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**
13016 Longview
Detroit, Michigan
AKT Peerless Project No. 8997f5-5-10.3

Mr. Palazzolo:

The City of Detroit, Detroit Demolition Department retained AKT Peerless to conduct soil sampling at a residential demolition site located at 13016 Longview 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 31, 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 "13016 Longview-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 sample 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.
- Select pesticides were detected in the topsoil composite sample at concentrations exceeding laboratory MDLs but below EGLE Part 201 RCC. Remaining pesticides were not detected 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 13016 Longview 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.

DRAFT

Sean Brick
Environmental Consultant
AKT Peerless
Farmington, Michigan Office
Phone: 248.615.1333

DRAFT

Megan Napier
Senior Engineer
AKT Peerless
Farmington, Michigan Office
Phone: 248.615.1333

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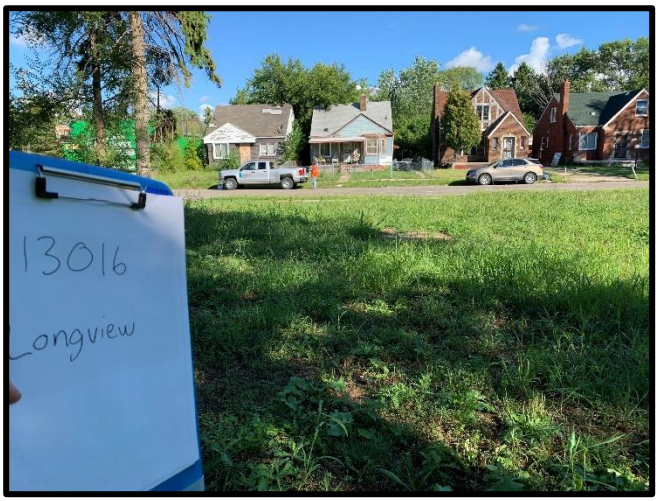
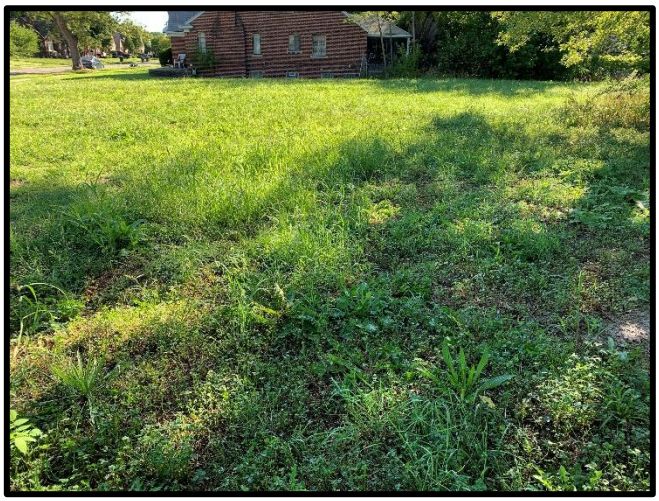
Attachment I

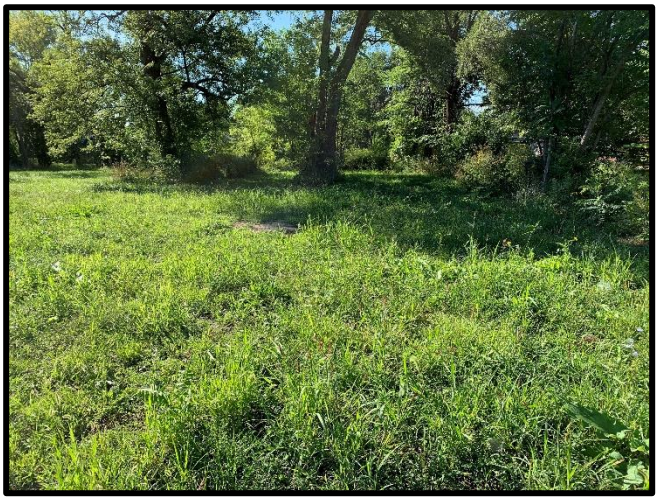
Site Photographs



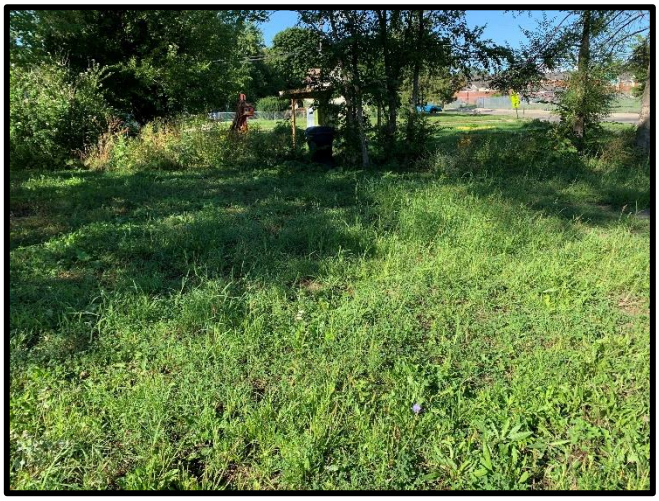
View of the property looking north.



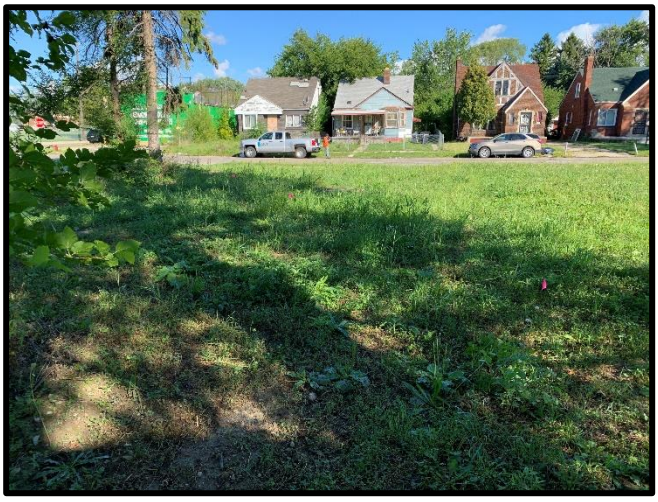
View of the property looking east.



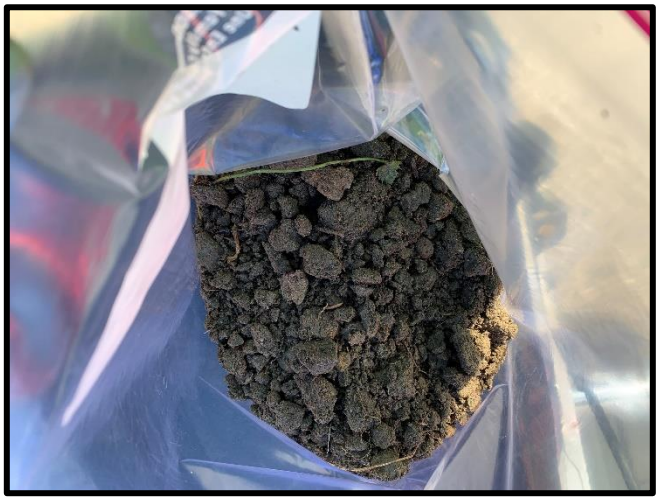
View of the property looking south.



View of the property looking west.



View of sample locations.



View of typical top fill material.

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Property Photographs
13016 Longview
Detroit, Michigan

Taken by: S. Brick
Date: 08.31.2020

Project No: 8997F5-5-10.5

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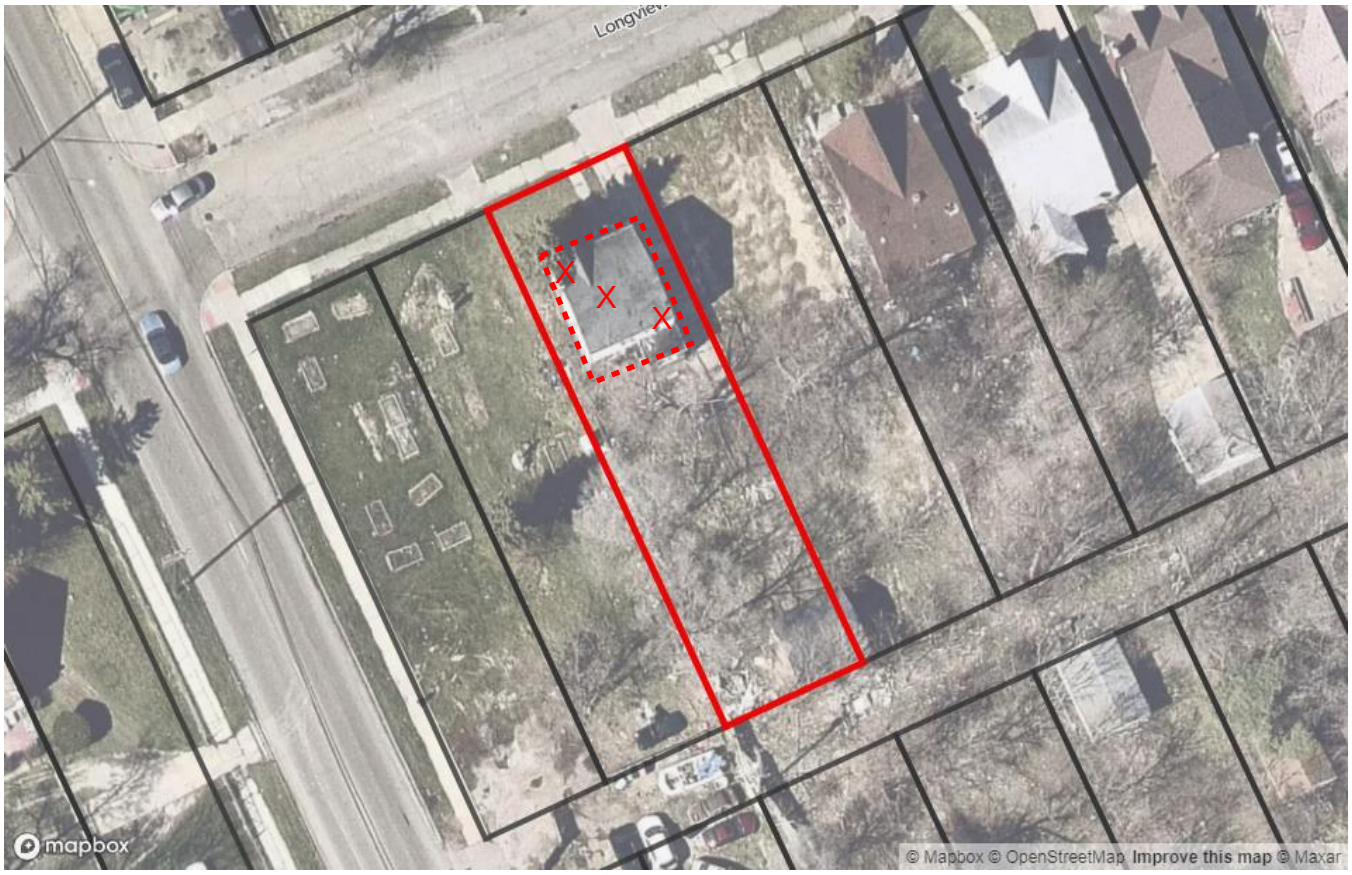
Attachment II

