dry	1	6/1/2023 09:46 PM
4-Nitroquinoline 1-oxide	ND		1.9	mg/Kg-dry	1	6/1/2023 09:46 PM
5-Nitro-o-toluidine	ND		0.37	mg/Kg-dry	1	6/1/2023 09:46 PM
7,12-Dimethylbenz(a)anthracene	ND		0.37	mg/Kg-dry	1	6/1/2023 09:46 PM
<b>Acenaphthene</b>	<b>0.68</b>		<b>0.23</b>	<b>mg/Kg-dry</b>	1	6/1/2023 09:46 PM
<b>Acenaphthylene</b>	<b>0.29</b>		<b>0.23</b>	<b>mg/Kg-dry</b>	1	6/1/2023 09:46 PM
Acetophenone	ND		0.37	mg/Kg-dry	1	6/1/2023 09:46 PM
Aniline	ND		0.37	mg/Kg-dry	1	6/1/2023 09:46 PM
<b>Anthracene</b>	<b>1.9</b>		<b>0.23</b>	<b>mg/Kg-dry</b>	1	6/1/2023 09:46 PM
Azobenzene	ND		0.37	mg/Kg-dry	1	6/1/2023 09:46 PM
Benzidine	ND		0.37	mg/Kg-dry	1	6/1/2023 09:46 PM
<b>Benzo(a)anthracene</b>	<b>5.7</b>		<b>1.1</b>	<b>mg/Kg-dry</b>	10	6/2/2023 01:22 PM
<b>Benzo(a)pyrene</b>	<b>4.9</b>		<b>1.1</b>	<b>mg/Kg-dry</b>	10	6/2/2023 01:22 PM
<b>Benzo(b)fluoranthene</b>	<b>5.8</b>		<b>2.3</b>	<b>mg/Kg-dry</b>	10	6/2/2023 01:22 PM
<b>Benzo(g,h,i)perylene</b>	<b>2.6</b>		<b>0.23</b>	<b>mg/Kg-dry</b>	1	6/1/2023 09:46 PM
<b>Benzo(k)fluoranthene</b>	<b>2.7</b>		<b>0.23</b>	<b>mg/Kg-dry</b>	1	6/1/2023 09:46 PM

Note:

# ALS Environmental

Date: 05-Jun-23

**Client:** The Mannik & Smith Group, Inc.  
**Project:** Hillson Nut; MS23-13; 401ODAS003-19  
**Sample ID:** SB-16 (0-2')  
**Collection Date:** 5/23/2023 04:10 PM

**Work Order:** 23051093  
**Lab ID:** 23051093-03  
**Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Benzyl alcohol	ND		0.75	mg/Kg-dry	1	6/1/2023 09:46 PM
Bis(2-chloroethoxy)methane	ND		0.37	mg/Kg-dry	1	6/1/2023 09:46 PM
Bis(2-chloroethyl)ether	ND		0.37	mg/Kg-dry	1	6/1/2023 09:46 PM
Bis(2-chloroisopropyl)ether	ND		0.37	mg/Kg-dry	1	6/1/2023 09:46 PM
Bis(2-ethylhexyl)phthalate	ND		0.37	mg/Kg-dry	1	6/1/2023 09:46 PM
Butyl benzyl phthalate	ND		0.37	mg/Kg-dry	1	6/1/2023 09:46 PM
<b>Carbazole</b>	<b>0.75</b>		<b>0.23</b>	<b>mg/Kg-dry</b>	1	6/1/2023 09:46 PM
<b>Chrysene</b>	<b>5.8</b>		<b>2.3</b>	<b>mg/Kg-dry</b>	10	6/2/2023 01:22 PM
<b>Dibenzo(a,h)anthracene</b>	<b>0.79</b>		<b>0.11</b>	<b>mg/Kg-dry</b>	1	6/1/2023 09:46 PM
<b>Dibenzofuran</b>	<b>0.46</b>		<b>0.23</b>	<b>mg/Kg-dry</b>	1	6/1/2023 09:46 PM
Diethyl phthalate	ND		0.37	mg/Kg-dry	1	6/1/2023 09:46 PM
Dimethyl phthalate	ND		0.37	mg/Kg-dry	1	6/1/2023 09:46 PM
Di-n-butyl phthalate	ND		0.37	mg/Kg-dry	1	6/1/2023 09:46 PM
Di-n-octyl phthalate	ND		0.37	mg/Kg-dry	1	6/1/2023 09:46 PM
Dinoseb	ND		0.37	mg/Kg-dry	1	6/1/2023 09:46 PM
Diphenylamine	ND		0.37	mg/Kg-dry	1	6/1/2023 09:46 PM
Ethyl methanesulfonate	ND		0.37	mg/Kg-dry	1	6/1/2023 09:46 PM
<b>Fluoranthene</b>	<b>12</b>		<b>2.3</b>	<b>mg/Kg-dry</b>	10	6/2/2023 01:22 PM
<b>Fluorene</b>	<b>0.61</b>		<b>0.23</b>	<b>mg/Kg-dry</b>	1	6/1/2023 09:46 PM
Hexachlorobenzene	ND		0.37	mg/Kg-dry	1	6/1/2023 09:46 PM
Hexachlorobutadiene	ND		0.37	mg/Kg-dry	1	6/1/2023 09:46 PM
Hexachlorocyclopentadiene	ND		0.37	mg/Kg-dry	1	6/1/2023 09:46 PM
Hexachloroethane	ND		0.37	mg/Kg-dry	1	6/1/2023 09:46 PM
<b>Indeno(1,2,3-cd)pyrene</b>	<b>2.5</b>		<b>0.11</b>	<b>mg/Kg-dry</b>	1	6/1/2023 09:46 PM
Isophorone	ND		0.37	mg/Kg-dry	1	6/1/2023 09:46 PM
Isosafrole	ND		0.37	mg/Kg-dry	1	6/1/2023 09:46 PM
Methapyrilene	ND		1.9	mg/Kg-dry	1	6/1/2023 09:46 PM
Methyl methanesulfonate	ND		0.37	mg/Kg-dry	1	6/1/2023 09:46 PM
<b>Naphthalene</b>	<b>0.49</b>		<b>0.23</b>	<b>mg/Kg-dry</b>	1	6/1/2023 09:46 PM
Nitrobenzene	ND		0.37	mg/Kg-dry	1	6/1/2023 09:46 PM
N-Nitrosodiethylamine	ND		0.37	mg/Kg-dry	1	6/1/2023 09:46 PM
N-Nitrosodimethylamine	ND		0.37	mg/Kg-dry	1	6/1/2023 09:46 PM
N-Nitroso-di-n-butylamine	ND		0.37	mg/Kg-dry	1	6/1/2023 09:46 PM
N-Nitrosodi-n-propylamine	ND		0.37	mg/Kg-dry	1	6/1/2023 09:46 PM
N-Nitrosomethylethylamine	ND		0.37	mg/Kg-dry	1	6/1/2023 09:46 PM
N-Nitrosomorpholine	ND		0.37	mg/Kg-dry	1	6/1/2023 09:46 PM
N-Nitrosopiperidine	ND		0.37	mg/Kg-dry	1	6/1/2023 09:46 PM
N-Nitrosopyrrolidine	ND		0.37	mg/Kg-dry	1	6/1/2023 09:46 PM
o-Toluidine	ND		1.9	mg/Kg-dry	1	6/1/2023 09:46 PM
p-Dimethylaminoazobenzene	ND		0.37	mg/Kg-dry	1	6/1/2023 09:46 PM

**Note:**

# ALS Environmental

Date: 05-Jun-23

**Client:** The Mannik & Smith Group, Inc.  
**Project:** Hillson Nut; MS23-13; 401ODAS003-19  
**Sample ID:** SB-16 (0-2')  
**Collection Date:** 5/23/2023 04:10 PM

**Work Order:** 23051093  
**Lab ID:** 23051093-03  
**Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Pentachlorobenzene	ND		0.37	mg/Kg-dry	1	6/1/2023 09:46 PM
Pentachloroethane	ND		0.37	mg/Kg-dry	1	6/1/2023 09:46 PM
Pentachloronitrobenzene	ND		0.75	mg/Kg-dry	1	6/1/2023 09:46 PM
Pentachlorophenol	ND		1.9	mg/Kg-dry	1	6/1/2023 09:46 PM
Phenacetin	ND		0.75	mg/Kg-dry	1	6/1/2023 09:46 PM
<b>Phenanthrene</b>	<b>7.7</b>		<b>2.3</b>	<b>mg/Kg-dry</b>	10	6/2/2023 01:22 PM
Phenol	ND		0.37	mg/Kg-dry	1	6/1/2023 09:46 PM
<b>Pyrene</b>	<b>9.3</b>		<b>2.3</b>	<b>mg/Kg-dry</b>	10	6/2/2023 01:22 PM
Pyridine	ND		0.37	mg/Kg-dry	1	6/1/2023 09:46 PM
Safrole	ND		0.37	mg/Kg-dry	1	6/1/2023 09:46 PM
<i>Surr: 2,4,6-Tribromophenol</i>	<i>60.7</i>		<i>14.2-136</i>	<i>%REC</i>	1	6/1/2023 09:46 PM
<i>Surr: 2-Fluorobiphenyl</i>	<i>63.5</i>		<i>30-116</i>	<i>%REC</i>	1	6/1/2023 09:46 PM
<i>Surr: 2-Fluorophenol</i>	<i>44.3</i>		<i>24-105</i>	<i>%REC</i>	1	6/1/2023 09:46 PM
<i>Surr: 4-Terphenyl-d14</i>	<i>66.6</i>		<i>27.3-138</i>	<i>%REC</i>	1	6/1/2023 09:46 PM
<i>Surr: Nitrobenzene-d5</i>	<i>51.8</i>		<i>23.7-109</i>	<i>%REC</i>	1	6/1/2023 09:46 PM
<i>Surr: Phenol-d5</i>	<i>43.7</i>		<i>24.9-103</i>	<i>%REC</i>	1	6/1/2023 09:46 PM

## VOLATILE ORGANIC COMPOUNDS

SW8260B

Analyst: LAK

1,1,1,2-Tetrachloroethane	ND		0.0051	mg/Kg-dry	1	5/25/2023 05:41 PM
1,1,1-Trichloroethane	ND		0.0051	mg/Kg-dry	1	5/25/2023 05:41 PM
1,1,2,2-Tetrachloroethane	ND		0.0051	mg/Kg-dry	1	5/25/2023 05:41 PM
1,1,2-Trichloroethane	ND		0.0051	mg/Kg-dry	1	5/25/2023 05:41 PM
1,1-Dichloroethane	ND		0.0051	mg/Kg-dry	1	5/25/2023 05:41 PM
1,1-Dichloroethene	ND		0.0051	mg/Kg-dry	1	5/25/2023 05:41 PM
1,1-Dichloropropene	ND		0.0051	mg/Kg-dry	1	5/25/2023 05:41 PM
1,2,3-Trichlorobenzene	ND		0.0051	mg/Kg-dry	1	5/25/2023 05:41 PM
1,2,3-Trichloropropane	ND		0.0051	mg/Kg-dry	1	5/25/2023 05:41 PM
1,2,4-Trichlorobenzene	ND		0.0051	mg/Kg-dry	1	5/25/2023 05:41 PM
1,2,4-Trimethylbenzene	ND		0.0051	mg/Kg-dry	1	5/25/2023 05:41 PM
1,2-Dibromo-3-chloropropane	ND		0.0051	mg/Kg-dry	1	5/25/2023 05:41 PM
1,2-Dibromoethane	ND		0.0051	mg/Kg-dry	1	5/25/2023 05:41 PM
1,2-Dichlorobenzene	ND		0.0051	mg/Kg-dry	1	5/25/2023 05:41 PM
1,2-Dichloroethane	ND		0.0051	mg/Kg-dry	1	5/25/2023 05:41 PM
1,2-Dichloropropane	ND		0.0051	mg/Kg-dry	1	5/25/2023 05:41 PM
1,3,5-Trimethylbenzene	ND		0.0051	mg/Kg-dry	1	5/25/2023 05:41 PM
1,3-Dichlorobenzene	ND		0.0051	mg/Kg-dry	1	5/25/2023 05:41 PM
1,3-Dichloropropane	ND		0.0051	mg/Kg-dry	1	5/25/2023 05:41 PM
1,4-Dichlorobenzene	ND		0.0051	mg/Kg-dry	1	5/25/2023 05:41 PM
2,2-Dichloropropane	ND		0.0051	mg/Kg-dry	1	5/25/2023 05:41 PM
2-Butanone	ND		0.051	mg/Kg-dry	1	5/25/2023 05:41 PM
2-Chlorotoluene	ND		0.0051	mg/Kg-dry	1	5/25/2023 05:41 PM

Note:

# ALS Environmental

Date: 05-Jun-23

**Client:** The Mannik & Smith Group, Inc.  
**Project:** Hillson Nut; MS23-13; 401ODAS003-19  
**Sample ID:** SB-16 (0-2')  
**Collection Date:** 5/23/2023 04:10 PM

**Work Order:** 23051093  
**Lab ID:** 23051093-03  
**Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
2-Hexanone	ND		0.0051	mg/Kg-dry	1	5/25/2023 05:41 PM
4-Chlorotoluene	ND		0.0051	mg/Kg-dry	1	5/25/2023 05:41 PM
4-Methyl-2-pentanone	ND		0.0051	mg/Kg-dry	1	5/25/2023 05:41 PM
Acetone	ND		0.051	mg/Kg-dry	1	5/25/2023 05:41 PM
Benzene	ND		0.0051	mg/Kg-dry	1	5/25/2023 05:41 PM
Bromobenzene	ND		0.0051	mg/Kg-dry	1	5/25/2023 05:41 PM
Bromochloromethane	ND		0.0051	mg/Kg-dry	1	5/25/2023 05:41 PM
Bromodichloromethane	ND		0.0051	mg/Kg-dry	1	5/25/2023 05:41 PM
Bromoform	ND		0.0051	mg/Kg-dry	1	5/25/2023 05:41 PM
Bromomethane	ND		0.0051	mg/Kg-dry	1	5/25/2023 05:41 PM
Carbon disulfide	ND		0.0051	mg/Kg-dry	1	5/25/2023 05:41 PM
Carbon tetrachloride	ND		0.0051	mg/Kg-dry	1	5/25/2023 05:41 PM
Chlorobenzene	ND		0.0051	mg/Kg-dry	1	5/25/2023 05:41 PM
Chloroethane	ND		0.0051	mg/Kg-dry	1	5/25/2023 05:41 PM
Chloroform	ND		0.0051	mg/Kg-dry	1	5/25/2023 05:41 PM
Chloromethane	ND		0.0051	mg/Kg-dry	1	5/25/2023 05:41 PM
cis-1,2-Dichloroethene	ND		0.0051	mg/Kg-dry	1	5/25/2023 05:41 PM
cis-1,3-Dichloropropene	ND		0.0051	mg/Kg-dry	1	5/25/2023 05:41 PM
Dibromochloromethane	ND		0.0051	mg/Kg-dry	1	5/25/2023 05:41 PM
Dibromomethane	ND		0.0051	mg/Kg-dry	1	5/25/2023 05:41 PM
Dichlorodifluoromethane	ND		0.0051	mg/Kg-dry	1	5/25/2023 05:41 PM
Ethylbenzene	ND		0.0051	mg/Kg-dry	1	5/25/2023 05:41 PM
Hexachlorobutadiene	ND		0.0051	mg/Kg-dry	1	5/25/2023 05:41 PM
Isopropylbenzene	ND		0.0051	mg/Kg-dry	1	5/25/2023 05:41 PM
m,p-Xylene	ND		0.0051	mg/Kg-dry	1	5/25/2023 05:41 PM
Methyl tert-butyl ether	ND		0.0051	mg/Kg-dry	1	5/25/2023 05:41 PM
Methylene chloride	ND		0.020	mg/Kg-dry	1	5/25/2023 05:41 PM
Naphthalene	ND		0.0051	mg/Kg-dry	1	5/25/2023 05:41 PM
n-Butylbenzene	ND		0.0051	mg/Kg-dry	1	5/25/2023 05:41 PM
n-Propylbenzene	ND		0.0051	mg/Kg-dry	1	5/25/2023 05:41 PM
o-Xylene	ND		0.0051	mg/Kg-dry	1	5/25/2023 05:41 PM
p-Isopropyltoluene	ND		0.0051	mg/Kg-dry	1	5/25/2023 05:41 PM
sec-Butylbenzene	ND		0.0051	mg/Kg-dry	1	5/25/2023 05:41 PM
Styrene	ND		0.0051	mg/Kg-dry	1	5/25/2023 05:41 PM
tert-Butylbenzene	ND		0.0051	mg/Kg-dry	1	5/25/2023 05:41 PM
Tetrachloroethene	ND		0.0051	mg/Kg-dry	1	5/25/2023 05:41 PM
Toluene	ND		0.0051	mg/Kg-dry	1	5/25/2023 05:41 PM
trans-1,2-Dichloroethene	ND		0.0051	mg/Kg-dry	1	5/25/2023 05:41 PM
trans-1,3-Dichloropropene	ND		0.0051	mg/Kg-dry	1	5/25/2023 05:41 PM
Trichloroethene	ND		0.0051	mg/Kg-dry	1	5/25/2023 05:41 PM

**Note:**

# ALS Environmental

Date: 05-Jun-23

**Client:** The Mannik & Smith Group, Inc.  
**Project:** Hillson Nut; MS23-13; 401ODAS003-19  
**Sample ID:** SB-16 (0-2')  
**Collection Date:** 5/23/2023 04:10 PM

**Work Order:** 23051093  
**Lab ID:** 23051093-03  
**Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Trichlorofluoromethane	ND		0.0051	mg/Kg-dry	1	5/25/2023 05:41 PM
Vinyl chloride	ND		0.0051	mg/Kg-dry	1	5/25/2023 05:41 PM
Xylenes, Total	ND		0.010	mg/Kg-dry	1	5/25/2023 05:41 PM
<i>Surr: 4-Bromofluorobenzene</i>	103		60-140	%REC	1	5/25/2023 05:41 PM
<i>Surr: Dibromofluoromethane</i>	102		60-140	%REC	1	5/25/2023 05:41 PM
<i>Surr: Toluene-d8</i>	96.0		60-140	%REC	1	5/25/2023 05:41 PM

**Note:**

# ALS Environmental

Date: 05-Jun-23

**Client:** The Mannik & Smith Group, Inc.  
**Project:** Hillson Nut; MS23-13; 401ODAS003-19  
**Sample ID:** SB-18 (0-2')  
**Collection Date:** 5/23/2023 04:30 PM

**Work Order:** 23051093  
**Lab ID:** 23051093-04  
**Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
<b>PCBS</b>			<b>SW8082</b>	Prep: SW3546 5/31/23 17:07		Analyst: <b>TSA</b>
Aroclor 1016	ND		0.12	mg/Kg-dry	1	6/1/2023 06:24 AM
Aroclor 1221	ND		0.24	mg/Kg-dry	1	6/1/2023 06:24 AM
Aroclor 1232	ND		0.12	mg/Kg-dry	1	6/1/2023 06:24 AM
Aroclor 1242	ND		0.12	mg/Kg-dry	1	6/1/2023 06:24 AM
Aroclor 1248	ND		0.12	mg/Kg-dry	1	6/1/2023 06:24 AM
Aroclor 1254	ND		0.12	mg/Kg-dry	1	6/1/2023 06:24 AM
Aroclor 1260	ND		0.12	mg/Kg-dry	1	6/1/2023 06:24 AM
Aroclor 1262	ND		0.12	mg/Kg-dry	1	6/1/2023 06:24 AM
Aroclor 1268	ND		0.12	mg/Kg-dry	1	6/1/2023 06:24 AM
Surr: Decachlorobiphenyl	70.0		7.32-154	%REC	1	6/1/2023 06:24 AM
Surr: Tetrachloro-m-xylene	68.0		33.5-152	%REC	1	6/1/2023 06:24 AM
<b>MOISTURE</b>			<b>SM2540B</b>			Analyst: <b>CW</b>
Moisture	15			% of sample	1	6/1/2023
<b>MERCURY BY CVAA</b>			<b>SW7471A</b>	Prep: EPA 7471 5/30/23 13:51		Analyst: <b>SLT</b>
Mercury	ND		0.31	mg/Kg-dry	1	6/2/2023 01:36 PM
<b>METALS BY ICP</b>			<b>SW6010B</b>	Prep: SW3050B 5/30/23 12:24		Analyst: <b>SLT</b>
Arsenic	6.8		5.9	mg/Kg-dry	1	5/30/2023 05:06 PM
Barium	69		24	mg/Kg-dry	1	5/30/2023 05:06 PM
Cadmium	1.6		1.2	mg/Kg-dry	1	5/30/2023 05:06 PM
Chromium	15		12	mg/Kg-dry	1	5/30/2023 05:06 PM
Lead	ND		24	mg/Kg-dry	1	5/30/2023 05:06 PM
Selenium	ND		3.5	mg/Kg-dry	1	5/30/2023 05:06 PM
Silver	ND		5.9	mg/Kg-dry	1	5/30/2023 05:06 PM
<b>SEMI-VOLATILE ORGANIC COMPOUNDS</b>			<b>SW8270C</b>	Prep: SW3546 5/30/23 11:26		Analyst: <b>RA</b>
1,2,4,5-Tetrachlorobenzene	ND		0.39	mg/Kg-dry	1	6/1/2023 10:08 PM
1,2,4-Trichlorobenzene	ND		0.39	mg/Kg-dry	1	6/1/2023 10:08 PM
1,2-Dichlorobenzene	ND		0.39	mg/Kg-dry	1	6/1/2023 10:08 PM
1,3-Dichlorobenzene	ND		0.39	mg/Kg-dry	1	6/1/2023 10:08 PM
1,3-Dinitrobenzene	ND		0.39	mg/Kg-dry	1	6/1/2023 10:08 PM
1,4-Dichlorobenzene	ND		0.39	mg/Kg-dry	1	6/1/2023 10:08 PM
1-Methylnaphthalene	ND		0.24	mg/Kg-dry	1	6/1/2023 10:08 PM
1-Naphthylamine	ND		0.39	mg/Kg-dry	1	6/1/2023 10:08 PM
2,3,4,6-Tetrachlorophenol	ND		0.39	mg/Kg-dry	1	6/1/2023 10:08 PM
2,4,5-Trichlorophenol	ND		0.39	mg/Kg-dry	1	6/1/2023 10:08 PM
2,4,6-Trichlorophenol	ND		0.39	mg/Kg-dry	1	6/1/2023 10:08 PM
2,4-Dichlorophenol	ND		0.39	mg/Kg-dry	1	6/1/2023 10:08 PM
2,4-Dimethylphenol	ND		0.39	mg/Kg-dry	1	6/1/2023 10:08 PM

Note:

# ALS Environmental

Date: 05-Jun-23

**Client:** The Mannik & Smith Group, Inc.  
**Project:** Hillson Nut; MS23-13; 401ODAS003-19  
**Sample ID:** SB-18 (0-2')  
**Collection Date:** 5/23/2023 04:30 PM

**Work Order:** 23051093  
**Lab ID:** 23051093-04  
**Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
2,4-Dinitrophenol	ND		2.0	mg/Kg-dry	1	6/1/2023 10:08 PM
2,4-Dinitrotoluene	ND		0.39	mg/Kg-dry	1	6/1/2023 10:08 PM
2,6-Dichlorophenol	ND		0.39	mg/Kg-dry	1	6/1/2023 10:08 PM
2,6-Dinitrotoluene	ND		0.39	mg/Kg-dry	1	6/1/2023 10:08 PM
2-Acetylaminofluorene	ND		0.39	mg/Kg-dry	1	6/1/2023 10:08 PM
2-Chloronaphthalene	ND		0.39	mg/Kg-dry	1	6/1/2023 10:08 PM
2-Chlorophenol	ND		0.39	mg/Kg-dry	1	6/1/2023 10:08 PM
2-Methylnaphthalene	ND		0.24	mg/Kg-dry	1	6/1/2023 10:08 PM
2-Methylphenol	ND		0.39	mg/Kg-dry	1	6/1/2023 10:08 PM
2-Naphthylamine	ND		0.39	mg/Kg-dry	1	6/1/2023 10:08 PM
2-Nitroaniline	ND		2.0	mg/Kg-dry	1	6/1/2023 10:08 PM
2-Nitrophenol	ND		0.39	mg/Kg-dry	1	6/1/2023 10:08 PM
2-Picoline	ND		0.39	mg/Kg-dry	1	6/1/2023 10:08 PM
3&4-Methylphenol	ND		0.39	mg/Kg-dry	1	6/1/2023 10:08 PM
3,3'-Dichlorobenzidine	ND		0.78	mg/Kg-dry	1	6/1/2023 10:08 PM
3-Methylcholanthrene	ND		0.39	mg/Kg-dry	1	6/1/2023 10:08 PM
3-Nitroaniline	ND		2.0	mg/Kg-dry	1	6/1/2023 10:08 PM
4,6-Dinitro-2-methylphenol	ND		2.0	mg/Kg-dry	1	6/1/2023 10:08 PM
4-Aminobiphenyl	ND		0.78	mg/Kg-dry	1	6/1/2023 10:08 PM
4-Bromophenyl phenyl ether	ND		0.39	mg/Kg-dry	1	6/1/2023 10:08 PM
4-Chloro-3-methylphenol	ND		0.78	mg/Kg-dry	1	6/1/2023 10:08 PM
4-Chloroaniline	ND		0.78	mg/Kg-dry	1	6/1/2023 10:08 PM
4-Chlorophenyl phenyl ether	ND		0.39	mg/Kg-dry	1	6/1/2023 10:08 PM
4-Nitroaniline	ND		0.78	mg/Kg-dry	1	6/1/2023 10:08 PM
4-Nitrophenol	ND		2.0	mg/Kg-dry	1	6/1/2023 10:08 PM
4-Nitroquinoline 1-oxide	ND		2.0	mg/Kg-dry	1	6/1/2023 10:08 PM
5-Nitro-o-toluidine	ND		0.39	mg/Kg-dry	1	6/1/2023 10:08 PM
7,12-Dimethylbenz(a)anthracene	ND		0.39	mg/Kg-dry	1	6/1/2023 10:08 PM
Acenaphthene	ND		0.24	mg/Kg-dry	1	6/1/2023 10:08 PM
Acenaphthylene	ND		0.24	mg/Kg-dry	1	6/1/2023 10:08 PM
Acetophenone	ND		0.39	mg/Kg-dry	1	6/1/2023 10:08 PM
Aniline	ND		0.39	mg/Kg-dry	1	6/1/2023 10:08 PM
Anthracene	ND		0.24	mg/Kg-dry	1	6/1/2023 10:08 PM
Azobenzene	ND		0.39	mg/Kg-dry	1	6/1/2023 10:08 PM
Benzidine	ND		0.39	mg/Kg-dry	1	6/1/2023 10:08 PM
Benzo(a)anthracene	ND		0.12	mg/Kg-dry	1	6/1/2023 10:08 PM
Benzo(a)pyrene	ND		0.12	mg/Kg-dry	1	6/1/2023 10:08 PM
Benzo(b)fluoranthene	ND		0.24	mg/Kg-dry	1	6/1/2023 10:08 PM
Benzo(g,h,i)perylene	ND		0.24	mg/Kg-dry	1	6/1/2023 10:08 PM
Benzo(k)fluoranthene	ND		0.24	mg/Kg-dry	1	6/1/2023 10:08 PM

**Note:**



# ALS Environmental

Date: 05-Jun-23

**Client:** The Mannik & Smith Group, Inc.  
**Project:** Hillson Nut; MS23-13; 401ODAS003-19  
**Sample ID:** SB-18 (0-2')  
**Collection Date:** 5/23/2023 04:30 PM

**Work Order:** 23051093  
**Lab ID:** 23051093-04  
**Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Benzyl alcohol	ND		0.78	mg/Kg-dry	1	6/1/2023 10:08 PM
Bis(2-chloroethoxy)methane	ND		0.39	mg/Kg-dry	1	6/1/2023 10:08 PM
Bis(2-chloroethyl)ether	ND		0.39	mg/Kg-dry	1	6/1/2023 10:08 PM
Bis(2-chloroisopropyl)ether	ND		0.39	mg/Kg-dry	1	6/1/2023 10:08 PM
Bis(2-ethylhexyl)phthalate	ND		0.39	mg/Kg-dry	1	6/1/2023 10:08 PM
Butyl benzyl phthalate	ND		0.39	mg/Kg-dry	1	6/1/2023 10:08 PM
Carbazole	ND		0.24	mg/Kg-dry	1	6/1/2023 10:08 PM
Chrysene	ND		0.24	mg/Kg-dry	1	6/1/2023 10:08 PM
Dibenzo(a,h)anthracene	ND		0.12	mg/Kg-dry	1	6/1/2023 10:08 PM
Dibenzofuran	ND		0.24	mg/Kg-dry	1	6/1/2023 10:08 PM
Diethyl phthalate	ND		0.39	mg/Kg-dry	1	6/1/2023 10:08 PM
Dimethyl phthalate	ND		0.39	mg/Kg-dry	1	6/1/2023 10:08 PM
Di-n-butyl phthalate	ND		0.39	mg/Kg-dry	1	6/1/2023 10:08 PM
Di-n-octyl phthalate	ND		0.39	mg/Kg-dry	1	6/1/2023 10:08 PM
Dinoseb	ND		0.39	mg/Kg-dry	1	6/1/2023 10:08 PM
Diphenylamine	ND		0.39	mg/Kg-dry	1	6/1/2023 10:08 PM
Ethyl methanesulfonate	ND		0.39	mg/Kg-dry	1	6/1/2023 10:08 PM
Fluoranthene	ND		0.24	mg/Kg-dry	1	6/1/2023 10:08 PM
Fluorene	ND		0.24	mg/Kg-dry	1	6/1/2023 10:08 PM
Hexachlorobenzene	ND		0.39	mg/Kg-dry	1	6/1/2023 10:08 PM
Hexachlorobutadiene	ND		0.39	mg/Kg-dry	1	6/1/2023 10:08 PM
Hexachlorocyclopentadiene	ND		0.39	mg/Kg-dry	1	6/1/2023 10:08 PM
Hexachloroethane	ND		0.39	mg/Kg-dry	1	6/1/2023 10:08 PM
Indeno(1,2,3-cd)pyrene	ND		0.12	mg/Kg-dry	1	6/1/2023 10:08 PM
Isophorone	ND		0.39	mg/Kg-dry	1	6/1/2023 10:08 PM
Isosafrole	ND		0.39	mg/Kg-dry	1	6/1/2023 10:08 PM
Methapyrilene	ND		2.0	mg/Kg-dry	1	6/1/2023 10:08 PM
Methyl methanesulfonate	ND		0.39	mg/Kg-dry	1	6/1/2023 10:08 PM
Naphthalene	ND		0.24	mg/Kg-dry	1	6/1/2023 10:08 PM
Nitrobenzene	ND		0.39	mg/Kg-dry	1	6/1/2023 10:08 PM
N-Nitrosodiethylamine	ND		0.39	mg/Kg-dry	1	6/1/2023 10:08 PM
N-Nitrosodimethylamine	ND		0.39	mg/Kg-dry	1	6/1/2023 10:08 PM
N-Nitroso-di-n-butylamine	ND		0.39	mg/Kg-dry	1	6/1/2023 10:08 PM
N-Nitrosodi-n-propylamine	ND		0.39	mg/Kg-dry	1	6/1/2023 10:08 PM
N-Nitrosomethylethylamine	ND		0.39	mg/Kg-dry	1	6/1/2023 10:08 PM
N-Nitrosomorpholine	ND		0.39	mg/Kg-dry	1	6/1/2023 10:08 PM
N-Nitrosopiperidine	ND		0.39	mg/Kg-dry	1	6/1/2023 10:08 PM
N-Nitrosopyrrolidine	ND		0.39	mg/Kg-dry	1	6/1/2023 10:08 PM
o-Toluidine	ND		2.0	mg/Kg-dry	1	6/1/2023 10:08 PM
p-Dimethylaminoazobenzene	ND		0.39	mg/Kg-dry	1	6/1/2023 10:08 PM

**Note:**

# ALS Environmental

Date: 05-Jun-23

**Client:** The Mannik & Smith Group, Inc.  
**Project:** Hillson Nut; MS23-13; 401ODAS003-19  
**Sample ID:** SB-18 (0-2')  
**Collection Date:** 5/23/2023 04:30 PM

**Work Order:** 23051093  
**Lab ID:** 23051093-04  
**Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Pentachlorobenzene	ND		0.39	mg/Kg-dry	1	6/1/2023 10:08 PM
Pentachloroethane	ND		0.39	mg/Kg-dry	1	6/1/2023 10:08 PM
Pentachloronitrobenzene	ND		0.78	mg/Kg-dry	1	6/1/2023 10:08 PM
Pentachlorophenol	ND		2.0	mg/Kg-dry	1	6/1/2023 10:08 PM
Phenacetin	ND		0.78	mg/Kg-dry	1	6/1/2023 10:08 PM
Phenanthrene	ND		0.24	mg/Kg-dry	1	6/1/2023 10:08 PM
Phenol	ND		0.39	mg/Kg-dry	1	6/1/2023 10:08 PM
Pyrene	ND		0.24	mg/Kg-dry	1	6/1/2023 10:08 PM
Pyridine	ND		0.39	mg/Kg-dry	1	6/1/2023 10:08 PM
Safrole	ND		0.39	mg/Kg-dry	1	6/1/2023 10:08 PM
<i>Surr: 2,4,6-Tribromophenol</i>	<i>54.1</i>		<i>14.2-136</i>	<i>%REC</i>	<i>1</i>	<i>6/1/2023 10:08 PM</i>
<i>Surr: 2-Fluorobiphenyl</i>	<i>55.5</i>		<i>30-116</i>	<i>%REC</i>	<i>1</i>	<i>6/1/2023 10:08 PM</i>
<i>Surr: 2-Fluorophenol</i>	<i>42.3</i>		<i>24-105</i>	<i>%REC</i>	<i>1</i>	<i>6/1/2023 10:08 PM</i>
<i>Surr: 4-Terphenyl-d14</i>	<i>54.6</i>		<i>27.3-138</i>	<i>%REC</i>	<i>1</i>	<i>6/1/2023 10:08 PM</i>
<i>Surr: Nitrobenzene-d5</i>	<i>48.1</i>		<i>23.7-109</i>	<i>%REC</i>	<i>1</i>	<i>6/1/2023 10:08 PM</i>
<i>Surr: Phenol-d5</i>	<i>41.1</i>		<i>24.9-103</i>	<i>%REC</i>	<i>1</i>	<i>6/1/2023 10:08 PM</i>

## VOLATILE ORGANIC COMPOUNDS

SW8260B

Analyst: LAK

1,1,1,2-Tetrachloroethane	ND		0.0062	mg/Kg-dry	1	5/25/2023 06:03 PM
1,1,1-Trichloroethane	ND		0.0062	mg/Kg-dry	1	5/25/2023 06:03 PM
1,1,2,2-Tetrachloroethane	ND		0.0062	mg/Kg-dry	1	5/25/2023 06:03 PM
1,1,2-Trichloroethane	ND		0.0062	mg/Kg-dry	1	5/25/2023 06:03 PM
1,1-Dichloroethane	ND		0.0062	mg/Kg-dry	1	5/25/2023 06:03 PM
1,1-Dichloroethene	ND		0.0062	mg/Kg-dry	1	5/25/2023 06:03 PM
1,1-Dichloropropene	ND		0.0062	mg/Kg-dry	1	5/25/2023 06:03 PM
1,2,3-Trichlorobenzene	ND		0.0062	mg/Kg-dry	1	5/25/2023 06:03 PM
1,2,3-Trichloropropane	ND		0.0062	mg/Kg-dry	1	5/25/2023 06:03 PM
1,2,4-Trichlorobenzene	ND		0.0062	mg/Kg-dry	1	5/25/2023 06:03 PM
1,2,4-Trimethylbenzene	ND		0.0062	mg/Kg-dry	1	5/25/2023 06:03 PM
1,2-Dibromo-3-chloropropane	ND		0.0062	mg/Kg-dry	1	5/25/2023 06:03 PM
1,2-Dibromoethane	ND		0.0062	mg/Kg-dry	1	5/25/2023 06:03 PM
1,2-Dichlorobenzene	ND		0.0062	mg/Kg-dry	1	5/25/2023 06:03 PM
1,2-Dichloroethane	ND		0.0062	mg/Kg-dry	1	5/25/2023 06:03 PM
1,2-Dichloropropane	ND		0.0062	mg/Kg-dry	1	5/25/2023 06:03 PM
1,3,5-Trimethylbenzene	ND		0.0062	mg/Kg-dry	1	5/25/2023 06:03 PM
1,3-Dichlorobenzene	ND		0.0062	mg/Kg-dry	1	5/25/2023 06:03 PM
1,3-Dichloropropane	ND		0.0062	mg/Kg-dry	1	5/25/2023 06:03 PM
1,4-Dichlorobenzene	ND		0.0062	mg/Kg-dry	1	5/25/2023 06:03 PM
2,2-Dichloropropane	ND		0.0062	mg/Kg-dry	1	5/25/2023 06:03 PM
2-Butanone	ND		0.062	mg/Kg-dry	1	5/25/2023 06:03 PM
2-Chlorotoluene	ND		0.0062	mg/Kg-dry	1	5/25/2023 06:03 PM

Note:

# ALS Environmental

Date: 05-Jun-23

**Client:** The Mannik & Smith Group, Inc.  
**Project:** Hillson Nut; MS23-13; 401ODAS003-19  
**Sample ID:** SB-18 (0-2')  
**Collection Date:** 5/23/2023 04:30 PM

**Work Order:** 23051093  
**Lab ID:** 23051093-04  
**Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
2-Hexanone	ND		0.0062	mg/Kg-dry	1	5/25/2023 06:03 PM
4-Chlorotoluene	ND		0.0062	mg/Kg-dry	1	5/25/2023 06:03 PM
4-Methyl-2-pentanone	ND		0.0062	mg/Kg-dry	1	5/25/2023 06:03 PM
Acetone	ND		0.062	mg/Kg-dry	1	5/25/2023 06:03 PM
Benzene	ND		0.0062	mg/Kg-dry	1	5/25/2023 06:03 PM
Bromobenzene	ND		0.0062	mg/Kg-dry	1	5/25/2023 06:03 PM
Bromochloromethane	ND		0.0062	mg/Kg-dry	1	5/25/2023 06:03 PM
Bromodichloromethane	ND		0.0062	mg/Kg-dry	1	5/25/2023 06:03 PM
Bromoform	ND		0.0062	mg/Kg-dry	1	5/25/2023 06:03 PM
Bromomethane	ND		0.0062	mg/Kg-dry	1	5/25/2023 06:03 PM
Carbon disulfide	ND		0.0062	mg/Kg-dry	1	5/25/2023 06:03 PM
Carbon tetrachloride	ND		0.0062	mg/Kg-dry	1	5/25/2023 06:03 PM
Chlorobenzene	ND		0.0062	mg/Kg-dry	1	5/25/2023 06:03 PM
Chloroethane	ND		0.0062	mg/Kg-dry	1	5/25/2023 06:03 PM
Chloroform	ND		0.0062	mg/Kg-dry	1	5/25/2023 06:03 PM
Chloromethane	ND		0.0062	mg/Kg-dry	1	5/25/2023 06:03 PM
cis-1,2-Dichloroethene	ND		0.0062	mg/Kg-dry	1	5/25/2023 06:03 PM
cis-1,3-Dichloropropene	ND		0.0062	mg/Kg-dry	1	5/25/2023 06:03 PM
Dibromochloromethane	ND		0.0062	mg/Kg-dry	1	5/25/2023 06:03 PM
Dibromomethane	ND		0.0062	mg/Kg-dry	1	5/25/2023 06:03 PM
Dichlorodifluoromethane	ND		0.0062	mg/Kg-dry	1	5/25/2023 06:03 PM
Ethylbenzene	ND		0.0062	mg/Kg-dry	1	5/25/2023 06:03 PM
Hexachlorobutadiene	ND		0.0062	mg/Kg-dry	1	5/25/2023 06:03 PM
Isopropylbenzene	ND		0.0062	mg/Kg-dry	1	5/25/2023 06:03 PM
m,p-Xylene	ND		0.0062	mg/Kg-dry	1	5/25/2023 06:03 PM
Methyl tert-butyl ether	ND		0.0062	mg/Kg-dry	1	5/25/2023 06:03 PM
Methylene chloride	ND		0.025	mg/Kg-dry	1	5/25/2023 06:03 PM
Naphthalene	ND		0.0062	mg/Kg-dry	1	5/25/2023 06:03 PM
n-Butylbenzene	ND		0.0062	mg/Kg-dry	1	5/25/2023 06:03 PM
n-Propylbenzene	ND		0.0062	mg/Kg-dry	1	5/25/2023 06:03 PM
o-Xylene	ND		0.0062	mg/Kg-dry	1	5/25/2023 06:03 PM
p-Isopropyltoluene	ND		0.0062	mg/Kg-dry	1	5/25/2023 06:03 PM
sec-Butylbenzene	ND		0.0062	mg/Kg-dry	1	5/25/2023 06:03 PM
Styrene	ND		0.0062	mg/Kg-dry	1	5/25/2023 06:03 PM
tert-Butylbenzene	ND		0.0062	mg/Kg-dry	1	5/25/2023 06:03 PM
Tetrachloroethene	ND		0.0062	mg/Kg-dry	1	5/25/2023 06:03 PM
Toluene	ND		0.0062	mg/Kg-dry	1	5/25/2023 06:03 PM
trans-1,2-Dichloroethene	ND		0.0062	mg/Kg-dry	1	5/25/2023 06:03 PM
trans-1,3-Dichloropropene	ND		0.0062	mg/Kg-dry	1	5/25/2023 06:03 PM
Trichloroethene	ND		0.0062	mg/Kg-dry	1	5/25/2023 06:03 PM

**Note:**

# ALS Environmental

Date: 05-Jun-23

**Client:** The Mannik & Smith Group, Inc.  
**Project:** Hillson Nut; MS23-13; 401ODAS003-19  
**Sample ID:** SB-18 (0-2')  
**Collection Date:** 5/23/2023 04:30 PM

**Work Order:** 23051093  
**Lab ID:** 23051093-04  
**Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Trichlorofluoromethane	ND		0.0062	mg/Kg-dry	1	5/25/2023 06:03 PM
Vinyl chloride	ND		0.0062	mg/Kg-dry	1	5/25/2023 06:03 PM
Xylenes, Total	ND		0.012	mg/Kg-dry	1	5/25/2023 06:03 PM
<i>Surr: 4-Bromofluorobenzene</i>	105		60-140	%REC	1	5/25/2023 06:03 PM
<i>Surr: Dibromofluoromethane</i>	106		60-140	%REC	1	5/25/2023 06:03 PM
<i>Surr: Toluene-d8</i>	96.4		60-140	%REC	1	5/25/2023 06:03 PM

**Note:**

# ALS Environmental

Date: 05-Jun-23

**Client:** The Mannik & Smith Group, Inc.  
**Project:** Hillson Nut; MS23-13; 401ODAS003-19  
**Sample ID:** TW-10  
**Collection Date:** 5/23/2023 03:45 PM

