AKTPEERLESS

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September 30, 2020

Mr. Timothy Palazzolo
City of Detroit
Detroit Demolition Department
1301 Third Street
Detroit, Michigan 48226

Subject: **Topsoil Composite Soil Sampling Report**
12741 Maiden
Detroit, Michigan
AKT Peerless Project No. 8997f5-5-10.4

Mr. Palazzolo:

The City of Detroit, Detroit Demolition Department retained AKT Peerless to conduct soil sampling at a residential demolition site located at 12471 Maiden in Detroit, Wayne County, Michigan.

This scope of work was conducted in accordance with AKT Peerless' Work Order Request dated July 29, 2020 (approved July 29, 2020).

AKT Peerless understands that a residential structure was demolished at this location and the former basement excavation was filled with engineered fill (crushed residential hardfill consisting of broken concrete foundations and slabs, hard paved surfaces, brick and block, along with soil overburden) from the basement floor to approximately 12-inches below grade. An imported topsoil material was placed in the top 12-inches to grade.

Field Investigation

On August 27, 2020, Mr. Sean Brick and Mr. Antonio Morsette with AKT Peerless collected (1) composite sample, which consisted of three (3) discrete soil samples from the topsoil (top 12") combined into one (1) composite sample identified as "12741 Maiden-TS-Composite" in the former area of the residential structure.

AKT Peerless used a shovel to collect the samples.

During sample collection, AKT Peerless adhered to proper decontamination procedures. Sampling equipment was decontaminated using the following methods to minimize potential cross-contamination of soil samples:

- Washing and scrubbing the equipment with non-phosphate detergent
- Rinsing the equipment
- Air-drying the equipment

AKT Peerless collected samples according to USEPA Publication SW-846, Testing Methods for Evaluating Solid Waste. Soil samples were collected in laboratory-supplied containers, stored on ice at approximately 4 degrees Celsius, and submitted under chain-of-custody documentation. Soil samples collected for volatile analyses (VOCs) were field preserved with methanol in accordance with U.S. EPA

Method 5035. Soil samples collected for additional analyses were stored in unpreserved, 8-ounce wide-mouth jars.

Photographs taken during sampling activities are included in Attachment I. A site map depicting the sample locations is included in Attachment II.

Laboratory Analysis and Methods

The soil samples were delivered to ALS Group, USA, an independent National Voluntary Laboratory Accreditation Program (NVLAP) laboratory in Holland, Michigan, under chain-of-custody documentation for analysis of:

- Volatile Organic Compounds (VOCs) in accordance with USEPA Method 8260C;
- Semi-Volatile Organic Compounds (SVOCs) in accordance with USEPA Method 8270D;
- Polychlorinated biphenyls (PCBs) in accordance with USEPA Method 8082;
- Michigan 10 Metals (arsenic, barium, cadmium, total chromium, copper, lead, mercury, selenium, silver, and zinc) in accordance with USEPA Method 6020B or 7471B;
- Chloride in accordance with USEPA Method 325.3;
- Herbicides in accordance with USEPA Method 8151; and
- Pesticides in accordance with USEPA Method 8081A.

Analytical Results

AKT Peerless compared the laboratory analytical results to Michigan Department of Environment, Great Lakes and Energy (EGLE) Part 201 Residential Cleanup Criterion (RCC) provided in Michigan Administrative Rules 299.1 through 299.50 and the requirements outlined in the Detroit Land Bank Authority (DLBA) Scope of Services, revised September 13, 2018 (which were the applicable Scope of Work standards at the time backfill was placed at the subject property).

The results of the investigation indicate the following:

- VOCs were not detected in the topsoil composite sample above laboratory method detection limits (MDLs).
- SVOCs were not detected in the topsoil composite sample above laboratory MDLs.
- PCBs were not detected in the topsoil composite sample above laboratory MDLs.
- Arsenic, barium, cadmium, chromium (total), copper, lead, and zinc were detected in the topsoil composite sample above laboratory MDLs but below EGLE Part 201 RCC. Selenium and silver were not detected in the topsoil composite sample above laboratory MDLs.
- Mercury was detected in the topsoil composite samples exceeding EGLE Part 201 Groundwater to Surfacewater Interface Protection (GSIP) criteria.
- Chloride was not detected in the topsoil composite sample above laboratory MDLs.
- Herbicides were not detected in the topsoil composite sample above laboratory MDLs.
- Pesticides were not detected in the topsoil composite sample above laboratory MDLs.

A table summarizing the soil sampling results is included in Attachment III. The laboratory analytical results and chain of custody documentation are also provided in Attachment III.

Conclusions and Recommendations

AKT Peerless collected one (1) composite sample, which consisted of three (3) discrete soil samples from the topsoil (top 12") combined into one (1) composite sample in the former area of the residential structure located at 12471 Maiden in Detroit, Wayne County, Michigan. The soil samples were submitted for laboratory analysis of VOCs, SVOCs, PCBs, MI Metals, chloride, herbicides, and pesticides.

Laboratory analytical results from the topsoil composite sample depth did not identify the presence of target compounds above laboratory MDLs and/or EGLE Part 201 RCC, except for mercury. Mercury was identified at a concentration exceeding EGLE Part 201 GSIP criteria.

According to the DLBA Scope of Services, backfill that is contaminated above an EGLE Part 201 RCC or with detectable concentrations of VOCs is not suitable for the Detroit backfill program. Based on the sampling results from the topsoil composite sample, the topsoil material does not meet the DLBA Scope of Services requirements.

Limitations

The information and opinions obtained in this report are for the exclusive use of the City of Detroit. No distribution to or reliance by other parties may occur without the express written permission of AKT Peerless. AKT Peerless will not distribute this report without your written consent or as required by law or by a Court order. The information and opinions contained in the report are given in light of that assignment. The report must be reviewed and relied upon only in conjunction with the terms and conditions expressly agreed upon by the parties and as limited therein. Any third parties who have been extended the right to rely on the contents of this report by AKT Peerless (which is expressly required prior to any third-party release), expressly agrees to be bound by the original terms and conditions entered into by AKT Peerless and the City of Detroit.

Subject to the above and the terms and conditions, AKT Peerless accepts responsibility for the competent performance of its duties in executing the assignment and preparing reports in accordance with the normal standards of the profession but disclaims any responsibility for consequential damages. Although AKT Peerless believes that results contained herein are reliable, AKT Peerless cannot warrant or guarantee that the information provided is exhaustive or that the information provided by the City of Detroit or third parties is complete or accurate.

Signatures of Environmental Professionals

The following individuals contributed to the completion of this report.

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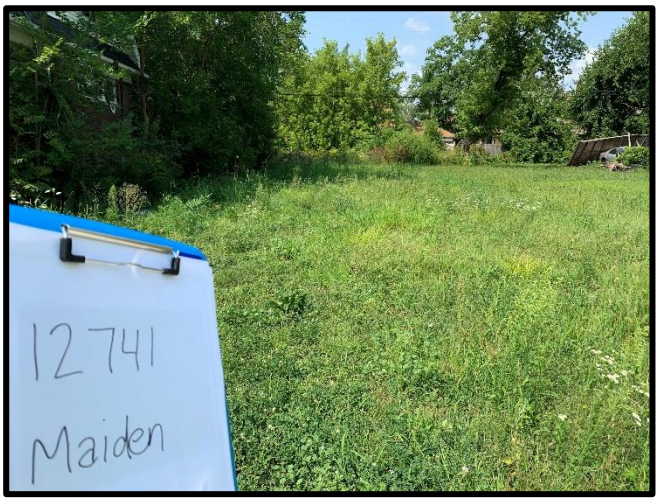
Attachment I

Site Photographs



View of the property looking north.

View of the property looking east.

View of the property looking south.

View of the property looking west.

View of sample locations.

View of typical top fill material.

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Property Photographs
12741 Maiden
Detroit, Michigan

Taken by: S. Brick
Date: 08.27.2020

Project No: 8997F5-5-10.5

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Attachment II

Site Map

Notes:

– Approximate location of excavation area

X – Approximate location of AKT Peerless discrete sample locations

Map not to scale.

Map/aerial courtesy of Detroit Parcel Viewer at https://cityofdetroit.github.io/parcel-viewer/

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Sample Location Map
12741 Maiden
Detroit, Michigan

Project No: 8997F5-5-10.4

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Attachment III

Soil Results Table and Laboratory Analytical Results

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Table 1: Summary of Soil Analytical Results
12741 Maiden, Detroit, Michigan
AKT Peerless Project No. 8997F5-5-10.4

Parameters* *(Refer to detailed laboratory report for method reference data)*	Chemical Abstract Service Number	Statewide Default Background Levels	Residential Drinking Water Protection Criteria	Groundwater Surface Water Interface Protection Criteria	Residential Soil Volatilization to Indoor Air Inhalation Criteria	Residential Infinite Source Volatile Soil Inhalation Criteria	Residential Particulate Soil Inhalation Criteria	Residential Direct Contact Criteria	Soil Saturation Concentration Screening Levels	Sample Name Collection Date	12741 Maiden-TS-Composite 8/27/2020
Metals (µg/kg)											
Arsenic	7440-38-2	5,800	4,600	4,600	NLV	NLV	7.2E+5	7,600	NA		5,200
Barium (B)	7440-39-3	75,000	1.3E+6	(G)	NLV	NLV	3.3E+8	3.7E+7	NA		52,000
Cadmium (B)	7440-43-9	1,200	6,000	(G,X)	NLV	NLV	1.7E+6	5.5E+5	NA		230
Chromium, Total	7440-47-3	18,000 (total)	30,000	3,300	NLV	NLV	2.6E+5	2.5E+6	NA		14,000
Copper (B)	7440-50-8	32,000	5.8E+6	(G)	NLV	NLV	1.3E+8	2.0E+7	NA		12,000
Lead (B)	7439-92-1	21,000	7.0E+5	(G,X)	NLV	NLV	1.0E+8	4.0E+5	NA		44,000
Mercury, Total	7439-97-6	130	1,700	50 (M); 1.2	48,000	52,000	2.0E+7	1.6E+5	NA		**220**
Selenium (B)	7782-49-2	410	4,000	400	NLV	NLV	1.3E+8	2.6E+6	NA		<410
Silver (B)	7440-22-4	1,000	4,500	100 (M); 27	NLV	NLV	6.7E+6	2.5E+6	NA		<410
Zinc (B)	7440-66-6	47,000	2.4E+6	(G)	NLV	NLV	ID	1.7E+8	NA		58,000
Chloride (ug/kg)											
Chloride	16887-00-6	NA	5.0E+6	(X)	NLV	NLV	ID	5.0E+5 (F)	NA		<200,000
Polychlorinated biphenyls (PCBs, µg/kg)											
PCBs (J,T)	1336-36-3	NA	NLL	NLL	3.0E+6	2.4E+5	5.2E+6	(T)	NA		<330
Herbicides (µg/kg)											
Silvex (2,4,5-TP)	93-72-1	NA	3,600	2,200	NLV	NLV	ID	1.7E+6	NA		<300
2,4-Dichlorophenoxyacetic acid	94-75-7	NA	1,400	4,400	NLV	NLV	6.7E+9	2.5E+6	NA		<200
Pesticides (µg/kg)											
All Pesticides	Varies	-	-	-	-	-	-	-	-		BDL
Semivolatile Organic Compounds (SVOCs, µg/kg)											
All SVOCs	Varies	-	-	-	-	-	-	-	-		BDL
Volatile Organic Compounds (VOCs, µg/kg)											
All VOCs	Varies	-	-	-	-	-	-	-	-		BDL

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R 299.49 FOOTNOTES FOR GENERIC CLEANUP CRITERIA TABLES (as last revised on December 30, 2013)

Cleanup Criteria Requirements for Response Activity (formerly the Part 201 Generic Cleanup Criteria and Screening Levels)

(A) Criterion is the state of Michigan drinking water standard established pursuant to Section 5 of 1976 PA 399, MCL 325.1005.

(B) Background, as defined in R 299.1(b), may be substituted if higher than the calculated cleanup criterion. Background levels may be less than criteria for some inorganic compounds.

(C) The criterion developed under R 299.20 to R 299.26 exceeds the chemical-specific soil saturation screening level (C_{sat}). The person proposing or implementing response activity shall document whether additional response activity is required to control free-phase liquids or NAPL to protect against risks associated with free-phase liquids by using methods appropriate for the free-phase liquids present. Development of a site-specific C_{sat} or methods presented in R 299.22, R 299.24(5), and R 299.26(8) may be conducted for the relevant exposure pathways.

(D) Calculated criterion exceeds 10%, hence it is reduced to 100 percent or 1.0E+9 parts per billion (ppb).

(E) Criterion is the aesthetic drinking water value, as required by Section 20120a(5) of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (NREPA). A notice of aesthetic impact may be employed as an institutional control mechanism if groundwater concentrations exceed the aesthetic drinking water criterion, but do not exceed the applicable health-based drinking water value [as provided in the table in Footnote (E) in R 299.49].

(F) Criterion is based on adverse impacts to plant life and phytotoxicity.

(G) Groundwater surface water interface (GSI) criterion depends on the pH or water hardness, or both, of the receiving surface water. The final chronic value (FCV) for the protection of aquatic life shall be calculated based on the pH or hardness of the receiving surface water. Where water hardness exceeds 400 mg $CaCO_3$/L, use 400 mg $CaCO_3$/L for the FCV calculation. The FCV formula provides values in units of ug/L or ppb. The generic GSI criterion is the lesser of the calculated FCV, the wildlife value (WV), and the surface water human non-drinking water value (HNDV). The soil GSI protection criteria for these hazardous substances are the greater of 20 times the GSI criterion or the GSI soil-water partition values using the GSI criteria developed with the procedure described in this footnote. [See table in Footnote (G) in R 299.49].

(H) Valence-specific chromium data (Cr III and Cr VI) shall be compared to the corresponding valence-specific cleanup criteria. If both Cr III and Cr VI are present in groundwater, the total concentration of both cannot exceed the drinking water criterion of 100 ug/L. If analytical data are provided for total chromium only, they shall be compared to the cleanup criteria for Cr VI. Cr III soil cleanup criterion for protection of drinking water can only be used at sites where groundwater is prevented from being used as a public water supply, currently and in the future, through an approved land or resource use restriction.

(I) Hazardous substance may exhibit the characteristic of ignitability as defined in 40 C.F.R. §261.21 (revised as of July 1, 2001), which is adopted by reference in these rules.

(J) Hazardous substance may be present in several isomer forms. Isomer-specific concentrations shall be added together for comparison to criteria.

(K) Hazardous substance may be flammable or explosive, or both.

(L) Criteria for lead are derived using a biologically based model, as allowed for under Section 20120a(9) of the NREPA, and are not calculated using the algorithms and assumptions specified in pathway-specific rules. The generic residential drinking water criterion of 4 ug/L is linked to the generic residential soil direct contact criterion of 400 mg/kg. A higher concentration in the drinking water, up to the state action level of 15 ug/L, may be allowed as a site-specific remedy and still allow for drinking water use, under Section 20120a(2) of the NREPA if soil concentrations are appropriately lower than 400 mg/kg. If a site-specific criterion is approved based on this subdivision, a notice shall be filed on the deed for all property where the groundwater concentrations will exceed 4 ug/L to provide notice of the potential for unacceptable risk if soil or groundwater concentrations increase. Acceptable concentrations of site-specific soil and drinking water concentrations are presented in the [table in Footnote (L) in R 299.49].

(M) Calculated criterion is below the analytical target detection limit, therefore, the criterion defaults to the target detection limit.

(N) The concentrations of all potential sources of nitrate-nitrogen (e.g., ammonia-N, nitrite-N, nitrate-N) in groundwater that is used as a source of drinking water shall not, when added together, exceed the nitrate drinking water criterion of 10,000 ug/L. Where leaching to groundwater is a relevant pathway, soil concentrations of all potential sources of nitrate-nitrogen shall not, when added together, exceed the nitrate drinking water protection criterion of 2.0E+5 ug/kg.

(O) The concentration of all polychlorinated and polybrominated dibenzodioxin and dibenzofuran isomers present at a facility, expressed as an equivalent concentration of 2,3,7,8-tetrachlorodibenzo-p-dioxin based upon their relative potency, shall be added together and compared to the criteria for 2,3,7,8-tetrachlorodibenzo-p-dioxin. The generic cleanup criteria for 2,3,7,8-tetrachlorodibenzo-p-dioxin are not calculated according to the algorithms presented in R 299.14 to R 299.26. The generic cleanup criteria are being held at the values that the DEQ has used since August 1998, in recognition of the fact that national efforts to reassess risks posed by dioxin are not yet complete. Until these studies are complete, it is premature to select a revised slope factor and/or reference dose for calculation of generic cleanup criteria.

(P) Amenable cyanide methods or method OIA-1677 shall be used to quantify cyanide concentrations for compliance with all groundwater criteria. Total cyanide methods or method OIA-1677 shall be used to quantify cyanide concentrations for compliance with soil criteria. Nonresidential direct contact criteria may not be protective of the potential for release of hydrogen cyanide gas. Additional land or resource use restrictions may be necessary to protect for the acute inhalation concerns associated with hydrogen cyanide gas.

(Q) Criteria for carcinogenic polycyclic aromatic hydrocarbons were developed using relative potential potencies to benzo(a)pyrene.

(R) Hazardous substance may exhibit the characteristic of reactivity as defined in 40 C.F.R. §261.23 (revised as of July 1, 2001), which is adopted by reference in these rules.

(S) Criterion defaults to the hazardous substance-specific water solubility limit.

(T) Refer to the federal Toxic Substances Control Act (TSCA), 40 C.F.R. §761, subpart D and 40 C.F.R. §761, Subpart G, to determine the applicability of TSCA cleanup standards. Subpart D and subpart G of 40 C.F.R. §761 (July 1, 2001) are adopted by reference in these rules. Alternatives to compliance with the TSCA standards listed below are possible under 40 C.F.R. §761 Subpart D. New releases may be subject to the standards identified in 40 C.F.R. §761, Subpart G. Use Part 201 soil direct contact cleanup criteria in the following table if TSCA standards are not applicable. [See table in Footnote (T) in R 299.49].

(U) Hazardous substance may exhibit the characteristic of corrosivity as defined in 40 C.F.R. §261.22 (revised as of July 1, 2001), which is adopted by reference in these rules.

(V) Criterion is the aesthetic drinking water value as required by Section 20120(a)(5) of the NREPA. Concentrations up to 200 ug/L may be acceptable, and still allow for drinking water use, as part of a site-specific cleanup under Section 20120a(2) and 20120b of the NREPA.

(W) Concentrations of trihalomethanes in groundwater shall be added together to determine compliance with the Michigan drinking water standard of 80 ug/L. Concentrations of trihalomethanes in soil shall be added together to determine compliance with the drinking water protection criterion of 1,600 ug/kg.

(X) The GSI criterion shown in the generic cleanup criteria tables is not protective for surface water that is used as a drinking water source. For a groundwater discharge to the Great Lakes and their connecting waters or discharge in close proximity to a water supply intake in inland surface waters, the generic GSI criterion shall be the surface water human drinking water value (HDV) listed in the [table in Footnote (X) in R 299.49], except for those HDV indicated with an asterisk. For HDV with an asterisk, the generic GSI criterion shall be the lowest of the HDV, the WV, and the calculated FCV. See formulas in [the table in Footnote (G) in R 299.49]. Soil protection criteria based on the HDV shall be as listed in the [table in Footnote (X) in R 299.49], except for those values with an asterisk. Soil GSI protection criteria based on the HDV shall be as listed in the [table in Footnote (X) in R 299.49], except for those values with an asterisk. Soil GSI protection criteria for compounds with an asterisk shall be the greater of 20 times the GSI criterion or the GSI soil-water partition values using the GSI criteria developed with the procedure described in this footnote.

(Y) Source size modifiers shown in the [table in Footnote (Y) in R 299.49] shall be used to determine soil inhalation criteria for ambient air when the source size is not one-half acre. The modifier shall be multiplied by the generic soil inhalation criteria shown in the table of generic cleanup criteria to determine the applicable criterion. See Footnote (C) [in R 299.49].

(Z) Mercury is typically measured as total mercury. The generic cleanup criteria, however, are based on data for different species of mercury. Specifically, data for elemental mercury, chemical abstract service (CAS) number 7439976, serve as the basis for the soil volatilization to indoor air criteria, groundwater volatilization to indoor air, and soil inhalation criteria. Data for methyl mercury, CAS number 22967926, serve as the basis for the GSI criterion; and data for mercuric chloride, CAS number 7487947, serve as the basis for the drinking water, groundwater contact, soil direct contact, and the groundwater protection criteria. Comparison to criteria shall be based on species-specific analytical data only if sufficient facility characterization has been conducted to rule out the presence of other species of mercury.

(AA) Use 10,000 ug/L where groundwater enters a structure through the use of a water well, sump or other device. Use 28,000 ug/L for all other uses.

(BB) The state drinking water standard for asbestos (fibers greater than 10 micrometers in length) is in units of a million fibers per liter of water (MFL). Soil concentrations of asbestos are determined by polarized light microscopy.

(CC) Groundwater: The generic GSI criteria are based on the toxicity of unionized ammonia (NH_3); the criteria are 29 ug/L and 53 ug/L for cold water and warm water surface water, respectively. As a result, the GSI criterion shall be compared to the percent of the total ammonia concentration in the groundwater that will become NH_3 in the surface water. This percent NH_3 is a function of the pH and temperature of the receiving surface water and can be estimated using the [table in Footnote (CC) in R 299.49], taken from Emerson, et al., (Journal of the Fisheries Research Board of Canada, Volume 32(12):2382, 1975). The generic approach for estimating NH_3 assumes a default pH of 8 and default temperatures of 68 °F and 85 °F for cold water and warm water surface water, respectively. The resulting NH_3 is 3.8 percent and 7.2 percent for cold water and warm water, respectively. This default percentage shall be multiplied by the total ammonia-nitrogen (NH_3-N) concentration in the groundwater and the resulting NH_3 concentration compared to the applicable GSI criterion. As an alternative, the maximum pH and temperature data from the specific receiving surface water can be used to estimate, from the [table in Footnote (CC) in R 299.49], a lower percent unionized ammonia concentration for comparison to the generic GSI.
Soil: The generic soil GSI protection criteria for unionized ammonia are 580 ug/kg and 1,100 ug/kg for cold water and warm water surface water, respectively.

(DD) Hazardous substance causes developmental effects. Residential direct contact criteria are protective of both prenatal and postnatal exposure. Nonresidential direct contact criteria are protective for a pregnant adult receptor.

(EE) The [values listed in the table in Footnote (EE) in 299.49] are applicable generic GSI criteria as required by Section 20120e of the NREPA.

(FF) The chloride GSI criterion shall be 125 mg/L when the discharge is to surface waters of the state designated as public water supply sources or 50 mg/L when the discharge is to the Great Lakes or connecting waters. Chloride GSI criteria shall not apply for surface waters of the state that are not designated as a public water supply source; however, the total dissolved solids criterion is applicable.

(GG) Risk-based criteria are not available for methane due to insufficient toxicity data. An acceptable soil gas concentration (presented for both residential and nonresidential land uses) was derived utilizing 25 percent of the lower explosive level for methane. This equates to 1.25 percent or 8.4E+6 ug/m^3.

(HH) The residential criterion for sodium is 230,000 ug/L in accordance with the Sodium Advisory Council recommendation and revised Groundwater Discharge Standards.

ID Insufficient data to develop criterion.

NA A criterion or value is not available or, in the case of background and CAS numbers, not applicable.

NLL Hazardous substance is not likely to leach under most soil conditions.

NLV Hazardous substance is not likely to volatilize under most conditions.

ug/kg Micrograms per kilogram

ug/L Micrograms per liter

BDL Below Laboratory Method Detection Limits

BOLD Exceeds criteria.

BF Backfill

TS Topsoil

09-Sep-2020

Megan Napier
AKT Peerless
22725 Orchard Lake Road
Farmington, MI 48336

Re: **8997f5-5-10.4** Work Order: **20082418**

Dear Megan,

ALS Environmental received 1 sample on 29-Aug-2020 08:00 AM for the analyses presented in the following report.

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

Sample results are compliant with industry accepted practices and Quality Control results achieved laboratory specifications. Any exceptions are noted in the Case Narrative, or noted with qualifiers in the report or QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained from ALS Environmental. Samples will be disposed in 30 days unless storage arrangements are made.

The total number of pages in this report is 39.

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

ADDRESS: 3352 128th Avenue, Holland, MI, USA
PHONE: +1 (616) 399-6070 FAX: +1 (616) 399-6185

Sincerely,

Electronically approved by: Bill Carey

Bill Carey
Project Manager

Report of Laboratory Analysis

ALS Group, USA

Date: 09-Sep-20

Client: AKT Peerless
Project: 8997f5-5-10.4
Work Order: **20082418**

Work Order Sample Summary

Lab Samp ID	Client Sample ID	Matrix	Tag Number	Collection Date	Date Received	Hold
20082418-01	12741 Maiden-TS-Composite	Soil		8/27/2020 14:20	8/29/2020 08:00	☐

Client: AKT Peerless
Project: 8997f5-5-10.4
WorkOrder: **20082418**

QUALIFIERS, ACRONYMS, UNITS

Qualifier	Description
*	Value exceeds Regulatory Limit
**	Estimated Value
a	Analyte is non-accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
Hr	BOD/CBOD - Sample was reset outside Hold Time, value should be considered estimated.
J	Analyte is present at an estimated concentration between the MDL and Report Limit
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL
X	Analyte was detected in the Method Blank between the MDL and Reporting Limit, sample results may exhibit background or reagent contamination at the observed level.

Acronym	Description
DUP	Method Duplicate
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
LOD	Limit of Detection (see MDL)
LOQ	Limit of Quantitation (see PQL)
MBLK	Method Blank
MDL	Method Detection Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PQL	Practical Quantitation Limit
RPD	Relative Percent Difference
TDL	Target Detection Limit
TNTC	Too Numerous To Count
A	APHA Standard Methods
D	ASTM
E	EPA
SW	SW-846 Update III

Units Reported	Description
% of sample	Percent of Sample
µg/Kg-dry	Micrograms per Kilogram Dry Weight
mg/Kg-dry	Milligrams per Kilogram Dry Weight

ALS Group, USA

Date: 09-Sep-20

Client: AKT Peerless
Project: 8997f5-5-10.4
Work Order: 20082418

Case Narrative

Samples for the above noted Work Order were received on 8/29/2020. The attached "Sample Receipt Checklist" documents the status of custody seals, container integrity, preservation, and temperature compliance.

Samples were analyzed according to the analytical methodology previously transmitted in the "Work Order Acknowledgement". Methodologies are also documented in the "Analytical Result" section for each sample. Quality control results are listed in the "QC Report" section. Sample association for the reported quality control is located at the end of each batch summary. If applicable, results are appropriately qualified in the Analytical Result and QC Report sections. The "Qualifiers" section documents the various qualifiers, units, and acronyms utilized in reporting. A copy of the laboratory's scope of accreditation is available upon request.

With the following exceptions, all sample analyses achieved analytical criteria.

Volatile Organics:
No other deviations or anomalies were noted.

Extractable Organics:
Batch 163547, Method SVO_8270_S, Sample 20082418-01B: The reporting limit is elevated due to dilution needed to eliminate matrix-related interference.

Metals:
No other deviations or anomalies were noted.

Wet Chemistry:
No other deviations or anomalies were noted.

ALS Group, USA

Date: *09-Sep-20*

Client:	AKT Peerless	**Client Sample ID:**	12741 Maiden-TS-Composite
Work Order:	20082418	**Collection Date:**	8/27/2020 2:20:00 PM
Project:	8997f5-5-10.4		
Lab ID:	20082418-01	**Matrix:**	SOIL

Analyses	Result	Report Limit	MDEQ OP Memo 2 TDL	Qual	Units	Dilution Factor	Date Analyzed
HERBICIDES			**SW8151**		Prep Date: **9/4/2020**		Analyst: **KYM**
2,4,5-TP (Silvex)	ND	300	300		µg/Kg-dry	1	9/4/2020
2,4-D	ND	200	200		µg/Kg-dry	1	9/4/2020
Surr: DCAA	*46.0*	*10-150*			*%REC*	1	9/4/2020
PCBS			**SW8082**		Prep Date: **9/3/2020**		Analyst: **RM**
Aroclor 1016	ND	330	330		µg/Kg-dry	1	9/3/2020
Aroclor 1221	ND	330	330		µg/Kg-dry	1	9/3/2020
Aroclor 1232	ND	330	330		µg/Kg-dry	1	9/3/2020
Aroclor 1242	ND	330	330		µg/Kg-dry	1	9/3/2020
Aroclor 1248	ND	330	330		µg/Kg-dry	1	9/3/2020
Aroclor 1254	ND	330	330		µg/Kg-dry	1	9/3/2020
Aroclor 1260	ND	330	330		µg/Kg-dry	1	9/3/2020
Aroclor 1262	ND	330	330		µg/Kg-dry	1	9/3/2020
Aroclor 1268	ND	330	330		µg/Kg-dry	1	9/3/2020
Surr: Decachlorobiphenyl	*55.9*	*40-140*			*%REC*	1	9/3/2020
Surr: Tetrachloro-m-xylene	*61.6*	*45-124*			*%REC*	1	9/3/2020
PESTICIDES			**SW8081A**		Prep Date: **9/3/2020**		Analyst: **RM**
4,4´-DDD	ND	20	20		µg/Kg-dry	1	9/7/2020
4,4´-DDE	ND	20	20		µg/Kg-dry	1	9/7/2020
4,4´-DDT	ND	20	20		µg/Kg-dry	1	9/7/2020
Aldrin	ND	20	20		µg/Kg-dry	1	9/7/2020
alpha-BHC	ND	11	10		µg/Kg-dry	1	9/7/2020
alpha-Chlordane	ND	30	30		µg/Kg-dry	1	9/7/2020
beta-BHC	ND	20	20		µg/Kg-dry	1	9/7/2020
Chlordane, Technical	ND	30	30		µg/Kg-dry	1	9/7/2020
delta-BHC	ND	20	20		µg/Kg-dry	1	9/7/2020
Dieldrin	ND	20	20		µg/Kg-dry	1	9/7/2020
Endosulfan I	ND	20	20		µg/Kg-dry	1	9/7/2020
Endosulfan II	ND	20	20		µg/Kg-dry	1	9/7/2020
Endosulfan sulfate	ND	20	20		µg/Kg-dry	1	9/7/2020
Endrin	ND	20	20		µg/Kg-dry	1	9/7/2020
Endrin aldehyde	ND	20	20		µg/Kg-dry	1	9/7/2020
Endrin ketone	ND	20	20		µg/Kg-dry	1	9/7/2020
gamma-BHC (Lindane)	ND	20	20		µg/Kg-dry	1	9/7/2020
gamma-Chlordane	ND	30	30		µg/Kg-dry	1	9/7/2020
Heptachlor	ND	20	20		µg/Kg-dry	1	9/7/2020
Heptachlor epoxide	ND	20	20		µg/Kg-dry	1	9/7/2020
Methoxychlor	ND	50	50		µg/Kg-dry	1	9/7/2020
Toxaphene	ND	170	170		µg/Kg-dry	1	9/7/2020

Note: See Qualifiers page for a list of qualifiers and their definitions.