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
13016 Longview
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
13016 Longview, 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	13016 Longview-TS-Composite / 8/31/2020
Metals (µg/kg)											
Arsenic	7440-38-2	5,800	4,600	4,600	NLV	NLV	7.2E+5	7,600	NA		5,800
Barium (B)	7440-39-3	75,000	1.3E+6	(G)	NLV	NLV	3.3E+8	3.7E+7	NA		58,000
Cadmium (B)	7440-43-9	1,200	6,000	(G,X)	NLV	NLV	1.7E+6	5.5E+5	NA		280
Chromium, Total	7440-47-3	18,000 (total)	30,000	3,300	NLV	NLV	2.6E+5	2.5E+6	NA		13,000
Copper (B)	7440-50-8	32,000	5.8E+6	(G)	NLV	NLV	1.3E+8	2.0E+7	NA		15,000
Lead (B)	7439-92-1	21,000	7.0E+5	(G,X)	NLV	NLV	1.0E+8	4.0E+5	NA		37,000
Mercury, Total	7439-97-6	130	1,700	50 (M); 1.2	48,000	52,000	2.0E+7	1.6E+5	NA		**230**
Selenium (B)	7782-49-2	410	4,000	400	NLV	NLV	1.3E+8	2.6E+6	NA		<460
Silver (B)	7440-22-4	1,000	4,500	100 (M); 27	NLV	NLV	6.7E+6	2.5E+6	NA		<460
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)											
4-4'-DDE	72-55-9	NA	NLL	NLL	NLV	NLV	3.2E+7	45,000	NA		51
4-4'-DDT	50-29-3	NA	NLL	NLL	NLV	NLV	3.2E+7	57,000	NA		95
Remaining 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

10-Sep-2020

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

Re: **8997f5-5-10.4** Work Order: **20090028**

Dear Megan,

ALS Environmental received 1 sample on 01-Sep-2020 08:30 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

Certificate No: MN 026-999-449

ALS Group, USA

Date: 10-Sep-20

Client: AKT Peerless
Project: 8997f5-5-10.4
Work Order: **20090028**

Work Order Sample Summary

Lab Samp ID	Client Sample ID	Matrix	Tag Number	Collection Date	Date Received	Hold
20090028-01	13016 Longview-TS-Composite	Soil		8/31/2020 10:05	9/1/2020 08:30	☐

Client: AKT Peerless
Project: 8997f5-5-10.4
WorkOrder: **20090028**

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

Client: AKT Peerless
Project: 8997f5-5-10.4
Work Order: 20090028

Case Narrative

Samples for the above noted Work Order were received on 9/1/2020. 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:
Batch 163493, Method VOC_8260_S, Sample LCS-163493: The LCS recovery was above the upper control limit. All the sample results in the batch were non-detect. No qualification is necessary for this analyte: methyl iodide

Extractable Organics:
Batch 163752, Method SVO_8270_S, Sample 20090028-01B: 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: *10-Sep-20*

Client:	AKT Peerless	**Client Sample ID:**	13016 Longview-TS-Composite
Work Order:	20090028	**Collection Date:**	8/31/2020 10:05:00 AM
Project:	8997f5-5-10.4		
Lab ID:	20090028-01	**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	*54.0*	*10-150*			*%REC*	1	9/4/2020
PCBS			**SW8082**		Prep Date: **9/8/2020**		Analyst: **RM**
Aroclor 1016	ND	330	330		µg/Kg-dry	1	9/8/2020
Aroclor 1221	ND	330	330		µg/Kg-dry	1	9/8/2020
Aroclor 1232	ND	330	330		µg/Kg-dry	1	9/8/2020
Aroclor 1242	ND	330	330		µg/Kg-dry	1	9/8/2020
Aroclor 1248	ND	330	330		µg/Kg-dry	1	9/8/2020
Aroclor 1254	ND	330	330		µg/Kg-dry	1	9/8/2020
Aroclor 1260	ND	330	330		µg/Kg-dry	1	9/8/2020
Aroclor 1262	ND	330	330		µg/Kg-dry	1	9/8/2020
Aroclor 1268	ND	330	330		µg/Kg-dry	1	9/8/2020
Surr: Decachlorobiphenyl	*84.7*	*40-140*			*%REC*	1	9/8/2020
Surr: Tetrachloro-m-xylene	*90.6*	*45-124*			*%REC*	1	9/8/2020
PESTICIDES			**SW8081A**		Prep Date: **9/8/2020**		Analyst: **RM**
4,4´-DDD	ND	20	20		µg/Kg-dry	1	9/8/2020
4,4´-DDE	**51**	**20**	**20**		**µg/Kg-dry**	1	9/8/2020
4,4´-DDT	**95**	**55**	**20**		**µg/Kg-dry**	5	9/9/2020
Aldrin	ND	20	20		µg/Kg-dry	1	9/8/2020
alpha-BHC	ND	11	10		µg/Kg-dry	1	9/8/2020
alpha-Chlordane	ND	30	30		µg/Kg-dry	1	9/8/2020
beta-BHC	ND	20	20		µg/Kg-dry	1	9/8/2020
Chlordane, Technical	ND	30	30		µg/Kg-dry	1	9/8/2020
delta-BHC	ND	20	20		µg/Kg-dry	1	9/8/2020
Dieldrin	ND	20	20		µg/Kg-dry	1	9/8/2020
Endosulfan I	ND	20	20		µg/Kg-dry	1	9/8/2020
Endosulfan II	ND	20	20		µg/Kg-dry	1	9/8/2020
Endosulfan sulfate	ND	20	20		µg/Kg-dry	1	9/8/2020
Endrin	ND	20	20		µg/Kg-dry	1	9/8/2020
Endrin aldehyde	ND	20	20		µg/Kg-dry	1	9/8/2020
Endrin ketone	ND	20	20		µg/Kg-dry	1	9/8/2020
gamma-BHC (Lindane)	ND	20	20		µg/Kg-dry	1	9/8/2020
gamma-Chlordane	ND	30	30		µg/Kg-dry	1	9/8/2020
Heptachlor	ND	20	20		µg/Kg-dry	1	9/8/2020
Heptachlor epoxide	ND	20	20		µg/Kg-dry	1	9/8/2020
Methoxychlor	ND	50	50		µg/Kg-dry	1	9/8/2020
Toxaphene	ND	170	170		µg/Kg-dry	1	9/8/2020

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

Client: AKT Peerless **Client Sample ID:** 13016 Longview-TS-Composite
Work Order: 20090028 **Collection Date:** 8/31/2020 10:05:00 AM
Project: 8997f5-5-10.4
Lab ID: 20090028-01 **Matrix:** SOIL

Analyses	Result	Report Limit	MDEQ OP Memo 2 TDL	Qual	Units	Dilution Factor	Date Analyzed
Surr: Decachlorobiphenyl	*78.7*	*50-150*			*%REC*	1	9/8/2020
Surr: Tetrachloro-m-xylene	*82.8*	*50-150*			*%REC*	1	9/8/2020
MERCURY BY CVAA			**SW7471B**		Prep Date: **9/3/2020**		Analyst: **MAC**
Mercury	**230**	**50**	**50**		**µg/Kg-dry**	1	9/3/2020
METALS BY ICP-MS			**SW6020B**		Prep Date: **9/3/2020**		Analyst: **STP**
Arsenic	**5,800**	**2,000**	**2,000**		**µg/Kg-dry**	1	9/3/2020
Barium	**58,000**	**1,000**	**1,000**		**µg/Kg-dry**	1	9/3/2020
Cadmium	**280**	**200**	**200**		**µg/Kg-dry**	1	9/3/2020
Chromium	**13,000**	**2,000**	**2,000**		**µg/Kg-dry**	1	9/3/2020
Copper	**15,000**	**1,000**	**1,000**		**µg/Kg-dry**	1	9/4/2020
Lead	**37,000**	**10,000**	**10,000**		**µg/Kg-dry**	1	9/3/2020
Selenium	ND	460	200		µg/Kg-dry	1	9/3/2020
Silver	ND	460	100		µg/Kg-dry	1	9/3/2020
Zinc	**58,000**	**1,000**	**1,000**		**µg/Kg-dry**	1	9/3/2020
SEMI-VOLATILE ORGANIC COMPOUNDS			**SW846 8270D**		Prep Date: **9/4/2020**		Analyst: **EE**
1,2,4-Trichlorobenzene	ND	330	330		µg/Kg-dry	5	9/8/2020
1,2-Dichlorobenzene	ND	330	330		µg/Kg-dry	5	9/8/2020
1,3-Dichlorobenzene	ND	330	330		µg/Kg-dry	5	9/8/2020
1,4-Dichlorobenzene	ND	330	330		µg/Kg-dry	5	9/8/2020
2,4,5-Trichlorophenol	ND	300	300		µg/Kg-dry	5	9/8/2020
2,4,6-Trichlorophenol	ND	330	330		µg/Kg-dry	5	9/8/2020
2,4-Dichlorophenol	ND	330	330		µg/Kg-dry	5	9/8/2020
2,4-Dimethylphenol	ND	330	330		µg/Kg-dry	5	9/8/2020
2,4-Dinitrophenol	ND	830	830		µg/Kg-dry	5	9/8/2020
2,4-Dinitrotoluene	ND	330	330		µg/Kg-dry	5	9/8/2020
2,6-Dinitrotoluene	ND	330	330		µg/Kg-dry	5	9/8/2020
2-Chloronaphthalene	ND	330	330		µg/Kg-dry	5	9/8/2020
2-Chlorophenol	ND	330	330		µg/Kg-dry	5	9/8/2020
2-Methylnaphthalene	ND	330	330		µg/Kg-dry	5	9/8/2020
2-Methylphenol	ND	330	330		µg/Kg-dry	5	9/8/2020
2-Nitroaniline	ND	830	830		µg/Kg-dry	5	9/8/2020
2-Nitrophenol	ND	330	330		µg/Kg-dry	5	9/8/2020
3&4-Methylphenol	ND	330	330		µg/Kg-dry	5	9/8/2020
3,3´-Dichlorobenzidine	ND	2,000	2,000		µg/Kg-dry	5	9/8/2020
3-Nitroaniline	ND	830	830		µg/Kg-dry	5	9/8/2020
4,6-Dinitro-2-methylphenol	ND	830	830		µg/Kg-dry	5	9/8/2020
4-Bromophenyl phenyl ether	ND	330	330		µg/Kg-dry	5	9/8/2020
4-Chloro-3-methylphenol	ND	280	280		µg/Kg-dry	5	9/8/2020
4-Chloroaniline	ND	380	330		µg/Kg-dry	5	9/8/2020

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

ALS Group, USA

Date: *10-Sep-20*

Client:	AKT Peerless	**Client Sample ID:**	13016 Longview-TS-Composite
Work Order:	20090028	**Collection Date:**	8/31/2020 10:05:00 AM
Project:	8997f5-5-10.4		
Lab ID:	20090028-01	**Matrix:**	SOIL