**Work Order:** 23051093  
**Lab ID:** 23051093-05  
**Matrix:** WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
<b>PCBS</b>			<b>SW8082</b>		Prep: SW3510C 6/1/23 13:00	Analyst: <b>TSA</b>
Aroclor 1016	ND		1.0	µg/L	1	6/2/2023 10:12 AM
Aroclor 1221	ND		1.0	µg/L	1	6/2/2023 10:12 AM
Aroclor 1232	ND		1.0	µg/L	1	6/2/2023 10:12 AM
Aroclor 1242	ND		1.0	µg/L	1	6/2/2023 10:12 AM
Aroclor 1248	ND		1.0	µg/L	1	6/2/2023 10:12 AM
Aroclor 1254	ND		1.8	µg/L	1	6/2/2023 10:12 AM
Aroclor 1260	ND		1.8	µg/L	1	6/2/2023 10:12 AM
Surr: Decachlorobiphenyl	31.0		6.61-163	%REC	1	6/2/2023 10:12 AM
Surr: Tetrachloro-m-xylene	52.0		23.8-163	%REC	1	6/2/2023 10:12 AM
<b>MERCURY BY CVA</b>			<b>SW7470A</b>		Prep: SW7470A 5/25/23 13:14	Analyst: <b>SLT</b>
Mercury	0.46		0.25	µg/L	1	5/31/2023 11:25 AM
<b>METALS BY ICP</b>			<b>SW6010B</b>		Prep: SW3010A 5/25/23 13:13	Analyst: <b>SLT</b>
Arsenic	260		10	µg/L	1	5/29/2023 03:21 PM
Barium	430		100	µg/L	1	5/29/2023 03:21 PM
Cadmium	ND		50	µg/L	1	5/29/2023 03:21 PM
Chromium	200		10	µg/L	1	5/29/2023 03:21 PM
Lead	290		15	µg/L	1	5/29/2023 03:21 PM
Selenium	ND		30	µg/L	1	5/29/2023 03:21 PM
Silver	ND		50	µg/L	1	5/29/2023 03:21 PM
<b>SEMI-VOLATILE ORGANIC COMPOUNDS</b>			<b>SW8270C</b>		Prep: SW3510C 5/30/23 12:10	Analyst: <b>GC</b>
1,2,4,5-Tetrachlorobenzene	ND		10.0	µg/L	1	5/30/2023 10:49 PM
1,2,4-Trichlorobenzene	ND		10.0	µg/L	1	5/30/2023 10:49 PM
1,2-Dichlorobenzene	ND		10.0	µg/L	1	5/30/2023 10:49 PM
1,3-Dichlorobenzene	ND		10.0	µg/L	1	5/30/2023 10:49 PM
1,3-Dinitrobenzene	ND		10.0	µg/L	1	5/30/2023 10:49 PM
1,4-Dichlorobenzene	ND		10.0	µg/L	1	5/30/2023 10:49 PM
1-Methylnaphthalene	ND		0.200	µg/L	1	5/30/2023 10:49 PM
1-Naphthylamine	ND		10.0	µg/L	1	5/30/2023 10:49 PM
2,3,4,6-Tetrachlorophenol	ND		10.0	µg/L	1	5/30/2023 10:49 PM
2,4,5-Trichlorophenol	ND		10.0	µg/L	1	5/30/2023 10:49 PM
2,4,6-Trichlorophenol	ND		10.0	µg/L	1	5/30/2023 10:49 PM
2,4-Dichlorophenol	ND		10.0	µg/L	1	5/30/2023 10:49 PM
2,4-Dimethylphenol	ND		10.0	µg/L	1	5/30/2023 10:49 PM
2,4-Dinitrophenol	ND		10.0	µg/L	1	5/30/2023 10:49 PM
2,4-Dinitrotoluene	ND		10.0	µg/L	1	5/30/2023 10:49 PM
2,6-Dichlorophenol	ND		10.0	µg/L	1	5/30/2023 10:49 PM
2,6-Dinitrotoluene	ND		10.0	µg/L	1	5/30/2023 10:49 PM

Note:

# ALS Environmental

Date: 05-Jun-23

**Client:** The Mannik & Smith Group, Inc.  
**Project:** Hillson Nut; MS23-13; 401ODAS003-19  
**Sample ID:** TW-10  
**Collection Date:** 5/23/2023 03:45 PM

**Work Order:** 23051093  
**Lab ID:** 23051093-05  
**Matrix:** WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
2-Acetylaminofluorene	ND		10.0	µg/L	1	5/30/2023 10:49 PM
2-Chloronaphthalene	ND		10.0	µg/L	1	5/30/2023 10:49 PM
2-Chlorophenol	ND		10.0	µg/L	1	5/30/2023 10:49 PM
2-Methylnaphthalene	ND		0.200	µg/L	1	5/30/2023 10:49 PM
2-Methylphenol	ND		10.0	µg/L	1	5/30/2023 10:49 PM
2-Naphthylamine	ND		20.0	µg/L	1	5/30/2023 10:49 PM
2-Nitroaniline	ND		10.0	µg/L	1	5/30/2023 10:49 PM
2-Nitrophenol	ND		10.0	µg/L	1	5/30/2023 10:49 PM
2-Picoline	ND		20.0	µg/L	1	5/30/2023 10:49 PM
3&4-Methylphenol	ND		10.0	µg/L	1	5/30/2023 10:49 PM
3,3'-Dichlorobenzidine	ND		10.0	µg/L	1	5/30/2023 10:49 PM
3-Methylcholanthrene	ND		20.0	µg/L	1	5/30/2023 10:49 PM
3-Nitroaniline	ND		20.0	µg/L	1	5/30/2023 10:49 PM
4,6-Dinitro-2-methylphenol	ND		20.0	µg/L	1	5/30/2023 10:49 PM
4-Aminobiphenyl	ND		10.0	µg/L	1	5/30/2023 10:49 PM
4-Bromophenyl phenyl ether	ND		20.0	µg/L	1	5/30/2023 10:49 PM
4-Chloro-3-methylphenol	ND		20.0	µg/L	1	5/30/2023 10:49 PM
4-Chloroaniline	ND		10.0	µg/L	1	5/30/2023 10:49 PM
4-Chlorophenyl phenyl ether	ND		20.0	µg/L	1	5/30/2023 10:49 PM
4-Nitroaniline	ND		20.0	µg/L	1	5/30/2023 10:49 PM
4-Nitrophenol	ND		10.0	µg/L	1	5/30/2023 10:49 PM
4-Nitroquinoline 1-oxide	ND		10.0	µg/L	1	5/30/2023 10:49 PM
5-Nitro-o-toluidine	ND		10.0	µg/L	1	5/30/2023 10:49 PM
7,12-Dimethylbenz(a)anthracene	ND		10.0	µg/L	1	5/30/2023 10:49 PM
Acenaphthene	ND		0.200	µg/L	1	5/30/2023 10:49 PM
Acenaphthylene	ND		0.200	µg/L	1	5/30/2023 10:49 PM
Acetophenone	ND		10.0	µg/L	1	5/30/2023 10:49 PM
Aniline	ND		10.0	µg/L	1	5/30/2023 10:49 PM
Anthracene	ND		0.200	µg/L	1	5/30/2023 10:49 PM
Azobenzene	ND		10.0	µg/L	1	5/30/2023 10:49 PM
Benzidine	ND		10.0	µg/L	1	5/30/2023 10:49 PM
Benzo(a)anthracene	ND		0.200	µg/L	1	5/30/2023 10:49 PM
Benzo(a)pyrene	ND		0.200	µg/L	1	5/30/2023 10:49 PM
Benzo(b)fluoranthene	ND		0.200	µg/L	1	5/30/2023 10:49 PM
Benzo(g,h,i)perylene	ND		0.200	µg/L	1	5/30/2023 10:49 PM
Benzo(k)fluoranthene	ND		0.200	µg/L	1	5/30/2023 10:49 PM
Benzyl alcohol	ND		10.0	µg/L	1	5/30/2023 10:49 PM
Bis(2-chloroethoxy)methane	ND		10.0	µg/L	1	5/30/2023 10:49 PM
Bis(2-chloroethyl)ether	ND		10.0	µg/L	1	5/30/2023 10:49 PM
Bis(2-chloroisopropyl)ether	ND		10.0	µg/L	1	5/30/2023 10:49 PM

**Note:**

# ALS Environmental

Date: 05-Jun-23

**Client:** The Mannik & Smith Group, Inc.  
**Project:** Hillson Nut; MS23-13; 401ODAS003-19  
**Sample ID:** TW-10  
**Collection Date:** 5/23/2023 03:45 PM

**Work Order:** 23051093  
**Lab ID:** 23051093-05  
**Matrix:** WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Bis(2-ethylhexyl)phthalate	ND		10.0	µg/L	1	5/30/2023 10:49 PM
Butyl benzyl phthalate	ND		10.0	µg/L	1	5/30/2023 10:49 PM
Carbazole	ND		0.200	µg/L	1	5/30/2023 10:49 PM
Chrysene	ND		0.200	µg/L	1	5/30/2023 10:49 PM
Dibenzo(a,h)anthracene	ND		0.200	µg/L	1	5/30/2023 10:49 PM
Dibenzofuran	ND		10.0	µg/L	1	5/30/2023 10:49 PM
Diethyl phthalate	ND		10.0	µg/L	1	5/30/2023 10:49 PM
Dimethyl phthalate	ND		10.0	µg/L	1	5/30/2023 10:49 PM
Di-n-butyl phthalate	ND		10.0	µg/L	1	5/30/2023 10:49 PM
Di-n-octyl phthalate	ND		10.0	µg/L	1	5/30/2023 10:49 PM
Dinoseb	ND		20.0	µg/L	1	5/30/2023 10:49 PM
Diphenylamine	ND		10.0	µg/L	1	5/30/2023 10:49 PM
Ethyl methanesulfonate	ND		10.0	µg/L	1	5/30/2023 10:49 PM
Fluoranthene	ND		0.200	µg/L	1	5/30/2023 10:49 PM
Fluorene	ND		0.200	µg/L	1	5/30/2023 10:49 PM
Hexachlorobenzene	ND		10.0	µg/L	1	5/30/2023 10:49 PM
Hexachlorobutadiene	ND		10.0	µg/L	1	5/30/2023 10:49 PM
Hexachlorocyclopentadiene	ND		10.0	µg/L	1	5/30/2023 10:49 PM
Hexachloroethane	ND		10.0	µg/L	1	5/30/2023 10:49 PM
Indeno(1,2,3-cd)pyrene	ND		0.200	µg/L	1	5/30/2023 10:49 PM
Isophorone	ND		10.0	µg/L	1	5/30/2023 10:49 PM
Isosafrole	ND		10.0	µg/L	1	5/30/2023 10:49 PM
Methapyrilene	ND		10.0	µg/L	1	5/30/2023 10:49 PM
Methyl methanesulfonate	ND		10.0	µg/L	1	5/30/2023 10:49 PM
Naphthalene	ND		0.200	µg/L	1	5/30/2023 10:49 PM
Nitrobenzene	ND		10.0	µg/L	1	5/30/2023 10:49 PM
N-Nitrosodiethylamine	ND		10.0	µg/L	1	5/30/2023 10:49 PM
N-Nitrosodimethylamine	ND		10.0	µg/L	1	5/30/2023 10:49 PM
N-Nitroso-di-n-butylamine	ND		10.0	µg/L	1	5/30/2023 10:49 PM
N-Nitrosodi-n-propylamine	ND		10.0	µg/L	1	5/30/2023 10:49 PM
N-Nitrosomethylethylamine	ND		10.0	µg/L	1	5/30/2023 10:49 PM
N-Nitrosomorpholine	ND		10.0	µg/L	1	5/30/2023 10:49 PM
N-Nitrosopiperidine	ND		10.0	µg/L	1	5/30/2023 10:49 PM
N-Nitrosopyrrolidine	ND		10.0	µg/L	1	5/30/2023 10:49 PM
o-Toluidine	ND		10.0	µg/L	1	5/30/2023 10:49 PM
p-Dimethylaminoazobenzene	ND		10.0	µg/L	1	5/30/2023 10:49 PM
Pentachlorobenzene	ND		10.0	µg/L	1	5/30/2023 10:49 PM
Pentachloroethane	ND		10.0	µg/L	1	5/30/2023 10:49 PM
Pentachloronitrobenzene	ND		20.0	µg/L	1	5/30/2023 10:49 PM
Pentachlorophenol	ND		20.0	µg/L	1	5/30/2023 10:49 PM

**Note:**

# ALS Environmental

Date: 05-Jun-23

**Client:** The Mannik & Smith Group, Inc.  
**Project:** Hillson Nut; MS23-13; 401ODAS003-19  
**Sample ID:** TW-10  
**Collection Date:** 5/23/2023 03:45 PM

**Work Order:** 23051093  
**Lab ID:** 23051093-05  
**Matrix:** WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Phenacetin	ND		20.0	µg/L	1	5/30/2023 10:49 PM
Phenanthrene	ND		0.200	µg/L	1	5/30/2023 10:49 PM
Phenol	ND		10.0	µg/L	1	5/30/2023 10:49 PM
Pyrene	ND		0.200	µg/L	1	5/30/2023 10:49 PM
Pyridine	ND		10.0	µg/L	1	5/30/2023 10:49 PM
Safrole	ND		10.0	µg/L	1	5/30/2023 10:49 PM
<i>Surr: 2,4,6-Tribromophenol</i>	<i>64.1</i>		<i>42.3-142</i>	<i>%REC</i>	1	5/30/2023 10:49 PM
<i>Surr: 2-Fluorobiphenyl</i>	<i>53.0</i>		<i>36.8-125</i>	<i>%REC</i>	1	5/30/2023 10:49 PM
<i>Surr: 2-Fluorophenol</i>	<i>31.1</i>		<i>12-89</i>	<i>%REC</i>	1	5/30/2023 10:49 PM
<i>Surr: 4-Terphenyl-d14</i>	<i>48.0</i>		<i>38.3-160</i>	<i>%REC</i>	1	5/30/2023 10:49 PM
<i>Surr: Nitrobenzene-d5</i>	<i>55.1</i>		<i>28-120</i>	<i>%REC</i>	1	5/30/2023 10:49 PM
<i>Surr: Phenol-d5</i>	<i>23.8</i>		<i>4.27-70.1</i>	<i>%REC</i>	1	5/30/2023 10:49 PM

## VOLATILE ORGANIC COMPOUNDS

SW8260B

Analyst: TJH

1,1,1,2-Tetrachloroethane	ND		5.0	µg/L	1	5/26/2023 04:51 PM
1,1,1-Trichloroethane	ND		5.0	µg/L	1	5/26/2023 04:51 PM
1,1,2,2-Tetrachloroethane	ND		5.0	µg/L	1	5/26/2023 04:51 PM
1,1,2-Trichloroethane	ND		5.0	µg/L	1	5/26/2023 04:51 PM
1,1-Dichloroethane	ND		5.0	µg/L	1	5/26/2023 04:51 PM
1,1-Dichloroethene	ND		5.0	µg/L	1	5/26/2023 04:51 PM
1,1-Dichloropropene	ND		5.0	µg/L	1	5/26/2023 04:51 PM
1,2,3-Trichlorobenzene	ND		5.0	µg/L	1	5/26/2023 04:51 PM
1,2,3-Trichloropropane	ND		5.0	µg/L	1	5/26/2023 04:51 PM
1,2,4-Trichlorobenzene	ND		5.0	µg/L	1	5/26/2023 04:51 PM
1,2,4-Trimethylbenzene	ND		5.0	µg/L	1	5/26/2023 04:51 PM
1,2-Dibromo-3-chloropropane	ND		5.0	µg/L	1	5/26/2023 04:51 PM
1,2-Dibromoethane	ND		5.0	µg/L	1	5/26/2023 04:51 PM
1,2-Dichlorobenzene	ND		5.0	µg/L	1	5/26/2023 04:51 PM
1,2-Dichloroethane	ND		5.0	µg/L	1	5/26/2023 04:51 PM
1,2-Dichloropropane	ND		5.0	µg/L	1	5/26/2023 04:51 PM
1,3,5-Trimethylbenzene	ND		5.0	µg/L	1	5/26/2023 04:51 PM
1,3-Dichlorobenzene	ND		5.0	µg/L	1	5/26/2023 04:51 PM
1,3-Dichloropropane	ND		5.0	µg/L	1	5/26/2023 04:51 PM
1,4-Dichlorobenzene	ND		5.0	µg/L	1	5/26/2023 04:51 PM
2,2-Dichloropropane	ND		5.0	µg/L	1	5/26/2023 04:51 PM
2-Butanone	ND		50	µg/L	1	5/26/2023 04:51 PM
2-Chlorotoluene	ND		5.0	µg/L	1	5/26/2023 04:51 PM
2-Hexanone	ND		5.0	µg/L	1	5/26/2023 04:51 PM
4-Chlorotoluene	ND		5.0	µg/L	1	5/26/2023 04:51 PM
4-Methyl-2-pentanone	ND		5.0	µg/L	1	5/26/2023 04:51 PM
Acetone	ND		50	µg/L	1	5/26/2023 04:51 PM

Note:



# ALS Environmental

Date: 05-Jun-23

**Client:** The Mannik & Smith Group, Inc.  
**Project:** Hillson Nut; MS23-13; 401ODAS003-19  
**Sample ID:** TW-10  
**Collection Date:** 5/23/2023 03:45 PM

**Work Order:** 23051093  
**Lab ID:** 23051093-05  
**Matrix:** WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Benzene	ND		5.0	µg/L	1	5/26/2023 04:51 PM
Bromobenzene	ND		5.0	µg/L	1	5/26/2023 04:51 PM
Bromochloromethane	ND		5.0	µg/L	1	5/26/2023 04:51 PM
Bromodichloromethane	ND		5.0	µg/L	1	5/26/2023 04:51 PM
Bromoform	ND		5.0	µg/L	1	5/26/2023 04:51 PM
Bromomethane	ND		5.0	µg/L	1	5/26/2023 04:51 PM
Carbon disulfide	ND		5.0	µg/L	1	5/26/2023 04:51 PM
Carbon tetrachloride	ND		5.0	µg/L	1	5/26/2023 04:51 PM
Chlorobenzene	ND		5.0	µg/L	1	5/26/2023 04:51 PM
Chloroethane	ND		5.0	µg/L	1	5/26/2023 04:51 PM
Chloroform	ND		5.0	µg/L	1	5/26/2023 04:51 PM
Chloromethane	ND		5.0	µg/L	1	5/26/2023 04:51 PM
cis-1,2-Dichloroethene	ND		5.0	µg/L	1	5/26/2023 04:51 PM
cis-1,3-Dichloropropene	ND		5.0	µg/L	1	5/26/2023 04:51 PM
Dibromochloromethane	ND		5.0	µg/L	1	5/26/2023 04:51 PM
Dibromomethane	ND		5.0	µg/L	1	5/26/2023 04:51 PM
Dichlorodifluoromethane	ND		5.0	µg/L	1	5/26/2023 04:51 PM
Ethylbenzene	ND		5.0	µg/L	1	5/26/2023 04:51 PM
Hexachlorobutadiene	ND		5.0	µg/L	1	5/26/2023 04:51 PM
Isopropylbenzene	ND		5.0	µg/L	1	5/26/2023 04:51 PM
m,p-Xylene	ND		10	µg/L	1	5/26/2023 04:51 PM
Methyl tert-butyl ether	ND		5.0	µg/L	1	5/26/2023 04:51 PM
Methylene chloride	ND		5.0	µg/L	1	5/26/2023 04:51 PM
Naphthalene	ND		5.0	µg/L	1	5/26/2023 04:51 PM
n-Butylbenzene	ND		5.0	µg/L	1	5/26/2023 04:51 PM
n-Propylbenzene	ND		5.0	µg/L	1	5/26/2023 04:51 PM
o-Xylene	ND		5.0	µg/L	1	5/26/2023 04:51 PM
p-Isopropyltoluene	ND		5.0	µg/L	1	5/26/2023 04:51 PM
sec-Butylbenzene	ND		5.0	µg/L	1	5/26/2023 04:51 PM
Styrene	ND		5.0	µg/L	1	5/26/2023 04:51 PM
tert-Butylbenzene	ND		5.0	µg/L	1	5/26/2023 04:51 PM
Tetrachloroethene	ND		5.0	µg/L	1	5/26/2023 04:51 PM
Toluene	ND		5.0	µg/L	1	5/26/2023 04:51 PM
trans-1,2-Dichloroethene	ND		5.0	µg/L	1	5/26/2023 04:51 PM
trans-1,3-Dichloropropene	ND		5.0	µg/L	1	5/26/2023 04:51 PM
Trichloroethene	ND		5.0	µg/L	1	5/26/2023 04:51 PM
Trichlorofluoromethane	ND		5.0	µg/L	1	5/26/2023 04:51 PM
Vinyl chloride	ND		2.0	µg/L	1	5/26/2023 04:51 PM
Xylenes, Total	ND		15	µg/L	1	5/26/2023 04:51 PM
Surr: 4-Bromofluorobenzene	107		61-131	%REC	1	5/26/2023 04:51 PM

**Note:**

**ALS Environmental**

**Date:** 05-Jun-23

**Client:** The Mannik & Smith Group, Inc.  
**Project:** Hillson Nut; MS23-13; 401ODAS003-19  
**Sample ID:** TW-10  
**Collection Date:** 5/23/2023 03:45 PM

**Work Order:** 23051093  
**Lab ID:** 23051093-05  
**Matrix:** WATER

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<b>Analyses</b>	<b>Result</b>	<b>Qual</b>	<b>Report Limit</b>	<b>Units</b>	<b>Dilution Factor</b>	<b>Date Analyzed</b>
<i>Surr: Dibromofluoromethane</i>	109		72-137	%REC	1	5/26/2023 04:51 PM
<i>Surr: Toluene-d8</i>	103		80.4-119	%REC	1	5/26/2023 04:51 PM

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**Note:**

# ALS Environmental

Date: 05-Jun-23

**Client:** The Mannik & Smith Group, Inc.  
**Project:** Hillson Nut; MS23-13; 401ODAS003-19  
**Sample ID:** TW-8  
**Collection Date:** 5/23/2023 04:00 PM

**Work Order:** 23051093  
**Lab ID:** 23051093-06  
**Matrix:** WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
<b>PCBS</b>			<b>SW8082</b>		Prep: SW3510C 6/1/23 13:00	Analyst: <b>TSA</b>
Aroclor 1016	ND		1.0	µg/L	1	6/2/2023 10:28 AM
Aroclor 1221	ND		1.0	µg/L	1	6/2/2023 10:28 AM
Aroclor 1232	ND		1.0	µg/L	1	6/2/2023 10:28 AM
Aroclor 1242	ND		1.0	µg/L	1	6/2/2023 10:28 AM
Aroclor 1248	ND		1.0	µg/L	1	6/2/2023 10:28 AM
Aroclor 1254	ND		1.8	µg/L	1	6/2/2023 10:28 AM
Aroclor 1260	ND		1.8	µg/L	1	6/2/2023 10:28 AM
Surr: Decachlorobiphenyl	28.0		6.61-163	%REC	1	6/2/2023 10:28 AM
Surr: Tetrachloro-m-xylene	52.0		23.8-163	%REC	1	6/2/2023 10:28 AM
<b>MERCURY BY CVAA</b>			<b>SW7470A</b>		Prep: SW7470A 5/25/23 13:14	Analyst: <b>SLT</b>
Mercury	1.5		0.25	µg/L	1	5/31/2023 11:27 AM
<b>METALS BY ICP</b>			<b>SW6010B</b>		Prep: SW3010A 5/25/23 13:13	Analyst: <b>SLT</b>
Arsenic	190		10	µg/L	1	5/29/2023 03:34 PM
Barium	560		100	µg/L	1	5/29/2023 03:34 PM
Cadmium	ND		50	µg/L	1	5/29/2023 03:34 PM
Chromium	140		10	µg/L	1	5/29/2023 03:34 PM
Lead	240		15	µg/L	1	5/29/2023 03:34 PM
Selenium	ND		30	µg/L	1	5/29/2023 03:34 PM
Silver	ND		50	µg/L	1	5/29/2023 03:34 PM
<b>SEMI-VOLATILE ORGANIC COMPOUNDS</b>			<b>SW8270C</b>		Prep: SW3510C 5/30/23 12:10	Analyst: <b>GC</b>
1,2,4,5-Tetrachlorobenzene	ND		12.5	µg/L	1	5/30/2023 11:09 PM
1,2,4-Trichlorobenzene	ND		12.5	µg/L	1	5/30/2023 11:09 PM
1,2-Dichlorobenzene	ND		12.5	µg/L	1	5/30/2023 11:09 PM
1,3-Dichlorobenzene	ND		12.5	µg/L	1	5/30/2023 11:09 PM
1,3-Dinitrobenzene	ND		12.5	µg/L	1	5/30/2023 11:09 PM
1,4-Dichlorobenzene	ND		12.5	µg/L	1	5/30/2023 11:09 PM
1-Methylnaphthalene	ND		0.250	µg/L	1	5/30/2023 11:09 PM
1-Naphthylamine	ND		12.5	µg/L	1	5/30/2023 11:09 PM
2,3,4,6-Tetrachlorophenol	ND		12.5	µg/L	1	5/30/2023 11:09 PM
2,4,5-Trichlorophenol	ND		12.5	µg/L	1	5/30/2023 11:09 PM
2,4,6-Trichlorophenol	ND		12.5	µg/L	1	5/30/2023 11:09 PM
2,4-Dichlorophenol	ND		12.5	µg/L	1	5/30/2023 11:09 PM
2,4-Dimethylphenol	ND		12.5	µg/L	1	5/30/2023 11:09 PM
2,4-Dinitrophenol	ND		12.5	µg/L	1	5/30/2023 11:09 PM
2,4-Dinitrotoluene	ND		12.5	µg/L	1	5/30/2023 11:09 PM
2,6-Dichlorophenol	ND		12.5	µg/L	1	5/30/2023 11:09 PM
2,6-Dinitrotoluene	ND		12.5	µg/L	1	5/30/2023 11:09 PM

Note:

# ALS Environmental

Date: 05-Jun-23

**Client:** The Mannik & Smith Group, Inc.  
**Project:** Hillson Nut; MS23-13; 401ODAS003-19  
**Sample ID:** TW-8  
**Collection Date:** 5/23/2023 04:00 PM

**Work Order:** 23051093  
**Lab ID:** 23051093-06  
**Matrix:** WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
2-Acetylaminofluorene	ND		12.5	µg/L	1	5/30/2023 11:09 PM
2-Chloronaphthalene	ND		12.5	µg/L	1	5/30/2023 11:09 PM
2-Chlorophenol	ND		12.5	µg/L	1	5/30/2023 11:09 PM
2-Methylnaphthalene	ND		0.250	µg/L	1	5/30/2023 11:09 PM
2-Methylphenol	ND		12.5	µg/L	1	5/30/2023 11:09 PM
2-Naphthylamine	ND		25.0	µg/L	1	5/30/2023 11:09 PM
2-Nitroaniline	ND		12.5	µg/L	1	5/30/2023 11:09 PM
2-Nitrophenol	ND		12.5	µg/L	1	5/30/2023 11:09 PM
2-Picoline	ND		25.0	µg/L	1	5/30/2023 11:09 PM
3&4-Methylphenol	ND		12.5	µg/L	1	5/30/2023 11:09 PM
3,3'-Dichlorobenzidine	ND		12.5	µg/L	1	5/30/2023 11:09 PM
3-Methylcholanthrene	ND		25.0	µg/L	1	5/30/2023 11:09 PM
3-Nitroaniline	ND		25.0	µg/L	1	5/30/2023 11:09 PM
4,6-Dinitro-2-methylphenol	ND		25.0	µg/L	1	5/30/2023 11:09 PM
4-Aminobiphenyl	ND		12.5	µg/L	1	5/30/2023 11:09 PM
4-Bromophenyl phenyl ether	ND		25.0	µg/L	1	5/30/2023 11:09 PM
4-Chloro-3-methylphenol	ND		25.0	µg/L	1	5/30/2023 11:09 PM
4-Chloroaniline	ND		12.5	µg/L	1	5/30/2023 11:09 PM
4-Chlorophenyl phenyl ether	ND		25.0	µg/L	1	5/30/2023 11:09 PM
4-Nitroaniline	ND		25.0	µg/L	1	5/30/2023 11:09 PM
4-Nitrophenol	ND		12.5	µg/L	1	5/30/2023 11:09 PM
4-Nitroquinoline 1-oxide	ND		12.5	µg/L	1	5/30/2023 11:09 PM
5-Nitro-o-toluidine	ND		12.5	µg/L	1	5/30/2023 11:09 PM
7,12-Dimethylbenz(a)anthracene	ND		12.5	µg/L	1	5/30/2023 11:09 PM
Acenaphthene	ND		0.250	µg/L	1	5/30/2023 11:09 PM
Acenaphthylene	ND		0.250	µg/L	1	5/30/2023 11:09 PM
Acetophenone	ND		12.5	µg/L	1	5/30/2023 11:09 PM
Aniline	ND		12.5	µg/L	1	5/30/2023 11:09 PM
Anthracene	ND		0.250	µg/L	1	5/30/2023 11:09 PM
Azobenzene	ND		12.5	µg/L	1	5/30/2023 11:09 PM
Benzidine	ND		12.5	µg/L	1	5/30/2023 11:09 PM
Benzo(a)anthracene	ND		0.250	µg/L	1	5/30/2023 11:09 PM
Benzo(a)pyrene	ND		0.250	µg/L	1	5/30/2023 11:09 PM
Benzo(b)fluoranthene	ND		0.250	µg/L	1	5/30/2023 11:09 PM
Benzo(g,h,i)perylene	ND		0.250	µg/L	1	5/30/2023 11:09 PM
Benzo(k)fluoranthene	ND		0.250	µg/L	1	5/30/2023 11:09 PM
Benzyl alcohol	ND		12.5	µg/L	1	5/30/2023 11:09 PM
Bis(2-chloroethoxy)methane	ND		12.5	µg/L	1	5/30/2023 11:09 PM
Bis(2-chloroethyl)ether	ND		12.5	µg/L	1	5/30/2023 11:09 PM
Bis(2-chloroisopropyl)ether	ND		12.5	µg/L	1	5/30/2023 11:09 PM

**Note:**

# ALS Environmental

Date: 05-Jun-23

**Client:** The Mannik & Smith Group, Inc.  
**Project:** Hillson Nut; MS23-13; 401ODAS003-19  
**Sample ID:** TW-8  
**Collection Date:** 5/23/2023 04:00 PM

**Work Order:** 23051093  
**Lab ID:** 23051093-06  
**Matrix:** WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Bis(2-ethylhexyl)phthalate	ND		12.5	µg/L	1	5/30/2023 11:09 PM
Butyl benzyl phthalate	ND		12.5	µg/L	1	5/30/2023 11:09 PM
Carbazole	ND		0.250	µg/L	1	5/30/2023 11:09 PM
Chrysene	ND		0.250	µg/L	1	5/30/2023 11:09 PM
Dibenzo(a,h)anthracene	ND		0.250	µg/L	1	5/30/2023 11:09 PM
Dibenzofuran	ND		12.5	µg/L	1	5/30/2023 11:09 PM
Diethyl phthalate	ND		12.5	µg/L	1	5/30/2023 11:09 PM
Dimethyl phthalate	ND		12.5	µg/L	1	5/30/2023 11:09 PM
Di-n-butyl phthalate	ND		12.5	µg/L	1	5/30/2023 11:09 PM
Di-n-octyl phthalate	ND		12.5	µg/L	1	5/30/2023 11:09 PM
Dinoseb	ND		25.0	µg/L	1	5/30/2023 11:09 PM
Diphenylamine	ND		12.5	µg/L	1	5/30/2023 11:09 PM
Ethyl methanesulfonate	ND		12.5	µg/L	1	5/30/2023 11:09 PM
Fluoranthene	ND		0.250	µg/L	1	5/30/2023 11:09 PM
Fluorene	ND		0.250	µg/L	1	5/30/2023 11:09 PM
Hexachlorobenzene	ND		12.5	µg/L	1	5/30/2023 11:09 PM
Hexachlorobutadiene	ND		12.5	µg/L	1	5/30/2023 11:09 PM
Hexachlorocyclopentadiene	ND		12.5	µg/L	1	5/30/2023 11:09 PM
Hexachloroethane	ND		12.5	µg/L	1	5/30/2023 11:09 PM
Indeno(1,2,3-cd)pyrene	ND		0.250	µg/L	1	5/30/2023 11:09 PM
Isophorone	ND		12.5	µg/L	1	5/30/2023 11:09 PM
Isosafrole	ND		12.5	µg/L	1	5/30/2023 11:09 PM
Methapyrilene	ND		12.5	µg/L	1	5/30/2023 11:09 PM
Methyl methanesulfonate	ND		12.5	µg/L	1	5/30/2023 11:09 PM
Naphthalene	ND		0.250	µg/L	1	5/30/2023 11:09 PM
Nitrobenzene	ND		12.5	µg/L	1	5/30/2023 11:09 PM
N-Nitrosodiethylamine	ND		12.5	µg/L	1	5/30/2023 11:09 PM
N-Nitrosodimethylamine	ND		12.5	µg/L	1	5/30/2023 11:09 PM
N-Nitroso-di-n-butylamine	ND		12.5	µg/L	1	5/30/2023 11:09 PM
N-Nitrosodi-n-propylamine	ND		12.5	µg/L	1	5/30/2023 11:09 PM
N-Nitrosomethylethylamine	ND		12.5	µg/L	1	5/30/2023 11:09 PM
N-Nitrosomorpholine	ND		12.5	µg/L	1	5/30/2023 11:09 PM
N-Nitrosopiperidine	ND		12.5	µg/L	1	5/30/2023 11:09 PM
N-Nitrosopyrrolidine	ND		12.5	µg/L	1	5/30/2023 11:09 PM
o-Toluidine	ND		12.5	µg/L	1	5/30/2023 11:09 PM
p-Dimethylaminoazobenzene	ND		12.5	µg/L	1	5/30/2023 11:09 PM
Pentachlorobenzene	ND		12.5	µg/L	1	5/30/2023 11:09 PM
Pentachloroethane	ND		12.5	µg/L	1	5/30/2023 11:09 PM
Pentachloronitrobenzene	ND		25.0	µg/L	1	5/30/2023 11:09 PM
Pentachlorophenol	ND		25.0	µg/L	1	5/30/2023 11:09 PM

**Note:**

# ALS Environmental

Date: 05-Jun-23

**Client:** The Mannik & Smith Group, Inc.  
**Project:** Hillson Nut; MS23-13; 401ODAS003-19  
**Sample ID:** TW-8  
**Collection Date:** 5/23/2023 04:00 PM

**Work Order:** 23051093  
**Lab ID:** 23051093-06  
**Matrix:** WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Phenacetin	ND		25.0	µg/L	1	5/30/2023 11:09 PM
Phenanthrene	ND		0.250	µg/L	1	5/30/2023 11:09 PM
Phenol	ND		12.5	µg/L	1	5/30/2023 11:09 PM
Pyrene	ND		0.250	µg/L	1	5/30/2023 11:09 PM
Pyridine	ND		12.5	µg/L	1	5/30/2023 11:09 PM
Safrole	ND		12.5	µg/L	1	5/30/2023 11:09 PM
Surr: 2,4,6-Tribromophenol	60.6		42.3-142	%REC	1	5/30/2023 11:09 PM
Surr: 2-Fluorobiphenyl	55.4		36.8-125	%REC	1	5/30/2023 11:09 PM
Surr: 2-Fluorophenol	30.5		12-89	%REC	1	5/30/2023 11:09 PM
Surr: 4-Terphenyl-d14	52.6		38.3-160	%REC	1	5/30/2023 11:09 PM
Surr: Nitrobenzene-d5	54.8		28-120	%REC	1	5/30/2023 11:09 PM
Surr: Phenol-d5	28.2		4.27-70.1	%REC	1	5/30/2023 11:09 PM

## VOLATILE ORGANIC COMPOUNDS

SW8260B

Analyst: TJH

1,1,1,2-Tetrachloroethane	ND		5.0	µg/L	1	5/26/2023 05:11 PM
1,1,1-Trichloroethane	ND		5.0	µg/L	1	5/26/2023 05:11 PM
1,1,2,2-Tetrachloroethane	ND		5.0	µg/L	1	5/26/2023 05:11 PM
1,1,2-Trichloroethane	ND		5.0	µg/L	1	5/26/2023 05:11 PM
1,1-Dichloroethane	ND		5.0	µg/L	1	5/26/2023 05:11 PM
1,1-Dichloroethene	ND		5.0	µg/L	1	5/26/2023 05:11 PM
1,1-Dichloropropene	ND		5.0	µg/L	1	5/26/2023 05:11 PM
1,2,3-Trichlorobenzene	ND		5.0	µg/L	1	5/26/2023 05:11 PM
1,2,3-Trichloropropane	ND		5.0	µg/L	1	5/26/2023 05:11 PM
1,2,4-Trichlorobenzene	ND		5.0	µg/L	1	5/26/2023 05:11 PM
1,2,4-Trimethylbenzene	ND		5.0	µg/L	1	5/26/2023 05:11 PM
1,2-Dibromo-3-chloropropane	ND		5.0	µg/L	1	5/26/2023 05:11 PM
1,2-Dibromoethane	ND		5.0	µg/L	1	5/26/2023 05:11 PM
1,2-Dichlorobenzene	ND		5.0	µg/L	1	5/26/2023 05:11 PM
1,2-Dichloroethane	ND		5.0	µg/L	1	5/26/2023 05:11 PM
1,2-Dichloropropane	ND		5.0	µg/L	1	5/26/2023 05:11 PM
1,3,5-Trimethylbenzene	ND		5.0	µg/L	1	5/26/2023 05:11 PM
1,3-Dichlorobenzene	ND		5.0	µg/L	1	5/26/2023 05:11 PM
1,3-Dichloropropane	ND		5.0	µg/L	1	5/26/2023 05:11 PM
1,4-Dichlorobenzene	ND		5.0	µg/L	1	5/26/2023 05:11 PM
2,2-Dichloropropane	ND		5.0	µg/L	1	5/26/2023 05:11 PM
2-Butanone	ND		50	µg/L	1	5/26/2023 05:11 PM
2-Chlorotoluene	ND		5.0	µg/L	1	5/26/2023 05:11 PM
2-Hexanone	ND		5.0	µg/L	1	5/26/2023 05:11 PM
4-Chlorotoluene	ND		5.0	µg/L	1	5/26/2023 05:11 PM
4-Methyl-2-pentanone	ND		5.0	µg/L	1	5/26/2023 05:11 PM
Acetone	ND		50	µg/L	1	5/26/2023 05:11 PM

Note:

# ALS Environmental

Date: 05-Jun-23

**Client:** The Mannik & Smith Group, Inc.  
**Project:** Hillson Nut; MS23-13; 401ODAS003-19  
**Sample ID:** TW-8  
**Collection Date:** 5/23/2023 04:00 PM

**Work Order:** 23051093  
**Lab ID:** 23051093-06  
**Matrix:** WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Benzene	ND		5.0	µg/L	1	5/26/2023 05:11 PM
Bromobenzene	ND		5.0	µg/L	1	5/26/2023 05:11 PM
Bromochloromethane	ND		5.0	µg/L	1	5/26/2023 05:11 PM
Bromodichloromethane	ND		5.0	µg/L	1	5/26/2023 05:11 PM
Bromoform	ND		5.0	µg/L	1	5/26/2023 05:11 PM
Bromomethane	ND		5.0	µg/L	1	5/26/2023 05:11 PM
Carbon disulfide	ND		5.0	µg/L	1	5/26/2023 05:11 PM
Carbon tetrachloride	ND		5.0	µg/L	1	5/26/2023 05:11 PM
Chlorobenzene	ND		5.0	µg/L	1	5/26/2023 05:11 PM
Chloroethane	ND		5.0	µg/L	1	5/26/2023 05:11 PM
Chloroform	ND		5.0	µg/L	1	5/26/2023 05:11 PM
Chloromethane	ND		5.0	µg/L	1	5/26/2023 05:11 PM
cis-1,2-Dichloroethene	ND		5.0	µg/L	1	5/26/2023 05:11 PM
cis-1,3-Dichloropropene	ND		5.0	µg/L	1	5/26/2023 05:11 PM
Dibromochloromethane	ND		5.0	µg/L	1	5/26/2023 05:11 PM
Dibromomethane	ND		5.0	µg/L	1	5/26/2023 05:11 PM
Dichlorodifluoromethane	ND		5.0	µg/L	1	5/26/2023 05:11 PM
Ethylbenzene	ND		5.0	µg/L	1	5/26/2023 05:11 PM
Hexachlorobutadiene	ND		5.0	µg/L	1	5/26/2023 05:11 PM
Isopropylbenzene	ND		5.0	µg/L	1	5/26/2023 05:11 PM
m,p-Xylene	ND		10	µg/L	1	5/26/2023 05:11 PM
Methyl tert-butyl ether	ND		5.0	µg/L	1	5/26/2023 05:11 PM
Methylene chloride	ND		5.0	µg/L	1	5/26/2023 05:11 PM
Naphthalene	ND		5.0	µg/L	1	5/26/2023 05:11 PM
n-Butylbenzene	ND		5.0	µg/L	1	5/26/2023 05:11 PM
n-Propylbenzene	ND		5.0	µg/L	1	5/26/2023 05:11 PM
o-Xylene	ND		5.0	µg/L	1	5/26/2023 05:11 PM
p-Isopropyltoluene	ND		5.0	µg/L	1	5/26/2023 05:11 PM
sec-Butylbenzene	ND		5.0	µg/L	1	5/26/2023 05:11 PM
Styrene	ND		5.0	µg/L	1	5/26/2023 05:11 PM
tert-Butylbenzene	ND		5.0	µg/L	1	5/26/2023 05:11 PM
Tetrachloroethene	ND		5.0	µg/L	1	5/26/2023 05:11 PM
Toluene	ND		5.0	µg/L	1	5/26/2023 05:11 PM
trans-1,2-Dichloroethene	ND		5.0	µg/L	1	5/26/2023 05:11 PM
trans-1,3-Dichloropropene	ND		5.0	µg/L	1	5/26/2023 05:11 PM
Trichloroethene	ND		5.0	µg/L	1	5/26/2023 05:11 PM
Trichlorofluoromethane	ND		5.0	µg/L	1	5/26/2023 05:11 PM
Vinyl chloride	ND		2.0	µg/L	1	5/26/2023 05:11 PM
Xylenes, Total	ND		15	µg/L	1	5/26/2023 05:11 PM
<i>Surr: 4-Bromofluorobenzene</i>	<i>102</i>		<i>61-131</i>	<i>%REC</i>	<i>1</i>	<i>5/26/2023 05:11 PM</i>

**Note:**

**ALS Environmental**

**Date:** 05-Jun-23

**Client:** The Mannik & Smith Group, Inc.  
**Project:** Hillson Nut; MS23-13; 401ODAS003-19  
**Sample ID:** TW-8  
**Collection Date:** 5/23/2023 04:00 PM

**Work Order:** 23051093  
**Lab ID:** 23051093-06  
**Matrix:** WATER

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<b>Analyses</b>	<b>Result</b>	<b>Qual</b>	<b>Report Limit</b>	<b>Units</b>	<b>Dilution Factor</b>	<b>Date Analyzed</b>
<i>Surr: Dibromofluoromethane</i>	107		72-137	%REC	1	5/26/2023 05:11 PM
<i>Surr: Toluene-d8</i>	106		80.4-119	%REC	1	5/26/2023 05:11 PM

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**Note:**



Client: The Mannik & Smith Group, Inc.

**QC BATCH REPORT**

Work Order: 23051093

Project: Hillson Nut; MS23-13; 401ODAS003-19

Batch ID: **91488**

Instrument ID **GC3**

Method: **SW8082**

MBLK		Sample ID: <b>MBLK-91488-91488</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>6/1/2023 03:26 AM</b>		
Client ID:		Run ID: <b>GC3_230531B</b>				SeqNo: <b>3062991</b>		Prep Date: <b>5/31/2023</b>		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aroclor 1016	ND	0.10								
Aroclor 1221	ND	0.20								
Aroclor 1232	ND	0.10								
Aroclor 1242	ND	0.10								
Aroclor 1248	ND	0.10								
Aroclor 1254	ND	0.10								
Aroclor 1260	ND	0.10								
Aroclor 1262	ND	0.10								
Aroclor 1268	ND	0.10								
<i>Surr: Decachlorobiphenyl</i>	<i>0.06267</i>	<i>0</i>	<i>0.0667</i>	<i>0</i>	<i>94</i>	<i>7.32-154</i>	<i>0</i>			
<i>Surr: Tetrachloro-m-xylene</i>	<i>0.07067</i>	<i>0</i>	<i>0.0667</i>	<i>0</i>	<i>106</i>	<i>33.5-152</i>	<i>0</i>			

LCS		Sample ID: <b>LCS-91488-91488</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>6/1/2023 03:43 AM</b>		
Client ID:		Run ID: <b>GC3_230531B</b>				SeqNo: <b>3062992</b>		Prep Date: <b>5/31/2023</b>		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aroclor 1016	1.435	0.10	1.333	0	108	66.4-129	0			
Aroclor 1260	1.371	0.10	1.333	0	103	58.2-144	0			
<i>Surr: Decachlorobiphenyl</i>	<i>0.06533</i>	<i>0</i>	<i>0.0667</i>	<i>0</i>	<i>98</i>	<i>7.32-154</i>	<i>0</i>			
<i>Surr: Tetrachloro-m-xylene</i>	<i>0.07333</i>	<i>0</i>	<i>0.0667</i>	<i>0</i>	<i>110</i>	<i>33.5-152</i>	<i>0</i>			

MS		Sample ID: <b>23050911-93AMS</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>6/1/2023 03:59 AM</b>		
Client ID:		Run ID: <b>GC3_230531B</b>				SeqNo: <b>3062993</b>		Prep Date: <b>5/31/2023</b>		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aroclor 1016	1.145	0.10	1.336	0	85.7	34.7-137	0			
Aroclor 1260	1.133	0.10	1.336	0	84.8	27.1-140	0			
<i>Surr: Decachlorobiphenyl</i>	<i>0.05077</i>	<i>0</i>	<i>0.06683</i>	<i>0</i>	<i>76</i>	<i>7.32-154</i>	<i>0</i>			
<i>Surr: Tetrachloro-m-xylene</i>	<i>0.05478</i>	<i>0</i>	<i>0.06683</i>	<i>0</i>	<i>82</i>	<i>33.5-152</i>	<i>0</i>			

MSD		Sample ID: <b>23050911-93AMSD</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>6/1/2023 04:15 AM</b>		
Client ID:		Run ID: <b>GC3_230531B</b>				SeqNo: <b>3062994</b>		Prep Date: <b>5/31/2023</b>		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aroclor 1016	1.141	0.10	1.336	0	85.4	34.7-137	1.145	0.351	30	
Aroclor 1260	1.117	0.10	1.336	0	83.6	27.1-140	1.133	1.43	53	
<i>Surr: Decachlorobiphenyl</i>	<i>0.0481</i>	<i>0</i>	<i>0.06683</i>	<i>0</i>	<i>72</i>	<i>7.32-154</i>	<i>0.05077</i>	<i>5.41</i>		
<i>Surr: Tetrachloro-m-xylene</i>	<i>0.05344</i>	<i>0</i>	<i>0.06683</i>	<i>0</i>	<i>80</i>	<i>33.5-152</i>	<i>0.05478</i>	<i>2.47</i>		

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

**Client:** The Mannik & Smith Group, Inc.  
**Work Order:** 23051093  
**Project:** Hillson Nut; MS23-13; 401ODAS003-19

## QC BATCH REPORT

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Batch ID: **91488**      Instrument ID **GC3**      Method: **SW8082**

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**The following samples were analyzed in this batch:**

23051093-01B	23051093-02B	23051093-03B
23051093-04B		

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**Note:** See Qualifiers Page for a list of Qualifiers and their explanation.

Client: The Mannik & Smith Group, Inc.  
 Work Order: 23051093  
 Project: Hillson Nut; MS23-13; 401ODAS003-19

# QC BATCH REPORT

Batch ID: **91519** Instrument ID **GC2** Method: **SW8082**

MBLK		Sample ID: <b>MBLK-91519-91519</b>				Units: <b>µg/L</b>		Analysis Date: <b>6/2/2023 09:00 AM</b>		
Client ID:		Run ID: <b>GC2_230601A</b>		SeqNo: <b>3065026</b>		Prep Date: <b>6/1/2023</b>		DF: <b>1</b>		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aroclor 1016	ND	0.50								
Aroclor 1221	ND	0.50								
Aroclor 1232	ND	0.50								
Aroclor 1242	ND	0.50								
Aroclor 1248	ND	0.50								
Aroclor 1254	ND	0.89								
Aroclor 1260	ND	0.89								
<i>Surr: Decachlorobiphenyl</i>	<i>0.125</i>	<i>0</i>	<i>0.5</i>	<i>0</i>	<i>25</i>	<i>6.61-163</i>	<i>0</i>			
<i>Surr: Tetrachloro-m-xylene</i>	<i>0.24</i>	<i>0</i>	<i>0.5</i>	<i>0</i>	<i>48</i>	<i>23.8-163</i>	<i>0</i>			

LCS		Sample ID: <b>LCS-91519-91519</b>				Units: <b>µg/L</b>		Analysis Date: <b>6/2/2023 09:16 AM</b>		
Client ID:		Run ID: <b>GC2_230601A</b>		SeqNo: <b>3065027</b>		Prep Date: <b>6/1/2023</b>		DF: <b>1</b>		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aroclor 1016	5.65	0.50	10	0	56.5	39.7-137	0			
Aroclor 1260	5.74	0.89	10	0	57.4	31.6-139	0			
<i>Surr: Decachlorobiphenyl</i>	<i>0.245</i>	<i>0</i>	<i>0.5</i>	<i>0</i>	<i>49</i>	<i>6.61-163</i>	<i>0</i>			
<i>Surr: Tetrachloro-m-xylene</i>	<i>0.26</i>	<i>0</i>	<i>0.5</i>	<i>0</i>	<i>52</i>	<i>23.8-163</i>	<i>0</i>			

The following samples were analyzed in this batch: 23051093-05C 23051093-06C

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: The Mannik & Smith Group, Inc.  
 Work Order: 23051093  
 Project: Hillson Nut; MS23-13; 401ODAS003-19

# QC BATCH REPORT

Batch ID: **91401** Instrument ID **HG2** Method: **SW7470A**

MBLK		Sample ID: <b>MBLK-91401-91401</b>				Units: <b>µg/L</b>		Analysis Date: <b>5/25/2023 04:03 PM</b>			
Client ID:		Run ID: <b>HG2_230525A</b>				SeqNo: <b>3056339</b>		Prep Date: <b>5/25/2023</b>		DF: <b>1</b>	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	

Mercury ND 0.25

LCS		Sample ID: <b>LCS-91401-91401</b>				Units: <b>µg/L</b>		Analysis Date: <b>5/25/2023 04:05 PM</b>			
Client ID:		Run ID: <b>HG2_230525A</b>				SeqNo: <b>3056340</b>		Prep Date: <b>5/25/2023</b>		DF: <b>1</b>	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	

Mercury 4.58 0.25 5 0 91.6 78.7-113 0

LCSD		Sample ID: <b>LCSD-91401-91401</b>				Units: <b>µg/L</b>		Analysis Date: <b>5/25/2023 04:07 PM</b>			
Client ID:		Run ID: <b>HG2_230525A</b>				SeqNo: <b>3056341</b>		Prep Date: <b>5/25/2023</b>		DF: <b>1</b>	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	

Mercury 4.76 0.25 5 0 95.2 78.7-113 4.58 3.85 20

MS		Sample ID: <b>23051092-05C MS</b>				Units: <b>µg/L</b>		Analysis Date: <b>5/31/2023 11:21 AM</b>			
Client ID:		Run ID: <b>HG2_230531A</b>				SeqNo: <b>3060402</b>		Prep Date: <b>5/25/2023</b>		DF: <b>1</b>	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	

Mercury 4.43 0.25 5 0 88.6 67.3-108 0

MSD		Sample ID: <b>23051092-05C MSD</b>				Units: <b>µg/L</b>		Analysis Date: <b>5/31/2023 11:23 AM</b>			
Client ID:		Run ID: <b>HG2_230531A</b>				SeqNo: <b>3060403</b>		Prep Date: <b>5/25/2023</b>		DF: <b>1</b>	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	

Mercury 4.4 0.25 5 0 88 67.3-108 4.43 0.68 20

The following samples were analyzed in this batch: 23051093-05D 23051093-06D

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

**Client:** The Mannik & Smith Group, Inc.  
**Work Order:** 23051093  
**Project:** Hillson Nut; MS23-13; 401ODAS003-19

# QC BATCH REPORT

Batch ID: **91467**      Instrument ID **HG2**      Method: **SW7471A**

MBLK		Sample ID: <b>MBLK-91467-91467</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>6/2/2023 01:16 PM</b>			
Client ID:		Run ID: <b>HG2_230602B</b>				SeqNo: <b>3064151</b>		Prep Date: <b>5/30/2023</b>		DF: <b>1</b>	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Mercury	ND	0.30									

LCS		Sample ID: <b>LCS-91467-91467</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>6/2/2023 01:18 PM</b>			
Client ID:		Run ID: <b>HG2_230602B</b>				SeqNo: <b>3064152</b>		Prep Date: <b>5/30/2023</b>		DF: <b>1</b>	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Mercury	1.186	0.28	1.048		0	113	66.5-169	0			

LCSD		Sample ID: <b>LCSD 91467-91467</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>6/2/2023 01:20 PM</b>			
Client ID:		Run ID: <b>HG2_230602B</b>				SeqNo: <b>3064153</b>		Prep Date: <b>5/30/2023</b>		DF: <b>1</b>	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Mercury	0.92	0.30	1.12		0	82.1	66.5-169	1.186	25.2	20 R	

**The following samples were analyzed in this batch:**

23051093-01B	23051093-02B	23051093-03B
23051093-04B		

**Note:** See Qualifiers Page for a list of Qualifiers and their explanation.

Client: The Mannik & Smith Group, Inc.  
 Work Order: 23051093  
 Project: Hillson Nut; MS23-13; 401ODAS003-19

# QC BATCH REPORT

Batch ID: **91400** Instrument ID **ICP1** Method: **SW6010B**

MBLK		Sample ID: <b>MBLK-91400-91400</b>				Units: <b>mg/L</b>		Analysis Date: <b>5/29/2023 03:01 PM</b>			
Client ID:		Run ID: <b>ICP1_230529A</b>				SeqNo: <b>3058106</b>		Prep Date: <b>5/25/2023</b>		DF: <b>1</b>	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Arsenic	ND	0.010									
Barium	ND	0.10									
Cadmium	ND	0.0050									
Chromium	ND	0.010									
Lead	ND	0.015									
Selenium	ND	0.030									
Silver	ND	0.050									

LCS		Sample ID: <b>LCS-91400-91400</b>				Units: <b>mg/L</b>		Analysis Date: <b>5/29/2023 03:13 PM</b>			
Client ID:		Run ID: <b>ICP1_230529A</b>				SeqNo: <b>3058107</b>		Prep Date: <b>5/25/2023</b>		DF: <b>1</b>	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Arsenic	1.016	0.010	1.1	0	92.4	81.7-107	0				
Barium	1.018	0.10	1.1	0	92.5	81.2-107	0				
Cadmium	1.036	0.0050	1.1	0	94.2	80-120	0				
Chromium	1.007	0.010	1.1	0	91.5	80-120	0				
Lead	1.004	0.015	1.1	0	91.2	84.6-109	0				
Selenium	1.04	0.030	1.1	0	94.5	80-120	0				
Silver	0.9934	0.050	1.1	0	90.3	80-120	0				

LCSD		Sample ID: <b>LCSD-91400-91400</b>				Units: <b>mg/L</b>		Analysis Date: <b>5/29/2023 03:17 PM</b>			
Client ID:		Run ID: <b>ICP1_230529A</b>				SeqNo: <b>3058108</b>		Prep Date: <b>5/25/2023</b>		DF: <b>1</b>	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Arsenic	1.023	0.010	1.1	0	93	81.7-107	1.016	0.669	20		
Barium	1.024	0.10	1.1	0	93.1	81.2-107	1.018	0.668	20		
Cadmium	1.042	0.0050	1.1	0	94.8	77.6-114	1.036	0.572	20		
Chromium	1.021	0.010	1.1	0	92.8	72.9-109	1.007	1.44	20		
Lead	1.012	0.015	1.1	0	92	73.7-110	1.004	0.786	20		
Selenium	1.044	0.030	1.1	0	94.9	70.7-106	1.04	0.391	20		
Silver	0.9932	0.050	1.1	0	90.3	77.5-99.3	0.9934	0.0221	20		

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: The Mannik & Smith Group, Inc.  
 Work Order: 23051093  
 Project: Hillson Nut; MS23-13; 401ODAS003-19

# QC BATCH REPORT

Batch ID: **91400** Instrument ID **ICP1** Method: **SW6010B**

<b>MS</b>		Sample ID: <b>23051093-05D MS</b>				Units: <b>mg/L</b>		Analysis Date: <b>5/29/2023 03:25 PM</b>			
Client ID: <b>TW-10</b>		Run ID: <b>ICP1_230529A</b>				SeqNo: <b>3058110</b>		Prep Date: <b>5/25/2023</b>		DF: <b>1</b>	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Arsenic	1.214	0.010	1.1	0.2552	87.2	75-125	0				
Barium	1.302	0.10	1.1	0.4272	79.6	75-125	0				
Cadmium	0.8913	0.0050	1.1	0	81	75-125	0				
Chromium	1.099	0.010	1.1	0.1986	81.9	75-125	0				
Lead	1.103	0.015	1.1	0.2917	73.8	59.3-111	0				
Selenium	0.9608	0.030	1.1	0	87.4	75-125	0				
Silver	0.9168	0.050	1.1	0	83.4	75-125	0				

<b>MSD</b>		Sample ID: <b>23051093-05D MSD</b>				Units: <b>mg/L</b>		Analysis Date: <b>5/29/2023 03:30 PM</b>			
Client ID: <b>TW-10</b>		Run ID: <b>ICP1_230529A</b>				SeqNo: <b>3058111</b>		Prep Date: <b>5/25/2023</b>		DF: <b>1</b>	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Arsenic	1.202	0.010	1.1	0.2552	86.1	73.2-107	1.214	1	20		
Barium	1.301	0.10	1.1	0.4272	79.5	75-125	1.302	0.0845	20		
Cadmium	0.8901	0.0050	1.1	0	80.9	76.4-108	0.8913	0.136	20		
Chromium	1.092	0.010	1.1	0.1986	81.2	73-104	1.099	0.703	20		
Lead	1.099	0.015	1.1	0.2917	73.4	59.3-111	1.103	0.43	20		
Selenium	0.9468	0.030	1.1	0	86.1	71.3-104	0.9608	1.48	20		
Silver	0.9123	0.050	1.1	0	82.9	74.6-98.9	0.9168	0.493	20		

The following samples were analyzed in this batch:

23051093-05D	23051093-06D
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Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: The Mannik & Smith Group, Inc.  
 Work Order: 23051093  
 Project: Hillson Nut; MS23-13; 401ODAS003-19

# QC BATCH REPORT

Batch ID: **91458** Instrument ID **ICP3** Method: **SW6010B**

MBLK		Sample ID: <b>MBLK-91458-91458</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>5/30/2023 04:30 PM</b>		
Client ID:		Run ID: <b>ICP3_230530B</b>				SeqNo: <b>3059580</b>		Prep Date: <b>5/30/2023</b>		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	ND	5.0								
Barium	ND	20								
Cadmium	ND	1.0								
Chromium	ND	10								
Lead	ND	20								
Selenium	ND	3.0								
Silver	ND	5.0								

LCS		Sample ID: <b>LCS-91458-91458</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>5/30/2023 04:34 PM</b>		
Client ID:		Run ID: <b>ICP3_230530B</b>				SeqNo: <b>3059581</b>		Prep Date: <b>5/30/2023</b>		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	106.9	5.0	100	0	107	80-120	0			
Barium	106.7	20	100	0	107	81.6-112	0			
Cadmium	109.5	1.0	100	0	110	87.2-119	0			
Chromium	97.55	10	100	0	97.6	74.6-110	0			
Lead	108.1	20	100	0	108	82.9-117	0			
Selenium	110.2	3.0	100	0	110	86.2-110	0			S
Silver	100.6	5.0	100	0	101	77.1-118	0			

LCSD		Sample ID: <b>LCSD 91458-91458</b>				Units: <b>mg/Kg</b>		Analysis Date: <b>5/30/2023 04:39 PM</b>		
Client ID:		Run ID: <b>ICP3_230530B</b>				SeqNo: <b>3059582</b>		Prep Date: <b>5/30/2023</b>		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	104.3	5.0	100	0	104	79.7-118	106.9	2.46	20	
Barium	102.4	20	100	0	102	81.6-112	106.7	4.11	20	
Cadmium	107.4	1.0	100	0	107	87.2-119	109.5	1.94	20	
Chromium	96.83	10	100	0	96.8	74.6-110	97.55	0.741	20	
Lead	105.3	20	100	0	105	82.9-117	108.1	2.62	20	
Selenium	108.8	3.0	100	0	109	86.2-110	110.2	1.28	20	
Silver	97.06	5.0	100	0	97.1	77.1-118	100.6	3.58	20	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.



Client: The Mannik & Smith Group, Inc.  
 Work Order: 23051093  
 Project: Hillson Nut; MS23-13; 401ODAS003-19

# QC BATCH REPORT

Batch ID: **91458** Instrument ID **ICP3** Method: **SW6010B**

MS				Sample ID: 23051093-01B MS			Units: mg/Kg		Analysis Date: 5/30/2023 04:48 PM		
Client ID: SB-11 (0-2')			Run ID: ICP3_230530B			SeqNo: 3059584		Prep Date: 5/30/2023		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Arsenic	95.6	4.7	93.55	5.764	96	75-125	0				
Barium	194.3	19	93.55	126.9	72	75-125	0			S	
Cadmium	81.56	0.94	93.55	2.078	85	75-125	0				
Chromium	99.63	9.4	93.55	18.3	86.9	69.3-116	0				
Lead	106.5	19	93.55	23.75	88.5	69.3-107	0				
Selenium	87.66	2.8	93.55	0	93.7	75-125	0				
Silver	87.68	4.7	93.55	0	93.7	75-125	0				

MSD				Sample ID: 23051093-01B MSD			Units: mg/Kg		Analysis Date: 5/30/2023 04:53 PM		
Client ID: SB-11 (0-2')			Run ID: ICP3_230530B			SeqNo: 3059585		Prep Date: 5/30/2023		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Arsenic	100.6	4.8	96.71	5.764	98	69.6-115	95.6	5.07	20		
Barium	172.1	19	96.71	126.9	46.7	60.1-114	194.3	12.1	20	S	
Cadmium	86.32	0.97	96.71	2.078	87.1	69.1-120	81.56	5.66	20		
Chromium	110.3	9.7	96.71	18.3	95.2	69.3-116	99.63	10.2	20		
Lead	114.6	19	96.71	23.75	93.9	69.3-107	106.5	7.28	20		
Selenium	92.25	2.9	96.71	0	95.4	66.5-109	87.66	5.1	20		
Silver	91.71	4.8	96.71	0	94.8	70.3-116	87.68	4.49	20		

The following samples were analyzed in this batch:

23051093-01B	23051093-02B	23051093-03B
23051093-04B		

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: The Mannik & Smith Group, Inc.  
 Work Order: 23051093  
 Project: Hillson Nut; MS23-13; 401ODAS003-19

# QC BATCH REPORT

Batch ID: **91422** Instrument ID **SVMS2** Method: **SW8270C**

MBLK		Sample ID: <b>MBLK-91422-91422</b>			Units: <b>µg/Kg</b>		Analysis Date: <b>6/1/2023 01:52 PM</b>			
Client ID:		Run ID: <b>SVMS2_230601A</b>			SeqNo: <b>3063736</b>		Prep Date: <b>5/30/2023</b>		DF: <b>1</b>	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2,4,5-Tetrachlorobenzene	ND	330								
1,2,4-Trichlorobenzene	ND	330								
1,2-Dichlorobenzene	ND	330								
1,3-Dichlorobenzene	ND	330								
1,3-Dinitrobenzene	ND	330								
1,4-Dichlorobenzene	ND	330								
1-Methylnaphthalene	ND	200								
1-Naphthylamine	ND	330								
2,3,4,6-Tetrachlorophenol	ND	330								
2,4,5-Trichlorophenol	ND	330								
2,4,6-Trichlorophenol	ND	330								
2,4-Dichlorophenol	ND	330								
2,4-Dimethylphenol	ND	330								
2,4-Dinitrophenol	ND	1,600								
2,4-Dinitrotoluene	ND	330								
2,6-Dichlorophenol	ND	330								
2,6-Dinitrotoluene	ND	330								
2-Acetylaminofluorene	ND	330								
2-Chloronaphthalene	ND	330								
2-Chlorophenol	ND	330								
2-Methylnaphthalene	ND	200								
2-Methylphenol	ND	330								
2-Naphthylamine	ND	330								
2-Nitroaniline	ND	1,600								
2-Nitrophenol	ND	330								
2-Picoline	ND	330								
3&4-Methylphenol	ND	330								
3,3'-Dichlorobenzidine	ND	660								
3-Methylcholanthrene	ND	330								
3-Nitroaniline	ND	1,600								
4,6-Dinitro-2-methylphenol	ND	1,600								
4-Aminobiphenyl	ND	660								
4-Bromophenyl phenyl ether	ND	330								
4-Chloro-3-methylphenol	ND	660								
4-Chloroaniline	ND	660								
4-Chlorophenyl phenyl ether	ND	330								
4-Nitroaniline	ND	660								
4-Nitrophenol	ND	1,600								
4-Nitroquinoline 1-oxide	ND	1,600								
5-Nitro-o-toluidine	ND	330								
7,12-Dimethylbenz(a)anthracene	ND	330								
Acenaphthene	ND	200								

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

**Client:** The Mannik & Smith Group, Inc.  
**Work Order:** 23051093  
**Project:** Hillson Nut; MS23-13; 401ODAS003-19

## QC BATCH REPORT

Batch ID: <b>91422</b>	Instrument ID <b>SVMS2</b>	Method: <b>SW8270C</b>
Acenaphthylene	ND	200
Acetophenone	ND	330
Aniline	ND	330
Anthracene	ND	200
Azobenzene	ND	330
Benzidine	ND	330
Benzo(a)anthracene	ND	100
Benzo(a)pyrene	ND	100
Benzo(b)fluoranthene	ND	200
Benzo(g,h,i)perylene	ND	200
Benzo(k)fluoranthene	ND	200
Benzyl alcohol	ND	660
Bis(2-chloroethoxy)methane	ND	330
Bis(2-chloroethyl)ether	ND	330
Bis(2-chloroisopropyl)ether	ND	330
Bis(2-ethylhexyl)phthalate	ND	330
Butyl benzyl phthalate	ND	330
Carbazole	ND	200
Chrysene	ND	200
Dibenzo(a,h)anthracene	ND	100
Dibenzofuran	ND	200
Diethyl phthalate	ND	330
Dimethyl phthalate	ND	330
Di-n-butyl phthalate	ND	330
Di-n-octyl phthalate	ND	330
Dinoseb	ND	330
Diphenylamine	ND	330
Ethyl methanesulfonate	ND	330
Fluoranthene	ND	200
Fluorene	ND	200
Hexachlorobenzene	ND	330
Hexachlorobutadiene	ND	330
Hexachlorocyclopentadiene	ND	330
Hexachloroethane	ND	330
Indeno(1,2,3-cd)pyrene	ND	100
Isophorone	ND	330
Isosafrole	ND	330
Methapyrilene	ND	1,600
Methyl methanesulfonate	ND	330
Naphthalene	ND	200
Nitrobenzene	ND	330
N-Nitrosodiethylamine	ND	330
N-Nitrosodimethylamine	ND	330
N-Nitroso-di-n-butylamine	ND	330
N-Nitrosodi-n-propylamine	ND	330
N-Nitrosomethylethylamine	ND	330
N-Nitrosomorpholine	ND	330
N-Nitrosopiperidine	ND	330

**Note:** See Qualifiers Page for a list of Qualifiers and their explanation.

**Client:** The Mannik & Smith Group, Inc.  
**Work Order:** 23051093  
**Project:** Hillson Nut; MS23-13; 401ODAS003-19

## QC BATCH REPORT

Batch ID: <b>91422</b>	Instrument ID <b>SVMS2</b>	Method: <b>SW8270C</b>						
N-Nitrosopyrrolidine	ND	330						
o-Toluidine	ND	1,600						
p-Dimethylaminoazobenzene	ND	330						
Pentachlorobenzene	ND	330						
Pentachloroethane	ND	330						
Pentachloronitrobenzene	ND	660						
Pentachlorophenol	ND	1,600						
Phenacetin	ND	660						
Phenanthrene	ND	200						
Phenol	ND	330						
Pyrene	ND	200						
Pyridine	ND	330						
Safrole	ND	330						
<i>Surr: 2,4,6-Tribromophenol</i>	4530	0	6660	0	68	14.2-136	0	
<i>Surr: 2-Fluorobiphenyl</i>	2116	0	3330	0	63.5	30-116	0	
<i>Surr: 2-Fluorophenol</i>	4147	0	6660	0	62.3	24-105	0	
<i>Surr: 4-Terphenyl-d14</i>	2585	0	3330	0	77.6	27.3-138	0	
<i>Surr: Nitrobenzene-d5</i>	2038	0	3330	0	61.2	23.7-109	0	
<i>Surr: Phenol-d5</i>	3739	0	6660	0	56.1	24.9-103	0	

**Note:** See Qualifiers Page for a list of Qualifiers and their explanation.

Client: The Mannik & Smith Group, Inc.  
 Work Order: 23051093  
 Project: Hillson Nut; MS23-13; 401ODAS003-19

# QC BATCH REPORT

Batch ID: **91422** Instrument ID **SVMS2** Method: **SW8270C**

LCS				Sample ID: <b>LCS-91422-91422</b>		Units: <b>µg/Kg</b>		Analysis Date: <b>6/1/2023 02:15 PM</b>		
Client ID:		Run ID: <b>SVMS2_230601A</b>		SeqNo: <b>3063737</b>		Prep Date: <b>5/30/2023</b>		DF: <b>1</b>		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2,4-Trichlorobenzene	1741	330	3330	0	52.3	39-104	0			
1,4-Dichlorobenzene	1541	330	3330	0	46.3	38.7-95.1	0			
2,4-Dinitrotoluene	2181	330	3330	0	65.5	58.8-123	0			
2-Chlorophenol	1507	330	3330	0	45.2	34.7-116	0			
4-Chloro-3-methylphenol	1743	660	3330	0	52.4	32.1-109	0			
4-Nitrophenol	2351	1,600	3330	0	70.6	36.2-146	0			
Acenaphthene	1986	200	3330	0	59.6	52-119	0			
Acenaphthylene	2189	200	3330	0	65.7	46-118	0			
Anthracene	2251	200	3330	0	67.6	56-109	0			
Benzo(a)anthracene	2476	100	3330	0	74.4	48-121	0			
Benzo(a)pyrene	2323	100	3330	0	69.8	40.1-114	0			
Benzo(b)fluoranthene	2285	200	3330	0	68.6	44-115	0			
Benzo(g,h,i)perylene	2178	200	3330	0	65.4	47.9-113	0			
Benzo(k)fluoranthene	2183	200	3330	0	65.5	39.5-116	0			
Carbazole	2401	200	3330	0	72.1	43.3-146	0			
Chrysene	2515	200	3330	0	75.5	49.2-115	0			
Dibenzo(a,h)anthracene	2345	100	3330	0	70.4	41.7-123	0			
Fluoranthene	2372	200	3330	0	71.2	52.7-118	0			
Fluorene	2207	200	3330	0	66.3	56.3-103	0			
Indeno(1,2,3-cd)pyrene	2322	100	3330	0	69.7	41.1-124	0			
Naphthalene	1633	200	3330	0	49	42.5-103	0			
N-Nitrosodi-n-propylamine	1436	330	3330	0	43.1	25.3-127	0			
Pentachlorophenol	2252	1,600	3330	0	67.6	22.1-105	0			
Phenanthrene	2254	200	3330	0	67.7	52.8-114	0			
Phenol	1535	330	3330	0	46.1	36.9-97.8	0			
Pyrene	2364	200	3330	0	71	50.7-109	0			
<i>Surr: 2,4,6-Tribromophenol</i>	4437	0	6660	0	66.6	14.2-136	0			
<i>Surr: 2-Fluorobiphenyl</i>	1815	0	3330	0	54.5	30-116	0			
<i>Surr: 2-Fluorophenol</i>	2728	0	6660	0	41	24-105	0			
<i>Surr: 4-Terphenyl-d14</i>	2188	0	3330	0	65.7	27.3-138	0			
<i>Surr: Nitrobenzene-d5</i>	1457	0	3330	0	43.8	23.7-109	0			
<i>Surr: Phenol-d5</i>	2674	0	6660	0	40.2	24.9-103	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: The Mannik & Smith Group, Inc.  
 Work Order: 23051093  
 Project: Hillson Nut; MS23-13; 401ODAS003-19

# QC BATCH REPORT

Batch ID: **91422** Instrument ID **SVMS2** Method: **SW8270C**

MS				Sample ID: <b>23051029-12BMS</b>			Units: <b>µg/Kg</b>		Analysis Date: <b>6/1/2023 02:39 PM</b>		
Client ID:		Run ID: <b>SVMS2_230601A</b>		SeqNo: <b>3063738</b>		Prep Date: <b>5/30/2023</b>		DF: <b>1</b>			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
1,2,4-Trichlorobenzene	2164	330	3343	0	64.7	39-91.8	0				
1,4-Dichlorobenzene	1774	330	3343	0	53.1	32.9-90	0				
2,4-Dinitrotoluene	2053	330	3343	0	61.4	29.7-121	0				
2-Chlorophenol	1691	330	3343	0	50.6	33.3-109	0				
4-Chloro-3-methylphenol	1884	660	3343	0	56.4	35.8-116	0				
4-Nitrophenol	2052	1,700	3343	0	61.4	34.1-120	0				
Acenaphthene	2148	200	3343	0	64.2	44-108	0				
Acenaphthylene	2207	200	3343	0	66	43.6-110	0				
Anthracene	2201	200	3343	0	65.8	35.8-104	0				
Benzo(a)anthracene	2394	100	3343	0	71.6	47-114	0				
Benzo(a)pyrene	2284	100	3343	0	68.3	43.8-115	0				
Benzo(b)fluoranthene	2141	200	3343	0	64	40-106	0				
Benzo(g,h,i)perylene	2060	200	3343	0	61.6	38.2-110	0				
Benzo(k)fluoranthene	2236	200	3343	0	66.9	48.6-107	0				
Carbazole	2290	200	3343	0	68.5	28.5-114	0				
Chrysene	2445	200	3343	0	73.1	44.3-97.5	0				
Dibenzo(a,h)anthracene	2261	100	3343	0	67.6	46-116	0				
Fluoranthene	2292	200	3343	0	68.5	40.2-129	0				
Fluorene	2139	200	3343	0	64	42.8-106	0				
Indeno(1,2,3-cd)pyrene	2260	100	3343	0	67.6	33-115	0				
Naphthalene	1977	200	3343	0	59.1	18.2-126	0				
N-Nitrosodi-n-propylamine	1574	330	3343	0	47.1	23.5-76.2	0				
Pentachlorophenol	2211	1,700	3343	0	66.1	9.31-107	0				
Phenanthrene	2149	200	3343	0	64.3	31.2-127	0				
Phenol	1616	330	3343	0	48.3	25.9-90.3	0				
Pyrene	2272	200	3343	0	67.9	33.7-129	0				
<i>Surr: 2,4,6-Tribromophenol</i>	4223	0	6687	0	63.2	14.2-136	0				
<i>Surr: 2-Fluorobiphenyl</i>	1954	0	3343	0	58.5	30-116	0				
<i>Surr: 2-Fluorophenol</i>	3177	0	6687	0	47.5	24-105	0				
<i>Surr: 4-Terphenyl-d14</i>	2130	0	3343	0	63.7	27.3-138	0				
<i>Surr: Nitrobenzene-d5</i>	1636	0	3343	0	48.9	23.7-109	0				
<i>Surr: Phenol-d5</i>	3010	0	6687	0	45	24.9-103	0				

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: The Mannik & Smith Group, Inc.  
 Work Order: 23051093  
 Project: Hillson Nut; MS23-13; 401ODAS003-19

# QC BATCH REPORT

Batch ID: **91422** Instrument ID **SVMS2** Method: **SW8270C**

MSD				Sample ID: <b>23051029-12BMSD</b>		Units: <b>µg/Kg</b>		Analysis Date: <b>6/1/2023 03:01 PM</b>		
Client ID:		Run ID: <b>SVMS2_230601A</b>		SeqNo: <b>3063739</b>		Prep Date: <b>5/30/2023</b>		DF: <b>1</b>		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2,4-Trichlorobenzene	2165	330	3319	0	65.2	39-91.8	2164	0.0674	18	
1,4-Dichlorobenzene	1891	330	3319	0	57	32.9-90	1774	6.4	20	
2,4-Dinitrotoluene	2136	330	3319	0	64.3	29.7-121	2053	3.95	20	
2-Chlorophenol	1852	330	3319	0	55.8	33.3-109	1691	9.05	20	
4-Chloro-3-methylphenol	1940	660	3319	0	58.5	35.8-116	1884	2.93	20	
4-Nitrophenol	2130	1,600	3319	0	64.2	34.1-120	2052	3.73	20	
Acenaphthene	2182	200	3319	0	65.7	44-108	2148	1.58	20	
Acenaphthylene	2277	200	3319	0	68.6	43.6-110	2207	3.13	20	
Anthracene	2245	200	3319	0	67.6	35.8-104	2201	1.97	24	
Benzo(a)anthracene	2397	100	3319	0	72.2	47-114	2394	0.157	21	
Benzo(a)pyrene	2268	100	3319	0	68.3	43.8-115	2284	0.704	20	
Benzo(b)fluoranthene	2103	200	3319	0	63.4	40-106	2141	1.8	20	
Benzo(g,h,i)perylene	2112	200	3319	0	63.6	38.2-110	2060	2.5	20	
Benzo(k)fluoranthene	2207	200	3319	0	66.5	48.6-107	2236	1.3	24	
Carbazole	2243	200	3319	0	67.6	28.5-114	2290	2.12	20	
Chrysene	2394	200	3319	0	72.1	44.3-97.5	2445	2.11	19	
Dibenzo(a,h)anthracene	2234	100	3319	0	67.3	46-116	2261	1.21	20	
Fluoranthene	2252	200	3319	0	67.9	40.2-129	2292	1.73	20	
Fluorene	2220	200	3319	0	66.9	42.8-106	2139	3.7	20	
Indeno(1,2,3-cd)pyrene	2242	100	3319	0	67.5	33-115	2260	0.822	20	
Naphthalene	1959	200	3319	0	59	18.2-126	1977	0.869	20	
N-Nitrosodi-n-propylamine	1623	330	3319	0	48.9	23.5-76.2	1574	3.06	17	
Pentachlorophenol	2324	1,600	3319	0	70	9.31-107	2211	5	20	
Phenanthrene	2208	200	3319	0	66.5	31.2-127	2149	2.69	20	
Phenol	1795	330	3319	0	54.1	25.9-90.3	1616	10.5	17	
Pyrene	2261	200	3319	0	68.1	33.7-129	2272	0.469	20	
<i>Surr: 2,4,6-Tribromophenol</i>	4387	0	6638	0	66.1	14.2-136	4223	3.82		
<i>Surr: 2-Fluorobiphenyl</i>	2029	0	3319	0	61.1	30-116	1954	3.72		
<i>Surr: 2-Fluorophenol</i>	3379	0	6638	0	50.9	24-105	3177	6.16		
<i>Surr: 4-Terphenyl-d14</i>	2134	0	3319	0	64.3	27.3-138	2130	0.205		
<i>Surr: Nitrobenzene-d5</i>	1726	0	3319	0	52	23.7-109	1636	5.34		
<i>Surr: Phenol-d5</i>	3330	0	6638	0	50.2	24.9-103	3010	10.1		

The following samples were analyzed in this batch:

23051093-01B	23051093-02B	23051093-03B
23051093-04B		

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: The Mannik & Smith Group, Inc.  
 Work Order: 23051093  
 Project: Hillson Nut; MS23-13; 401ODAS003-19

# QC BATCH REPORT

Batch ID: 91447 Instrument ID SVMS4 Method: SW8270C

MBLK		Sample ID: MBLK-91447-91447			Units: µg/L		Analysis Date: 5/30/2023 10:08 PM			
Client ID:		Run ID: SVMS4_230530A			SeqNo: 3060054		Prep Date: 5/30/2023		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2,4,5-Tetrachlorobenzene	ND	10								
1,2,4-Trichlorobenzene	ND	10								
1,2-Dichlorobenzene	ND	10								
1,3-Dichlorobenzene	ND	10								
1,3-Dinitrobenzene	ND	10								
1,4-Dichlorobenzene	ND	10								
1-Methylnaphthalene	ND	0.20								
1-Naphthylamine	ND	10								
2,3,4,6-Tetrachlorophenol	ND	10								
2,4,5-Trichlorophenol	ND	10								
2,4,6-Trichlorophenol	ND	10								
2,4-Dichlorophenol	ND	10								
2,4-Dimethylphenol	ND	10								
2,4-Dinitrophenol	ND	10								
2,4-Dinitrotoluene	ND	10								
2,6-Dichlorophenol	ND	10								
2,6-Dinitrotoluene	ND	10								
2-Acetylaminofluorene	ND	10								
2-Chloronaphthalene	ND	10								
2-Chlorophenol	ND	10								
2-Methylnaphthalene	ND	0.20								
2-Methylphenol	ND	10								
2-Naphthylamine	ND	20								
2-Nitroaniline	ND	10								
2-Nitrophenol	ND	10								
2-Picoline	ND	20								
3&4-Methylphenol	ND	10								
3,3'-Dichlorobenzidine	ND	10								
3-Methylcholanthrene	ND	20								
3-Nitroaniline	ND	20								
4,6-Dinitro-2-methylphenol	ND	20								
4-Aminobiphenyl	ND	10								
4-Bromophenyl phenyl ether	ND	20								
4-Chloro-3-methylphenol	ND	20								
4-Chloroaniline	2.176	10								J
4-Chlorophenyl phenyl ether	ND	20								
4-Nitroaniline	ND	20								
4-Nitrophenol	2.872	10								J
4-Nitroquinoline 1-oxide	ND	10								
5-Nitro-o-toluidine	ND	10								
7,12-Dimethylbenz(a)anthracene	ND	10								
Acenaphthene	ND	0.20								

Note: See Qualifiers Page for a list of Qualifiers and their explanation.



**Client:** The Mannik & Smith Group, Inc.  
**Work Order:** 23051093  
**Project:** Hillson Nut; MS23-13; 401ODAS003-19

## QC BATCH REPORT

Batch ID: <b>91447</b>	Instrument ID <b>SVMS4</b>	Method: <b>SW8270C</b>
Acenaphthylene	ND	0.20
Acetophenone	ND	10
Aniline	ND	10
Anthracene	ND	0.20
Azobenzene	ND	10
Benzidine	ND	10
Benzo(a)anthracene	ND	0.20
Benzo(a)pyrene	ND	0.20
Benzo(b)fluoranthene	ND	0.20
Benzo(g,h,i)perylene	ND	0.20
Benzo(k)fluoranthene	ND	0.20
Benzyl alcohol	ND	10
Bis(2-chloroethoxy)methane	ND	10
Bis(2-chloroethyl)ether	ND	10
Bis(2-chloroisopropyl)ether	ND	10
Bis(2-ethylhexyl)phthalate	ND	10
Butyl benzyl phthalate	ND	10
Carbazole	ND	0.20
Chrysene	ND	0.20
Dibenzo(a,h)anthracene	ND	0.20
Dibenzofuran	ND	10
Diethyl phthalate	ND	10
Dimethyl phthalate	ND	10
Di-n-butyl phthalate	ND	10
Di-n-octyl phthalate	ND	10
Dinoseb	ND	20
Diphenylamine	ND	10
Ethyl methanesulfonate	ND	10
Fluoranthene	ND	0.20
Fluorene	ND	0.20
Hexachlorobenzene	ND	10
Hexachlorobutadiene	ND	10
Hexachlorocyclopentadiene	ND	10
Hexachloroethane	ND	10
Indeno(1,2,3-cd)pyrene	ND	0.20
Isophorone	ND	10
Isosafrole	ND	10
Methapyrilene	ND	10
Methyl methanesulfonate	ND	10
Naphthalene	ND	0.20
Nitrobenzene	ND	10
N-Nitrosodiethylamine	ND	10
N-Nitrosodimethylamine	ND	10
N-Nitroso-di-n-butylamine	ND	10
N-Nitrosodi-n-propylamine	ND	10
N-Nitrosomethylethylamine	ND	10
N-Nitrosomorpholine	ND	10
N-Nitrosopiperidine	ND	10

**Note:** See Qualifiers Page for a list of Qualifiers and their explanation.

**Client:** The Mannik & Smith Group, Inc.  
**Work Order:** 23051093  
**Project:** Hillson Nut; MS23-13; 401ODAS003-19

## QC BATCH REPORT

Batch ID: <b>91447</b>	Instrument ID <b>SVMS4</b>	Method: <b>SW8270C</b>						
N-Nitrosopyrrolidine	ND	10						
o-Toluidine	ND	10						
p-Dimethylaminoazobenzene	ND	10						
Pentachlorobenzene	ND	10						
Pentachloroethane	ND	10						
Pentachloronitrobenzene	ND	20						
Pentachlorophenol	ND	20						
Phenacetin	ND	20						
Phenanthrene	ND	0.20						
Phenol	ND	10						
Pyrene	ND	0.20						
Pyridine	ND	10						
Safrole	ND	10						
<i>Surr: 2,4,6-Tribromophenol</i>	<i>255.1</i>	<i>0</i>	<i>400</i>	<i>0</i>	<i>63.8</i>	<i>42.3-142</i>	<i>0</i>	
<i>Surr: 2-Fluorobiphenyl</i>	<i>96.81</i>	<i>0</i>	<i>200</i>	<i>0</i>	<i>48.4</i>	<i>36.8-125</i>	<i>0</i>	
<i>Surr: 2-Fluorophenol</i>	<i>115.7</i>	<i>0</i>	<i>400</i>	<i>0</i>	<i>28.9</i>	<i>12-89</i>	<i>0</i>	
<i>Surr: 4-Terphenyl-d14</i>	<i>109.1</i>	<i>0</i>	<i>200</i>	<i>0</i>	<i>54.6</i>	<i>38.3-160</i>	<i>0</i>	
<i>Surr: Nitrobenzene-d5</i>	<i>109.4</i>	<i>0</i>	<i>200</i>	<i>0</i>	<i>54.7</i>	<i>28-120</i>	<i>0</i>	
<i>Surr: Phenol-d5</i>	<i>86.58</i>	<i>0</i>	<i>400</i>	<i>0</i>	<i>21.6</i>	<i>4.27-70.1</i>	<i>0</i>	

**Note:** See Qualifiers Page for a list of Qualifiers and their explanation.

Client: The Mannik & Smith Group, Inc.  
 Work Order: 23051093  
 Project: Hillson Nut; MS23-13; 401ODAS003-19

# QC BATCH REPORT

Batch ID: 91447 Instrument ID SVMS4 Method: SW8270C

MBLK		Sample ID: MBLK-91447-91447			Units: µg/L		Analysis Date: 5/30/2023 10:08 PM			
Client ID:		Run ID: SVMS4_230530A			SeqNo: 3060239		Prep Date: 5/30/2023		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2,4,5-Tetrachlorobenzene	ND	10								
1,2,4-Trichlorobenzene	ND	10								
1,2-Dichlorobenzene	ND	10								
1,3-Dichlorobenzene	ND	10								
1,3-Dinitrobenzene	ND	10								
1,4-Dichlorobenzene	ND	10								
1-Methylnaphthalene	ND	5.0								
1-Naphthylamine	ND	10								
2,3,4,6-Tetrachlorophenol	ND	10								
2,4,5-Trichlorophenol	ND	10								
2,4,6-Trichlorophenol	ND	10								
2,4-Dichlorophenol	ND	10								
2,4-Dimethylphenol	ND	10								
2,4-Dinitrophenol	ND	10								
2,4-Dinitrotoluene	ND	10								
2,6-Dichlorophenol	ND	10								
2,6-Dinitrotoluene	ND	10								
2-Acetylaminofluorene	ND	10								
2-Chloronaphthalene	ND	10								
2-Chlorophenol	ND	10								
2-Methylnaphthalene	ND	5.0								
2-Methylphenol	ND	10								
2-Naphthylamine	ND	20								
2-Nitroaniline	ND	10								
2-Nitrophenol	ND	10								
2-Picoline	ND	20								
3&4-Methylphenol	ND	10								
3,3'-Dichlorobenzidine	ND	10								
3-Methylcholanthrene	ND	20								
3-Nitroaniline	ND	20								
4,6-Dinitro-2-methylphenol	ND	20								
4-Aminobiphenyl	ND	10								
4-Bromophenyl phenyl ether	ND	20								
4-Chloro-3-methylphenol	ND	20								
4-Chloroaniline	2.176	10								J
4-Chlorophenyl phenyl ether	ND	20								
4-Nitroaniline	ND	20								
4-Nitrophenol	2.872	10								J
4-Nitroquinoline 1-oxide	ND	10								
5-Nitro-o-toluidine	ND	10								
7,12-Dimethylbenz(a)anthracene	ND	10								
Acenaphthene	ND	5.0								

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

**Client:** The Mannik & Smith Group, Inc.  
**Work Order:** 23051093  
**Project:** Hillson Nut; MS23-13; 401ODAS003-19

## QC BATCH REPORT

Batch ID: <b>91447</b>	Instrument ID <b>SVMS4</b>	Method: <b>SW8270C</b>	
Acenaphthylene	ND	5.0	
Acetophenone	ND	10	
Aniline	ND	10	
Anthracene	ND	5.0	
Azobenzene	ND	10	
Benzidine	ND	10	
Benzo(a)anthracene	ND	5.0	
Benzo(a)pyrene	ND	5.0	
Benzo(b)fluoranthene	ND	5.0	
Benzo(g,h,i)perylene	ND	5.0	
Benzo(k)fluoranthene	ND	5.0	
Benzyl alcohol	ND	10	
Bis(2-chloroethoxy)methane	ND	10	
Bis(2-chloroethyl)ether	ND	10	
Bis(2-chloroisopropyl)ether	ND	10	
Bis(2-ethylhexyl)phthalate	ND	10	
Butyl benzyl phthalate	ND	10	
Carbazole	ND	10	
Chrysene	ND	5.0	
Dibenzo(a,h)anthracene	ND	5.0	
Dibenzofuran	ND	10	
Diethyl phthalate	ND	10	
Dimethyl phthalate	ND	10	
Di-n-butyl phthalate	ND	10	
Di-n-octyl phthalate	ND	10	
Dinoseb	ND	20	
Diphenylamine	ND	10	
Ethyl methanesulfonate	ND	10	
Fluoranthene	ND	5.0	
Fluorene	ND	5.0	
Hexachlorobenzene	ND	10	
Hexachlorobutadiene	ND	10	
Hexachlorocyclopentadiene	ND	10	
Hexachloroethane	ND	10	
Indeno(1,2,3-cd)pyrene	ND	5.0	
Isophorone	ND	10	
Isosafrole	ND	10	
Methapyrilene	ND	10	
Methyl methanesulfonate	ND	10	
Naphthalene	ND	5.0	
Nitrobenzene	ND	10	
N-Nitrosodiethylamine	ND	10	
N-Nitrosodimethylamine	ND	10	
N-Nitroso-di-n-butylamine	ND	10	
N-Nitrosodi-n-propylamine	ND	10	
N-Nitrosomethylethylamine	ND	10	
N-Nitrosomorpholine	ND	10	
N-Nitrosopiperidine	ND	10	

**Note:** See Qualifiers Page for a list of Qualifiers and their explanation.

**Client:** The Mannik & Smith Group, Inc.  
**Work Order:** 23051093  
**Project:** Hillson Nut; MS23-13; 401ODAS003-19

## QC BATCH REPORT

Batch ID: <b>91447</b>	Instrument ID <b>SVMS4</b>	Method: <b>SW8270C</b>						
N-Nitrosopyrrolidine	ND	10						
o-Toluidine	ND	10						
p-Dimethylaminoazobenzene	ND	10						
Pentachlorobenzene	ND	10						
Pentachloroethane	ND	10						
Pentachloronitrobenzene	ND	20						
Pentachlorophenol	ND	20						
Phenacetin	ND	20						
Phenanthrene	ND	5.0						
Phenol	ND	10						
Pyrene	ND	5.0						
Pyridine	ND	10						
Safrole	ND	10						
<i>Surr: 2,4,6-Tribromophenol</i>	<i>255.1</i>	<i>0</i>	<i>400</i>	<i>0</i>	<i>63.8</i>	<i>35-120</i>	<i>0</i>	
<i>Surr: 2-Fluorobiphenyl</i>	<i>96.81</i>	<i>0</i>	<i>200</i>	<i>0</i>	<i>48.4</i>	<i>38-105</i>	<i>0</i>	
<i>Surr: 2-Fluorophenol</i>	<i>115.7</i>	<i>0</i>	<i>400</i>	<i>0</i>	<i>28.9</i>	<i>12-89</i>	<i>0</i>	
<i>Surr: 4-Terphenyl-d14</i>	<i>109.1</i>	<i>0</i>	<i>200</i>	<i>0</i>	<i>54.6</i>	<i>42-125</i>	<i>0</i>	
<i>Surr: Nitrobenzene-d5</i>	<i>109.4</i>	<i>0</i>	<i>200</i>	<i>0</i>	<i>54.7</i>	<i>28-120</i>	<i>0</i>	
<i>Surr: Phenol-d5</i>	<i>86.58</i>	<i>0</i>	<i>400</i>	<i>0</i>	<i>21.6</i>	<i>10-62</i>	<i>0</i>	

**Note:** See Qualifiers Page for a list of Qualifiers and their explanation.

Client: The Mannik & Smith Group, Inc.  
 Work Order: 23051093  
 Project: Hillson Nut; MS23-13; 401ODAS003-19

# QC BATCH REPORT

Batch ID: **91447** Instrument ID **SVMS4** Method: **SW8270C**

LCS		Sample ID: <b>LCS-91447-91447</b>			Units: <b>µg/L</b>		Analysis Date: <b>5/30/2023 10:28 PM</b>			
Client ID:		Run ID: <b>SVMS4_230530A</b>			SeqNo: <b>3060055</b>		Prep Date: <b>5/30/2023</b>		DF: <b>1</b>	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2,4-Trichlorobenzene	118.8	10	200	0	59.4	33.3-96.9	0			
1,4-Dichlorobenzene	107.2	10	200	0	53.6	24.6-94.5	0			
2,4-Dinitrotoluene	139.2	10	200	0	69.6	58.9-126	0			
2-Chlorophenol	103.8	10	200	0	51.9	53-97.3	0			S
4-Chloro-3-methylphenol	123	20	200	0	61.5	58.1-110	0			
4-Nitrophenol	58.96	10	200	0	29.5	17.3-80.3	0			
Acenaphthene	116.7	0.20	200	0	58.4	40.1-123	0			
Acenaphthylene	127.5	0.20	200	0	63.8	59.3-126	0			
Anthracene	127.5	0.20	200	0	63.8	62.1-110	0			
Benzo(a)anthracene	155.4	0.20	200	0	77.7	55.5-112	0			
Benzo(a)pyrene	155.5	0.20	200	0	77.7	62.1-118	0			
Benzo(b)fluoranthene	137.2	0.20	200	0	68.6	59.9-113	0			
Benzo(g,h,i)perylene	166.1	0.20	200	0	83.1	42.3-123	0			
Benzo(k)fluoranthene	127	0.20	200	0	63.5	54.7-99.1	0			
Carbazole	138.3	0.20	200	0	69.1	49.9-163	0			
Chrysene	137.8	0.20	200	0	68.9	63.1-116	0			
Dibenzo(a,h)anthracene	177.7	0.20	200	0	88.8	47.1-168	0			
Fluoranthene	147.4	0.20	200	0	73.7	62.1-121	0			
Fluorene	123.5	0.20	200	0	61.7	59.5-120	0			
Indeno(1,2,3-cd)pyrene	169.2	0.20	200	0	84.6	56.3-141	0			
Naphthalene	104	0.20	200	0	52	46.6-104	0			
N-Nitrosodi-n-propylamine	92.64	10	200	0	46.3	42.7-95.9	0			
Pentachlorophenol	131.1	20	200	0	65.5	34.1-130	0			
Phenanthrene	122	0.20	200	0	61	63-118	0			S
Phenol	43.11	10	200	0	21.6	17.5-68	0			
Pyrene	145.7	0.20	200	0	72.9	42-125	0			
<i>Surr: 2,4,6-Tribromophenol</i>	<i>211.8</i>	<i>0</i>	<i>400</i>	<i>0</i>	<i>52.9</i>	<i>42.3-142</i>	<i>0</i>			
<i>Surr: 2-Fluorobiphenyl</i>	<i>123.3</i>	<i>0</i>	<i>200</i>	<i>0</i>	<i>61.6</i>	<i>36.8-125</i>	<i>0</i>			
<i>Surr: 2-Fluorophenol</i>	<i>115.1</i>	<i>0</i>	<i>400</i>	<i>0</i>	<i>28.8</i>	<i>12-89</i>	<i>0</i>			
<i>Surr: 4-Terphenyl-d14</i>	<i>118.6</i>	<i>0</i>	<i>200</i>	<i>0</i>	<i>59.3</i>	<i>38.3-160</i>	<i>0</i>			
<i>Surr: Nitrobenzene-d5</i>	<i>121</i>	<i>0</i>	<i>200</i>	<i>0</i>	<i>60.5</i>	<i>28-120</i>	<i>0</i>			
<i>Surr: Phenol-d5</i>	<i>85.98</i>	<i>0</i>	<i>400</i>	<i>0</i>	<i>21.5</i>	<i>4.27-70.1</i>	<i>0</i>			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: The Mannik & Smith Group, Inc.  
 Work Order: 23051093  
 Project: Hillson Nut; MS23-13; 401ODAS003-19

# QC BATCH REPORT

Batch ID: **91447** Instrument ID **SVMS4** Method: **SW8270C**

LCS		Sample ID: <b>LCS-91447-91447</b>				Units: <b>µg/L</b>		Analysis Date: <b>5/30/2023 10:28 PM</b>		
Client ID:		Run ID: <b>SVMS4_230530A</b>		SeqNo: <b>3060240</b>		Prep Date: <b>5/30/2023</b>		DF: <b>1</b>		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2,4-Trichlorobenzene	118.8	10	200	0	59.4	44-142	0			
1,2-Dichlorobenzene	121.4	10	200	0	60.7	32-129	0			
1,3-Dichlorobenzene	105.5	10	200	0	52.8	.1-172	0			
1,4-Dichlorobenzene	107.2	10	200	0	53.6	20-124	0			
2,4,6-Trichlorophenol	144.4	10	200	0	72.2	37-144	0			
2,4-Dichlorophenol	116.6	10	200	0	58.3	39-135	0			
2,4-Dimethylphenol	96.8	10	200	0	48.4	32-119	0			
2,4-Dinitrophenol	101.9	10	200	0	50.9	.1-191	0			
2,4-Dinitrotoluene	139.2	10	200	0	69.6	39-139	0			
2,6-Dinitrotoluene	133.9	10	200	0	67	50-158	0			
2-Chloronaphthalene	136.2	10	200	0	68.1	60-118	0			
2-Chlorophenol	103.8	10	200	0	51.9	23-134	0			
2-Nitrophenol	105.3	10	200	0	52.6	29-182	0			
4,6-Dinitro-2-methylphenol	123.4	20	200	0	61.7	.1-181	0			
4-Chloro-3-methylphenol	123	20	200	0	61.5	22-147	0			
4-Chlorophenyl phenyl ether	125.1	20	200	0	62.6	25-158	0			
4-Nitrophenol	58.96	10	200	0	29.5	.1-132	0			
Acenaphthene	116.7	5.0	200	0	58.4	47-145	0			
Acenaphthylene	127.5	5.0	200	0	63.8	33-145	0			
Anthracene	127.5	5.0	200	0	63.8	27-133	0			
Benzo(a)anthracene	155.4	5.0	200	0	77.7	33-143	0			
Benzo(a)pyrene	155.5	5.0	200	0	77.7	17-163	0			
Benzo(b)fluoranthene	137.2	5.0	200	0	68.6	24-159	0			
Benzo(g,h,i)perylene	166.1	5.0	200	0	83.1	.1-219	0			
Benzo(k)fluoranthene	127	5.0	200	0	63.5	11-162	0			
Bis(2-chloroethoxy)methane	114.7	10	200	0	57.3	33-184	0			
Bis(2-chloroethyl)ether	110.4	10	200	0	55.2	12-158	0			
Bis(2-chloroisopropyl)ether	119.5	10	200	0	59.7	36-166	0			
Bis(2-ethylhexyl)phthalate	160	10	200	0	80	8-158	0			
Butyl benzyl phthalate	162.9	10	200	0	81.5	.1-152	0			
Chrysene	137.8	5.0	200	0	68.9	17-168	0			
Dibenzo(a,h)anthracene	177.7	5.0	200	0	88.8	.1-227	0			
Diethyl phthalate	142.4	10	200	0	71.2	.1-114	0			
Dimethyl phthalate	131.1	10	200	0	65.5	.1-112	0			
Di-n-butyl phthalate	142.3	10	200	0	71.2	1-118	0			
Di-n-octyl phthalate	154.2	10	200	0	77.1	4-146	0			
Fluoranthene	147.4	5.0	200	0	73.7	26-137	0			
Fluorene	123.5	5.0	200	0	61.7	59-121	0			
Hexachlorobenzene	117.7	10	200	0	58.9	.1-152	0			
Hexachlorobutadiene	121.5	10	200	0	60.7	24-116	0			
Hexachloroethane	127	10	200	0	63.5	40-113	0			
Indeno(1,2,3-cd)pyrene	169.2	5.0	200	0	84.6	.1-171	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

**Client:** The Mannik & Smith Group, Inc.  
**Work Order:** 23051093  
**Project:** Hillson Nut; MS23-13; 401ODAS003-19

## QC BATCH REPORT

Batch ID: <b>91447</b>	Instrument ID <b>SVMS4</b>		Method: <b>SW8270C</b>					
Isophorone	115.8	10	200	0	57.9	21-196	0	
Naphthalene	104	5.0	200	0	52	21-133	0	
Nitrobenzene	135.4	10	200	0	67.7	35-180	0	
N-Nitrosodi-n-propylamine	92.64	10	200	0	46.3	.1-230	0	
Pentachlorophenol	131.1	20	200	0	65.5	14-176	0	
Phenanthrene	122	5.0	200	0	61	54-120	0	
Phenol	43.11	10	200	0	21.6	5-112	0	
Pyrene	145.7	5.0	200	0	72.9	52-115	0	
<i>Surr: 2,4,6-Tribromophenol</i>	<i>211.8</i>	<i>0</i>	<i>400</i>	<i>0</i>	<i>52.9</i>	<i>35-120</i>	<i>0</i>	
<i>Surr: 2-Fluorobiphenyl</i>	<i>123.3</i>	<i>0</i>	<i>200</i>	<i>0</i>	<i>61.6</i>	<i>38-105</i>	<i>0</i>	
<i>Surr: 2-Fluorophenol</i>	<i>115.1</i>	<i>0</i>	<i>400</i>	<i>0</i>	<i>28.8</i>	<i>12-89</i>	<i>0</i>	
<i>Surr: 4-Terphenyl-d14</i>	<i>118.6</i>	<i>0</i>	<i>200</i>	<i>0</i>	<i>59.3</i>	<i>42-125</i>	<i>0</i>	
<i>Surr: Nitrobenzene-d5</i>	<i>121</i>	<i>0</i>	<i>200</i>	<i>0</i>	<i>60.5</i>	<i>28-120</i>	<i>0</i>	
<i>Surr: Phenol-d5</i>	<i>85.98</i>	<i>0</i>	<i>400</i>	<i>0</i>	<i>21.5</i>	<i>10-62</i>	<i>0</i>	

The following samples were analyzed in this batch:

23051093-05B	23051093-06B
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**Note:** See Qualifiers Page for a list of Qualifiers and their explanation.



Client: The Mannik & Smith Group, Inc.  
 Work Order: 23051093  
 Project: Hillson Nut; MS23-13; 401ODAS003-19

# QC BATCH REPORT

Batch ID: **R216901** Instrument ID **VMS5** Method: **SW8260B**

MBLK		Sample ID: <b>MBLK-R216901</b>			Units: <b>µg/Kg</b>		Analysis Date: <b>5/25/2023 09:45 AM</b>			
Client ID:		Run ID: <b>VMS5_230525A</b>			SeqNo: <b>3056962</b>		Prep Date:		DF: <b>1</b>	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1,2-Tetrachloroethane	ND	5.0								
1,1,1-Trichloroethane	ND	5.0								
1,1,2,2-Tetrachloroethane	ND	5.0								
1,1,2-Trichloroethane	ND	5.0								
1,1-Dichloroethane	ND	5.0								
1,1-Dichloroethene	ND	5.0								
1,1-Dichloropropene	ND	5.0								
1,2,3-Trichlorobenzene	ND	5.0								
1,2,3-Trichloropropane	ND	5.0								
1,2,4-Trichlorobenzene	ND	5.0								
1,2,4-Trimethylbenzene	ND	5.0								
1,2-Dibromo-3-chloropropane	ND	5.0								
1,2-Dibromoethane	ND	5.0								
1,2-Dichlorobenzene	ND	5.0								
1,2-Dichloroethane	ND	5.0								
1,2-Dichloropropane	ND	5.0								
1,3,5-Trimethylbenzene	ND	5.0								
1,3-Dichlorobenzene	ND	5.0								
1,3-Dichloropropane	ND	5.0								
1,4-Dichlorobenzene	ND	5.0								
2,2-Dichloropropane	ND	5.0								
2-Butanone	ND	5.0								
2-Chlorotoluene	ND	5.0								
2-Hexanone	ND	5.0								
4-Chlorotoluene	ND	5.0								
4-Methyl-2-pentanone	ND	5.0								
Acetone	ND	5.0								
Benzene	ND	5.0								
Bromobenzene	ND	5.0								
Bromochloromethane	ND	5.0								
Bromodichloromethane	ND	5.0								
Bromoform	ND	5.0								
Bromomethane	ND	5.0								
Carbon disulfide	ND	5.0								
Carbon tetrachloride	ND	5.0								
Chlorobenzene	ND	5.0								
Chloroethane	ND	5.0								
Chloroform	ND	5.0								
Chloromethane	ND	5.0								
cis-1,2-Dichloroethene	ND	5.0								
cis-1,3-Dichloropropene	ND	5.0								
Dibromochloromethane	ND	5.0								

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

**Client:** The Mannik & Smith Group, Inc.  
**Work Order:** 23051093  
**Project:** Hillson Nut; MS23-13; 401ODAS003-19

# QC BATCH REPORT

Batch ID: <b>R216901</b>	Instrument ID <b>VMS5</b>	Method: <b>SW8260B</b>					
Dibromomethane	ND	5.0					
Dichlorodifluoromethane	ND	5.0					
Ethylbenzene	ND	5.0					
Hexachlorobutadiene	ND	5.0					
Isopropylbenzene	ND	5.0					
m,p-Xylene	ND	5.0					
Methyl tert-butyl ether	ND	5.0					
Methylene chloride	ND	20					
Naphthalene	1.14	5.0					J
n-Butylbenzene	ND	5.0					
n-Propylbenzene	ND	5.0					
o-Xylene	ND	5.0					
p-Isopropyltoluene	ND	5.0					
sec-Butylbenzene	ND	5.0					
Styrene	ND	5.0					
tert-Butylbenzene	ND	5.0					
Tetrachloroethene	ND	5.0					
Toluene	ND	5.0					
trans-1,2-Dichloroethene	ND	5.0					
trans-1,3-Dichloropropene	ND	5.0					
Trichloroethene	ND	5.0					
Trichlorofluoromethane	ND	5.0					
Vinyl chloride	ND	5.0					
Xylenes, Total	ND	10					
<i>Surr: 4-Bromofluorobenzene</i>	<i>50.2</i>	<i>0</i>	<i>50</i>	<i>0</i>	<i>100</i>	<i>60-140</i>	<i>0</i>
<i>Surr: Dibromofluoromethane</i>	<i>54.95</i>	<i>0</i>	<i>50</i>	<i>0</i>	<i>110</i>	<i>60-140</i>	<i>0</i>
<i>Surr: Toluene-d8</i>	<i>48.87</i>	<i>0</i>	<i>50</i>	<i>0</i>	<i>97.7</i>	<i>60-140</i>	<i>0</i>

**Note:** See Qualifiers Page for a list of Qualifiers and their explanation.

Client: The Mannik & Smith Group, Inc.  
 Work Order: 23051093  
 Project: Hillson Nut; MS23-13; 401ODAS003-19

# QC BATCH REPORT

Batch ID: **R216901** Instrument ID **VMS5** Method: **SW8260B**

LCS		Sample ID: <b>LCS-R216901</b>				Units: <b>µg/Kg</b>		Analysis Date: <b>5/25/2023 08:39 AM</b>		
Client ID:		Run ID: <b>VMS5_230525A</b>			SeqNo: <b>3056961</b>		Prep Date:		DF: <b>1</b>	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	44.02	5.0	50	0	88	53.6-149	0			
1,1-Dichloroethene	37.33	5.0	50	0	74.7	38.8-176	0			
1,2-Dichloroethane	43.2	5.0	50	0	86.4	54.4-145	0			
1,3-Dichlorobenzene	43.37	5.0	50	0	86.7	54.2-137	0			
1,4-Dichlorobenzene	43.47	5.0	50	0	86.9	52.8-135	0			
Benzene	46.32	5.0	50	0	92.6	56-148	0			
Carbon tetrachloride	45.72	5.0	50	0	91.4	51.9-151	0			
Chlorobenzene	45.13	5.0	50	0	90.3	55.4-137	0			
Chloroform	49.77	5.0	50	0	99.5	51.1-147	0			
cis-1,2-Dichloroethene	53.85	5.0	50	0	108	47.6-149	0			
Ethylbenzene	45.49	5.0	50	0	91	55.8-142	0			
m,p-Xylene	91.39	5.0	100	0	91.4	57.6-141	0			
Styrene	48.12	5.0	50	0	96.2	59.6-143	0			
Tetrachloroethene	33.28	5.0	50	0	66.6	56.2-160	0			
Toluene	45.35	5.0	50	0	90.7	56-143	0			
Trichloroethene	44.78	5.0	50	0	89.6	56.5-143	0			
<i>Surr: 4-Bromofluorobenzene</i>	<i>50.59</i>	<i>0</i>	<i>50</i>	<i>0</i>	<i>101</i>	<i>60-140</i>	<i>0</i>			
<i>Surr: Dibromofluoromethane</i>	<i>49.8</i>	<i>0</i>	<i>50</i>	<i>0</i>	<i>99.6</i>	<i>60-140</i>	<i>0</i>			
<i>Surr: Toluene-d8</i>	<i>49.55</i>	<i>0</i>	<i>50</i>	<i>0</i>	<i>99.1</i>	<i>60-140</i>	<i>0</i>			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: The Mannik & Smith Group, Inc.  
 Work Order: 23051093  
 Project: Hillson Nut; MS23-13; 401ODAS003-19

# QC BATCH REPORT

Batch ID: **R216901** Instrument ID **VMS5** Method: **SW8260B**

MS		Sample ID: <b>23051008-03 MS</b>				Units: <b>µg/Kg</b>		Analysis Date: <b>5/25/2023 06:25 PM</b>		
Client ID:		Run ID: <b>VMS5_230525A</b>			SeqNo: <b>3056984</b>		Prep Date:		DF: <b>1</b>	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	36.54	5.0	50	0	73.1	66.9-140	0			
1,1-Dichloroethane	41.1	5.0	50	0	82.2	41.4-161	0			
1,2-Dichloroethane	33.51	5.0	50	0	67	58.9-137	0			
1,3-Dichlorobenzene	28.37	5.0	50	0	56.7	42.5-150	0			
1,4-Dichlorobenzene	27.89	5.0	50	0	55.8	52.1-137	0			
Benzene	31.97	5.0	50	0	63.9	35.8-162	0			
Carbon tetrachloride	39.13	5.0	50	0	78.3	53.2-137	0			
Chlorobenzene	32.96	5.0	50	0	65.9	65.6-137	0			
Chloroform	33.73	5.0	50	0	67.5	58-130	0			
cis-1,2-Dichloroethene	31.17	5.0	50	0	62.3	52.9-138	0			
Ethylbenzene	32.05	5.0	50	0	64.1	57.5-134	0			
m,p-Xylene	64.27	10	100	0	64.3	56.4-135	0			
Styrene	32.93	5.0	50	0	65.9	60.9-135	0			
Tetrachloroethene	27.62	5.0	50	0	55.2	28.3-109	0			
Toluene	34.37	5.0	50	0	68.7	67.7-135	0			
Trichloroethene	37.74	5.0	50	0	75.5	56.5-136	0			
<i>Surr: 4-Bromofluorobenzene</i>	<i>46.68</i>	<i>0</i>	<i>50</i>	<i>0</i>	<i>93.4</i>	<i>60-140</i>	<i>0</i>			
<i>Surr: Dibromofluoromethane</i>	<i>45.72</i>	<i>0</i>	<i>50</i>	<i>0</i>	<i>91.4</i>	<i>60-140</i>	<i>0</i>			
<i>Surr: Toluene-d8</i>	<i>49.66</i>	<i>0</i>	<i>50</i>	<i>0</i>	<i>99.3</i>	<i>60-140</i>	<i>0</i>			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: The Mannik & Smith Group, Inc.  
 Work Order: 23051093  
 Project: Hillson Nut; MS23-13; 401ODAS003-19

# QC BATCH REPORT

Batch ID: **R216901** Instrument ID **VMS5** Method: **SW8260B**

MSD		Sample ID: <b>23051008-03A MSD</b>				Units: <b>µg/Kg</b>		Analysis Date: <b>5/25/2023 08:09 AM</b>		
Client ID:		Run ID: <b>VMS5_230525A</b>			SeqNo: <b>3056960</b>		Prep Date:		DF: <b>1</b>	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	38.78	5.0	50	0	77.6	66.9-140	33.39	14.9	31.2	
1,1-Dichloroethene	39.02	5.0	50	0	78	41.4-161	30.08	25.9	38.1	
1,2-Dichloroethane	37.69	5.0	50	0	75.4	58.9-137	32.06	16.1	26.2	
1,3-Dichlorobenzene	39.56	5.0	50	0	79.1	42.5-150	39.87	0.781	21	
1,4-Dichlorobenzene	38.99	5.0	50	0	78	52.1-137	39.32	0.843	28.7	
Benzene	40.77	5.0	50	0	81.5	35.8-162	40.54	0.566	23.6	
Carbon tetrachloride	39.19	5.0	50	0	78.4	53.2-137	28.23	32.5	32.3	R
Chlorobenzene	40.31	5.0	50	0	80.6	65.6-137	40.12	0.472	20	
Chloroform	43.9	5.0	50	0	87.8	58-130	41.31	6.08	28.2	
cis-1,2-Dichloroethene	48.58	5.0	50	0	97.2	52.9-138	45.61	6.31	23.7	
Ethylbenzene	40.97	5.0	50	0	81.9	57.5-134	39.05	4.8	24.9	
m,p-Xylene	82.91	10	100	0	82.9	56.4-135	77	7.39	25.1	
Styrene	42.5	5.0	50	0	85	60.9-135	43.29	1.84	22.8	
Tetrachloroethene	29.79	5.0	50	0	59.6	28.3-109	29.18	2.07	24.7	
Toluene	40.17	5.0	50	0	80.3	67.7-135	39.52	1.63	20	
Trichloroethene	39.58	5.0	50	0	79.2	56.5-136	41.13	3.84	20	
<i>Surr: 4-Bromofluorobenzene</i>	<i>50.74</i>	<i>0</i>	<i>50</i>	<i>0</i>	<i>101</i>	<i>60-140</i>	<i>52.33</i>	<i>3.09</i>		
<i>Surr: Dibromofluoromethane</i>	<i>48.56</i>	<i>0</i>	<i>50</i>	<i>0</i>	<i>97.1</i>	<i>60-140</i>	<i>47.95</i>	<i>1.26</i>		
<i>Surr: Toluene-d8</i>	<i>49.08</i>	<i>0</i>	<i>50</i>	<i>0</i>	<i>98.2</i>	<i>60-140</i>	<i>49.31</i>	<i>0.468</i>		

The following samples were analyzed in this batch:

23051093-01A	23051093-02A	23051093-03A
23051093-04A		

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: The Mannik & Smith Group, Inc.  
 Work Order: 23051093  
 Project: Hillson Nut; MS23-13; 401ODAS003-19

# QC BATCH REPORT

Batch ID: **R216924** Instrument ID **VMS6** Method: **SW8260B**

MBLK		Sample ID: <b>MBLK-R216924</b>			Units: <b>µg/L</b>		Analysis Date: <b>5/26/2023 12:10 PM</b>			
Client ID:		Run ID: <b>VMS6_230526A</b>			SeqNo: <b>3058263</b>		Prep Date:		DF: <b>1</b>	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1,2-Tetrachloroethane	ND	5.0								
1,1,1-Trichloroethane	ND	5.0								
1,1,2,2-Tetrachloroethane	ND	5.0								
1,1,2-Trichloroethane	ND	5.0								
1,1-Dichloroethane	ND	5.0								
1,1-Dichloroethene	ND	5.0								
1,1-Dichloropropene	ND	5.0								
1,2,3-Trichlorobenzene	ND	5.0								
1,2,3-Trichloropropane	ND	5.0								
1,2,4-Trichlorobenzene	ND	5.0								
1,2,4-Trimethylbenzene	ND	5.0								
1,2-Dibromo-3-chloropropane	ND	5.0								
1,2-Dibromoethane	ND	5.0								
1,2-Dichlorobenzene	ND	5.0								
1,2-Dichloroethane	ND	5.0								
1,2-Dichloropropane	ND	5.0								
1,3,5-Trimethylbenzene	ND	5.0								
1,3-Dichlorobenzene	ND	5.0								
1,3-Dichloropropane	ND	5.0								
1,4-Dichlorobenzene	ND	5.0								
2,2-Dichloropropane	ND	5.0								
2-Butanone	ND	5.0								
2-Chlorotoluene	ND	5.0								
2-Hexanone	ND	5.0								
4-Chlorotoluene	ND	5.0								
4-Methyl-2-pentanone	ND	5.0								
Acetone	ND	5.0								
Benzene	ND	5.0								
Bromobenzene	ND	5.0								
Bromochloromethane	ND	5.0								
Bromodichloromethane	ND	5.0								
Bromoform	ND	5.0								
Bromomethane	ND	5.0								
Carbon disulfide	ND	5.0								
Carbon tetrachloride	ND	5.0								
Chlorobenzene	ND	5.0								
Chloroethane	ND	5.0								
Chloroform	ND	5.0								
Chloromethane	ND	5.0								
cis-1,2-Dichloroethene	ND	5.0								
cis-1,3-Dichloropropene	ND	5.0								
Dibromochloromethane	ND	5.0								

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

**Client:** The Mannik & Smith Group, Inc.  
**Work Order:** 23051093  
**Project:** Hillson Nut; MS23-13; 401ODAS003-19

# QC BATCH REPORT

Batch ID: <b>R216924</b>	Instrument ID <b>VMS6</b>	Method: <b>SW8260B</b>					
Dibromomethane	ND	5.0					
Dichlorodifluoromethane	ND	5.0					
Ethylbenzene	ND	5.0					
Hexachlorobutadiene	ND	5.0					
Isopropylbenzene	ND	5.0					
m,p-Xylene	ND	10					
Methyl tert-butyl ether	ND	5.0					
Methylene chloride	ND	5.0					
Naphthalene	ND	5.0					
n-Butylbenzene	ND	5.0					
n-Propylbenzene	ND	5.0					
o-Xylene	ND	5.0					
p-Isopropyltoluene	ND	5.0					
sec-Butylbenzene	ND	5.0					
Styrene	ND	5.0					
tert-Butylbenzene	ND	5.0					
Tetrachloroethene	ND	5.0					
Toluene	ND	5.0					
trans-1,2-Dichloroethene	ND	5.0					
trans-1,3-Dichloropropene	ND	5.0					
Trichloroethene	ND	5.0					
Trichlorofluoromethane	ND	5.0					
Vinyl chloride	ND	2.0					
Xylenes, Total	ND	15					
<i>Surr: 4-Bromofluorobenzene</i>	<i>53.14</i>	<i>0</i>	<i>50</i>	<i>0</i>	<i>106</i>	<i>61-131</i>	<i>0</i>
<i>Surr: Dibromofluoromethane</i>	<i>54.8</i>	<i>0</i>	<i>50</i>	<i>0</i>	<i>110</i>	<i>72-137</i>	<i>0</i>
<i>Surr: Toluene-d8</i>	<i>52.21</i>	<i>0</i>	<i>50</i>	<i>0</i>	<i>104</i>	<i>80.4-119</i>	<i>0</i>

**Note:** See Qualifiers Page for a list of Qualifiers and their explanation.

Client: The Mannik & Smith Group, Inc.  
 Work Order: 23051093  
 Project: Hillson Nut; MS23-13; 401ODAS003-19

# QC BATCH REPORT

Batch ID: **R216924** Instrument ID **VMS6** Method: **SW8260B**

LCS		Sample ID: <b>LCS-R216924</b>				Units: <b>µg/L</b>		Analysis Date: <b>5/26/2023 10:28 AM</b>		
Client ID:		Run ID: <b>VMS6_230526A</b>			SeqNo: <b>3058260</b>		Prep Date:		DF: <b>1</b>	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	46.29	5.0	50	0	92.6	48.4-140	0			
1,1-Dichloroethene	47.37	5.0	50	0	94.7	45.5-150	0			
1,2-Dichloroethane	50.2	5.0	50	0	100	46.5-141	0			
1,3-Dichlorobenzene	45.62	5.0	50	0	91.2	42.5-133	0			
1,4-Dichlorobenzene	43.73	5.0	50	0	87.5	38.9-136	0			
Benzene	44.31	5.0	50	0	88.6	50.7-134	0			
Carbon tetrachloride	48.84	5.0	50	0	97.7	45.5-143	0			
Chlorobenzene	46.88	5.0	50	0	93.8	45-133	0			
Chloroform	48.4	5.0	50	0	96.8	52.4-136	0			
cis-1,2-Dichloroethene	45.4	5.0	50	0	90.8	49.7-138	0			
Ethylbenzene	46.34	5.0	50	0	92.7	37.8-145	0			
m,p-Xylene	99.51	10	100	0	99.5	25.1-163	0			
Methyl tert-butyl ether	54.87	5.0	50	0	110	26.7-174	0			
Styrene	51.89	5.0	50	0	104	26.3-172	0			
Tetrachloroethene	44.21	5.0	50	0	88.4	37.3-139	0			
Toluene	45.31	5.0	50	0	90.6	44-135	0			
Trichloroethene	46.92	5.0	50	0	93.8	45.9-140	0			
Xylenes, Total	150.4	15	150	0	100	47.3-132	0			
<i>Surr: 4-Bromofluorobenzene</i>	47.96	0	50	0	95.9	61-131	0			
<i>Surr: Dibromofluoromethane</i>	51.37	0	50	0	103	72-137	0			
<i>Surr: Toluene-d8</i>	50.74	0	50	0	101	80.4-119	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.



Client: The Mannik & Smith Group, Inc.  
 Work Order: 23051093  
 Project: Hillson Nut; MS23-13; 401ODAS003-19

# QC BATCH REPORT

Batch ID: **R216924** Instrument ID **VMS6** Method: **SW8260B**

MS		Sample ID: <b>23050961-01A MS</b>				Units: <b>µg/L</b>		Analysis Date: <b>5/26/2023 10:48 AM</b>		
Client ID:		Run ID: <b>VMS6_230526A</b>		SeqNo: <b>3058261</b>		Prep Date:		DF: <b>1</b>		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	52.63	5.0	50	0	105	40.4-134	0			
1,1-Dichloroethane	53.78	5.0	50	0	108	45.3-151	0			
1,2-Dichloroethane	53.33	5.0	50	0	107	37-139	0			
1,3-Dichlorobenzene	51.8	5.0	50	0	104	42.9-121	0			
1,4-Dichlorobenzene	47.6	5.0	50	0	95.2	53.4-129	0			
Benzene	50.55	5.0	50	0	101	37.4-144	0			
Carbon tetrachloride	56.06	5.0	50	0	112	33.8-150	0			
Chlorobenzene	52.29	5.0	50	0	105	52.4-132	0			
Chloroform	54.5	5.0	50	0	109	45.5-135	0			
cis-1,2-Dichloroethene	50.91	5.0	50	0	102	35.2-150	0			
Ethylbenzene	53.39	5.0	50	0	107	46.5-146	0			
m,p-Xylene	112.9	10	100	0	113	38.2-167	0			
Styrene	56.65	5.0	50	0	113	20.9-184	0			
Tetrachloroethene	50.73	5.0	50	0	101	55.2-134	0			
Toluene	51.47	5.0	50	0	103	32.7-140	0			
Trichloroethene	55.52	5.0	50	0	111	29.1-153	0			
Xylenes, Total	170.8	15	150	0	114	43.6-148	0			
<i>Surr: 4-Bromofluorobenzene</i>	<i>49.16</i>	<i>0</i>	<i>50</i>	<i>0</i>	<i>98.3</i>	<i>61-131</i>	<i>0</i>			
<i>Surr: Dibromofluoromethane</i>	<i>50.51</i>	<i>0</i>	<i>50</i>	<i>0</i>	<i>101</i>	<i>72-137</i>	<i>0</i>			
<i>Surr: Toluene-d8</i>	<i>51.07</i>	<i>0</i>	<i>50</i>	<i>0</i>	<i>102</i>	<i>80.4-119</i>	<i>0</i>			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: The Mannik & Smith Group, Inc.  
 Work Order: 23051093  
 Project: Hillson Nut; MS23-13; 401ODAS003-19

# QC BATCH REPORT

Batch ID: **R216924** Instrument ID **VMS6** Method: **SW8260B**

MSD		Sample ID: 23050961-01A MSD				Units: µg/L		Analysis Date: 5/26/2023 11:09 AM		
Client ID:		Run ID: VMS6_230526A			SeqNo: 3058262		Prep Date:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	51.2	5.0	50	0	102	40.4-134	52.63	2.75	20	
1,1-Dichloroethene	51.17	5.0	50	0	102	45.3-151	53.78	4.97	20	
1,2-Dichloroethane	53.41	5.0	50	0	107	37-139	53.33	0.15	20	
1,3-Dichlorobenzene	51.79	5.0	50	0	104	42.9-121	51.8	0.0193	20	
1,4-Dichlorobenzene	48.15	5.0	50	0	96.3	53.4-129	47.6	1.15	20	
Benzene	49.95	5.0	50	0	99.9	37.4-144	50.55	1.19	20	
Carbon tetrachloride	53.81	5.0	50	0	108	33.8-150	56.06	4.1	20	
Chlorobenzene	51.35	5.0	50	0	103	52.4-132	52.29	1.81	20	
Chloroform	53.07	5.0	50	0	106	45.5-135	54.5	2.66	20	
cis-1,2-Dichloroethene	51.32	5.0	50	0	103	35.2-150	50.91	0.802	21	
Ethylbenzene	52.07	5.0	50	0	104	46.5-146	53.39	2.5	20	
m,p-Xylene	111.3	10	100	0	111	38.2-167	112.9	1.44	20	
Styrene	56.12	5.0	50	0	112	20.9-184	56.65	0.94	20	
Tetrachloroethene	49.18	5.0	50	0	98.4	55.2-134	50.73	3.1	20	
Toluene	50.18	5.0	50	0	100	32.7-140	51.47	2.54	20	
Trichloroethene	52.05	5.0	50	0	104	29.1-153	55.52	6.45	20	
Xylenes, Total	168.8	15	150	0	112	43.6-148	170.8	1.18	20	
<i>Surr: 4-Bromofluorobenzene</i>	48.3	0	50	0	96.6	61-131	49.16	1.76		
<i>Surr: Dibromofluoromethane</i>	50.6	0	50	0	101	72-137	50.51	0.178		
<i>Surr: Toluene-d8</i>	51.35	0	50	0	103	80.4-119	51.07	0.547		

The following samples were analyzed in this batch:

23051093-05A	23051093-06A
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Note: See Qualifiers Page for a list of Qualifiers and their explanation.

**Client:** The Mannik & Smith Group, Inc.  
**Project:** Hillson Nut; MS23-13; 401ODAS003-19  
**WorkOrder:** 23051093

**QUALIFIERS,  
ACRONYMS, UNITS**

<u>Qualifier</u>	<u>Description</u>
*	Value exceeds Regulatory Limit
a	Not accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
J	Analyte detected below quantitation limit
n	Not offered for accreditation
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL

<u>Acronym</u>	<u>Description</u>
DUP	Method Duplicate
E	EPA Method
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
MBLK	Method Blank
MDL	Method Detection Limit
MQL	Method Quantitation Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PDS	Post Digestion Spike
PQL	Practical Quantitation Limit
SDL	Sample Detection Limit
SW	SW-846 Method

<u>Units Reported</u>	<u>Description</u>
% of sample	
µg/L	
mg/Kg-dry	

Sample Receipt Checklist

Client Name: **MANNIK&SMITH-COLUMBUS**

Date/Time Received: **24-May-23 15:00**

Work Order: **23051093**

Received by: **DS**

Checklist completed by Alec Bolender 25-May-23  
eSignature | Date

Reviewed by: Rob Nieman 31-May-23  
eSignature | Date

Matrices: soil; water

Carrier name: Courier

- Shipping container/cooler in good condition? Yes  No  Not Present
- Custody seals intact on shipping container/cooler? Yes  No  Not Present
- Custody seals intact on sample bottles? Yes  No  Not Present
- Chain of custody present? Yes  No
- Chain of custody signed when relinquished and received? Yes  No
- Chain of custody agrees with sample labels? Yes  No
- Samples in proper container/bottle? Yes  No
- Sample containers intact? Yes  No
- Sufficient sample volume for indicated test? Yes  No
- All samples received within holding time? Yes  No
- Container/Temp Blank temperature in compliance? Yes  No
- Sample(s) received on ice? Yes  No

Temperature(s)/Thermometer(s):

Cooler(s)/Kit(s):

Date/Time sample(s) sent to storage:

Water - VOA vials have zero headspace? Yes  No  No VOA vials submitted

Water - pH acceptable upon receipt? Yes  No  N/A

pH adjusted? Yes  No  N/A

pH adjusted by:

Login Notes:



Client Contacted: \_\_\_\_\_ Date Contacted: \_\_\_\_\_ Person Contacted: \_\_\_\_\_

Contacted By: \_\_\_\_\_ Regarding: \_\_\_\_\_

Comments:

CorrectiveAction:



Ship To: **ALS Environmental**  
4388 Glendale Milford Rd.  
Cincinnati, Ohio 45242  
Phone: (513) 733-5336  
Fax: (513) 733-5347

# Field Chain-of-Custody Record

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76752

REV 10/2017

Date: 5/23/23  
 Company Name: Mannitt+Smith Group  
 Address: 1160 Dublin Rd City: Columbus OH Zip: 43215  
 Person to Contact: Matt Pesci  
 Email Address: mpesci@mannittsmithgroup.com  
 Telephone: 614-222-8711 Fax: 614-222-8711  
 Alternate Contact: John Thornburg Columbus, OH 43216-1049

Purchase Order No.: \_\_\_\_\_  
 Project No.: 401.01AS003-19  
 Sampling Site: Milken Avt  
 Billing Address (if different): Ohio EPA

ALS Lab ID	Sample ID / Description	Date	Time
	SB-11 (0-2')	5/23/23	1540
	SB-13 (0-2')	5/23/23	1550
	SB-16 (0-2')	5/23/23	1610
	SB-18 (0-2')	5/23/23	1630
	TW-10	5/23/23	1545
	TW-8	5/23/23	1600

Notes:

REGULAR Status  RUSH Status   
 RESULTS REQUIRED BY: (Date) \_\_\_\_\_  
 CONTACT ALS ENVIRONMENTAL PRIOR TO SENDING SAMPLES

OH VAP:  YES  NO BUSTR:  YES  NO NELAC:  YES  NO

Preservation Key #	Sample Type / Matrix Key Abbr.	# of Sample Containers	ANALYSIS REQUESTED
9	VOC (terrene)	2	VOC (HCL), SVOC, PCRB (HCL), PCRB (VOC), PCRB (HCL)
9	SVOC, PCRB (HCL), PCRB (VOC)	2	
9	SVOC, PCRB (HCL), PCRB (VOC)	2	
9	SVOC, PCRB (HCL), PCRB (VOC)	2	
1/2	SVOC, PCRB (HCL), PCRB (VOC)	5	
1/2	SVOC, PCRB (HCL), PCRB (VOC)	5	

Matrix Key: A - Air B - Bulk S - Soil W - Water

Preservation Key: 1 - HCl 2 - HNO<sub>3</sub> 3 - H<sub>2</sub>SO<sub>4</sub> 4 - NaOH 5 - Na<sub>2</sub>O<sub>2</sub> 6 - NaHSO<sub>4</sub> 7 - NaOH/ZnAcetate 8 - Other 9 - 4°C

ALS LAB USE ONLY  
 COOLER TEMP: 5.3 °C TAKEN WITH IRE: 170258  
 COOLING METHOD: NONE COOLER VET ICE DRY ICE ICE PACK  
 DELIVERY METHOD: CLIENT DROP BOX FEDEX UPS  
 STD MAIL PRTY MAIL ALS COURIER OTHER:  
 CUSTODY SEALS: NOT REQUIRED COOLER PACKAGE SAMPLES  
 PH ADJUSTMENTS:

Failure to complete all portions of this form may delay analysis. Please fill in this form LEGIBLY.

Reinquired By: (Signature)	Time / Date	Received By: (Signature)	Time / Date
<i>[Signature]</i>	5/23/23	<i>[Signature]</i>	5/23/23 1500
Reinquired By: (Signature)	Time / Date	Received By: (Signature)	Time / Date
Reinquired By: (Signature)	Time / Date	Received By: (Signature)	Time / Date