Client: AKT Peerless **Client Sample ID:** 12741 Maiden-TS-Composite
Work Order: 20082418 **Collection Date:** 8/27/2020 2:20:00 PM
Project: 8997f5-5-10.4
Lab ID: 20082418-01 **Matrix:** SOIL

Analyses	Result	Report Limit	MDEQ OP Memo 2 TDL	Qual	Units	Dilution Factor	Date Analyzed
Surr: Decachlorobiphenyl	*51.8*	*50-150*			*%REC*	1	9/7/2020
Surr: Tetrachloro-m-xylene	*54.7*	*50-150*			*%REC*	1	9/7/2020
MERCURY BY CVAA			**SW7471B**		Prep Date: **9/2/2020**		Analyst: **MAC**
Mercury	**220**	**50**	**50**		**µg/Kg-dry**	1	9/2/2020
METALS BY ICP-MS			**SW6020B**		Prep Date: **9/1/2020**		Analyst: **STP**
Arsenic	**5,200**	**2,000**	**2,000**		**µg/Kg-dry**	1	9/1/2020
Barium	**52,000**	**1,000**	**1,000**		**µg/Kg-dry**	1	9/1/2020
Cadmium	**230**	**200**	**200**		**µg/Kg-dry**	1	9/1/2020
Chromium	**14,000**	**2,000**	**2,000**		**µg/Kg-dry**	1	9/1/2020
Copper	**12,000**	**1,000**	**1,000**		**µg/Kg-dry**	1	9/1/2020
Lead	**44,000**	**10,000**	**10,000**		**µg/Kg-dry**	1	9/1/2020
Selenium	ND	410	200		µg/Kg-dry	1	9/1/2020
Silver	ND	410	100		µg/Kg-dry	1	9/1/2020
Zinc	**58,000**	**1,000**	**1,000**		**µg/Kg-dry**	1	9/1/2020
SEMI-VOLATILE ORGANIC COMPOUNDS			**SW846 8270D**		Prep Date: **9/2/2020**		Analyst: **EEW**
1,2,4-Trichlorobenzene	ND	360	330		µg/Kg-dry	10	9/5/2020
1,2-Dichlorobenzene	ND	360	330		µg/Kg-dry	10	9/5/2020
1,3-Dichlorobenzene	ND	360	330		µg/Kg-dry	10	9/5/2020
1,4-Dichlorobenzene	ND	360	330		µg/Kg-dry	10	9/5/2020
2,4,5-Trichlorophenol	ND	360	300		µg/Kg-dry	10	9/5/2020
2,4,6-Trichlorophenol	ND	360	330		µg/Kg-dry	10	9/5/2020
2,4-Dichlorophenol	ND	360	330		µg/Kg-dry	10	9/5/2020
2,4-Dimethylphenol	ND	360	330		µg/Kg-dry	10	9/5/2020
2,4-Dinitrophenol	ND	830	830		µg/Kg-dry	10	9/5/2020
2,4-Dinitrotoluene	ND	360	330		µg/Kg-dry	10	9/5/2020
2,6-Dinitrotoluene	ND	360	330		µg/Kg-dry	10	9/5/2020
2-Chloronaphthalene	ND	330	330		µg/Kg-dry	10	9/5/2020
2-Chlorophenol	ND	360	330		µg/Kg-dry	10	9/5/2020
2-Methylnaphthalene	ND	330	330		µg/Kg-dry	10	9/5/2020
2-Methylphenol	ND	360	330		µg/Kg-dry	10	9/5/2020
2-Nitroaniline	ND	830	830		µg/Kg-dry	10	9/5/2020
2-Nitrophenol	ND	360	330		µg/Kg-dry	10	9/5/2020
3&4-Methylphenol	ND	360	330		µg/Kg-dry	10	9/5/2020
3,3´-Dichlorobenzidine	ND	2,000	2,000		µg/Kg-dry	10	9/5/2020
3-Nitroaniline	ND	830	830		µg/Kg-dry	10	9/5/2020
4,6-Dinitro-2-methylphenol	ND	830	830		µg/Kg-dry	10	9/5/2020
4-Bromophenyl phenyl ether	ND	360	330		µg/Kg-dry	10	9/5/2020
4-Chloro-3-methylphenol	ND	360	280		µg/Kg-dry	10	9/5/2020
4-Chloroaniline	ND	740	330		µg/Kg-dry	10	9/5/2020

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: *09-Sep-20*

Client:	AKT Peerless	**Client Sample ID:**	12741 Maiden-TS-Composite
Work Order:	20082418	**Collection Date:**	8/27/2020 2:20:00 PM
Project:	8997f5-5-10.4		
Lab ID:	20082418-01	**Matrix:**	SOIL

Analyses	Result	Report Limit	MDEQ OP Memo 2 TDL	Qual	Units	Dilution Factor	Date Analyzed
4-Chlorophenyl phenyl ether	ND	360	330		µg/Kg-dry	10	9/5/2020
4-Nitroaniline	ND	1,800	830		µg/Kg-dry	10	9/5/2020
4-Nitrophenol	ND	830	830		µg/Kg-dry	10	9/5/2020
Acenaphthene	ND	330	330		µg/Kg-dry	10	9/5/2020
Acenaphthylene	ND	330	330		µg/Kg-dry	10	9/5/2020
Anthracene	ND	330	330		µg/Kg-dry	10	9/5/2020
Benzo(a)anthracene	ND	330	330		µg/Kg-dry	10	9/5/2020
Benzo(a)pyrene	ND	330	330		µg/Kg-dry	10	9/5/2020
Benzo(b)fluoranthene	ND	330	330		µg/Kg-dry	10	9/5/2020
Benzo(g,h,i)perylene	ND	330	330		µg/Kg-dry	10	9/5/2020
Benzo(k)fluoranthene	ND	330	330		µg/Kg-dry	10	9/5/2020
Bis(2-chloroethoxy)methane	ND	360	330		µg/Kg-dry	10	9/5/2020
Bis(2-chloroethyl)ether	ND	360	100		µg/Kg-dry	10	9/5/2020
Bis(2-chloroisopropyl)ether	ND	360	330		µg/Kg-dry	10	9/5/2020
Bis(2-ethylhexyl)phthalate	ND	360	330		µg/Kg-dry	10	9/5/2020
Butyl benzyl phthalate	ND	360	330		µg/Kg-dry	10	9/5/2020
Carbazole	ND	360	330		µg/Kg-dry	10	9/5/2020
Chrysene	ND	330	330		µg/Kg-dry	10	9/5/2020
Dibenzo(a,h)anthracene	ND	330	330		µg/Kg-dry	10	9/5/2020
Dibenzofuran	ND	360	330		µg/Kg-dry	10	9/5/2020
Diethyl phthalate	ND	360	330		µg/Kg-dry	10	9/5/2020
Dimethyl phthalate	ND	360	330		µg/Kg-dry	10	9/5/2020
Di-n-butyl phthalate	ND	360	330		µg/Kg-dry	10	9/5/2020
Di-n-octyl phthalate	ND	360	330		µg/Kg-dry	10	9/5/2020
Fluoranthene	ND	330	330		µg/Kg-dry	10	9/5/2020
Fluorene	ND	330	330		µg/Kg-dry	10	9/5/2020
Hexachlorobenzene	ND	360	330		µg/Kg-dry	10	9/5/2020
Hexachlorobutadiene	ND	360	50		µg/Kg-dry	10	9/5/2020
Hexachlorocyclopentadiene	ND	360	330		µg/Kg-dry	10	9/5/2020
Hexachloroethane	ND	360	300		µg/Kg-dry	10	9/5/2020
Indeno(1,2,3-cd)pyrene	ND	330	330		µg/Kg-dry	10	9/5/2020
Isophorone	ND	1,800	330		µg/Kg-dry	10	9/5/2020
Naphthalene	ND	330	330		µg/Kg-dry	10	9/5/2020
Nitrobenzene	ND	1,800	330		µg/Kg-dry	10	9/5/2020
N-Nitrosodi-n-propylamine	ND	360	330		µg/Kg-dry	10	9/5/2020
N-Nitrosodiphenylamine	ND	360	330		µg/Kg-dry	10	9/5/2020
Pentachlorophenol	ND	360	20		µg/Kg-dry	10	9/5/2020
Phenanthrene	ND	330	330		µg/Kg-dry	10	9/5/2020
Phenol	ND	360	330		µg/Kg-dry	10	9/5/2020
Pyrene	ND	330	330		µg/Kg-dry	10	9/5/2020
Surr: 2,4,6-Tribromophenol	*72.0*	*38-92*			*%REC*	10	9/5/2020

Note: See Qualifiers page for a list of qualifiers and their definitions.

Client: AKT Peerless **Client Sample ID:** 12741 Maiden-TS-Composite
Work Order: 20082418 **Collection Date:** 8/27/2020 2:20:00 PM
Project: 8997f5-5-10.4
Lab ID: 20082418-01 **Matrix:** SOIL

Analyses	Result	Report Limit	MDEQ OP Memo 2 TDL	Qual	Units	Dilution Factor	Date Analyzed
Surr: 2-Fluorobiphenyl	*75.4*	*44-107*			*%REC*	10	9/5/2020
Surr: 2-Fluorophenol	*69.4*	*37-109*			*%REC*	10	9/5/2020
Surr: 4-Terphenyl-d14	*87.6*	*52-123*			*%REC*	10	9/5/2020
Surr: Nitrobenzene-d5	*71.8*	*41-94*			*%REC*	10	9/5/2020
Surr: Phenol-d6	*76.0*	*28-111*			*%REC*	10	9/5/2020
VOLATILE ORGANIC COMPOUNDS			**SW8260C**		Prep Date: **8/31/2020**		Analyst: **JNS**
1,1,1,2-Tetrachloroethane	ND	100	100		µg/Kg-dry	1	9/3/2020
1,1,1-Trichloroethane	ND	50	50		µg/Kg-dry	1	9/3/2020
1,1,2,2-Tetrachloroethane	ND	50	50		µg/Kg-dry	1	9/3/2020
1,1,2-Trichloroethane	ND	50	50		µg/Kg-dry	1	9/3/2020
1,1,2-Trichlorotrifluoroethane	ND	100	100		µg/Kg-dry	1	9/3/2020
1,1-Dichloroethane	ND	50	50		µg/Kg-dry	1	9/3/2020
1,1-Dichloroethene	ND	50	50		µg/Kg-dry	1	9/3/2020
1,2,3-Trichloropropane	ND	100	100		µg/Kg-dry	1	9/3/2020
1,2,4-Trichlorobenzene	ND	250	250		µg/Kg-dry	1	9/3/2020
1,2,4-Trimethylbenzene	ND	100	100		µg/Kg-dry	1	9/3/2020
1,2-Dibromo-3-chloropropane	ND	120	10		µg/Kg-dry	1	9/3/2020
1,2-Dibromoethane	ND	35	20		µg/Kg-dry	1	9/3/2020
1,2-Dichlorobenzene	ND	100	100		µg/Kg-dry	1	9/3/2020
1,2-Dichloroethane	ND	120	50		µg/Kg-dry	1	9/3/2020
1,2-Dichloropropane	ND	50	50		µg/Kg-dry	1	9/3/2020
1,3,5-Trimethylbenzene	ND	120	100		µg/Kg-dry	1	9/3/2020
1,3-Dichlorobenzene	ND	100	100		µg/Kg-dry	1	9/3/2020
1,4-Dichlorobenzene	ND	100	100		µg/Kg-dry	1	9/3/2020
2-Butanone	ND	750	750		µg/Kg-dry	1	9/3/2020
2-Hexanone	ND	2,500	2,500		µg/Kg-dry	1	9/3/2020
2-Methylnaphthalene	ND	330	330		µg/Kg-dry	1	9/3/2020
4-Methyl-2-pentanone	ND	2,500	2,500		µg/Kg-dry	1	9/3/2020
Acetone	ND	1,000	1,000		µg/Kg-dry	1	9/3/2020
Acrylonitrile	ND	120	100		µg/Kg-dry	1	9/3/2020
Benzene	ND	50	50		µg/Kg-dry	1	9/3/2020
Bromodichloromethane	ND	100	100		µg/Kg-dry	1	9/3/2020
Bromoform	ND	100	100		µg/Kg-dry	1	9/3/2020
Bromomethane	ND	200	200		µg/Kg-dry	1	9/3/2020
Carbon disulfide	ND	250	250		µg/Kg-dry	1	9/3/2020
Carbon tetrachloride	ND	50	50		µg/Kg-dry	1	9/3/2020
Chlorobenzene	ND	50	50		µg/Kg-dry	1	9/3/2020
Chloroethane	ND	250	250		µg/Kg-dry	1	9/3/2020
Chloroform	ND	50	50		µg/Kg-dry	1	9/3/2020
Chloromethane	ND	250	250		µg/Kg-dry	1	9/3/2020

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: *09-Sep-20*

Client:	AKT Peerless	**Client Sample ID:**	12741 Maiden-TS-Composite
Work Order:	20082418	**Collection Date:**	8/27/2020 2:20:00 PM
Project:	8997f5-5-10.4		
Lab ID:	20082418-01	**Matrix:**	SOIL

Analyses	Result	Report Limit	MDEQ OP Memo 2 TDL	Qual	Units	Dilution Factor	Date Analyzed
cis-1,2-Dichloroethene	ND	50	50		µg/Kg-dry	1	9/3/2020
cis-1,3-Dichloropropene	ND	50	50		µg/Kg-dry	1	9/3/2020
Dibromochloromethane	ND	100	100		µg/Kg-dry	1	9/3/2020
Dibromomethane	ND	250	250		µg/Kg-dry	1	9/3/2020
Dichlorodifluoromethane	ND	250	250		µg/Kg-dry	1	9/3/2020
Diethyl ether	ND	200	200		µg/Kg-dry	1	9/3/2020
Ethylbenzene	ND	50	50		µg/Kg-dry	1	9/3/2020
Hexachloroethane	ND	300	300		µg/Kg-dry	1	9/3/2020
Isopropylbenzene	ND	250	250		µg/Kg-dry	1	9/3/2020
m,p-Xylene	ND	100	100		µg/Kg-dry	1	9/3/2020
Methyl tert-butyl ether	ND	250	250		µg/Kg-dry	1	9/3/2020
Methylene chloride	ND	290	100		µg/Kg-dry	1	9/3/2020
Naphthalene	ND	330	330		µg/Kg-dry	1	9/3/2020
n-Propylbenzene	ND	100	100		µg/Kg-dry	1	9/3/2020
o-Xylene	ND	50	50		µg/Kg-dry	1	9/3/2020
Styrene	ND	50	50		µg/Kg-dry	1	9/3/2020
Tetrachloroethene	ND	50	50		µg/Kg-dry	1	9/3/2020
Toluene	ND	100	100		µg/Kg-dry	1	9/3/2020
trans-1,2-Dichloroethene	ND	50	50		µg/Kg-dry	1	9/3/2020
trans-1,3-Dichloropropene	ND	50	50		µg/Kg-dry	1	9/3/2020
Trichloroethene	ND	50	50		µg/Kg-dry	1	9/3/2020
Trichlorofluoromethane	ND	100	100		µg/Kg-dry	1	9/3/2020
Vinyl acetate	ND	5,000	5,000		µg/Kg-dry	1	9/3/2020
Vinyl chloride	ND	40	40		µg/Kg-dry	1	9/3/2020
Xylenes, Total	ND	150	150		µg/Kg-dry	1	9/3/2020
Surr: 1,2-Dichloroethane-d4	*97.7*	*70-130*			*%REC*	1	9/3/2020
Surr: 4-Bromofluorobenzene	*101*	*70-130*			*%REC*	1	9/3/2020
Surr: Dibromofluoromethane	*95.7*	*70-130*			*%REC*	1	9/3/2020
Surr: Toluene-d8	*97.5*	*70-130*			*%REC*	1	9/3/2020
CHLORIDE			**A4500-CL E-11**		Prep Date: **9/1/2020**		Analyst: **JDR**
Chloride	ND	200	200		mg/Kg-dry	1	9/2/2020
MOISTURE			**SW3550C**				Analyst: **KTP**
Moisture	**9.9**	**0.10**	**0**		**% of sample**	1	9/2/2020

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: 09-Sep-20

Client: AKT Peerless

QC BATCH REPORT

Work Order: 20082418

Project: 8997f5-5-10.4

Batch ID: **163600** Instrument ID **GC7** Method: **SW8151**

MBLK Sample ID: **HBLKS1-163600-163600** Units: **µg/Kg** Analysis Date: **9/4/2020 02:35 PM**

Client ID: Run ID: **GC7_200904A** SeqNo: **6687861** Prep Date: **9/4/2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
2,4,5-TP (Silvex)	ND	5.0								
2,4-D	ND	10								
Surr: DCAA	*25*	0	*50*	0	*50*	*10-150*	0			

LCS Sample ID: **HLCSS1-163600-163600** Units: **µg/Kg** Analysis Date: **9/4/2020 02:49 PM**

Client ID: Run ID: **GC7_200904A** SeqNo: **6687862** Prep Date: **9/4/2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
2,4,5-TP (Silvex)	40	5.0	50	0	80	10-150	0			
2,4-D	46	10	50	0	92	10-130	0			
Surr: DCAA	*32*	0	*50*	0	*64*	*10-150*	0			

MS Sample ID: **20082410-01B MS** Units: **µg/Kg** Analysis Date: **9/4/2020 03:03 PM**

Client ID: Run ID: **GC7_200904A** SeqNo: **6687863** Prep Date: **9/4/2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
2,4,5-TP (Silvex)	29.74	5.0	49.57	0	60	10-150	0			
2,4-D	35.69	9.9	49.57	0	72	10-130	0			
Surr: DCAA	*25.77*	0	*49.57*	0	*52*	*10-150*	0			

MSD Sample ID: **20082410-01B MSD** Units: **µg/Kg** Analysis Date: **9/4/2020 03:16 PM**

Client ID: Run ID: **GC7_200904A** SeqNo: **6687864** Prep Date: **9/4/2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
2,4,5-TP (Silvex)	33.13	4.9	48.72	0	68	10-150	29.74	10.8	50	
2,4-D	38.98	9.7	48.72	0	80	10-130	35.69	8.81	50	
Surr: DCAA	*29.23*	0	*48.72*	0	*60*	*10-150*	25.77	*12.6*	*50*	

The following samples were analyzed in this batch: 20082418-01B

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

Client: AKT Peerless
Work Order: 20082418
Project: 8997f5-5-10.4

QC BATCH REPORT

Batch ID: **163660** Instrument ID **GC14** Method: **SW8082**

MBLK Sample ID: **PBLKS1-163660-163660** Units: **µg/Kg** Analysis Date: **9/3/2020 05:31 PM**
Client ID: Run ID: **GC14_200903A** SeqNo: **6683513** Prep Date: **9/3/2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aroclor 1016	ND	67								
Aroclor 1221	ND	67								
Aroclor 1232	ND	67								
Aroclor 1242	ND	67								
Aroclor 1248	ND	67								
Aroclor 1254	ND	67								
Aroclor 1260	ND	67								
Aroclor 1262	ND	67								
Aroclor 1268	ND	67								
Surr: Decachlorobiphenyl	*26.77*	0	*33.3*	0	*80.4*	*40-140*	0			
Surr: Tetrachloro-m-xylene	*25.88*	0	*33.3*	0	*77.7*	*45-124*	0			

LCS Sample ID: **PLCSS1-163660-163660** Units: **µg/Kg** Analysis Date: **9/3/2020 05:46 PM**
Client ID: Run ID: **GC14_200903A** SeqNo: **6683514** Prep Date: **9/3/2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aroclor 1016	613	67	833	0	73.6	50-130	0			
Aroclor 1260	583	67	833	0	70	50-130	0			
Surr: Decachlorobiphenyl	*28.37*	0	*33.3*	0	*85.2*	*40-140*	0			
Surr: Tetrachloro-m-xylene	*28.15*	0	*33.3*	0	*84.5*	*45-124*	0			

MS Sample ID: **20082410-01B MS** Units: **µg/Kg** Analysis Date: **9/3/2020 06:01 PM**
Client ID: Run ID: **GC14_200903A** SeqNo: **6683515** Prep Date: **9/3/2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aroclor 1016	462.2	65	813.7	0	56.8	40-140	0			
Aroclor 1260	442.4	65	813.7	0	54.4	40-140	0			
Surr: Decachlorobiphenyl	*20.99*	0	*32.53*	0	*64.5*	*40-140*	0			
Surr: Tetrachloro-m-xylene	*20.06*	0	*32.53*	0	*61.7*	*45-124*	0			

MSD Sample ID: **20082410-01B MSD** Units: **µg/Kg** Analysis Date: **9/3/2020 06:16 PM**
Client ID: Run ID: **GC14_200903A** SeqNo: **6683516** Prep Date: **9/3/2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aroclor 1016	659.3	63	791.4	0	83.3	40-140	462.2	35.1	50	
Aroclor 1260	646.6	63	791.4	0	81.7	40-140	442.4	37.5	50	
Surr: Decachlorobiphenyl	*30.23*	0	*31.64*	0	*95.5*	*40-140*	20.99	*36.1*	*50*	
Surr: Tetrachloro-m-xylene	*30.37*	0	*31.64*	0	*96*	*45-124*	20.06	*40.9*	*50*	

The following samples were analyzed in this batch: 20082418-01B

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

Client: AKT Peerless
Work Order: 20082418
Project: 8997f5-5-10.4

QC BATCH REPORT

Batch ID: **163662** Instrument ID **GC12** Method: **SW8081A**

MBLK Sample ID: **PBLKS1-163662-163662** Units: **µg/Kg** Analysis Date: **9/7/2020 01:24 PM**
Client ID: Run ID: **GC12_200907A** SeqNo: **6690053** Prep Date: **9/3/2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
4,4´-DDD	ND	10								
4,4´-DDE	ND	10								
4,4´-DDT	ND	10								
Aldrin	ND	10								
alpha-BHC	ND	10								
alpha-Chlordane	ND	10								
beta-BHC	ND	10								
Chlordane, Technical	ND	25								
delta-BHC	ND	10								
Dieldrin	ND	10								
Endosulfan I	ND	10								
Endosulfan II	ND	10								
Endosulfan sulfate	ND	10								
Endrin	ND	10								
Endrin aldehyde	ND	10								
Endrin ketone	ND	10								
gamma-BHC (Lindane)	ND	10								
gamma-Chlordane	ND	10								
Heptachlor	ND	10								
Heptachlor epoxide	ND	10								
Methoxychlor	ND	10								
Toxaphene	ND	60								
Surr: Decachlorobiphenyl	*32.67*	0	*33.3*	0	*98.1*	*50-150*	0			
Surr: Tetrachloro-m-xylene	*30.98*	0	*33.3*	0	*93*	*50-150*	0			

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

Client: AKT Peerless
Work Order: 20082418
Project: 8997f5-5-10.4

QC BATCH REPORT

Batch ID: **163662** Instrument ID **GC12** Method: **SW8081A**

LCS	Sample ID: **PLCSS1-163662-163662**				Units: **µg/Kg**			Analysis Date: **9/7/2020 01:39 PM**			
Client ID:		Run ID: **GC12_200907A**			SeqNo: **6690054**			Prep Date: **9/3/2020**		DF: **1**	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
4,4´-DDD	29.3	10	33.33	0	87.9	50-150	0			
4,4´-DDE	30.92	10	33.33	0	92.8	50-150	0			
4,4´-DDT	30.77	10	33.33	0	92.3	50-150	0			
Aldrin	30.35	10	33.33	0	91.1	50-150	0			
alpha-BHC	30.68	10	33.33	0	92.1	50-150	0			
alpha-Chlordane	30.4	10	33.33	0	91.2	50-150	0			
beta-BHC	29.93	10	33.33	0	89.8	50-150	0			
delta-BHC	30.43	10	33.33	0	91.3	50-150	0			
Dieldrin	30.52	10	33.33	0	91.6	50-150	0			
Endosulfan I	30.43	10	33.33	0	91.3	50-150	0			
Endosulfan II	30.08	10	33.33	0	90.3	50-150	0			
Endosulfan sulfate	30.73	10	33.33	0	92.2	50-150	0			
Endrin	31.08	10	33.33	0	93.3	50-150	0			
Endrin aldehyde	29.72	10	33.33	0	89.2	50-150	0			
Endrin ketone	30.62	10	33.33	0	91.9	50-150	0			
gamma-BHC (Lindane)	30.27	10	33.33	0	90.8	50-150	0			
gamma-Chlordane	26.98	10	33.33	0	81	50-150	0			
Heptachlor	30.63	10	33.33	0	91.9	50-150	0			
Heptachlor epoxide	30.58	10	33.33	0	91.8	50-150	0			
Methoxychlor	29.9	10	33.33	0	89.7	50-150	0			
Surr: Decachlorobiphenyl	*31.48*	0	*33.3*	0	*94.5*	*50-150*	0			
Surr: Tetrachloro-m-xylene	*30.85*	0	*33.3*	0	*92.6*	*50-150*	0			

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

Client: AKT Peerless
Work Order: 20082418
Project: 8997f5-5-10.4

QC BATCH REPORT

Batch ID: **163662** Instrument ID **GC12** Method: **SW8081A**

MS Sample ID: **20082411-01B MS** Units: **µg/Kg** Analysis Date: **9/7/2020 01:53 PM**

Client ID: Run ID: **GC12_200907A** SeqNo: **6690055** Prep Date: **9/3/2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
4,4´-DDD	18.75	9.9	32.84	1.958	51.1	50-150	0			
4,4´-DDE	50.66	9.9	32.84	29.7	63.8	50-150	0			
4,4´-DDT	26.56	9.9	32.84	10.88	47.7	50-150	0			S
Aldrin	18.38	9.9	32.84	0	56	50-150	0			
alpha-BHC	18.02	9.9	32.84	0	54.9	50-150	0			
alpha-Chlordane	18.66	9.9	32.84	0	56.8	50-150	0			
beta-BHC	16.24	9.9	32.84	0	49.5	50-150	0			S
delta-BHC	15.72	9.9	32.84	0	47.9	50-150	0			S
Dieldrin	17.44	9.9	32.84	0	53.1	50-150	0			
Endosulfan I	16.85	9.9	32.84	0	51.3	50-150	0			
Endosulfan II	15.21	9.9	32.84	0	46.3	50-150	0			S
Endosulfan sulfate	15.27	9.9	32.84	0	46.5	50-150	0			S
Endrin	17.15	9.9	32.84	0	52.2	50-150	0			
Endrin aldehyde	14.09	9.9	32.84	0	42.9	50-150	0			S
Endrin ketone	15.39	9.9	32.84	0	46.9	50-150	0			S
gamma-BHC (Lindane)	17.33	9.9	32.84	0	52.8	50-150	0			
gamma-Chlordane	17.47	9.9	32.84	0	53.2	50-150	0			
Heptachlor	17.51	9.9	32.84	0	53.3	50-150	0			
Heptachlor epoxide	17.46	9.9	32.84	0	53.2	50-150	0			
Methoxychlor	15.98	9.9	32.84	0	48.7	50-150	0			S
Surr: Decachlorobiphenyl	*18.56*	0	*32.81*	0	*56.6*	*50-150*	0			
Surr: Tetrachloro-m-xylene	*20.31*	0	*32.81*	0	*61.9*	*50-150*	0			

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

Client: AKT Peerless
Work Order: 20082418
Project: 8997f5-5-10.4

QC BATCH REPORT

Batch ID: **163662** Instrument ID **GC12** Method: **SW8081A**

MSD	Sample ID: **20082411-01B MSD**				Units: **µg/Kg**			Analysis Date: **9/7/2020 02:08 PM**		
Client ID:	Run ID: **GC12_200907A**				SeqNo: **6690056**		Prep Date: **9/3/2020**		DF: **1**	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
4,4´-DDD	18.74	9.6	31.85	1.958	52.7	50-150	18.75	0.0597	35	
4,4´-DDE	61.66	9.6	31.85	29.7	100	50-150	50.66	19.6	35	
4,4´-DDT	35.64	9.6	31.85	10.88	77.7	50-150	26.56	29.2	35	
Aldrin	17.17	9.6	31.85	0	53.9	50-150	18.38	6.81	35	
alpha-BHC	17.15	9.6	31.85	0	53.9	50-150	18.02	4.92	35	
alpha-Chlordane	17.84	9.6	31.85	0	56	50-150	18.66	4.5	35	
beta-BHC	15.05	9.6	31.85	0	47.3	50-150	16.24	7.63	35	S
delta-BHC	14.2	9.6	31.85	0	44.6	50-150	15.72	10.1	35	S
Dieldrin	16.45	9.6	31.85	0	51.7	50-150	17.44	5.85	35	
Endosulfan I	16.15	9.6	31.85	0	50.7	50-150	16.85	4.25	35	
Endosulfan II	13.12	9.6	31.85	0	41.2	50-150	15.21	14.7	35	S
Endosulfan sulfate	12.64	9.6	31.85	0	39.7	50-150	15.27	18.8	35	S
Endrin	16.88	9.6	31.85	0	53	50-150	17.15	1.56	35	
Endrin aldehyde	11.26	9.6	31.85	0	35.4	50-150	14.09	22.3	35	S
Endrin ketone	13.22	9.6	31.85	0	41.5	50-150	15.39	15.2	35	S
gamma-BHC (Lindane)	16.96	9.6	31.85	0	53.3	50-150	17.33	2.14	35	
gamma-Chlordane	15.43	9.6	31.85	0	48.5	50-150	17.47	12.4	35	S
Heptachlor	16.82	9.6	31.85	0	52.8	50-150	17.51	4.02	35	
Heptachlor epoxide	16.4	9.6	31.85	0	51.5	50-150	17.46	6.23	35	
Methoxychlor	14.87	9.6	31.85	0	46.7	50-150	15.98	7.17	35	S
Surr: Decachlorobiphenyl	*18.2*	0	*31.82*	0	*57.2*	*50-150*	18.56	*1.93*	*35*	
Surr: Tetrachloro-m-xylene	*18.44*	0	*31.82*	0	*58*	*50-150*	20.31	*9.67*	*35*	

The following samples were analyzed in this batch: 20082418-01B

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

Client: AKT Peerless
Work Order: 20082418
Project: 8997f5-5-10.4

QC BATCH REPORT

Batch ID: **163542** Instrument ID **HG4** Method: **SW7471B**

MBLK Sample ID: **MBLK-163542-163542** Units: **mg/Kg** Analysis Date: **9/2/2020 03:43 PM**
Client ID: Run ID: **HG4_200902A** SeqNo: **6680600** Prep Date: **9/2/2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	ND	0.020								

LCS Sample ID: **LCS-163542-163542** Units: **mg/Kg** Analysis Date: **9/2/2020 03:45 PM**
Client ID: Run ID: **HG4_200902A** SeqNo: **6680601** Prep Date: **9/2/2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.1775	0.020	0.1665	0	107	80-120	0			

MS Sample ID: **20082439-01BMS** Units: **mg/Kg** Analysis Date: **9/2/2020 04:33 PM**
Client ID: Run ID: **HG4_200902A** SeqNo: **6680628** Prep Date: **9/2/2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.2032	0.019	0.1573	0.0546	94.4	75-125	0			

MSD Sample ID: **20082439-01BMSD** Units: **mg/Kg** Analysis Date: **9/2/2020 04:35 PM**
Client ID: Run ID: **HG4_200902A** SeqNo: **6680629** Prep Date: **9/2/2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.1948	0.018	0.1532	0.0546	91.5	75-125	0.2032	4.2	35	

The following samples were analyzed in this batch: 20082418-01B

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

Client: AKT Peerless
Work Order: 20082418
Project: 8997f5-5-10.4

QC BATCH REPORT

Batch ID: **163463** Instrument ID **ICPMS3** Method: **SW6020B**

MBLK Sample ID: **MBLK-163463-163463** Units: **mg/Kg** Analysis Date: **9/1/2020 05:27 PM**
Client ID: Run ID: **ICPMS3_200901B** SeqNo: **6678184** Prep Date: **9/1/2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	ND	0.25								
Barium	ND	0.25								
Cadmium	ND	0.10								
Chromium	ND	0.25								
Copper	ND	0.25								
Lead	ND	0.25								
Selenium	ND	0.25								
Silver	ND	0.25								
Zinc	ND	0.50								

LCS Sample ID: **LCS-163463-163463** Units: **mg/Kg** Analysis Date: **9/1/2020 05:28 PM**
Client ID: Run ID: **ICPMS3_200901B** SeqNo: **6678185** Prep Date: **9/1/2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	4.644	0.25	5	0	92.9	80-120	0			
Barium	4.836	0.25	5	0	96.7	80-120	0			
Cadmium	4.609	0.10	5	0	92.2	80-120	0			
Chromium	4.917	0.25	5	0	98.3	80-120	0			
Copper	4.833	0.25	5	0	96.7	80-120	0			
Lead	4.676	0.25	5	0	93.5	80-120	0			
Selenium	4.794	0.25	5	0	95.9	80-120	0			
Silver	4.736	0.25	5	0	94.7	80-120	0			
Zinc	4.675	0.50	5	0	93.5	80-120	0			

MS Sample ID: **20081944-01BMS** Units: **mg/Kg** Analysis Date: **9/1/2020 05:32 PM**
Client ID: Run ID: **ICPMS3_200901B** SeqNo: **6678187** Prep Date: **9/1/2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	7.66	0.33	6.502	2.655	77	75-125	0			
Barium	19.73	0.33	6.502	15.54	64.4	75-125	0			S
Cadmium	5.288	0.13	6.502	0.06767	80.3	75-125	0			
Chromium	20.53	0.33	6.502	9.218	174	75-125	0			S
Lead	15.16	0.33	6.502	9.396	88.7	75-125	0			
Selenium	5.802	0.33	6.502	0.12	87.4	75-125	0			
Silver	5.019	0.33	6.502	-0.02703	77.6	75-125	0			
Zinc	31.24	0.65	6.502	30.27	14.9	75-125	0			SO

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

Client: AKT Peerless
Work Order: 20082418
Project: 8997f5-5-10.4

QC BATCH REPORT

Batch ID: **163463** Instrument ID **ICPMS3** Method: **SW6020B**

MS Sample ID: **20081944-01BMS** Units: **mg/Kg** Analysis Date: **9/2/2020 04:28 PM**
Client ID: Run ID: **ICPMS4_200902B** SeqNo: **6679949** Prep Date: **9/1/2020** DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Copper	21.3	3.3	6.502	15.68	86.4	75-125	0			

MSD Sample ID: **20081944-01BMSD** Units: **mg/Kg** Analysis Date: **9/1/2020 05:34 PM**
Client ID: Run ID: **ICPMS3_200901B** SeqNo: **6678188** Prep Date: **9/1/2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	8.148	0.32	6.46	2.655	85	75-125	7.66	6.18	20	
Barium	20.18	0.32	6.46	15.54	71.8	75-125	19.73	2.27	20	S
Cadmium	5.322	0.13	6.46	0.06767	81.3	75-125	5.288	0.642	20	
Chromium	45.86	0.32	6.46	9.218	567	75-125	20.53	76.3	20	SR
Lead	16.61	0.32	6.46	9.396	112	75-125	15.16	9.12	20	
Selenium	5.721	0.32	6.46	0.12	86.7	75-125	5.802	1.41	20	
Silver	5.034	0.32	6.46	-0.02703	78.3	75-125	5.019	0.305	20	
Zinc	30.39	0.65	6.46	30.27	1.79	75-125	31.24	2.77	20	SO

MSD Sample ID: **20081944-01BMSD** Units: **mg/Kg** Analysis Date: **9/2/2020 04:30 PM**
Client ID: Run ID: **ICPMS4_200902B** SeqNo: **6679950** Prep Date: **9/1/2020** DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Copper	22.98	3.2	6.46	15.68	113	75-125	21.3	7.61	20	

The following samples were analyzed in this batch: 20082418-01B

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

Client: AKT Peerless
Work Order: 20082418
Project: 8997f5-5-10.4

QC BATCH REPORT

Batch ID: **163547** Instrument ID **SVMS10** Method: **SW846 8270D**

MBLK	Sample ID: **SBLKS1-163547-163547**				Units: **µg/Kg**		Analysis Date: **9/3/2020 09:03 PM**			
Client ID:		Run ID: **SVMS10_200903A**			SeqNo: **6684572**		Prep Date: **9/2/2020**		DF: **1**	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2,4-Trichlorobenzene	ND	33								
1,2-Dichlorobenzene	ND	33								
1,3-Dichlorobenzene	ND	33								
1,4-Dichlorobenzene	ND	33								
2,4,5-Trichlorophenol	ND	33								
2,4,6-Trichlorophenol	ND	33								
2,4-Dichlorophenol	ND	33								
2,4-Dimethylphenol	ND	33								
2,4-Dinitrophenol	ND	33								
2,4-Dinitrotoluene	ND	33								
2,6-Dinitrotoluene	ND	33								
2-Chloronaphthalene	ND	6.7								
2-Chlorophenol	ND	33								
2-Methylnaphthalene	ND	6.7								
2-Methylphenol	ND	33								
2-Nitroaniline	ND	33								
2-Nitrophenol	ND	33								
3&4-Methylphenol	ND	33								
3,3´-Dichlorobenzidine	ND	170								
3-Nitroaniline	ND	33								
4,6-Dinitro-2-methylphenol	ND	33								
4-Bromophenyl phenyl ether	ND	33								
4-Chloro-3-methylphenol	ND	33								
4-Chloroaniline	ND	67								
4-Chlorophenyl phenyl ether	ND	33								
4-Nitroaniline	ND	170								
4-Nitrophenol	ND	33								
Acenaphthene	ND	6.7								
Acenaphthylene	ND	6.7								
Anthracene	ND	6.7								
Benzo(a)anthracene	ND	6.7								
Benzo(a)pyrene	ND	6.7								
Benzo(b)fluoranthene	ND	6.7								
Benzo(g,h,i)perylene	ND	6.7								
Benzo(k)fluoranthene	ND	6.7								
Bis(2-chloroethoxy)methane	ND	33								
Bis(2-chloroethyl)ether	ND	33								
Bis(2-chloroisopropyl)ether	ND	33								
Bis(2-ethylhexyl)phthalate	ND	33								
Butyl benzyl phthalate	ND	33								
Carbazole	ND	33								
Chrysene	ND	6.7								

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

QC BATCH REPORT

Batch ID: **163547** Instrument ID **SVMS10** Method: **SW846 8270D**

Dibenzo(a,h)anthracene	ND	6.7					
Dibenzofuran	ND	33					
Diethyl phthalate	ND	33					
Dimethyl phthalate	ND	33					
Di-n-butyl phthalate	ND	33					
Di-n-octyl phthalate	ND	33					
Fluoranthene	ND	6.7					
Fluorene	ND	6.7					
Hexachlorobenzene	ND	33					
Hexachlorobutadiene	ND	33					
Hexachlorocyclopentadiene	ND	33					
Hexachloroethane	ND	33					
Indeno(1,2,3-cd)pyrene	ND	6.7					
Isophorone	ND	170					
Naphthalene	ND	6.7					
Nitrobenzene	ND	170					
N-Nitrosodi-n-propylamine	ND	33					
N-Nitrosodiphenylamine	ND	33					
Pentachlorophenol	ND	33					
Phenanthrene	ND	6.7					
Phenol	ND	33					
Pyrene	ND	6.7					
Surr: 2,4,6-Tribromophenol	*2024*	0	*3333*	0	*60.7*	*38-92*	0
Surr: 2-Fluorobiphenyl	*2647*	0	*3333*	0	*79.4*	*44-107*	0
Surr: 2-Fluorophenol	*2443*	0	*3333*	0	*73.3*	*37-109*	0
Surr: 4-Terphenyl-d14	*3453*	0	*3333*	0	*104*	*52-123*	0
Surr: Nitrobenzene-d5	*2551*	0	*3333*	0	*76.5*	*41-94*	0
Surr: Phenol-d6	*2877*	0	*3333*	0	*86.3*	*28-111*	0

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

Client: AKT Peerless
Work Order: 20082418
Project: 8997f5-5-10.4

QC BATCH REPORT

Batch ID: **163547** Instrument ID **SVMS10** Method: **SW846 8270D**

LCS	Sample ID: **SLCSS1-163547-163547**				Units: **µg/Kg**		Analysis Date: **9/3/2020 09:30 PM**			
Client ID:		Run ID: **SVMS10_200903A**			SeqNo: **6684573**		Prep Date: **9/2/2020**		DF: **1**	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2,4-Trichlorobenzene	1039	33	1333	0	77.9	40-93	0			
1,2-Dichlorobenzene	1106	33	1333	0	83	42-94	0			
1,3-Dichlorobenzene	1104	33	1333	0	82.8	41-94	0			
1,4-Dichlorobenzene	1102	33	1333	0	82.7	42-94	0			
2,4,5-Trichlorophenol	1007	33	1333	0	75.5	52-111	0			
2,4,6-Trichlorophenol	1065	33	1333	0	79.9	46-105	0			
2,4-Dichlorophenol	1003	33	1333	0	75.2	47-96	0			
2,4-Dimethylphenol	1045	33	1333	0	78.4	49-97	0			
2,4-Dinitrophenol	576.7	33	1333	0	43.3	10-106	0			
2,4-Dinitrotoluene	1173	33	1333	0	88	58-110	0			
2,6-Dinitrotoluene	1173	33	1333	0	88	59-108	0			
2-Chloronaphthalene	1185	6.7	1333	0	88.9	56-104	0			
2-Chlorophenol	1080	33	1333	0	81	50-104	0			
2-Methylnaphthalene	1114	6.7	1333	0	83.6	54-96	0			
2-Methylphenol	1100	33	1333	0	82.5	49-105	0			
2-Nitroaniline	1183	33	1333	0	88.8	54-107	0			
2-Nitrophenol	1063	33	1333	0	79.7	51-94	0			
3&4-Methylphenol	1131	33	1333	0	84.9	48-105	0			
3,3´-Dichlorobenzidine	906.7	170	1333	0	68	39-99	0			
3-Nitroaniline	983.3	33	1333	0	73.8	17-92	0			
4,6-Dinitro-2-methylphenol	751.3	33	1333	0	56.4	32-103	0			
4-Bromophenyl phenyl ether	1207	33	1333	0	90.5	60-106	0			
4-Chloro-3-methylphenol	1099	33	1333	0	82.5	51-101	0			
4-Chloroaniline	1101	67	1333	0	82.6	27-110	0			
4-Chlorophenyl phenyl ether	1135	33	1333	0	85.2	58-106	0			
4-Nitroaniline	665.3	170	1333	0	49.9	21-100	0			
4-Nitrophenol	880	33	1333	0	66	29-120	0			
Acenaphthene	1220	6.7	1333	0	91.5	55-101	0			
Acenaphthylene	1276	6.7	1333	0	95.7	59-106	0			
Anthracene	1223	6.7	1333	0	91.8	67-105	0			
Benzo(a)anthracene	1215	6.7	1333	0	91.2	68-105	0			
Benzo(a)pyrene	1251	6.7	1333	0	93.9	68-110	0			
Benzo(b)fluoranthene	1261	6.7	1333	0	94.6	65-110	0			
Benzo(g,h,i)perylene	1471	6.7	1333	0	110	60-120	0			
Benzo(k)fluoranthene	1217	6.7	1333	0	91.3	66-113	0			
Bis(2-chloroethoxy)methane	1107	33	1333	0	83.1	53-96	0			
Bis(2-chloroethyl)ether	1125	33	1333	0	84.4	47-108	0			
Bis(2-chloroisopropyl)ether	1160	33	1333	0	87	47-107	0			
Bis(2-ethylhexyl)phthalate	1351	33	1333	0	101	59-117	0			
Butyl benzyl phthalate	1316	33	1333	0	98.7	59-106	0			
Carbazole	1163	33	1333	0	87.2	67-108	0			
Chrysene	1235	6.7	1333	0	92.6	68-108	0			

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

Batch ID: **163547** Instrument ID **SVMS10** Method: **SW846 8270D**

Dibenzo(a,h)anthracene	1419	6.7	1333	0	106	62-119	0
Dibenzofuran	1159	33	1333	0	87	60-104	0
Diethyl phthalate	1151	33	1333	0	86.3	62-111	0
Dimethyl phthalate	1142	33	1333	0	85.7	62-106	0
Di-n-butyl phthalate	1233	33	1333	0	92.5	59-105	0
Di-n-octyl phthalate	1244	33	1333	0	93.3	51-123	0
Fluoranthene	1101	6.7	1333	0	82.6	67-106	0
Fluorene	1167	6.7	1333	0	87.6	59-107	0
Hexachlorobenzene	1191	33	1333	0	89.3	62-103	0
Hexachlorobutadiene	1078	33	1333	0	80.9	51-94	0
Hexachlorocyclopentadiene	1180	33	1333	0	88.5	25-120	0
Hexachloroethane	1127	33	1333	0	84.6	55-93	0
Indeno(1,2,3-cd)pyrene	1391	6.7	1333	0	104	56-120	0
Isophorone	1160	170	1333	0	87	52-99	0
Naphthalene	1121	6.7	1333	0	84.1	46-98	0
Nitrobenzene	1153	170	1333	0	86.5	53-95	0
N-Nitrosodi-n-propylamine	1180	33	1333	0	88.5	50-104	0
N-Nitrosodiphenylamine	1217	33	1333	0	91.3	63-107	0
Pentachlorophenol	857.3	33	1333	0	64.3	34-106	0
Phenanthrene	1224	6.7	1333	0	91.8	66-101	0
Phenol	1120	33	1333	0	84	44-109	0
Pyrene	1370	6.7	1333	0	103	60-119	0
Surr: 2,4,6-Tribromophenol	*2499*	0	*3333*	0	*75*	*38-92*	0
Surr: 2-Fluorobiphenyl	*2859*	0	*3333*	0	*85.8*	*44-107*	0
Surr: 2-Fluorophenol	*2578*	0	*3333*	0	*77.3*	*37-109*	0
Surr: 4-Terphenyl-d14	*3560*	0	*3333*	0	*107*	*52-123*	0
Surr: Nitrobenzene-d5	*2703*	0	*3333*	0	*81.1*	*41-94*	0
Surr: Phenol-d6	*2901*	0	*3333*	0	*87*	*28-111*	0

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

Client: AKT Peerless
Work Order: 20082418
Project: 8997f5-5-10.4

QC BATCH REPORT

Batch ID: **163547** Instrument ID **SVMS10** Method: **SW846 8270D**

MS	Sample ID: **20090064-12C MS**				Units: **µg/Kg**		Analysis Date: **9/3/2020 09:57 PM**			
Client ID:		Run ID: **SVMS10_200903A**			SeqNo: **6684574**		Prep Date: **9/2/2020**		DF: **1**	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2,4-Trichlorobenzene	950.9	32	1273	0	74.7	40-93	0			
1,2-Dichlorobenzene	996.1	32	1273	0	78.3	42-94	0			
1,3-Dichlorobenzene	990.4	32	1273	0	77.8	41-94	0			
1,4-Dichlorobenzene	1003	32	1273	0	78.8	42-94	0			
2,4,5-Trichlorophenol	1009	32	1273	0	79.3	52-111	0			
2,4,6-Trichlorophenol	853.5	32	1273	0	67.1	46-105	0			
2,4-Dichlorophenol	1022	32	1273	0	80.3	47-96	0			
2,4-Dimethylphenol	1119	32	1273	0	87.9	49-97	0			
2,4-Dinitrophenol	ND	32	1273	0	0	10-106	0			S
2,4-Dinitrotoluene	1095	32	1273	0	86	58-110	0			
2,6-Dinitrotoluene	1095	32	1273	0	86	59-108	0			
2-Chloronaphthalene	1049	6.4	1273	0	82.4	56-104	0			
2-Chlorophenol	1016	32	1273	0	79.9	50-104	0			
2-Methylnaphthalene	1048	6.4	1273	0	82.3	54-96	0			
2-Methylphenol	1078	32	1273	0	84.7	49-105	0			
2-Nitroaniline	1109	32	1273	0	87.1	54-107	0			
2-Nitrophenol	1026	32	1273	0	80.6	51-94	0			
3&4-Methylphenol	1079	32	1273	0	84.8	48-105	0			
3,3´-Dichlorobenzidine	931.8	160	1273	0	73.2	39-99	0			
3-Nitroaniline	898.7	32	1273	0	70.6	17-92	0			
4,6-Dinitro-2-methylphenol	168.7	32	1273	0	13.3	32-103	0			S
4-Bromophenyl phenyl ether	1072	32	1273	0	84.2	60-106	0			
4-Chloro-3-methylphenol	1108	32	1273	0	87	51-101	0			
4-Chloroaniline	1023	64	1273	0	80.4	27-110	0			
4-Chlorophenyl phenyl ether	1044	32	1273	0	82.1	58-106	0			
4-Nitroaniline	590.7	160	1273	0	46.4	21-100	0			
4-Nitrophenol	371.7	32	1273	0	29.2	29-120	0			
Acenaphthene	1099	6.4	1273	0	86.4	55-101	0			
Acenaphthylene	1137	6.4	1273	0	89.3	59-106	0			
Anthracene	1105	6.4	1273	0	86.8	67-105	0			
Benzo(a)anthracene	1104	6.4	1273	0	86.7	68-105	0			
Benzo(a)pyrene	1130	6.4	1273	5.965	88.3	68-110	0			
Benzo(b)fluoranthene	1157	6.4	1273	6.628	90.4	65-110	0			
Benzo(g,h,i)perylene	1290	6.4	1273	0	101	60-120	0			
Benzo(k)fluoranthene	1119	6.4	1273	2.651	87.7	66-113	0			
Bis(2-chloroethoxy)methane	1010	32	1273	0	79.4	53-96	0			
Bis(2-chloroethyl)ether	1032	32	1273	0	81.1	47-108	0			
Bis(2-chloroisopropyl)ether	1030	32	1273	0	80.9	47-107	0			
Bis(2-ethylhexyl)phthalate	1204	32	1273	0	94.6	59-117	0			
Butyl benzyl phthalate	1249	32	1273	0	98.1	59-106	0			
Carbazole	1105	32	1273	0	86.8	67-108	0			
Chrysene	1088	6.4	1273	0	85.5	68-108	0			

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

QC BATCH REPORT

Batch ID: **163547** Instrument ID **SVMS10** Method: **SW846 8270D**

Dibenzo(a,h)anthracene	1232	6.4	1273	0	96.8	62-119	0	
Dibenzofuran	1036	32	1273	0	81.4	60-104	0	
Diethyl phthalate	1098	32	1273	0	86.3	62-111	0	
Dimethyl phthalate	1039	32	1273	0	81.6	62-106	0	
Di-n-butyl phthalate	1181	32	1273	0	92.8	59-105	0	
Di-n-octyl phthalate	1266	32	1273	0	99.5	51-123	0	
Fluoranthene	1090	6.4	1273	9.279	84.9	67-106	0	
Fluorene	1079	6.4	1273	0	84.8	59-107	0	
Hexachlorobenzene	1052	32	1273	0	82.7	62-103	0	
Hexachlorobutadiene	978.3	32	1273	0	76.9	51-94	0	
Hexachlorocyclopentadiene	656.9	32	1273	0	51.6	25-120	0	
Hexachloroethane	1008	32	1273	0	79.2	55-93	0	
Indeno(1,2,3-cd)pyrene	1252	6.4	1273	0	98.4	56-120	0	
Isophorone	1046	160	1273	0	82.2	52-99	0	
Naphthalene	1055	6.4	1273	7.953	82.3	46-98	0	
Nitrobenzene	1059	160	1273	0	83.2	53-95	0	
N-Nitrosodi-n-propylamine	1032	32	1273	0	81.1	50-104	0	
N-Nitrosodiphenylamine	1084	32	1273	0	85.2	63-107	0	
Pentachlorophenol	307.4	32	1273	0	24.2	34-106	0	S
Phenanthrene	1100	6.4	1273	0	86.4	66-101	0	
Phenol	1037	32	1273	0	81.5	44-109	0	
Pyrene	1175	6.4	1273	6.628	91.8	60-119	0	
Surr: 2,4,6-Tribromophenol	*2312*	0	*3182*	0	*72.7*	*38-92*	0	
Surr: 2-Fluorobiphenyl	*2554*	0	*3182*	0	*80.2*	*44-107*	0	
Surr: 2-Fluorophenol	*2349*	0	*3182*	0	*73.8*	*37-109*	0	
Surr: 4-Terphenyl-d14	*2999*	0	*3182*	0	*94.2*	*52-123*	0	
Surr: Nitrobenzene-d5	*2487*	0	*3182*	0	*78.1*	*41-94*	0	
Surr: Phenol-d6	*2710*	0	*3182*	0	*85.1*	*28-111*	0	

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

Client: AKT Peerless
Work Order: 20082418
Project: 8997f5-5-10.4

QC BATCH REPORT

Batch ID: **163547** Instrument ID **SVMS10** Method: **SW846 8270D**

MSD	Sample ID: **20090064-12C MSD**				Units: **µg/Kg**		Analysis Date: **9/3/2020 10:24 PM**			
Client ID:		Run ID: **SVMS10_200903A**			SeqNo: **6684575**		Prep Date: **9/2/2020**		DF: **1**	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2,4-Trichlorobenzene	958.4	33	1319	0	72.7	40-93	950.9	0.787	30	
1,2-Dichlorobenzene	1018	33	1319	0	77.2	42-94	996.1	2.22	30	
1,3-Dichlorobenzene	1016	33	1319	0	77.1	41-94	990.4	2.6	30	
1,4-Dichlorobenzene	1018	33	1319	0	77.2	42-94	1003	1.52	30	
2,4,5-Trichlorophenol	972.3	33	1319	0	73.7	52-111	1009	3.75	30	
2,4,6-Trichlorophenol	775.7	33	1319	0	58.8	46-105	853.5	9.55	30	
2,4-Dichlorophenol	998.7	33	1319	0	75.7	47-96	1022	2.33	30	
2,4-Dimethylphenol	1158	33	1319	0	87.8	49-97	1119	3.4	30	
2,4-Dinitrophenol	ND	33	1319	0	0	10-106	0	0	30	S
2,4-Dinitrotoluene	1139	33	1319	0	86.4	58-110	1095	3.98	30	
2,6-Dinitrotoluene	1139	33	1319	0	86.4	59-108	1095	3.98	30	
2-Chloronaphthalene	1075	6.6	1319	0	81.5	56-104	1049	2.47	30	
2-Chlorophenol	1007	33	1319	0	76.4	50-104	1016	0.912	30	
2-Methylnaphthalene	1053	6.6	1319	0	79.8	54-96	1048	0.486	30	
2-Methylphenol	1103	33	1319	0	83.6	49-105	1078	2.32	30	
2-Nitroaniline	1177	33	1319	0	89.2	54-107	1109	5.95	30	
2-Nitrophenol	998.7	33	1319	0	75.7	51-94	1026	2.7	30	
3&4-Methylphenol	1118	33	1319	0	84.8	48-105	1079	3.57	30	
3,3´-Dichlorobenzidine	1009	170	1319	0	76.5	39-99	931.8	7.91	30	
3-Nitroaniline	969.7	33	1319	0	73.5	17-92	898.7	7.59	30	
4,6-Dinitro-2-methylphenol	118.7	33	1319	0	9	32-103	168.7	34.8	30	SR
4-Bromophenyl phenyl ether	1108	33	1319	0	84	60-106	1072	3.27	30	
4-Chloro-3-methylphenol	1150	33	1319	0	87.2	51-101	1108	3.8	30	
4-Chloroaniline	1078	66	1319	0	81.8	27-110	1023	5.23	30	
4-Chlorophenyl phenyl ether	1075	33	1319	0	81.5	58-106	1044	2.84	30	
4-Nitroaniline	701.2	170	1319	0	53.2	21-100	590.7	17.1	30	
4-Nitrophenol	347.6	33	1319	0	26.4	29-120	371.7	6.7	30	S
Acenaphthene	1131	6.6	1319	0	85.7	55-101	1099	2.81	30	
Acenaphthylene	1180	6.6	1319	0	89.5	59-106	1137	3.74	30	
Anthracene	1164	6.6	1319	0	88.3	67-105	1105	5.23	30	
Benzo(a)anthracene	1161	6.6	1319	0	88	68-105	1104	5.06	30	
Benzo(a)pyrene	1185	6.6	1319	5.965	89.4	68-110	1130	4.8	30	
Benzo(b)fluoranthene	1195	6.6	1319	6.628	90.1	65-110	1157	3.24	30	
Benzo(g,h,i)perylene	1317	6.6	1319	0	99.8	60-120	1290	2.08	30	
Benzo(k)fluoranthene	1128	6.6	1319	2.651	85.3	66-113	1119	0.802	30	
Bis(2-chloroethoxy)methane	1022	33	1319	0	77.5	53-96	1010	1.21	30	
Bis(2-chloroethyl)ether	1061	33	1319	0	80.4	47-108	1032	2.7	30	
Bis(2-chloroisopropyl)ether	1040	33	1319	0	78.8	47-107	1030	0.94	30	
Bis(2-ethylhexyl)phthalate	1236	33	1319	0	93.7	59-117	1204	2.61	30	
Butyl benzyl phthalate	1217	33	1319	0	92.3	59-106	1249	2.58	30	
Carbazole	1224	33	1319	0	92.8	67-108	1105	10.2	30	
Chrysene	1152	6.6	1319	0	87.3	68-108	1088	5.71	30	

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

QC BATCH REPORT

Batch ID: **163547** Instrument ID **SVMS10** Method: **SW846 8270D**

Dibenzo(a,h)anthracene	1255	6.6	1319	0	95.2	62-119	1232	1.85	30	
Dibenzofuran	1077	33	1319	0	81.7	60-104	1036	3.94	30	
Diethyl phthalate	1141	33	1319	0	86.5	62-111	1098	3.86	30	
Dimethyl phthalate	1098	33	1319	0	83.2	62-106	1039	5.51	30	
Di-n-butyl phthalate	1241	33	1319	0	94.1	59-105	1181	4.96	30	
Di-n-octyl phthalate	1256	33	1319	0	95.2	51-123	1266	0.797	30	
Fluoranthene	1183	6.6	1319	9.279	89	67-106	1090	8.13	30	
Fluorene	1135	6.6	1319	0	86.1	59-107	1079	5.09	30	
Hexachlorobenzene	1107	33	1319	0	83.9	62-103	1052	5.07	30	
Hexachlorobutadiene	980.2	33	1319	0	74.3	51-94	978.3	0.196	30	
Hexachlorocyclopentadiene	432.7	33	1319	0	32.8	25-120	656.9	41.1	30	R
Hexachloroethane	973.6	33	1319	0	73.8	55-93	1008	3.49	30	
Indeno(1,2,3-cd)pyrene	1288	6.6	1319	0	97.7	56-120	1252	2.86	30	
Isophorone	1064	170	1319	0	80.7	52-99	1046	1.73	30	
Naphthalene	1066	6.6	1319	7.953	80.2	46-98	1055	1	30	
Nitrobenzene	1038	170	1319	0	78.7	53-95	1059	2.05	30	
N-Nitrosodi-n-propylamine	1067	33	1319	0	80.9	50-104	1032	3.32	30	
N-Nitrosodiphenylamine	1136	33	1319	0	86.1	63-107	1084	4.68	30	
Pentachlorophenol	246.7	33	1319	0	18.7	34-106	307.4	21.9	30	S
Phenanthrene	1154	6.6	1319	0	87.5	66-101	1100	4.83	30	
Phenol	1062	33	1319	0	80.5	44-109	1037	2.34	30	
Pyrene	1148	6.6	1319	6.628	86.6	60-119	1175	2.29	30	
Surr: 2,4,6-Tribromophenol	*2148*	0	*3298*	0	*65.1*	*38-92*	2312	*7.35*	*40*	
Surr: 2-Fluorobiphenyl	*2543*	0	*3298*	0	*77.1*	*44-107*	2554	*0.422*	*40*	
Surr: 2-Fluorophenol	*2234*	0	*3298*	0	*67.7*	*37-109*	2349	*5.05*	*40*	
Surr: 4-Terphenyl-d14	*2960*	0	*3298*	0	*89.7*	*52-123*	2999	*1.32*	*40*	
Surr: Nitrobenzene-d5	*2505*	0	*3298*	0	*76*	*41-94*	2487	*0.741*	*40*	
Surr: Phenol-d6	*2699*	0	*3298*	0	*81.8*	*28-111*	2710	*0.383*	*40*	

The following samples were analyzed in this batch: 20082418-01B

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

Client: AKT Peerless
Work Order: 20082418
Project: 8997f5-5-10.4

QC BATCH REPORT

Batch ID: **163433** Instrument ID **VMS11** Method: **SW8260C**

MBLK	Sample ID: **MBLK-163433-163433**				Units: **µg/Kg-dry**		Analysis Date: **9/4/2020 01:43 AM**			
Client ID:		Run ID: **VMS11_200903B**			SeqNo: **6684590**		Prep Date: **8/31/2020**		DF: **1**	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1,2-Tetrachloroethane	ND	30								
1,1,1-Trichloroethane	ND	30								
1,1,2,2-Tetrachloroethane	ND	30								
1,1,2-Trichloroethane	ND	30								
1,1,2-Trichlorotrifluoroethane	ND	30								
1,1-Dichloroethane	ND	30								
1,1-Dichloroethene	ND	30								
1,2,3-Trichloropropane	ND	30								
1,2,4-Trichlorobenzene	ND	100								
1,2,4-Trimethylbenzene	ND	30								
1,2-Dibromo-3-chloropropane	ND	100								
1,2-Dibromoethane	ND	30								
1,2-Dichlorobenzene	ND	30								
1,2-Dichloroethane	ND	100								
1,2-Dichloropropane	ND	30								
1,3,5-Trimethylbenzene	ND	100								
1,3-Dichlorobenzene	ND	30								
1,4-Dichlorobenzene	ND	30								
2-Butanone	ND	200								
2-Hexanone	ND	30								
2-Methylnaphthalene	ND	100								
4-Methyl-2-pentanone	ND	30								
Acetone	ND	100								
Acrylonitrile	ND	100								
Benzene	ND	30								
Bromodichloromethane	ND	30								
Bromoform	ND	30								
Bromomethane	ND	100								
Carbon disulfide	ND	30								
Carbon tetrachloride	ND	30								
Chlorobenzene	ND	30								
Chloroethane	ND	100								
Chloroform	ND	30								
Chloromethane	ND	100								
cis-1,2-Dichloroethene	ND	30								
cis-1,3-Dichloropropene	ND	30								
Dibromochloromethane	ND	30								
Dibromomethane	ND	30								
Dichlorodifluoromethane	ND	100								
Diethyl ether	ND	30								
Ethylbenzene	ND	30								
Hexachloroethane	ND	100								

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

QC BATCH REPORT

Batch ID: **163433** Instrument ID **VMS11** Method: **SW8260C**

Isopropylbenzene	ND	30					
m,p-Xylene	ND	60					
Methyl tert-butyl ether	ND	30					
Methylene chloride	ND	250					
Naphthalene	ND	100					
n-Propylbenzene	ND	30					
o-Xylene	ND	30					
Styrene	ND	30					
Tetrachloroethene	ND	30					
Toluene	ND	30					
trans-1,2-Dichloroethene	ND	30					
trans-1,3-Dichloropropene	ND	30					
Trichloroethene	ND	30					
Trichlorofluoromethane	ND	30					
Vinyl acetate	ND	250					
Vinyl chloride	ND	30					
Xylenes, Total	ND	90					
Surr: 1,2-Dichloroethane-d4	*959.5*	0	*1000*	0	*96*	*70-130*	0
Surr: 4-Bromofluorobenzene	*999.5*	0	*1000*	0	*100*	*70-130*	0
Surr: Dibromofluoromethane	*988*	0	*1000*	0	*98.8*	*70-130*	0
Surr: Toluene-d8	*966.5*	0	*1000*	0	*96.6*	*70-130*	0

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

Client: AKT Peerless
Work Order: 20082418
Project: 8997f5-5-10.4

QC BATCH REPORT

Batch ID: **163433** Instrument ID **VMS11** Method: **SW8260C**

LCS	Sample ID: **LCS-163433-163433**				Units: **µg/Kg-dry**		Analysis Date: **9/4/2020 12:37 AM**			
Client ID:		Run ID: **VMS11_200903B**			SeqNo: **6684588**		Prep Date: **8/31/2020**		DF: **1**	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1,2-Tetrachloroethane	948	30	1000	0	94.8	75-125	0			
1,1,1-Trichloroethane	888.5	30	1000	0	88.8	70-135	0			
1,1,2,2-Tetrachloroethane	918.5	30	1000	0	91.8	55-130	0			
1,1,2-Trichloroethane	877.5	30	1000	0	87.8	60-125	0			
1,1-Dichloroethane	832.5	30	1000	0	83.2	75-125	0			
1,1-Dichloroethene	876	30	1000	0	87.6	76-148	0			
1,2,3-Trichloropropane	959.5	30	1000	0	96	65-130	0			
1,2,4-Trichlorobenzene	878	100	1000	0	87.8	65-130	0			
1,2,4-Trimethylbenzene	938	30	1000	0	93.8	65-135	0			
1,2-Dibromo-3-chloropropane	833.5	100	1000	0	83.4	40-135	0			
1,2-Dibromoethane	880.5	30	1000	0	88	80-195	0			
1,2-Dichlorobenzene	866.5	30	1000	0	86.6	75-120	0			
1,2-Dichloroethane	945.5	100	1000	0	94.6	70-135	0			
1,2-Dichloropropane	778.5	30	1000	0	77.8	70-120	0			
1,3,5-Trimethylbenzene	950.5	100	1000	0	95	65-135	0			
1,3-Dichlorobenzene	937.5	30	1000	0	93.8	70-125	0			
1,4-Dichlorobenzene	927.5	30	1000	0	92.8	70-125	0			
2-Butanone	735.5	200	1000	0	73.6	30-160	0			
2-Hexanone	804	30	1000	0	80.4	45-145	0			
4-Methyl-2-pentanone	1130	30	1000	0	113	74-176	0			
Acetone	771	100	1000	0	77.1	20-160	0			
Acrylonitrile	771.5	100	1000	0	77.2	70-135	0			
Benzene	878.5	30	1000	0	87.8	75-125	0			
Bromodichloromethane	897.5	30	1000	0	89.8	70-130	0			
Bromoform	905	30	1000	0	90.5	55-135	0			
Bromomethane	1080	100	1000	0	108	50-170	0			
Carbon disulfide	866	30	1000	0	86.6	45-160	0			
Carbon tetrachloride	963.5	30	1000	0	96.4	65-135	0			
Chlorobenzene	922.5	30	1000	0	92.2	75-125	0			
Chloroethane	935	100	1000	0	93.5	40-155	0			
Chloroform	852.5	30	1000	0	85.2	66-140	0			
Chloromethane	785.5	100	1000	0	78.6	50-144	0			
cis-1,2-Dichloroethene	829	30	1000	0	82.9	65-125	0			
cis-1,3-Dichloropropene	806.5	30	1000	0	80.6	70-125	0			
Dibromochloromethane	858	30	1000	0	85.8	65-135	0			
Dibromomethane	910	30	1000	0	91	75-130	0			
Dichlorodifluoromethane	907	100	1000	0	90.7	35-135	0			
Diethyl ether	791	30	1000	0	79.1	67-150	0			
Ethylbenzene	930	30	1000	0	93	75-125	0			
Hexachloroethane	845	100	1000	0	84.5	51-122	0			
Isopropylbenzene	956.5	30	1000	0	95.6	75-130	0			
m,p-Xylene	1896	60	2000	0	94.8	80-125	0			

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

QC BATCH REPORT

Batch ID: **163433** Instrument ID **VMS11** Method: **SW8260C**

Methyl tert-butyl ether	839	30	1000	0	83.9	75-125	0
Methylene chloride	769.5	250	1000	0	77	55-145	0
Naphthalene	773	100	1000	0	77.3	40-140	0
n-Propylbenzene	946.5	30	1000	0	94.6	65-135	0
o-Xylene	950	30	1000	0	95	75-125	0
Styrene	960	30	1000	0	96	80-138	0
Tetrachloroethene	1028	30	1000	0	103	67-167	0
Toluene	927	30	1000	0	92.7	70-125	0
trans-1,2-Dichloroethene	862	30	1000	0	86.2	65-135	0
trans-1,3-Dichloropropene	790.5	30	1000	0	79	59-129	0
Trichloroethene	931	30	1000	0	93.1	75-125	0
Trichlorofluoromethane	698	30	1000	0	69.8	25-185	0
Vinyl chloride	756.5	30	1000	0	75.6	60-125	0
Xylenes, Total	2846	90	3000	0	94.8	75-125	0
Surr: 1,2-Dichloroethane-d4	*973*	0	*1000*	0	*97.3*	*70-130*	0
Surr: 4-Bromofluorobenzene	*990.5*	0	*1000*	0	*99*	*70-130*	0
Surr: Dibromofluoromethane	*1003*	0	*1000*	0	*100*	*70-130*	0
Surr: Toluene-d8	*981.5*	0	*1000*	0	*98.2*	*70-130*	0

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

Client: AKT Peerless
Work Order: 20082418
Project: 8997f5-5-10.4

QC BATCH REPORT

Batch ID: **163433** Instrument ID **VMS11** Method: **SW8260C**

MS	Sample ID: **20082411-01A MS**				Units: **µg/Kg-dry**		Analysis Date: **9/4/2020 08:43 AM**			
Client ID:		Run ID: **VMS11_200903B**			SeqNo: **6684611**		Prep Date: **8/31/2020**		DF: **1**	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1,2-Tetrachloroethane	1164	37	1244	0	93.6	75-125	0			
1,1,1-Trichloroethane	1227	37	1244	0	98.7	70-135	0			
1,1,2,2-Tetrachloroethane	245.7	37	1244	0	19.7	55-130	0			S
1,1,2-Trichloroethane	1086	37	1244	0	87.3	60-125	0			
1,1-Dichloroethane	1099	37	1244	0	88.3	75-125	0			
1,1-Dichloroethene	1288	37	1244	0	104	76-148	0			
1,2,3-Trichloropropane	1217	37	1244	0	97.9	65-130	0			
1,2,4-Trichlorobenzene	1120	120	1244	0	90	65-130	0			
1,2,4-Trimethylbenzene	1233	37	1244	0	99.2	65-135	0			
1,2-Dibromo-3-chloropropane	1042	120	1244	0	83.7	40-135	0			
1,2-Dibromoethane	1077	37	1244	0	86.5	80-195	0			
1,2-Dichlorobenzene	1128	37	1244	0	90.6	75-120	0			
1,2-Dichloroethane	1225	120	1244	0	98.5	70-135	0			
1,2-Dichloropropane	994.5	37	1244	0	79.9	70-120	0			
1,3,5-Trimethylbenzene	1259	120	1244	0	101	65-135	0			
1,3-Dichlorobenzene	1186	37	1244	0	95.4	70-125	0			
1,4-Dichlorobenzene	1161	37	1244	0	93.4	70-125	0			
2-Butanone	1892	250	1244	0	152	30-160	0			
2-Hexanone	1565	37	1244	0	126	45-145	0			
4-Methyl-2-pentanone	1059	37	1244	0	85.1	74-176	0			
Acetone	2271	120	1244	0	183	20-160	0			S
Acrylonitrile	993.9	120	1244	0	79.9	70-135	0			
Benzene	1172	37	1244	0	94.2	75-125	0			
Bromodichloromethane	1129	37	1244	0	90.8	70-130	0			
Bromoform	1009	37	1244	0	81.1	55-135	0			
Bromomethane	168.6	120	1244	0	13.6	50-170	0			S
Carbon disulfide	1254	37	1244	0	101	45-160	0			
Carbon tetrachloride	1233	37	1244	0	99.2	65-135	0			
Chlorobenzene	1227	37	1244	0	98.6	75-125	0			
Chloroethane	952.9	120	1244	0	76.6	40-155	0			
Chloroform	1164	37	1244	0	93.6	66-140	0			
Chloromethane	966.5	120	1244	0	77.7	50-144	0			
cis-1,2-Dichloroethene	1097	37	1244	0	88.2	65-125	0			
cis-1,3-Dichloropropene	962.8	37	1244	0	77.4	70-125	0			
Dibromochloromethane	1027	37	1244	0	82.5	65-135	0			
Dibromomethane	1168	37	1244	0	93.9	75-130	0			
Dichlorodifluoromethane	1528	120	1244	0	123	35-135	0			
Diethyl ether	1055	37	1244	0	84.9	67-150	0			
Ethylbenzene	1214	37	1244	0	97.6	75-125	0			
Hexachloroethane	781.2	120	1244	0	62.8	51-122	0			
Isopropylbenzene	1263	37	1244	0	102	75-130	0			
m,p-Xylene	2464	75	2488	0	99.1	80-125	0			

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

QC BATCH REPORT

Batch ID: **163433** Instrument ID **VMS11** Method: **SW8260C**

Methyl tert-butyl ether	1064	37	1244	0	85.5	75-125	0	
Methylene chloride	1047	310	1244	0	84.2	55-145	0	
Naphthalene	929.8	120	1244	0	74.8	40-140	0	
n-Propylbenzene	1233	37	1244	0	99.1	65-135	0	
o-Xylene	1228	37	1244	0	98.7	75-125	0	
Styrene	1249	37	1244	0	100	80-138	0	
Tetrachloroethene	2590	37	1244	0	208	67-167	0	S
Toluene	1200	37	1244	0	96.5	70-125	0	
trans-1,2-Dichloroethene	1174	37	1244	0	94.4	65-135	0	
trans-1,3-Dichloropropene	889.4	37	1244	0	71.5	59-129	0	
Trichloroethene	2109	37	1244	0	170	75-125	0	S
Trichlorofluoromethane	1027	37	1244	0	82.6	25-185	0	
Vinyl chloride	1175	37	1244	0	94.4	60-125	0	
Xylenes, Total	3693	110	3732	0	99	75-125	0	
Surr: 1,2-Dichloroethane-d4	*1209*	0	*1244*	0	*97.2*	*70-130*	0	
Surr: 4-Bromofluorobenzene	*1216*	0	*1244*	0	*97.7*	*70-130*	0	
Surr: Dibromofluoromethane	*1248*	0	*1244*	0	*100*	*70-130*	0	
Surr: Toluene-d8	*1179*	0	*1244*	0	*94.7*	*70-130*	0	

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

Client: AKT Peerless
Work Order: 20082418
Project: 8997f5-5-10.4

QC BATCH REPORT

Batch ID: **163433** Instrument ID **VMS11** Method: **SW8260C**

MSD Sample ID: **20082411-01A MSD** Units: **µg/Kg-dry** Analysis Date: **9/4/2020 09:05 AM**

Client ID: Run ID: **VMS11_200903B** SeqNo: **6684612** Prep Date: **8/31/2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1,2-Tetrachloroethane	1212	38	1266	0	95.7	75-125	1164	3.97	30	
1,1,1-Trichloroethane	1230	38	1266	0	97.1	70-135	1227	0.222	30	
1,1,2,2-Tetrachloroethane	180.4	38	1266	0	14.3	55-130	245.7	30.6	30	SR
1,1,2-Trichloroethane	1091	38	1266	0	86.2	60-125	1086	0.487	30	
1,1-Dichloroethane	1075	38	1266	0	84.9	75-125	1099	2.17	30	
1,1-Dichloroethene	1281	38	1266	0	101	76-148	1288	0.59	30	
1,2,3-Trichloropropane	1250	38	1266	0	98.8	65-130	1217	2.67	30	
1,2,4-Trichlorobenzene	1122	130	1266	0	88.6	65-130	1120	0.243	30	
1,2,4-Trimethylbenzene	1256	38	1266	0	99.3	65-135	1233	1.86	30	
1,2-Dibromo-3-chloropropane	1059	130	1266	0	83.7	40-135	1042	1.64	30	
1,2-Dibromoethane	1093	38	1266	0	86.4	80-195	1077	1.52	30	
1,2-Dichlorobenzene	1126	38	1266	0	88.9	75-120	1128	0.138	30	
1,2-Dichloroethane	1214	130	1266	0	95.9	70-135	1225	0.869	30	
1,2-Dichloropropane	1012	38	1266	0	80	70-120	994.5	1.75	30	
1,3,5-Trimethylbenzene	1298	130	1266	0	103	65-135	1259	3.08	30	
1,3-Dichlorobenzene	1220	38	1266	0	96.3	70-125	1186	2.8	30	
1,4-Dichlorobenzene	1229	38	1266	0	97.1	70-125	1161	5.69	30	
2-Butanone	1859	250	1266	0	147	30-160	1892	1.76	30	
2-Hexanone	1708	38	1266	0	135	45-145	1565	8.73	30	
4-Methyl-2-pentanone	1128	38	1266	0	89.1	74-176	1059	6.35	30	
Acetone	2406	130	1266	0	190	20-160	2271	5.75	30	S
Acrylonitrile	1031	130	1266	0	81.5	70-135	993.9	3.68	30	
Benzene	1172	38	1266	0	92.6	75-125	1172	0.0111	30	
Bromodichloromethane	1117	38	1266	0	88.2	70-130	1129	1.15	30	
Bromoform	1072	38	1266	0	84.7	55-135	1009	6.1	30	
Bromomethane	232.3	130	1266	0	18.4	50-170	168.6	31.8	30	SR
Carbon disulfide	1230	38	1266	0	97.1	45-160	1254	1.98	30	
Carbon tetrachloride	1251	38	1266	0	98.8	65-135	1233	1.45	30	
Chlorobenzene	1227	38	1266	0	96.9	75-125	1227	0.0155	30	
Chloroethane	835.5	130	1266	0	66	40-155	952.9	13.1	30	
Chloroform	1135	38	1266	0	89.6	66-140	1164	2.5	30	
Chloromethane	961.5	130	1266	0	75.9	50-144	966.5	0.523	30	
cis-1,2-Dichloroethene	1066	38	1266	0	84.2	65-125	1097	2.89	30	
cis-1,3-Dichloropropene	944.4	38	1266	0	74.6	70-125	962.8	1.93	30	
Dibromochloromethane	1041	38	1266	0	82.2	65-135	1027	1.39	30	
Dibromomethane	1191	38	1266	0	94.1	75-130	1168	1.91	30	
Dichlorodifluoromethane	1536	130	1266	0	121	35-135	1528	0.526	30	
Diethyl ether	1001	38	1266	0	79.1	67-150	1055	5.26	30	
Ethylbenzene	1251	38	1266	0	98.8	75-125	1214	3.03	30	
Hexachloroethane	886.8	130	1266	0	70.1	51-122	781.2	12.7	30	
Isopropylbenzene	1310	38	1266	0	104	75-130	1263	3.66	30	
m,p-Xylene	2541	76	2532	0	100	80-125	2464	3.08	30	

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

QC BATCH REPORT

Batch ID: **163433** Instrument ID **VMS11** Method: **SW8260C**

Methyl tert-butyl ether	1058	38	1266	0	83.6	75-125	1064	0.493	30	
Methylene chloride	1029	320	1266	0	81.3	55-145	1047	1.75	30	
Naphthalene	1004	130	1266	0	79.3	40-140	929.8	7.66	30	
n-Propylbenzene	1262	38	1266	0	99.7	65-135	1233	2.31	30	
o-Xylene	1270	38	1266	0	100	75-125	1228	3.31	30	
Styrene	1260	38	1266	0	99.5	80-138	1249	0.854	30	
Tetrachloroethene	2660	38	1266	0	210	67-167	2590	2.64	30	S
Toluene	1206	38	1266	0	95.3	70-125	1200	0.451	30	
trans-1,2-Dichloroethene	1168	38	1266	0	92.3	65-135	1174	0.495	30	
trans-1,3-Dichloropropene	917.8	38	1266	0	72.5	59-129	889.4	3.14	30	
Trichloroethene	2150	38	1266	0	170	75-125	2109	1.93	30	S
Trichlorofluoromethane	1022	38	1266	0	80.7	25-185	1027	0.511	30	
Vinyl chloride	1183	38	1266	0	93.4	60-125	1175	0.69	30	
Xylenes, Total	3811	110	3798	0	100	75-125	3693	3.16	30	
Surr: 1,2-Dichloroethane-d4	*1228*	0	*1266*	0	*97*	*70-130*	1209	*1.55*	*30*	
Surr: 4-Bromofluorobenzene	*1286*	0	*1266*	0	*102*	*70-130*	1216	*5.57*	*30*	
Surr: Dibromofluoromethane	*1220*	0	*1266*	0	*96.4*	*70-130*	1248	*2.21*	*30*	
Surr: Toluene-d8	*1179*	0	*1266*	0	*93.1*	*70-130*	1179	*0.0017*	*30*	

The following samples were analyzed in this batch: 20082418-01A

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

Client: AKT Peerless
Work Order: 20082418
Project: 8997f5-5-10.4

QC BATCH REPORT

Batch ID: **163507** Instrument ID **GALLERY** Method: **A4500-Cl E-11**

MBLK Sample ID: **MBLK-163507-163507** Units: **mg/Kg** Analysis Date: **9/2/2020 01:30 PM**
Client ID: Run ID: **GALLERY_200902A** SeqNo: **6679668** Prep Date: **9/1/2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	ND	10								

MS Sample ID: **20090013-01AMS** Units: **mg/Kg** Analysis Date: **9/2/2020 01:30 PM**
Client ID: Run ID: **GALLERY_200902A** SeqNo: **6679679** Prep Date: **9/1/2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	508	9.9	497	0.6048	102	86-114	0			

MSD Sample ID: **20090013-01AMSD** Units: **mg/Kg** Analysis Date: **9/2/2020 01:30 PM**
Client ID: Run ID: **GALLERY_200902A** SeqNo: **6679680** Prep Date: **9/1/2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	506.8	10	498	0.6048	102	86-114	508	0.232	10	

LCS1 Sample ID: **LCS1-163507-163507** Units: **mg/Kg** Analysis Date: **9/2/2020 01:30 PM**
Client ID: Run ID: **GALLERY_200902A** SeqNo: **6679690** Prep Date: **9/1/2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	97.36	10	100	0	97.4	86-114	0			

LCS2 Sample ID: **LCS2-163507-163507** Units: **mg/Kg** Analysis Date: **9/2/2020 01:30 PM**
Client ID: Run ID: **GALLERY_200902A** SeqNo: **6679691** Prep Date: **9/1/2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	496.9	10	500	0	99.4	88-112	0			

The following samples were analyzed in this batch: 20082418-01B

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

Client: AKT Peerless
Work Order: 20082418
Project: 8997f5-5-10.4

QC BATCH REPORT

Batch ID: **R297357** Instrument ID **MOIST** Method: **SW3550C**

MBLK Sample ID: **WBLKS-R297357** Units: **% of sample** Analysis Date: **9/2/2020 12:32 PM**
Client ID: Run ID: **MOIST_200902B** SeqNo: **6681722** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Moisture	ND	0.10								

LCS Sample ID: **LCS-R297357** Units: **% of sample** Analysis Date: **9/2/2020 12:32 PM**
Client ID: Run ID: **MOIST_200902B** SeqNo: **6681721** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Moisture	100	0.10	100	0	100	98-102	0			

DUP Sample ID: **20082410-01B DUP** Units: **% of sample** Analysis Date: **9/2/2020 12:32 PM**
Client ID: Run ID: **MOIST_200902B** SeqNo: **6681702** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Moisture	9.45	0.10	0	0	0	0-0	9.44	0.106	10	

DUP Sample ID: **20090107-01A DUP** Units: **% of sample** Analysis Date: **9/2/2020 12:32 PM**
Client ID: Run ID: **MOIST_200902B** SeqNo: **6681714** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Moisture	3.55	0.10	0	0	0	0-0	3.59	1.12	10	

The following samples were analyzed in this batch: 20082418-01B

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

Cincinnati, OH +1 513 733 5336
Fort Collins, CO +1 970 490 1511
Everett, WA +1 425 356 2600
Holland, MI +1 616 399 6070
Houston, TX +1 281 530 5656
Spring City, PA +1 610 948 4903
South Charleston, WV +1 304 356 3168
Middletown, PA +1 717 944 5541
Salt Lake City, UT +1 801 266 7700
York, PA +1 717 505 5280

Chain of Custody Form

Page 1 of 1

COC ID: 223366

ALS Project Manager: | ALS Work Order #: 2008241R

Customer Information		Project Information		Parameter/Method Request for Analysis	
Purchase Order		Project Name		A	VOCs
Work Order		Project Number	8997f5-5-10.4	B	SVOCs
Company Name	AKT Peerless	Bill To Company	AKT Peerless	C	PCBs
Send Report To	Megan Napier	Invoice Attn	Accounts Payable	D	M1-10 metals
Address	22725 Orchard Lake Road	Address	214 Janes Avenue	E	Chloride
				F	Herbicides + Pesticides
City/State/Zip	Farmington, MI 48336	City/State/Zip	Saginaw, MI 48607	G	
Phone	(248) 615-1333	Phone	(989) 754-9896	H	
Fax	cooktr@aktpeerless.com	Fax		I	
e-Mail Address	napierm@aktpeerless.com	e-Mail Address		J	

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	12741 Maiden-TS-Composite	8/28/2020	2:20pm	Soil	MeOH	3	X	X	X	X	X	X					
2																	
3																	
4																	
5																	
6																	
7																	
8																	
9																	
10																	

Sampler(s) Please Print & Sign: Sean Brick

Shipment Method:

Required Turnaround Time: (Check Box) ☐ Std 10 WK Days ☒ 5 WK Days ☐ 2 WK Days ☐ 24 Hour ☐ Other

Results Due Date:

Relinquished by:	Date: 8/28/2020	Time: 11:45A	Received by:	
Relinquished by:	Date: 8/30/2020	Time: 1730	Received by (Laboratory):	Date: 8/29/20 Time: 8:00
Logged by (Laboratory): MTG	Date: 8/31/20	Time: 12:21	Checked by (Laboratory):	

Notes: also send report to bricks@aktpeerless.com

Cooler ID	Cooler Temp.
	5.0°C
	ERI

QC Package: (Check One Box Below)
☑ Level II Std QC ☐ TRRP CheckList
☐ Level III Std QC/Raw Data ☐ TRRP Level IV
☐ Level IV SW846/CLP
☐ Other

Preservative Key: 1-HCl 2-HNO_3 3-H_2SO_4 4-NaOH 5-$Na_2S_2O_3$ 6-$NaHSO_4$ 7-Other 8-4°C 9-5035

Note:
1. Any changes must be made in writing once samples and COC Form have been submitted to ALS Environmental.
2. Unless otherwise agreed in a formal contract, services provided by ALS Environmental are expressly limited to the terms and conditions stated on the reverse.
3. The Chain of Custody is a legal document. All information must be completed accurately.

ALS Group, USA

Sample Receipt Checklist

Client Name: **AKT PEERLESS - FARMINGTON** Date/Time Received: **29-Aug-20 08:00**

Work Order: **20082418** Received by: **MJG**

Checklist completed by Matthew Gaylord (eSignature) 31-Aug-20 (Date) Reviewed by: Bill Carey (eSignature) 31-Aug-20 (Date)

Matrices: Soil

Carrier name: Courier

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐	
Sample(s) received on ice?	Yes ☑	No ☐	
Temperature(s)/Thermometer(s):	5.0/5.0C	IR1	
Cooler(s)/Kit(s):			
Date/Time sample(s) sent to storage:	8/31/2020 12:23:32 PM		
Water - VOA vials have zero headspace?	Yes ☐	No ☐	No VOA vials submitted ☑
Water - pH acceptable upon receipt?	Yes ☐	No ☐	N/A ☑
pH adjusted?	Yes ☐	No ☐	N/A ☑
pH adjusted by:	-		

Login Notes:

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

CorrectiveAction: