

Vapor Intrusion Survey/Groundwater Monitoring Well Decommissioning Final Report

**K&L Distributors
Fairbanks, Alaska**

May 31, 2016

Prepared for:

K&L Distributors Inc.

Prepared by:

**Alaska Resources and
Environmental Services, LLC.**



284 Topside Drive
Fairbanks, AK 99712

Prepared
by:



Dustin Stahl
Project Manager/Environmental Specialist

Vapor Intrusion Survey/ Well Decommissioning Final Report
K&L Distributors
945 Elizabeth Street
June 2016

INTRODUCTION & PURPOSE

This report was prepared on behalf of K&L Distributors Inc. who has contracted with Alaska Resources & Environmental Services (ARES) to perform the indoor air investigation and monitoring well decommissioning associated with the petroleum release from the former 1,500-gallon UST, at the subject property (ADEC file #102.38.177). The work was conducted as detailed in the approved Corrective Action Work Plan submitted April 2016.

The objective of our work was to conduct a vapor intrusion survey and to assess indoor air quality of the K&L main warehouse and office building adjacent to the release area. As part of this project, three groundwater monitoring wells were also decommissioned.

SITE BACKGROUND

Site Description

The property located at 945 Elizabeth Street, Fairbanks, Alaska (Figures 1,2) is situated in an area primarily used for commercial and light industrial purposes in the vicinity Fairbanks, Alaska. The lot consists of one commercial building on a 1.26 acre parcel. The former 1,500-gallon UST used for the storage of heating fuel oil (# 2 diesel) was located adjacent and south of the warehouse. The legal description for the site is: Tax Lot 2, Block 1 Burgess Industrial Park. The GPS coordinates for the site are N 64° 51.181', W -147° 46.035'. The elevation of the site is 447' above mean sea level.

History

A UST Closure / Site Characterization was conducted in July, 2013 at the request of Mr. Keith Rousseau, Owner of Inland Petroservice Inc., who was contracted to remove a UST at the site. The purpose of this project was to perform a limited site characterization and to investigate the subsurface conditions following the removal of a 1,500-gallon UST used for the storage of # 2 heating fuel oil for the property located at 945 Elizabeth Street.

A total of twenty eight (28) soil field screen samples were collected during the 1,500-gallon UST closure / site characterization. Based on soil field screen sample results, contaminated soils were encountered at the base of the UST excavation at approximately 7.5' bgs and extended to an unknown depth.

The total area of excavation was approximately 208 square feet in size and the maximum depth of excavation was 7.5' bgs. Additional excavation could not occur adjacent to the building due to concern of structurally undermining the building foundation. The vertical

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and horizontal (north and west) extent of soil contamination at the site is unknown. Groundwater was not encountered during excavation.

Based on soil analytical results, DRO contaminated soils above ADEC cleanup levels were determined to remain in place on the north and west sidewalls and at the base of the excavation (7.5' bgs). DRO contaminated soils were detected on the west sidewall (5.5' bgs) at 614 mg/kg, the north sidewall (6.0' bgs) at 376 mg/kg, and DRO in the base of the excavation ranging from 301 mg/kg – 628 mg/kg. The ADEC cleanup level for DRO in soil is 250 mg/kg.

Prior to backfilling the site, a passive aeration system was installed to increase oxygen levels and provide a pathway for increased air flow to the subsurface. The system was constructed using perforated pipe placed at the length of the base of excavation and two vertical PVC pipes rising above ground level. A passive wind generated turbine was installed to conduct air flow thru the system. Details of the sampling event were documented in the ARES report titled *K&L Distributors UST Closure / Site Characterization* dated September 2013.

Groundwater sampling events conducted in 2013 detected GRO and DRO above ADEC cleanup levels for groundwater and below ADEC cleanup levels for BTEX compounds in the source area well, MW-1. Analytical results from down-gradient wells indicate that groundwater was not impacted and contaminants were not migrating off-site.

The sampling event conducted in 2014 detected DRO above ADEC cleanup levels for groundwater and below ADEC cleanup levels for GRO and BTEX compounds. Contaminants above ADEC cleanup levels were detected in the source area well, MW-1. Analytical results from down-gradient wells indicate that groundwater was not impacted and contaminants were not migrating off-site.

An additional groundwater sampling event was conducted in 2015. Analytical results indicate that the concentrations of DRO have remained nearly identical in source area (above ADEC cleanup levels) and slightly decreased in down-gradient wells (all below ADEC cleanup levels). Analytical results confirmed that GRO, BTEX and DRO concentrations are below ADEC cleanup levels for groundwater in down-gradient wells MW-2 and MW-3. Both MW-2 and MW-3 had non-detect results for all tested analytes. A historical review of analytical results from MW-2 and MW-3 show a decrease in the concentrations of GRO and DRO in both wells.

Groundwater analytical results indicate that the contaminant plume has stabilized as observed in contaminant levels from down-gradient wells over a three year period.

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Topography

The United States Geological Survey (USGS) Fairbanks Quadrangle (D-2 SE) provides topographic map coverage of the site (Figure 1). Fairbanks is located in the northern part of the Tanana Basin, which is a relatively flat floodplain of the Tanana River. The subject property is situated approximately 0.54 miles north of the Chena River and 3.95 miles north of the Tanana River.

Regional Hydrology

The Chena and Tanana rivers are the dominant influence on ground-water flow in the subject area. Two discharge peaks characterize the Chena River: spring snowmelt runoff and late summer precipitation. The stage of Chena River typically rises and falls in response to stage changes of the Tanana River. The depth to groundwater varies in response to these controlling factors. Based on interpretation of USGS data and historical data, regional groundwater flow direction is generally to the west-northwest. However, the direction of flow can vary slightly depending on the stage of the Chena River and Tanana River. Depth to groundwater in the area is generally 12-14 feet bgs, though seasonal fluctuation can range between 10-16 feet bgs.

Scope of Work

To achieve stated objectives, ARES performed the following tasks:

- Conducted a Vapor Intrusion Survey to assess potential for indoor air vapor intrusion of the main warehouse and office building adjacent to the source area;
- Collected analytical indoor air samples by EPA method TO-17 to assess indoor air quality;
- Decommissioned three permanent groundwater monitoring wells; and
- Documented field activities and preparation of Final Report.

Field Work Protocol

Fieldwork described in this report will be conducted in accordance with 18 AAC 75 *Oil and Other Hazardous Substances Pollution Control*, as amended through May 8, 2016 and 18 AAC 78 *Underground Storage Tanks* as amended through June 17, 2015. ADEC's *Field Sampling Guidance* May, 2016, was used as a guide for standard sampling procedures. Site characterization requirements are provided by ADEC in 18 AAC 75, Articles 3 and 9 Discharge Reporting, Cleanup, and Disposal of Oil and Other Hazardous Substances and General Provisions as amended through June 17, 2015. Soil and Groundwater cleanup levels are also provided according to 18 AAC 75. Protocol for performing the release investigation is outlined by the ASTM standard ASTM E-1903-97

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Standard Guide for Environmental Site Assessments: Phase II Environmental Site Assessment Process.

Monitoring well decommissioning requirements are provided in the following guidance documents:

- *ADEC Monitoring Well Guidance* September 2013
- 11 AAC 93.140, Alaska Department of Natural Resources, Water Wells.

Vapor intrusion guidance and indoor air target levels are provided in the following guidance documents:

- *ADEC Vapor Intrusion Guidance* October 2012

Mr. Dustin Stahl, Project Manager/Environmental Specialist for ARES, conducted the indoor air quality assessment and the decommissioning of the groundwater monitoring wells. Mr. Stahl meets the qualifications of 'Qualified Environmental Professional' by the Alaska Department of Environmental Conservation (ADEC) under 18 AAC 75.

Vapor Intrusion Survey

A vapor intrusion survey was conducted to determine if the indoor air quality of the building adjacent to the release area was being affected by the subsurface contamination remaining in place.

A building inspection conducted, and an ADEC Building Inventory and Indoor Air Sampling Questionnaire was completed and is included in Appendix D. PID ambient air readings were collected throughout the building, with emphasis on possible vapor intrusion pathways to include foundation/ floor cracks, drains, vents, and piping penetrations. PID ambient air results ranged between 0.1 ppm and 0.4 ppm from all areas, except for an abandoned sealed floor drain which had PID results of 2.2 ppm.

Some potential sources of indoor air contamination to include cleaners, paints, air fresheners, and solvents were located within sealed closets and were not removed before air sampling was conducted. Other potential sources of contamination such as forklifts and related lubricants were relocated outside the building at least 24 hours before analytical sampling was conducted.

To avoid potential interferences and dilution effects, site workers and management were instructed to avoid the following for 24 hours prior to sampling:

- Opening any windows, fireplace dampers, openings, or vents;
- Operating ventilation fans;
- Smoking in the building;
- Use of auxiliary heating equipment (e.g., kero-sene heater);

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- Cleaning, waxing, or polishing furniture, floors, or other woodwork with petroleum or oil-based products;
- Using air fresheners, scented candles, or odor eliminators;
- Engaging in any work activities that use materials containing volatile chemicals;
- Using cosmetics, including hairspray, nail polish, nail polish removers, perfume/cologne, etc.; and
- Using building repair or maintenance products, such as caulk or roofing tar.

Indoor Air Analytical Sampling

A total of eight (8) analytical indoor air samples (includes one duplicate sample) were collected on Saturday April 16, 2016 and laboratory analyzed for benzene, toluene, ethylbenzene, total xylenes, and naphthalene by EPA Method TO-17. Sample locations are shown in Figure 4, Appendix A. Analytical results are summarized in Table 1 below. Sampling was conducted during weekend hours when very few employees were present and all garage doors remained closed throughout sampling to obtain results that represented a 'worst case scenario'.

Sorbents

Samples were collected by drawing air at a calibrated flow rate through a laboratory prepared TD Carbo-300 Sorbent Tube containing a sorbent media designed for VOC's. Samples were collected using low flow pumps calibrated with a TSI Mass Flowmeter (SN 41460518003). The pumps were set at a flow rate of 67ml/min and operated over a one hour time period to collect the 4L sampling volume required by the laboratory.