Analyses	Result	Report Limit	MDEQ OP Memo 2 TDL	Qual	Units	Dilution Factor	Date Analyzed
4-Chlorophenyl phenyl ether	ND	330	330		µg/Kg-dry	5	9/8/2020
4-Nitroaniline	ND	950	830		µg/Kg-dry	5	9/8/2020
4-Nitrophenol	ND	830	830		µg/Kg-dry	5	9/8/2020
Acenaphthene	ND	330	330		µg/Kg-dry	5	9/8/2020
Acenaphthylene	ND	330	330		µg/Kg-dry	5	9/8/2020
Anthracene	ND	330	330		µg/Kg-dry	5	9/8/2020
Benzo(a)anthracene	ND	330	330		µg/Kg-dry	5	9/8/2020
Benzo(a)pyrene	ND	330	330		µg/Kg-dry	5	9/8/2020
Benzo(b)fluoranthene	ND	330	330		µg/Kg-dry	5	9/8/2020
Benzo(g,h,i)perylene	ND	330	330		µg/Kg-dry	5	9/8/2020
Benzo(k)fluoranthene	ND	330	330		µg/Kg-dry	5	9/8/2020
Bis(2-chloroethoxy)methane	ND	330	330		µg/Kg-dry	5	9/8/2020
Bis(2-chloroethyl)ether	ND	190	100		µg/Kg-dry	5	9/8/2020
Bis(2-chloroisopropyl)ether	ND	330	330		µg/Kg-dry	5	9/8/2020
Bis(2-ethylhexyl)phthalate	ND	330	330		µg/Kg-dry	5	9/8/2020
Butyl benzyl phthalate	ND	330	330		µg/Kg-dry	5	9/8/2020
Carbazole	ND	330	330		µg/Kg-dry	5	9/8/2020
Chrysene	ND	330	330		µg/Kg-dry	5	9/8/2020
Dibenzo(a,h)anthracene	ND	330	330		µg/Kg-dry	5	9/8/2020
Dibenzofuran	ND	330	330		µg/Kg-dry	5	9/8/2020
Diethyl phthalate	ND	330	330		µg/Kg-dry	5	9/8/2020
Dimethyl phthalate	ND	330	330		µg/Kg-dry	5	9/8/2020
Di-n-butyl phthalate	ND	330	330		µg/Kg-dry	5	9/8/2020
Di-n-octyl phthalate	ND	330	330		µg/Kg-dry	5	9/8/2020
Fluoranthene	ND	330	330		µg/Kg-dry	5	9/8/2020
Fluorene	ND	330	330		µg/Kg-dry	5	9/8/2020
Hexachlorobenzene	ND	330	330		µg/Kg-dry	5	9/8/2020
Hexachlorobutadiene	ND	190	50		µg/Kg-dry	5	9/8/2020
Hexachlorocyclopentadiene	ND	330	330		µg/Kg-dry	5	9/8/2020
Hexachloroethane	ND	300	300		µg/Kg-dry	5	9/8/2020
Indeno(1,2,3-cd)pyrene	ND	330	330		µg/Kg-dry	5	9/8/2020
Isophorone	ND	950	330		µg/Kg-dry	5	9/8/2020
Naphthalene	ND	330	330		µg/Kg-dry	5	9/8/2020
Nitrobenzene	ND	950	330		µg/Kg-dry	5	9/8/2020
N-Nitrosodi-n-propylamine	ND	330	330		µg/Kg-dry	5	9/8/2020
N-Nitrosodiphenylamine	ND	330	330		µg/Kg-dry	5	9/8/2020
Pentachlorophenol	ND	190	20		µg/Kg-dry	5	9/8/2020
Phenanthrene	ND	330	330		µg/Kg-dry	5	9/8/2020
Phenol	ND	330	330		µg/Kg-dry	5	9/8/2020
Pyrene	ND	330	330		µg/Kg-dry	5	9/8/2020
Surr: 2,4,6-Tribromophenol	*74.4*	*38-92*			*%REC*	5	9/8/2020

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

ALS Group, USA

Date: *10-Sep-20*

Client:	AKT Peerless	**Client Sample ID:**	13016 Longview-TS-Composite
Work Order:	20090028	**Collection Date:**	8/31/2020 10:05:00 AM
Project:	8997f5-5-10.4		
Lab ID:	20090028-01	**Matrix:**	SOIL

Analyses	Result	Report Limit	MDEQ OP Memo 2 TDL	Qual	Units	Dilution Factor	Date Analyzed
Surr: 2-Fluorobiphenyl	*75.5*	*44-107*			*%REC*	5	9/8/2020
Surr: 2-Fluorophenol	*67.9*	*37-109*			*%REC*	5	9/8/2020
Surr: 4-Terphenyl-d14	*99.1*	*52-123*			*%REC*	5	9/8/2020
Surr: Nitrobenzene-d5	*72.1*	*41-94*			*%REC*	5	9/8/2020
Surr: Phenol-d6	*75.6*	*28-111*			*%REC*	5	9/8/2020
VOLATILE ORGANIC COMPOUNDS			**SW8260C**		Prep Date: **9/1/2020**		Analyst: **MF**
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	37	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: *10-Sep-20*

Client: AKT Peerless
Work Order: 20090028
Project: 8997f5-5-10.4
Lab ID: 20090028-01

Client Sample ID: 13016 Longview-TS-Composite
Collection Date: 8/31/2020 10:05:00 AM
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	310	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	*93.4*	*70-130*			*%REC*	1	9/3/2020
Surr: 4-Bromofluorobenzene	*94.2*	*70-130*			*%REC*	1	9/3/2020
Surr: Dibromofluoromethane	*88.3*	*70-130*			*%REC*	1	9/3/2020
Surr: Toluene-d8	*98.6*	*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	**13**	**0.10**	**0**		**% of sample**	1	9/3/2020

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

ALS Group, USA

Date: 10-Sep-20

Client: AKT Peerless

QC BATCH REPORT

Work Order: 20090028

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: 20090028-01B

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

Client: AKT Peerless
Work Order: 20090028
Project: 8997f5-5-10.4

QC BATCH REPORT

Batch ID: **163787** Instrument ID **GC14** Method: **SW8082**

MBLK Sample ID: **PBLKS1-163787-163787** Units: **µg/Kg** Analysis Date: **9/8/2020 05:42 PM**
Client ID: Run ID: **GC14_200908A** SeqNo: **6692787** Prep Date: **9/8/2020** 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	*35.58*	0	*33.3*	0	*107*	*40-140*	0			
Surr: Tetrachloro-m-xylene	*37.78*	0	*33.3*	0	*113*	*45-124*	0			

LCS Sample ID: **PLCSS1-163787-163787** Units: **µg/Kg** Analysis Date: **9/8/2020 05:57 PM**
Client ID: Run ID: **GC14_200908A** SeqNo: **6692788** Prep Date: **9/8/2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aroclor 1016	743.8	67	833	0	89.3	50-130	0			
Aroclor 1260	702.1	67	833	0	84.3	50-130	0			
Surr: Decachlorobiphenyl	*32.57*	0	*33.3*	0	*97.8*	*40-140*	0			
Surr: Tetrachloro-m-xylene	*32.52*	0	*33.3*	0	*97.6*	*45-124*	0			

MS Sample ID: **20090352-01C MS** Units: **µg/Kg** Analysis Date: **9/8/2020 06:12 PM**
Client ID: Run ID: **GC14_200908A** SeqNo: **6692789** Prep Date: **9/8/2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aroclor 1016	749.4	66	819.2	0	91.5	40-140	0			
Aroclor 1260	771.8	66	819.2	0	94.2	40-140	0			
Surr: Decachlorobiphenyl	*33.7*	0	*32.75*	0	*103*	*40-140*	0			
Surr: Tetrachloro-m-xylene	*33.96*	0	*32.75*	0	*104*	*45-124*	0			

MSD Sample ID: **20090352-01C MSD** Units: **µg/Kg** Analysis Date: **9/8/2020 06:28 PM**
Client ID: Run ID: **GC14_200908A** SeqNo: **6692790** Prep Date: **9/8/2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aroclor 1016	711.9	64	802.3	0	88.7	40-140	749.4	5.13	50	
Aroclor 1260	742.5	64	802.3	0	92.5	40-140	771.8	3.86	50	
Surr: Decachlorobiphenyl	*32.28*	0	*32.07*	0	*101*	*40-140*	33.7	*4.3*	*50*	
Surr: Tetrachloro-m-xylene	*32.09*	0	*32.07*	0	*100*	*45-124*	33.96	*5.67*	*50*	

The following samples were analyzed in this batch: 20090028-01B

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

Client: AKT Peerless
Work Order: 20090028
Project: 8997f5-5-10.4

QC BATCH REPORT

Batch ID: **163788** Instrument ID **GC12** Method: **SW8081A**

MBLK Sample ID: **PBLKS1-163788-163788** Units: **µg/Kg** Analysis Date: **9/8/2020 11:56 PM**
Client ID: Run ID: **GC12_200908A** SeqNo: **6692476** Prep Date: **9/8/2020** 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	*29.32*	0	*33.3*	0	*88*	*50-150*	0			
Surr: Tetrachloro-m-xylene	*30.57*	0	*33.3*	0	*91.8*	*50-150*	0			

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

Client: AKT Peerless
Work Order: 20090028
Project: 8997f5-5-10.4

QC BATCH REPORT

Batch ID: **163788** Instrument ID **GC12** Method: **SW8081A**

LCS	Sample ID: **PLCSS1-163788-163788**				Units: **µg/Kg**			Analysis Date: **9/9/2020 12:11 AM**			
Client ID:		Run ID: **GC12_200908A**			SeqNo: **6692477**			Prep Date: **9/8/2020**		DF: **1**	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
4,4´-DDD	28.93	10	33.33	0	86.8	50-150	0			
4,4´-DDE	29.3	10	33.33	0	87.9	50-150	0			
4,4´-DDT	27.62	10	33.33	0	82.9	50-150	0			
Aldrin	29.97	10	33.33	0	89.9	50-150	0			
alpha-BHC	30.18	10	33.33	0	90.6	50-150	0			
alpha-Chlordane	29.87	10	33.33	0	89.6	50-150	0			
beta-BHC	29.53	10	33.33	0	88.6	50-150	0			
delta-BHC	30.18	10	33.33	0	90.6	50-150	0			
Dieldrin	29.75	10	33.33	0	89.3	50-150	0			
Endosulfan I	29.65	10	33.33	0	89	50-150	0			
Endosulfan II	27.35	10	33.33	0	82.1	50-150	0			
Endosulfan sulfate	28.62	10	33.33	0	85.9	50-150	0			
Endrin	27.15	10	33.33	0	81.5	50-150	0			
Endrin aldehyde	25.32	10	33.33	0	76	50-150	0			
Endrin ketone	30.38	10	33.33	0	91.2	50-150	0			
gamma-BHC (Lindane)	30.05	10	33.33	0	90.2	50-150	0			
gamma-Chlordane	28.75	10	33.33	0	86.3	50-150	0			
Heptachlor	30.02	10	33.33	0	90.1	50-150	0			
Heptachlor epoxide	30.43	10	33.33	0	91.3	50-150	0			
Methoxychlor	24.9	10	33.33	0	74.7	50-150	0			
Surr: Decachlorobiphenyl	*28.53*	0	*33.3*	0	*85.7*	*50-150*	0			
Surr: Tetrachloro-m-xylene	*29.65*	0	*33.3*	0	*89*	*50-150*	0			

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

Client: AKT Peerless
Work Order: 20090028
Project: 8997f5-5-10.4

QC BATCH REPORT

Batch ID: **163788** Instrument ID **GC12** Method: **SW8081A**

MS Sample ID: **20090352-01C MS** Units: **µg/Kg** Analysis Date: **9/8/2020 08:46 PM**
Client ID: Run ID: **GC12_200908A** SeqNo: **6692467** Prep Date: **9/8/2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
4,4´-DDD	18.04	9.7	32.42	0	55.7	50-150	0			
4,4´-DDE	17.57	9.7	32.42	0	54.2	50-150	0			
4,4´-DDT	16.34	9.7	32.42	0	50.4	50-150	0			
Aldrin	17.56	9.7	32.42	0	54.2	50-150	0			
alpha-BHC	17.51	9.7	32.42	0	54	50-150	0			
alpha-Chlordane	17.75	9.7	32.42	0	54.8	50-150	0			
beta-BHC	17.33	9.7	32.42	0	53.5	50-150	0			
delta-BHC	17.26	9.7	32.42	0	53.3	50-150	0			
Dieldrin	17.6	9.7	32.42	0	54.3	50-150	0			
Endosulfan I	17.8	9.7	32.42	0	54.9	50-150	0			
Endosulfan II	17.34	9.7	32.42	0	53.5	50-150	0			
Endosulfan sulfate	16.71	9.7	32.42	0	51.6	50-150	0			
Endrin	17.04	9.7	32.42	0	52.6	50-150	0			
Endrin aldehyde	10.11	9.7	32.42	0	31.2	50-150	0			S
Endrin ketone	16.86	9.7	32.42	0	52	50-150	0			
gamma-BHC (Lindane)	17.8	9.7	32.42	0	54.9	50-150	0			
gamma-Chlordane	16.74	9.7	32.42	0	51.7	50-150	0			
Heptachlor	17.62	9.7	32.42	0	54.4	50-150	0			
Heptachlor epoxide	17.72	9.7	32.42	0	54.7	50-150	0			
Methoxychlor	13.24	9.7	32.42	0	40.9	50-150	0			S
Surr: Decachlorobiphenyl	*15.95*	0	*32.39*	0	*49.2*	*50-150*	0			*S*
Surr: Tetrachloro-m-xylene	*17.15*	0	*32.39*	0	*53*	*50-150*	0			

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

Client: AKT Peerless
Work Order: 20090028
Project: 8997f5-5-10.4

QC BATCH REPORT

Batch ID: **163788** Instrument ID **GC12** Method: **SW8081A**

MSD	Sample ID: **20090352-01C MSD**				Units: **µg/Kg**			Analysis Date: **9/8/2020 09:01 PM**			
Client ID:		Run ID: **GC12_200908A**			SeqNo: **6692468**			Prep Date: **9/8/2020**		DF: **1**	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
4,4´-DDD	19.36	9.7	32.4	0	59.8	50-150	18.04	7.07	35	
4,4´-DDE	18.52	9.7	32.4	0	57.2	50-150	17.57	5.26	35	
4,4´-DDT	17.89	9.7	32.4	0	55.2	50-150	16.34	9.05	35	
Aldrin	18.33	9.7	32.4	0	56.6	50-150	17.56	4.3	35	
alpha-BHC	18.13	9.7	32.4	0	56	50-150	17.51	3.51	35	
alpha-Chlordane	18.63	9.7	32.4	0	57.5	50-150	17.75	4.86	35	
beta-BHC	17.95	9.7	32.4	0	55.4	50-150	17.33	3.54	35	
delta-BHC	18.31	9.7	32.4	0	56.5	50-150	17.26	5.88	35	
Dieldrin	18.76	9.7	32.4	0	57.9	50-150	17.6	6.38	35	
Endosulfan I	18.81	9.7	32.4	0	58.1	50-150	17.8	5.54	35	
Endosulfan II	18.52	9.7	32.4	0	57.2	50-150	17.34	6.56	35	
Endosulfan sulfate	17.97	9.7	32.4	0	55.5	50-150	16.71	7.25	35	
Endrin	18.23	9.7	32.4	0	56.3	50-150	17.04	6.76	35	
Endrin aldehyde	10.27	9.7	32.4	0	31.7	50-150	10.11	1.55	35	S
Endrin ketone	18.24	9.7	32.4	0	56.3	50-150	16.86	7.9	35	
gamma-BHC (Lindane)	18.75	9.7	32.4	0	57.9	50-150	17.8	5.19	35	
gamma-Chlordane	17.5	9.7	32.4	0	54	50-150	16.74	4.41	35	
Heptachlor	18.63	9.7	32.4	0	57.5	50-150	17.62	5.59	35	
Heptachlor epoxide	18.81	9.7	32.4	0	58.1	50-150	17.72	5.99	35	
Methoxychlor	14.7	9.7	32.4	0	45.4	50-150	13.24	10.4	35	S
Surr: Decachlorobiphenyl	*17.37*	0	*32.37*	0	*53.7*	*50-150*	15.95	*8.52*	*35*	
Surr: Tetrachloro-m-xylene	*17.97*	0	*32.37*	0	*55.5*	*50-150*	17.15	*4.67*	*35*	

The following samples were analyzed in this batch: 20090028-01B

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

Client: AKT Peerless
Work Order: 20090028
Project: 8997f5-5-10.4

QC BATCH REPORT

Batch ID: **163598** Instrument ID **HG4** Method: **SW7471B**

MBLK Sample ID: **MBLK-163598-163598** Units: **mg/Kg** Analysis Date: **9/3/2020 01:53 PM**
Client ID: Run ID: **HG4_200903A** SeqNo: **6683152** 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
Mercury	ND	0.020								

LCS Sample ID: **LCS-163598-163598** Units: **mg/Kg** Analysis Date: **9/3/2020 01:55 PM**
Client ID: Run ID: **HG4_200903A** SeqNo: **6683153** 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
Mercury	0.1667	0.020	0.1665	0	100	80-120	0			

MS Sample ID: **20082424-05BMS** Units: **mg/Kg** Analysis Date: **9/3/2020 01:58 PM**
Client ID: Run ID: **HG4_200903A** SeqNo: **6683155** 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
Mercury	0.2361	0.020	0.1632	0.08934	89.9	75-125	0			

MSD Sample ID: **20082424-05BMSD** Units: **mg/Kg** Analysis Date: **9/3/2020 02:00 PM**
Client ID: Run ID: **HG4_200903A** SeqNo: **6683156** 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
Mercury	0.2646	0.019	0.1617	0.08934	108	75-125	0.2361	11.4	35	

The following samples were analyzed in this batch: 20090028-01B

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

Client: AKT Peerless
Work Order: 20090028
Project: 8997f5-5-10.4

QC BATCH REPORT

Batch ID: **163593** Instrument ID **ICPMS3** Method: **SW6020B**

MBLK Sample ID: **MBLK-163593-163593** Units: **mg/Kg** Analysis Date: **9/3/2020 08:39 PM**
Client ID: Run ID: **ICPMS3_200903B** SeqNo: **6684110** 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
Arsenic	ND	0.25								
Barium	ND	0.25								
Cadmium	ND	0.10								
Chromium	ND	0.25								
Lead	ND	0.25								
Selenium	ND	0.25								
Silver	ND	0.25								
Zinc	ND	0.50								

MBLK Sample ID: **MBLK-163593-163593** Units: **mg/Kg** Analysis Date: **9/4/2020 03:32 PM**
Client ID: Run ID: **ICPMS4_200904B** SeqNo: **6685528** 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
Copper	ND	0.25								

LCS Sample ID: **LCS-163593-163593** Units: **mg/Kg** Analysis Date: **9/3/2020 08:41 PM**
Client ID: Run ID: **ICPMS3_200903B** SeqNo: **6684111** 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
Arsenic	5.28	0.25	5	0	106	80-120	0			
Barium	5.41	0.25	5	0	108	80-120	0			
Cadmium	5.283	0.10	5	0	106	80-120	0			
Chromium	5.49	0.25	5	0	110	80-120	0			
Copper	4.871	0.25	5	0	97.4	80-120	0			
Lead	5.429	0.25	5	0	109	80-120	0			
Selenium	5.08	0.25	5	0	102	80-120	0			
Silver	5.589	0.25	5	0	112	80-120	0			
Zinc	5.275	0.50	5	0	106	80-120	0			

MS Sample ID: **20090064-01CMS** Units: **mg/Kg** Analysis Date: **9/3/2020 08:59 PM**
Client ID: Run ID: **ICPMS3_200903B** SeqNo: **6684121** 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
Arsenic	13.27	0.35	7.072	9.05	59.7	75-125	0			S
Cadmium	10.3	0.14	7.072	6.99	46.7	75-125	0			S
Selenium	6.726	0.35	7.072	0.4738	88.4	75-125	0			
Silver	5.863	0.35	7.072	0.5783	74.7	75-125	0			S
Zinc	385.1	0.71	7.072	483.7	-1390	75-125	0			SEO

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

Client: AKT Peerless
Work Order: 20090028
Project: 8997f5-5-10.4

QC BATCH REPORT

Batch ID: **163593** Instrument ID **ICPMS3** Method: **SW6020B**

MS Sample ID: **20090064-01CMS** Units: **mg/Kg** Analysis Date: **9/4/2020 04:08 PM**
Client ID: Run ID: **ICPMS4_200904B** SeqNo: **6685554** Prep Date: **9/3/2020** DF: **100**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Barium	394.4	35	7.072	383.7	151	75-125	0			SO
Chromium	1610	35	7.072	1802	-2720	75-125	0			SO
Copper	91.95	35	7.072	188.9	-1370	75-125	0			SO
Lead	262.4	35	7.072	339	-1080	75-125	0			SO

MSD Sample ID: **20090064-01CMSD** Units: **mg/Kg** Analysis Date: **9/3/2020 09:01 PM**
Client ID: Run ID: **ICPMS3_200903B** SeqNo: **6684122** 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
Arsenic	12.88	0.35	7.092	9.05	54	75-125	13.27	3.03	20	S
Cadmium	9.41	0.14	7.092	6.99	34.1	75-125	10.3	8.98	20	S
Selenium	6.634	0.35	7.092	0.4738	86.9	75-125	6.726	1.37	20	
Silver	5.634	0.35	7.092	0.5783	71.3	75-125	5.863	3.98	20	S
Zinc	486.2	0.71	7.092	483.7	34.7	75-125	385.1	23.2	20	SREO

MSD Sample ID: **20090064-01CMSD** Units: **mg/Kg** Analysis Date: **9/4/2020 04:09 PM**
Client ID: Run ID: **ICPMS4_200904B** SeqNo: **6685556** Prep Date: **9/3/2020** DF: **100**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Barium	377.6	35	7.092	383.7	-85.5	75-125	394.4	4.33	20	SO
Chromium	1749	35	7.092	1802	-752	75-125	1610	8.26	20	SO
Copper	121.5	35	7.092	188.9	-951	75-125	91.95	27.7	20	SRO
Lead	285.5	35	7.092	339	-754	75-125	262.4	8.42	20	SO

The following samples were analyzed in this batch: 20090028-01B

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

QC BATCH REPORT

Batch ID: **163752** Instrument ID **SVMS8** Method: **SW846 8270D**

MBLK Sample ID: **SBLKS1-163752-163752** Units: **µg/Kg** Analysis Date: **9/8/2020 12:29 PM**
Client ID: Run ID: **SVMS8_200908A** SeqNo: **6689134** 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
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: **163752** Instrument ID **SVMS8** 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	*2025*	0	*3333*	0	*60.8*	*38-92*	0
Surr: 2-Fluorobiphenyl	*2205*	0	*3333*	0	*66.1*	*44-107*	0
Surr: 2-Fluorophenol	*2199*	0	*3333*	0	*66*	*37-109*	0
Surr: 4-Terphenyl-d14	*2884*	0	*3333*	0	*86.5*	*52-123*	0
Surr: Nitrobenzene-d5	*2221*	0	*3333*	0	*66.6*	*41-94*	0
Surr: Phenol-d6	*2416*	0	*3333*	0	*72.5*	*28-111*	0

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

Client: AKT Peerless
Work Order: 20090028
Project: 8997f5-5-10.4

QC BATCH REPORT

Batch ID: **163752** Instrument ID **SVMS8** Method: **SW846 8270D**

LCS	Sample ID: **SLCSS1-163752-163752**				Units: **µg/Kg**			Analysis Date: **9/8/2020 12:50 PM**			
Client ID:		Run ID: **SVMS8_200908A**			SeqNo: **6689135**			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
1,2,4-Trichlorobenzene	939.3	33	1333	0	70.5	40-93	0			
1,2-Dichlorobenzene	916	33	1333	0	68.7	42-94	0			
1,3-Dichlorobenzene	927.3	33	1333	0	69.6	41-94	0			
1,4-Dichlorobenzene	928.7	33	1333	0	69.7	42-94	0			
2,4,5-Trichlorophenol	906.7	33	1333	0	68	52-111	0			
2,4,6-Trichlorophenol	898.7	33	1333	0	67.4	46-105	0			
2,4-Dichlorophenol	874.7	33	1333	0	65.6	47-96	0			
2,4-Dimethylphenol	965.3	33	1333	0	72.4	49-97	0			
2,4-Dinitrophenol	496	33	1333	0	37.2	10-106	0			
2,4-Dinitrotoluene	990	33	1333	0	74.3	58-110	0			
2,6-Dinitrotoluene	979.3	33	1333	0	73.5	59-108	0			
2-Chloronaphthalene	926	6.7	1333	0	69.5	56-104	0			
2-Chlorophenol	883.3	33	1333	0	66.3	50-104	0			
2-Methylnaphthalene	936.7	6.7	1333	0	70.3	54-96	0			
2-Methylphenol	910	33	1333	0	68.3	49-105	0			
2-Nitroaniline	940.7	33	1333	0	70.6	54-107	0			
2-Nitrophenol	931.3	33	1333	0	69.9	51-94	0			
3&4-Methylphenol	916.7	33	1333	0	68.8	48-105	0			
3,3´-Dichlorobenzidine	884.7	170	1333	0	66.4	39-99	0			
3-Nitroaniline	526.7	33	1333	0	39.5	17-92	0			
4,6-Dinitro-2-methylphenol	787.3	33	1333	0	59.1	32-103	0			
4-Bromophenyl phenyl ether	994.7	33	1333	0	74.6	60-106	0			
4-Chloro-3-methylphenol	916	33	1333	0	68.7	51-101	0			
4-Chloroaniline	866.7	67	1333	0	65	27-110	0			
4-Chlorophenyl phenyl ether	972	33	1333	0	72.9	58-106	0			
4-Nitroaniline	718	170	1333	0	53.9	21-100	0			
4-Nitrophenol	1015	33	1333	0	76.1	29-120	0			
Acenaphthene	953.3	6.7	1333	0	71.5	55-101	0			
Acenaphthylene	998.7	6.7	1333	0	74.9	59-106	0			
Anthracene	992.7	6.7	1333	0	74.5	67-105	0			
Benzo(a)anthracene	1021	6.7	1333	0	76.6	68-105	0			
Benzo(a)pyrene	994	6.7	1333	0	74.6	68-110	0			
Benzo(b)fluoranthene	1017	6.7	1333	0	76.3	65-110	0			
Benzo(g,h,i)perylene	1116	6.7	1333	0	83.7	60-120	0			
Benzo(k)fluoranthene	1016	6.7	1333	0	76.2	66-113	0			
Bis(2-chloroethoxy)methane	930	33	1333	0	69.8	53-96	0			
Bis(2-chloroethyl)ether	939.3	33	1333	0	70.5	47-108	0			
Bis(2-chloroisopropyl)ether	924	33	1333	0	69.3	47-107	0			
Bis(2-ethylhexyl)phthalate	1068	33	1333	0	80.1	59-117	0			
Butyl benzyl phthalate	952	33	1333	0	71.4	59-106	0			
Carbazole	981.3	33	1333	0	73.6	67-108	0			
Chrysene	1017	6.7	1333	0	76.3	68-108	0			

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

Batch ID: **163752** Instrument ID **SVMS8** Method: **SW846 8270D**

Dibenzo(a,h)anthracene	1094	6.7	1333	0	82.1	62-119	0
Dibenzofuran	948.7	33	1333	0	71.2	60-104	0
Diethyl phthalate	992	33	1333	0	74.4	62-111	0
Dimethyl phthalate	967.3	33	1333	0	72.6	62-106	0
Di-n-butyl phthalate	1050	33	1333	0	78.8	59-105	0
Di-n-octyl phthalate	1035	33	1333	0	77.7	51-123	0
Fluoranthene	998	6.7	1333	0	74.9	67-106	0
Fluorene	949.3	6.7	1333	0	71.2	59-107	0
Hexachlorobenzene	999.3	33	1333	0	75	62-103	0
Hexachlorobutadiene	964.7	33	1333	0	72.4	51-94	0
Hexachlorocyclopentadiene	962	33	1333	0	72.2	25-120	0
Hexachloroethane	908.7	33	1333	0	68.2	55-93	0
Indeno(1,2,3-cd)pyrene	1108	6.7	1333	0	83.1	56-120	0
Isophorone	950.7	170	1333	0	71.3	52-99	0
Naphthalene	909.3	6.7	1333	0	68.2	46-98	0
Nitrobenzene	930.7	170	1333	0	69.8	53-95	0
N-Nitrosodi-n-propylamine	932.7	33	1333	0	70	50-104	0
N-Nitrosodiphenylamine	980	33	1333	0	73.5	63-107	0
Pentachlorophenol	802	33	1333	0	60.2	34-106	0
Phenanthrene	978.7	6.7	1333	0	73.4	66-101	0
Phenol	990.7	33	1333	0	74.3	44-109	0
Pyrene	994	6.7	1333	0	74.6	60-119	0
Surr: 2,4,6-Tribromophenol	*2513*	0	*3333*	0	*75.4*	*38-92*	0
Surr: 2-Fluorobiphenyl	*2431*	0	*3333*	0	*72.9*	*44-107*	0
Surr: 2-Fluorophenol	*2333*	0	*3333*	0	*70*	*37-109*	0
Surr: 4-Terphenyl-d14	*2795*	0	*3333*	0	*83.8*	*52-123*	0
Surr: Nitrobenzene-d5	*2468*	0	*3333*	0	*74*	*41-94*	0
Surr: Phenol-d6	*2495*	0	*3333*	0	*74.8*	*28-111*	0

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

Client: AKT Peerless
Work Order: 20090028
Project: 8997f5-5-10.4

QC BATCH REPORT

Batch ID: **163752** Instrument ID **SVMS8** Method: **SW846 8270D**

MS	Sample ID: **20090017-01B MS**				Units: **µg/Kg**			Analysis Date: **9/8/2020 01:54 PM**			
Client ID:		Run ID: **SVMS8_200908A**			SeqNo: **6689138**			Prep Date: **9/4/2020**		DF: **10**	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2,4-Trichlorobenzene	838.9	330	1321	0	63.5	40-93	0			
1,2-Dichlorobenzene	931.4	330	1321	0	70.5	42-94	0			
1,3-Dichlorobenzene	911.6	330	1321	0	69	41-94	0			
1,4-Dichlorobenzene	931.4	330	1321	0	70.5	42-94	0			
2,4,5-Trichlorophenol	812.5	330	1321	0	61.5	52-111	0			
2,4,6-Trichlorophenol	852.1	330	1321	0	64.5	46-105	0			
2,4-Dichlorophenol	852.1	330	1321	0	64.5	47-96	0			
2,4-Dimethylphenol	898.3	330	1321	0	68	49-97	0			
2,4-Dinitrophenol	ND	330	1321	0	0	10-106	0			S
2,4-Dinitrotoluene	891.7	330	1321	0	67.5	58-110	0			
2,6-Dinitrotoluene	957.8	330	1321	0	72.5	59-108	0			
2-Chloronaphthalene	819.1	66	1321	0	62	56-104	0			
2-Chlorophenol	865.3	330	1321	0	65.5	50-104	0			
2-Methylnaphthalene	904.9	66	1321	0	68.5	54-96	0			
2-Methylphenol	924.8	330	1321	0	70	49-105	0			
2-Nitroaniline	898.3	330	1321	0	68	54-107	0			
2-Nitrophenol	838.9	330	1321	0	63.5	51-94	0			
3&4-Methylphenol	951.2	330	1321	0	72	48-105	0			
3,3´-Dichlorobenzidine	687	1,700	1321	0	52	39-99	0			J
3-Nitroaniline	904.9	330	1321	0	68.5	17-92	0			
4,6-Dinitro-2-methylphenol	515.2	330	1321	0	39	32-103	0			
4-Bromophenyl phenyl ether	885.1	330	1321	0	67	60-106	0			
4-Chloro-3-methylphenol	924.8	330	1321	0	70	51-101	0			
4-Chloroaniline	627.5	660	1321	0	47.5	27-110	0			J
4-Chlorophenyl phenyl ether	911.6	330	1321	0	69	58-106	0			
4-Nitroaniline	924.8	1,700	1321	0	70	21-100	0			J
4-Nitrophenol	1050	330	1321	0	79.5	29-120	0			
Acenaphthene	911.6	66	1321	0	69	55-101	0			
Acenaphthylene	904.9	66	1321	0	68.5	59-106	0			
Anthracene	918.2	66	1321	0	69.5	67-105	0			
Benzo(a)anthracene	1044	66	1321	105	71.1	68-105	0			
Benzo(a)pyrene	1017	66	1321	0	77	68-110	0			
Benzo(b)fluoranthene	1070	66	1321	0	81	65-110	0			
Benzo(g,h,i)perylene	871.9	66	1321	0	66	60-120	0			
Benzo(k)fluoranthene	971	66	1321	0	73.5	66-113	0			
Bis(2-chloroethoxy)methane	871.9	330	1321	0	66	53-96	0			
Bis(2-chloroethyl)ether	964.4	330	1321	0	73	47-108	0			
Bis(2-chloroisopropyl)ether	990.8	330	1321	0	75	47-107	0			
Bis(2-ethylhexyl)phthalate	871.9	330	1321	0	66	59-117	0			
Butyl benzyl phthalate	891.7	330	1321	0	67.5	59-106	0			
Carbazole	938	330	1321	0	71	67-108	0			
Chrysene	990.8	66	1321	85.3	68.6	68-108	0			

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

QC BATCH REPORT

Batch ID: **163752** Instrument ID **SVMS8** Method: **SW846 8270D**

Dibenzo(a,h)anthracene	792.7	66	1321	0	60	62-119	0	S
Dibenzofuran	931.4	330	1321	0	70.5	60-104	0	
Diethyl phthalate	891.7	330	1321	0	67.5	62-111	0	
Dimethyl phthalate	891.7	330	1321	0	67.5	62-106	0	
Di-n-butyl phthalate	911.6	330	1321	0	69	59-105	0	
Di-n-octyl phthalate	1130	330	1321	0	85.5	51-123	0	
Fluoranthene	1070	66	1321	131.2	71.1	67-106	0	
Fluorene	871.9	66	1321	0	66	59-107	0	
Hexachlorobenzene	852.1	330	1321	0	64.5	62-103	0	
Hexachlorobutadiene	832.3	330	1321	0	63	51-94	0	
Hexachlorocyclopentadiene	488.8	330	1321	0	37	25-120	0	
Hexachloroethane	838.9	330	1321	0	63.5	55-93	0	
Indeno(1,2,3-cd)pyrene	898.3	66	1321	0	68	56-120	0	
Isophorone	898.3	1,700	1321	0	68	52-99	0	J
Naphthalene	865.3	66	1321	0	65.5	46-98	0	
Nitrobenzene	885.1	1,700	1321	0	67	53-95	0	J
N-Nitrosodi-n-propylamine	944.6	330	1321	0	71.5	50-104	0	
N-Nitrosodiphenylamine	885.1	330	1321	0	67	63-107	0	
Pentachlorophenol	554.9	330	1321	0	42	34-106	0	
Phenanthrene	1011	66	1321	0	76.5	66-101	0	
Phenol	924.8	330	1321	0	70	44-109	0	
Pyrene	1004	66	1321	118.1	67.1	60-119	0	
Surr: 2,4,6-Tribromophenol	*2054*	0	*3302*	0	*62.2*	*38-92*	0	
Surr: 2-Fluorobiphenyl	*2120*	0	*3302*	0	*64.2*	*44-107*	0	
Surr: 2-Fluorophenol	*2081*	0	*3302*	0	*63*	*37-109*	0	
Surr: 4-Terphenyl-d14	*2325*	0	*3302*	0	*70.4*	*52-123*	0	
Surr: Nitrobenzene-d5	*2226*	0	*3302*	0	*67.4*	*41-94*	0	
Surr: Phenol-d6	*2246*	0	*3302*	0	*68*	*28-111*	0	

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

Client: AKT Peerless
Work Order: 20090028
Project: 8997f5-5-10.4

QC BATCH REPORT

Batch ID: **163752** Instrument ID **SVMS8** Method: **SW846 8270D**

MSD	Sample ID: **20090017-01B MSD**				Units: **µg/Kg**		Analysis Date: **9/8/2020 02:16 PM**			
Client ID:		Run ID: **SVMS8_200908A**			SeqNo: **6689139**		Prep Date: **9/4/2020**		DF: **10**	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2,4-Trichlorobenzene	921.3	330	1325	0	69.5	40-93	838.9	9.37	30	
1,2-Dichlorobenzene	941.2	330	1325	0	71	42-94	931.4	1.05	30	
1,3-Dichlorobenzene	908.1	330	1325	0	68.5	41-94	911.6	0.383	30	
1,4-Dichlorobenzene	954.5	330	1325	0	72	42-94	931.4	2.45	30	
2,4,5-Trichlorophenol	828.5	330	1325	0	62.5	52-111	812.5	1.96	30	
2,4,6-Trichlorophenol	848.4	330	1325	0	64	46-105	852.1	0.434	30	
2,4-Dichlorophenol	841.8	330	1325	0	63.5	47-96	852.1	1.22	30	
2,4-Dimethylphenol	881.6	330	1325	0	66.5	49-97	898.3	1.89	30	
2,4-Dinitrophenol	503.7	330	1325	0	38	10-106	0	200	30	R
2,4-Dinitrotoluene	848.4	330	1325	0	64	58-110	891.7	4.98	30	
2,6-Dinitrotoluene	947.8	330	1325	0	71.5	59-108	957.8	1.05	30	
2-Chloronaphthalene	874.9	66	1325	0	66	56-104	819.1	6.59	30	
2-Chlorophenol	874.9	330	1325	0	66	50-104	865.3	1.1	30	
2-Methylnaphthalene	928	66	1325	0	70	54-96	904.9	2.51	30	
2-Methylphenol	901.4	330	1325	0	68	49-105	924.8	2.55	30	
2-Nitroaniline	855	330	1325	0	64.5	54-107	898.3	4.94	30	
2-Nitrophenol	855	330	1325	0	64.5	51-94	838.9	1.91	30	
3&4-Methylphenol	881.6	330	1325	0	66.5	48-105	951.2	7.6	30	
3,3´-Dichlorobenzidine	696	1,700	1325	0	52.5	39-99	687	0	30	J
3-Nitroaniline	855	330	1325	0	64.5	17-92	904.9	5.67	30	
4,6-Dinitro-2-methylphenol	550.1	330	1325	0	41.5	32-103	515.2	6.55	30	
4-Bromophenyl phenyl ether	994.2	330	1325	0	75	60-106	885.1	11.6	30	
4-Chloro-3-methylphenol	855	330	1325	0	64.5	51-101	924.8	7.84	30	
4-Chloroaniline	656.2	670	1325	0	49.5	27-110	627.5	0	30	J
4-Chlorophenyl phenyl ether	908.1	330	1325	0	68.5	58-106	911.6	0.383	30	
4-Nitroaniline	808.6	1,700	1325	0	61	21-100	924.8	0	30	J
4-Nitrophenol	888.2	330	1325	0	67	29-120	1050	16.7	30	
Acenaphthene	1001	66	1325	0	75.5	55-101	911.6	9.34	30	
Acenaphthylene	934.6	66	1325	0	70.5	59-106	904.9	3.22	30	
Anthracene	928	66	1325	0	70	67-105	918.2	1.06	30	
Benzo(a)anthracene	1034	66	1325	105	70.1	68-105	1044	0.93	30	
Benzo(a)pyrene	994.2	66	1325	0	75	68-110	1017	2.29	30	
Benzo(b)fluoranthene	1061	66	1325	0	80	65-110	1070	0.897	30	
Benzo(g,h,i)perylene	1034	66	1325	0	78	60-120	871.9	17	30	
Benzo(k)fluoranthene	928	66	1325	0	70	66-113	971	4.53	30	
Bis(2-chloroethoxy)methane	881.6	330	1325	0	66.5	53-96	871.9	1.1	30	
Bis(2-chloroethyl)ether	947.8	330	1325	0	71.5	47-108	964.4	1.73	30	
Bis(2-chloroisopropyl)ether	987.6	330	1325	0	74.5	47-107	990.8	0.325	30	
Bis(2-ethylhexyl)phthalate	921.3	330	1325	0	69.5	59-117	871.9	5.51	30	
Butyl benzyl phthalate	961.1	330	1325	0	72.5	59-106	891.7	7.49	30	
Carbazole	894.8	330	1325	0	67.5	67-108	938	4.71	30	
Chrysene	1001	66	1325	85.3	69.1	68-108	990.8	1.01	30	

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

QC BATCH REPORT

Batch ID: **163752** Instrument ID **SVMS8** Method: **SW846 8270D**

Dibenzo(a,h)anthracene	954.5	66	1325	0	72	62-119	792.7	18.5	30	
Dibenzofuran	928	330	1325	0	70	60-104	931.4	0.368	30	
Diethyl phthalate	908.1	330	1325	0	68.5	62-111	891.7	1.81	30	
Dimethyl phthalate	881.6	330	1325	0	66.5	62-106	891.7	1.15	30	
Di-n-butyl phthalate	934.6	330	1325	0	70.5	59-105	911.6	2.49	30	
Di-n-octyl phthalate	1100	330	1325	0	83	51-123	1130	2.62	30	
Fluoranthene	967.7	66	1325	131.2	63.1	67-106	1070	10	30	S
Fluorene	881.6	66	1325	0	66.5	59-107	871.9	1.1	30	
Hexachlorobenzene	934.6	330	1325	0	70.5	62-103	852.1	9.23	30	
Hexachlorobutadiene	908.1	330	1325	0	68.5	51-94	832.3	8.71	30	
Hexachlorocyclopentadiene	629.7	330	1325	0	47.5	25-120	488.8	25.2	30	
Hexachloroethane	908.1	330	1325	0	68.5	55-93	838.9	7.92	30	
Indeno(1,2,3-cd)pyrene	947.8	66	1325	0	71.5	56-120	898.3	5.36	30	
Isophorone	928	1,700	1325	0	70	52-99	898.3	0	30	J
Naphthalene	888.2	66	1325	0	67	46-98	865.3	2.61	30	
Nitrobenzene	921.3	1,700	1325	0	69.5	53-95	885.1	0	30	J
N-Nitrosodi-n-propylamine	874.9	330	1325	0	66	50-104	944.6	7.66	30	
N-Nitrosodiphenylamine	947.8	330	1325	0	71.5	63-107	885.1	6.84	30	
Pentachlorophenol	642.9	330	1325	0	48.5	34-106	554.9	14.7	30	
Phenanthrene	1007	66	1325	0	76	66-101	1011	0.312	30	
Phenol	908.1	330	1325	0	68.5	44-109	924.8	1.82	30	
Pyrene	1114	66	1325	118.1	75.1	60-119	1004	10.3	30	
Surr: 2,4,6-Tribromophenol	*2148*	0	*3314*	0	*64.8*	*38-92*	2054	*4.44*	*40*	
Surr: 2-Fluorobiphenyl	*2234*	0	*3314*	0	*67.4*	*44-107*	2120	*5.21*	*40*	
Surr: 2-Fluorophenol	*2041*	0	*3314*	0	*61.6*	*37-109*	2081	*1.9*	*40*	
Surr: 4-Terphenyl-d14	*2744*	0	*3314*	0	*82.8*	*52-123*	2325	*16.5*	*40*	
Surr: Nitrobenzene-d5	*2273*	0	*3314*	0	*68.6*	*41-94*	2226	*2.11*	*40*	
Surr: Phenol-d6	*2201*	0	*3314*	0	*66.4*	*28-111*	2246	*2.04*	*40*	

The following samples were analyzed in this batch: 20090028-01B

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

Client: AKT Peerless
Work Order: 20090028
Project: 8997f5-5-10.4

QC BATCH REPORT

Batch ID: **163493** Instrument ID **VMS7** Method: **SW8260C**

MBLK	Sample ID: **MBLK-163493-163493**				Units: **µg/Kg-dry**		Analysis Date: **9/3/2020 07:49 PM**			
Client ID:		Run ID: **VMS7_200903B**			SeqNo: **6683761**		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
1,1,1,2-Tetrachloroethane	ND	30	0	0	0	0-0	0			
1,1,1-Trichloroethane	ND	30	0	0	0	0-0	0			
1,1,2,2-Tetrachloroethane	ND	30	0	0	0	0-0	0			
1,1,2-Trichloroethane	ND	30	0	0	0	0-0	0			
1,1,2-Trichlorotrifluoroethane	ND	30	0	0	0		0			
1,1-Dichloroethane	ND	30	0	0	0	0-0	0			
1,1-Dichloroethene	ND	30	0	0	0	0-0	0			
1,2,3-Trichloropropane	ND	30	0	0	0	0-0	0			
1,2,4-Trichlorobenzene	ND	100	0	0	0	0-0	0			
1,2,4-Trimethylbenzene	ND	30	0	0	0	0-0	0			
1,2-Dibromo-3-chloropropane	ND	100	0	0	0	0-0	0			
1,2-Dibromoethane	ND	30	0	0	0	0-0	0			
1,2-Dichlorobenzene	ND	30	0	0	0	0-0	0			
1,2-Dichloroethane	ND	100	0	0	0	0-0	0			
1,2-Dichloropropane	ND	30	0	0	0	0-0	0			
1,3,5-Trimethylbenzene	ND	100	0	0	0	0-0	0			
1,3-Dichlorobenzene	ND	30	0	0	0	0-0	0			
1,4-Dichlorobenzene	ND	30	0	0	0	0-0	0			
2-Butanone	ND	200	0	0	0	0-0	0			
2-Hexanone	ND	30	0	0	0	0-0	0			
2-Methylnaphthalene	ND	100	0	0	0	0-0	0			
4-Methyl-2-pentanone	ND	30	0	0	0	0-0	0			
Acetone	ND	100	0	0	0	0-0	0			
Acrylonitrile	ND	100	0	0	0	0-0	0			
Benzene	ND	30	0	0	0	0-0	0			
Bromodichloromethane	ND	30	0	0	0	0-0	0			
Bromoform	ND	30	0	0	0	0-0	0			
Bromomethane	ND	100	0	0	0	0-0	0			
Carbon disulfide	ND	30	0	0	0	0-0	0			
Carbon tetrachloride	ND	30	0	0	0	0-0	0			
Chlorobenzene	ND	30	0	0	0	0-0	0			
Chloroethane	ND	100	0	0	0	0-0	0			
Chloroform	ND	30	0	0	0	0-0	0			
Chloromethane	ND	100	0	0	0	0-0	0			
cis-1,2-Dichloroethene	ND	30	0	0	0	0-0	0			
cis-1,3-Dichloropropene	ND	30	0	0	0	0-0	0			
Dibromochloromethane	ND	30	0	0	0	0-0	0			
Dibromomethane	ND	30	0	0	0	0-0	0			
Dichlorodifluoromethane	ND	100	0	0	0	0-0	0			
Diethyl ether	ND	30	0	0	0	0-0	0			
Ethylbenzene	ND	30	0	0	0	0-0	0			
Hexachloroethane	ND	100	0	0	0	0-0	0			

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

Batch ID: **163493** Instrument ID **VMS7** Method: **SW8260C**

Isopropylbenzene	ND	30	0	0	0	0-0	0
m,p-Xylene	ND	60	0	0	0	0-0	0
Methyl tert-butyl ether	ND	30	0	0	0	0-0	0
Methylene chloride	ND	250	0	0	0	0-0	0
Naphthalene	ND	100	0	0	0	0-0	0
n-Propylbenzene	ND	30	0	0	0	0-0	0
o-Xylene	ND	30	0	0	0	0-0	0
Styrene	ND	30	0	0	0	0-0	0
Tetrachloroethene	ND	30	0	0	0	0-0	0
Toluene	ND	30	0	0	0	0-0	0
trans-1,2-Dichloroethene	ND	30	0	0	0	0-0	0
trans-1,3-Dichloropropene	ND	30	0	0	0	0-0	0
Trichloroethene	ND	30	0	0	0	0-0	0
Trichlorofluoromethane	ND	30	0	0	0	0-0	0
Vinyl acetate	ND	250	0	0	0	0-0	0
Vinyl chloride	ND	30	0	0	0	0-0	0
Xylenes, Total	ND	90	0	0	0	0-0	0
Surr: 1,2-Dichloroethane-d4	*1010*	0	*1000*	0	*101*	*70-130*	0
Surr: 4-Bromofluorobenzene	*947.5*	0	*1000*	0	*94.8*	*70-130*	0
Surr: Dibromofluoromethane	*895.5*	0	*1000*	0	*89.6*	*70-130*	0
Surr: Toluene-d8	*986.5*	0	*1000*	0	*98.6*	*70-130*	0

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

Client: AKT Peerless
Work Order: 20090028
Project: 8997f5-5-10.4

QC BATCH REPORT

Batch ID: **163493** Instrument ID **VMS7** Method: **SW8260C**

LCS	Sample ID: **LCS-163493-163493**				Units: **µg/Kg-dry**		Analysis Date: **9/3/2020 06:42 PM**			
Client ID:		Run ID: **VMS7_200903B**			SeqNo: **6683759**		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
1,1,1,2-Tetrachloroethane	885	30	1000	0	88.5	75-125	0			
1,1,1-Trichloroethane	996	30	1000	0	99.6	70-135	0			
1,1,2,2-Tetrachloroethane	991.5	30	1000	0	99.2	55-130	0			
1,1,2-Trichloroethane	1014	30	1000	0	101	60-125	0			
1,1-Dichloroethane	955.5	30	1000	0	95.6	75-125	0			
1,1-Dichloroethene	987.5	30	1000	0	98.8	76-148	0			
1,2,3-Trichloropropane	951.5	30	1000	0	95.2	65-130	0			
1,2,4-Trichlorobenzene	793.5	100	1000	0	79.4	65-130	0			
1,2,4-Trimethylbenzene	937.5	30	1000	0	93.8	65-135	0			
1,2-Dibromo-3-chloropropane	824.5	100	1000	0	82.4	40-135	0			
1,2-Dibromoethane	954.5	30	1000	0	95.4	80-195	0			
1,2-Dichlorobenzene	964.5	30	1000	0	96.4	75-120	0			
1,2-Dichloroethane	945	100	1000	0	94.5	70-135	0			
1,2-Dichloropropane	935.5	30	1000	0	93.6	70-120	0			
1,3,5-Trimethylbenzene	970.5	100	1000	0	97	65-135	0			
1,3-Dichlorobenzene	960.5	30	1000	0	96	70-125	0			
1,4-Dichlorobenzene	952	30	1000	0	95.2	70-125	0			
2-Butanone	883.5	200	1000	0	88.4	30-160	0			
2-Hexanone	896	30	1000	0	89.6	45-145	0			
4-Methyl-2-pentanone	1360	30	1000	0	136	74-176	0			
Acetone	1012	100	1000	0	101	20-160	0			
Acrylonitrile	929	100	1000	0	92.9	70-135	0			
Benzene	953	30	1000	0	95.3	75-125	0			
Bromodichloromethane	913	30	1000	0	91.3	70-130	0			
Bromoform	746.5	30	1000	0	74.6	55-135	0			
Bromomethane	1438	100	1000	0	144	50-170	0			
Carbon disulfide	979.5	30	1000	0	98	45-160	0			
Carbon tetrachloride	853	30	1000	0	85.3	65-135	0			
Chlorobenzene	975.5	30	1000	0	97.6	75-125	0			
Chloroethane	1268	100	1000	0	127	40-155	0			
Chloroform	919.5	30	1000	0	92	66-140	0			
Chloromethane	685	100	1000	0	68.5	50-144	0			
cis-1,2-Dichloroethene	928	30	1000	0	92.8	65-125	0			
cis-1,3-Dichloropropene	860.5	30	1000	0	86	70-125	0			
Dibromochloromethane	784.5	30	1000	0	78.4	65-135	0			
Dibromomethane	1008	30	1000	0	101	75-130	0			
Dichlorodifluoromethane	1135	100	1000	0	114	35-135	0			
Diethyl ether	966	30	1000	0	96.6	67-150	0			
Ethylbenzene	971.5	30	1000	0	97.2	75-125	0			
Hexachloroethane	873	100	1000	0	87.3	51-122	0			
Isopropylbenzene	987	30	1000	0	98.7	75-130	0			
m,p-Xylene	1934	60	2000	0	96.7	80-125	0			

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

QC BATCH REPORT

Batch ID: **163493** Instrument ID **VMS7** Method: **SW8260C**

Methyl tert-butyl ether	917.5	30	1000	0	91.8	75-125	0
Methylene chloride	796	250	1000	0	79.6	55-145	0
Naphthalene	727.5	100	1000	0	72.8	40-140	0
n-Propylbenzene	907.5	30	1000	0	90.8	65-135	0
o-Xylene	985.5	30	1000	0	98.6	75-125	0
Styrene	926.5	30	1000	0	92.6	80-138	0
Tetrachloroethene	1061	30	1000	0	106	67-167	0
Toluene	962	30	1000	0	96.2	70-125	0
trans-1,2-Dichloroethene	957.5	30	1000	0	95.8	65-135	0
trans-1,3-Dichloropropene	815.5	30	1000	0	81.6	59-129	0
Trichloroethene	974.5	30	1000	0	97.4	75-125	0
Trichlorofluoromethane	816	30	1000	0	81.6	25-185	0
Vinyl chloride	1014	30	1000	0	101	60-125	0
Xylenes, Total	2919	90	3000	0	97.3	75-125	0
Surr: 1,2-Dichloroethane-d4	*975.5*	0	*1000*	0	*97.6*	*70-130*	0
Surr: 4-Bromofluorobenzene	*1013*	0	*1000*	0	*101*	*70-130*	0
Surr: Dibromofluoromethane	*1037*	0	*1000*	0	*104*	*70-130*	0
Surr: Toluene-d8	*996.5*	0	*1000*	0	*99.6*	*70-130*	0

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

Client: AKT Peerless
Work Order: 20090028
Project: 8997f5-5-10.4

QC BATCH REPORT

Batch ID: **163493** Instrument ID **VMS7** Method: **SW8260C**

MS Sample ID: **20090023-04A MS** Units: **µg/Kg-dry** Analysis Date: **9/4/2020 02:09 AM**

Client ID: Run ID: **VMS7_200903B** SeqNo: **6683784** 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
1,1,1,2-Tetrachloroethane	978.1	36	1186	0	82.5	75-125	0			
1,1,1-Trichloroethane	1183	36	1186	0	99.8	70-135	0			
1,1,2,2-Tetrachloroethane	1090	36	1186	0	91.9	55-130	0			
1,1,2-Trichloroethane	1156	36	1186	0	97.5	60-125	0			
1,1-Dichloroethane	1074	36	1186	0	90.6	75-125	0			
1,1-Dichloroethene	1245	36	1186	0	105	76-148	0			
1,2,3-Trichloropropane	1071	36	1186	9.691	89.5	65-130	0			
1,2,4-Trichlorobenzene	1040	120	1186	15.75	86.4	65-130	0			
1,2,4-Trimethylbenzene	1158	36	1186	164.8	83.8	65-135	0			
1,2-Dibromo-3-chloropropane	857.8	120	1186	27.26	70.1	40-135	0			
1,2-Dibromoethane	1056	36	1186	0	89.1	80-195	0			
1,2-Dichlorobenzene	1148	36	1186	0	96.9	75-120	0			
1,2-Dichloroethane	1101	120	1186	0	92.9	70-135	0			
1,2-Dichloropropane	1095	36	1186	0	92.4	70-120	0			
1,3,5-Trimethylbenzene	1186	120	1186	52.7	95.6	65-135	0			
1,3-Dichlorobenzene	1122	36	1186	0	94.6	70-125	0			
1,4-Dichlorobenzene	1107	36	1186	0	93.4	70-125	0			
2-Butanone	1163	240	1186	54.51	93.5	30-160	0			
2-Hexanone	1173	36	1186	0	98.9	45-145	0			
4-Methyl-2-pentanone	1452	36	1186	0	123	74-176	0			
Acetone	2002	120	1186	0	169	20-160	0			S
Acrylonitrile	1110	120	1186	0	93.7	70-135	0			
Benzene	1158	36	1186	21.81	95.8	75-125	0			
Bromodichloromethane	969.8	36	1186	0	81.8	70-130	0			
Bromoform	725.6	36	1186	0	61.2	55-135	0			
Bromomethane	1283	120	1186	0	108	50-170	0			
Carbon disulfide	1117	36	1186	0	94.3	45-160	0			
Carbon tetrachloride	957.4	36	1186	0	80.8	65-135	0			
Chlorobenzene	1146	36	1186	0	96.7	75-125	0			
Chloroethane	152.9	120	1186	0	12.9	40-155	0			S
Chloroform	1101	36	1186	0	92.8	66-140	0			
Chloromethane	903.4	120	1186	23.62	74.2	50-144	0			
cis-1,2-Dichloroethene	1114	36	1186	0	94	65-125	0			
cis-1,3-Dichloropropene	969.8	36	1186	0	81.8	70-125	0			
Dibromochloromethane	793.8	36	1186	0	67	65-135	0			
Dibromomethane	1144	36	1186	0	96.5	75-130	0			
Dichlorodifluoromethane	1525	120	1186	0	129	35-135	0			
Diethyl ether	1187	36	1186	0	100	67-150	0			
Ethylbenzene	1153	36	1186	55.12	92.6	75-125	0			
Hexachloroethane	944.3	120	1186	8.48	78.9	51-122	0			
Isopropylbenzene	1202	36	1186	23.62	99.4	75-130	0			
m,p-Xylene	2324	71	2371	245.9	87.6	80-125	0			

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

QC BATCH REPORT

Batch ID: **163493** Instrument ID **VMS7** Method: **SW8260C**

Methyl tert-butyl ether	1135	36	1186	0	95.8	75-125	0
Methylene chloride	995.3	300	1186	15.14	82.7	55-145	0
Naphthalene	1069	120	1186	323.4	62.9	40-140	0
n-Propylbenzene	1095	36	1186	39.37	89	65-135	0
o-Xylene	1200	36	1186	167.2	87.1	75-125	0
Styrene	1091	36	1186	16.35	90.6	80-138	0
Tetrachloroethene	1790	36	1186	41.79	147	67-167	0
Toluene	1120	36	1186	164.8	80.6	70-125	0
trans-1,2-Dichloroethene	1178	36	1186	0	99.4	65-135	0
trans-1,3-Dichloropropene	905.2	36	1186	24.23	74.3	59-129	0
Trichloroethene	1178	36	1186	26.05	97.2	75-125	0
Trichlorofluoromethane	827.5	36	1186	0	69.8	25-185	0
Vinyl chloride	1363	36	1186	0	115	60-125	0
Xylenes, Total	3524	110	3557	420	87.3	75-125	0
Surr: 1,2-Dichloroethane-d4	*1147*	0	*1186*	0	*96.8*	*70-130*	0
Surr: 4-Bromofluorobenzene	*1190*	0	*1186*	0	*100*	*70-130*	0
Surr: Dibromofluoromethane	*1115*	0	*1186*	0	*94.1*	*70-130*	0
Surr: Toluene-d8	*1144*	0	*1186*	0	*96.5*	*70-130*	0

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

Client: AKT Peerless
Work Order: 20090028
Project: 8997f5-5-10.4

QC BATCH REPORT

Batch ID: **163493** Instrument ID **VMS7** Method: **SW8260C**

MSD Sample ID: **20090023-04A MSD** Units: **µg/Kg-dry** Analysis Date: **9/4/2020 02:26 AM**

Client ID: Run ID: **VMS7_200903B** SeqNo: **6683785** 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
1,1,1,2-Tetrachloroethane	997.2	36	1190	0	83.8	75-125	978.1	1.93	30	
1,1,1-Trichloroethane	1175	36	1190	0	98.7	70-135	1183	0.687	30	
1,1,2,2-Tetrachloroethane	1042	36	1190	0	87.5	55-130	1090	4.48	30	
1,1,2-Trichloroethane	1172	36	1190	0	98.4	60-125	1156	1.34	30	
1,1-Dichloroethane	1076	36	1190	0	90.4	75-125	1074	0.205	30	
1,1-Dichloroethene	1212	36	1190	0	102	76-148	1245	2.67	30	
1,2,3-Trichloropropane	1111	36	1190	9.691	92.6	65-130	1071	3.75	30	
1,2,4-Trichlorobenzene	1041	120	1190	15.75	86.1	65-130	1040	0.0846	30	
1,2,4-Trimethylbenzene	1148	36	1190	164.8	82.6	65-135	1158	0.866	30	
1,2-Dibromo-3-chloropropane	874.6	120	1190	27.26	71.2	40-135	857.8	1.95	30	
1,2-Dibromoethane	1095	36	1190	0	92	80-195	1056	3.63	30	
1,2-Dichlorobenzene	1123	36	1190	0	94.3	75-120	1148	2.24	30	
1,2-Dichloroethane	1095	120	1190	0	92	70-135	1101	0.549	30	
1,2-Dichloropropane	1106	36	1190	0	92.9	70-120	1095	0.91	30	
1,3,5-Trimethylbenzene	1186	120	1190	52.7	95.2	65-135	1186	0.0304	30	
1,3-Dichlorobenzene	1116	36	1190	0	93.8	70-125	1122	0.478	30	
1,4-Dichlorobenzene	1125	36	1190	0	94.5	70-125	1107	1.59	30	
2-Butanone	1410	240	1190	54.51	114	30-160	1163	19.2	30	
2-Hexanone	1305	36	1190	0	110	45-145	1173	10.7	30	
4-Methyl-2-pentanone	1421	36	1190	0	119	74-176	1452	2.19	30	
Acetone	2400	120	1190	0	202	20-160	2002	18	30	S
Acrylonitrile	1074	120	1190	0	90.2	70-135	1110	3.33	30	
Benzene	1156	36	1190	21.81	95.3	75-125	1158	0.143	30	
Bromodichloromethane	986.5	36	1190	0	82.9	70-130	969.8	1.71	30	
Bromoform	737.2	36	1190	0	61.9	55-135	725.6	1.59	30	
Bromomethane	1152	120	1190	0	96.8	50-170	1283	10.8	30	
Carbon disulfide	1116	36	1190	0	93.7	45-160	1117	0.161	30	
Carbon tetrachloride	935.9	36	1190	0	78.6	65-135	957.4	2.26	30	
Chlorobenzene	1140	36	1190	0	95.8	75-125	1146	0.564	30	
Chloroethane	130.3	120	1190	0	11	40-155	152.9	16	30	S
Chloroform	1105	36	1190	0	92.8	66-140	1101	0.371	30	
Chloromethane	875.2	120	1190	23.62	71.6	50-144	903.4	3.17	30	
cis-1,2-Dichloroethene	1122	36	1190	0	94.3	65-125	1114	0.689	30	
cis-1,3-Dichloropropene	950.8	36	1190	0	79.9	70-125	969.8	1.98	30	
Dibromochloromethane	799.1	36	1190	0	67.1	65-135	793.8	0.669	30	
Dibromomethane	1161	36	1190	0	97.6	75-130	1144	1.5	30	
Dichlorodifluoromethane	1428	120	1190	0	120	35-135	1525	6.59	30	
Diethyl ether	1167	36	1190	0	98	67-150	1187	1.75	30	
Ethylbenzene	1147	36	1190	55.12	91.7	75-125	1153	0.559	30	
Hexachloroethane	956.2	120	1190	8.48	79.6	51-122	944.3	1.25	30	
Isopropylbenzene	1202	36	1190	23.62	99	75-130	1202	0.025	30	
m,p-Xylene	2320	71	2380	245.9	87.2	80-125	2324	0.141	30	

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

Client: AKT Peerless
Work Order: 20090028
Project: 8997f5-5-10.4

QC BATCH REPORT

Batch ID: **163493** Instrument ID **VMS7** Method: **SW8260C**

Methyl tert-butyl ether	1119	36	1190	0	94	75-125	1135	1.42	30	
Methylene chloride	983.5	300	1190	15.14	81.4	55-145	995.3	1.19	30	
Naphthalene	1111	120	1190	323.4	66.2	40-140	1069	3.86	30	
n-Propylbenzene	1075	36	1190	39.37	87	65-135	1095	1.87	30	
o-Xylene	1169	36	1190	167.2	84.2	75-125	1200	2.69	30	
Styrene	1094	36	1190	16.35	90.6	80-138	1091	0.316	30	
Tetrachloroethene	2112	36	1190	41.79	174	67-167	1790	16.5	30	S
Toluene	1135	36	1190	164.8	81.6	70-125	1120	1.37	30	
trans-1,2-Dichloroethene	1170	36	1190	0	98.3	65-135	1178	0.692	30	
trans-1,3-Dichloropropene	888.3	36	1190	24.23	72.6	59-129	905.2	1.88	30	
Trichloroethene	1245	36	1190	26.05	102	75-125	1178	5.47	30	
Trichlorofluoromethane	857.4	36	1190	0	72	25-185	827.5	3.54	30	
Vinyl chloride	1329	36	1190	0	112	60-125	1363	2.59	30	
Xylenes, Total	3489	110	3570	420	86	75-125	3524	1	30	
Surr: 1,2-Dichloroethane-d4	*1173*	0	*1190*	0	*98.5*	*70-130*	1147	*2.21*	*30*	
Surr: 4-Bromofluorobenzene	*1192*	0	*1190*	0	*100*	*70-130*	1190	*0.171*	*30*	
Surr: Dibromofluoromethane	*1144*	0	*1190*	0	*96.1*	*70-130*	1115	*2.53*	*30*	
Surr: Toluene-d8	*1183*	0	*1190*	0	*99.4*	*70-130*	1144	*3.33*	*30*	

The following samples were analyzed in this batch: 20090028-01A

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

Client: AKT Peerless
Work Order: 20090028
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: 20090028-01B

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

Client: AKT Peerless
Work Order: 20090028
Project: 8997f5-5-10.4

QC BATCH REPORT

Batch ID: **R297417** Instrument ID **MOIST** Method: **SW3550C**

MBLK Sample ID: **WBLKS-R297417** Units: **% of sample** Analysis Date: **9/3/2020 01:55 PM**
Client ID: Run ID: **MOIST_200903B** SeqNo: **6683452** 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-R297417** Units: **% of sample** Analysis Date: **9/3/2020 01:55 PM**
Client ID: Run ID: **MOIST_200903B** SeqNo: **6683451** 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: **20090017-01B DUP** Units: **% of sample** Analysis Date: **9/3/2020 01:55 PM**
Client ID: Run ID: **MOIST_200903B** SeqNo: **6683437** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Moisture	12.13	0.10	0	0	0	0-0	12.43	2.44	10	

DUP Sample ID: **20090104-01B DUP** Units: **% of sample** Analysis Date: **9/3/2020 01:55 PM**
Client ID: Run ID: **MOIST_200903B** SeqNo: **6683450** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Moisture	5.46	0.10	0	0	0	0-0	5.09	7.01	10	

The following samples were analyzed in this batch: 20090028-01B

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: 223352

ALS Project Manager: | ALS Work Order #: 20090028

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	MI-10metals
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	napiermn@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	13016 Longview-T5-Composite	8/31/2020	10:05am	So;l	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: 8/31/20 | Time: 3:55pm | Received by: | 8/3/20 3:5[illegible]

Relinquished by: | Date: 9/3/20 | Time: 5:10 | Received by (Laboratory): | 8/31/20 5:10

Logged by (Laboratory): KW | Date: 9/1/20 | Time: 1005 | Checked by (Laboratory): CQ

Notes: also send report to bricks@aktpeerless.com

Cooler ID	Cooler Temp.
1R3	2.4°C

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

9/1/20 0830

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: **01-Sep-20 08:30**

Work Order: **20090028** Received by: **KRW**

Checklist completed by Keith Wierenga (eSignature) 01-Sep-20 (Date) Reviewed by: Bill Carey (eSignature) 01-Sep-20 (Date)

Matrices: Soil

Carrier name: FedEx

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):	2.4/3.4 C	IR3	
Cooler(s)/Kit(s):			
Date/Time sample(s) sent to storage:	9/1/2020 10:07:55 AM		
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: