

CALVERTON INDUSTRIAL PARK
4285 MIDDLE COUNTRY ROAD
CALVERTON, NEW YORK
TAX MAP ID: 0600-116.00-01.00-002.000

GROUNDWATER CHARACTERIZATION REPORT

PREPARED FOR:

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Great Neck, NY 11024

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GROUNDWATER CHARACTERIZATION REPORT
4285 MIDDLE COUNTRY RD, CALVERTON, NY

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**GROUNDWATER CHARACTERIZATION REPORT
4285 MIDDLE COUNTRY RD, CALVERTON, NY**

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ACRONYM	DEFINITION
ASP	Analytical Services Protocol
ASTM	American Society for Testing and Materials
AWQS	Ambient Water Quality Standards
CFR	Code of Federal Regulations
DER	Department of Environmental Remediation
ELAP	Environmental Laboratory Approval Program
EM	Electromagnetic
ESA	Environmental Site Assessment
GQS	Groundwater Quality Standard
GV	Guidance Value
NYCRR	New York Codes, Rules, and Regulations
NYSDEC	New York State Department of Environmental Conservation
NYSDOH	New York State Department of Health
PFAS	Per- and polyfluoroalkyl substances
PCB	Polychlorinated Biphenyl
PID	Photo-ionization Detector
PWGC	P.W. Grosser Consulting, Inc.
QA/QC	Quality Assurance / Quality Control
REC	Recognized Environmental Condition
SCO	Soil Cleanup Objective
SVOC	Semi-volatile Organic Compound
USCS	Unified Soil Classification System
USEPA	United States Environmental Protection Agency
UST	Underground Storage Tank
VOC	Volatile Organic Compound



1.0 INTRODUCTION

HK Ventures LLC (Client) retained P.W. Grosser Consulting, Inc. (PWGC) to prepare a Groundwater Sampling Report for the property located at 4285 Middle Country Road, Calverton, New York. The purpose of the groundwater sampling was to evaluate groundwater quality with a focus on the western property boundary shared with Sky Materials. Work was conducted in accordance with Item 10 in the Town of Riverhead Resolution 2021-091 and in substantial conformance with the New York State Department of Environmental Conservation's (NYSDEC's) Division of Environmental Remediation's (DER's) Technical Guidance for Site Investigation and Remediation, May 2010 (DER-10).

2.0 BACKGROUND

2.1 Site Description and Features

The subject property consists of one parcel located at 4285 Middle Country Road in the hamlet of Calverton, Town of Riverhead, Suffolk County, New York. The property is identified in the Suffolk County Tax Map as 0600-116.00-01.00-002.000. A Site Location Map is included as **Figure 1** and a Site Plan is included as **Figure 2**.

2.2 Physical Setting

The Site measures approximately 30.25 acres and is vacant with wooded areas along the northeast and southwest property boundaries. Currently, the property is primarily composed of a naturally vegetated undeveloped land. The property slopes gradually from north to south. Regional groundwater flow beneath the subject property is in a generally northeast direction as obtained from groundwater contour maps developed by the United States Geologic Survey for Long Island in 2016.

2.3 Site History and Land Use

The Site has been historically used for agricultural purposes from before 1938 to approximately 1986. The Site is currently vacant and unimproved.

2.4 Adjacent Property Land Uses

The Site is bounded by Middle Country Road and vacant land to the north, portions of the former Grumman property (EPCAL) to the south and west, a sod farm to the east, and commercial properties to the west. Commercial properties to the west include a Tractor Supply Co. retail store, and Sky Materials which is a New York State Department of Environmental Conservation (NYSDEC) Part 360 permitted solid waste management facility.

2.5 Summary of Previous Assessments

2.5.1 Phase I Environmental Site Assessment Report (December 2019)

A Phase I ESA was prepared for the subject property in December of 2019 by H2M. The Phase I ESA identified the following REC associated with subject property.

- Based on a review of historical aerial photographs, the subject property was historically utilized for agricultural purposes from before 1938 to approximately 1986. Chemicals such as herbicides and pesticides are commonly used during farming operations to control pests and maintain plant growth.



Residual contamination may be present in site surface soils. Due to the potential presence of herbicides and pesticides in the onsite soil, this is considered to be a REC.

Based on review of the Phase I ESA and a visual inspection of the Site and surrounding area, PWGC identified the following additional potential environmental concerns:

- Current and historical usage of properties in the surrounding area for agricultural purposes. As with the usage of the subject property, this usage is likely associated with the application of pesticides and herbicides. Such compounds may have migrated to the subject property from adjacent properties via surficial storm runoff or wind deposition.
- The adjacent property to the west (Sky Materials) is an active NYSDEC permitted solid waste management facility. Based on a visual inspection of this property from public rights of way, it appears the facility engages in processing construction and demolition (C&D) debris and vegetative waste (mulching). Based on review of historical aerial photographs, there is no evidence of piles of soil or debris, or other evidence of improper dumping associated with the Sky Materials site on the subject property. There is evidence of a possible access road/trail that appears to be associated with the Sky Materials site that encroached onto the southwestern corner of the subject property from approximately 2006 to 2010 (the trail currently appears to be overgrown with vegetation). However, based on the documented history of poor housekeeping, violations, and non-compliance with permit conditions, it is possible that soils, C&D debris and/or other materials from Sky Materials may potentially have been improperly dumped along the common boundary with the subject property.
- The former Calverton Naval Weapons Industrial Reserve Plant (NWIRP) is located to the south and west of the subject property. This site is currently known as Enterprise Park at Calverton (EPCAL). This site is listed as a NYSDEC Class 2 Hazardous Waste site where volatile organic compound (VOC) and per- and polyfluoroalkyl substance (PFAS) impact to groundwater has been documented.

3.0 GROUNDWATER SAMPLING

To evaluate potential impacts related to the current and historical usage of the adjacent property to the west that has been used as a sand mine and is currently a registered C&D processing facility, PWGC performed groundwater sampling focused on the western property boundary shared with Sky Materials.

3.1 Groundwater Sampling Procedures

Associated Environmental Services, Inc. (Associated) of Hauppauge, New York provided environmental drilling services during the sampling. On October 12, 2021, Associated mobilized to the site with a Geoprobe® 7822DT direct-push drill rig to install three (3) temporary groundwater sampling points to evaluate groundwater quality at the western property boundary. At each temporary groundwater sampling location, a four-foot screen point sampler was driven to the desired depth (three feet below the water table) to allow the sampler screen to intersect the water table. Groundwater was encountered between 45 and 51 feet below the ground surface (bgs). Following sample collection, temporary sampling points were removed and backfilled.

Groundwater sample locations are identified as GW001, GW002 and GW003, and are illustrated in **Figure 3**.

3.1.1 Sample Protocol

Samples were collected using a Waterra hydrolift pump fitted with dedicated high-density polyethylene (HDPE) tubing in accordance with United States Environmental Protection Agency (USEPA) Low Stress (Low Flow) Purging and Sampling Procedure for The Collection of Groundwater Samples from Monitoring Wells (September 2017). A Horiba U-22 multi-parameter water quality meter outfitted with a flow through cell was utilized to monitor field parameters (turbidity, pH, temperature, oxidation-reduction potential, dissolved oxygen, and conductivity) at three-minute intervals. Upon stabilization of field parameters (three consecutive readings within allowable tolerances) groundwater samples were collected. Well Sampling Logs are included as **Appendix A**.

3.1.2 Sample Analysis

Groundwater samples submitted for laboratory analysis were placed on ice in a cooler and shipped under proper chain-of-custody procedures to Alpha Analytical Laboratories (Alpha), a New York State Department of Health (NYSDOH) Environmental Laboratory Approval Program (ELAP) certified laboratory. Samples were analyzed for:

- Volatile organic compounds (VOCs) by USEPA Method 8260.
- Semi-volatile organic compounds (SVOCs) by USEPA Method 8270.



- Target Analyte List (TAL) Metals by USEPA Methods 6010/7471 (total & dissolved).
- Poly-chlorinated biphenyls (PCBs) by USEPA Method 8082
- Herbicides by USEPA Method 8151
- Pesticides by USEPA Method 8081
- Per- and polyfluoroalkyl substances (PFAS) by USEPA Method 537 Modified
- 1,4-Dioxane by USEPA Method 8270-SIM

One field blank sample was collected and analyzed for PFAS by USEPA Method 537 Modified as a quality assurance/quality control measure. Laboratory analytical data are summarized in **Tables 1** through **5**; laboratory reports are included as **Appendix B**.

4.0 GROUNDWATER SAMPLING RESULTS

Groundwater analytical results are compared to the Class GA Ambient Water Quality Standards (AWQS) specified in Technical and Operational Guidance Series (TOGS) 1.1.1, Ambient Water Quality Standards and Guidance Values on Groundwater Effluent Limitations, June 1998. PFAS results are compared to the guidance values specified in Sampling, Analysis, and Assessment of Per- and Polyfluoroalkyl Substances (PFAS) Under NYSDEC's Part 375 Remedial Programs (January 2021). 1,4-Dioxane results are compared to the New York State maximum contaminant level (MCL) for drinking water.

VOCs were not detected at concentrations above their respective AWQS in each of the three (3) groundwater samples.

SVOCs were detected at concentrations exceeding their respective AWQS in each of the three (3) groundwater samples. It should be noted that the concentrations detected were extremely low and flagged with "J" qualifiers from the laboratory indicating that the values are estimated.

Metals including chromium, iron, manganese, sodium, and thallium were detected at concentrations exceeding AWQS in each groundwater sample collected at the site. However, metals exceeding AWQS in filtered (dissolved) samples were limited to manganese and sodium in GW001 and manganese, sodium, and thallium in GW002.

Pesticides, herbicides, and PCBs were not detected at concentrations exceeding their respective AWQS in groundwater samples collected from the site with the exception of dieldrin in GW001. It should be noted that the dieldrin concentration detected was extremely low and flagged with a "J" qualifier from the laboratory indicating that the value was estimated.

PFAS compounds PFOA and PFOS were detected at concentrations exceeding their respective NYSDEC guidance values in GW001 and GW002.

1,4-Dioxane was not detected at concentrations exceeding its MCL of 1 ppb in the three (3) groundwater samples.

5.0 CONCLUSIONS

PWGC has performed a groundwater investigation in accordance with Item 10 in the Town of Riverhead Resolution 2021-091 to characterize groundwater and evaluate potential impacts related to the current and historical usage of the adjacent property to the west that has been used as a sand mine and is currently a registered C&D processing facility (Sky Materials). The investigation consisted of:

- Evaluation of groundwater quality.

5.1 Conclusions

Based on the results of the groundwater sampling, PWGC offers the following conclusions:

- To evaluate groundwater quality, three (3) temporary groundwater sample points installed along the western property boundary of the site adjacent to Sky Materials.
 - VOCs, herbicides, PCBs, and 1,4-dioxane were not detected at concentrations above applicable standards or guidance values.
 - Several SVOCs were detected at concentrations exceeding their respective AWQS in each of the three groundwater samples. It should be noted that the AWQS for these compounds are extremely low, and the concentrations detected are flagged with “J” qualifiers from the laboratory indicating that the concentrations should be considered estimated.
 - Several dissolved metals, including manganese and sodium, were detected at concentrations exceeding their respective AWQS in two groundwater samples (GW001 and GW002). Elevated concentrations of these compounds are typical of Long Island groundwater and are likely related to the composition of the aquifer rather than a source of impact.
 - One pesticide (dieldrin) was detected in one groundwater sample (GW001) at a concentration exceeding its AWQS. It should be noted that the AWQS for this compound is extremely low, and the concentration detected is flagged with a “J” qualifier from the laboratory indicating that the concentration should be considered estimated.
 - PFAS compounds PFOA and PFOS were detected at concentrations exceeding their respective guidance values in two groundwater samples (GW001 and GW002).
 - Based on the regional groundwater flow direction and the proximity of the samples to the upgradient property boundary, it appears that detected groundwater impact is related to an offsite, upgradient source such as Sky Materials, EPCAL and/or other upgradient sources not previously identified.



5.2 Recommendations

Based on the conclusions detailed above, PWGC offers the following recommendations for the subject property:

- As impact detected in groundwater appears to be related to an offsite source or sources, and there are currently no plans to install supply wells at the subject property (i.e., the proposed development will be connected to the Riverhead Water District) it does not appear that groundwater remediation is necessary at the subject property.



6.0 REFERENCES

6 NYCRR Part 375 Environmental Remediation Programs Subparts 375-1 to 375-4 & 375-6.

6NYCRR Part 703.5 GA Groundwater Quality Standards (GQS) and Guidance Values (GV) 6/1998

DER-10 / Technical Guidance for Site Investigation and Remediation.

NYSDEC Sampling, Analysis, and Assessment of PFAS Groundwater Screening Levels, January 2021.

New York State Maximum Contaminant Levels (MCL) for Drinking Water

H2M – 4285 Middle Country Road, Calverton, NY – Phase I ESA Report, December 2019



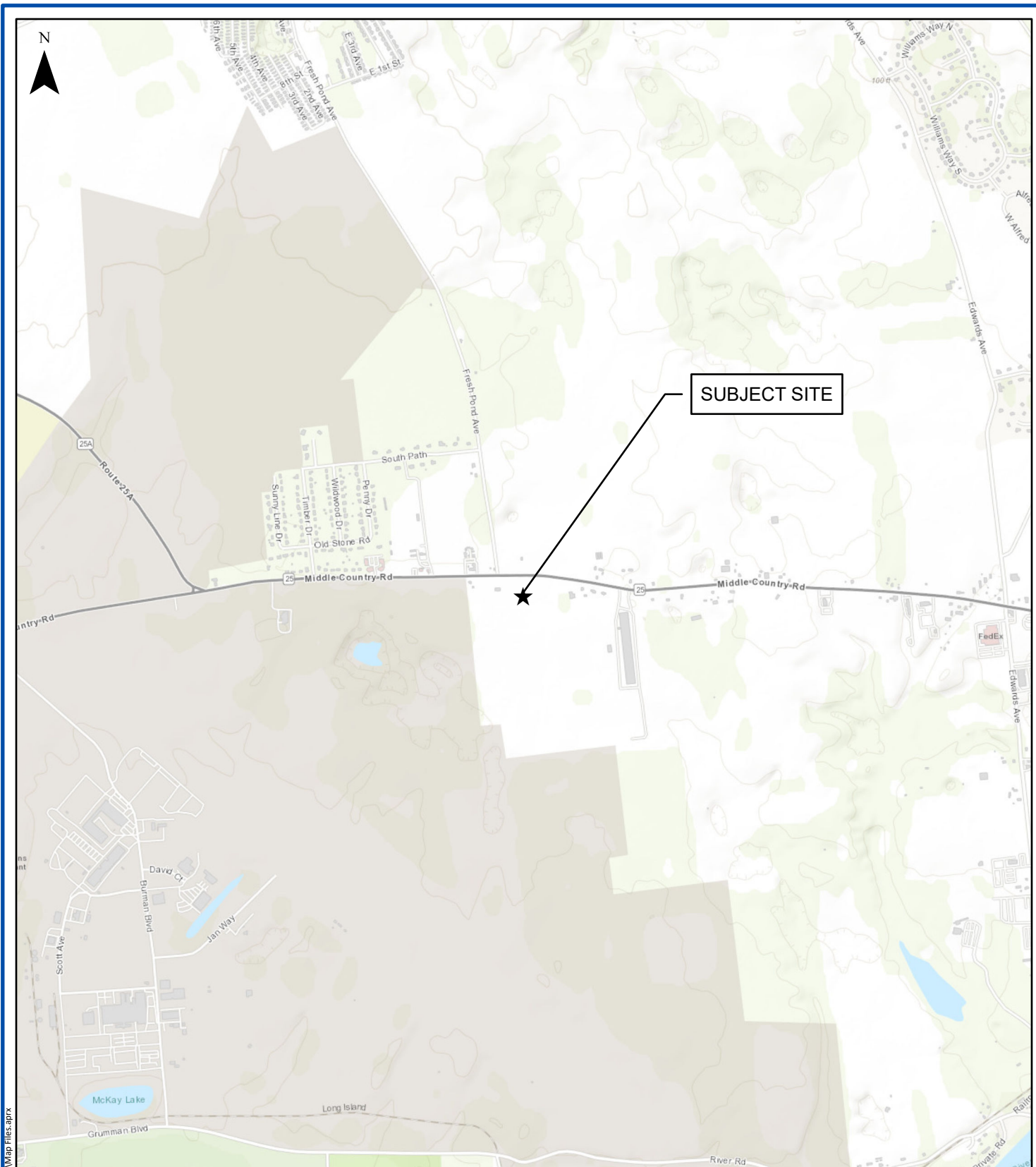
7.0 LIMITATIONS

The conclusions presented in this report are professional opinions based on the data described in this report. These opinions have been arrived at in accordance with currently accepted engineering and hydrogeologic standards and practices applicable to this location, and are subject to the following inherent limitations:

1. The data presented in this report are from visual inspections and examination of records prepared by others. The passage of time, manifestation of latent conditions, or occurrence of future events may require further exploration of the site, analysis of data, and re-evaluation of the findings, observations, and conclusions presented in this report.
2. The data reported and the findings, observations, and conclusions expressed are limited by the scope of work. The scope of work was defined by the request of the client.
3. No warranty or guarantee, whether expressed or implied, is made with respect to the data reported, findings, observations, or conclusions. These are based solely upon site conditions in existence at the time of the investigation, and other information obtained and reviewed by PWGC.
4. The conclusions presented in this report are professional opinions based on data described in this report. They are intended only for the purpose, site location, and project indicated. This report is not a definitive study of contamination at the site and should not be interpreted as such.
5. This report is based, in part, on information supplied to PWGC by third-party sources. While efforts have been made to substantiate this third-party information, PWGC cannot attest to the completeness or accuracy of information provided by others.

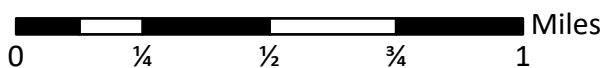


FIGURES



SITE LOCATION

4285 Middle Country Road
Calverton, NY



Project:	HKV2101
Date:	11/24/2021
Designed by:	MP
Drawn by:	OA
Approved by:	MP
Figure No:	1



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Project:	HKV2101	Designed by:	MP
Date:	11/24/2021	Drawn by:	OA
Scale:	AS SHOWN	Approved by:	MP

Site Plan

4285 Middle Country Road
Calverton, NY

FIGURE NO:

2



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Date:	11/29/2021	Drawn by:	OA
Scale:	AS SHOWN	Approved by:	MP

Groundwater Sample Locations

4285 Middle Country Road
Calverton, NY

FIGURE NO:

3

 Groundwater Sample Location Property Boundary

 Tax Lot Boundary

Imagery ©2020 Maxar Technologies, New York GIS, USDA Farm Service Agency, Map data ©2020 United States



TABLES

Table 1
Groundwater Analytical for VOCs
4285 Middle Country Rd,
Calverton, NY

Client Sample ID: Laboratory ID: Sampling Date:	NYSDEC Groundwater Quality Standards (1)	GW001 L2155680-01 10/12/2021	GW002 L2155680-02 10/12/2021	GW003 L2155680-03 10/12/2021
Volatile Organic Compounds by USEPA Method 8260 in µg/L				
1,1,1,2-Tetrachloroethane	5	2.5 U	2.5 U	2.5 U
1,1,1-Trichloroethane	5	2.5 U	2.5 U	2.5 U
1,1,2,2-Tetrachloroethane	5	0.5 U	0.5 U	0.5 U
1,1,2-Trichloroethane	1	1.5 U	1.5 U	1.5 U
1,1-Dichloroethane	5	2.5 U	2.5 U	2.5 U
1,1-Dichloroethene	5	0.5 U	0.5 U	0.5 U
1,1-Dichloropropene	5	2.5 U	2.5 U	2.5 U
1,2,3-Trichlorobenzene	5	2.5 U	2.5 U	2.5 U
1,2,3-Trichloropropane	0.04	2.5 U	2.5 U	2.5 U
1,2,4,5-Tetramethylbenzene	NS	2 U	2 U	2 U
1,2,4-Trichlorobenzene	5	2.5 U	2.5 U	2.5 U
1,2,4-Trimethylbenzene	5	2.5 U	2.5 U	2.5 U
1,2-Dibromo-3-chloropropane	0.04	2.5 U	2.5 U	2.5 U
1,2-Dibromoethane	0.0006	2 U	2 U	2 U
1,2-Dichlorobenzene	3	2.5 U	2.5 U	2.5 U
1,2-Dichloroethane	0.6	0.5 U	0.5 U	0.5 U
1,2-Dichloroethene, Total	5	2.5 U	2.5 U	2.5 U
1,2-Dichloropropane	1	1 U	1 U	1 U
1,3,5-Trimethylbenzene	5	2.5 U	2.5 U	2.5 U
1,3-Dichlorobenzene	3	2.5 U	2.5 U	2.5 U
1,3-Dichloropropane	5	2.5 U	2.5 U	2.5 U
1,3-Dichloropropene, Total	0.4	0.5 U	0.5 U	0.5 U
1,4-Dichlorobenzene	3	2.5 U	2.5 U	2.5 U
1,4-Dioxane	NS	250 U	250 U	250 U
2,2-Dichloropropane	5	2.5 U	2.5 U	2.5 U
2-Butanone	50	5 U	5 U	5 U
2-Hexanone	50	5 U	5 U	5 U
4-Methyl-2-pentanone	NS	5 U	5 U	5 U
Acetone	50	1.8 J	5.8	1.5 J
Acrylonitrile	5	5 U	5 U	5 U
Benzene	1	0.5 U	0.5 U	0.5 U
Bromobenzene	5	2.5 U	2.5 U	2.5 U
Bromochloromethane	5	2.5 U	2.5 U	2.5 U
Bromodichloromethane	50	0.5 U	0.5 U	0.5 U
Bromoform	50	2 U	2 U	2 U
Bromomethane	5	2.5 U	2.5 U	2.5 U
Carbon disulfide	60	5 U	5 U	5 U
Carbon tetrachloride	5	0.5 U	0.5 U	0.5 U
Chlorobenzene	5	2.5 U	2.5 U	2.5 U
Chloroethane	5	2.5 U	2.5 U	2.5 U
Chloroform	7	2.5 U	2.5 U	2.5 U
Chloromethane	NS	2.5 U	2.5 U	2.5 U
cis-1,2-Dichloroethene	5	2.5 U	2.5 U	2.5 U
cis-1,3-Dichloropropene	0.4	0.5 U	0.5 U	0.5 U
Dibromochloromethane	50	0.5 U	0.5 U	0.5 U
Dibromomethane	5	5 U	5 U	5 U
Dichlorodifluoromethane	5	5 U	5 U	5 U
Ethyl ether	NS	2.5 U	2.5 U	2.5 U
Ethylbenzene	5	2.5 U	2.5 U	2.5 U
Hexachlorobutadiene	0.5	2.5 U	2.5 U	2.5 U
Isopropylbenzene	5	2.5 U	2.5 U	2.5 U
Methyl tert butyl ether	10	2.5 U	2.5 U	2.5 U
Methylene chloride	5	2.5 U	2.5 U	2.5 U
n-Butylbenzene	5	2.5 U	2.5 U	2.5 U
n-Propylbenzene	5	2.5 U	2.5 U	2.5 U
Naphthalene	10	2.5 U	2.5 U	2.5 U
o-Chlorotoluene	5	2.5 U	2.5 U	2.5 U
o-Xylene	5	2.5 U	2.5 U	2.5 U
p-Chlorotoluene	5	2.5 U	2.5 U	2.5 U
p-Diethylbenzene	NS	2 U	2 U	2 U
p-Ethyltoluene	NS	2 U	2 U	2 U
p-Isopropyltoluene	5	2.5 U	2.5 U	2.5 U
p/m-Xylene	5	2.5 U	2.5 U	2.5 U
sec-Butylbenzene	5	2.5 U	2.5 U	2.5 U
Styrene	5	2.5 U	2.5 U	2.5 U
tert-Butylbenzene	5	2.5 U	2.5 U	2.5 U
Tetrachloroethene	5	0.5 U	0.5 U	0.5 U
Toluene	5	2.5 U	2.5 U	2.5 U
trans-1,2-Dichloroethene	5	2.5 U	2.5 U	2.5 U
trans-1,3-Dichloropropene	0.4	0.5 U	0.5 U	0.5 U
trans-1,4-Dichloro-2-butene	5	2.5 U	2.5 U	2.5 U
Trichloroethene	5	0.5 U	0.5 U	0.5 U
Trichlorofluoromethane	5	2.5 U	2.5 U	2.5 U
Vinyl acetate	NS	5 U	5 U	5 U
Vinyl chloride	2	1 U	1 U	1 U
Xylenes, Total	NS	2.5 U	2.5 U	2.5 U
Total VOCs:		1.8	5.8	1.5

Notes:

(1) NYSDEC Ambient Water Quality Standards and Guidance Values 6/1998

NS - No Standard

J - Data indicates the presence of a compound that meets the identification criteria. The result is less than the quantitation limit but greater than MDL.

U - The analyte was analyzed for, but was not detected above the reported sample quantification limit. The associated numerical value is the sample quantitation limit.

Highlighted values indicate exceedance of the NYSDEC AWQS

Table 2
Groundwater Analytical for SVOCs
4285 Middle Country Rd,
Calverton, NY

Client Sample ID:	NYSDEC Groundwater Quality Standards ⁽¹⁾	GW001 L2155680-01 10/12/2021	GW002 L2155680-02 10/12/2021	GW003 L2155680-03 10/12/2021
Laboratory ID:				
Sampling Date:				
Semi-Volatile Organic Compounds by USEPA Method 8270 in µg/L				
1,2,4,5-Tetrachlorobenzene	5	10 U	10 U	10 U
1,2,4-Trichlorobenzene	5	5 U	5 U	5 U
1,2-Dichlorobenzene	3	2 U	2 U	2 U
1,3-Dichlorobenzene	3	2 U	2 U	2 U
1,4-Dichlorobenzene	3	2 U	2 U	2 U
2,4,5-Trichlorophenol	NS	5 U	5 U	5 U
2,4,6-Trichlorophenol	NS	5 U	5 U	5 U
2,4-Dichlorophenol	1	5 U	5 U	5 U
2,4-Dimethylphenol	50	5 U	5 U	5 U
2,4-Dinitrophenol	10	20 U	20 U	20 U
2,4-Dinitrotoluene	5	5 U	5 U	5 U
2,6-Dinitrotoluene	5	5 U	5 U	5 U
2-Chloronaphthalene	10	0.2 U	0.2 U	0.2 U
2-Chlorophenol	NS	2 U	2 U	2 U
2-Methylnaphthalene	NS	0.09 J	0.1 U	0.03 J
2-Methylphenol	NS	5 U	5 U	5 U
2-Nitroaniline	5	5 U	5 U	5 U
2-Nitrophenol	NS	10 U	10 U	10 U
3,3'-Dichlorobenzidine	5	5 U	5 U	5 U
3-Methylphenol/4-Methylphenol	NS	5 U	5 U	5 U
3-Nitroaniline	5	5 U	5 U	5 U
4,6-Dinitro-o-cresol	NS	10 U	10 U	10 U
4-Bromophenyl phenyl ether	NS	2 U	2 U	2 U
4-Chloroaniline	5	5 U	5 U	5 U
4-Chlorophenyl phenyl ether	NS	2 U	2 U	2 U
4-Nitroaniline	5	5 U	5 U	5 U
4-Nitrophenol	NS	10 U	10 U	10 U
Acenaphthene	20	0.1 U	0.1 U	0.1 U
Acenaphthylene	NS	0.1 U	0.1 U	0.1 U
Acetophenone	NS	5 U	5 U	5 U
Anthracene	50	0.02 J	0.04 J	0.1 U
Benzo(a)anthracene	0.002	0.03 J	0.03 J	0.1 U
Benzo(a)pyrene	0	0.02 J	0.1 U	0.1 U
Benzo(b)fluoranthene	0.002	0.04 J	0.03 J	0.02 J
Benzo(ghi)perylene	NS	0.02 J	0.1 U	0.1 U
Benzo(k)fluoranthene	0.002	0.01 J	0.1 U	0.1 U
Benzoic Acid	NS	50 U	50 U	50 U
Benzyl Alcohol	NS	2 U	2 U	2 U
Biphenyl	NS	2 U	2 U	2 U
Bis(2-chloroethoxy)methane	5	5 U	5 U	5 U
Bis(2-chloroethyl)ether	1	2 U	2 U	2 U
Bis(2-chloroisopropyl)ether	5	2 U	2 U	2 U
Bis(2-ethylhexyl)phthalate	5	3 U	3 U	3 U
Butyl benzyl phthalate	50	5 U	5 U	5 U
Carbazole	NS	2 U	2 U	2 U
Chrysene	0.002	0.02 J	0.02 J	0.1 U
Di-n-butylphthalate	50	0.1 U	0.1 U	0.1 U
Di-n-octylphthalate	50	2 U	2 U	2 U
Dibenzo(a,h)anthracene	NS	5 U	5 U	5 U
Dibenzofuran	NS	5 U	5 U	5 U
Diethyl phthalate	50	5 U	5 U	5 U
Dimethyl phthalate	50	5 U	5 U	5 U
Fluoranthene	50	0.05 J	0.04 J	0.03 J
Fluorene	50	0.1 U	0.1 U	0.1 U
Hexachlorobenzene	0.04	0.8 U	0.8 U	0.8 U
Hexachlorobutadiene	0.5	0.5 U	0.5 U	0.5 U
Hexachlorocyclopentadiene	5	20 U	20 U	20 U
Hexachloroethane	5	0.8 U	0.8 U	0.8 U
Indeno(1,2,3-cd)pyrene	0.002	0.02 J	0.02 J	0.01 J
Isophorone	50	5 U	5 U	5 U
n-Nitrosodi-n-propylamine	NS	0.32	0.1 U	0.07 J
Naphthalene	10	2 U	2 U	2 U
NDPA/DPA	50	2 U	2 U	2 U
Nitrobenzene	0.4	5 U	5 U	5 U
p-Chloro-m-cresol	NS	2 U	2 U	2 U
Pentachlorophenol	1	0.8 U	0.11 J	0.8 U
Phenanthrene	50	0.06 J	0.03 J	0.05 J
Phenol	1	5 U	5 U	5 U
Pyrene	50	0.05 J	0.04 J	0.02 J
Total SVOCs:		0.75	0.36	0.23

Notes:

(1) NYSDEC Ambient Water Quality Standards and Guidance Values 6/1998 - Standard

NS - No Standard

J - Data indicates the presence of a compound that meets the identification criteria. The result is less than the quantitation limit but greater than MDL.

U - The analyte was analyzed for, but was not detected above the reported sample quantification limit. The associated numerical value is the sample quantitation limit.

Highlighted values indicate exceedance of the NYSDEC AWQS or GV

Table 3
Groundwater Analytical for Metals
4285 Middle Country Rd,
Calverton, NY

Client Sample ID:	NYSDEC	GW001		GW002		GW003	
Laboratory ID:	Groundwater	L2155680-01		L2155680-02		L2155680-03	
Sampling Date:	Quality	3/27/2019		3/27/2019		3/27/2019	
Sample Type:	Standards ⁽¹⁾	Total	Dissolved	Total	Dissolved	Total	Dissolved
Total Metals by USEPA Method 6010 in µg/L							
Aluminum	NS	2,530	4.3 J	3,630	6.07 J	3,300	10 U
Antimony	3	0.54 J	4 U	0.57 J	0.51 J	4 U	4 U
Arsenic	25	1.88	0.2 J	2.99	0.76	1.79	0.5 U
Barium	1,000	114.3	83.38	127.2	92.89	57.96	15.71
Beryllium	3	0.23 J	0.5 U	0.27 J	0.5 U	0.26 J	0.5 U
Cadmium	5	0.1 J	0.2 U	0.15 J	0.09 J	0.07 J	0.2 U
Calcium	NS	83,600	89,000	102,000	109,000	6,540	6,190
Chromium	50	94.54	0.24 J	98.91	1 U	127.2	0.35 J
Cobalt	NS	5.75	2.22	7.61	3.71	4.65	1.97
Copper	200	24.74	3.45	47.1	19.38	33.25	0.79 J
Iron	300	14,300	27 J	19,200	50 U	17,800	25 J
Lead	25	7.62	1 U	7.4	1 U	7.05	1 U
Magnesium	35,000	10,400	10,300	13,900	14,000	1,890	1,100
Manganese	300	1,303	1,030	12,520	8,154	377.5	232
Mercury	0.7	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Nickel	100	30.99	8.29	34.54	14.19	29.39	9.48
Potassium	NS	10,400	10,700	109,000	117,000	1,850	1,380
Selenium	10	5 U	5 U	5 U	5 U	5 U	5 U
Silver	50	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
Sodium	20,000	52,600	54,800	95,500	101,000	5,690	5,720
Thallium	0.5	0.41 J	0.42 J	0.62 J	0.65 J	0.16 J	0.15 J
Vanadium	NS	8.7	5 U	10.84	5 U	8.47	5 U
Zinc	2,000	31.97	10 U	142.7	16.99	73.99	11.85

Notes:

(1) 6NYCRR Part 703.5 GA Groundwater Quality Standards (GQS) and Guidance Values (GV) 6/1998

NS - No Standard

U - The analyte was analyzed for, but was not detected above the reported sample quantification limit.

J - The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.

Highlighted values indicate exceedance of the NYSDEC GQS or GV.

Table 4
Groundwater Analytical for Pesticides, Herbicides and PCBs
4285 Middle Country Rd,
Calverton, NY

Client Sample ID:	NYSDEC Groundwater Quality Standards ⁽¹⁾	GW001 L2155680-01 10/12/2021	GW002 L2155680-02 10/12/2021	GW003 L2155680-03 10/12/2021
Organochlorine Pesticides by USEPA Method 8081 in µg/L				
4,4'-DDD	0.3	0.029 U	0.029 U	0.029 U
4,4'-DDE	0.2	0.005 JIP	0.029 U	0.029 U
4,4'-DDT	0.2	0.029 U	0.029 U	0.029 U
Aldrin	0	0.014 U	0.014 U	0.014 U
Alpha-BHC	0.01	0.014 U	0.014 U	0.014 U
Beta-BHC	0.04	0.014 U	0.014 U	0.014 U
Chlordane	0.05	0.143 U	0.143 U	0.143 U
cis-Chlordane	NS	0.014 U	0.014 U	0.014 U
Delta-BHC	0.04	0.014 U	0.014 U	0.014 U
Dieldrin	0.004	0.006 J	0.029 U	0.029 U
Endosulfan I	NS	0.014 U	0.014 U	0.014 U
Endosulfan II	NS	0.029 U	0.029 U	0.029 U
Endosulfan sulfate	NS	0.029 U	0.029 U	0.029 U
Endrin	0	0.029 U	0.029 U	0.029 U
Endrin aldehyde	5	0.029 U	0.029 U	0.029 U
Endrin ketone	5	0.029 U	0.029 U	0.029 U
Heptachlor	0.04	0.014 U	0.014 U	0.014 U
Heptachlor epoxide	0.03	0.014 U	0.014 U	0.014 U
Lindane	0.05	0.014 U	0.014 U	0.014 U
Methoxychlor	35	0.143 U	0.143 U	0.143 U
Toxaphene	0.06	0.143 U	0.143 U	0.143 U
trans-Chlordane	NS	0.014 U	0.014 U	0.014 U
Chlorinated Herbicides by GC in µg/L				
2,4,5-T	0.09	8 U	7.14 U	2 U
2,4,5-TP (Silvex)	0.09	8 U	7.14 U	2 U
2,4-D	0.09	40 U	35.7 U	10 U
Polychlorinated Biphenyls by USEPA Method 8082 in µg/L				
Aroclor 1016	0.09	0.071 U	0.071 U	0.071 U
Aroclor 1221	0.09	0.071 U	0.071 U	0.071 U
Aroclor 1232	0.09	0.071 U	0.071 U	0.071 U
Aroclor 1242	0.09	0.071 U	0.071 U	0.071 U
Aroclor 1248	0.09	0.071 U	0.071 U	0.071 U
Aroclor 1254	0.09	0.071 U	0.071 U	0.071 U
Aroclor 1260	0.09	0.071 U	0.071 U	0.071 U
Aroclor 1262	0.09	0.071 U	0.071 U	0.071 U
Aroclor 1268	0.09	0.071 U	0.071 U	0.071 U
PCBs, Total	0.09	0.071 U	0.071 U	0.071 U

Notes:

(1) 6NYCRR Part 703.5 GA Groundwater Quality Standards (GQS) and Guidance Values (GV) 6/1998

* DUP002 is a blind duplicate of MW005

NS - No Standard

U - The analyte was analyzed for, but was not detected above the reported sample quantification limit. numerical value is the approximate concentration of the

Highlighted values indicate exceedance of the NYSDEC GQS or GV.

Table 5
Groundwater Analytical for Perfluorinated Alkyl Acids and 1,4-Dioxane
4285 Middle Country Rd,
Calverton, NY

Client Sample ID:	NYSDEC Groundwater Quality Standards ⁽¹⁾	GW001 L2155680-01 10/12/2021	GW002 L2155680-02 10/12/2021	GW003 L2155680-03 10/12/2021	FIELD BLANK L2155680-04 10/12/2021
Laboratory ID:					
Sampling Date:					
Perfluorinated Alkyl Acids by Isotope Dilution in ng/L					
1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	NS	1.92 U	1.84 U	1.88 U	1.79 U
1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	NS	1.92 U	3.39	1.88 U	1.79 U
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	NS	1.92 U	1.84 U	1.88 U	1.79 U
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	NS	1.92 U	1.84 U	1.88 U	1.79 U
Perfluorobutanesulfonic Acid (PFBS)	NS	5.34	26.4	1.88 U	1.79 U
Perfluorobutanoic Acid (PFBA)	NS	17.5	58.4	1.88 U	1.79 U
Perfluorodecanesulfonic Acid (PFDS)	NS	1.92 U	1.84 U	1.88 U	1.79 U
Perfluorodecanoic Acid (PFDA)	NS	1.92 U	2.32	1.88 U	1.79 U
Perfluorododecanoic Acid (PFDoA)	NS	1.92 U	1.84 U	1.88 U	1.79 U
Perfluoroheptanesulfonic Acid (PFHpS)	NS	1.92 U	1.84 U	1.88 U	1.79 U
Perfluoroheptanoic Acid (PFHpA)	NS	26.2	35.8	1.88 U	1.79 U
Perfluorohexanesulfonic Acid (PFHxS)	NS	20.4	20.6 F	1.88 U	1.79 U
Perfluorohexanoic Acid (PFHxA)	NS	31.9	81.6	0.331 J	1.79 U
Perfluorononanoic Acid (PFNA)	NS	2.18	7.71	1.88 U	1.79 U
Perfluorooctanesulfonamide (FOSA)	NS	1.92 U	1.84 U	1.88 U	1.79 U
Perfluorooctanesulfonic Acid (PFOS)	10	14.3	34.7	1.88 U	1.79 U
Perfluorooctanoic Acid (PFOA)	10	88.3	90	0.376 J	1.79 U
Perfluoropentanoic Acid (PFPeA)	NS	31.6	88.6	0.771 J	0.364 J
Perfluorotetradecanoic Acid (PFTA)	NS	1.92 U	1.84 U	1.88 U	1.79 U
Perfluorotridecanoic Acid (PFTrDA)	NS	1.92 U	1.84 U	1.88 U	1.79 U
Perfluoroundecanoic Acid (PFUnA)	NS	1.92 U	0.627 J	1.88 U	1.79 U
PFOA/PFOS, Total	NS	103	125	0.376 J	1.79 U
1,4 Dioxane by 8270D-SIM in µg/L					
1,4-Dioxane	100	0.144 U	0.902	0.15 U	NA

Notes:

(1) NYSDEC Sampling, Analysis, and Assessment of PFAS Groundwater Screening Levels, January 2021.

(2) 1,4-Dioxane results are compared to the NYS maximum contaminant level (MCL) for drinking water.

NS - No Standard

NA - Not Analyzed

U - The analyte was analyzed for, but was not detected above the reported sample quantification limit.
concentration of the analyte in the sample.

Highlighted values indicate exceedance of the NYSDEC GQS or GV.



APPENDIX A

GROUNDWATER SAMPLE LOGS

Well Designation:	GW001	Sampled By:	MPP
Site Address:	4285 Middle Country Rd, Calverton, NY	Project Manager:	TM
Project Name:	HK Ventures - Calverton	Project Number:	HKV2101
Relative TOC Elevation (ft):	NM	Well Use:	GW Sample
Depth to Product (ft):	No Product	Product Elevation (ft):	NM
Depth to Water (ft):	51	Groundwater Elevation (ft):	NM
Depth to Bottom (ft):	55	Bottom Elevation (ft):	NM
Height of Water Column (ft):	4	Well Diameter (in):	1
Standing Water Volume (gal):	0.16	Calculated Purge Volume (gal):	1.19
Sample Date:	10/12/2021	Begin Purge Time:	10:21
Sample Time:	10:50	Complete Purge Time:	10:49
Purge Method:	Low-Flow	Sample Method:	Waterra
Purge Rate (mL/min):	250	Purge Time (min):	18
Sample Appearance:	Slightly Turbid	Odors Observed:	no odor
Analytical Laboratory:	Alpha	Notes: Interface Probe unable to fit inside GW temp well, DTW and DTB estimated.	
Date Shipped:	10/12/2021		
Analyses Requested: VOCs, SVOCs, PCBs, Herbicides, Pesticides, Metals (total & dissolved), Cyanide, PFAS, 1,4-Dioxane			

[illegible]

Well Designation:	GW002	Sampled By:	MPP
Site Address:	4285 Middle Country Rd, Calverton, NY	Project Manager:	TM
Project Name:	HK Ventures - Calverton	Project Number:	HKV2101
Relative TOC Elevation (ft):	NM	Well Use:	GW Sample
Depth to Product (ft):	No Product	Product Elevation (ft):	NM
Depth to Water (ft):	50	Groundwater Elevation (ft):	NM
Depth to Bottom (ft):	55	Bottom Elevation (ft):	NM
Height of Water Column (ft):	5	Well Diameter (in):	1
Standing Water Volume (gal):	0.20	Calculated Purge Volume (gal):	1.39
Sample Date:	10/12/2021	Begin Purge Time:	11:52
Sample Time:	12:25	Complete Purge Time:	12:13
Purge Method:	Low-Flow	Sample Method:	Waterra
Purge Rate (mL/min):	250	Purge Time (min):	21
Sample Appearance:	Turbid	Odors Observed:	no odor
Analytical Laboratory:	Alpha	Notes: Interface Probe unable to fit inside GW temp well, DTW and DTB estimated.	
Date Shipped:	10/12/2021		
Analyses Requested: VOCs, SVOCs, PCBs, Herbicides, Pesticides, Metals (total & dissolved), Cyanide, PFAS, 1,4-Dioxane			

[illegible]

Well Designation:	GW003	Sampled By:	MPP
Site Address:	4285 Middle Country Rd, Calverton, NY	Project Manager:	TM
Project Name:	HK Ventures - Calverton	Project Number:	HKV2101
Relative TOC Elevation (ft):	NM	Well Use:	GW Sample
Depth to Product (ft):	No Product	Product Elevation (ft):	NM
Depth to Water (ft):	45	Groundwater Elevation (ft):	NM
Depth to Bottom (ft):	50	Bottom Elevation (ft):	NM
Height of Water Column (ft):	5	Well Diameter (in):	1
Standing Water Volume (gal):	0.20	Calculated Purge Volume (gal):	1.39
Sample Date:	10/12/2021	Begin Purge Time:	13:27
Sample Time:	14:00	Complete Purge Time:	13:48
Purge Method:	Low-Flow	Sample Method:	Waterra
Purge Rate (mL/min):	250	Purge Time (min):	21
Sample Appearance:	Turbid	Odors Observed:	no odor
Analytical Laboratory:	Alpha	Notes: Interface Probe unable to fit inside GW temp well, DTW and DTB estimated.	
Date Shipped:	10/12/2021		
Analyses Requested: VOCs, SVOCs, PCBs, Herbicides, Pesticides, Metals (total & dissolved), Cyanide, PFAS, 1,4-Dioxane			

[illegible]



APPENDIX B

LABORATORY ANALYTICAL REPORTS



ANALYTICAL REPORT

Lab Number:	L2155680
Client:	P. W. Grosser 630 Johnson Avenue Suite 7 Bohemia, NY 11716
ATTN:	Thomas Melia
Phone:	(631) 589-6353
Project Name:	HK VENTURES-CALVERTON
Project Number:	HKV2101
Report Date:	10/28/21

The original project report/data package is held by Alpha Analytical. This report/data package is paginated and should be reproduced only in its entirety. Alpha Analytical holds no responsibility for results and/or data that are not consistent with the original.

Certifications & Approvals: MA (M-MA086), NH NELAP (2064), CT (PH-0574), IL (200077), ME (MA00086), MD (348), NJ (MA935), NY (11148), NC (25700/666), PA (68-03671), RI (LAO00065), TX (T104704476), VT (VT-0935), VA (460195), USDA (Permit #P330-17-00196).

Eight Walkup Drive, Westborough, MA 01581-1019
508-898-9220 (Fax) 508-898-9193 800-624-9220 - www.alphalab.com



Project Name: HK VENTURES-CALVERTON
Project Number: HKV2101

Lab Number: L2155680
Report Date: 10/28/21

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L2155680-01	GW001	WATER	4285 MIDDLE COUNTRY RD, CALVERTON, NY	10/12/21 10:50	10/12/21
L2155680-02	GW002	WATER	4285 MIDDLE COUNTRY RD, CALVERTON, NY	10/12/21 12:25	10/12/21
L2155680-03	GW003	WATER	4285 MIDDLE COUNTRY RD, CALVERTON, NY	10/12/21 14:00	10/12/21
L2155680-04	FIELD BLANK	WATER	4285 MIDDLE COUNTRY RD, CALVERTON, NY	10/12/21 14:25	10/12/21

Project Name: HK VENTURES-CALVERTON
Project Number: HKV2101

Lab Number: L2155680
Report Date: 10/28/21

Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet NELAP requirements for all NELAP accredited parameters unless otherwise noted in the following narrative. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. Tentatively Identified Compounds (TICs), if requested, are reported for compounds identified to be present and are not part of the method/program Target Compound List, even if only a subset of the TCL are being reported. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively.

When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances, the specific failure is not narrated but noted in the associated QC Outlier Summary Report, located directly after the Case Narrative. QC information is also incorporated in the Data Usability Assessment table (Format 11) of our Data Merger tool, where it can be reviewed in conjunction with the sample result, associated regulatory criteria and any associated data usability implications.

Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

HOLD POLICY - For samples submitted on hold, Alpha's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Alpha Project Manager and made arrangements for Alpha to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

Please contact Project Management at 800-624-9220 with any questions.

Project Name: HK VENTURES-CALVERTON
Project Number: HKV2101

Lab Number: L2155680
Report Date: 10/28/21

Case Narrative (continued)

Report Submission

All non-detect (ND) or estimated concentrations (J-qualified) have been quantitated to the limit noted in the MDL column.

Sample Receipt

L2155680-01, -02, and -03: Sample containers for Dissolved Metals were received, but were not listed on the chain of custody. At the client's request, the analysis was performed.

L2155680-01: Herbicides and Total Cyanide were requested on the chain of custody; however, sample containers were not received. At the client's request, one of the containers submitted for Semivolatile Organics was utilized for the Herbicides analysis, and an aliquot was taken from an unpreserved container and preserved for the Total Cyanide analysis.

Perfluorinated Alkyl Acids by Isotope Dilution

L2155680-01, -02, and -03: The sample was centrifuged and decanted prior to extraction due to sample matrix.

L2155680-01 and -02: Extracted Internal Standard recoveries were outside the acceptance criteria for individual analytes. Please refer to the surrogate section of the report for details.

Herbicides

L2155680-01 and -02: The sample has elevated detection limits due to limited sample volume available for analysis.

Dissolved Metals

The WG1560979-3 MS recovery for calcium (150%), performed on L2155680-01, does not apply because the sample concentration is greater than four times the spike amount added.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature:



Kelly Stenstrom

Title: Technical Director/Representative

Date: 10/28/21

ORGANICS

VOLATILES

Project Name: HK VENTURES-CALVERTON**Lab Number:** L2155680**Project Number:** HKV2101**Report Date:** 10/28/21**SAMPLE RESULTS**

Lab ID: L2155680-01
 Client ID: GW001
 Sample Location: 4285 MIDDLE COUNTRY RD, CALVERTON, NY

Date Collected: 10/12/21 10:50
 Date Received: 10/12/21
 Field Prep: Not Specified

Sample Depth:

Matrix: Water
 Analytical Method: 1,8260C
 Analytical Date: 10/22/21 12:31
 Analyst: PD

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/l	2.5	0.70	1
1,1-Dichloroethane	ND		ug/l	2.5	0.70	1
Chloroform	ND		ug/l	2.5	0.70	1
Carbon tetrachloride	ND		ug/l	0.50	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Dibromochloromethane	ND		ug/l	0.50	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.5	0.50	1
Tetrachloroethene	ND		ug/l	0.50	0.18	1
Chlorobenzene	ND		ug/l	2.5	0.70	1
Trichlorofluoromethane	ND		ug/l	2.5	0.70	1
1,2-Dichloroethane	ND		ug/l	0.50	0.13	1
1,1,1-Trichloroethane	ND		ug/l	2.5	0.70	1
Bromodichloromethane	ND		ug/l	0.50	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.50	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.50	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.50	0.14	1
1,1-Dichloropropene	ND		ug/l	2.5	0.70	1
Bromoform	ND		ug/l	2.0	0.65	1
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	0.17	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	2.5	0.70	1
Ethylbenzene	ND		ug/l	2.5	0.70	1
Chloromethane	ND		ug/l	2.5	0.70	1
Bromomethane	ND		ug/l	2.5	0.70	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.5	0.70	1
1,1-Dichloroethene	ND		ug/l	0.50	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	2.5	0.70	1

Project Name: HK VENTURES-CALVERTON**Lab Number:** L2155680**Project Number:** HKV2101**Report Date:** 10/28/21**SAMPLE RESULTS**

Lab ID: L2155680-01

Date Collected: 10/12/21 10:50

Client ID: GW001

Date Received: 10/12/21

Sample Location: 4285 MIDDLE COUNTRY RD, CALVERTON, NY

Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Trichloroethene	ND		ug/l	0.50	0.18	1
1,2-Dichlorobenzene	ND		ug/l	2.5	0.70	1
1,3-Dichlorobenzene	ND		ug/l	2.5	0.70	1
1,4-Dichlorobenzene	ND		ug/l	2.5	0.70	1
Methyl tert butyl ether	ND		ug/l	2.5	0.70	1
p/m-Xylene	ND		ug/l	2.5	0.70	1
o-Xylene	ND		ug/l	2.5	0.70	1
Xylenes, Total	ND		ug/l	2.5	0.70	1
cis-1,2-Dichloroethene	ND		ug/l	2.5	0.70	1
1,2-Dichloroethene, Total	ND		ug/l	2.5	0.70	1
Dibromomethane	ND		ug/l	5.0	1.0	1
1,2,3-Trichloropropane	ND		ug/l	2.5	0.70	1
Acrylonitrile	ND		ug/l	5.0	1.5	1
Styrene	ND		ug/l	2.5	0.70	1
Dichlorodifluoromethane	ND		ug/l	5.0	1.0	1
Acetone	1.8	J	ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	5.0	1.0	1
2-Butanone	ND		ug/l	5.0	1.9	1
Vinyl acetate	ND		ug/l	5.0	1.0	1
4-Methyl-2-pentanone	ND		ug/l	5.0	1.0	1
2-Hexanone	ND		ug/l	5.0	1.0	1
Bromochloromethane	ND		ug/l	2.5	0.70	1
2,2-Dichloropropane	ND		ug/l	2.5	0.70	1
1,2-Dibromoethane	ND		ug/l	2.0	0.65	1
1,3-Dichloropropane	ND		ug/l	2.5	0.70	1
1,1,1,2-Tetrachloroethane	ND		ug/l	2.5	0.70	1
Bromobenzene	ND		ug/l	2.5	0.70	1
n-Butylbenzene	ND		ug/l	2.5	0.70	1
sec-Butylbenzene	ND		ug/l	2.5	0.70	1
tert-Butylbenzene	ND		ug/l	2.5	0.70	1
o-Chlorotoluene	ND		ug/l	2.5	0.70	1
p-Chlorotoluene	ND		ug/l	2.5	0.70	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.5	0.70	1
Hexachlorobutadiene	ND		ug/l	2.5	0.70	1
Isopropylbenzene	ND		ug/l	2.5	0.70	1
p-Isopropyltoluene	ND		ug/l	2.5	0.70	1
Naphthalene	ND		ug/l	2.5	0.70	1

Project Name: HK VENTURES-CALVERTON**Lab Number:** L2155680**Project Number:** HKV2101**Report Date:** 10/28/21**SAMPLE RESULTS****Lab ID:** L2155680-01**Date Collected:** 10/12/21 10:50**Client ID:** GW001**Date Received:** 10/12/21**Sample Location:** 4285 MIDDLE COUNTRY RD, CALVERTON, NY**Field Prep:** Not Specified**Sample Depth:**

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
n-Propylbenzene	ND		ug/l	2.5	0.70	1
1,2,3-Trichlorobenzene	ND		ug/l	2.5	0.70	1
1,2,4-Trichlorobenzene	ND		ug/l	2.5	0.70	1
1,3,5-Trimethylbenzene	ND		ug/l	2.5	0.70	1
1,2,4-Trimethylbenzene	ND		ug/l	2.5	0.70	1
1,4-Dioxane	ND		ug/l	250	61.	1
p-Diethylbenzene	ND		ug/l	2.0	0.70	1
p-Ethyltoluene	ND		ug/l	2.0	0.70	1
1,2,4,5-Tetramethylbenzene	ND		ug/l	2.0	0.54	1
Ethyl ether	ND		ug/l	2.5	0.70	1
trans-1,4-Dichloro-2-butene	ND		ug/l	2.5	0.70	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	103		70-130
Toluene-d8	97		70-130
4-Bromofluorobenzene	94		70-130
Dibromofluoromethane	98		70-130

Project Name: HK VENTURES-CALVERTON**Lab Number:** L2155680**Project Number:** HKV2101**Report Date:** 10/28/21**SAMPLE RESULTS**

Lab ID: L2155680-02
 Client ID: GW002
 Sample Location: 4285 MIDDLE COUNTRY RD, CALVERTON, NY

Date Collected: 10/12/21 12:25
 Date Received: 10/12/21
 Field Prep: Not Specified

Sample Depth:

Matrix: Water

Analytical Method: 1,8260C

Analytical Date: 10/22/21 12:57

Analyst: PD

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/l	2.5	0.70	1
1,1-Dichloroethane	ND		ug/l	2.5	0.70	1
Chloroform	ND		ug/l	2.5	0.70	1
Carbon tetrachloride	ND		ug/l	0.50	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Dibromochloromethane	ND		ug/l	0.50	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.5	0.50	1
Tetrachloroethene	ND		ug/l	0.50	0.18	1
Chlorobenzene	ND		ug/l	2.5	0.70	1
Trichlorofluoromethane	ND		ug/l	2.5	0.70	1
1,2-Dichloroethane	ND		ug/l	0.50	0.13	1
1,1,1-Trichloroethane	ND		ug/l	2.5	0.70	1
Bromodichloromethane	ND		ug/l	0.50	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.50	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.50	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.50	0.14	1
1,1-Dichloropropene	ND		ug/l	2.5	0.70	1
Bromoform	ND		ug/l	2.0	0.65	1
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	0.17	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	2.5	0.70	1
Ethylbenzene	ND		ug/l	2.5	0.70	1
Chloromethane	ND		ug/l	2.5	0.70	1
Bromomethane	ND		ug/l	2.5	0.70	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.5	0.70	1
1,1-Dichloroethene	ND		ug/l	0.50	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	2.5	0.70	1

Project Name: HK VENTURES-CALVERTON**Lab Number:** L2155680**Project Number:** HKV2101**Report Date:** 10/28/21**SAMPLE RESULTS****Lab ID:** L2155680-02**Date Collected:** 10/12/21 12:25**Client ID:** GW002**Date Received:** 10/12/21**Sample Location:** 4285 MIDDLE COUNTRY RD, CALVERTON, NY**Field Prep:** Not Specified**Sample Depth:**

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Trichloroethene	ND		ug/l	0.50	0.18	1
1,2-Dichlorobenzene	ND		ug/l	2.5	0.70	1
1,3-Dichlorobenzene	ND		ug/l	2.5	0.70	1
1,4-Dichlorobenzene	ND		ug/l	2.5	0.70	1
Methyl tert butyl ether	ND		ug/l	2.5	0.70	1
p/m-Xylene	ND		ug/l	2.5	0.70	1
o-Xylene	ND		ug/l	2.5	0.70	1
Xylenes, Total	ND		ug/l	2.5	0.70	1
cis-1,2-Dichloroethene	ND		ug/l	2.5	0.70	1
1,2-Dichloroethene, Total	ND		ug/l	2.5	0.70	1
Dibromomethane	ND		ug/l	5.0	1.0	1
1,2,3-Trichloropropane	ND		ug/l	2.5	0.70	1
Acrylonitrile	ND		ug/l	5.0	1.5	1
Styrene	ND		ug/l	2.5	0.70	1
Dichlorodifluoromethane	ND		ug/l	5.0	1.0	1
Acetone	5.8		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	5.0	1.0	1
2-Butanone	ND		ug/l	5.0	1.9	1
Vinyl acetate	ND		ug/l	5.0	1.0	1
4-Methyl-2-pentanone	ND		ug/l	5.0	1.0	1
2-Hexanone	ND		ug/l	5.0	1.0	1
Bromochloromethane	ND		ug/l	2.5	0.70	1
2,2-Dichloropropane	ND		ug/l	2.5	0.70	1
1,2-Dibromoethane	ND		ug/l	2.0	0.65	1
1,3-Dichloropropane	ND		ug/l	2.5	0.70	1
1,1,1,2-Tetrachloroethane	ND		ug/l	2.5	0.70	1
Bromobenzene	ND		ug/l	2.5	0.70	1
n-Butylbenzene	ND		ug/l	2.5	0.70	1
sec-Butylbenzene	ND		ug/l	2.5	0.70	1
tert-Butylbenzene	ND		ug/l	2.5	0.70	1
o-Chlorotoluene	ND		ug/l	2.5	0.70	1
p-Chlorotoluene	ND		ug/l	2.5	0.70	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.5	0.70	1
Hexachlorobutadiene	ND		ug/l	2.5	0.70	1
Isopropylbenzene	ND		ug/l	2.5	0.70	1
p-Isopropyltoluene	ND		ug/l	2.5	0.70	1
Naphthalene	ND		ug/l	2.5	0.70	1

Project Name: HK VENTURES-CALVERTON**Lab Number:** L2155680**Project Number:** HKV2101**Report Date:** 10/28/21**SAMPLE RESULTS****Lab ID:** L2155680-02**Date Collected:** 10/12/21 12:25**Client ID:** GW002**Date Received:** 10/12/21**Sample Location:** 4285 MIDDLE COUNTRY RD, CALVERTON, NY**Field Prep:** Not Specified**Sample Depth:**

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
n-Propylbenzene	ND		ug/l	2.5	0.70	1
1,2,3-Trichlorobenzene	ND		ug/l	2.5	0.70	1
1,2,4-Trichlorobenzene	ND		ug/l	2.5	0.70	1
1,3,5-Trimethylbenzene	ND		ug/l	2.5	0.70	1
1,2,4-Trimethylbenzene	ND		ug/l	2.5	0.70	1
1,4-Dioxane	ND		ug/l	250	61.	1
p-Diethylbenzene	ND		ug/l	2.0	0.70	1
p-Ethyltoluene	ND		ug/l	2.0	0.70	1
1,2,4,5-Tetramethylbenzene	ND		ug/l	2.0	0.54	1
Ethyl ether	ND		ug/l	2.5	0.70	1
trans-1,4-Dichloro-2-butene	ND		ug/l	2.5	0.70	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	103		70-130
Toluene-d8	96		70-130
4-Bromofluorobenzene	96		70-130
Dibromofluoromethane	104		70-130

Project Name: HK VENTURES-CALVERTON**Lab Number:** L2155680**Project Number:** HKV2101**Report Date:** 10/28/21**SAMPLE RESULTS**

Lab ID: L2155680-03
 Client ID: GW003
 Sample Location: 4285 MIDDLE COUNTRY RD, CALVERTON, NY

Date Collected: 10/12/21 14:00
 Date Received: 10/12/21
 Field Prep: Not Specified

Sample Depth:

Matrix: Water

Analytical Method: 1,8260C

Analytical Date: 10/22/21 13:24

Analyst: PD

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/l	2.5	0.70	1
1,1-Dichloroethane	ND		ug/l	2.5	0.70	1
Chloroform	ND		ug/l	2.5	0.70	1
Carbon tetrachloride	ND		ug/l	0.50	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Dibromochloromethane	ND		ug/l	0.50	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.5	0.50	1
Tetrachloroethene	ND		ug/l	0.50	0.18	1
Chlorobenzene	ND		ug/l	2.5	0.70	1
Trichlorofluoromethane	ND		ug/l	2.5	0.70	1
1,2-Dichloroethane	ND		ug/l	0.50	0.13	1
1,1,1-Trichloroethane	ND		ug/l	2.5	0.70	1
Bromodichloromethane	ND		ug/l	0.50	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.50	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.50	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.50	0.14	1
1,1-Dichloropropene	ND		ug/l	2.5	0.70	1
Bromoform	ND		ug/l	2.0	0.65	1
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	0.17	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	2.5	0.70	1
Ethylbenzene	ND		ug/l	2.5	0.70	1
Chloromethane	ND		ug/l	2.5	0.70	1
Bromomethane	ND		ug/l	2.5	0.70	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.5	0.70	1
1,1-Dichloroethene	ND		ug/l	0.50	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	2.5	0.70	1

Project Name: HK VENTURES-CALVERTON**Lab Number:** L2155680**Project Number:** HKV2101**Report Date:** 10/28/21**SAMPLE RESULTS****Lab ID:** L2155680-03**Date Collected:** 10/12/21 14:00**Client ID:** GW003**Date Received:** 10/12/21**Sample Location:** 4285 MIDDLE COUNTRY RD, CALVERTON, NY**Field Prep:** Not Specified**Sample Depth:**

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Trichloroethene	ND		ug/l	0.50	0.18	1
1,2-Dichlorobenzene	ND		ug/l	2.5	0.70	1
1,3-Dichlorobenzene	ND		ug/l	2.5	0.70	1
1,4-Dichlorobenzene	ND		ug/l	2.5	0.70	1
Methyl tert butyl ether	ND		ug/l	2.5	0.70	1
p/m-Xylene	ND		ug/l	2.5	0.70	1
o-Xylene	ND		ug/l	2.5	0.70	1
Xylenes, Total	ND		ug/l	2.5	0.70	1
cis-1,2-Dichloroethene	ND		ug/l	2.5	0.70	1
1,2-Dichloroethene, Total	ND		ug/l	2.5	0.70	1
Dibromomethane	ND		ug/l	5.0	1.0	1
1,2,3-Trichloropropane	ND		ug/l	2.5	0.70	1
Acrylonitrile	ND		ug/l	5.0	1.5	1
Styrene	ND		ug/l	2.5	0.70	1
Dichlorodifluoromethane	ND		ug/l	5.0	1.0	1
Acetone	1.5	J	ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	5.0	1.0	1
2-Butanone	ND		ug/l	5.0	1.9	1
Vinyl acetate	ND		ug/l	5.0	1.0	1
4-Methyl-2-pentanone	ND		ug/l	5.0	1.0	1
2-Hexanone	ND		ug/l	5.0	1.0	1
Bromochloromethane	ND		ug/l	2.5	0.70	1
2,2-Dichloropropane	ND		ug/l	2.5	0.70	1
1,2-Dibromoethane	ND		ug/l	2.0	0.65	1
1,3-Dichloropropane	ND		ug/l	2.5	0.70	1
1,1,1,2-Tetrachloroethane	ND		ug/l	2.5	0.70	1
Bromobenzene	ND		ug/l	2.5	0.70	1
n-Butylbenzene	ND		ug/l	2.5	0.70	1
sec-Butylbenzene	ND		ug/l	2.5	0.70	1
tert-Butylbenzene	ND		ug/l	2.5	0.70	1
o-Chlorotoluene	ND		ug/l	2.5	0.70	1
p-Chlorotoluene	ND		ug/l	2.5	0.70	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.5	0.70	1
Hexachlorobutadiene	ND		ug/l	2.5	0.70	1
Isopropylbenzene	ND		ug/l	2.5	0.70	1
p-Isopropyltoluene	ND		ug/l	2.5	0.70	1
Naphthalene	ND		ug/l	2.5	0.70	1

Project Name: HK VENTURES-CALVERTON**Lab Number:** L2155680**Project Number:** HKV2101**Report Date:** 10/28/21**SAMPLE RESULTS****Lab ID:** L2155680-03**Date Collected:** 10/12/21 14:00**Client ID:** GW003**Date Received:** 10/12/21**Sample Location:** 4285 MIDDLE COUNTRY RD, CALVERTON, NY**Field Prep:** Not Specified**Sample Depth:**

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
n-Propylbenzene	ND		ug/l	2.5	0.70	1
1,2,3-Trichlorobenzene	ND		ug/l	2.5	0.70	1
1,2,4-Trichlorobenzene	ND		ug/l	2.5	0.70	1
1,3,5-Trimethylbenzene	ND		ug/l	2.5	0.70	1
1,2,4-Trimethylbenzene	ND		ug/l	2.5	0.70	1
1,4-Dioxane	ND		ug/l	250	61.	1
p-Diethylbenzene	ND		ug/l	2.0	0.70	1
p-Ethyltoluene	ND		ug/l	2.0	0.70	1
1,2,4,5-Tetramethylbenzene	ND		ug/l	2.0	0.54	1
Ethyl ether	ND		ug/l	2.5	0.70	1
trans-1,4-Dichloro-2-butene	ND		ug/l	2.5	0.70	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	106		70-130
Toluene-d8	96		70-130
4-Bromofluorobenzene	96		70-130
Dibromofluoromethane	100		70-130

Project Name: HK VENTURES-CALVERTON
Project Number: HKV2101

Lab Number: L2155680
Report Date: 10/28/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
 Analytical Date: 10/22/21 10:17
 Analyst: PD

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01-03 Batch: WG1562328-5					
Methylene chloride	ND		ug/l	2.5	0.70
1,1-Dichloroethane	ND		ug/l	2.5	0.70
Chloroform	ND		ug/l	2.5	0.70
Carbon tetrachloride	ND		ug/l	0.50	0.13
1,2-Dichloropropane	ND		ug/l	1.0	0.14
Dibromochloromethane	ND		ug/l	0.50	0.15
1,1,2-Trichloroethane	ND		ug/l	1.5	0.50
Tetrachloroethene	ND		ug/l	0.50	0.18
Chlorobenzene	ND		ug/l	2.5	0.70
Trichlorofluoromethane	ND		ug/l	2.5	0.70
1,2-Dichloroethane	ND		ug/l	0.50	0.13
1,1,1-Trichloroethane	ND		ug/l	2.5	0.70
Bromodichloromethane	ND		ug/l	0.50	0.19
trans-1,3-Dichloropropene	ND		ug/l	0.50	0.16
cis-1,3-Dichloropropene	ND		ug/l	0.50	0.14
1,3-Dichloropropene, Total	ND		ug/l	0.50	0.14
1,1-Dichloropropene	ND		ug/l	2.5	0.70
Bromoform	ND		ug/l	2.0	0.65
1,1,1,2-Tetrachloroethane	ND		ug/l	0.50	0.17
Benzene	ND		ug/l	0.50	0.16
Toluene	ND		ug/l	2.5	0.70
Ethylbenzene	ND		ug/l	2.5	0.70
Chloromethane	ND		ug/l	2.5	0.70
Bromomethane	ND		ug/l	2.5	0.70
Vinyl chloride	ND		ug/l	1.0	0.07
Chloroethane	ND		ug/l	2.5	0.70
1,1-Dichloroethene	ND		ug/l	0.50	0.17
trans-1,2-Dichloroethene	ND		ug/l	2.5	0.70
Trichloroethene	ND		ug/l	0.50	0.18

Project Name: HK VENTURES-CALVERTON
Project Number: HKV2101

Lab Number: L2155680
Report Date: 10/28/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
 Analytical Date: 10/22/21 10:17
 Analyst: PD

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01-03 Batch: WG1562328-5					
1,2-Dichlorobenzene	ND		ug/l	2.5	0.70
1,3-Dichlorobenzene	ND		ug/l	2.5	0.70
1,4-Dichlorobenzene	ND		ug/l	2.5	0.70
Methyl tert butyl ether	ND		ug/l	2.5	0.70
p/m-Xylene	ND		ug/l	2.5	0.70
o-Xylene	ND		ug/l	2.5	0.70
Xylenes, Total	ND		ug/l	2.5	0.70
cis-1,2-Dichloroethene	ND		ug/l	2.5	0.70
1,2-Dichloroethene, Total	ND		ug/l	2.5	0.70
Dibromomethane	ND		ug/l	5.0	1.0
1,2,3-Trichloropropane	ND		ug/l	2.5	0.70
Acrylonitrile	ND		ug/l	5.0	1.5
Styrene	ND		ug/l	2.5	0.70
Dichlorodifluoromethane	ND		ug/l	5.0	1.0
Acetone	ND		ug/l	5.0	1.5
Carbon disulfide	ND		ug/l	5.0	1.0
2-Butanone	ND		ug/l	5.0	1.9
Vinyl acetate	ND		ug/l	5.0	1.0
4-Methyl-2-pentanone	ND		ug/l	5.0	1.0
2-Hexanone	ND		ug/l	5.0	1.0
Bromochloromethane	ND		ug/l	2.5	0.70
2,2-Dichloropropane	ND		ug/l	2.5	0.70
1,2-Dibromoethane	ND		ug/l	2.0	0.65
1,3-Dichloropropane	ND		ug/l	2.5	0.70
1,1,1,2-Tetrachloroethane	ND		ug/l	2.5	0.70
Bromobenzene	ND		ug/l	2.5	0.70
n-Butylbenzene	ND		ug/l	2.5	0.70
sec-Butylbenzene	ND		ug/l	2.5	0.70
tert-Butylbenzene	ND		ug/l	2.5	0.70

Project Name: HK VENTURES-CALVERTON
Project Number: HKV2101

Lab Number: L2155680
Report Date: 10/28/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 10/22/21 10:17
Analyst: PD

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01-03 Batch: WG1562328-5					
o-Chlorotoluene	ND		ug/l	2.5	0.70
p-Chlorotoluene	ND		ug/l	2.5	0.70
1,2-Dibromo-3-chloropropane	ND		ug/l	2.5	0.70
Hexachlorobutadiene	ND		ug/l	2.5	0.70
Isopropylbenzene	ND		ug/l	2.5	0.70
p-Isopropyltoluene	ND		ug/l	2.5	0.70
Naphthalene	ND		ug/l	2.5	0.70
n-Propylbenzene	ND		ug/l	2.5	0.70
1,2,3-Trichlorobenzene	ND		ug/l	2.5	0.70
1,2,4-Trichlorobenzene	ND		ug/l	2.5	0.70
1,3,5-Trimethylbenzene	ND		ug/l	2.5	0.70
1,2,4-Trimethylbenzene	ND		ug/l	2.5	0.70
1,4-Dioxane	ND		ug/l	250	61.
p-Diethylbenzene	ND		ug/l	2.0	0.70
p-Ethyltoluene	ND		ug/l	2.0	0.70
1,2,4,5-Tetramethylbenzene	ND		ug/l	2.0	0.54
Ethyl ether	ND		ug/l	2.5	0.70
trans-1,4-Dichloro-2-butene	ND		ug/l	2.5	0.70

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	98		70-130
Toluene-d8	97		70-130
4-Bromofluorobenzene	96		70-130
Dibromofluoromethane	96		70-130

Lab Control Sample Analysis

Batch Quality Control

Project Name: HK VENTURES-CALVERTON

Project Number: HKV2101

Lab Number: L2155680

Report Date: 10/28/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-03 Batch: WG1562328-3 WG1562328-4								
Methylene chloride	88		89		70-130	1		20
1,1-Dichloroethane	97		97		70-130	0		20
Chloroform	90		95		70-130	5		20
Carbon tetrachloride	97		95		63-132	2		20
1,2-Dichloropropane	96		96		70-130	0		20
Dibromochloromethane	93		93		63-130	0		20
1,1,2-Trichloroethane	91		91		70-130	0		20
Tetrachloroethene	100		99		70-130	1		20
Chlorobenzene	97		99		75-130	2		20
Trichlorofluoromethane	100		96		62-150	4		20
1,2-Dichloroethane	96		93		70-130	3		20
1,1,1-Trichloroethane	94		93		67-130	1		20
Bromodichloromethane	91		91		67-130	0		20
trans-1,3-Dichloropropene	89		89		70-130	0		20
cis-1,3-Dichloropropene	91		89		70-130	2		20
1,1-Dichloropropene	97		96		70-130	1		20
Bromoform	93		94		54-136	1		20
1,1,2,2-Tetrachloroethane	98		100		67-130	2		20
Benzene	93		93		70-130	0		20
Toluene	94		94		70-130	0		20
Ethylbenzene	94		92		70-130	2		20
Chloromethane	85		85		64-130	0		20
Bromomethane	88		81		39-139	8		20

Lab Control Sample Analysis

Batch Quality Control

Project Name: HK VENTURES-CALVERTON

Project Number: HKV2101

Lab Number: L2155680

Report Date: 10/28/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-03 Batch: WG1562328-3 WG1562328-4								
Vinyl chloride	93		90		55-140	3		20
Chloroethane	100		98		55-138	2		20
1,1-Dichloroethene	97		95		61-145	2		20
trans-1,2-Dichloroethene	93		91		70-130	2		20
Trichloroethene	88		88		70-130	0		20
1,2-Dichlorobenzene	97		98		70-130	1		20
1,3-Dichlorobenzene	97		98		70-130	1		20
1,4-Dichlorobenzene	98		99		70-130	1		20
Methyl tert butyl ether	94		91		63-130	3		20
p/m-Xylene	100		95		70-130	5		20
o-Xylene	100		95		70-130	5		20
cis-1,2-Dichloroethene	92		92		70-130	0		20
Dibromomethane	95		94		70-130	1		20
1,2,3-Trichloropropane	94		94		64-130	0		20
Acrylonitrile	96		99		70-130	3		20
Styrene	95		95		70-130	0		20
Dichlorodifluoromethane	79		75		36-147	5		20
Acetone	74		76		58-148	3		20
Carbon disulfide	96		96		51-130	0		20
2-Butanone	100		88		63-138	13		20
Vinyl acetate	130		120		70-130	8		20
4-Methyl-2-pentanone	90		90		59-130	0		20
2-Hexanone	87		83		57-130	5		20

Lab Control Sample Analysis **Batch Quality Control**

Project Name: HK VENTURES-CALVERTON

Project Number: HKV2101

Lab Number: L2155680

Report Date: 10/28/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-03 Batch: WG1562328-3 WG1562328-4								
Bromochloromethane	98		97		70-130	1		20
2,2-Dichloropropane	99		97		63-133	2		20
1,2-Dibromoethane	94		92		70-130	2		20
1,3-Dichloropropane	96		96		70-130	0		20
1,1,1,2-Tetrachloroethane	95		94		64-130	1		20
Bromobenzene	99		98		70-130	1		20
n-Butylbenzene	98		97		53-136	1		20
sec-Butylbenzene	99		100		70-130	1		20
tert-Butylbenzene	95		95		70-130	0		20
o-Chlorotoluene	94		94		70-130	0		20
p-Chlorotoluene	92		94		70-130	2		20
1,2-Dibromo-3-chloropropane	89		88		41-144	1		20
Hexachlorobutadiene	90		90		63-130	0		20
Isopropylbenzene	97		96		70-130	1		20
p-Isopropyltoluene	97		96		70-130	1		20
Naphthalene	110		110		70-130	0		20
n-Propylbenzene	97		96		69-130	1		20
1,2,3-Trichlorobenzene	110		120		70-130	9		20
1,2,4-Trichlorobenzene	100		100		70-130	0		20
1,3,5-Trimethylbenzene	95		94		64-130	1		20
1,2,4-Trimethylbenzene	92		93		70-130	1		20
1,4-Dioxane	86		84		56-162	2		20
p-Diethylbenzene	95		94		70-130	1		20

Lab Control Sample Analysis

Batch Quality Control

Project Name: HK VENTURES-CALVERTON

Project Number: HKV2101

Lab Number: L2155680

Report Date: 10/28/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-03 Batch: WG1562328-3 WG1562328-4								
p-Ethyltoluene	95		94		70-130	1		20
1,2,4,5-Tetramethylbenzene	89		87		70-130	2		20
Ethyl ether	92		98		59-134	6		20
trans-1,4-Dichloro-2-butene	76		77		70-130	1		20

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	99		98		70-130
Toluene-d8	98		98		70-130
4-Bromofluorobenzene	98		98		70-130
Dibromofluoromethane	95		97		70-130

SEMIVOLATILES

Project Name: HK VENTURES-CALVERTON**Lab Number:** L2155680**Project Number:** HKV2101**Report Date:** 10/28/21**SAMPLE RESULTS**

Lab ID: L2155680-01
 Client ID: GW001
 Sample Location: 4285 MIDDLE COUNTRY RD, CALVERTON, NY

Date Collected: 10/12/21 10:50
 Date Received: 10/12/21
 Field Prep: Not Specified

Sample Depth:

Matrix: Water
 Analytical Method: 1,8270D
 Analytical Date: 10/18/21 17:17
 Analyst: SZ

Extraction Method: EPA 3510C
 Extraction Date: 10/16/21 07:12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.50	1
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.50	1
1,2-Dichlorobenzene	ND		ug/l	2.0	0.45	1
1,3-Dichlorobenzene	ND		ug/l	2.0	0.40	1
1,4-Dichlorobenzene	ND		ug/l	2.0	0.43	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.6	1
2,4-Dinitrotoluene	ND		ug/l	5.0	1.2	1
2,6-Dinitrotoluene	ND		ug/l	5.0	0.93	1
4-Chlorophenyl phenyl ether	ND		ug/l	2.0	0.49	1
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.38	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.53	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.50	1
Hexachlorocyclopentadiene	ND		ug/l	20	0.69	1
Isophorone	ND		ug/l	5.0	1.2	1
Nitrobenzene	ND		ug/l	2.0	0.77	1
NDPA/DPA	ND		ug/l	2.0	0.42	1
n-Nitrosodi-n-propylamine	ND		ug/l	5.0	0.64	1
Bis(2-ethylhexyl)phthalate	ND		ug/l	3.0	1.5	1
Butyl benzyl phthalate	ND		ug/l	5.0	1.2	1
Di-n-butylphthalate	ND		ug/l	5.0	0.39	1
Di-n-octylphthalate	ND		ug/l	5.0	1.3	1
Diethyl phthalate	ND		ug/l	5.0	0.38	1
Dimethyl phthalate	ND		ug/l	5.0	1.8	1
Biphenyl	ND		ug/l	2.0	0.46	1
4-Chloroaniline	ND		ug/l	5.0	1.1	1
2-Nitroaniline	ND		ug/l	5.0	0.50	1
3-Nitroaniline	ND		ug/l	5.0	0.81	1
4-Nitroaniline	ND		ug/l	5.0	0.80	1

Project Name: HK VENTURES-CALVERTON**Lab Number:** L2155680**Project Number:** HKV2101**Report Date:** 10/28/21**SAMPLE RESULTS****Lab ID:** L2155680-01**Date Collected:** 10/12/21 10:50**Client ID:** GW001**Date Received:** 10/12/21**Sample Location:** 4285 MIDDLE COUNTRY RD, CALVERTON, NY**Field Prep:** Not Specified**Sample Depth:**

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Dibenzofuran	ND		ug/l	2.0	0.50	1
1,2,4,5-Tetrachlorobenzene	ND		ug/l	10	0.44	1
Acetophenone	ND		ug/l	5.0	0.53	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.61	1
p-Chloro-m-cresol	ND		ug/l	2.0	0.35	1
2-Chlorophenol	ND		ug/l	2.0	0.48	1
2,4-Dichlorophenol	ND		ug/l	5.0	0.41	1
2,4-Dimethylphenol	ND		ug/l	5.0	1.8	1
2-Nitrophenol	ND		ug/l	10	0.85	1
4-Nitrophenol	ND		ug/l	10	0.67	1
2,4-Dinitrophenol	ND		ug/l	20	6.6	1
4,6-Dinitro-o-cresol	ND		ug/l	10	1.8	1
Phenol	ND		ug/l	5.0	0.57	1
2-Methylphenol	ND		ug/l	5.0	0.49	1
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.48	1
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.77	1
Benzoic Acid	ND		ug/l	50	2.6	1
Benzyl Alcohol	ND		ug/l	2.0	0.59	1
Carbazole	ND		ug/l	2.0	0.49	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	46		21-120
Phenol-d6	36		10-120
Nitrobenzene-d5	53		23-120
2-Fluorobiphenyl	59		15-120
2,4,6-Tribromophenol	55		10-120
4-Terphenyl-d14	70		41-149

Project Name: HK VENTURES-CALVERTON**Lab Number:** L2155680**Project Number:** HKV2101**Report Date:** 10/28/21**SAMPLE RESULTS**

Lab ID: L2155680-01

Date Collected: 10/12/21 10:50

Client ID: GW001

Date Received: 10/12/21

Sample Location: 4285 MIDDLE COUNTRY RD, CALVERTON, NY

Field Prep: Not Specified

Sample Depth:

Matrix: Water

Extraction Method: EPA 3510C

Analytical Method: 1,8270D-SIM

Extraction Date: 10/18/21 09:00

Analytical Date: 10/19/21 04:29

Analyst: DB

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
1,4 Dioxane by 8270D-SIM - Mansfield Lab						
1,4-Dioxane	ND		ng/l	144	32.6	1
Surrogate			% Recovery	Qualifier	Acceptance Criteria	
1,4-Dioxane-d8			45		15-110	

Project Name: HK VENTURES-CALVERTON**Lab Number:** L2155680**Project Number:** HKV2101**Report Date:** 10/28/21**SAMPLE RESULTS**

Lab ID: L2155680-01
 Client ID: GW001
 Sample Location: 4285 MIDDLE COUNTRY RD, CALVERTON, NY

Date Collected: 10/12/21 10:50
 Date Received: 10/12/21
 Field Prep: Not Specified

Sample Depth:

Matrix: Water
 Analytical Method: 1,8270D-SIM
 Analytical Date: 10/26/21 15:57
 Analyst: JJW

Extraction Method: EPA 3510C
 Extraction Date: 10/16/21 07:13

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS-SIM - Westborough Lab						
Acenaphthene	ND		ug/l	0.10	0.01	1
2-Chloronaphthalene	ND		ug/l	0.20	0.02	1
Fluoranthene	0.05	J	ug/l	0.10	0.02	1
Hexachlorobutadiene	ND		ug/l	0.50	0.05	1
Naphthalene	0.32		ug/l	0.10	0.05	1
Benzo(a)anthracene	0.03	J	ug/l	0.10	0.02	1
Benzo(a)pyrene	0.02	J	ug/l	0.10	0.02	1
Benzo(b)fluoranthene	0.04	J	ug/l	0.10	0.01	1
Benzo(k)fluoranthene	0.01	J	ug/l	0.10	0.01	1
Chrysene	0.02	J	ug/l	0.10	0.01	1
Acenaphthylene	ND		ug/l	0.10	0.01	1
Anthracene	0.02	J	ug/l	0.10	0.01	1
Benzo(ghi)perylene	0.02	J	ug/l	0.10	0.01	1
Fluorene	ND		ug/l	0.10	0.01	1
Phenanthrene	0.06	J	ug/l	0.10	0.02	1
Dibenzo(a,h)anthracene	ND		ug/l	0.10	0.01	1
Indeno(1,2,3-cd)pyrene	0.02	J	ug/l	0.10	0.01	1
Pyrene	0.05	J	ug/l	0.10	0.02	1
2-Methylnaphthalene	0.09	J	ug/l	0.10	0.02	1
Pentachlorophenol	ND		ug/l	0.80	0.01	1
Hexachlorobenzene	ND		ug/l	0.80	0.01	1
Hexachloroethane	ND		ug/l	0.80	0.06	1

Project Name: HK VENTURES-CALVERTON**Lab Number:** L2155680**Project Number:** HKV2101**Report Date:** 10/28/21**SAMPLE RESULTS**

Lab ID: L2155680-01

Date Collected: 10/12/21 10:50

Client ID: GW001

Date Received: 10/12/21

Sample Location: 4285 MIDDLE COUNTRY RD, CALVERTON, NY

Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
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Semivolatile Organics by GC/MS-SIM - Westborough Lab

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	48		21-120
Phenol-d6	39		10-120
Nitrobenzene-d5	65		23-120
2-Fluorobiphenyl	68		15-120
2,4,6-Tribromophenol	70		10-120
4-Terphenyl-d14	72		41-149

Project Name: HK VENTURES-CALVERTON**Lab Number:** L2155680**Project Number:** HKV2101**Report Date:** 10/28/21**SAMPLE RESULTS**

Lab ID: L2155680-01
 Client ID: GW001
 Sample Location: 4285 MIDDLE COUNTRY RD, CALVERTON, NY

Date Collected: 10/12/21 10:50
 Date Received: 10/12/21
 Field Prep: Not Specified

Sample Depth:

Matrix: Water
 Analytical Method: 134,LCMSMS-ID
 Analytical Date: 10/17/21 04:21
 Analyst: SG

Extraction Method: ALPHA 23528
 Extraction Date: 10/14/21 16:50

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab						
Perfluorobutanoic Acid (PFBA)	17.5		ng/l	1.92	0.392	1
Perfluoropentanoic Acid (PFPeA)	31.6		ng/l	1.92	0.380	1
Perfluorobutanesulfonic Acid (PFBS)	5.34		ng/l	1.92	0.228	1
Perfluorohexanoic Acid (PFHxA)	31.9		ng/l	1.92	0.315	1
Perfluoroheptanoic Acid (PFHpA)	26.2		ng/l	1.92	0.216	1
Perfluorohexanesulfonic Acid (PFHxS)	20.4		ng/l	1.92	0.361	1
Perfluorooctanoic Acid (PFOA)	88.3		ng/l	1.92	0.227	1
1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	ND		ng/l	1.92	1.28	1
Perfluoroheptanesulfonic Acid (PFHpS)	ND		ng/l	1.92	0.661	1
Perfluorononanoic Acid (PFNA)	2.18		ng/l	1.92	0.300	1
Perfluorooctanesulfonic Acid (PFOS)	14.3		ng/l	1.92	0.484	1
Perfluorodecanoic Acid (PFDA)	ND		ng/l	1.92	0.292	1
1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	ND		ng/l	1.92	1.16	1
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	ND		ng/l	1.92	0.622	1
Perfluoroundecanoic Acid (PFUnA)	ND		ng/l	1.92	0.250	1
Perfluorodecanesulfonic Acid (PFDS)	ND		ng/l	1.92	0.941	1
Perfluorooctanesulfonamide (FOSA)	ND		ng/l	1.92	0.557	1
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND		ng/l	1.92	0.772	1
Perfluorododecanoic Acid (PFDoA)	ND		ng/l	1.92	0.357	1
Perfluorotridecanoic Acid (PFTrDA)	ND		ng/l	1.92	0.314	1
Perfluorotetradecanoic Acid (PFTA)	ND		ng/l	1.92	0.238	1
PFOA/PFOS, Total	103		ng/l	1.92	0.227	1

Project Name: HK VENTURES-CALVERTON**Lab Number:** L2155680**Project Number:** HKV2101**Report Date:** 10/28/21**SAMPLE RESULTS****Lab ID:** L2155680-01**Date Collected:** 10/12/21 10:50**Client ID:** GW001**Date Received:** 10/12/21**Sample Location:** 4285 MIDDLE COUNTRY RD, CALVERTON, NY**Field Prep:** Not Specified**Sample Depth:**

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab						

Surrogate (Extracted Internal Standard)	% Recovery	Qualifier	Acceptance Criteria
Perfluoro[13C4]Butanoic Acid (MPFBA)	80		58-132
Perfluoro[13C5]Pentanoic Acid (M5PFPEA)	72		62-163
Perfluoro[2,3,4-13C3]Butanesulfonic Acid (M3PFBS)	77		70-131
Perfluoro[1,2,3,4,6-13C5]Hexanoic Acid (M5PFHxA)	58		57-129
Perfluoro[1,2,3,4-13C4]Heptanoic Acid (M4PFHpA)	69		60-129
Perfluoro[1,2,3-13C3]Hexanesulfonic Acid (M3PFHxS)	87		71-134
Perfluoro[13C8]Octanoic Acid (M8PFOA)	78		62-129
1H,1H,2H,2H-Perfluoro[1,2-13C2]Octanesulfonic Acid (M2-6:2FTS)	223	Q	14-147
Perfluoro[13C9]Nonanoic Acid (M9PFNA)	86		59-139
Perfluoro[13C8]Octanesulfonic Acid (M8PFOS)	84		69-131
Perfluoro[1,2,3,4,5,6-13C6]Decanoic Acid (M6PFDA)	80		62-124
1H,1H,2H,2H-Perfluoro[1,2-13C2]Decanesulfonic Acid (M2-8:2FTS)	197	Q	10-162
N-Deuteriomethylperfluoro-1-octanesulfonamidoacetic Acid (d3-NMeFOSAA)	89		24-116
Perfluoro[1,2,3,4,5,6,7-13C7]Undecanoic Acid (M7-PFUDA)	77		55-137
Perfluoro[13C8]Octanesulfonamide (M8FOSA)	31		10-112
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA)	82		27-126
Perfluoro[1,2-13C2]Dodecanoic Acid (MPFDOA)	63		48-131
Perfluoro[1,2-13C2]Tetradecanoic Acid (M2PFTEDA)	59		22-136

Project Name: HK VENTURES-CALVERTON**Lab Number:** L2155680**Project Number:** HKV2101**Report Date:** 10/28/21**SAMPLE RESULTS**

Lab ID: L2155680-02
 Client ID: GW002
 Sample Location: 4285 MIDDLE COUNTRY RD, CALVERTON, NY

Date Collected: 10/12/21 12:25
 Date Received: 10/12/21
 Field Prep: Not Specified

Sample Depth:

Matrix: Water
 Analytical Method: 1,8270D
 Analytical Date: 10/18/21 17:42
 Analyst: SZ

Extraction Method: EPA 3510C
 Extraction Date: 10/16/21 07:12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.50	1
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.50	1
1,2-Dichlorobenzene	ND		ug/l	2.0	0.45	1
1,3-Dichlorobenzene	ND		ug/l	2.0	0.40	1
1,4-Dichlorobenzene	ND		ug/l	2.0	0.43	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.6	1
2,4-Dinitrotoluene	ND		ug/l	5.0	1.2	1
2,6-Dinitrotoluene	ND		ug/l	5.0	0.93	1
4-Chlorophenyl phenyl ether	ND		ug/l	2.0	0.49	1
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.38	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.53	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.50	1
Hexachlorocyclopentadiene	ND		ug/l	20	0.69	1
Isophorone	ND		ug/l	5.0	1.2	1
Nitrobenzene	ND		ug/l	2.0	0.77	1
NDPA/DPA	ND		ug/l	2.0	0.42	1
n-Nitrosodi-n-propylamine	ND		ug/l	5.0	0.64	1
Bis(2-ethylhexyl)phthalate	ND		ug/l	3.0	1.5	1
Butyl benzyl phthalate	ND		ug/l	5.0	1.2	1
Di-n-butylphthalate	ND		ug/l	5.0	0.39	1
Di-n-octylphthalate	ND		ug/l	5.0	1.3	1
Diethyl phthalate	ND		ug/l	5.0	0.38	1
Dimethyl phthalate	ND		ug/l	5.0	1.8	1
Biphenyl	ND		ug/l	2.0	0.46	1
4-Chloroaniline	ND		ug/l	5.0	1.1	1
2-Nitroaniline	ND		ug/l	5.0	0.50	1
3-Nitroaniline	ND		ug/l	5.0	0.81	1
4-Nitroaniline	ND		ug/l	5.0	0.80	1

Project Name: HK VENTURES-CALVERTON**Lab Number:** L2155680**Project Number:** HKV2101**Report Date:** 10/28/21**SAMPLE RESULTS****Lab ID:** L2155680-02**Date Collected:** 10/12/21 12:25**Client ID:** GW002**Date Received:** 10/12/21**Sample Location:** 4285 MIDDLE COUNTRY RD, CALVERTON, NY**Field Prep:** Not Specified**Sample Depth:**

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Dibenzofuran	ND		ug/l	2.0	0.50	1
1,2,4,5-Tetrachlorobenzene	ND		ug/l	10	0.44	1
Acetophenone	ND		ug/l	5.0	0.53	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.61	1
p-Chloro-m-cresol	ND		ug/l	2.0	0.35	1
2-Chlorophenol	ND		ug/l	2.0	0.48	1
2,4-Dichlorophenol	ND		ug/l	5.0	0.41	1
2,4-Dimethylphenol	ND		ug/l	5.0	1.8	1
2-Nitrophenol	ND		ug/l	10	0.85	1
4-Nitrophenol	ND		ug/l	10	0.67	1
2,4-Dinitrophenol	ND		ug/l	20	6.6	1
4,6-Dinitro-o-cresol	ND		ug/l	10	1.8	1
Phenol	ND		ug/l	5.0	0.57	1
2-Methylphenol	ND		ug/l	5.0	0.49	1
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.48	1
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.77	1
Benzoic Acid	ND		ug/l	50	2.6	1
Benzyl Alcohol	ND		ug/l	2.0	0.59	1
Carbazole	ND		ug/l	2.0	0.49	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	55		21-120
Phenol-d6	45		10-120
Nitrobenzene-d5	64		23-120
2-Fluorobiphenyl	68		15-120
2,4,6-Tribromophenol	63		10-120
4-Terphenyl-d14	74		41-149

Project Name: HK VENTURES-CALVERTON**Lab Number:** L2155680**Project Number:** HKV2101**Report Date:** 10/28/21**SAMPLE RESULTS**

Lab ID: L2155680-02

Date Collected: 10/12/21 12:25

Client ID: GW002

Date Received: 10/12/21

Sample Location: 4285 MIDDLE COUNTRY RD, CALVERTON, NY

Field Prep: Not Specified

Sample Depth:

Matrix: Water

Extraction Method: EPA 3510C

Analytical Method: 1,8270D-SIM

Extraction Date: 10/18/21 09:00

Analytical Date: 10/19/21 04:57

Analyst: DB

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
1,4 Dioxane by 8270D-SIM - Mansfield Lab						
1,4-Dioxane	902.		ng/l	144	32.6	1
Surrogate	% Recovery		Qualifier	Acceptance Criteria		
1,4-Dioxane-d8	44			15-110		

Project Name: HK VENTURES-CALVERTON**Lab Number:** L2155680**Project Number:** HKV2101**Report Date:** 10/28/21**SAMPLE RESULTS**

Lab ID: L2155680-02
 Client ID: GW002
 Sample Location: 4285 MIDDLE COUNTRY RD, CALVERTON, NY

Date Collected: 10/12/21 12:25
 Date Received: 10/12/21
 Field Prep: Not Specified

Sample Depth:

Matrix: Water
 Analytical Method: 1,8270D-SIM
 Analytical Date: 10/26/21 16:36
 Analyst: JJW

Extraction Method: EPA 3510C
 Extraction Date: 10/16/21 07:13

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS-SIM - Westborough Lab						
Acenaphthene	ND		ug/l	0.10	0.01	1
2-Chloronaphthalene	ND		ug/l	0.20	0.02	1
Fluoranthene	0.04	J	ug/l	0.10	0.02	1
Hexachlorobutadiene	ND		ug/l	0.50	0.05	1
Naphthalene	ND		ug/l	0.10	0.05	1
Benzo(a)anthracene	0.03	J	ug/l	0.10	0.02	1
Benzo(a)pyrene	ND		ug/l	0.10	0.02	1
Benzo(b)fluoranthene	0.03	J	ug/l	0.10	0.01	1
Benzo(k)fluoranthene	ND		ug/l	0.10	0.01	1
Chrysene	0.02	J	ug/l	0.10	0.01	1
Acenaphthylene	ND		ug/l	0.10	0.01	1
Anthracene	0.04	J	ug/l	0.10	0.01	1
Benzo(ghi)perylene	ND		ug/l	0.10	0.01	1
Fluorene	ND		ug/l	0.10	0.01	1
Phenanthrene	0.03	J	ug/l	0.10	0.02	1
Dibenzo(a,h)anthracene	ND		ug/l	0.10	0.01	1
Indeno(1,2,3-cd)pyrene	0.02	J	ug/l	0.10	0.01	1
Pyrene	0.04	J	ug/l	0.10	0.02	1
2-Methylnaphthalene	ND		ug/l	0.10	0.02	1
Pentachlorophenol	0.11	J	ug/l	0.80	0.01	1
Hexachlorobenzene	ND		ug/l	0.80	0.01	1
Hexachloroethane	ND		ug/l	0.80	0.06	1

Project Name: HK VENTURES-CALVERTON**Lab Number:** L2155680**Project Number:** HKV2101**Report Date:** 10/28/21**SAMPLE RESULTS**

Lab ID: L2155680-02

Date Collected: 10/12/21 12:25

Client ID: GW002

Date Received: 10/12/21

Sample Location: 4285 MIDDLE COUNTRY RD, CALVERTON, NY

Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
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Semivolatile Organics by GC/MS-SIM - Westborough Lab

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	57		21-120
Phenol-d6	47		10-120
Nitrobenzene-d5	79		23-120
2-Fluorobiphenyl	81		15-120
2,4,6-Tribromophenol	86		10-120
4-Terphenyl-d14	79		41-149

Project Name: HK VENTURES-CALVERTON**Lab Number:** L2155680**Project Number:** HKV2101**Report Date:** 10/28/21**SAMPLE RESULTS**

Lab ID: L2155680-02
 Client ID: GW002
 Sample Location: 4285 MIDDLE COUNTRY RD, CALVERTON, NY

Date Collected: 10/12/21 12:25
 Date Received: 10/12/21
 Field Prep: Not Specified

Sample Depth:

Matrix: Water
 Analytical Method: 134,LCMSMS-ID
 Analytical Date: 10/17/21 04:37
 Analyst: SG

Extraction Method: ALPHA 23528
 Extraction Date: 10/14/21 16:50

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab						
Perfluorobutanoic Acid (PFBA)	58.4		ng/l	1.84	0.376	1
Perfluoropentanoic Acid (PFPeA)	88.6		ng/l	1.84	0.365	1
Perfluorobutanesulfonic Acid (PFBS)	26.4		ng/l	1.84	0.219	1
Perfluorohexanoic Acid (PFHxA)	81.6		ng/l	1.84	0.302	1
Perfluoroheptanoic Acid (PFHpA)	35.8		ng/l	1.84	0.208	1
Perfluorohexanesulfonic Acid (PFHxS)	20.6	F	ng/l	1.84	0.347	1
Perfluorooctanoic Acid (PFOA)	90.0		ng/l	1.84	0.218	1
1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	3.39		ng/l	1.84	1.23	1
Perfluoroheptanesulfonic Acid (PFHpS)	ND		ng/l	1.84	0.634	1
Perfluorononanoic Acid (PFNA)	7.71		ng/l	1.84	0.288	1
Perfluorooctanesulfonic Acid (PFOS)	34.7		ng/l	1.84	0.465	1
Perfluorodecanoic Acid (PFDA)	2.32		ng/l	1.84	0.280	1
1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	ND		ng/l	1.84	1.12	1
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	ND		ng/l	1.84	0.598	1
Perfluoroundecanoic Acid (PFUnA)	0.627	J	ng/l	1.84	0.240	1
Perfluorodecanesulfonic Acid (PFDS)	ND		ng/l	1.84	0.904	1
Perfluorooctanesulfonamide (FOSA)	ND		ng/l	1.84	0.535	1
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND		ng/l	1.84	0.741	1
Perfluorododecanoic Acid (PFDoA)	ND		ng/l	1.84	0.343	1
Perfluorotridecanoic Acid (PFTrDA)	ND		ng/l	1.84	0.302	1
Perfluorotetradecanoic Acid (PFTA)	ND		ng/l	1.84	0.229	1
PFOA/PFOS, Total	125		ng/l	1.84	0.218	1

Project Name: HK VENTURES-CALVERTON**Lab Number:** L2155680**Project Number:** HKV2101**Report Date:** 10/28/21**SAMPLE RESULTS****Lab ID:** L2155680-02**Date Collected:** 10/12/21 12:25**Client ID:** GW002**Date Received:** 10/12/21**Sample Location:** 4285 MIDDLE COUNTRY RD, CALVERTON, NY**Field Prep:** Not Specified**Sample Depth:**

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab						

Surrogate (Extracted Internal Standard)	% Recovery	Qualifier	Acceptance Criteria
Perfluoro[13C4]Butanoic Acid (MPFBA)	82		58-132
Perfluoro[13C5]Pentanoic Acid (M5PFPEA)	59	Q	62-163
Perfluoro[2,3,4-13C3]Butanesulfonic Acid (M3PFBS)	72		70-131
Perfluoro[1,2,3,4,6-13C5]Hexanoic Acid (M5PFHxA)	52	Q	57-129
Perfluoro[1,2,3,4-13C4]Heptanoic Acid (M4PFHpA)	66		60-129
Perfluoro[1,2,3-13C3]Hexanesulfonic Acid (M3PFHxS)	84		71-134
Perfluoro[13C8]Octanoic Acid (M8PFOA)	80		62-129
1H,1H,2H,2H-Perfluoro[1,2-13C2]Octanesulfonic Acid (M2-6:2FTS)	238	Q	14-147
Perfluoro[13C9]Nonanoic Acid (M9PFNA)	92		59-139
Perfluoro[13C8]Octanesulfonic Acid (M8PFOS)	84		69-131
Perfluoro[1,2,3,4,5,6-13C6]Decanoic Acid (M6PFDA)	82		62-124
1H,1H,2H,2H-Perfluoro[1,2-13C2]Decanesulfonic Acid (M2-8:2FTS)	238	Q	10-162
N-Deuteriomethylperfluoro-1-octanesulfonamidoacetic Acid (d3-NMeFOSAA)	117	Q	24-116
Perfluoro[1,2,3,4,5,6,7-13C7]Undecanoic Acid (M7-PFUDA)	91		55-137
Perfluoro[13C8]Octanesulfonamide (M8FOSA)	43		10-112
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA)	112		27-126
Perfluoro[1,2-13C2]Dodecanoic Acid (MPFDOA)	84		48-131
Perfluoro[1,2-13C2]Tetradecanoic Acid (M2PFTEDA)	68		22-136

Project Name: HK VENTURES-CALVERTON**Lab Number:** L2155680**Project Number:** HKV2101**Report Date:** 10/28/21**SAMPLE RESULTS**

Lab ID: L2155680-03
 Client ID: GW003
 Sample Location: 4285 MIDDLE COUNTRY RD, CALVERTON, NY

Date Collected: 10/12/21 14:00
 Date Received: 10/12/21
 Field Prep: Not Specified

Sample Depth:

Matrix: Water
 Analytical Method: 1,8270D
 Analytical Date: 10/18/21 18:07
 Analyst: SZ

Extraction Method: EPA 3510C
 Extraction Date: 10/16/21 07:12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.50	1
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.50	1
1,2-Dichlorobenzene	ND		ug/l	2.0	0.45	1
1,3-Dichlorobenzene	ND		ug/l	2.0	0.40	1
1,4-Dichlorobenzene	ND		ug/l	2.0	0.43	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.6	1
2,4-Dinitrotoluene	ND		ug/l	5.0	1.2	1
2,6-Dinitrotoluene	ND		ug/l	5.0	0.93	1
4-Chlorophenyl phenyl ether	ND		ug/l	2.0	0.49	1
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.38	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.53	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.50	1
Hexachlorocyclopentadiene	ND		ug/l	20	0.69	1
Isophorone	ND		ug/l	5.0	1.2	1
Nitrobenzene	ND		ug/l	2.0	0.77	1
NDPA/DPA	ND		ug/l	2.0	0.42	1
n-Nitrosodi-n-propylamine	ND		ug/l	5.0	0.64	1
Bis(2-ethylhexyl)phthalate	ND		ug/l	3.0	1.5	1
Butyl benzyl phthalate	ND		ug/l	5.0	1.2	1
Di-n-butylphthalate	ND		ug/l	5.0	0.39	1
Di-n-octylphthalate	ND		ug/l	5.0	1.3	1
Diethyl phthalate	ND		ug/l	5.0	0.38	1
Dimethyl phthalate	ND		ug/l	5.0	1.8	1
Biphenyl	ND		ug/l	2.0	0.46	1
4-Chloroaniline	ND		ug/l	5.0	1.1	1
2-Nitroaniline	ND		ug/l	5.0	0.50	1
3-Nitroaniline	ND		ug/l	5.0	0.81	1
4-Nitroaniline	ND		ug/l	5.0	0.80	1

Project Name: HK VENTURES-CALVERTON**Lab Number:** L2155680**Project Number:** HKV2101**Report Date:** 10/28/21**SAMPLE RESULTS****Lab ID:** L2155680-03**Date Collected:** 10/12/21 14:00**Client ID:** GW003**Date Received:** 10/12/21**Sample Location:** 4285 MIDDLE COUNTRY RD, CALVERTON, NY**Field Prep:** Not Specified**Sample Depth:**

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Dibenzofuran	ND		ug/l	2.0	0.50	1
1,2,4,5-Tetrachlorobenzene	ND		ug/l	10	0.44	1
Acetophenone	ND		ug/l	5.0	0.53	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.61	1
p-Chloro-m-cresol	ND		ug/l	2.0	0.35	1
2-Chlorophenol	ND		ug/l	2.0	0.48	1
2,4-Dichlorophenol	ND		ug/l	5.0	0.41	1
2,4-Dimethylphenol	ND		ug/l	5.0	1.8	1
2-Nitrophenol	ND		ug/l	10	0.85	1
4-Nitrophenol	ND		ug/l	10	0.67	1
2,4-Dinitrophenol	ND		ug/l	20	6.6	1
4,6-Dinitro-o-cresol	ND		ug/l	10	1.8	1
Phenol	ND		ug/l	5.0	0.57	1
2-Methylphenol	ND		ug/l	5.0	0.49	1
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.48	1
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.77	1
Benzoic Acid	ND		ug/l	50	2.6	1
Benzyl Alcohol	ND		ug/l	2.0	0.59	1
Carbazole	ND		ug/l	2.0	0.49	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	56		21-120
Phenol-d6	45		10-120
Nitrobenzene-d5	69		23-120
2-Fluorobiphenyl	71		15-120
2,4,6-Tribromophenol	68		10-120
4-Terphenyl-d14	72		41-149

Project Name: HK VENTURES-CALVERTON**Lab Number:** L2155680**Project Number:** HKV2101**Report Date:** 10/28/21**SAMPLE RESULTS**

Lab ID: L2155680-03

Date Collected: 10/12/21 14:00

Client ID: GW003

Date Received: 10/12/21

Sample Location: 4285 MIDDLE COUNTRY RD, CALVERTON, NY

Field Prep: Not Specified

Sample Depth:

Matrix: Water

Extraction Method: EPA 3510C

Analytical Method: 1,8270D-SIM

Extraction Date: 10/18/21 09:00

Analytical Date: 10/19/21 05:24

Analyst: DB

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
1,4 Dioxane by 8270D-SIM - Mansfield Lab						
1,4-Dioxane	ND		ng/l	150	33.9	1
Surrogate	% Recovery		Qualifier	Acceptance Criteria		
1,4-Dioxane-d8	44			15-110		

Project Name: HK VENTURES-CALVERTON**Lab Number:** L2155680**Project Number:** HKV2101**Report Date:** 10/28/21**SAMPLE RESULTS**

Lab ID: L2155680-03
 Client ID: GW003
 Sample Location: 4285 MIDDLE COUNTRY RD, CALVERTON, NY

Date Collected: 10/12/21 14:00
 Date Received: 10/12/21
 Field Prep: Not Specified

Sample Depth:

Matrix: Water
 Analytical Method: 1,8270D-SIM
 Analytical Date: 10/26/21 16:56
 Analyst: DV

Extraction Method: EPA 3510C
 Extraction Date: 10/16/21 07:13

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS-SIM - Westborough Lab						
Acenaphthene	ND		ug/l	0.10	0.01	1
2-Chloronaphthalene	ND		ug/l	0.20	0.02	1
Fluoranthene	0.03	J	ug/l	0.10	0.02	1
Hexachlorobutadiene	ND		ug/l	0.50	0.05	1
Naphthalene	0.07	J	ug/l	0.10	0.05	1
Benzo(a)anthracene	ND		ug/l	0.10	0.02	1
Benzo(a)pyrene	ND		ug/l	0.10	0.02	1
Benzo(b)fluoranthene	0.02	J	ug/l	0.10	0.01	1
Benzo(k)fluoranthene	ND		ug/l	0.10	0.01	1
Chrysene	ND		ug/l	0.10	0.01	1
Acenaphthylene	ND		ug/l	0.10	0.01	1
Anthracene	ND		ug/l	0.10	0.01	1
Benzo(ghi)perylene	ND		ug/l	0.10	0.01	1
Fluorene	ND		ug/l	0.10	0.01	1
Phenanthrene	0.05	J	ug/l	0.10	0.02	1
Dibenzo(a,h)anthracene	ND		ug/l	0.10	0.01	1
Indeno(1,2,3-cd)pyrene	0.01	J	ug/l	0.10	0.01	1
Pyrene	0.02	J	ug/l	0.10	0.02	1
2-Methylnaphthalene	0.03	J	ug/l	0.10	0.02	1
Pentachlorophenol	ND		ug/l	0.80	0.01	1
Hexachlorobenzene	ND		ug/l	0.80	0.01	1
Hexachloroethane	ND		ug/l	0.80	0.06	1

Project Name: HK VENTURES-CALVERTON**Lab Number:** L2155680**Project Number:** HKV2101**Report Date:** 10/28/21**SAMPLE RESULTS**

Lab ID: L2155680-03

Date Collected: 10/12/21 14:00

Client ID: GW003

Date Received: 10/12/21

Sample Location: 4285 MIDDLE COUNTRY RD, CALVERTON, NY

Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS-SIM - Westborough Lab						

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	55		21-120
Phenol-d6	45		10-120
Nitrobenzene-d5	77		23-120
2-Fluorobiphenyl	77		15-120
2,4,6-Tribromophenol	81		10-120
4-Terphenyl-d14	70		41-149

Project Name: HK VENTURES-CALVERTON**Lab Number:** L2155680**Project Number:** HKV2101**Report Date:** 10/28/21**SAMPLE RESULTS**

Lab ID: L2155680-03
 Client ID: GW003
 Sample Location: 4285 MIDDLE COUNTRY RD, CALVERTON, NY

Date Collected: 10/12/21 14:00
 Date Received: 10/12/21
 Field Prep: Not Specified

Sample Depth:

Matrix: Water
 Analytical Method: 134,LCMSMS-ID
 Analytical Date: 10/17/21 04:54
 Analyst: SG

Extraction Method: ALPHA 23528
 Extraction Date: 10/14/21 16:50

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab						
Perfluorobutanoic Acid (PFBA)	ND		ng/l	1.88	0.383	1
Perfluoropentanoic Acid (PFPeA)	0.771	J	ng/l	1.88	0.372	1
Perfluorobutanesulfonic Acid (PFBS)	ND		ng/l	1.88	0.224	1
Perfluorohexanoic Acid (PFHxA)	0.331	J	ng/l	1.88	0.308	1
Perfluoroheptanoic Acid (PFHpA)	ND		ng/l	1.88	0.212	1
Perfluorohexanesulfonic Acid (PFHxS)	ND		ng/l	1.88	0.353	1
Perfluorooctanoic Acid (PFOA)	0.376	J	ng/l	1.88	0.222	1
1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	ND		ng/l	1.88	1.25	1
Perfluoroheptanesulfonic Acid (PFHpS)	ND		ng/l	1.88	0.647	1
Perfluorononanoic Acid (PFNA)	ND		ng/l	1.88	0.293	1
Perfluorooctanesulfonic Acid (PFOS)	ND		ng/l	1.88	0.474	1
Perfluorodecanoic Acid (PFDA)	ND		ng/l	1.88	0.286	1
1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	ND		ng/l	1.88	1.14	1
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	ND		ng/l	1.88	0.609	1
Perfluoroundecanoic Acid (PFUnA)	ND		ng/l	1.88	0.244	1
Perfluorodecanesulfonic Acid (PFDS)	ND		ng/l	1.88	0.921	1
Perfluorooctanesulfonamide (FOSA)	ND		ng/l	1.88	0.545	1
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND		ng/l	1.88	0.756	1
Perfluorododecanoic Acid (PFDoA)	ND		ng/l	1.88	0.350	1
Perfluorotridecanoic Acid (PFTrDA)	ND		ng/l	1.88	0.308	1
Perfluorotetradecanoic Acid (PFTA)	ND		ng/l	1.88	0.233	1
PFOA/PFOS, Total	0.376	J	ng/l	1.88	0.222	1

Project Name: HK VENTURES-CALVERTON**Lab Number:** L2155680**Project Number:** HKV2101**Report Date:** 10/28/21**SAMPLE RESULTS****Lab ID:** L2155680-03**Date Collected:** 10/12/21 14:00**Client ID:** GW003**Date Received:** 10/12/21**Sample Location:** 4285 MIDDLE COUNTRY RD, CALVERTON, NY**Field Prep:** Not Specified**Sample Depth:**

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab						

Surrogate (Extracted Internal Standard)	% Recovery	Qualifier	Acceptance Criteria
Perfluoro[13C4]Butanoic Acid (MPFBA)	72		58-132
Perfluoro[13C5]Pentanoic Acid (M5PFPEA)	80		62-163
Perfluoro[2,3,4-13C3]Butanesulfonic Acid (M3PFBS)	103		70-131
Perfluoro[1,2,3,4,6-13C5]Hexanoic Acid (M5PFHxA)	73		57-129
Perfluoro[1,2,3,4-13C4]Heptanoic Acid (M4PFHpA)	75		60-129
Perfluoro[1,2,3-13C3]Hexanesulfonic Acid (M3PFHxS)	103		71-134
Perfluoro[13C8]Octanoic Acid (M8PFOA)	80		62-129
1H,1H,2H,2H-Perfluoro[1,2-13C2]Octanesulfonic Acid (M2-6:2FTS)	94		14-147
Perfluoro[13C9]Nonanoic Acid (M9PFNA)	89		59-139
Perfluoro[13C8]Octanesulfonic Acid (M8PFOS)	100		69-131
Perfluoro[1,2,3,4,5,6-13C6]Decanoic Acid (M6PFDA)	89		62-124
1H,1H,2H,2H-Perfluoro[1,2-13C2]Decanesulfonic Acid (M2-8:2FTS)	100		10-162
N-Deuteriomethylperfluoro-1-octanesulfonamidoacetic Acid (d3-NMeFOSAA)	73		24-116
Perfluoro[1,2,3,4,5,6,7-13C7]Undecanoic Acid (M7-PFUDA)	97		55-137
Perfluoro[13C8]Octanesulfonamide (M8FOSA)	25		10-112
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA)	87		27-126
Perfluoro[1,2-13C2]Dodecanoic Acid (MPFDOA)	89		48-131
Perfluoro[1,2-13C2]Tetradecanoic Acid (M2PFTEDA)	86		22-136

Project Name: HK VENTURES-CALVERTON**Lab Number:** L2155680**Project Number:** HKV2101**Report Date:** 10/28/21**SAMPLE RESULTS**

Lab ID: L2155680-04
 Client ID: FIELD BLANK
 Sample Location: 4285 MIDDLE COUNTRY RD, CALVERTON, NY

Date Collected: 10/12/21 14:25
 Date Received: 10/12/21
 Field Prep: Not Specified

Sample Depth:

Matrix: Water
 Analytical Method: 134,LCMSMS-ID
 Analytical Date: 10/17/21 05:10
 Analyst: SG

Extraction Method: ALPHA 23528
 Extraction Date: 10/14/21 16:50

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab						
Perfluorobutanoic Acid (PFBA)	ND		ng/l	1.79	0.364	1
Perfluoropentanoic Acid (PFPeA)	0.364	J	ng/l	1.79	0.354	1
Perfluorobutanesulfonic Acid (PFBS)	ND		ng/l	1.79	0.212	1
Perfluorohexanoic Acid (PFHxA)	ND		ng/l	1.79	0.293	1
Perfluoroheptanoic Acid (PFHpA)	ND		ng/l	1.79	0.201	1
Perfluorohexanesulfonic Acid (PFHxS)	ND		ng/l	1.79	0.336	1
Perfluorooctanoic Acid (PFOA)	ND		ng/l	1.79	0.211	1
1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	ND		ng/l	1.79	1.19	1
Perfluoroheptanesulfonic Acid (PFHpS)	ND		ng/l	1.79	0.614	1
Perfluorononanoic Acid (PFNA)	ND		ng/l	1.79	0.279	1
Perfluorooctanesulfonic Acid (PFOS)	ND		ng/l	1.79	0.450	1
Perfluorodecanoic Acid (PFDA)	ND		ng/l	1.79	0.272	1
1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	ND		ng/l	1.79	1.08	1
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	ND		ng/l	1.79	0.579	1
Perfluoroundecanoic Acid (PFUnA)	ND		ng/l	1.79	0.232	1
Perfluorodecanesulfonic Acid (PFDS)	ND		ng/l	1.79	0.875	1
Perfluorooctanesulfonamide (FOSA)	ND		ng/l	1.79	0.518	1
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND		ng/l	1.79	0.718	1
Perfluorododecanoic Acid (PFDoA)	ND		ng/l	1.79	0.332	1
Perfluorotridecanoic Acid (PFTrDA)	ND		ng/l	1.79	0.292	1
Perfluorotetradecanoic Acid (PFTA)	ND		ng/l	1.79	0.222	1
PFOA/PFOS, Total	ND		ng/l	1.79	0.211	1

Project Name: HK VENTURES-CALVERTON**Lab Number:** L2155680**Project Number:** HKV2101**Report Date:** 10/28/21**SAMPLE RESULTS****Lab ID:** L2155680-04**Date Collected:** 10/12/21 14:25**Client ID:** FIELD BLANK**Date Received:** 10/12/21**Sample Location:** 4285 MIDDLE COUNTRY RD, CALVERTON, NY**Field Prep:** Not Specified**Sample Depth:**

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab						

Surrogate (Extracted Internal Standard)	% Recovery	Qualifier	Acceptance Criteria
Perfluoro[13C4]Butanoic Acid (MPFBA)	95		58-132
Perfluoro[13C5]Pentanoic Acid (M5PFPEA)	109		62-163
Perfluoro[2,3,4-13C3]Butanesulfonic Acid (M3PFBS)	101		70-131
Perfluoro[1,2,3,4,6-13C5]Hexanoic Acid (M5PFHxA)	92		57-129
Perfluoro[1,2,3,4-13C4]Heptanoic Acid (M4PFHpA)	90		60-129
Perfluoro[1,2,3-13C3]Hexanesulfonic Acid (M3PFHxS)	99		71-134
Perfluoro[13C8]Octanoic Acid (M8PFOA)	93		62-129
1H,1H,2H,2H-Perfluoro[1,2-13C2]Octanesulfonic Acid (M2-6:2FTS)	78		14-147
Perfluoro[13C9]Nonanoic Acid (M9PFNA)	97		59-139
Perfluoro[13C8]Octanesulfonic Acid (M8PFOS)	99		69-131
Perfluoro[1,2,3,4,5,6-13C6]Decanoic Acid (M6PFDA)	101		62-124
1H,1H,2H,2H-Perfluoro[1,2-13C2]Decanesulfonic Acid (M2-8:2FTS)	86		10-162
N-Deuteriomethylperfluoro-1-octanesulfonamidoacetic Acid (d3-NMeFOSAA)	96		24-116
Perfluoro[1,2,3,4,5,6,7-13C7]Undecanoic Acid (M7-PFUDA)	106		55-137
Perfluoro[13C8]Octanesulfonamide (M8FOSA)	32		10-112
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA)	99		27-126
Perfluoro[1,2-13C2]Dodecanoic Acid (MPFDOA)	98		48-131
Perfluoro[1,2-13C2]Tetradecanoic Acid (M2PFTEDA)	91		22-136

Project Name: HK VENTURES-CALVERTON
Project Number: HKV2101

Lab Number: L2155680
Report Date: 10/28/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 134,LCMSMS-ID
Analytical Date: 10/17/21 02:25
Analyst: SG

Extraction Method: ALPHA 23528
Extraction Date: 10/14/21 16:50

Parameter	Result	Qualifier	Units	RL	MDL
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab for sample(s): 01-04 Batch: WG1558724-1					
Perfluorobutanoic Acid (PFBA)	ND		ng/l	2.00	0.408
Perfluoropentanoic Acid (PFPeA)	0.412	J	ng/l	2.00	0.396
Perfluorobutanesulfonic Acid (PFBS)	ND		ng/l	2.00	0.238
Perfluorohexanoic Acid (PFHxA)	ND		ng/l	2.00	0.328
Perfluoroheptanoic Acid (PFHpA)	ND		ng/l	2.00	0.225
Perfluorohexanesulfonic Acid (PFHxS)	ND		ng/l	2.00	0.376
Perfluorooctanoic Acid (PFOA)	ND		ng/l	2.00	0.236
1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	ND		ng/l	2.00	1.33
Perfluoroheptanesulfonic Acid (PFHpS)	ND		ng/l	2.00	0.688
Perfluorononanoic Acid (PFNA)	ND		ng/l	2.00	0.312
Perfluorooctanesulfonic Acid (PFOS)	ND		ng/l	2.00	0.504
Perfluorodecanoic Acid (PFDA)	ND		ng/l	2.00	0.304
1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	ND		ng/l	2.00	1.21
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	ND		ng/l	2.00	0.648
Perfluoroundecanoic Acid (PFUnA)	ND		ng/l	2.00	0.260
Perfluorodecanesulfonic Acid (PFDS)	ND		ng/l	2.00	0.980
Perfluorooctanesulfonamide (FOSA)	ND		ng/l	2.00	0.580
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND		ng/l	2.00	0.804
Perfluorododecanoic Acid (PFDoA)	ND		ng/l	2.00	0.372
Perfluorotridecanoic Acid (PFTrDA)	ND		ng/l	2.00	0.327
Perfluorotetradecanoic Acid (PFTA)	ND		ng/l	2.00	0.248
PFOA/PFOS, Total	ND		ng/l	2.00	0.236

Project Name: HK VENTURES-CALVERTON
Project Number: HKV2101

Lab Number: L2155680
Report Date: 10/28/21

**Method Blank Analysis
Batch Quality Control**

Analytical Method: 134,LCMSMS-ID
Analytical Date: 10/17/21 02:25
Analyst: SG

Extraction Method: ALPHA 23528
Extraction Date: 10/14/21 16:50

Parameter	Result	Qualifier	Units	RL	MDL
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab for sample(s): 01-04 Batch: WG1558724-1					

Surrogate (Extracted Internal Standard)	%Recovery	Qualifier	Acceptance Criteria
Perfluoro[13C4]Butanoic Acid (MPFBA)	97		58-132
Perfluoro[13C5]Pentanoic Acid (M5PFPEA)	113		62-163
Perfluoro[2,3,4-13C3]Butanesulfonic Acid (M3PFBS)	101		70-131
Perfluoro[1,2,3,4,6-13C5]Hexanoic Acid (M5PFHxA)	93		57-129
Perfluoro[1,2,3,4-13C4]Heptanoic Acid (M4PFHpA)	93		60-129
Perfluoro[1,2,3-13C3]Hexanesulfonic Acid (M3PFHxS)	108		71-134
Perfluoro[13C8]Octanoic Acid (M8PFOA)	95		62-129
1H,1H,2H,2H-Perfluoro[1,2-13C2]Octanesulfonic Acid (M2-6:2FTS)	77		14-147
Perfluoro[13C9]Nonanoic Acid (M9PFNA)	99		59-139
Perfluoro[13C8]Octanesulfonic Acid (M8PFOS)	100		69-131
Perfluoro[1,2,3,4,5,6-13C6]Decanoic Acid (M6PFDA)	100		62-124
1H,1H,2H,2H-Perfluoro[1,2-13C2]Decanesulfonic Acid (M2-8:2FTS)	90		10-162
N-Deuteriomethylperfluoro-1-octanesulfonamidoacetic Acid (d3-NMeFOSAA)	93		24-116
Perfluoro[1,2,3,4,5,6,7-13C7]Undecanoic Acid (M7-PFUDA)	105		55-137
Perfluoro[13C8]Octanesulfonamide (M8FOSA)	34		10-112
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA)	101		27-126
Perfluoro[1,2-13C2]Dodecanoic Acid (MPFDOA)	99		48-131
Perfluoro[1,2-13C2]Tetradecanoic Acid (M2PFTEDA)	93		22-136

Project Name: HK VENTURES-CALVERTON
Project Number: HKV2101

Lab Number: L2155680
Report Date: 10/28/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 134,LCMSMS-ID
Analytical Date: 10/24/21 19:20
Analyst: SG

Extraction Method: ALPHA 23528
Extraction Date: 10/14/21 16:50

Parameter	Result	Qualifier	Units	RL	MDL
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab for sample(s): 01-04 Batch: WG1558724-1					
Perfluorooctanesulfonamide (FOSA)	ND		ng/l	2.00	0.580

Surrogate (Extracted Internal Standard)	%Recovery	Qualifier	Acceptance Criteria
Perfluoro[13C8]Octanesulfonamide (M8FOSA)	58		10-112

Project Name: HK VENTURES-CALVERTON
Project Number: HKV2101

Lab Number: L2155680
Report Date: 10/28/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8270D
Analytical Date: 10/16/21 15:04
Analyst: SZ

Extraction Method: EPA 3510C
Extraction Date: 10/15/21 09:07

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS - Westborough Lab for sample(s): 01-03 Batch: WG1559061-1					
Acenaphthene	ND		ug/l	2.0	0.44
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.50
Hexachlorobenzene	ND		ug/l	2.0	0.46
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.50
2-Chloronaphthalene	ND		ug/l	2.0	0.44
1,2-Dichlorobenzene	ND		ug/l	2.0	0.45
1,3-Dichlorobenzene	ND		ug/l	2.0	0.40
1,4-Dichlorobenzene	ND		ug/l	2.0	0.43
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.6
2,4-Dinitrotoluene	ND		ug/l	5.0	1.2
2,6-Dinitrotoluene	ND		ug/l	5.0	0.93
Fluoranthene	ND		ug/l	2.0	0.26
4-Chlorophenyl phenyl ether	ND		ug/l	2.0	0.49
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.38
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.53
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.50
Hexachlorobutadiene	ND		ug/l	2.0	0.66
Hexachlorocyclopentadiene	ND		ug/l	20	0.69
Hexachloroethane	ND		ug/l	2.0	0.58
Isophorone	ND		ug/l	5.0	1.2
Naphthalene	ND		ug/l	2.0	0.46
Nitrobenzene	ND		ug/l	2.0	0.77
NDPA/DPA	ND		ug/l	2.0	0.42
n-Nitrosodi-n-propylamine	ND		ug/l	5.0	0.64
Bis(2-ethylhexyl)phthalate	ND		ug/l	3.0	1.5
Butyl benzyl phthalate	ND		ug/l	5.0	1.2
Di-n-butylphthalate	ND		ug/l	5.0	0.39
Di-n-octylphthalate	ND		ug/l	5.0	1.3
Diethyl phthalate	ND		ug/l	5.0	0.38

Project Name: HK VENTURES-CALVERTON
Project Number: HKV2101

Lab Number: L2155680
Report Date: 10/28/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8270D
Analytical Date: 10/16/21 15:04
Analyst: SZ

Extraction Method: EPA 3510C
Extraction Date: 10/15/21 09:07

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS - Westborough Lab for sample(s): 01-03 Batch: WG1559061-1					
Dimethyl phthalate	ND		ug/l	5.0	1.8
Benzo(a)anthracene	ND		ug/l	2.0	0.32
Benzo(a)pyrene	ND		ug/l	2.0	0.41
Benzo(b)fluoranthene	ND		ug/l	2.0	0.35
Benzo(k)fluoranthene	ND		ug/l	2.0	0.37
Chrysene	ND		ug/l	2.0	0.34
Acenaphthylene	ND		ug/l	2.0	0.46
Anthracene	ND		ug/l	2.0	0.33
Benzo(ghi)perylene	ND		ug/l	2.0	0.30
Fluorene	ND		ug/l	2.0	0.41
Phenanthrene	ND		ug/l	2.0	0.33
Dibenzo(a,h)anthracene	ND		ug/l	2.0	0.32
Indeno(1,2,3-cd)pyrene	ND		ug/l	2.0	0.40
Pyrene	ND		ug/l	2.0	0.28
Biphenyl	ND		ug/l	2.0	0.46
4-Chloroaniline	ND		ug/l	5.0	1.1
2-Nitroaniline	ND		ug/l	5.0	0.50
3-Nitroaniline	ND		ug/l	5.0	0.81
4-Nitroaniline	ND		ug/l	5.0	0.80
Dibenzofuran	ND		ug/l	2.0	0.50
2-Methylnaphthalene	ND		ug/l	2.0	0.45
1,2,4,5-Tetrachlorobenzene	ND		ug/l	10	0.44
Acetophenone	ND		ug/l	5.0	0.53
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.61
p-Chloro-m-cresol	ND		ug/l	2.0	0.35
2-Chlorophenol	ND		ug/l	2.0	0.48
2,4-Dichlorophenol	ND		ug/l	5.0	0.41
2,4-Dimethylphenol	ND		ug/l	5.0	1.8
2-Nitrophenol	ND		ug/l	10	0.85

Project Name: HK VENTURES-CALVERTON
Project Number: HKV2101

Lab Number: L2155680
Report Date: 10/28/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8270D
Analytical Date: 10/16/21 15:04
Analyst: SZ

Extraction Method: EPA 3510C
Extraction Date: 10/15/21 09:07

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS - Westborough Lab for sample(s): 01-03 Batch: WG1559061-1					
4-Nitrophenol	ND		ug/l	10	0.67
2,4-Dinitrophenol	ND		ug/l	20	6.6
4,6-Dinitro-o-cresol	ND		ug/l	10	1.8
Pentachlorophenol	ND		ug/l	10	1.8
Phenol	ND		ug/l	5.0	0.57
2-Methylphenol	ND		ug/l	5.0	0.49
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.48
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.77
Benzoic Acid	ND		ug/l	50	2.6
Benzyl Alcohol	ND		ug/l	2.0	0.59
Carbazole	ND		ug/l	2.0	0.49

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	57		21-120
Phenol-d6	44		10-120
Nitrobenzene-d5	58		23-120
2-Fluorobiphenyl	57		15-120
2,4,6-Tribromophenol	46		10-120
4-Terphenyl-d14	58		41-149

Project Name: HK VENTURES-CALVERTON
Project Number: HKV2101

Lab Number: L2155680
Report Date: 10/28/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8270D-SIM
Analytical Date: 10/17/21 01:44
Analyst: RP

Extraction Method: EPA 3510C
Extraction Date: 10/15/21 09:08

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS-SIM - Westborough Lab for sample(s): 01-03 Batch: WG1559064-1					
Acenaphthene	ND		ug/l	0.10	0.01
2-Chloronaphthalene	ND		ug/l	0.20	0.02
Fluoranthene	ND		ug/l	0.10	0.02
Hexachlorobutadiene	ND		ug/l	0.50	0.05
Naphthalene	ND		ug/l	0.10	0.05
Benzo(a)anthracene	ND		ug/l	0.10	0.02
Benzo(a)pyrene	ND		ug/l	0.10	0.02
Benzo(b)fluoranthene	ND		ug/l	0.10	0.01
Benzo(k)fluoranthene	ND		ug/l	0.10	0.01
Chrysene	ND		ug/l	0.10	0.01
Acenaphthylene	ND		ug/l	0.10	0.01
Anthracene	ND		ug/l	0.10	0.01
Benzo(ghi)perylene	ND		ug/l	0.10	0.01
Fluorene	ND		ug/l	0.10	0.01
Phenanthrene	ND		ug/l	0.10	0.02
Dibenzo(a,h)anthracene	ND		ug/l	0.10	0.01
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.10	0.01
Pyrene	ND		ug/l	0.10	0.02
2-Methylnaphthalene	ND		ug/l	0.10	0.02
Pentachlorophenol	ND		ug/l	0.80	0.01
Hexachlorobenzene	ND		ug/l	0.80	0.01
Hexachloroethane	ND		ug/l	0.80	0.06

Project Name: HK VENTURES-CALVERTON
Project Number: HKV2101

Lab Number: L2155680
Report Date: 10/28/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8270D-SIM
 Analytical Date: 10/17/21 01:44
 Analyst: RP

Extraction Method: EPA 3510C
 Extraction Date: 10/15/21 09:08

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS-SIM - Westborough Lab for sample(s): 01-03 Batch: WG1559064-1					

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	58		21-120
Phenol-d6	49		10-120
Nitrobenzene-d5	109		23-120
2-Fluorobiphenyl	65		15-120
2,4,6-Tribromophenol	100		10-120
4-Terphenyl-d14	84		41-149

Project Name: HK VENTURES-CALVERTON
Project Number: HKV2101

Lab Number: L2155680
Report Date: 10/28/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8270D-SIM
Analytical Date: 10/19/21 02:38
Analyst: DB

Extraction Method: EPA 3510C
Extraction Date: 10/18/21 09:00

Parameter	Result	Qualifier	Units	RL	MDL
1,4 Dioxane by 8270D-SIM - Mansfield Lab for sample(s): 01-03 Batch: WG1559850-1					
1,4-Dioxane	ND		ng/l	150	33.9

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	47		15-110

Lab Control Sample Analysis

Batch Quality Control

Project Name: HK VENTURES-CALVERTON

Project Number: HKV2101

Lab Number: L2155680

Report Date: 10/28/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab Associated sample(s): 01-04 Batch: WG1558724-2								
Perfluorobutanoic Acid (PFBA)	96		-		67-148	-		30
Perfluoropentanoic Acid (PFPeA)	96		-		63-161	-		30
Perfluorobutanesulfonic Acid (PFBS)	94		-		65-157	-		30
Perfluorohexanoic Acid (PFHxA)	96		-		69-168	-		30
Perfluoroheptanoic Acid (PFHpA)	95		-		58-159	-		30
Perfluorohexanesulfonic Acid (PFHxS)	91		-		69-177	-		30
Perfluorooctanoic Acid (PFOA)	96		-		63-159	-		30
1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	100		-		49-187	-		30
Perfluoroheptanesulfonic Acid (PFHpS)	95		-		61-179	-		30
Perfluorononanoic Acid (PFNA)	94		-		68-171	-		30
Perfluorooctanesulfonic Acid (PFOS)	94		-		52-151	-		30
Perfluorodecanoic Acid (PFDA)	93		-		63-171	-		30
1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	107		-		56-173	-		30
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	99		-		60-166	-		30
Perfluoroundecanoic Acid (PFUnA)	95		-		60-153	-		30
Perfluorodecanesulfonic Acid (PFDS)	95		-		38-156	-		30
Perfluorooctanesulfonamide (FOSA)	89		-		46-170	-		30
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	93		-		45-170	-		30
Perfluorododecanoic Acid (PFDoA)	100		-		67-153	-		30
Perfluorotridecanoic Acid (PFTrDA)	108		-		48-158	-		30
Perfluorotetradecanoic Acid (PFTA)	103		-		59-182	-		30

Lab Control Sample Analysis

Batch Quality Control

Project Name: HK VENTURES-CALVERTON

Lab Number: L2155680

Project Number: HKV2101

Report Date: 10/28/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab Associated sample(s): 01-04 Batch: WG1558724-2								

Surrogate (Extracted Internal Standard)	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
Perfluoro[13C4]Butanoic Acid (MPFBA)	91				58-132
Perfluoro[13C5]Pentanoic Acid (M5PFPEA)	106				62-163
Perfluoro[2,3,4-13C3]Butanesulfonic Acid (M3PFBS)	96				70-131
Perfluoro[1,2,3,4,6-13C5]Hexanoic Acid (M5PFHxA)	88				57-129
Perfluoro[1,2,3,4-13C4]Heptanoic Acid (M4PFHpA)	88				60-129
Perfluoro[1,2,3-13C3]Hexanesulfonic Acid (M3PFHxS)	102				71-134
Perfluoro[13C8]Octanoic Acid (M8PFOA)	90				62-129
1H,1H,2H,2H-Perfluoro[1,2-13C2]Octanesulfonic Acid (M2-6:2FTS)	76				14-147
Perfluoro[13C9]Nonanoic Acid (M9PFNA)	94				59-139
Perfluoro[13C8]Octanesulfonic Acid (M8PFOS)	96				69-131
Perfluoro[1,2,3,4,5,6-13C6]Decanoic Acid (M6PFDA)	94				62-124
1H,1H,2H,2H-Perfluoro[1,2-13C2]Decanesulfonic Acid (M2-8:2FTS)	83				10-162
N-Deuteriomethylperfluoro-1-octanesulfonamidoacetic Acid (d3-NMeFOSAA)	80				24-116
Perfluoro[1,2,3,4,5,6,7-13C7]Undecanoic Acid (M7-PFUDA)	100				55-137
Perfluoro[13C8]Octanesulfonamide (M8FOSA)	43				10-112
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA)	105				27-126
Perfluoro[1,2-13C2]Dodecanoic Acid (MPFDOA)	94				48-131
Perfluoro[1,2-13C2]Tetradecanoic Acid (M2PFTEDA)	90				22-136

Lab Control Sample Analysis**Batch Quality Control****Project Name:** HK VENTURES-CALVERTON**Lab Number:** L2155680**Project Number:** HKV2101**Report Date:** 10/28/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab Associated sample(s): 01-04 Batch: WG1558724-2								
Perfluorooctanesulfonamide (FOSA)	108		-		46-170	-		30

Surrogate (Extracted Internal Standard)	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
Perfluoro[13C8]Octanesulfonamide (M8FOSA)	55				10-112

Lab Control Sample Analysis

Batch Quality Control

Project Name: HK VENTURES-CALVERTON

Project Number: HKV2101

Lab Number: L2155680

Report Date: 10/28/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-03 Batch: WG1559061-2 WG1559061-3								
Acenaphthene	44		68		37-111	43	Q	30
1,2,4-Trichlorobenzene	50		74		39-98	39	Q	30
Hexachlorobenzene	46		68		40-140	39	Q	30
Bis(2-chloroethyl)ether	45		69		40-140	42	Q	30
2-Chloronaphthalene	46		70		40-140	41	Q	30
1,2-Dichlorobenzene	49		70		40-140	35	Q	30
1,3-Dichlorobenzene	48		66		40-140	32	Q	30
1,4-Dichlorobenzene	49		71		36-97	37	Q	30
3,3'-Dichlorobenzidine	44		62		40-140	34	Q	30
2,4-Dinitrotoluene	43	Q	69		48-143	46	Q	30
2,6-Dinitrotoluene	46		74		40-140	47	Q	30
Fluoranthene	46		73		40-140	45	Q	30
4-Chlorophenyl phenyl ether	49		76		40-140	43	Q	30
4-Bromophenyl phenyl ether	46		70		40-140	41	Q	30
Bis(2-chloroisopropyl)ether	40		62		40-140	43	Q	30
Bis(2-chloroethoxy)methane	46		70		40-140	41	Q	30
Hexachlorobutadiene	49		73		40-140	39	Q	30
Hexachlorocyclopentadiene	42		63		40-140	40	Q	30
Hexachloroethane	44		65		40-140	39	Q	30
Isophorone	43		72		40-140	50	Q	30
Naphthalene	46		69		40-140	40	Q	30
Nitrobenzene	49		71		40-140	37	Q	30
NDPA/DPA	48		74		40-140	43	Q	30

Lab Control Sample Analysis

Batch Quality Control

Project Name: HK VENTURES-CALVERTON

Project Number: HKV2101

Lab Number: L2155680

Report Date: 10/28/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-03 Batch: WG1559061-2 WG1559061-3								
n-Nitrosodi-n-propylamine	44		68		29-132	43	Q	30
Bis(2-ethylhexyl)phthalate	40		61		40-140	42	Q	30
Butyl benzyl phthalate	40		66		40-140	49	Q	30
Di-n-butylphthalate	42		67		40-140	46	Q	30
Di-n-octylphthalate	45		64		40-140	35	Q	30
Diethyl phthalate	44		66		40-140	40	Q	30
Dimethyl phthalate	46		70		40-140	41	Q	30
Benzo(a)anthracene	49		72		40-140	38	Q	30
Benzo(a)pyrene	51		77		40-140	41	Q	30
Benzo(b)fluoranthene	49		73		40-140	39	Q	30
Benzo(k)fluoranthene	51		75		40-140	38	Q	30
Chrysene	49		72		40-140	38	Q	30
Acenaphthylene	48		72		45-123	40	Q	30
Anthracene	48		70		40-140	37	Q	30
Benzo(ghi)perylene	51		76		40-140	39	Q	30
Fluorene	47		72		40-140	42	Q	30
Phenanthrene	45		69		40-140	42	Q	30
Dibenzo(a,h)anthracene	52		76		40-140	38	Q	30
Indeno(1,2,3-cd)pyrene	51		75		40-140	38	Q	30
Pyrene	46		73		26-127	45	Q	30
Biphenyl	49		75		40-140	42	Q	30
4-Chloroaniline	47		69		40-140	38	Q	30
2-Nitroaniline	48	Q	70		52-143	37	Q	30

Lab Control Sample Analysis

Batch Quality Control

Project Name: HK VENTURES-CALVERTON

Project Number: HKV2101

Lab Number: L2155680

Report Date: 10/28/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-03 Batch: WG1559061-2 WG1559061-3								
3-Nitroaniline	41		64		25-145	44	Q	30
4-Nitroaniline	40	Q	64		51-143	46	Q	30
Dibenzofuran	47		72		40-140	42	Q	30
2-Methylnaphthalene	46		72		40-140	44	Q	30
1,2,4,5-Tetrachlorobenzene	52		78		2-134	40	Q	30
Acetophenone	49		72		39-129	38	Q	30
2,4,6-Trichlorophenol	51		74		30-130	37	Q	30
p-Chloro-m-cresol	50		75		23-97	40	Q	30
2-Chlorophenol	48		73		27-123	41	Q	30
2,4-Dichlorophenol	54		79		30-130	38	Q	30
2,4-Dimethylphenol	52		76		30-130	38	Q	30
2-Nitrophenol	49		74		30-130	41	Q	30
4-Nitrophenol	39		60		10-80	42	Q	30
2,4-Dinitrophenol	47		59		20-130	23		30
4,6-Dinitro-o-cresol	44		64		20-164	37	Q	30
Pentachlorophenol	40		66		9-103	49	Q	30
Phenol	38		60		12-110	45	Q	30
2-Methylphenol	51		74		30-130	37	Q	30
3-Methylphenol/4-Methylphenol	51		75		30-130	38	Q	30
2,4,5-Trichlorophenol	50		77		30-130	43	Q	30
Benzoic Acid	21		29		10-164	32	Q	30
Benzyl Alcohol	48		75		26-116	44	Q	30
Carbazole	46	Q	72		55-144	44	Q	30

Lab Control Sample Analysis**Batch Quality Control****Project Name:** HK VENTURES-CALVERTON**Lab Number:** L2155680**Project Number:** HKV2101**Report Date:** 10/28/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
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Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-03 Batch: WG1559061-2 WG1559061-3

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
2-Fluorophenol	45		66		21-120
Phenol-d6	36		53		10-120
Nitrobenzene-d5	46		66		23-120
2-Fluorobiphenyl	44		67		15-120
2,4,6-Tribromophenol	39		63		10-120
4-Terphenyl-d14	46		71		41-149

Lab Control Sample Analysis **Batch Quality Control**

Project Name: HK VENTURES-CALVERTON

Lab Number: L2155680

Project Number: HKV2101

Report Date: 10/28/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS-SIM - Westborough Lab Associated sample(s): 01-03 Batch: WG1559064-2 WG1559064-3								
Acenaphthene	61		68		40-140	11		40
2-Chloronaphthalene	62		70		40-140	12		40
Fluoranthene	70		78		40-140	11		40
Hexachlorobutadiene	68		77		40-140	12		40
Naphthalene	60		68		40-140	13		40
Benzo(a)anthracene	66		75		40-140	13		40
Benzo(a)pyrene	62		70		40-140	12		40
Benzo(b)fluoranthene	61		72		40-140	17		40
Benzo(k)fluoranthene	63		68		40-140	8		40
Chrysene	60		68		40-140	13		40
Acenaphthylene	66		74		40-140	11		40
Anthracene	60		68		40-140	13		40
Benzo(ghi)perylene	65		74		40-140	13		40
Fluorene	64		74		40-140	14		40
Phenanthrene	60		66		40-140	10		40
Dibenzo(a,h)anthracene	69		77		40-140	11		40
Indeno(1,2,3-cd)pyrene	65		75		40-140	14		40
Pyrene	71		81		40-140	13		40
2-Methylnaphthalene	60		68		40-140	13		40
Pentachlorophenol	126		141	Q	40-140	11		40
Hexachlorobenzene	51		57		40-140	11		40
Hexachloroethane	64		72		40-140	12		40

Lab Control Sample Analysis**Batch Quality Control****Project Name:** HK VENTURES-CALVERTON**Lab Number:** L2155680**Project Number:** HKV2101**Report Date:** 10/28/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS-SIM - Westborough Lab Associated sample(s): 01-03 Batch: WG1559064-2 WG1559064-3								

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
2-Fluorophenol	55		60		21-120
Phenol-d6	47		51		10-120
Nitrobenzene-d5	98		108		23-120
2-Fluorobiphenyl	58		65		15-120
2,4,6-Tribromophenol	91		101		10-120
4-Terphenyl-d14	71		80		41-149

Lab Control Sample Analysis**Batch Quality Control****Project Name:** HK VENTURES-CALVERTON**Lab Number:** L2155680**Project Number:** HKV2101**Report Date:** 10/28/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
1,4 Dioxane by 8270D-SIM - Mansfield Lab Associated sample(s): 01-03 Batch: WG1559850-2 WG1559850-3								
1,4-Dioxane	113		120		40-140	6		30

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,4-Dioxane-d8	46		49		15-110

Matrix Spike Analysis

Batch Quality Control

Project Name: HK VENTURES-CALVERTON

Project Number: HKV2101

Lab Number: L2155680

Report Date: 10/28/21

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab Associated sample(s): 01-04 QC Batch ID: WG1558724-3 QC Sample: L2155884-03 Client ID: MS Sample												
Perfluorobutanoic Acid (PFBA)	26.3	38.3	62.3	94		-	-		67-148	-		30
Perfluoropentanoic Acid (PFPeA)	73.8	38.3	110	94		-	-		63-161	-		30
Perfluorobutanesulfonic Acid (PFBS)	7.58	34	37.6	88		-	-		65-157	-		30
1H,1H,2H,2H-Perfluorohexanesulfonic Acid (4:2FTS)	ND	35.9	33.6	94		-	-		37-219	-		30
Perfluorohexanoic Acid (PFHxA)	58.5	38.3	94.3	93		-	-		69-168	-		30
Perfluoropentanesulfonic Acid (PFPeS)	1.69J	36	32.2	85		-	-		52-156	-		30
Perfluoroheptanoic Acid (PFHpA)	23.3	38.3	58.1	91		-	-		58-159	-		30
Perfluorohexanesulfonic Acid (PFHxS)	4.44	35	38.4	97		-	-		69-177	-		30
Perfluorooctanoic Acid (PFOA)	19.7	38.3	55.5	93		-	-		63-159	-		30
1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	ND	36.5	33.9	93		-	-		49-187	-		30
Perfluoroheptanesulfonic Acid (PFHpS)	ND	36.5	34.1	93		-	-		61-179	-		30
Perfluorononanoic Acid (PFNA)	1.00J	38.3	35.7	90		-	-		68-171	-		30
Perfluorooctanesulfonic Acid (PFOS)	7.70	35.6	40.3	92		-	-		52-151	-		30
Perfluorodecanoic Acid (PFDA)	ND	38.3	33.7	88		-	-		63-171	-		30
1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	ND	36.8	32.4	88		-	-		56-173	-		30
Perfluorononanesulfonic Acid (PFNS)	ND	36.9	31.2	85		-	-		48-150	-		30
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	ND	38.3	32.0	84		-	-		60-166	-		30
Perfluoroundecanoic Acid (PFUnA)	ND	38.3	33.9	88		-	-		60-153	-		30
Perfluorodecanesulfonic Acid (PFDS)	ND	37	29.6	80		-	-		38-156	-		30
Perfluorooctanesulfonamide (FOSA)	ND	38.3	34.7F	90		-	-		46-170	-		30
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND	38.3	33.4	87		-	-		45-170	-		30
Perfluorododecanoic Acid (PFDoA)	ND	38.3	34.8	91		-	-		67-153	-		30

Matrix Spike Analysis

Batch Quality Control

Project Name: HK VENTURES-CALVERTON

Project Number: HKV2101

Lab Number: L2155680

Report Date: 10/28/21

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab Associated sample(s): 01-04 QC Batch ID: WG1558724-3 QC Sample: L2155884-03 Client ID: MS Sample												
Perfluorotridecanoic Acid (PFTrDA)	ND	38.3	36.1	94		-	-		48-158	-		30
Perfluorotetradecanoic Acid (PFTA)	ND	38.3	34.6	90		-	-		59-182	-		30

Surrogate (Extracted Internal Standard)	MS % Recovery	MS Qualifier	MSD % Recovery	MSD Qualifier	Acceptance Criteria
1H,1H,2H,2H-Perfluoro[1,2-13C2]Decanesulfonic Acid (M2-8:2FTS)	187	Q			10-162
1H,1H,2H,2H-Perfluoro[1,2-13C2]Hexanesulfonic Acid (M2-4:2FTS)	204	Q			12-142
1H,1H,2H,2H-Perfluoro[1,2-13C2]Octanesulfonic Acid (M2-6:2FTS)	249	Q			14-147
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA)	79				27-126
N-Deuteriomethylperfluoro-1-octanesulfonamidoacetic Acid (d3-NMeFOSAA)	78				24-116
Perfluoro[1,2,3,4,5,6,7-13C7]Undecanoic Acid (M7-PFUDA)	77				55-137
Perfluoro[1,2,3,4,5,6-13C6]Decanoic Acid (M6PFDA)	82				62-124
Perfluoro[1,2,3,4,6-13C5]Hexanoic Acid (M5PFHxA)	65				57-129
Perfluoro[1,2,3,4-13C4]Heptanoic Acid (M4PFHpA)	73				60-129
Perfluoro[1,2,3-13C3]Hexanesulfonic Acid (M3PFHxS)	92				71-134
Perfluoro[1,2-13C2]Dodecanoic Acid (MPFDOA)	67				48-131
Perfluoro[1,2-13C2]Tetradecanoic Acid (M2PFTEDA)	63				22-136
Perfluoro[13C4]Butanoic Acid (MPFBA)	86				58-132
Perfluoro[13C5]Pentanoic Acid (M5PFPEA)	77				62-163
Perfluoro[13C8]Octanesulfonamide (M8FOSA)	14				10-112
Perfluoro[13C8]Octanesulfonic Acid (M8PFOS)	93				69-131
Perfluoro[13C8]Octanoic Acid (M8PFOA)	85				62-129
Perfluoro[13C9]Nonanoic Acid (M9PFNA)	89				59-139
Perfluoro[2,3,4-13C3]Butanesulfonic Acid (M3PFBS)	91				70-131

Project Name: HK VENTURES-CALVERTON

Project Number: HKV2101

Lab Duplicate Analysis

Batch Quality Control

Lab Number: L2155680

Report Date: 10/28/21

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab Associated sample(s): 01-04 QC Batch ID: WG1558724-4 QC Sample: L2155884-04 Client ID: DUP Sample						
Perfluorobutanoic Acid (PFBA)	20.0	20.0	ng/l	0		30
Perfluoropentanoic Acid (PFPeA)	42.0	42.0	ng/l	0		30
Perfluorobutanesulfonic Acid (PFBS)	23.3	24.1	ng/l	3		30
1H,1H,2H,2H-Perfluorohexanesulfonic Acid (4:2FTS)	ND	ND	ng/l	NC		30
Perfluorohexanoic Acid (PFHxA)	36.1	35.5	ng/l	2		30
Perfluoropentanesulfonic Acid (PFPeS)	1.02J	1.03J	ng/l	NC		30
Perfluoroheptanoic Acid (PFHpA)	16.4	16.4	ng/l	0		30
Perfluorohexanesulfonic Acid (PFHxS)	13.5	12.8	ng/l	5		30
Perfluorooctanoic Acid (PFOA)	48.6	49.7	ng/l	2		30
1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	ND	ND	ng/l	NC		30
Perfluoroheptanesulfonic Acid (PFHpS)	0.838JF	ND	ng/l	NC		30
Perfluorononanoic Acid (PFNA)	0.940J	0.979J	ng/l	NC		30
Perfluorooctanesulfonic Acid (PFOS)	15.0	15.5	ng/l	3		30
Perfluorodecanoic Acid (PFDA)	ND	ND	ng/l	NC		30
1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	ND	ND	ng/l	NC		30
Perfluorononanesulfonic Acid (PFNS)	ND	ND	ng/l	NC		30
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	ND	ND	ng/l	NC		30
Perfluoroundecanoic Acid (PFUnA)	ND	ND	ng/l	NC		30
Perfluorodecanesulfonic Acid (PFDS)	ND	ND	ng/l	NC		30
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND	ND	ng/l	NC		30

Lab Duplicate Analysis Batch Quality Control

Project Name: HK VENTURES-CALVERTON

Project Number: HKV2101

Lab Number: L2155680

Report Date: 10/28/21

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab Associated sample(s): 01-04 QC Batch ID: WG1558724-4 QC Sample: L2155884-04 Client ID: DUP Sample						
Perfluorododecanoic Acid (PFDoA)	ND	ND	ng/l	NC		30
Perfluorotridecanoic Acid (PFTrDA)	ND	ND	ng/l	NC		30
Perfluorotetradecanoic Acid (PFTA)	ND	ND	ng/l	NC		30

Surrogate (Extracted Internal Standard)	%Recovery	Qualifier	%Recovery	Qualifier	Acceptance Criteria
Perfluoro[13C4]Butanoic Acid (MPFBA)	79		79		58-132
Perfluoro[13C5]Pentanoic Acid (M5PFPEA)	85		85		62-163
Perfluoro[2,3,4-13C3]Butanesulfonic Acid (M3PFBS)	97		94		70-131
1H,1H,2H,2H-Perfluoro[1,2-13C2]Hexanesulfonic Acid (M2-4:2FTS)	157	Q	151	Q	12-142
Perfluoro[1,2,3,4,6-13C5]Hexanoic Acid (M5PFHxA)	73		74		57-129
Perfluoro[1,2,3,4-13C4]Heptanoic Acid (M4PFHpA)	78		77		60-129
Perfluoro[1,2,3-13C3]Hexanesulfonic Acid (M3PFHxS)	98		101		71-134
Perfluoro[13C8]Octanoic Acid (M8PFOA)	79		77		62-129
1H,1H,2H,2H-Perfluoro[1,2-13C2]Octanesulfonic Acid (M2-6:2FTS)	109		100		14-147
Perfluoro[13C9]Nonanoic Acid (M9PFNA)	80		79		59-139
Perfluoro[13C8]Octanesulfonic Acid (M8PFOS)	94		91		69-131
Perfluoro[1,2,3,4,5,6-13C6]Decanoic Acid (M6PFDA)	80		79		62-124
1H,1H,2H,2H-Perfluoro[1,2-13C2]Decanesulfonic Acid (M2-8:2FTS)	91		89		10-162
N-Deuteriomethylperfluoro-1-octanesulfonamidoacetic Acid (d3-NMeFOSAA)	71		71		24-116
Perfluoro[1,2,3,4,5,6,7-13C7]Undecanoic Acid (M7-PFUDA)	82		80		55-137
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA)	77		81		27-126
Perfluoro[1,2-13C2]Dodecanoic Acid (MPFDOA)	80		74		48-131
Perfluoro[1,2-13C2]Tetradecanoic Acid (M2PFTEDA)	74		72		22-136

PCBS

Project Name: HK VENTURES-CALVERTON**Lab Number:** L2155680**Project Number:** HKV2101**Report Date:** 10/28/21**SAMPLE RESULTS**

Lab ID: L2155680-01
 Client ID: GW001
 Sample Location: 4285 MIDDLE COUNTRY RD, CALVERTON, NY

Date Collected: 10/12/21 10:50
 Date Received: 10/12/21
 Field Prep: Not Specified

Sample Depth:

Matrix: Water
 Analytical Method: 1,8082A
 Analytical Date: 10/20/21 01:07
 Analyst: AD

Extraction Method: EPA 3510C
 Extraction Date: 10/19/21 09:46
 Cleanup Method: EPA 3665A
 Cleanup Date: 10/19/21
 Cleanup Method: EPA 3660B
 Cleanup Date: 10/19/21

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug/l	0.071	0.061	1	A
Aroclor 1221	ND		ug/l	0.071	0.061	1	A
Aroclor 1232	ND		ug/l	0.071	0.061	1	A
Aroclor 1242	ND		ug/l	0.071	0.061	1	A
Aroclor 1248	ND		ug/l	0.071	0.061	1	A
Aroclor 1254	ND		ug/l	0.071	0.061	1	A
Aroclor 1260	ND		ug/l	0.071	0.061	1	A
Aroclor 1262	ND		ug/l	0.071	0.061	1	A
Aroclor 1268	ND		ug/l	0.071	0.061	1	A
PCBs, Total	ND		ug/l	0.071	0.061	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	73		30-150	A
Decachlorobiphenyl	70		30-150	A
2,4,5,6-Tetrachloro-m-xylene	70		30-150	B
Decachlorobiphenyl	66		30-150	B

Project Name: HK VENTURES-CALVERTON**Lab Number:** L2155680**Project Number:** HKV2101**Report Date:** 10/28/21**SAMPLE RESULTS**

Lab ID: L2155680-02
 Client ID: GW002
 Sample Location: 4285 MIDDLE COUNTRY RD, CALVERTON, NY

Date Collected: 10/12/21 12:25
 Date Received: 10/12/21
 Field Prep: Not Specified

Sample Depth:

Matrix: Water
 Analytical Method: 1,8082A
 Analytical Date: 10/20/21 04:24
 Analyst: AWS

Extraction Method: EPA 3510C
 Extraction Date: 10/19/21 09:46
 Cleanup Method: EPA 3665A
 Cleanup Date: 10/19/21
 Cleanup Method: EPA 3660B
 Cleanup Date: 10/19/21

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug/l	0.071	0.061	1	A
Aroclor 1221	ND		ug/l	0.071	0.061	1	A
Aroclor 1232	ND		ug/l	0.071	0.061	1	A
Aroclor 1242	ND		ug/l	0.071	0.061	1	A
Aroclor 1248	ND		ug/l	0.071	0.061	1	A
Aroclor 1254	ND		ug/l	0.071	0.061	1	A
Aroclor 1260	ND		ug/l	0.071	0.061	1	A
Aroclor 1262	ND		ug/l	0.071	0.061	1	A
Aroclor 1268	ND		ug/l	0.071	0.061	1	A
PCBs, Total	ND		ug/l	0.071	0.061	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	76		30-150	A
Decachlorobiphenyl	52		30-150	A
2,4,5,6-Tetrachloro-m-xylene	74		30-150	B
Decachlorobiphenyl	60		30-150	B

Project Name: HK VENTURES-CALVERTON**Lab Number:** L2155680**Project Number:** HKV2101**Report Date:** 10/28/21**SAMPLE RESULTS**

Lab ID: L2155680-03
 Client ID: GW003
 Sample Location: 4285 MIDDLE COUNTRY RD, CALVERTON, NY

Date Collected: 10/12/21 14:00
 Date Received: 10/12/21
 Field Prep: Not Specified

Sample Depth:

Matrix: Water
 Analytical Method: 1,8082A
 Analytical Date: 10/20/21 04:33
 Analyst: AWS

Extraction Method: EPA 3510C
 Extraction Date: 10/19/21 09:46
 Cleanup Method: EPA 3665A
 Cleanup Date: 10/19/21
 Cleanup Method: EPA 3660B
 Cleanup Date: 10/19/21

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug/l	0.071	0.061	1	A
Aroclor 1221	ND		ug/l	0.071	0.061	1	A
Aroclor 1232	ND		ug/l	0.071	0.061	1	A
Aroclor 1242	ND		ug/l	0.071	0.061	1	A
Aroclor 1248	ND		ug/l	0.071	0.061	1	A
Aroclor 1254	ND		ug/l	0.071	0.061	1	A
Aroclor 1260	ND		ug/l	0.071	0.061	1	A
Aroclor 1262	ND		ug/l	0.071	0.061	1	A
Aroclor 1268	ND		ug/l	0.071	0.061	1	A
PCBs, Total	ND		ug/l	0.071	0.061	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	56		30-150	A
Decachlorobiphenyl	41		30-150	A
2,4,5,6-Tetrachloro-m-xylene	56		30-150	B
Decachlorobiphenyl	50		30-150	B

Project Name: HK VENTURES-CALVERTON
Project Number: HKV2101

Lab Number: L2155680
Report Date: 10/28/21

Method Blank Analysis Batch Quality Control

Analytical Method: 1,8082A
Analytical Date: 10/19/21 17:29
Analyst: JWL

Extraction Method: EPA 3510C
Extraction Date: 10/19/21 09:46
Cleanup Method: EPA 3665A
Cleanup Date: 10/19/21
Cleanup Method: EPA 3660B
Cleanup Date: 10/19/21

Parameter	Result	Qualifier	Units	RL	MDL	Column
Polychlorinated Biphenyls by GC - Westborough Lab for sample(s): 01-03 Batch: WG1560362-1						
Aroclor 1016	ND		ug/l	0.071	0.061	A
Aroclor 1221	ND		ug/l	0.071	0.061	A
Aroclor 1232	ND		ug/l	0.071	0.061	A
Aroclor 1242	ND		ug/l	0.071	0.061	A
Aroclor 1248	ND		ug/l	0.071	0.061	A
Aroclor 1254	ND		ug/l	0.071	0.061	A
Aroclor 1260	ND		ug/l	0.071	0.061	A
Aroclor 1262	ND		ug/l	0.071	0.061	A
Aroclor 1268	ND		ug/l	0.071	0.061	A
PCBs, Total	ND		ug/l	0.071	0.061	A

Surrogate	%Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	56		30-150	A
Decachlorobiphenyl	60		30-150	A
2,4,5,6-Tetrachloro-m-xylene	58		30-150	B
Decachlorobiphenyl	71		30-150	B

Lab Control Sample Analysis

Batch Quality Control

Project Name: HK VENTURES-CALVERTON

Project Number: HKV2101

Lab Number: L2155680

Report Date: 10/28/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits	Column
Polychlorinated Biphenyls by GC - Westborough Lab Associated sample(s): 01-03 Batch: WG1560362-2 WG1560362-3									
Aroclor 1016	78		76		40-140	3		50	A
Aroclor 1260	72		71		40-140	2		50	A

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	78		76		30-150	A
Decachlorobiphenyl	76		71		30-150	A
2,4,5,6-Tetrachloro-m-xylene	77		74		30-150	B
Decachlorobiphenyl	91		87		30-150	B

PESTICIDES

Project Name: HK VENTURES-CALVERTON**Lab Number:** L2155680**Project Number:** HKV2101**Report Date:** 10/28/21**SAMPLE RESULTS**

Lab ID: L2155680-01
 Client ID: GW001
 Sample Location: 4285 MIDDLE COUNTRY RD, CALVERTON, NY

Date Collected: 10/12/21 10:50
 Date Received: 10/12/21
 Field Prep: Not Specified

Sample Depth:

Matrix: Water
 Analytical Method: 1,8081B
 Analytical Date: 10/20/21 11:46
 Analyst: SDC

Extraction Method: EPA 3510C
 Extraction Date: 10/19/21 17:33

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Organochlorine Pesticides by GC - Westborough Lab							
Delta-BHC	ND		ug/l	0.014	0.003	1	A
Lindane	ND		ug/l	0.014	0.003	1	A
Alpha-BHC	ND		ug/l	0.014	0.003	1	A
Beta-BHC	ND		ug/l	0.014	0.004	1	A
Heptachlor	ND		ug/l	0.014	0.002	1	A
Aldrin	ND		ug/l	0.014	0.002	1	A
Heptachlor epoxide	ND		ug/l	0.014	0.003	1	A
Endrin	ND		ug/l	0.029	0.003	1	A
Endrin aldehyde	ND		ug/l	0.029	0.006	1	A
Endrin ketone	ND		ug/l	0.029	0.003	1	A
Dieldrin	0.006	J	ug/l	0.029	0.003	1	B
4,4'-DDE	0.005	JIP	ug/l	0.029	0.003	1	B
4,4'-DDD	ND		ug/l	0.029	0.003	1	A
4,4'-DDT	ND		ug/l	0.029	0.003	1	A
Endosulfan I	ND		ug/l	0.014	0.002	1	A
Endosulfan II	ND		ug/l	0.029	0.004	1	A
Endosulfan sulfate	ND		ug/l	0.029	0.003	1	B
Methoxychlor	ND		ug/l	0.143	0.005	1	A
Toxaphene	ND		ug/l	0.143	0.045	1	A
cis-Chlordane	ND	IP	ug/l	0.014	0.005	1	B
trans-Chlordane	ND		ug/l	0.014	0.004	1	A
Chlordane	ND		ug/l	0.143	0.033	1	A

Project Name: HK VENTURES-CALVERTON**Lab Number:** L2155680**Project Number:** HKV2101**Report Date:** 10/28/21**SAMPLE RESULTS**

Lab ID: L2155680-01

Date Collected: 10/12/21 10:50

Client ID: GW001

Date Received: 10/12/21

Sample Location: 4285 MIDDLE COUNTRY RD, CALVERTON, NY

Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Organochlorine Pesticides by GC - Westborough Lab							

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	55		30-150	A
Decachlorobiphenyl	57		30-150	A
2,4,5,6-Tetrachloro-m-xylene	57		30-150	B
Decachlorobiphenyl	58		30-150	B

Project Name: HK VENTURES-CALVERTON**Lab Number:** L2155680**Project Number:** HKV2101**Report Date:** 10/28/21**SAMPLE RESULTS**

Lab ID: L2155680-01

Date Collected: 10/12/21 10:50

Client ID: GW001

Date Received: 10/12/21

Sample Location: 4285 MIDDLE COUNTRY RD, CALVERTON, NY

Field Prep: Not Specified

Sample Depth:

Matrix: Water

Extraction Method: EPA 8151A

Analytical Method: 1,8151A

Extraction Date: 10/19/21 19:01

Analytical Date: 10/21/21 20:43

Analyst: AR

Methylation Date: 10/21/21 12:35

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
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Chlorinated Herbicides by GC - Westborough Lab

2,4-D	ND		ug/l	40.0	1.99	1	A
2,4,5-T	ND		ug/l	8.00	2.12	1	A
2,4,5-TP (Silvex)	ND		ug/l	8.00	2.16	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
DCAA	72		30-150	A
DCAA	61		30-150	B

Project Name: HK VENTURES-CALVERTON**Lab Number:** L2155680**Project Number:** HKV2101**Report Date:** 10/28/21**SAMPLE RESULTS**

Lab ID: L2155680-02
 Client ID: GW002
 Sample Location: 4285 MIDDLE COUNTRY RD, CALVERTON, NY

Date Collected: 10/12/21 12:25
 Date Received: 10/12/21
 Field Prep: Not Specified

Sample Depth:

Matrix: Water
 Analytical Method: 1,8081B
 Analytical Date: 10/20/21 11:57
 Analyst: SDC

Extraction Method: EPA 3510C
 Extraction Date: 10/19/21 17:33

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Organochlorine Pesticides by GC - Westborough Lab							
Delta-BHC	ND		ug/l	0.014	0.003	1	A
Lindane	ND		ug/l	0.014	0.003	1	A
Alpha-BHC	ND		ug/l	0.014	0.003	1	A
Beta-BHC	ND		ug/l	0.014	0.004	1	A
Heptachlor	ND		ug/l	0.014	0.002	1	A
Aldrin	ND		ug/l	0.014	0.002	1	A
Heptachlor epoxide	ND		ug/l	0.014	0.003	1	A
Endrin	ND		ug/l	0.029	0.003	1	A
Endrin aldehyde	ND		ug/l	0.029	0.006	1	A
Endrin ketone	ND		ug/l	0.029	0.003	1	A
Dieldrin	ND	IP	ug/l	0.029	0.003	1	B
4,4'-DDE	ND		ug/l	0.029	0.003	1	A
4,4'-DDD	ND		ug/l	0.029	0.003	1	A
4,4'-DDT	ND		ug/l	0.029	0.003	1	A
Endosulfan I	ND		ug/l	0.014	0.002	1	A
Endosulfan II	ND		ug/l	0.029	0.004	1	A
Endosulfan sulfate	ND		ug/l	0.029	0.003	1	A
Methoxychlor	ND		ug/l	0.143	0.005	1	A
Toxaphene	ND		ug/l	0.143	0.045	1	A
cis-Chlordane	ND		ug/l	0.014	0.005	1	A
trans-Chlordane	ND		ug/l	0.014	0.004	1	A
Chlordane	ND		ug/l	0.143	0.033	1	A

Project Name: HK VENTURES-CALVERTON**Lab Number:** L2155680**Project Number:** HKV2101**Report Date:** 10/28/21**SAMPLE RESULTS**

Lab ID: L2155680-02

Date Collected: 10/12/21 12:25

Client ID: GW002

Date Received: 10/12/21

Sample Location: 4285 MIDDLE COUNTRY RD, CALVERTON, NY

Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Organochlorine Pesticides by GC - Westborough Lab							

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	51		30-150	A
Decachlorobiphenyl	60		30-150	A
2,4,5,6-Tetrachloro-m-xylene	49		30-150	B
Decachlorobiphenyl	57		30-150	B

Project Name: HK VENTURES-CALVERTON**Lab Number:** L2155680**Project Number:** HKV2101**Report Date:** 10/28/21**SAMPLE RESULTS**

Lab ID: L2155680-02
 Client ID: GW002
 Sample Location: 4285 MIDDLE COUNTRY RD, CALVERTON, NY

Date Collected: 10/12/21 12:25
 Date Received: 10/12/21
 Field Prep: Not Specified

Sample Depth:

Matrix: Water

Extraction Method: EPA 8151A

Analytical Method: 1,8151A

Extraction Date: 10/13/21 11:29

Analytical Date: 10/15/21 16:08

Analyst: AR

Methylation Date: 10/14/21 07:16

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
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Chlorinated Herbicides by GC - Westborough Lab

2,4-D	ND		ug/l	35.7	1.78	1	A
2,4,5-T	ND		ug/l	7.14	1.90	1	A
2,4,5-TP (Silvex)	ND		ug/l	7.14	1.92	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
DCAA	103		30-150	A
DCAA	88		30-150	B

Project Name: HK VENTURES-CALVERTON**Lab Number:** L2155680**Project Number:** HKV2101**Report Date:** 10/28/21**SAMPLE RESULTS**

Lab ID: L2155680-03
 Client ID: GW003
 Sample Location: 4285 MIDDLE COUNTRY RD, CALVERTON, NY

Date Collected: 10/12/21 14:00
 Date Received: 10/12/21
 Field Prep: Not Specified

Sample Depth:

Matrix: Water
 Analytical Method: 1,8081B
 Analytical Date: 10/20/21 13:44
 Analyst: SDC

Extraction Method: EPA 3510C
 Extraction Date: 10/19/21 17:33

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Organochlorine Pesticides by GC - Westborough Lab							
Delta-BHC	ND		ug/l	0.014	0.003	1	A
Lindane	ND		ug/l	0.014	0.003	1	A
Alpha-BHC	ND		ug/l	0.014	0.003	1	A
Beta-BHC	ND		ug/l	0.014	0.004	1	A
Heptachlor	ND		ug/l	0.014	0.002	1	A
Aldrin	ND		ug/l	0.014	0.002	1	A
Heptachlor epoxide	ND		ug/l	0.014	0.003	1	A
Endrin	ND		ug/l	0.029	0.003	1	A
Endrin aldehyde	ND		ug/l	0.029	0.006	1	A
Endrin ketone	ND		ug/l	0.029	0.003	1	A
Dieldrin	ND		ug/l	0.029	0.003	1	A
4,4'-DDE	ND		ug/l	0.029	0.003	1	A
4,4'-DDD	ND		ug/l	0.029	0.003	1	A
4,4'-DDT	ND		ug/l	0.029	0.003	1	B
Endosulfan I	ND		ug/l	0.014	0.002	1	A
Endosulfan II	ND		ug/l	0.029	0.004	1	A
Endosulfan sulfate	ND		ug/l	0.029	0.003	1	A
Methoxychlor	ND		ug/l	0.143	0.005	1	A
Toxaphene	ND		ug/l	0.143	0.045	1	A
cis-Chlordane	ND		ug/l	0.014	0.005	1	A
trans-Chlordane	ND		ug/l	0.014	0.004	1	A
Chlordane	ND		ug/l	0.143	0.033	1	A

Project Name: HK VENTURES-CALVERTON**Lab Number:** L2155680**Project Number:** HKV2101**Report Date:** 10/28/21**SAMPLE RESULTS**

Lab ID: L2155680-03

Date Collected: 10/12/21 14:00

Client ID: GW003

Date Received: 10/12/21

Sample Location: 4285 MIDDLE COUNTRY RD, CALVERTON, NY

Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Organochlorine Pesticides by GC - Westborough Lab							

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	52		30-150	A
Decachlorobiphenyl	52		30-150	A
2,4,5,6-Tetrachloro-m-xylene	50		30-150	B
Decachlorobiphenyl	51		30-150	B

Project Name: HK VENTURES-CALVERTON**Lab Number:** L2155680**Project Number:** HKV2101**Report Date:** 10/28/21**SAMPLE RESULTS**

Lab ID: L2155680-03
 Client ID: GW003
 Sample Location: 4285 MIDDLE COUNTRY RD, CALVERTON, NY

Date Collected: 10/12/21 14:00
 Date Received: 10/12/21
 Field Prep: Not Specified

Sample Depth:

Matrix: Water

Extraction Method: EPA 8151A

Analytical Method: 1,8151A

Extraction Date: 10/13/21 11:29

Analytical Date: 10/15/21 16:27

Analyst: AR

Methylation Date: 10/14/21 07:16

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Chlorinated Herbicides by GC - Westborough Lab							
2,4-D	ND		ug/l	10.0	0.498	1	A
2,4,5-T	ND		ug/l	2.00	0.531	1	A
2,4,5-TP (Silvex)	ND		ug/l	2.00	0.539	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
DCAA	94		30-150	A
DCAA	78		30-150	B

Project Name: HK VENTURES-CALVERTON
Project Number: HKV2101

Lab Number: L2155680
Report Date: 10/28/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8151A
Analytical Date: 10/15/21 14:18
Analyst: AR

Extraction Method: EPA 8151A
Extraction Date: 10/13/21 11:29

Methylation Date: 10/14/21 07:16

Parameter	Result	Qualifier	Units	RL	MDL	Column
Chlorinated Herbicides by GC - Westborough Lab for sample(s): 02-03 Batch: WG1558076-1						
2,4-D	ND		ug/l	10.0	0.498	A
2,4,5-T	ND		ug/l	2.00	0.531	A
2,4,5-TP (Silvex)	ND		ug/l	2.00	0.539	A

Surrogate	%Recovery	Qualifier	Acceptance Criteria	Column
DCAA	84		30-150	A
DCAA	74		30-150	B

Project Name: HK VENTURES-CALVERTON
Project Number: HKV2101

Lab Number: L2155680
Report Date: 10/28/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8151A
Analytical Date: 10/21/21 11:44
Analyst: EJJ

Extraction Method: EPA 8151A
Extraction Date: 10/19/21 16:27

Methylation Date: 10/21/21 11:02

Parameter	Result	Qualifier	Units	RL	MDL	Column
Chlorinated Herbicides by GC - Westborough Lab for sample(s): 01 Batch: WG1560601-1						
2,4-D	ND		ug/l	10.0	0.498	A
2,4,5-T	ND		ug/l	2.00	0.531	A
2,4,5-TP (Silvex)	ND		ug/l	2.00	0.539	A

Surrogate	%Recovery	Qualifier	Acceptance Criteria	Column
DCAA	85		30-150	A
DCAA	72		30-150	B

Project Name: HK VENTURES-CALVERTON
Project Number: HKV2101

Lab Number: L2155680
Report Date: 10/28/21

Method Blank Analysis Batch Quality Control

Analytical Method: 1,8081B
Analytical Date: 10/20/21 12:09
Analyst: SDC

Extraction Method: EPA 3510C
Extraction Date: 10/19/21 17:33

Parameter	Result	Qualifier	Units	RL	MDL	Column
Organochlorine Pesticides by GC - Westborough Lab for sample(s): 01-03 Batch: WG1560636-1						
Delta-BHC	ND		ug/l	0.014	0.003	A
Lindane	ND		ug/l	0.014	0.003	A
Alpha-BHC	ND		ug/l	0.014	0.003	A
Beta-BHC	ND		ug/l	0.014	0.004	A
Heptachlor	ND		ug/l	0.014	0.002	A
Aldrin	ND		ug/l	0.014	0.002	A
Heptachlor epoxide	ND		ug/l	0.014	0.003	A
Endrin	ND		ug/l	0.029	0.003	A
Endrin aldehyde	ND		ug/l	0.029	0.006	A
Endrin ketone	ND		ug/l	0.029	0.003	A
Dieldrin	ND		ug/l	0.029	0.003	A
4,4'-DDE	ND		ug/l	0.029	0.003	A
4,4'-DDD	ND		ug/l	0.029	0.003	A
Endosulfan I	ND		ug/l	0.014	0.002	A
Endosulfan II	ND		ug/l	0.029	0.004	A
Endosulfan sulfate	ND		ug/l	0.029	0.003	A
Methoxychlor	ND		ug/l	0.143	0.005	A
Toxaphene	ND		ug/l	0.143	0.045	A
cis-Chlordane	ND		ug/l	0.014	0.005	A
trans-Chlordane	ND		ug/l	0.014	0.004	A
Chlordane	ND		ug/l	0.143	0.033	A
4,4'-DDT	ND		ug/l	0.029	0.003	B

Project Name: HK VENTURES-CALVERTON
Project Number: HKV2101

Lab Number: L2155680
Report Date: 10/28/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8081B
 Analytical Date: 10/20/21 12:09
 Analyst: SDC

Extraction Method: EPA 3510C
 Extraction Date: 10/19/21 17:33

Parameter	Result	Qualifier	Units	RL	MDL	Column
Organochlorine Pesticides by GC - Westborough Lab for sample(s): 01-03 Batch: WG1560636-1						

Surrogate	%Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	52		30-150	A
Decachlorobiphenyl	52		30-150	A
2,4,5,6-Tetrachloro-m-xylene	50		30-150	B
Decachlorobiphenyl	50		30-150	B

Lab Control Sample Analysis

Batch Quality Control

Project Name: HK VENTURES-CALVERTON

Lab Number: L2155680

Project Number: HKV2101

Report Date: 10/28/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits	Column
Chlorinated Herbicides by GC - Westborough Lab Associated sample(s): 02-03 Batch: WG1558076-2 WG1558076-3									
2,4-D	89		88		30-150	1		25	A
2,4,5-T	89		88		30-150	1		25	A
2,4,5-TP (Silvex)	91		90		30-150	1		25	A

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria	Column
DCAA	89		88		30-150	A
DCAA	98		91		30-150	B

Lab Control Sample Analysis

Batch Quality Control

Project Name: HK VENTURES-CALVERTON

Project Number: HKV2101

Lab Number: L2155680

Report Date: 10/28/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits	Column
Chlorinated Herbicides by GC - Westborough Lab Associated sample(s): 01 Batch: WG1560601-2 WG1560601-3									
2,4-D	78		75		30-150	4		25	A
2,4,5-T	80		79		30-150	1		25	A
2,4,5-TP (Silvex)	81		80		30-150	1		25	A

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria	Column
DCAA	77		77		30-150	A
DCAA	78		79		30-150	B

Lab Control Sample Analysis

Batch Quality Control

Project Name: HK VENTURES-CALVERTON

Project Number: HKV2101

Lab Number: L2155680

Report Date: 10/28/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits	Column
Organochlorine Pesticides by GC - Westborough Lab Associated sample(s): 01-03 Batch: WG1560636-2 WG1560636-3									
Delta-BHC	73		65		30-150	11		20	A
Lindane	77		70		30-150	9		20	A
Alpha-BHC	76		67		30-150	13		20	A
Beta-BHC	74		64		30-150	15		20	A
Heptachlor	80		71		30-150	12		20	A
Aldrin	72		64		30-150	11		20	A
Heptachlor epoxide	73		64		30-150	12		20	A
Endrin	76		66		30-150	14		20	A
Endrin aldehyde	72		61		30-150	17		20	A
Endrin ketone	83		71		30-150	16		20	A
Dieldrin	79		68		30-150	15		20	A
4,4'-DDE	72		63		30-150	13		20	A
4,4'-DDD	79		69		30-150	14		20	A
4,4'-DDT	80		69		30-150	14		20	A
Endosulfan I	70		62		30-150	13		20	A
Endosulfan II	77		65		30-150	17		20	A
Endosulfan sulfate	74		65		30-150	13		20	A
Methoxychlor	86		71		30-150	19		20	A
cis-Chlordane	62		55		30-150	12		20	A
trans-Chlordane	74		65		30-150	13		20	A

Lab Control Sample Analysis**Batch Quality Control****Project Name:** HK VENTURES-CALVERTON**Lab Number:** L2155680**Project Number:** HKV2101**Report Date:** 10/28/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
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Organochlorine Pesticides by GC - Westborough Lab Associated sample(s): 01-03 Batch: WG1560636-2 WG1560636-3

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	67		56		30-150	A
Decachlorobiphenyl	99		76		30-150	A
2,4,5,6-Tetrachloro-m-xylene	66		53		30-150	B
Decachlorobiphenyl	89		68		30-150	B

METALS

Project Name: HK VENTURES-CALVERTON**Lab Number:** L2155680**Project Number:** HKV2101**Report Date:** 10/28/21**SAMPLE RESULTS**

Lab ID: L2155680-01

Date Collected: 10/12/21 10:50

Client ID: GW001

Date Received: 10/12/21

Sample Location: 4285 MIDDLE COUNTRY RD, CALVERTON, NY

Field Prep: Not Specified

Sample Depth:

Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Aluminum, Total	2.53		mg/l	0.0100	0.00327	1	10/22/21 09:19	10/27/21 17:45	EPA 3005A	1,6020B	PS
Antimony, Total	0.00054	J	mg/l	0.00400	0.00042	1	10/22/21 09:19	10/27/21 17:45	EPA 3005A	1,6020B	PS
Arsenic, Total	0.00188		mg/l	0.00050	0.00016	1	10/22/21 09:19	10/27/21 17:45	EPA 3005A	1,6020B	PS
Barium, Total	0.1143		mg/l	0.00050	0.00017	1	10/22/21 09:19	10/27/21 17:45	EPA 3005A	1,6020B	PS
Beryllium, Total	0.00023	J	mg/l	0.00050	0.00010	1	10/22/21 09:19	10/27/21 17:45	EPA 3005A	1,6020B	PS
Cadmium, Total	0.00010	J	mg/l	0.00020	0.00005	1	10/22/21 09:19	10/27/21 17:45	EPA 3005A	1,6020B	PS
Calcium, Total	83.6		mg/l	0.100	0.0394	1	10/22/21 09:19	10/27/21 17:45	EPA 3005A	1,6020B	PS
Chromium, Total	0.09454		mg/l	0.00100	0.00017	1	10/22/21 09:19	10/27/21 17:45	EPA 3005A	1,6020B	PS
Cobalt, Total	0.00575		mg/l	0.00050	0.00016	1	10/22/21 09:19	10/27/21 17:45	EPA 3005A	1,6020B	PS
Copper, Total	0.02474		mg/l	0.00100	0.00038	1	10/22/21 09:19	10/27/21 17:45	EPA 3005A	1,6020B	PS
Iron, Total	14.3		mg/l	0.0500	0.0191	1	10/22/21 09:19	10/27/21 17:45	EPA 3005A	1,6020B	PS
Lead, Total	0.00762		mg/l	0.00100	0.00034	1	10/22/21 09:19	10/27/21 17:45	EPA 3005A	1,6020B	PS
Magnesium, Total	10.4		mg/l	0.0700	0.0242	1	10/22/21 09:19	10/27/21 17:45	EPA 3005A	1,6020B	PS
Manganese, Total	1.303		mg/l	0.00100	0.00044	1	10/22/21 09:19	10/27/21 17:45	EPA 3005A	1,6020B	PS
Mercury, Total	ND		mg/l	0.00020	0.00009	1	10/22/21 14:02	10/23/21 14:55	EPA 7470A	1,7470A	NB
Nickel, Total	0.03099		mg/l	0.00200	0.00055	1	10/22/21 09:19	10/27/21 17:45	EPA 3005A	1,6020B	PS
Potassium, Total	10.4		mg/l	0.100	0.0309	1	10/22/21 09:19	10/27/21 17:45	EPA 3005A	1,6020B	PS
Selenium, Total	ND		mg/l	0.00500	0.00173	1	10/22/21 09:19	10/27/21 17:45	EPA 3005A	1,6020B	PS
Silver, Total	ND		mg/l	0.00040	0.00016	1	10/22/21 09:19	10/27/21 17:45	EPA 3005A	1,6020B	PS
Sodium, Total	52.6		mg/l	0.100	0.0293	1	10/22/21 09:19	10/27/21 17:45	EPA 3005A	1,6020B	PS
Thallium, Total	0.00041	J	mg/l	0.00100	0.00014	1	10/22/21 09:19	10/27/21 17:45	EPA 3005A	1,6020B	PS
Vanadium, Total	0.00870		mg/l	0.00500	0.00157	1	10/22/21 09:19	10/27/21 17:45	EPA 3005A	1,6020B	PS
Zinc, Total	0.03197		mg/l	0.01000	0.00341	1	10/22/21 09:19	10/27/21 17:45	EPA 3005A	1,6020B	PS
Dissolved Metals - Mansfield Lab											
Aluminum, Dissolved	0.00430	J	mg/l	0.0100	0.00327	1	10/25/21 20:39	10/27/21 12:01	EPA 3005A	1,6020B	PS
Antimony, Dissolved	ND		mg/l	0.00400	0.00042	1	10/25/21 20:39	10/27/21 12:01	EPA 3005A	1,6020B	PS
Arsenic, Dissolved	0.00020	J	mg/l	0.00050	0.00016	1	10/25/21 20:39	10/27/21 12:01	EPA 3005A	1,6020B	PS
Barium, Dissolved	0.08338		mg/l	0.00050	0.00017	1	10/25/21 20:39	10/27/21 12:01	EPA 3005A	1,6020B	PS
Beryllium, Dissolved	ND		mg/l	0.00050	0.00010	1	10/25/21 20:39	10/27/21 12:01	EPA 3005A	1,6020B	PS



Project Name: HK VENTURES-CALVERTON**Lab Number:** L2155680**Project Number:** HKV2101**Report Date:** 10/28/21**SAMPLE RESULTS**

Lab ID: L2155680-01

Date Collected: 10/12/21 10:50

Client ID: GW001

Date Received: 10/12/21

Sample Location: 4285 MIDDLE COUNTRY RD, CALVERTON, NY

Field Prep: Not Specified

Sample Depth:

Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Cadmium, Dissolved	ND		mg/l	0.00020	0.00005	1	10/25/21 20:39	10/27/21 12:01	EPA 3005A	1,6020B	PS
Calcium, Dissolved	89.0		mg/l	0.100	0.0394	1	10/25/21 20:39	10/27/21 12:01	EPA 3005A	1,6020B	PS
Chromium, Dissolved	0.00024	J	mg/l	0.00100	0.00017	1	10/25/21 20:39	10/27/21 12:01	EPA 3005A	1,6020B	PS
Cobalt, Dissolved	0.00222		mg/l	0.00050	0.00016	1	10/25/21 20:39	10/27/21 12:01	EPA 3005A	1,6020B	PS
Copper, Dissolved	0.00345		mg/l	0.00100	0.00038	1	10/25/21 20:39	10/27/21 12:01	EPA 3005A	1,6020B	PS
Iron, Dissolved	0.0271	J	mg/l	0.0500	0.0191	1	10/25/21 20:39	10/27/21 12:01	EPA 3005A	1,6020B	PS
Lead, Dissolved	ND		mg/l	0.00100	0.00034	1	10/25/21 20:39	10/27/21 12:01	EPA 3005A	1,6020B	PS
Magnesium, Dissolved	10.3		mg/l	0.0700	0.0242	1	10/25/21 20:39	10/27/21 12:01	EPA 3005A	1,6020B	PS
Manganese, Dissolved	1.030		mg/l	0.00100	0.00044	1	10/25/21 20:39	10/27/21 12:01	EPA 3005A	1,6020B	PS
Mercury, Dissolved	ND		mg/l	0.00020	0.00009	1	10/25/21 21:18	10/26/21 09:25	EPA 7470A	1,7470A	AC
Nickel, Dissolved	0.00829		mg/l	0.00200	0.00055	1	10/25/21 20:39	10/27/21 12:01	EPA 3005A	1,6020B	PS
Potassium, Dissolved	10.7		mg/l	0.100	0.0309	1	10/25/21 20:39	10/27/21 12:01	EPA 3005A	1,6020B	PS
Selenium, Dissolved	ND		mg/l	0.00500	0.00173	1	10/25/21 20:39	10/27/21 12:01	EPA 3005A	1,6020B	PS
Silver, Dissolved	ND		mg/l	0.00040	0.00016	1	10/25/21 20:39	10/27/21 12:01	EPA 3005A	1,6020B	PS
Sodium, Dissolved	54.8		mg/l	0.100	0.0293	1	10/25/21 20:39	10/27/21 12:01	EPA 3005A	1,6020B	PS
Thallium, Dissolved	0.00042	J	mg/l	0.00100	0.00014	1	10/25/21 20:39	10/27/21 12:01	EPA 3005A	1,6020B	PS
Vanadium, Dissolved	ND		mg/l	0.00500	0.00157	1	10/25/21 20:39	10/27/21 12:01	EPA 3005A	1,6020B	PS
Zinc, Dissolved	ND		mg/l	0.01000	0.00341	1	10/25/21 20:39	10/27/21 12:01	EPA 3005A	1,6020B	PS



Project Name: HK VENTURES-CALVERTON**Lab Number:** L2155680**Project Number:** HKV2101**Report Date:** 10/28/21**SAMPLE RESULTS**

Lab ID: L2155680-02

Date Collected: 10/12/21 12:25

Client ID: GW002

Date Received: 10/12/21

Sample Location: 4285 MIDDLE COUNTRY RD, CALVERTON, NY

Field Prep: Not Specified

Sample Depth:

Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Aluminum, Total	3.63		mg/l	0.0100	0.00327	1	10/22/21 09:19	10/27/21 17:49	EPA 3005A	1,6020B	PS
Antimony, Total	0.00057	J	mg/l	0.00400	0.00042	1	10/22/21 09:19	10/27/21 17:49	EPA 3005A	1,6020B	PS
Arsenic, Total	0.00299		mg/l	0.00050	0.00016	1	10/22/21 09:19	10/27/21 17:49	EPA 3005A	1,6020B	PS
Barium, Total	0.1272		mg/l	0.00050	0.00017	1	10/22/21 09:19	10/27/21 17:49	EPA 3005A	1,6020B	PS
Beryllium, Total	0.00027	J	mg/l	0.00050	0.00010	1	10/22/21 09:19	10/27/21 17:49	EPA 3005A	1,6020B	PS
Cadmium, Total	0.00015	J	mg/l	0.00020	0.00005	1	10/22/21 09:19	10/27/21 17:49	EPA 3005A	1,6020B	PS
Calcium, Total	102.		mg/l	0.100	0.0394	1	10/22/21 09:19	10/27/21 17:49	EPA 3005A	1,6020B	PS
Chromium, Total	0.09891		mg/l	0.00100	0.00017	1	10/22/21 09:19	10/27/21 17:49	EPA 3005A	1,6020B	PS
Cobalt, Total	0.00761		mg/l	0.00050	0.00016	1	10/22/21 09:19	10/27/21 17:49	EPA 3005A	1,6020B	PS
Copper, Total	0.04710		mg/l	0.00100	0.00038	1	10/22/21 09:19	10/27/21 17:49	EPA 3005A	1,6020B	PS
Iron, Total	19.2		mg/l	0.0500	0.0191	1	10/22/21 09:19	10/27/21 17:49	EPA 3005A	1,6020B	PS
Lead, Total	0.00740		mg/l	0.00100	0.00034	1	10/22/21 09:19	10/27/21 17:49	EPA 3005A	1,6020B	PS
Magnesium, Total	13.9		mg/l	0.0700	0.0242	1	10/22/21 09:19	10/27/21 17:49	EPA 3005A	1,6020B	PS
Manganese, Total	12.52		mg/l	0.02000	0.00880	20	10/22/21 09:19	10/27/21 19:17	EPA 3005A	1,6020B	PS
Mercury, Total	ND		mg/l	0.00020	0.00009	1	10/22/21 14:02	10/23/21 14:58	EPA 7470A	1,7470A	NB
Nickel, Total	0.03454		mg/l	0.00200	0.00055	1	10/22/21 09:19	10/27/21 17:49	EPA 3005A	1,6020B	PS
Potassium, Total	109.		mg/l	0.100	0.0309	1	10/22/21 09:19	10/27/21 17:49	EPA 3005A	1,6020B	PS
Selenium, Total	ND		mg/l	0.00500	0.00173	1	10/22/21 09:19	10/27/21 17:49	EPA 3005A	1,6020B	PS
Silver, Total	ND		mg/l	0.00040	0.00016	1	10/22/21 09:19	10/27/21 17:49	EPA 3005A	1,6020B	PS
Sodium, Total	95.5		mg/l	0.100	0.0293	1	10/22/21 09:19	10/27/21 17:49	EPA 3005A	1,6020B	PS
Thallium, Total	0.00062	J	mg/l	0.00100	0.00014	1	10/22/21 09:19	10/27/21 17:49	EPA 3005A	1,6020B	PS
Vanadium, Total	0.01084		mg/l	0.00500	0.00157	1	10/22/21 09:19	10/27/21 17:49	EPA 3005A	1,6020B	PS
Zinc, Total	0.1427		mg/l	0.01000	0.00341	1	10/22/21 09:19	10/27/21 17:49	EPA 3005A	1,6020B	PS
Dissolved Metals - Mansfield Lab											
Aluminum, Dissolved	0.00607	J	mg/l	0.0100	0.00327	1	10/25/21 20:39	10/27/21 12:05	EPA 3005A	1,6020B	PS
Antimony, Dissolved	0.00051	J	mg/l	0.00400	0.00042	1	10/25/21 20:39	10/27/21 12:05	EPA 3005A	1,6020B	PS
Arsenic, Dissolved	0.00076		mg/l	0.00050	0.00016	1	10/25/21 20:39	10/27/21 12:05	EPA 3005A	1,6020B	PS
Barium, Dissolved	0.09289		mg/l	0.00050	0.00017	1	10/25/21 20:39	10/27/21 12:05	EPA 3005A	1,6020B	PS
Beryllium, Dissolved	ND		mg/l	0.00050	0.00010	1	10/25/21 20:39	10/27/21 12:05	EPA 3005A	1,6020B	PS



Project Name: HK VENTURES-CALVERTON**Lab Number:** L2155680**Project Number:** HKV2101**Report Date:** 10/28/21**SAMPLE RESULTS**

Lab ID: L2155680-02

Date Collected: 10/12/21 12:25

Client ID: GW002

Date Received: 10/12/21

Sample Location: 4285 MIDDLE COUNTRY RD, CALVERTON, NY

Field Prep: Not Specified

Sample Depth:

Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Cadmium, Dissolved	0.00009	J	mg/l	0.00020	0.00005	1	10/25/21 20:39	10/27/21 12:05	EPA 3005A	1,6020B	PS
Calcium, Dissolved	109.		mg/l	0.100	0.0394	1	10/25/21 20:39	10/27/21 12:05	EPA 3005A	1,6020B	PS
Chromium, Dissolved	ND		mg/l	0.00100	0.00017	1	10/25/21 20:39	10/27/21 12:05	EPA 3005A	1,6020B	PS
Cobalt, Dissolved	0.00371		mg/l	0.00050	0.00016	1	10/25/21 20:39	10/27/21 12:05	EPA 3005A	1,6020B	PS
Copper, Dissolved	0.01938		mg/l	0.00100	0.00038	1	10/25/21 20:39	10/27/21 12:05	EPA 3005A	1,6020B	PS
Iron, Dissolved	ND		mg/l	0.0500	0.0191	1	10/25/21 20:39	10/27/21 12:05	EPA 3005A	1,6020B	PS
Lead, Dissolved	ND		mg/l	0.00100	0.00034	1	10/25/21 20:39	10/27/21 12:05	EPA 3005A	1,6020B	PS
Magnesium, Dissolved	14.0		mg/l	0.0700	0.0242	1	10/25/21 20:39	10/27/21 12:05	EPA 3005A	1,6020B	PS
Manganese, Dissolved	8.154		mg/l	0.00500	0.00220	5	10/25/21 20:39	10/27/21 15:34	EPA 3005A	1,6020B	PS
Mercury, Dissolved	ND		mg/l	0.00020	0.00009	1	10/25/21 21:18	10/26/21 09:28	EPA 7470A	1,7470A	AC
Nickel, Dissolved	0.01419		mg/l	0.00200	0.00055	1	10/25/21 20:39	10/27/21 12:05	EPA 3005A	1,6020B	PS
Potassium, Dissolved	117.		mg/l	0.100	0.0309	1	10/25/21 20:39	10/27/21 12:05	EPA 3005A	1,6020B	PS
Selenium, Dissolved	ND		mg/l	0.00500	0.00173	1	10/25/21 20:39	10/27/21 12:05	EPA 3005A	1,6020B	PS
Silver, Dissolved	ND		mg/l	0.00040	0.00016	1	10/25/21 20:39	10/27/21 12:05	EPA 3005A	1,6020B	PS
Sodium, Dissolved	101.		mg/l	0.100	0.0293	1	10/25/21 20:39	10/27/21 12:05	EPA 3005A	1,6020B	PS
Thallium, Dissolved	0.00065	J	mg/l	0.00100	0.00014	1	10/25/21 20:39	10/27/21 12:05	EPA 3005A	1,6020B	PS
Vanadium, Dissolved	ND		mg/l	0.00500	0.00157	1	10/25/21 20:39	10/27/21 12:05	EPA 3005A	1,6020B	PS
Zinc, Dissolved	0.01699		mg/l	0.01000	0.00341	1	10/25/21 20:39	10/27/21 12:05	EPA 3005A	1,6020B	PS



Project Name: HK VENTURES-CALVERTON**Lab Number:** L2155680**Project Number:** HKV2101**Report Date:** 10/28/21**SAMPLE RESULTS**

Lab ID: L2155680-03

Date Collected: 10/12/21 14:00

Client ID: GW003

Date Received: 10/12/21

Sample Location: 4285 MIDDLE COUNTRY RD, CALVERTON, NY

Field Prep: Not Specified

Sample Depth:

Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Aluminum, Total	3.30		mg/l	0.0100	0.00327	1	10/22/21 09:19	10/27/21 17:54	EPA 3005A	1,6020B	PS
Antimony, Total	ND		mg/l	0.00400	0.00042	1	10/22/21 09:19	10/27/21 17:54	EPA 3005A	1,6020B	PS
Arsenic, Total	0.00179		mg/l	0.00050	0.00016	1	10/22/21 09:19	10/27/21 17:54	EPA 3005A	1,6020B	PS
Barium, Total	0.05796		mg/l	0.00050	0.00017	1	10/22/21 09:19	10/27/21 17:54	EPA 3005A	1,6020B	PS
Beryllium, Total	0.00026	J	mg/l	0.00050	0.00010	1	10/22/21 09:19	10/27/21 17:54	EPA 3005A	1,6020B	PS
Cadmium, Total	0.00007	J	mg/l	0.00020	0.00005	1	10/22/21 09:19	10/27/21 17:54	EPA 3005A	1,6020B	PS
Calcium, Total	6.54		mg/l	0.100	0.0394	1	10/22/21 09:19	10/27/21 17:54	EPA 3005A	1,6020B	PS
Chromium, Total	0.1272		mg/l	0.00100	0.00017	1	10/22/21 09:19	10/27/21 17:54	EPA 3005A	1,6020B	PS
Cobalt, Total	0.00465		mg/l	0.00050	0.00016	1	10/22/21 09:19	10/27/21 17:54	EPA 3005A	1,6020B	PS
Copper, Total	0.03325		mg/l	0.00100	0.00038	1	10/22/21 09:19	10/27/21 17:54	EPA 3005A	1,6020B	PS
Iron, Total	17.8		mg/l	0.0500	0.0191	1	10/22/21 09:19	10/27/21 17:54	EPA 3005A	1,6020B	PS
Lead, Total	0.00705		mg/l	0.00100	0.00034	1	10/22/21 09:19	10/27/21 17:54	EPA 3005A	1,6020B	PS
Magnesium, Total	1.89		mg/l	0.0700	0.0242	1	10/22/21 09:19	10/27/21 17:54	EPA 3005A	1,6020B	PS
Manganese, Total	0.3775		mg/l	0.00100	0.00044	1	10/22/21 09:19	10/27/21 17:54	EPA 3005A	1,6020B	PS
Mercury, Total	ND		mg/l	0.00020	0.00009	1	10/22/21 14:02	10/23/21 15:02	EPA 7470A	1,7470A	NB
Nickel, Total	0.02939		mg/l	0.00200	0.00055	1	10/22/21 09:19	10/27/21 17:54	EPA 3005A	1,6020B	PS
Potassium, Total	1.85		mg/l	0.100	0.0309	1	10/22/21 09:19	10/27/21 17:54	EPA 3005A	1,6020B	PS
Selenium, Total	ND		mg/l	0.00500	0.00173	1	10/22/21 09:19	10/27/21 17:54	EPA 3005A	1,6020B	PS
Silver, Total	ND		mg/l	0.00040	0.00016	1	10/22/21 09:19	10/27/21 17:54	EPA 3005A	1,6020B	PS
Sodium, Total	5.69		mg/l	0.100	0.0293	1	10/22/21 09:19	10/27/21 17:54	EPA 3005A	1,6020B	PS
Thallium, Total	0.00016	J	mg/l	0.00100	0.00014	1	10/22/21 09:19	10/27/21 17:54	EPA 3005A	1,6020B	PS
Vanadium, Total	0.00847		mg/l	0.00500	0.00157	1	10/22/21 09:19	10/27/21 17:54	EPA 3005A	1,6020B	PS
Zinc, Total	0.07399		mg/l	0.01000	0.00341	1	10/22/21 09:19	10/27/21 17:54	EPA 3005A	1,6020B	PS
Dissolved Metals - Mansfield Lab											
Aluminum, Dissolved	ND		mg/l	0.0100	0.00327	1	10/25/21 20:39	10/27/21 12:10	EPA 3005A	1,6020B	PS
Antimony, Dissolved	ND		mg/l	0.00400	0.00042	1	10/25/21 20:39	10/27/21 12:10	EPA 3005A	1,6020B	PS
Arsenic, Dissolved	ND		mg/l	0.00050	0.00016	1	10/25/21 20:39	10/27/21 12:10	EPA 3005A	1,6020B	PS
Barium, Dissolved	0.01571		mg/l	0.00050	0.00017	1	10/25/21 20:39	10/27/21 12:10	EPA 3005A	1,6020B	PS
Beryllium, Dissolved	ND		mg/l	0.00050	0.00010	1	10/25/21 20:39	10/27/21 12:10	EPA 3005A	1,6020B	PS



Project Name: HK VENTURES-CALVERTON**Lab Number:** L2155680**Project Number:** HKV2101**Report Date:** 10/28/21**SAMPLE RESULTS**

Lab ID: L2155680-03

Date Collected: 10/12/21 14:00

Client ID: GW003

Date Received: 10/12/21

Sample Location: 4285 MIDDLE COUNTRY RD, CALVERTON, NY

Field Prep: Not Specified

Sample Depth:

Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Cadmium, Dissolved	ND		mg/l	0.00020	0.00005	1	10/25/21 20:39	10/27/21 12:10	EPA 3005A	1,6020B	PS
Calcium, Dissolved	6.19		mg/l	0.100	0.0394	1	10/25/21 20:39	10/27/21 12:10	EPA 3005A	1,6020B	PS
Chromium, Dissolved	0.00035	J	mg/l	0.00100	0.00017	1	10/25/21 20:39	10/27/21 12:10	EPA 3005A	1,6020B	PS
Cobalt, Dissolved	0.00197		mg/l	0.00050	0.00016	1	10/25/21 20:39	10/27/21 12:10	EPA 3005A	1,6020B	PS
Copper, Dissolved	0.00079	J	mg/l	0.00100	0.00038	1	10/25/21 20:39	10/27/21 12:10	EPA 3005A	1,6020B	PS
Iron, Dissolved	0.0251	J	mg/l	0.0500	0.0191	1	10/25/21 20:39	10/27/21 12:10	EPA 3005A	1,6020B	PS
Lead, Dissolved	ND		mg/l	0.00100	0.00034	1	10/25/21 20:39	10/27/21 12:10	EPA 3005A	1,6020B	PS
Magnesium, Dissolved	1.10		mg/l	0.0700	0.0242	1	10/25/21 20:39	10/27/21 12:10	EPA 3005A	1,6020B	PS
Manganese, Dissolved	0.2321		mg/l	0.00100	0.00044	1	10/25/21 20:39	10/27/21 12:10	EPA 3005A	1,6020B	PS
Mercury, Dissolved	ND		mg/l	0.00020	0.00009	1	10/25/21 21:18	10/26/21 09:31	EPA 7470A	1,7470A	AC
Nickel, Dissolved	0.00948		mg/l	0.00200	0.00055	1	10/25/21 20:39	10/27/21 12:10	EPA 3005A	1,6020B	PS
Potassium, Dissolved	1.38		mg/l	0.100	0.0309	1	10/25/21 20:39	10/27/21 12:10	EPA 3005A	1,6020B	PS
Selenium, Dissolved	ND		mg/l	0.00500	0.00173	1	10/25/21 20:39	10/27/21 12:10	EPA 3005A	1,6020B	PS
Silver, Dissolved	ND		mg/l	0.00040	0.00016	1	10/25/21 20:39	10/27/21 12:10	EPA 3005A	1,6020B	PS
Sodium, Dissolved	5.72		mg/l	0.100	0.0293	1	10/25/21 20:39	10/27/21 12:10	EPA 3005A	1,6020B	PS
Thallium, Dissolved	0.00015	J	mg/l	0.00100	0.00014	1	10/25/21 20:39	10/27/21 12:10	EPA 3005A	1,6020B	PS
Vanadium, Dissolved	ND		mg/l	0.00500	0.00157	1	10/25/21 20:39	10/27/21 12:10	EPA 3005A	1,6020B	PS
Zinc, Dissolved	0.01185		mg/l	0.01000	0.00341	1	10/25/21 20:39	10/27/21 12:10	EPA 3005A	1,6020B	PS



Project Name: HK VENTURES-CALVERTON

Lab Number: L2155680

Project Number: HKV2101

Report Date: 10/28/21

Method Blank Analysis Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Metals - Mansfield Lab for sample(s): 01-03 Batch: WG1559311-1										
Aluminum, Total	ND		mg/l	0.0100	0.00327	1	10/22/21 09:19	10/27/21 16:28	1,6020B	PS
Antimony, Total	ND		mg/l	0.00400	0.00042	1	10/22/21 09:19	10/27/21 16:28	1,6020B	PS
Arsenic, Total	ND		mg/l	0.00050	0.00016	1	10/22/21 09:19	10/27/21 16:28	1,6020B	PS
Barium, Total	ND		mg/l	0.00050	0.00017	1	10/22/21 09:19	10/27/21 16:28	1,6020B	PS
Beryllium, Total	ND		mg/l	0.00050	0.00010	1	10/22/21 09:19	10/27/21 16:28	1,6020B	PS
Cadmium, Total	ND		mg/l	0.00020	0.00005	1	10/22/21 09:19	10/27/21 16:28	1,6020B	PS
Calcium, Total	ND		mg/l	0.100	0.0394	1	10/22/21 09:19	10/27/21 16:28	1,6020B	PS
Chromium, Total	ND		mg/l	0.00100	0.00017	1	10/22/21 09:19	10/27/21 16:28	1,6020B	PS
Cobalt, Total	ND		mg/l	0.00050	0.00016	1	10/22/21 09:19	10/27/21 16:28	1,6020B	PS
Copper, Total	ND		mg/l	0.00100	0.00038	1	10/22/21 09:19	10/27/21 16:28	1,6020B	PS
Iron, Total	ND		mg/l	0.0500	0.0191	1	10/22/21 09:19	10/27/21 16:28	1,6020B	PS
Lead, Total	ND		mg/l	0.00100	0.00034	1	10/22/21 09:19	10/27/21 16:28	1,6020B	PS
Magnesium, Total	ND		mg/l	0.0700	0.0242	1	10/22/21 09:19	10/27/21 16:28	1,6020B	PS
Manganese, Total	ND		mg/l	0.00100	0.00044	1	10/22/21 09:19	10/27/21 16:28	1,6020B	PS
Nickel, Total	ND		mg/l	0.00200	0.00055	1	10/22/21 09:19	10/27/21 16:28	1,6020B	PS
Potassium, Total	ND		mg/l	0.100	0.0309	1	10/22/21 09:19	10/27/21 16:28	1,6020B	PS
Selenium, Total	ND		mg/l	0.00500	0.00173	1	10/22/21 09:19	10/27/21 16:28	1,6020B	PS
Silver, Total	ND		mg/l	0.00040	0.00016	1	10/22/21 09:19	10/27/21 16:28	1,6020B	PS
Sodium, Total	ND		mg/l	0.100	0.0293	1	10/22/21 09:19	10/27/21 16:28	1,6020B	PS
Thallium, Total	ND		mg/l	0.00100	0.00014	1	10/22/21 09:19	10/27/21 16:28	1,6020B	PS
Vanadium, Total	ND		mg/l	0.00500	0.00157	1	10/22/21 09:19	10/27/21 16:28	1,6020B	PS
Zinc, Total	ND		mg/l	0.01000	0.00341	1	10/22/21 09:19	10/27/21 16:28	1,6020B	PS

Prep Information

Digestion Method: EPA 3005A

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Metals - Mansfield Lab for sample(s): 01-03 Batch: WG1559314-1										
Mercury, Total	ND		mg/l	0.00020	0.00009	1	10/22/21 14:02	10/23/21 14:32	1,7470A	NB



Project Name: HK VENTURES-CALVERTON

Lab Number: L2155680

Project Number: HKV2101

Report Date: 10/28/21

Method Blank Analysis Batch Quality Control

Prep Information

Digestion Method: EPA 7470A

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Dissolved Metals - Mansfield Lab for sample(s): 01-03 Batch: WG1560979-1										
Aluminum, Dissolved	ND		mg/l	0.0100	0.00327	1	10/25/21 20:39	10/27/21 11:56	1,6020B	PS
Antimony, Dissolved	ND		mg/l	0.00400	0.00042	1	10/25/21 20:39	10/27/21 11:56	1,6020B	PS
Arsenic, Dissolved	0.00018	J	mg/l	0.00050	0.00016	1	10/25/21 20:39	10/27/21 11:56	1,6020B	PS
Barium, Dissolved	ND		mg/l	0.00050	0.00017	1	10/25/21 20:39	10/27/21 11:56	1,6020B	PS
Beryllium, Dissolved	ND		mg/l	0.00050	0.00010	1	10/25/21 20:39	10/27/21 11:56	1,6020B	PS
Cadmium, Dissolved	ND		mg/l	0.00020	0.00005	1	10/25/21 20:39	10/27/21 11:56	1,6020B	PS
Calcium, Dissolved	ND		mg/l	0.100	0.0394	1	10/25/21 20:39	10/27/21 11:56	1,6020B	PS
Chromium, Dissolved	ND		mg/l	0.00100	0.00017	1	10/25/21 20:39	10/27/21 11:56	1,6020B	PS
Cobalt, Dissolved	ND		mg/l	0.00050	0.00016	1	10/25/21 20:39	10/27/21 11:56	1,6020B	PS
Copper, Dissolved	ND		mg/l	0.00100	0.00038	1	10/25/21 20:39	10/27/21 11:56	1,6020B	PS
Iron, Dissolved	ND		mg/l	0.0500	0.0191	1	10/25/21 20:39	10/27/21 11:56	1,6020B	PS
Lead, Dissolved	ND		mg/l	0.00100	0.00034	1	10/25/21 20:39	10/27/21 11:56	1,6020B	PS
Magnesium, Dissolved	ND		mg/l	0.0700	0.0242	1	10/25/21 20:39	10/27/21 11:56	1,6020B	PS
Manganese, Dissolved	ND		mg/l	0.00100	0.00044	1	10/25/21 20:39	10/27/21 11:56	1,6020B	PS
Nickel, Dissolved	ND		mg/l	0.00200	0.00055	1	10/25/21 20:39	10/27/21 11:56	1,6020B	PS
Potassium, Dissolved	ND		mg/l	0.100	0.0309	1	10/25/21 20:39	10/27/21 11:56	1,6020B	PS
Selenium, Dissolved	ND		mg/l	0.00500	0.00173	1	10/25/21 20:39	10/27/21 11:56	1,6020B	PS
Silver, Dissolved	ND		mg/l	0.00040	0.00016	1	10/25/21 20:39	10/27/21 11:56	1,6020B	PS
Sodium, Dissolved	ND		mg/l	0.100	0.0293	1	10/25/21 20:39	10/27/21 11:56	1,6020B	PS
Thallium, Dissolved	0.00039	J	mg/l	0.00100	0.00014	1	10/25/21 20:39	10/27/21 11:56	1,6020B	PS
Vanadium, Dissolved	ND		mg/l	0.00500	0.00157	1	10/25/21 20:39	10/27/21 11:56	1,6020B	PS
Zinc, Dissolved	ND		mg/l	0.01000	0.00341	1	10/25/21 20:39	10/27/21 11:56	1,6020B	PS

Prep Information

Digestion Method: EPA 3005A



Project Name: HK VENTURES-CALVERTON

Lab Number: L2155680

Project Number: HKV2101

Report Date: 10/28/21

Method Blank Analysis Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Dissolved Metals - Mansfield Lab for sample(s): 01-03 Batch: WG1560982-1										
Mercury, Dissolved	ND		mg/l	0.00020	0.00009	1	10/25/21 21:18	10/26/21 09:01	1,7470A	AC

Prep Information

Digestion Method: EPA 7470A

Lab Control Sample Analysis

Batch Quality Control

Project Name: HK VENTURES-CALVERTON

Lab Number: L2155680

Project Number: HKV2101

Report Date: 10/28/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01-03 Batch: WG1559311-2								
Aluminum, Total	99		-		80-120	-		
Antimony, Total	93		-		80-120	-		
Arsenic, Total	104		-		80-120	-		
Barium, Total	103		-		80-120	-		
Beryllium, Total	99		-		80-120	-		
Cadmium, Total	100		-		80-120	-		
Calcium, Total	101		-		80-120	-		
Chromium, Total	102		-		80-120	-		
Cobalt, Total	97		-		80-120	-		
Copper, Total	100		-		80-120	-		
Iron, Total	107		-		80-120	-		
Lead, Total	117		-		80-120	-		
Magnesium, Total	108		-		80-120	-		
Manganese, Total	103		-		80-120	-		
Nickel, Total	98		-		80-120	-		
Potassium, Total	104		-		80-120	-		
Selenium, Total	104		-		80-120	-		
Silver, Total	100		-		80-120	-		
Sodium, Total	107		-		80-120	-		
Thallium, Total	111		-		80-120	-		
Vanadium, Total	101		-		80-120	-		

Lab Control Sample Analysis

Batch Quality Control

Project Name: HK VENTURES-CALVERTON

Project Number: HKV2101

Lab Number: L2155680

Report Date: 10/28/21

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01-03 Batch: WG1559311-2					
Zinc, Total	100	-	80-120	-	
Total Metals - Mansfield Lab Associated sample(s): 01-03 Batch: WG1559314-2					
Mercury, Total	96	-	80-120	-	

Lab Control Sample Analysis

Batch Quality Control

Project Name: HK VENTURES-CALVERTON

Project Number: HKV2101

Lab Number: L2155680

Report Date: 10/28/21

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
Dissolved Metals - Mansfield Lab Associated sample(s): 01-03 Batch: WG1560979-2					
Aluminum, Dissolved	100	-	80-120	-	
Antimony, Dissolved	88	-	80-120	-	
Arsenic, Dissolved	103	-	80-120	-	
Barium, Dissolved	101	-	80-120	-	
Beryllium, Dissolved	101	-	80-120	-	
Cadmium, Dissolved	100	-	80-120	-	
Calcium, Dissolved	105	-	80-120	-	
Chromium, Dissolved	103	-	80-120	-	
Cobalt, Dissolved	97	-	80-120	-	
Copper, Dissolved	99	-	80-120	-	
Iron, Dissolved	106	-	80-120	-	
Lead, Dissolved	106	-	80-120	-	
Magnesium, Dissolved	108	-	80-120	-	
Manganese, Dissolved	104	-	80-120	-	
Nickel, Dissolved	99	-	80-120	-	
Potassium, Dissolved	110	-	80-120	-	
Selenium, Dissolved	102	-	80-120	-	
Silver, Dissolved	101	-	80-120	-	
Sodium, Dissolved	107	-	80-120	-	
Thallium, Dissolved	111	-	80-120	-	
Vanadium, Dissolved	104	-	80-120	-	

Lab Control Sample Analysis

Batch Quality Control

Project Name: HK VENTURES-CALVERTON

Project Number: HKV2101

Lab Number: L2155680

Report Date: 10/28/21

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
Dissolved Metals - Mansfield Lab Associated sample(s): 01-03 Batch: WG1560979-2					
Zinc, Dissolved	98	-	80-120	-	
Dissolved Metals - Mansfield Lab Associated sample(s): 01-03 Batch: WG1560982-2					
Mercury, Dissolved	95	-	80-120	-	

Matrix Spike Analysis **Batch Quality Control**

Project Name: HK VENTURES-CALVERTON

Project Number: HKV2101

Lab Number: L2155680

Report Date: 10/28/21

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01-03			QC Batch ID: WG1559311-3		WG1559311-4	QC Sample: L2157466-04			Client ID: MS Sample			
Aluminum, Total	0.0752	2	2.02	97		2.16	104		75-125	7		20
Antimony, Total	0.00304J	0.5	0.4661	93		0.4965	99		75-125	6		20
Arsenic, Total	0.00683	0.12	0.1306	103		0.1378	109		75-125	5		20
Barium, Total	0.1290	2	2.261	107		2.259	106		75-125	0		20
Beryllium, Total	ND	0.05	0.05071	101		0.05115	102		75-125	1		20
Cadmium, Total	0.00027	0.053	0.05557	104		0.05436	102		75-125	2		20
Calcium, Total	154.	10	166	120		168	140	Q	75-125	1		20
Chromium, Total	0.00090J	0.2	0.2112	106		0.2093	105		75-125	1		20
Cobalt, Total	0.01586	0.5	0.5152	100		0.5104	99		75-125	1		20
Copper, Total	0.00903	0.25	0.2675	103		0.2645	102		75-125	1		20
Iron, Total	2.90	1	3.99	109		4.04	114		75-125	1		20
Lead, Total	0.01751	0.53	0.6562	120		0.6603	121		75-125	1		20
Magnesium, Total	14.0	10	24.7	107		25.4	114		75-125	3		20
Manganese, Total	2.206	0.5	2.770	113		2.796	118		75-125	1		20
Nickel, Total	0.02041	0.5	0.5258	101		0.5177	99		75-125	2		20
Potassium, Total	10.9	10	21.9	110		22.1	112		75-125	1		20
Selenium, Total	ND	0.12	0.125	104		0.132	110		75-125	5		20
Silver, Total	ND	0.05	0.05124	102		0.05214	104		75-125	2		20
Sodium, Total	15.6	10	26.3	107		27.0	114		75-125	3		20
Thallium, Total	ND	0.12	0.1374	114		0.1401	117		75-125	2		20
Vanadium, Total	ND	0.5	0.5165	103		0.5266	105		75-125	2		20

Matrix Spike Analysis **Batch Quality Control**

Project Name: HK VENTURES-CALVERTON

Lab Number: L2155680

Project Number: HKV2101

Report Date: 10/28/21

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	MSD Found	MSD %Recovery	Recovery Limits	RPD	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01-03			QC Batch ID: WG1559311-3		WG1559311-4	QC Sample: L2157466-04		Client ID: MS Sample	
Zinc, Total	0.7020	0.5	1.234	106	1.243	108	75-125	1	20
Total Metals - Mansfield Lab Associated sample(s): 01-03			QC Batch ID: WG1559314-3		WG1559314-4	QC Sample: L2157466-04		Client ID: MS Sample	
Mercury, Total	ND	0.005	0.00493	99	0.00491	98	75-125	0	20

Matrix Spike Analysis **Batch Quality Control**

Project Name: HK VENTURES-CALVERTON

Project Number: HKV2101

Lab Number: L2155680

Report Date: 10/28/21

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	MSD Found	MSD %Recovery	Recovery Limits	RPD	RPD Limits
Dissolved Metals - Mansfield Lab Associated sample(s): 01-03 QC Batch ID: WG1560979-3 QC Sample: L2155680-01 Client ID: GW001									
Aluminum, Dissolved	0.00430J	2	2.06	103	-	-	75-125	-	20
Antimony, Dissolved	ND	0.5	0.5732	115	-	-	75-125	-	20
Arsenic, Dissolved	0.00020J	0.12	0.1320	110	-	-	75-125	-	20
Barium, Dissolved	0.08338	2	2.151	103	-	-	75-125	-	20
Beryllium, Dissolved	ND	0.05	0.05187	104	-	-	75-125	-	20
Cadmium, Dissolved	ND	0.053	0.05392	102	-	-	75-125	-	20
Calcium, Dissolved	89.0	10	104	150	Q	-	75-125	-	20
Chromium, Dissolved	0.00024J	0.2	0.2084	104	-	-	75-125	-	20
Cobalt, Dissolved	0.00222	0.5	0.5026	100	-	-	75-125	-	20
Copper, Dissolved	0.00345	0.25	0.2606	103	-	-	75-125	-	20
Iron, Dissolved	0.0271J	1	1.09	109	-	-	75-125	-	20
Lead, Dissolved	ND	0.53	0.5708	108	-	-	75-125	-	20
Magnesium, Dissolved	10.3	10	21.4	111	-	-	75-125	-	20
Manganese, Dissolved	1.030	0.5	1.593	113	-	-	75-125	-	20
Nickel, Dissolved	0.00829	0.5	0.5231	103	-	-	75-125	-	20
Potassium, Dissolved	10.7	10	22.4	117	-	-	75-125	-	20
Selenium, Dissolved	ND	0.12	0.125	104	-	-	75-125	-	20
Silver, Dissolved	ND	0.05	0.05128	102	-	-	75-125	-	20
Sodium, Dissolved	54.8	10	63.4	86	-	-	75-125	-	20
Thallium, Dissolved	0.00042J	0.12	0.1352	113	-	-	75-125	-	20
Vanadium, Dissolved	ND	0.5	0.5204	104	-	-	75-125	-	20

Matrix Spike Analysis

Batch Quality Control

Project Name: HK VENTURES-CALVERTON

Project Number: HKV2101

Lab Number: L2155680

Report Date: 10/28/21

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	MSD Found	MSD %Recovery	Recovery Limits	RPD	RPD Limits
Dissolved Metals - Mansfield Lab Associated sample(s): 01-03 QC Batch ID: WG1560979-3 QC Sample: L2155680-01 Client ID: GW001									
Zinc, Dissolved	ND	0.5	0.5080	102	-	-	75-125	-	20
Dissolved Metals - Mansfield Lab Associated sample(s): 01-03 QC Batch ID: WG1560982-3 QC Sample: L2155682-02 Client ID: MS Sample									
Mercury, Dissolved	ND	0.005	0.00463	93	-	-	75-125	-	20

Lab Duplicate Analysis *Batch Quality Control*

Project Name: HK VENTURES-CALVERTON

Project Number: HKV2101

Lab Number: L2155680

Report Date: 10/28/21

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Dissolved Metals - Mansfield Lab Associated sample(s): 01-03 QC Batch ID: WG1560979-4 QC Sample: L2155680-01 Client ID: GW001						
Aluminum, Dissolved	0.00430J	0.00533J	mg/l	NC		20
Antimony, Dissolved	ND	0.00159J	mg/l	NC		20
Arsenic, Dissolved	0.00020J	0.00049J	mg/l	NC		20
Barium, Dissolved	0.08338	0.08391	mg/l	1		20
Beryllium, Dissolved	ND	ND	mg/l	NC		20
Cadmium, Dissolved	ND	0.00007J	mg/l	NC		20
Calcium, Dissolved	89.0	88.3	mg/l	1		20
Chromium, Dissolved	0.00024J	0.00025J	mg/l	NC		20
Cobalt, Dissolved	0.00222	0.00221	mg/l	0		20
Copper, Dissolved	0.00345	0.00345	mg/l	0		20
Iron, Dissolved	0.0271J	0.0341J	mg/l	NC		20
Lead, Dissolved	ND	ND	mg/l	NC		20
Magnesium, Dissolved	10.3	10.3	mg/l	0		20
Manganese, Dissolved	1.030	1.014	mg/l	2		20
Nickel, Dissolved	0.00829	0.00820	mg/l	1		20
Potassium, Dissolved	10.7	10.7	mg/l	0		20
Selenium, Dissolved	ND	ND	mg/l	NC		20
Silver, Dissolved	ND	ND	mg/l	NC		20
Sodium, Dissolved	54.8	54.5	mg/l	1		20

Project Name: HK VENTURES-CALVERTON
Project Number: HKV2101

Lab Duplicate Analysis

Batch Quality Control

Lab Number: L2155680
Report Date: 10/28/21

Parameter	Native Sample	Duplicate Sample	Units	RPD	RPD Limits
Dissolved Metals - Mansfield Lab Associated sample(s): 01-03 QC Batch ID: WG1560979-4 QC Sample: L2155680-01 Client ID: GW001					
Thallium, Dissolved	0.00042J	0.00095J	mg/l	NC	20
Vanadium, Dissolved	ND	ND	mg/l	NC	20
Zinc, Dissolved	ND	ND	mg/l	NC	20
Dissolved Metals - Mansfield Lab Associated sample(s): 01-03 QC Batch ID: WG1560982-4 QC Sample: L2155682-02 Client ID: DUP Sample					
Mercury, Dissolved	ND	ND	mg/l	NC	20

INORGANICS & MISCELLANEOUS

Project Name: HK VENTURES-CALVERTON

Project Number: HKV2101

Lab Number: L2155680

Report Date: 10/28/21

SAMPLE RESULTS

Lab ID: L2155680-01

Client ID: GW001

Sample Location: 4285 MIDDLE COUNTRY RD, CALVERTON, NY

Date Collected: 10/12/21 10:50

Date Received: 10/12/21

Field Prep: Not Specified

Sample Depth:

Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Cyanide, Total	0.002	J	mg/l	0.005	0.001	1	10/22/21 15:00	10/25/21 14:52	1,9010C/9012B	JO
Chromium, Hexavalent	ND		mg/l	0.010	0.003	1	10/13/21 07:20	10/13/21 07:47	1,7196A	KP



Project Name: HK VENTURES-CALVERTON**Project Number:** HKV2101**Lab Number:** L2155680**Report Date:** 10/28/21**SAMPLE RESULTS****Lab ID:** L2155680-02**Client ID:** GW002**Sample Location:** 4285 MIDDLE COUNTRY RD, CALVERTON, NY**Date Collected:** 10/12/21 12:25**Date Received:** 10/12/21**Field Prep:** Not Specified**Sample Depth:****Matrix:** Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Cyanide, Total	0.058		mg/l	0.005	0.001	1	10/22/21 15:00	10/25/21 14:53	1,9010C/9012B	JO
Chromium, Hexavalent	ND		mg/l	0.010	0.003	1	10/13/21 07:20	10/13/21 07:48	1,7196A	KP



Project Name: HK VENTURES-CALVERTON**Lab Number:** L2155680**Project Number:** HKV2101**Report Date:** 10/28/21**SAMPLE RESULTS****Lab ID:** L2155680-03**Date Collected:** 10/12/21 14:00**Client ID:** GW003**Date Received:** 10/12/21**Sample Location:** 4285 MIDDLE COUNTRY RD, CALVERTON, NY**Field Prep:** Not Specified**Sample Depth:****Matrix:** Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Cyanide, Total	0.024		mg/l	0.005	0.001	1	10/22/21 15:00	10/25/21 14:54	1,9010C/9012B	JO
Chromium, Hexavalent	ND		mg/l	0.010	0.003	1	10/13/21 07:20	10/13/21 07:49	1,7196A	KP



Project Name: HK VENTURES-CALVERTON

Lab Number: L2155680

Project Number: HKV2101

Report Date: 10/28/21

Method Blank Analysis Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab for sample(s): 01-03 Batch: WG1557931-1										
Chromium, Hexavalent	ND		mg/l	0.010	0.003	1	10/13/21 07:20	10/13/21 07:46	1,7196A	KP
General Chemistry - Westborough Lab for sample(s): 01-03 Batch: WG1562071-1										
Cyanide, Total	0.002	J	mg/l	0.005	0.001	1	10/22/21 15:00	10/25/21 14:40	1,9010C/9012B	JO

Lab Control Sample Analysis**Batch Quality Control****Project Name:** HK VENTURES-CALVERTON**Project Number:** HKV2101**Lab Number:** L2155680**Report Date:** 10/28/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01-03 Batch: WG1557931-2								
Chromium, Hexavalent	108		-		85-115	-		20
General Chemistry - Westborough Lab Associated sample(s): 01-03 Batch: WG1562071-2 WG1562071-3								
Cyanide, Total	102		108		85-115	6		20

Matrix Spike Analysis **Batch Quality Control**

Project Name: HK VENTURES-CALVERTON

Lab Number: L2155680

Project Number: HKV2101

Report Date: 10/28/21

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01-03 QC Batch ID: WG1557931-4 QC Sample: L2155680-02 Client ID: GW002												
Chromium, Hexavalent	ND	0.1	0.108	108		-	-		85-115	-		20
General Chemistry - Westborough Lab Associated sample(s): 01-03 QC Batch ID: WG1562071-4 WG1562071-5 QC Sample: L2155682-02 Client ID: MS Sample												
Cyanide, Total	ND	0.2	0.222	111		0.223	112		80-120	0		20

Lab Duplicate Analysis
*Batch Quality Control***Project Name:** HK VENTURES-CALVERTON**Project Number:** HKV2101**Lab Number:** L2155680**Report Date:** 10/28/21

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01-03 QC Batch ID: WG1557931-3 QC Sample: L2155680-01 Client ID: GW001						
Chromium, Hexavalent	ND	ND	mg/l	NC		20

Project Name: HK VENTURES-CALVERTON**Lab Number:** L2155680**Project Number:** HKV2101**Report Date:** 10/28/21**Sample Receipt and Container Information**

Were project specific reporting limits specified?

YES

Cooler Information**Cooler** **Custody Seal**

A Absent

B Absent

C Absent

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2155680-01A	Vial HCl preserved	A	NA		4.7	Y	Absent		NYTCL-8260(14)
L2155680-01B	Vial HCl preserved	A	NA		4.7	Y	Absent		NYTCL-8260(14)
L2155680-01C	Vial HCl preserved	A	NA		4.7	Y	Absent		NYTCL-8260(14)
L2155680-01D	Amber 120ml unpreserved	A	7	7	4.7	Y	Absent		NYTCL-8082-LVI(365)
L2155680-01E	Amber 120ml unpreserved	A	7	7	4.7	Y	Absent		NYTCL-8082-LVI(365)
L2155680-01F	Amber 120ml unpreserved	A	7	7	4.7	Y	Absent		NYTCL-8081(7)
L2155680-01G	Amber 120ml unpreserved	A	7	7	4.7	Y	Absent		NYTCL-8081(7)
L2155680-01H	Plastic 250ml unpreserved	A	7	7	4.7	Y	Absent		HEXCR-7196(1)
L2155680-01I	Plastic 250ml unpreserved	A	7	7	4.7	Y	Absent		-
L2155680-01J	Plastic 250ml unpreserved	C	NA		3.2	Y	Absent		A2-NY-537-ISOTOPE(14)
L2155680-01K	Plastic 250ml unpreserved	C	NA		3.2	Y	Absent		A2-NY-537-ISOTOPE(14)
L2155680-01L	Plastic 250ml HNO3 preserved	A	<2	<2	4.7	Y	Absent		SE-6020T(180),TL-6020T(180),BA-6020T(180),FE-6020T(180),CR-6020T(180),CA-6020T(180),NI-6020T(180),K-6020T(180),CU-6020T(180),ZN-6020T(180),NA-6020T(180),PB-6020T(180),MN-6020T(180),BE-6020T(180),AS-6020T(180),V-6020T(180),SB-6020T(180),HG-T(28),AG-6020T(180),AL-6020T(180),CD-6020T(180),MG-6020T(180),CO-6020T(180)
L2155680-01M	Amber 250ml unpreserved	A	7	7	4.7	Y	Absent		NYTCL-8270-SIM-LVI(7),NYTCL-8270-LVI(7)
L2155680-01N	Amber 250ml unpreserved	A	7	7	4.7	Y	Absent		HERB-APA(7)
L2155680-01O	Amber 250ml unpreserved	A	7	7	4.7	Y	Absent		A2-1,4-DIOXANE-SIM(7)
L2155680-01W	Plastic 250ml NaOH preserved split	A	7	>12	4.7	N	Absent		TCN-9010(14)

Project Name: HK VENTURES-CALVERTON
Project Number: HKV2101

Serial_No:10282113:10
Lab Number: L2155680
Report Date: 10/28/21

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2155680-01X	Plastic 120ml HNO3 preserved Filtrates	A	NA		4.7	Y	Absent		K-6020S(180),CU-6020S(180),SE-6020S(180),V-6020S(180),MN-6020S(180),MG-6020S(180),BE-6020S(180),CO-6020S(180),ZN-6020S(180),CA-6020S(180),CR-6020S(180),FE-6020S(180),NI-6020S(180),NA-6020S(180),TL-6020S(180),PB-6020S(180),BA-6020S(180),AG-6020S(180),SB-6020S(180),AS-6020S(180),CD-6020S(180),AL-6020S(180),HG-S(28)
L2155680-02A	Vial HCl preserved	A	NA		4.7	Y	Absent		NYTCL-8260(14)
L2155680-02B	Vial HCl preserved	A	NA		4.7	Y	Absent		NYTCL-8260(14)
L2155680-02C	Vial HCl preserved	A	NA		4.7	Y	Absent		NYTCL-8260(14)
L2155680-02D	Amber 120ml unpreserved	A	7	7	4.7	Y	Absent		NYTCL-8082-LVI(365)
L2155680-02E	Amber 120ml unpreserved	A	7	7	4.7	Y	Absent		NYTCL-8082-LVI(365)
L2155680-02F	Amber 120ml unpreserved	A	7	7	4.7	Y	Absent		NYTCL-8081(7)
L2155680-02G	Amber 120ml unpreserved	A	7	7	4.7	Y	Absent		NYTCL-8081(7)
L2155680-02H	Plastic 250ml unpreserved	A	7	7	4.7	Y	Absent		HEXCR-7196(1)
L2155680-02I	Plastic 250ml unpreserved	A	7	7	4.7	Y	Absent		-
L2155680-02J	Plastic 250ml unpreserved	C	NA		3.2	Y	Absent		A2-NY-537-ISOTOPE(14)
L2155680-02K	Plastic 250ml unpreserved	C	NA		3.2	Y	Absent		A2-NY-537-ISOTOPE(14)
L2155680-02L	Plastic 250ml HNO3 preserved	A	<2	<2	4.7	Y	Absent		BA-6020T(180),TL-6020T(180),FE-6020T(180),SE-6020T(180),CA-6020T(180),CR-6020T(180),NI-6020T(180),K-6020T(180),ZN-6020T(180),NA-6020T(180),CU-6020T(180),PB-6020T(180),MN-6020T(180),BE-6020T(180),AS-6020T(180),V-6020T(180),SB-6020T(180),HG-T(28),MG-6020T(180),AG-6020T(180),AL-6020T(180),CD-6020T(180),CO-6020T(180)
L2155680-02M	Plastic 250ml NaOH preserved	A	>12	>12	4.7	Y	Absent		TCN-9010(14)
L2155680-02N	Amber 250ml unpreserved	A	7	7	4.7	Y	Absent		NYTCL-8270-SIM-LVI(7),NYTCL-8270-LVI(7)
L2155680-02O	Amber 250ml unpreserved	A	7	7	4.7	Y	Absent		NYTCL-8270-SIM-LVI(7),NYTCL-8270-LVI(7)
L2155680-02P	Amber 250ml unpreserved	A	7	7	4.7	Y	Absent		A2-1,4-DIOXANE-SIM(7)
L2155680-02Q	Amber 250ml unpreserved	A	7	7	4.7	Y	Absent		A2-1,4-DIOXANE-SIM(7)
L2155680-02R	Amber 1000ml unpreserved	A	7	7	4.7	Y	Absent		HERB-APA(7)

Project Name: HK VENTURES-CALVERTON
Project Number: HKV2101

Serial_No:10282113:10
Lab Number: L2155680
Report Date: 10/28/21

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2155680-02X	Plastic 120ml HNO3 preserved Filtrates	A	NA		4.7	Y	Absent		K-6020S(180),V-6020S(180),SE-6020S(180),CU-6020S(180),MN-6020S(180),CO-6020S(180),MG-6020S(180),BE-6020S(180),ZN-6020S(180),CA-6020S(180),FE-6020S(180),CR-6020S(180),BA-6020S(180),NA-6020S(180),PB-6020S(180),TL-6020S(180),NI-6020S(180),AG-6020S(180),AS-6020S(180),SB-6020S(180),HG-S(28),AL-6020S(180),CD-6020S(180)
L2155680-03A	Vial HCl preserved	B	NA		4.9	Y	Absent		NYTCL-8260(14)
L2155680-03B	Vial HCl preserved	B	NA		4.9	Y	Absent		NYTCL-8260(14)
L2155680-03C	Vial HCl preserved	B	NA		4.9	Y	Absent		NYTCL-8260(14)
L2155680-03D	Amber 120ml unpreserved	B	7	7	4.9	Y	Absent		NYTCL-8082-LVI(365)
L2155680-03E	Amber 120ml unpreserved	B	7	7	4.9	Y	Absent		NYTCL-8082-LVI(365)
L2155680-03F	Amber 120ml unpreserved	B	7	7	4.9	Y	Absent		NYTCL-8081(7)
L2155680-03G	Amber 120ml unpreserved	B	7	7	4.9	Y	Absent		NYTCL-8081(7)
L2155680-03H	Plastic 250ml unpreserved	B	7	7	4.9	Y	Absent		HEXCR-7196(1)
L2155680-03I	Plastic 250ml unpreserved	B	7	7	4.9	Y	Absent		-
L2155680-03J	Plastic 250ml unpreserved	C	NA		3.2	Y	Absent		A2-NY-537-ISOTOPE(14)
L2155680-03K	Plastic 250ml unpreserved	C	NA		3.2	Y	Absent		A2-NY-537-ISOTOPE(14)
L2155680-03L	Plastic 250ml HNO3 preserved	B	<2	<2	4.9	Y	Absent		FE-6020T(180),SE-6020T(180),BA-6020T(180),TL-6020T(180),K-6020T(180),CR-6020T(180),NI-6020T(180),CA-6020T(180),CU-6020T(180),NA-6020T(180),ZN-6020T(180),PB-6020T(180),BE-6020T(180),MN-6020T(180),V-6020T(180),AS-6020T(180),SB-6020T(180),MG-6020T(180),HG-T(28),CD-6020T(180),AG-6020T(180),AL-6020T(180),CO-6020T(180)
L2155680-03M	Plastic 250ml NaOH preserved	B	>12	>12	4.9	Y	Absent		TCN-9010(14)
L2155680-03N	Amber 250ml unpreserved	B	7	7	4.9	Y	Absent		NYTCL-8270-SIM-LVI(7),NYTCL-8270-LVI(7)
L2155680-03O	Amber 250ml unpreserved	B	7	7	4.9	Y	Absent		NYTCL-8270-SIM-LVI(7),NYTCL-8270-LVI(7)
L2155680-03P	Amber 250ml unpreserved	B	7	7	4.9	Y	Absent		A2-1,4-DIOXANE-SIM(7)
L2155680-03Q	Amber 250ml unpreserved	B	7	7	4.9	Y	Absent		A2-1,4-DIOXANE-SIM(7)
L2155680-03R	Amber 1000ml unpreserved	B	7	7	4.9	Y	Absent		HERB-APA(7)
L2155680-03S	Amber 1000ml unpreserved	B	7	7	4.9	Y	Absent		HERB-APA(7)

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Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2155680-03X	Plastic 120ml HNO3 preserved Filtrates	B	NA		4.9	Y	Absent		V-6020S(180),K-6020S(180),SE-6020S(180),CU-6020S(180),MN-6020S(180),MG-6020S(180),BE-6020S(180),CO-6020S(180),ZN-6020S(180),CR-6020S(180),FE-6020S(180),CA-6020S(180),PB-6020S(180),NI-6020S(180),BA-6020S(180),TL-6020S(180),NA-6020S(180),AS-6020S(180),SB-6020S(180),AG-6020S(180),AL-6020S(180),HG-S(28),CD-6020S(180)
L2155680-04A	Plastic 250ml unpreserved	C	NA		3.2	Y	Absent		A2-NY-537-ISOTOPE(14)

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PFAS PARAMETER SUMMARY

Parameter	Acronym	CAS Number
PERFLUOROALKYL CARBOXYLIC ACIDS (PFCAs)		
Perfluorooctadecanoic Acid	PFODA	16517-11-6
Perfluorohexadecanoic Acid	PFHxDA	67905-19-5
Perfluorotetradecanoic Acid	PFTA	376-06-7
Perfluorotridecanoic Acid	PFTrDA	72629-94-8
Perfluorododecanoic Acid	PFDaA	307-55-1
Perfluoroundecanoic Acid	PFUnA	2058-94-8
Perfluorodecanoic Acid	PFDA	335-76-2
Perfluorononanoic Acid	PFNA	375-95-1
Perfluorooctanoic Acid	PFOA	335-67-1
Perfluoroheptanoic Acid	PFHpA	375-85-9
Perfluorohexanoic Acid	PFHxA	307-24-4
Perfluoropentanoic Acid	PFPeA	2706-90-3
Perfluorobutanoic Acid	PFBA	375-22-4
PERFLUOROALKYL SULFONIC ACIDS (PFSA's)		
Perfluorododecanesulfonic Acid	PFDaDS	79780-39-5
Perfluorodecanesulfonic Acid	PFDS	335-77-3
Perfluorononanesulfonic Acid	PFNS	68259-12-1
Perfluorooctanesulfonic Acid	PFOS	1763-23-1
Perfluoroheptanesulfonic Acid	PFHpS	375-92-8
Perfluorohexanesulfonic Acid	PFHxS	355-46-4
Perfluoropentanesulfonic Acid	PFPeS	2706-91-4
Perfluorobutanesulfonic Acid	PFBS	375-73-5
FLUOROTELOMERS		
1H,1H,2H,2H-Perfluorododecanesulfonic Acid	10:2FTS	120226-60-0
1H,1H,2H,2H-Perfluorodecanesulfonic Acid	8:2FTS	39108-34-4
1H,1H,2H,2H-Perfluorooctanesulfonic Acid	6:2FTS	27619-97-2
1H,1H,2H,2H-Perfluorohexanesulfonic Acid	4:2FTS	757124-72-4
PERFLUOROALKANE SULFONAMIDES (FASAs)		
Perfluorooctanesulfonamide	FOSA	754-91-6
N-Ethyl Perfluorooctane Sulfonamide	NEtFOSA	4151-50-2
N-Methyl Perfluorooctane Sulfonamide	NMeFOSA	31506-32-8
PERFLUOROALKANE SULFONYL SUBSTANCES		
N-Ethyl Perfluorooctanesulfonamido Ethanol	NEtFOSE	1691-99-2
N-Methyl Perfluorooctanesulfonamido Ethanol	NMeFOSE	24448-09-7
N-Ethyl Perfluorooctanesulfonamidoacetic Acid	NEtFOSAA	2991-50-6
N-Methyl Perfluorooctanesulfonamidoacetic Acid	NMeFOSAA	2355-31-9
PER- and POLYFLUOROALKYL ETHER CARBOXYLIC ACIDS		
2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-Propanoic Acid	HFPO-DA	13252-13-6
4,8-Dioxa-3h-Perfluorononanoic Acid	ADONA	919005-14-4
CHLORO-PERFLUOROALKYL SULFONIC ACIDS		
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid	11Cl-PF3OUdS	763051-92-9
9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid	9Cl-PF3ONS	756426-58-1
PERFLUOROETHER SULFONIC ACIDS (PFESAs)		
Perfluoro(2-Ethoxyethane)Sulfonic Acid	PFEEESA	113507-82-7
PERFLUOROETHER/POLYETHER CARBOXYLIC ACIDS (PFPCAs)		
Perfluoro-3-Methoxypropanoic Acid	PFMPA	377-73-1
Perfluoro-4-Methoxybutanoic Acid	PFMBA	863090-89-5
Nonfluoro-3,6-Dioxaheptanoic Acid	NFDHA	151772-58-6

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GLOSSARY

Acronyms

DL	- Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the limit of quantitation (LOQ). The DL includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
EDL	- Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).
EMPC	- Estimated Maximum Possible Concentration: The concentration that results from the signal present at the retention time of an analyte when the ions meet all of the identification criteria except the ion abundance ratio criteria. An EMPC is a worst-case estimate of the concentration.
EPA	- Environmental Protection Agency.
LCS	- Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LCSD	- Laboratory Control Sample Duplicate: Refer to LCS.
LFB	- Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LOD	- Limit of Detection: This value represents the level to which a target analyte can reliably be detected for a specific analyte in a specific matrix by a specific method. The LOD includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
LOQ	- Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.) Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
MDL	- Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
MS	- Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available. For Method 332.0, the spike recovery is calculated using the native concentration, including estimated values.
MSD	- Matrix Spike Sample Duplicate: Refer to MS.
NA	- Not Applicable.
NC	- Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.
NDPA/DPA	- N-Nitrosodiphenylamine/Diphenylamine.
NI	- Not Ignitable.
NP	- Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.
NR	- No Results: Term is utilized when 'No Target Compounds Requested' is reported for the analysis of Volatile or Semivolatile Organic TIC only requests.
RL	- Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
RPD	- Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.
SRM	- Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.
STLP	- Semi-dynamic Tank Leaching Procedure per EPA Method 1315.
TEF	- Toxic Equivalency Factors: The values assigned to each dioxin and furan to evaluate their toxicity relative to 2,3,7,8-TCDD.
TEQ	- Toxic Equivalent: The measure of a sample's toxicity derived by multiplying each dioxin and furan by its corresponding TEF and then summing the resulting values.
TIC	- Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

Report Format: DU Report with 'J' Qualifiers

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Footnotes

- 1 - The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

Terms

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Difference: With respect to Total Oxidizable Precursor (TOP) Assay analysis, the difference is defined as the Post-Treatment value minus the Pre-Treatment value.

Final pH: As it pertains to Sample Receipt & Container Information section of the report, Final pH reflects pH of container determined after adjustment at the laboratory, if applicable. If no adjustment required, value reflects Initial pH.

Frozen Date/Time: With respect to Volatile Organics in soil, Frozen Date/Time reflects the date/time at which associated Reagent Water-preserved vials were initially frozen. Note: If frozen date/time is beyond 48 hours from sample collection, value will be reflected in 'bold'.

Initial pH: As it pertains to Sample Receipt & Container Information section of the report, Initial pH reflects pH of container determined upon receipt, if applicable.

PAH Total: With respect to Alkylated PAH analyses, the 'PAHs, Total' result is defined as the summation of results for all or a subset of the following compounds: Naphthalene, C1-C4 Naphthalenes, 2-Methylnaphthalene, 1-Methylnaphthalene, Biphenyl, Acenaphthylene, Acenaphthene, Fluorene, C1-C3 Fluorenes, Phenanthrene, C1-C4 Phenanthrenes/Anthracenes, Anthracene, Fluoranthene, Pyrene, C1-C4 Fluoranthenes/Pyrenes, Benz(a)anthracene, Chrysene, C1-C4 Chrysenes, Benzo(b)fluoranthene, Benzo(j)+(k)fluoranthene, Benzo(e)pyrene, Benzo(a)pyrene, Perylene, Indeno(1,2,3-cd)pyrene, Dibenz(ah)+(ac)anthracene, Benzo(g,h,i)perylene. If a 'Total' result is requested, the results of its individual components will also be reported.

PFAS Total: With respect to PFAS analyses, the 'PFAS, Total (5)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA and PFOS. In addition, the 'PFAS, Total (6)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA, PFDA and PFOS. For MassDEP DW compliance analysis only, the 'PFAS, Total (6)' result is defined as the summation of results at or above the RL. Note: If a 'Total' result is requested, the results of its individual components will also be reported.

The target compound Chlordane (CAS No. 57-74-9) is reported for GC ECD analyses. Per EPA, this compound "refers to a mixture of chlordane isomers, other chlorinated hydrocarbons and numerous other components." (Reference: USEPA Toxicological Review of Chlordane, In Support of Summary Information on the Integrated Risk Information System (IRIS), December 1997.)

Total: With respect to Organic analyses, a 'Total' result is defined as the summation of results for individual isomers or Aroclors. If a 'Total' result is requested, the results of its individual components will also be reported. This is applicable to 'Total' results for methods 8260, 8081 and 8082.

Data Qualifiers

- A** - Spectra identified as "Aldol Condensates" are byproducts of the extraction/concentration procedures when acetone is introduced in the process.
- B** - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).
- C** - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.
- D** - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.
- E** - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.
- F** - The ratio of quantifier ion response to qualifier ion response falls outside of the laboratory criteria. Results are considered to be an estimated maximum concentration.
- G** - The concentration may be biased high due to matrix interferences (i.e. co-elution) with non-target compound(s). The result should be considered estimated.
- H** - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.
- I** - The lower value for the two columns has been reported due to obvious interference.
- J** - Estimated value. The Target analyte concentration is below the quantitation limit (RL), but above the Method Detection Limit (MDL) or Estimated Detection Limit (EDL) for SPME-related analyses. This represents an estimated concentration for Tentatively Identified Compounds (TICs).
- M** - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.
- ND** - Not detected at the method detection limit (MDL) for the sample, or estimated detection limit (EDL) for SPME-related analyses.

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Data Qualifiers

- NJ** - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.
- P** - The RPD between the results for the two columns exceeds the method-specified criteria.
- Q** - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)
- R** - Analytical results are from sample re-analysis.
- RE** - Analytical results are from sample re-extraction.
- S** - Analytical results are from modified screening analysis.
- V** - The surrogate associated with this target analyte has a recovery outside the QC acceptance limits. (Applicable to MassDEP DW Compliance samples only.)
- Z** - The batch matrix spike and/or duplicate associated with this target analyte has a recovery/RPD outside the QC acceptance limits. (Applicable to MassDEP DW Compliance samples only.)

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REFERENCES

- 1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - VI, 2018.
- 134 Determination of Selected Perfluorinated Alkyl Acids in Drinking Water by Solid Phase Extraction and Liquid Chromatography/Tandem Mass Spectrometry (LC/MS/MS) using Isotope Dilution. Alpha SOP 23528.

LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.



Alpha Analytical, Inc.Facility: **Company-wide**Department: **Quality Assurance**Title: **Certificate/Approval Program Summary**ID No.: **17873**

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Certification Information

The following analytes are not included in our Primary NELAP Scope of Accreditation:

Westborough Facility**EPA 624/624.1:** m/p-xylene, o-xylene, Naphthalene**EPA 625/625.1:** alpha-Terpineol**EPA 8260C/8260D:** NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene; SCM: Iodomethane (methyl iodide), 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.**EPA 8270D/8270E:** NPW: Dimethylnaphthalene, 1,4-Diphenylhydrazine, alpha-Terpineol; SCM: Dimethylnaphthalene, 1,4-Diphenylhydrazine.**SM4500:** NPW: Amenable Cyanide; SCM: Total Phosphorus, TKN, NO₂, NO₃.**Mansfield Facility****SM 2540D:** TSS**EPA 8082A:** NPW: PCB: 1, 5, 31, 87, 101, 110, 141, 151, 153, 180, 183, 187.**EPA TO-15:** Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene,

3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.

Biological Tissue Matrix: EPA 3050B

The following analytes are included in our Massachusetts DEP Scope of Accreditation

Westborough Facility:**Drinking Water****EPA 300.0:** Chloride, Nitrate-N, Fluoride, Sulfate; **EPA 353.2:** Nitrate-N, Nitrite-N; **SM4500NO3-F:** Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE,****EPA 180.1, SM2130B, SM4500CI-D, SM2320B, SM2540C, SM4500H-B, SM4500NO2-B****EPA 332:** Perchlorate; **EPA 524.2:** THMs and VOCs; **EPA 504.1:** EDB, DBCP.**Microbiology:** **SM9215B; SM9223-P/A, SM9223B-Colilert-QT, SM9222D.****Non-Potable Water****SM4500H-B, EPA 120.1, SM2510B, SM2540C, SM2320B, SM4500CL-E, SM4500F-BC, SM4500NH3-BH:** Ammonia-N and Kjeldahl-N, **EPA 350.1:**Ammonia-N, **LACHAT 10-107-06-1-B:** Ammonia-N, **EPA 351.1, SM4500NO3-F, EPA 353.2:** Nitrate-N, **SM4500P-E, SM4500P-B, E, SM4500SO4-E,****SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, EPA 420.1, SM4500-CN-CE, SM2540D, EPA 300:** Chloride, Sulfate, Nitrate.**EPA 624.1:** Volatile Halocarbons & Aromatics,**EPA 608.3:** Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II,

Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs

EPA 625.1: SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045:** PCB-Oil.**Microbiology:** **SM9223B-Colilert-QT; Enterolert-QT, SM9221E, EPA 1600, EPA 1603, SM9222D.****Mansfield Facility:****Drinking Water****EPA 200.7:** Al, Ba, Cd, Cr, Cu, Fe, Mn, Ni, Na, Ag, Ca, Zn. **EPA 200.8:** Al, Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, TL, Zn. **EPA 245.1 Hg.****EPA 522, EPA 537.1.****Non-Potable Water****EPA 200.7:** Al, Sb, As, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Sr, TL, Ti, V, Zn.**EPA 200.8:** Al, Sb, As, Be, Cd, Cr, Cu, Fe, Pb, Mn, Ni, K, Se, Ag, Na, TL, Zn.**EPA 245.1 Hg.****SM2340B**

For a complete listing of analytes and methods, please contact your Alpha Project Manager.