Indoor Air Sampling Protocol

Samples were collected following the EPA TO-17 sampling protocol included in Appendix E.

Weather conditions at the site on the day of sample collection consisted of partly sunny skies with temperatures ranging from 24- 49 °F with winds of 0-2mph, and a barometric pressure of 29.88 inHg.

Samples were collected in the breathing zone, approximately 3 to 5 feet off the ground, in high-use areas. A field blank was included in the sampling set and was subjected to exactly the same handling as the samples (open, seal, and transport). Samples were stored and shipped in sealed containers and preserved with ice to maintain samples at 4°C. A signed Chain-of-Custody form accompanied the samples to ASL. ASL is certified by the National Environmental Laboratory Accreditation Program (NELAP) for air and soil-gas analysis.

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Table 1: Summary of TO-17 Analytical Results in Ambient Air

Sample ID	Date	EPA Method TO-17				
		Benzene in $\mu\text{g}/\text{m}^3$	Toluene in $\mu\text{g}/\text{m}^3$	Ethylbenzene in $\mu\text{g}/\text{m}^3$	Total Xylenes in $\mu\text{g}/\text{m}^3$	Naphthalene in $\mu\text{g}/\text{m}^3$
KL-0416-01	04/16/2016	ND [0.57]	3.5	0.72	4.0	ND [0.27]
KL-0416-02	04/16/2016	ND [0.57]	4.4	0.69	3.7	ND [0.27]
KL-0416-03	04/16/2016	0.68	3.3	0.87	4.8	0.31
KL-0416-04	04/16/2016	ND [0.57]	3.1	0.83	4.6	0.29
KL-0416-05	04/16/2016	ND [0.57]	2.0	0.53	2.9	ND [0.27]
KL-0416-06	04/16/2016	0.59	3.3	0.91	5.0	0.31
KL-0416-07	04/16/2016	0.63	3.2	0.86	4.7	0.30
KL-0416-08	04/16/2016	0.79	3.0	0.81	4.4	0.28
Commercial¹		16	21900	49	440	3.6

¹=ADEC calculated target levels for indoor air Appendix D: ADEC Vapor Intrusion Guidance for Contaminated Sites, Oct. 2012

Bold=Concentrations exceeding ADEC limits are highlighted and in bold

ND-Analyte not detected above the listed MDL

$\mu\text{g}/\text{m}^3$ =micrograms per cubic meter

Quality Assurance / Quality Control

Field quality control (QC) procedures for this project included the collection and analysis of a field duplicate and field blank, which accompanied the samples in the field. One field duplicate (DUP-0715) was collected for quality control purposes. Sample ID KL-0416-06 was a blind duplicate to KL-0416-05. The QC samples were analyzed to assess the quality of sample collection and handling, as well as the accuracy and precision of the laboratory's analytical procedures.

Precision, expressed as the relative percent difference (RPD) between field duplicate sample results, is an indication of the consistency of sampling, sample handling, preservation, and laboratory analysis. Field quality control sampling consisted of 10% field duplicates and 5% field blanks. Analysis of the field blank showed no analytes above the practical quantitation limit (PQL). Thus, there is no indication that cross-contamination among samples occurred.

The following blind field duplicates and associated RPD calculations are shown in Table 2 as follows:

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Table 2: Relative Percent Difference Calculations

Sample ID / Duplicate ID	Matrix	Compound	Sample Concentration (mg/kg)	Duplicate Concentration (mg/kg)	RPD
KL-0416-05/ KL-0416-06	Sorbent	Toluene	2.0	3.3	49.1
		Ethylbenzene	0.53	0.91	52.8
		Total xylenes	2.9	5.0	53.2

Given two sample concentrations (X and Y) the formula to determine RPD is the absolute value of the following:

$$[((X - Y) / (X + Y)) / 2] * 100 = \text{RPD}$$

Results above ADEC recommended range in **Bold**.

The calculable RPD's for duplicates collected as part of this investigation all exceeded the recommended range of <25% for air analysis. This was due to the use of separate pumps to collect the sample/sample duplicate, because a split sample train to collect a sample/ sample duplicate from a single pump was not available. Variations in the pumps led to elevated RPD calculations for all analytes. Data quality is affected, but data is still usable. Indoor air target exceedance levels for commercial buildings are at least ten times greater than actual analytical results.

Field Blank Samples

Field quality control (QC) procedures for this project included the analysis of one (1) field blank sample which accompanied the samples in the field and was subjected to exactly the same handling as the samples (open, seal, and transport). The field blank sample was analyzed to assess the quality of sample collection and handling.

In ideal conditions the analysis of a field blank sample should not indicate the presence of any of the tested analytes in a quantity above the Limit of Quantification (LOQ). A result above the LOQ can indicate that cross-contamination occurred between samples during sample transport or analysis, or indicate laboratory contamination.

The field blank sample was analyzed for BTEX and Naphthalene by EPA method TO-17. No analytes were detected above the LOQ in the trip blank associated with the water samples from the sampling event.

The ADEC Environmental Laboratory Data Quality Assurance Requirements (ADEC March 2009) and United States Environmental Protection Agency (EPA) National Functional Guidelines for Organic Review (EPA August 2014) were followed in this site investigation. The data were reviewed to determine the data quality and to evaluate potential impact on the usability of the data. The review was performed using Level II reports that were provided by ALS, Inc. The analytical laboratory reports and chain-of-custody records are included in Appendix B.

A complete set of quality control parameters were reviewed as listed below.

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- Holding times;
- Sample handling and receiving;
- Surrogate percent recovery;
- Field duplicate sample comparability;
- Matrix spike/matrix spike duplicate (MS/MSD) percent recoveries and relative percent difference (RPD);
- Laboratory control sample (LCS)/Laboratory control sample duplicate (LCSD); percent recoveries and RPD;
- Method blanks;
- Trip blanks; and
- Method Sensitivity – reporting limits and practical quantitation limits (PQL).

Work order # P1602041

All reviewed quality control parameters were met for this analytical sampling event with the following exceptions:

- LCS recovery for Naphthalene was slightly below accepted limits. LCSD was within limits. All sample results for Naphthalene may have a slightly low bias. Data quality is affected. Commercial indoor air target levels were at least ten times greater than analytical results. Data is still usable.
- The calculable RPD's for duplicates collected as part of this investigation all exceeded the recommended range of <25% for air analysis. This was due to the use of separate pumps to collect the sample/ sample duplicate, because a split sample train to collect a sample/ sample duplicate from a single pump was not available. Variations in the pumps led to elevated RPD calculations for all analytes. Data quality is affected, but data is still usable. Commercial indoor air target levels were at least ten times greater than analytical results.

Laboratory quality assurance included the procedures outlined in the laboratory's ADEC-approved standard operating procedures documentation. As presented in the laboratory report's QC summary sheet, the laboratory QC parameters fell within the acceptable limits with the exception of the items outlined above.

Groundwater Monitoring Well Decommissioning (General Procedure)

After confirmation that analytical indoor air samples by EPA method TO-17 met indoor air quality standards and ADEC's approval, groundwater monitoring wells MW-1, MW-2 and MW-3 were decommissioned in accordance with ADEC recommended guidelines.

Following three annual groundwater monitoring sampling events, it was determined that contaminants in groundwater at the site (DRO) appear to have reached a steady

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state of equilibrium. Contaminants are not migrating off-site and were not detected in groundwater in down-gradient monitoring wells. The subject property and surrounding properties are serviced by public utilities for potable water supply. The source has been identified and impacts to groundwater are localized. Contaminants at the site in soil and groundwater will be reduced over time through natural attenuation. ARES recommended ADEC issue a 'Conditional Site Closure' with Institutional Controls to include restricting installation of on-site potable water wells and additional characterization of soils if soils are disturbed within the source area per ARES report titled *K&L Distributors 2015 Groundwater Monitoring Report*. Following ADEC approval, three, on-site groundwater monitoring wells were scheduled for decommissioning.

All three monitoring wells scheduled to be decommissioned consisted of 1" pre-packed PVC micro-wells. These wells have a pre-packed sand layer around the slotted well screen with a built in Bentonite annular seal at the top of the screened interval. Due to the small diameter and fragility of the wells, they were decommissioned with the well casing and screen remaining in place.

The following procedures were used during the decommissioning of the wells:

- The well point was be punctured or separated from the well screen using a series of 6' sections of decontaminated 3/8" steel all-thread attached with couplers. (Small well diameter prevented the use of 1/2" pipe);
- Since the wells were known to have a competent annular seal, the screened interval was filled with sand;
- The well casing above the screened interval was filled with Benseal granular Bentonite clay up to the casing cut off point and hydrated to completely seal the casing;
- The well monuments were removed and the void space was be filled with 3/8" pea gravel; and
- The surface material was be restored to match the surrounding materials. (Asphalt in the parking lot and gravel/soil at the source area.).

Well Record of Decommissioning forms are included in Appendix C.

Conclusions and Recommendations

2015 Groundwater analytical results from Sample ID MW1-0715, (source area well MW1), detected concentrations of DRO (2.89mg/l) that exceeded ADEC cleanup levels for DRO in groundwater. The ADEC cleanup level for DRO in groundwater is 1.5 mg/L. Analytical results from Sample ID MW1-0814 were below ADEC cleanup levels for GRO and BTEX compounds. A historical review of analytical results indicate that the

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concentrations of DRO have remained nearly identical in source area (above ADEC cleanup levels) and slight decrease in down-gradient wells (all below ADEC cleanup levels).

Analytical results confirm that GRO, BTEX and DRO concentrations are below ADEC cleanup levels for groundwater in down-gradient wells MW-2 and MW-3. Both MW-2 and MW-3 had non-detect results for all tested analytes in 2015.

Analytical results indicate groundwater is still impacted at the site and that concentrations of DRO exceed ADEC cleanup levels for DRO in groundwater at the source area well MW-1. Analytical results do not indicate the groundwater is impacted above ADEC cleanup levels in down-gradient wells MW-2 and MW-3. Based on analytical results, contaminants are not migrating off-site and the contaminant plume in groundwater appears to have reached a steady state of equilibrium. MW-1, MW-2, and MW-3 were all decommissioned in accordance with ADEC regulations.

Analytical air sampling results from within the main warehouse/offices building adjacent to the release area were at least ten times less than commercial air target levels for all tested analytes, at all approved sampling locations. Based on analytical results, the indoor air quality in the commercial building is not exceeding indoor air target levels for identified contaminants of concern.

ARES recommends the following:

- The subject and surrounding properties are serviced by public utilities for potable water supply and therefore, a well receptor survey is not recommended at this time. The source has been identified and impacts to groundwater are localized (Subject Property);
- As indicated in the ARES report titled *K&L Distributors UST Closure / Site Characterization* dated September 2013, soils in the source area are above ADEC cleanup levels for DRO. Contaminated soils identified in the site assessment as remaining in-place should not be excavated or disturbed without prior approval of landowner and ADEC. Soils in the vicinity of documented contamination should be properly characterized if disturbed in the future and segregated accordingly;
- Based on a site vapor intrusion study and TO-17 analytical indoor air results, indoor air quality in the commercial building is not exceeding indoor air target levels for identified contaminants of concern. Further indoor air monitoring and/or sample collection is not warranted at this time;
- Institutional controls should remain in force at the site to include restricting installation of on-site potable water wells and additional characterization of soils if soils are disturbed within the source area until ADEC cleanup levels are achieved for soil and groundwater.

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- Contaminants in groundwater at the site (DRO) have reached a steady state of equilibrium. Contaminants are not migrating off-site and were not detected in down-gradient wells in 2015. Contaminants at the site will be reduced over time through natural attenuation. Based on indoor air analytical results, subsurface contaminants remaining in place are not affecting the indoor air quality of the building above indoor air target levels. Based on the above, ARES recommends ADEC issue a 'Conditional Site Closure' with Institutional Controls implemented as stated above.

Limitations

This report presents the analytical results from a limited number of indoor air samples and should not be construed as a comprehensive study of air quality at the site. The samples were intended to evaluate the presence or absence of contaminants at the locations selected. Detectable levels of petroleum hydrocarbons may be present at other locations. It was also not the intent of our sampling and testing to detect the presence of indoor air affected by contaminants other than those for which laboratory analysis were performed. No conclusions can be drawn on the presence or absence of other contaminants.

The data presented in this report should be considered representative of the time of our site observations and sample collection. Changes in site conditions can occur with time because of natural forces or human activity. ARES reserves the right to modify or alter conclusions and recommendations should additional data become available.

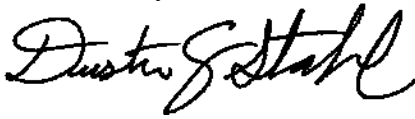
This report was prepared for the exclusive use of K&L Distributors Inc., and their representatives. If it is made available to others, it should be for information on factual data only and not as a warranty of subsurface conditions.

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Qualifications & Signature of Environmental Professional

Dustin Stahl meets the qualifications of 'Qualified Environmental Professional' by the ADEC under 18 AAC 75, and has field experience as an environmental Project Manager and has worked on all aspects of environmental assessments, investigations, and clean-up efforts.

Sincerely,

A handwritten signature in black ink that reads "Dustin Stahl". The signature is written in a cursive, flowing style.

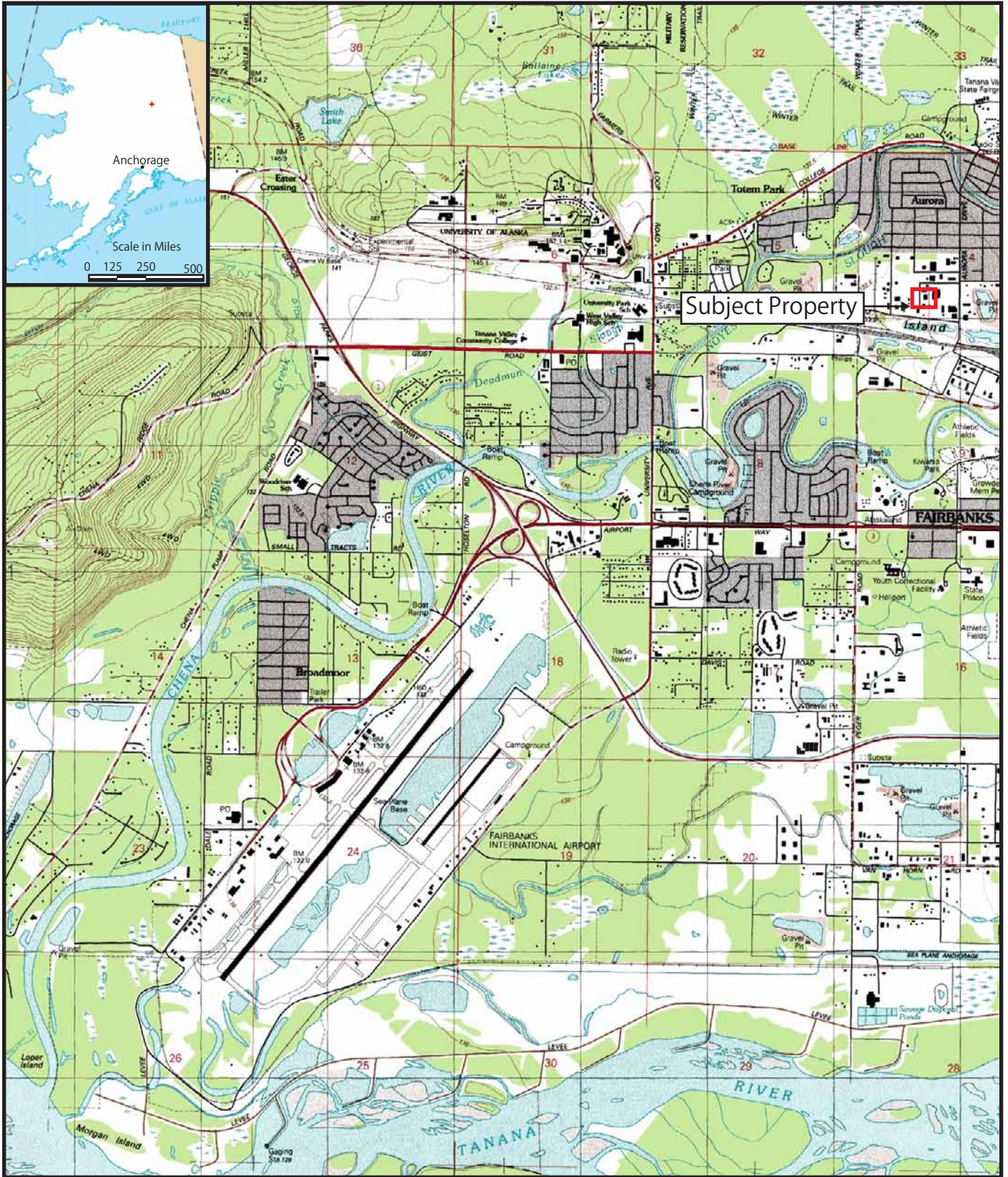
Dustin Stahl
Project Manager/Environmental Specialist
Alaska Resources and Environmental Services, LLC

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Enclosure: Appendix A – Figures
 Appendix B – SGS Laboratory Results/ADEC Lab Quality
 Checklist
 Appendix C – Well Record of Decommissioning Forms
 Appendix D – ADEC Building Inventory and Indoor Air Sampling
 Questionnaire
 Appendix E – EPA Method TO-17 Sampling Protocol

APPENDIX A

Figures



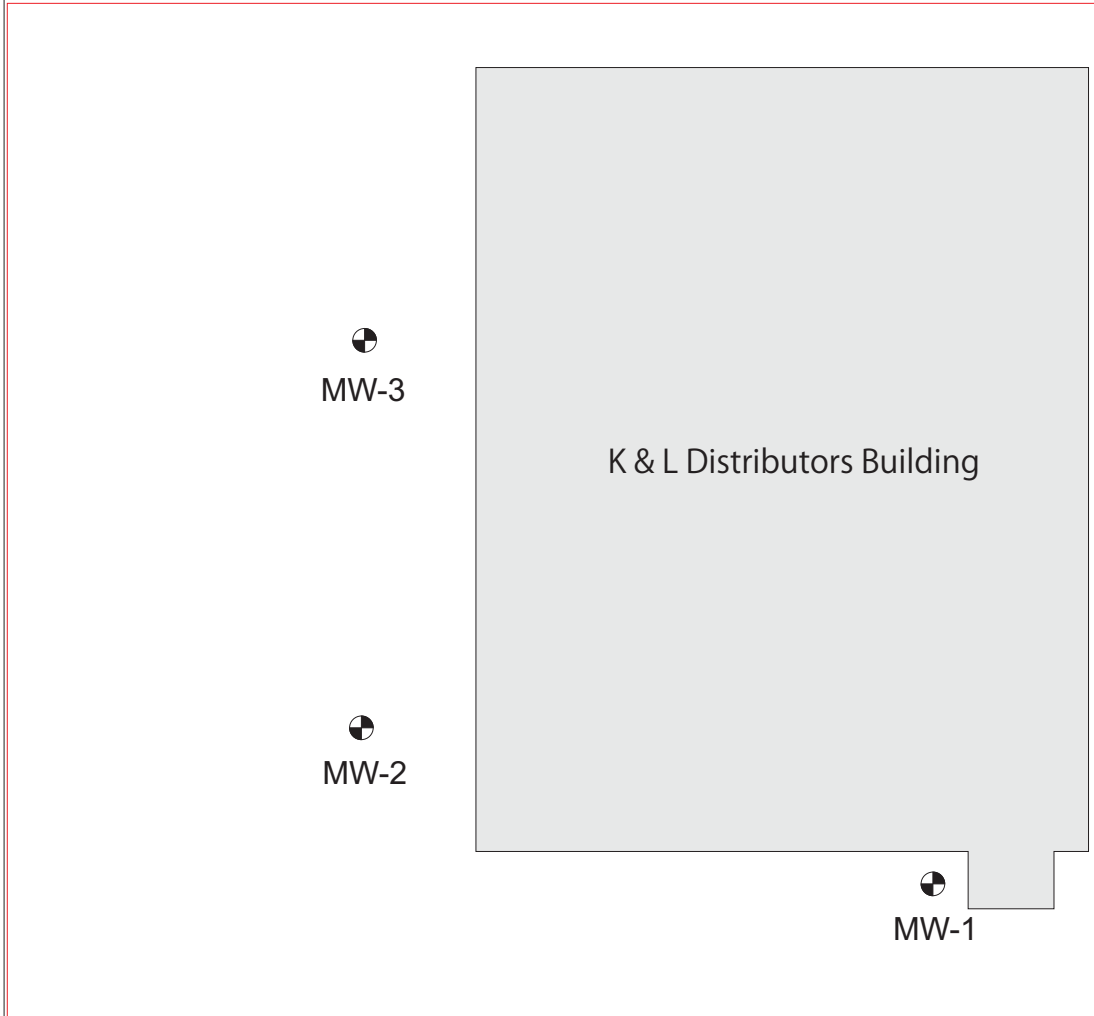
1992 Topographical Map Fairbanks, AK	Date: 5/20/16	Scale in Miles: 0 1/4 1/2 3/4 1		Alaska Resources and Environmental Services, LLC 284 Topside Fairbanks, AK 99701 PH. (907) 374-3226 FAX (907) 374-3219	
	Drawn: JDG				
					FIGURE 1






K & L Distributors Property
 (Lot 2 Block 1 Burgess Industrial)

Aerial Photograph	Date: 05/20/16	Scale in Feet:		Alaska Resources and Environmental Services, LLC 284 Topside Fairbanks, AK 99701 PH. (907) 374-3226 FAX (907) 374-3219	 FIGURE 2
	Drawn: JDG				
	Project: Indoor Air Sampling K & L Distributers, Fairbanks, AK				

K & L Distributors Property



Key
 Decommissioned Monitoring Well Location

Aerial Photograph	Date: 5/20/16	Scale in Feet: 0 10 20 30 40 50 	Alaska Resources and Environmental Services, LLC 284 Topside Fairbanks, AK 99701 PH. (907) 374-3226 FAX (907) 374-3219	 FIGURE 3
	Drawn: JDG			
	Project: Indoor Air Sampling K & L Distributors, Fairbanks, AK			

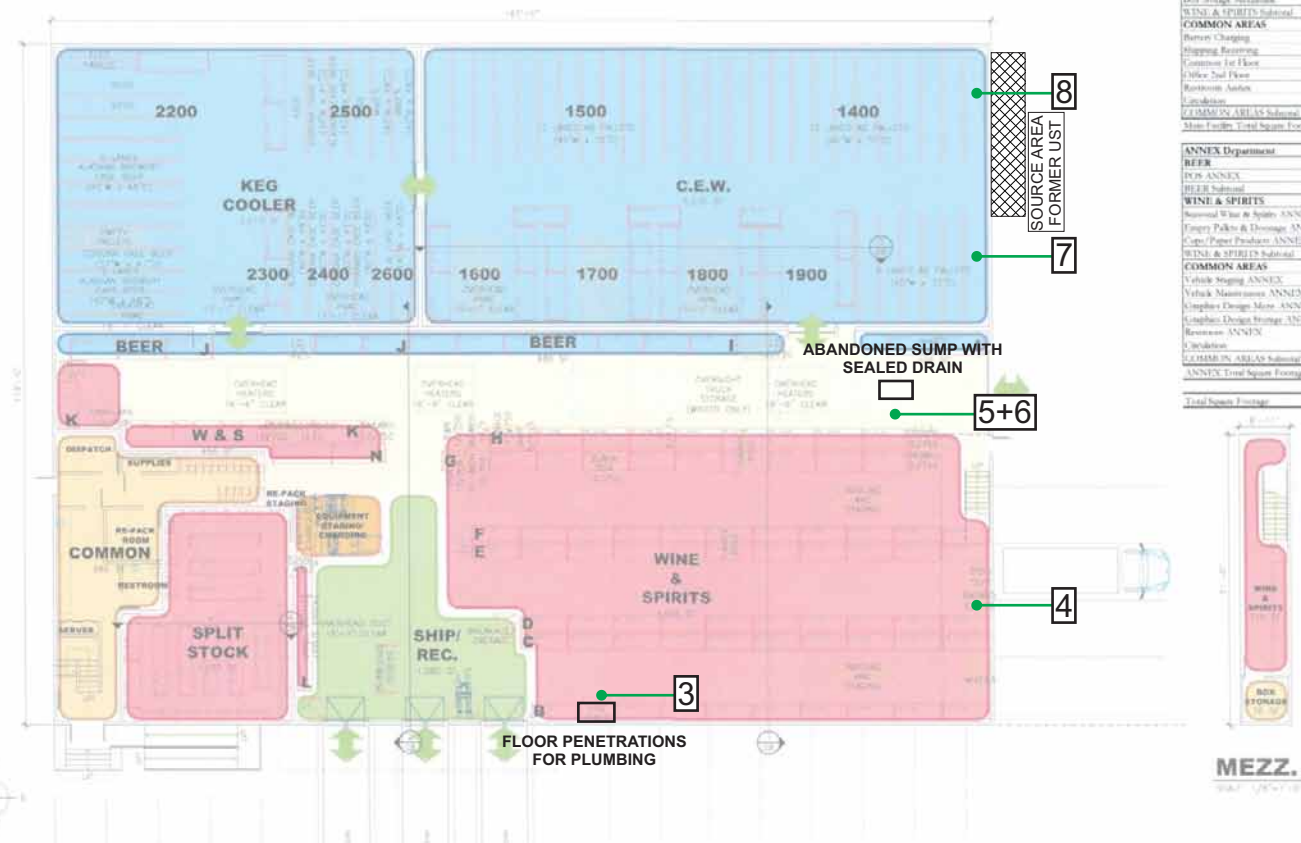
KEY

ANALYTICAL TO-17 AIR SAMPLE LOCATION

AREA SUMMARY

Main Facility Department	Sq. Ft.
BEER	
BEER	3,099
Draft Cooler	3,213
Beer Storage	74
BEER Subtotal	6,387
WINE & SPIRITS	
Wine & Spirits Warehouse Rack	3,118
Wine & Spirits Split Stock	1,077
Wine & Spirits Mezzanine	319
Beer Storage Mezzanine	74
WINE & SPIRITS Subtotal	4,588
COMMON AREAS	
Barney's Changing	291
General Restroom	1,081
Common 1st Floor	389
Office 2nd Floor	1,890
Restroom Aesthetics	75
Utilities	2,122
COMMON AREAS Subtotal	6,268
Main Facility Total Square Footage	17,000

ANNEX Department	Sq. Ft.
BEER	
BEER ANNEX	412
BEER Subtotal	412
WINE & SPIRITS	
Personal Wine & Spirits ANNEX	1,633
Energy Pallets & Drums ANNEX	904
Caps/Paper Products ANNEX	331
WINE & SPIRITS Subtotal	2,868
COMMON AREAS	
Vehicle Storage ANNEX	3,170
Vehicle Maintenance ANNEX	474
Complex Design Mezz. ANNEX	327
Complex Design Storage ANNEX	78
Restroom ANNEX	75
Circulation	252
COMMON AREAS Subtotal	4,276
ANNEX Total Square Footage	7,817
Total Square Footage	24,817



2ND FLOOR ADMIN AREA



Alaska Resources and Environmental Services, LLC
 284 Topsiside Fairbanks, AK 99701
 PH. (907) 374-3226
 FAX (907) 374-3219

INDOOR AIR SAMPLE LOCATIONS



DATE: 05/20/16
 DRAWN: JDG
 SCALE IN FEET:

PROJECT:
 INDOOR AIR SAMPLING K & I
 DISTRIBUTERS,
 FAIRBANKS, AK

FIGURE 4

APPENDIX B

Analytical Results & ADEC Lab Quality Checklist



2655 Park Center Dr., Suite A
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www.alsglobal.com

LABORATORY REPORT

May 3, 2016

Lyle Gresehover
Alaska Resources and Environmental Services, LLC
284 Topside Road
Fairbanks, AK 99712

RE: K&L DISTRIBUTORS

Dear Lyle:

Enclosed are the results of the samples submitted to our laboratory on April 19, 2016. For your reference, these analyses have been assigned our service request number P1602041.

All analyses were performed according to our laboratory's NELAP and DoD-ELAP-approved quality assurance program. The test results meet requirements of the current NELAP and DoD-ELAP standards, where applicable, and except as noted in the laboratory case narrative provided. For a specific list of NELAP and DoD-ELAP-accredited analytes, refer to the certifications section at www.alsglobal.com. Results are intended to be considered in their entirety and apply only to the samples analyzed and reported herein.

If you have any questions, please call me at (805) 526-7161.

Respectfully submitted,

ALS | Environmental

By Kate Aguilera at 9:03 am, May 03, 2016

Kate Aguilera
Project Manager



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Client: Alaska Resources and Environmental Services, LLC Service Request No: P1602041
Project: K&L DISTRIBUTORS

CASE NARRATIVE

The samples were received intact under chain of custody on April 19, 2016 and were stored in accordance with the analytical method requirements. Please refer to the sample acceptance check form for additional information. The results reported herein are applicable only to the condition of the samples at the time of sample receipt.

Volatile Organic Compound Analysis

The samples were analyzed for selected volatile organic compounds in accordance with the methodology outlined in EPA Method TO-17. This procedure is described in laboratory SOP VOA-TO17. The analyses were performed by thermal desorption/gas chromatography/mass spectrometry. This analysis is included on the laboratory's NELAP and DoD-ELAP scope of accreditation, however it is not part of the AIHA-LAP accreditation.

The results of analyses are given in the attached laboratory report. All results are intended to be considered in their entirety, and ALS Environmental (ALS) is not responsible for utilization of less than the complete report.

Use of ALS Environmental (ALS)'s Name. Client shall not use ALS's name or trademark in any marketing or reporting materials, press releases or in any other manner ("Materials") whatsoever and shall not attribute to ALS any test result, tolerance or specification derived from ALS's data ("Attribution") without ALS's prior written consent, which may be withheld by ALS for any reason in its sole discretion. To request ALS's consent, Client shall provide copies of the proposed Materials or Attribution and describe in writing Client's proposed use of such Materials or Attribution. If ALS has not provided written approval of the Materials or Attribution within ten (10) days of receipt from Client, Client's request to use ALS's name or trademark in any Materials or Attribution shall be deemed denied. ALS may, in its discretion, reasonably charge Client for its time in reviewing Materials or Attribution requests. Client acknowledges and agrees that the unauthorized use of ALS's name or trademark may cause ALS to incur irreparable harm for which the recovery of money damages will be inadequate. Accordingly, Client acknowledges and agrees that a violation shall justify preliminary injunctive relief. For questions contact the laboratory.



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ALS Environmental – Simi Valley

CERTIFICATIONS, ACCREDITATIONS, AND REGISTRATIONS

Agency	Web Site	Number
AIHA	http://www.aihaaccreditedlabs.org	101661
Arizona DHS	http://www.azdhs.gov/lab/license/env.htm	AZ0694
DoD ELAP	http://www.pjlabs.com/search-accredited-labs	L15-398
Florida DOH (NELAP)	http://www.doh.state.fl.us/lab/EnvLabCert/WaterCert.htm	E871020
Maine DHHS	http://www.maine.gov/dhhs/mecdc/environmental-health/water/dwp-services/labcert/labcert.htm	2014025
Minnesota DOH (NELAP)	http://www.health.state.mn.us/accreditation	977273
New Jersey DEP (NELAP)	http://www.nj.gov/dep/oqa/	CA009
New York DOH (NELAP)	http://www.wadsworth.org/labcert/elap/elap.html	11221
Oregon PHD (NELAP)	http://public.health.oregon.gov/LaboratoryServices/EnvironmentalLaboratoryAccreditation/Pages/index.aspx	4068-003
Pennsylvania DEP	http://www.depweb.state.pa.us/labs	68-03307 (Registration)
Texas CEQ (NELAP)	http://www.tceq.texas.gov/field/qa/env_lab_accreditation.html	T104704413-15-6
Utah DOH (NELAP)	http://www.health.utah.gov/lab/labimp/certification/index.html	CA01627201 5-5
Washington DOE	http://www.ecy.wa.gov/programs/eap/labs/lab-accreditation.html	C946

Analyses were performed according to our laboratory's NELAP and DoD-ELAP approved quality assurance program. A complete listing of specific NELAP and DoD-ELAP certified analytes can be found in the certifications section at www.alsglobal.com, or at the accreditation body's website.

Each of the certifications listed above have an explicit Scope of Accreditation that applies to specific matrices/methods/analytes; therefore, please contact the laboratory for information corresponding to a particular certification.

ALS ENVIRONMENTAL

DETAIL SUMMARY REPORT

Client: Alaska Resources and Environmental Services, LLC
Project ID: K&L DISTRIBUTORS

Service Request: P1602041

Date Received: 4/19/2016
Time Received: 09:35

TO-17 - VOC Sorbent

Client Sample ID	Lab Code	Matrix	Date Collected	Time Collected	
KL-0416-01	P1602041-001	Air	4/16/2016	10:06	X
KL-0416-02	P1602041-002	Air	4/16/2016	10:06	X
KL-0416-03	P1602041-003	Air	4/16/2016	10:17	X
KL-0416-04	P1602041-004	Air	4/16/2016	10:17	X
KL-0416-05	P1602041-005	Air	4/16/2016	11:13	X
KL-0416-06	P1602041-006	Air	4/16/2016	11:13	X
KL-0416-07	P1602041-007	Air	4/16/2016	11:23	X
KL-0416-08	P1602041-008	Air	4/16/2016	11:25	X
KL-TRIPBLANK	P1602041-009	Air	4/16/2016	00:00	X



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Chain of Custody Record & Analytical Service Request

Requested Turnaround Time in Business Days (Surcharges) Please Circle:		ALS Project No.	
1 Day (100%)	2 Day (75%)	3 Day (50%)	4 Day (35%)
10 Day (Standard)		P1602041	
Project Name		ALS Contact:	
K+L DISTRIBUTORS		Kate Aguilera	
Project Number		Analysis Method/Analytes	
P.O. # / Billing Information		8TEX → NAPHTHALENE	
Sampler (Print & Sign)		Sample Volume	
DUSTIN STAHL <i>Dustin Stahl</i>		4020 mL	
Sampling Pump Flow (mL/min)	Sampling Start Time	Sampling End Time	Sample Volume
67 mL/min	0906	1006	4020 mL
67 mL/min	0906	1006	4020 mL
67 mL/min	0917	1017	4020 mL
67 mL/min	0917	1017	4020 mL
67 mL/min	1013	1113	4020 mL
67 mL/min	1013	1113	4020 mL
67 mL/min	1023	1123	4020 mL
67 mL/min	1025	1125	4020 mL
67 mL/min	-	-	4020 mL
Laboratory ID #	Tube ID	Date Collected	Comments
①	167902	04/16/16	
②	176401	04/16/16	
③	172447	4-16-16	
④	181571	4-16-16	
⑤	180768	4-16-16	
⑥	176407	4-16-16	
⑦	181516	4-16-16	
⑧	167903	4-16-16	
⑨	181512	4-16-16	
KL-0416-01			
KL-0416-02			
KL-0416-03			
KL-0416-04			
KL-0416-05			
KL-0416-06			
KL-0416-07			
KL-0416-08			
TRIPBLANK			

Report Tier Levels - please select		Project Requirements (MRLs, QAPP)	
Tier I - (Results/Default if not specified)	Tier III (Data Validation Package) 10% Surcharge	Project Requirements	
Tier II (Results + QC) <input checked="" type="checkbox"/>	Tier IV (client specified)	Cooler / Blank Temperature °C	
Relinquished by: (Signature)	Received by: (Signature)	Time: 09:35	4 Cool
DUSTIN STAHL <i>Dustin Stahl</i>	<i>[Signature]</i>	Time: 4/19/16	
Relinquished by: (Signature)	Received by: (Signature)	Time:	
Relinquished by: (Signature)	Received by: (Signature)	Time:	

**ALS Environmental
Sample Acceptance Check Form**

Client: Alaska Resources and Environmental Services, LLC Work order: P1602041
 Project: K&L DISTRIBUTORS
 Sample(s) received on: 4/19/16 Date opened: 4/19/16 by: ADAVID

Note: This form is used for all samples received by ALS. The use of this form for custody seals is strictly meant to indicate presence/absence and not as an indication of compliance or nonconformity. Thermal preservation and pH will only be evaluated either at the request of the client and/or as required by the method/SOP.

- | | <u>Yes</u> | <u>No</u> | <u>N/A</u> |
|---|-------------------------------------|--------------------------|-------------------------------------|
| 1 Were sample containers properly marked with client sample ID? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 2 Did sample containers arrive in good condition? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 3 Were chain-of-custody papers used and filled out? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 4 Did sample container labels and/or tags agree with custody papers? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 5 Was sample volume received adequate for analysis? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 6 Are samples within specified holding times? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 7 Was proper temperature (thermal preservation) of cooler at receipt adhered to? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Cooler Temperature: 4° C Blank Temperature: ° C | | | |
| | | | Gel Packs |
| 8 Were custody seals on outside of cooler/Box/Container? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Location of seal(s)? <u>Cooler lid.</u> Sealing Lid? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Were signature and date included? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Were seals intact? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 9 Do containers have appropriate preservation , according to method/SOP or Client specified information? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| Is there a client indication that the submitted samples are pH preserved? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| Were VOA vials checked for presence/absence of air bubbles? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| Does the client/method/SOP require that the analyst check the sample pH and <u>if necessary</u> alter it? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 10 Tubes: Are the tubes capped and intact? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 11 Badges: Are the badges properly capped and intact? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| Are dual bed badges separated and individually capped and intact? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

Lab Sample ID	Container Description	Required pH *	Received pH	Adjusted pH	VOA Headspace (Presence/Absence)	Receipt / Preservation Comments
P1602041-001.01	Tube, TD					
P1602041-002.01	Tube, TD					
P1602041-003.01	Tube, TD					
P1602041-004.01	Tube, TD					
P1602041-005.01	Tube, TD					
P1602041-006.01	Tube, TD					
P1602041-007.01	Tube, TD					
P1602041-008.01	Tube, TD					
P1602041-009.01	Tube, TD					

Explain any discrepancies: (include lab sample ID numbers): _____

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Page 1 of 1

Client: Alaska Resources and Environmental Services, LLC

Client Sample ID: KL-0416-01

Client Project ID: K&L DISTRIBUTORS

ALS Project ID: P1602041

ALS Sample ID: P1602041-001

Test Code: EPA TO-17

Date Collected: 4/16/16

Instrument ID: Markes ATD/Agilent 5975Cinert/7890A/MS18

Date Received: 4/19/16

Analyst: Chris Parnell/Rui Malinowski

Date Analyzed: 4/26/16

Sampling Media: TD Carbo 300 Sorbent Tube

Volume(s) Analyzed: 4.020 Liter(s)

Test Notes:

CAS #	Compound	Result ng/Tube	Result µg/m ³	MRL µg/m ³	Result ppbV	MRL ppbV	Data Qualifier
71-43-2	Benzene	< 2.3	ND	0.57	ND	0.18	
108-88-3	Toluene	14	3.5	0.27	0.94	0.073	
100-41-4	Ethylbenzene	2.9	0.72	0.27	0.17	0.063	
179601-23-1	m,p-Xylenes	12	2.9	0.52	0.66	0.12	
95-47-6	o-Xylene	4.3	1.1	0.25	0.25	0.057	
91-20-3	Naphthalene	< 1.1	ND	0.27	ND	0.052	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Page 1 of 1

Client: Alaska Resources and Environmental Services, LLC

Client Sample ID: KL-0416-02

Client Project ID: K&L DISTRIBUTORS

ALS Project ID: P1602041

ALS Sample ID: P1602041-002

Test Code: EPA TO-17

Date Collected: 4/16/16

Instrument ID: Markes ATD/Agilent 5975Cinert/7890A/MS18

Date Received: 4/19/16

Analyst: Chris Parnell/Rui Malinowski

Date Analyzed: 4/26/16

Sampling Media: TD Carbo 300 Sorbent Tube

Volume(s) Analyzed: 4.020 Liter(s)

Test Notes:

CAS #	Compound	Result ng/Tube	Result µg/m ³	MRL µg/m ³	Result ppbV	MRL ppbV	Data Qualifier
71-43-2	Benzene	< 2.3	ND	0.57	ND	0.18	
108-88-3	Toluene	18	4.4	0.27	1.2	0.073	
100-41-4	Ethylbenzene	2.8	0.69	0.27	0.16	0.063	
179601-23-1	m,p-Xylenes	11	2.7	0.52	0.62	0.12	
95-47-6	o-Xylene	4.0	1.0	0.25	0.23	0.057	
91-20-3	Naphthalene	< 1.1	ND	0.27	ND	0.052	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Page 1 of 1

Client: Alaska Resources and Environmental Services, LLC

Client Sample ID: KL-0416-03

Client Project ID: K&L DISTRIBUTORS

ALS Project ID: P1602041

ALS Sample ID: P1602041-003

Test Code: EPA TO-17

Date Collected: 4/16/16

Instrument ID: Markes ATD/Agilent 5975Cinert/7890A/MS18

Date Received: 4/19/16

Analyst: Chris Parnell/Rui Malinowski

Date Analyzed: 4/26/16

Sampling Media: TD Carbo 300 Sorbent Tube

Volume(s) Analyzed: 4.020 Liter(s)

Test Notes:

CAS #	Compound	Result ng/Tube	Result µg/m ³	MRL µg/m ³	Result ppbV	MRL ppbV	Data Qualifier
71-43-2	Benzene	2.8	0.68	0.57	0.21	0.18	
108-88-3	Toluene	13	3.3	0.27	0.87	0.073	
100-41-4	Ethylbenzene	3.5	0.87	0.27	0.20	0.063	
179601-23-1	m,p-Xylenes	14	3.5	0.52	0.81	0.12	
95-47-6	o-Xylene	5.2	1.3	0.25	0.30	0.057	
91-20-3	Naphthalene	1.2	0.31	0.27	0.058	0.052	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Page 1 of 1

Client: Alaska Resources and Environmental Services, LLC

Client Sample ID: KL-0416-04

Client Project ID: K&L DISTRIBUTORS

ALS Project ID: P1602041

ALS Sample ID: P1602041-004

Test Code: EPA TO-17

Date Collected: 4/16/16

Instrument ID: Markes ATD/Agilent 5975Cinert/7890A/MS18

Date Received: 4/19/16

Analyst: Chris Parnell/Rui Malinowski

Date Analyzed: 4/27/16

Sampling Media: TD Carbo 300 Sorbent Tube

Volume(s) Analyzed: 4.020 Liter(s)

Test Notes:

CAS #	Compound	Result ng/Tube	Result µg/m ³	MRL µg/m ³	Result ppbV	MRL ppbV	Data Qualifier
71-43-2	Benzene	< 2.3	ND	0.57	ND	0.18	
108-88-3	Toluene	13	3.1	0.27	0.83	0.073	
100-41-4	Ethylbenzene	3.3	0.83	0.27	0.19	0.063	
179601-23-1	m,p-Xylenes	13	3.3	0.52	0.77	0.12	
95-47-6	o-Xylene	5.2	1.3	0.25	0.30	0.057	
91-20-3	Naphthalene	1.2	0.29	0.27	0.055	0.052	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Page 1 of 1

Client: Alaska Resources and Environmental Services, LLC

Client Sample ID: KL-0416-05

Client Project ID: K&L DISTRIBUTORS

ALS Project ID: P1602041

ALS Sample ID: P1602041-005

Test Code: EPA TO-17

Date Collected: 4/16/16

Instrument ID: Markes ATD/Agilent 5975Cinert/7890A/MS18

Date Received: 4/19/16

Analyst: Chris Parnell/Rui Malinowski

Date Analyzed: 4/27/16

Sampling Media: TD Carbo 300 Sorbent Tube

Volume(s) Analyzed: 4.020 Liter(s)

Test Notes:

CAS #	Compound	Result ng/Tube	Result µg/m ³	MRL µg/m ³	Result ppbV	MRL ppbV	Data Qualifier
71-43-2	Benzene	< 2.3	ND	0.57	ND	0.18	
108-88-3	Toluene	8.0	2.0	0.27	0.53	0.073	
100-41-4	Ethylbenzene	2.1	0.53	0.27	0.12	0.063	
179601-23-1	m,p-Xylenes	8.6	2.1	0.52	0.49	0.12	
95-47-6	o-Xylene	3.3	0.83	0.25	0.19	0.057	
91-20-3	Naphthalene	< 1.1	ND	0.27	ND	0.052	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Page 1 of 1

Client: Alaska Resources and Environmental Services, LLC
Client Sample ID: KL-0416-06
Client Project ID: K&L DISTRIBUTORS

ALS Project ID: P1602041
 ALS Sample ID: P1602041-006

Test Code: EPA TO-17
 Instrument ID: Markes ATD/Agilent 5975Cinert/7890A/MS18
 Analyst: Chris Parnell/Rui Malinowski
 Sampling Media: TD Carbo 300 Sorbent Tube
 Test Notes:

Date Collected: 4/16/16
 Date Received: 4/19/16
 Date Analyzed: 4/27/16
 Volume(s) Analyzed: 4.020 Liter(s)

CAS #	Compound	Result ng/Tube	Result µg/m ³	MRL µg/m ³	Result ppbV	MRL ppbV	Data Qualifier
71-43-2	Benzene	2.4	0.59	0.57	0.18	0.18	
108-88-3	Toluene	13	3.3	0.27	0.88	0.073	
100-41-4	Ethylbenzene	3.6	0.91	0.27	0.21	0.063	
179601-23-1	m,p-Xylenes	15	3.6	0.52	0.84	0.12	
95-47-6	o-Xylene	5.5	1.4	0.25	0.31	0.057	
91-20-3	Naphthalene	1.2	0.31	0.27	0.058	0.052	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Page 1 of 1

Client: Alaska Resources and Environmental Services, LLC

Client Sample ID: KL-0416-07

Client Project ID: K&L DISTRIBUTORS

ALS Project ID: P1602041

ALS Sample ID: P1602041-007

Test Code: EPA TO-17

Date Collected: 4/16/16

Instrument ID: Markes ATD/Agilent 5975Cinert/7890A/MS18

Date Received: 4/19/16

Analyst: Chris Parnell/Rui Malinowski

Date Analyzed: 4/27/16

Sampling Media: TD Carbo 300 Sorbent Tube

Volume(s) Analyzed: 4.020 Liter(s)

Test Notes:

CAS #	Compound	Result ng/Tube	Result µg/m ³	MRL µg/m ³	Result ppbV	MRL ppbV	Data Qualifier
71-43-2	Benzene	2.5	0.63	0.57	0.20	0.18	
108-88-3	Toluene	13	3.2	0.27	0.84	0.073	
100-41-4	Ethylbenzene	3.4	0.86	0.27	0.20	0.063	
179601-23-1	m,p-Xylenes	14	3.4	0.52	0.79	0.12	
95-47-6	o-Xylene	5.3	1.3	0.25	0.30	0.057	
91-20-3	Naphthalene	1.2	0.30	0.27	0.057	0.052	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Page 1 of 1

Client: Alaska Resources and Environmental Services, LLC

Client Sample ID: KL-0416-08

Client Project ID: K&L DISTRIBUTORS

ALS Project ID: P1602041

ALS Sample ID: P1602041-008

Test Code: EPA TO-17

Date Collected: 4/16/16

Instrument ID: Markes ATD/Agilent 5975Cinert/7890A/MS18

Date Received: 4/19/16

Analyst: Chris Parnell/Rui Malinowski

Date Analyzed: 4/27/16

Sampling Media: TD Carbo 300 Sorbent Tube

Volume(s) Analyzed: 4.020 Liter(s)

Test Notes:

CAS #	Compound	Result ng/Tube	Result µg/m ³	MRL µg/m ³	Result ppbV	MRL ppbV	Data Qualifier
71-43-2	Benzene	3.2	0.79	0.57	0.25	0.18	
108-88-3	Toluene	12	3.0	0.27	0.79	0.073	
100-41-4	Ethylbenzene	3.2	0.81	0.27	0.19	0.063	
179601-23-1	m,p-Xylenes	13	3.2	0.52	0.74	0.12	
95-47-6	o-Xylene	5.0	1.2	0.25	0.28	0.057	
91-20-3	Naphthalene	1.1	0.28	0.27	0.053	0.052	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

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Client: Alaska Resources and Environmental Services, LLC
Client Sample ID: KL-TRIPBLANK
Client Project ID: K&L DISTRIBUTORS

ALS Project ID: P1602041
 ALS Sample ID: P1602041-009

Test Code: EPA TO-17
 Instrument ID: Markes ATD/Agilent 5975Cinert/7890A/MS18
 Analyst: Chris Parnell/Rui Malinowski
 Sampling Media: TD Carbo 300 Sorbent Tube
 Test Notes:

Date Collected: 4/16/16
 Date Received: 4/19/16
 Date Analyzed: 4/26/16
 Volume(s) Analyzed: NA Liter(s)

CAS #	Compound	Result ng/Tube	Result µg/m ³	MRL µg/m ³	Result ppbV	MRL ppbV	Data Qualifier
71-43-2	Benzene	< 2.3	NA	NA	NA	NA	
108-88-3	Toluene	< 1.1	NA	NA	NA	NA	
100-41-4	Ethylbenzene	< 1.1	NA	NA	NA	NA	
179601-23-1	m,p-Xylenes	< 2.1	NA	NA	NA	NA	
95-47-6	o-Xylene	< 1.0	NA	NA	NA	NA	
91-20-3	Naphthalene	< 1.1	NA	NA	NA	NA	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

NA = Not applicable.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Page 1 of 1

Client: Alaska Resources and Environmental Services, LLC

Client Sample ID: Method Blank

Client Project ID: K&L DISTRIBUTORS

ALS Project ID: P1602041

ALS Sample ID: P160426-MB

Test Code: EPA TO-17

Date Collected: NA

Instrument ID: Markes ATD/Agilent 5975Cinert/7890A/MS18

Date Received: NA

Analyst: Chris Parnell/Rui Malinowski

Date Analyzed: 4/26/16

Sampling Media: TD Carbo 300 Sorbent Tube

Volume(s) Analyzed: NA Liter(s)

Test Notes:

CAS #	Compound	Result ng/Tube	Result µg/m ³	MRL µg/m ³	Result ppbV	MRL ppbV	Data Qualifier
71-43-2	Benzene	< 2.3	NA	NA	NA	NA	
108-88-3	Toluene	< 1.1	NA	NA	NA	NA	
100-41-4	Ethylbenzene	< 1.1	NA	NA	NA	NA	
179601-23-1	m,p-Xylenes	< 2.1	NA	NA	NA	NA	
95-47-6	o-Xylene	< 1.0	NA	NA	NA	NA	
91-20-3	Naphthalene	< 1.1	NA	NA	NA	NA	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

NA = Not applicable.

ALS ENVIRONMENTAL

SURROGATE SPIKE RECOVERY RESULTS

Page 1 of 1

Client: Alaska Resources and Environmental Services, LLC
Client Project ID: K&L DISTRIBUTORS

ALS Project ID: P1602041

Test Code: EPA TO-17
 Instrument ID: Markes ATD/Agilent 5975Cinert/7890A/MS18
 Analyst: Chris Parnell/Rui Malinowski
 Sampling Media: TD Carbo 300 Sorbent Tube(s)
 Test Notes:

Date(s) Collected: 4/16/16
 Date(s) Received: 4/19/16
 Date(s) Analyzed: 4/26 - 4/27/16

Client Sample ID	ALS Sample ID	1,2-Dichloroethane-d4		Toluene-d8		Bromofluorobenzene		Data Qualifier
		% Recovered	Acceptance Limits	% Recovered	Acceptance Limits	% Recovered	Acceptance Limits	
Method Blank	P160426-MB	94	70-140	99	70-140	103	70-140	
Lab Control Sample	P160426-LCS	101	70-140	99	70-140	103	70-140	
Duplicate Lab Control Sample	P160426-DLCS	97	70-140	99	70-140	103	70-140	
KL-0416-01	P1602041-001	93	70-140	98	70-140	106	70-140	
KL-0416-02	P1602041-002	93	70-140	99	70-140	105	70-140	
KL-0416-03	P1602041-003	91	70-140	98	70-140	104	70-140	
KL-0416-04	P1602041-004	91	70-140	99	70-140	105	70-140	
KL-0416-05	P1602041-005	93	70-140	99	70-140	104	70-140	
KL-0416-06	P1602041-006	91	70-140	98	70-140	103	70-140	
KL-0416-07	P1602041-007	100	70-140	98	70-140	102	70-140	
KL-0416-08	P1602041-008	92	70-140	98	70-140	102	70-140	
KL-TRIPBLANK	P1602041-009	93	70-140	99	70-140	106	70-140	

ALS ENVIRONMENTAL

LABORATORY CONTROL SAMPLE / DUPLICATE LABORATORY CONTROL SAMPLE SUMMARY

Page 1 of 1

Client: Alaska Resources and Environmental Services, LLC
Client Sample ID: Duplicate Lab Control Sample
Client Project ID: K&L DISTRIBUTORS

ALS Project ID: P1602041
 ALS Sample ID: P160426-DLCS

Test Code: EPA TO-17
 Instrument ID: Markes ATD/Agilent 5975Cinert/7890A/MS18
 Analyst: Chris Parnell/Rui Malinowski
 Sampling Media: TD Carbo 300 Sorbent Tube
 Test Notes:

Date Collected: NA
 Date Received: NA
 Date Analyzed: 4/26/16
 Volume(s) Analyzed: NA Liter(s)

CAS #	Compound	Spike Amount		Result		% Recovery		ALS	RPD	RPD	Data
		LCS / DLCS	LCS	DLCS	LCS	DLCS	Acceptance	RPD			
		ng	ng	ng	LCS	DLCS	Limits	Limit	Qualifier		
71-43-2	Benzene	56.5	46.1	47.2	82	84	64-122	2	25		
108-88-3	Toluene	54.5	51.8	52.3	95	96	71-125	1	25		
100-41-4	Ethylbenzene	54.5	51.5	52.7	94	97	73-132	3	25		
179601-23-1	m,p-Xylenes	107	101	104	94	97	70-132	3	25		
95-47-6	o-Xylene	52.5	49.8	50.6	95	96	71-132	1	25		
91-20-3	Naphthalene	54.5	44.8	46.7	82	86	85-162	5	25	L	

L = Laboratory control sample recovery outside the specified limits, results may be biased low.

Laboratory Data Review Checklist for Air Samples

Completed by:	Dustin Stahl		
Title:	Project Manager / Environmental Specialist	Date:	05/20/2016
CS Report Name:	K&L Distributors	Report Date:	05/03/2016
Consultant Firm:	Alaska Resources and Environmental Services		
Laboratory Name:	ALS	Laboratory Report Number:	P1602041
ADEC File Number:	102.38.177	ADEC Haz ID:	

1. Laboratory

a. Did a NELAP certified laboratory receive and perform all of the submitted sample analyses?

Yes No NA (Please explain.) Comments:

b. If the samples were transferred to another "network" laboratory or sub-contracted to an alternate laboratory, was the laboratory performing the analyses NELAP approved?

Yes No NA (Please explain.) Comments:

The samples were not transferred.

2. Chain of Custody (COC)

a. COC information completed, signed, and dated (including released/received by)?

Yes No NA (Please explain.) Comments:

b. Correct analyses requested?

Yes No NA (Please explain.) Comments:

3. Laboratory Sample Receipt Documentation

a. Sample condition documented -Samples collected in gas tight, opaque/dark Summa canisters or other ADEC approved container? Canister vacuum/pressure checked, recorded upon receipt and contained no open valves?

Yes No NA (Please explain.) Comments:

TO-17 Sorbent tubes received in good condition.

b. If there were any discrepancies, were they documented? For example, incorrect sample containers/preservation, sample temperature outside of acceptable range, insufficient or missing samples, canister not holding a vacuum etc.?

Yes No NA (Please explain) Comments:

There were no discrepancies to report.

c. Data quality or usability affected? (Please explain.)

Yes No NA (Please explain) Comments:

See above.

4. Case Narrative

a. Present and understandable?

Yes No NA (Please explain) Comments:

b. Discrepancies, errors or QC failures identified by the lab?

Yes No NA (Please explain) Comments:

There were no discrepancies, errors, or QC failures discussed in the case narrative.

c. Were all corrective actions documented?

Yes No NA (Please explain) Comments:

See above

d. What is the effect on data quality/usability according to the case narrative?

Comments:

N/A see above.

5. Samples Results

a. Correct analyses performed/reported as requested on COC?

Yes No NA (Please explain) Comments:

b. Samples analyzed within 30 days of collection or within the time required by the method?

Yes No NA (Please explain) Comments:

c. Are the reported PQLs less than the Target Screening Level or the minimum required detection level for the project?

Yes No NA (Please explain) Comments:

d. Data quality or usability affected?

Comments:

N/A

6. QC Samples

a. Method Blank

i. One method blank reported per analysis and 20 samples?

Yes No NA (Please explain)

Comments:

ii. All method blank results less than PQL?

Yes No NA (Please explain)

Comments:

iii. If above PQL, what samples are affected?

Comments:

iv. Do the affected sample(s) have data flags and if so, are the data flags clearly defined?

Yes No NA (Please explain)

Comments:

All results are less than the PQL.

v. Data quality or usability affected? (Please explain.)

Comments:

N/A-See above.

b. Laboratory Control Sample/Duplicate (LCS/LCSD)

i. One LCS/LCSD or one LCS and a sample/sample duplicate pair reported per analysis and 20 samples?

Yes No NA (Please explain)

Comments:

ii. Accuracy - All percent recoveries (%R) reported and within method or laboratory limits? And project specified DQOs, if applicable.

Yes No NA (Please explain)

Comments:

LCS recovery for Napthalene was slightly below accepted limits. LCSD was within limits.

iii. Precision - All relative percent differences (RPD) reported and less than method or laboratory limits? And project specified DQOs, if applicable.

Yes No NA (Please explain)

Comments:

iv. If %R or RPD is outside of acceptable limits, what samples are affected?

Yes No NA (Please explain) Comments:

All sample results for Naphthalene may be biased low.

v. Do the affected sample(s) have data flags? If so, are the data flags clearly defined?

Yes No NA (Please explain) Comments:

See above.

vi. Data quality or usability affected? (Please explain.)

Comments:

Data quality is affected Naphthalene may be biased low.

c. Surrogates

i. Are surrogate recoveries reported for field, QC and laboratory samples?

Yes No NA (Please explain) Comments:

ii. Accuracy - All percent recoveries (%R) reported and within method or laboratory limits? And project specified DQOs, if applicable.

Yes No NA (Please explain) Comments:

iii. Do the sample results with failed surrogate recoveries have data flags? If so, are the data flags clearly defined?

Yes No NA (Please explain) Comments:

All %R were within limits.

iv. Data quality or usability affected? (Please explain.)

Comments:

d. Field Duplicate

i. One field duplicate submitted per analysis and 10 type (soil gas, indoor air etc.) samples?

Yes No NA (Please explain) Comments:

ii. Submitted blind to lab?

Yes No NA (Please explain) Comments:

iii. Precision - All relative percent differences (RPD) less than specified DQOs? (Recommended: 25 %)

$$\text{RPD (\%)} = \text{Absolute Value of: } \frac{(R_1 - R_2)}{((R_1 + R_2)/2)} \times 100$$

Where R_1 = Sample Concentration

R_2 = Field Duplicate Concentration

Yes No NA (Please explain)

Comments:

The calculable RPD's for duplicates collected as part of this investigation all exceeded the recommended range of <25% for air analysis. This was due to the use of separate pumps to collect the sample/ sample duplicate, because a split sample train to collect a sample/ sample duplicate from a single pump was not available. Variations in the pumps led to elevated RPD calculations for all analytes.

iv. Data quality or usability affected? (Please explain.)

Comments:

Data quality is affected, but data is still usable. Commercial Indoor Air Target levels were at least ten times greater than analytical results.

e. Field Blank (If not used explain why).

Yes No NA (Please explain)

Comments:

i. All results less than PQL?

Yes No NA (Please explain)

Comments:

ii. If above PQL, what samples are affected?

Comments:

iii. Data quality or usability affected? (Please explain.)

Comments:

7. Other Data Flags/Qualifiers

a. Defined and appropriate?

Yes No NA (Please explain)

Comments:

Reset Form

APPENDIX C

ADEC/DNR Well Record of Decommissioning Forms



Department of Natural Resources
Division of Mining, Land & Water
550 W 7th Ave., Suite 1020
Anchorage, AK 99501-3562
dnr.water.nps.state.ak.us



Department of Environmental Conservation
Division of Environmental Health, Drinking Water Program
555 Cordova Street
Anchorage, AK 99501
dec.state.ak.us/decwater/decwater.html#tab1400

State
Of
Alaska



Well Record of Decommissioning

This form is intended to convey information regarding the decommissioning of a water well as required by both DEC and DNR. Add additional datasheets as necessary.

Well Decommissioner or Contractor		Well and Owner Particulars	
Name: Dustin Stahl	Owner's name and address: Fairbanks Beer Holdings, LLC	Street: 945 Elizabeth St. Fairbanks, AK	Quarters:
Company: Alaska Resources and Environmental Services	Well location - Street & number:	0160 Aurora-Lementa Lot2 Block1 Bugeas Industrial Park	Datum: WGS84
Address: PO Box 80662	Well location - Subdivision, Lot & Block:		
(continued): Fairbanks, AK 99708	Meridian:	64° 51.196' N	Section:
Phone: 907-374-3226	GPS (to 5 places): Latitude:	147° 46.087' W	
Email: Dustin@ak-res.com	Well Name or Number: MW-3	Range:	

Please check all boxes that apply and provide all requested information. Do not check boxes that do not apply. **Note: Do not enter locational information for public water supplies - see note **, below.**

Details of Former Well		Former Well Description (Not required if original well log attached)	
Public water system? (see note **) Yes: No: <input checked="" type="checkbox"/>	Original Driller's Name: The Drilling Company	Well depth (ft bls): 15.0	Date of completion: 10.18.2013
If so, PWSID number:	Well Type	Static water (ft bls): 1.0.6	Flowing artesian? Yes: No: <input checked="" type="checkbox"/>
Single Family Domestic? Yes: No: <input checked="" type="checkbox"/>	Drilled? Yes: No: <input checked="" type="checkbox"/>	Bedrock (ft bls):	Flood prone site? Yes: No: <input checked="" type="checkbox"/>
Commercial/ Fishery? Yes: No: <input checked="" type="checkbox"/>	Driven? Yes: <input checked="" type="checkbox"/>	Screened? Yes: <input checked="" type="checkbox"/>	Well condition? Good: <input checked="" type="checkbox"/> Poor: <input type="checkbox"/>
Irrigation/Agricultural? Yes: No: <input checked="" type="checkbox"/>	Jetted? Yes: No: <input checked="" type="checkbox"/>	Perforated? Yes: No: <input checked="" type="checkbox"/>	Grouted? Yes: <input checked="" type="checkbox"/> No: <input type="checkbox"/>
Heating / Cooling? Yes: No: <input checked="" type="checkbox"/>	Dug? Yes: No: <input checked="" type="checkbox"/>	Well liner present? Yes: No: <input checked="" type="checkbox"/>	Well house? Yes: <input type="checkbox"/> No: <input checked="" type="checkbox"/>
	Unknown? Yes: No: <input checked="" type="checkbox"/>		

Decommissioning notes:		Reason for well decommissioning:	
Include notes regarding any deviations from state approved methods of decommissioning the well.		Monitoring Well - No longer needed	
Excavation and Fill Details		Casing cut below grade? Yes: <input checked="" type="checkbox"/> No: <input type="checkbox"/>	
Excavation Depth (ft)?	Type of fill used?	Casing fully removed? Yes: <input checked="" type="checkbox"/> No: <input type="checkbox"/>	Well disinfected prior to decommissioning? Yes: <input checked="" type="checkbox"/> No: <input type="checkbox"/>
Volume of fill (cu ft)?	# Bags of bentonite in casing < 0.2	Casing filled with bentonite? Yes: <input checked="" type="checkbox"/> No: <input type="checkbox"/>	Plumbing removed from casing? Yes: <input type="checkbox"/> No: <input checked="" type="checkbox"/>
		Casing welded closed? Yes: <input type="checkbox"/> No: <input checked="" type="checkbox"/>	Liner (if any) removed? Yes: <input type="checkbox"/> No: <input checked="" type="checkbox"/>
		Borehole refilled? Yes: <input type="checkbox"/> No: <input checked="" type="checkbox"/>	Electric wiring removed from site? Yes: <input type="checkbox"/> No: <input checked="" type="checkbox"/>
		Screened area filled with gravel? Yes: <input checked="" type="checkbox"/> No: <input type="checkbox"/>	Attached an original well log? Yes: <input type="checkbox"/> No: <input checked="" type="checkbox"/>
		Perforated area filled with gravel? Yes: <input type="checkbox"/> No: <input checked="" type="checkbox"/>	Well log listed at DNR? Yes: <input type="checkbox"/> No: <input checked="" type="checkbox"/>
		Excavated pit refilled? Yes: <input type="checkbox"/> No: <input checked="" type="checkbox"/>	Local authorities notified? Yes: <input checked="" type="checkbox"/> No: <input type="checkbox"/>
		Pit area mounded? Yes: <input type="checkbox"/> No: <input checked="" type="checkbox"/>	DEC notified of decommissioning? Yes: <input checked="" type="checkbox"/> No: <input type="checkbox"/>
			DNR notified of decommissioning? Yes: <input type="checkbox"/> No: <input checked="" type="checkbox"/>

Owner: <i>Dustin Stahl</i>	Decommissioner/Contractor: <i>Dustin Stahl</i>
Date: 5 / 24 / 2016	Date: 05 / 24 / 2016

Signatures (* are required)**

1) Deliver this form to DNR and DEC within 45 days of decommissioning, as per state regulations 11 AAC 93.140.
 2) Attach an original water well log, if available. A blank water well log form is available for use if the lithology and well construction details are known but the original water well log is missing.
 3) Attach any maintenance or water usage records that may apply to this well and provide an adequate locational description, including maps or sketches. Use additional pages as needed.
 4) This form is under development and is subject to change. Please submit suggestions for changes or improvements to either DNR or DEC at the addresses listed above.



Department of Natural Resources
Division of Mining, Land & Water
550 w 7th Ave., Suite 1020
Anchorage, AK 99501-3562
dml.water.reports@alaska.gov



Department of Environmental Conservation
Division of Environmental Health, Drinking Water Program
555 Cordova Street
Anchorage, AK 99501
deceh.drinkingwater.reports@alaska.gov



Well Record of Decommissioning

This form is intended to convey information regarding the decommissioning of a water well as required by both DEC and DNR. Add additional datasheets as necessary.

Well Decommissioner or Contractor		Well and Owner Particulars	
Name: Dustin Stahl	Owner's name and address: Fairbanks Beer Holdings, LLC	Well location - Street & number: 945 Elizabeth St., Fairbanks, AK	Quarters: WGS84
Company: Alaska Resources and Environmental Services	Well location - Subdivision, Lot & Block: 0160 Aurora-Lementa Lot2 Block1 Burgess Industrial Park	Mendian: Township: Range: Section:	Datum: WGS84
Address: PO Box 80662	GPS (to 5 places): Latitude: 64° 51.186 'N Longitude: 147° 46.083 'W	Well Name or Number: MW-2	
(continued): Fairbanks, AK 99708			
Phone: 907-374-3226			
Email: Dustin@ak-res.com			

Please check all boxes that apply and provide all requested information. Do not check boxes that do not apply.

Details of Former Well

Public water system? (See note **) Yes: No:

If so, PWSID number: _____

Original Driller's Name: The Drilling Company

Well Type	Drilled? Yes: <input checked="" type="checkbox"/> No: <input checked="" type="checkbox"/>	Finish	Cased? Yes: <input checked="" type="checkbox"/> No: <input checked="" type="checkbox"/>	No: <input checked="" type="checkbox"/>	Well depth (ft bsl): 17.0	Date of completion: 10/18/2013
Single Family Domestic?	Yes: <input checked="" type="checkbox"/> No: <input checked="" type="checkbox"/>		Capped? Yes: <input checked="" type="checkbox"/> No: <input checked="" type="checkbox"/>		Static water (ft bsl): 11.0	Flowing artesian? Yes: <input checked="" type="checkbox"/> No: <input checked="" type="checkbox"/>
Commercial/Fishery?	Yes: <input checked="" type="checkbox"/> No: <input checked="" type="checkbox"/>		Screened? Yes: <input checked="" type="checkbox"/> No: <input checked="" type="checkbox"/>		Bedrock (ft bsl): N/A	Flood prone site? Yes: <input checked="" type="checkbox"/> No: <input checked="" type="checkbox"/>
Irrigation/Agricultural?	Yes: <input checked="" type="checkbox"/> No: <input checked="" type="checkbox"/>		Perforated? Yes: <input checked="" type="checkbox"/> No: <input checked="" type="checkbox"/>		Casing type: PVC	Well condition? Good: <input checked="" type="checkbox"/> Poor: <input checked="" type="checkbox"/>
Heating / Cooling?	Yes: <input checked="" type="checkbox"/> No: <input checked="" type="checkbox"/>		Well liner present? Yes: <input checked="" type="checkbox"/> No: <input checked="" type="checkbox"/>		Diameter (inches): 1"	Grouted? Yes: <input checked="" type="checkbox"/> No: <input checked="" type="checkbox"/>
					Stickup (ft): 0	Well house? Yes: <input checked="" type="checkbox"/> No: <input checked="" type="checkbox"/>

Former Well Description (Not required if original well log attached):

Decommissioning notes:

Public Water System decommissioning may require additional documentation, please contact DEC in this regard.

Reason for well decommissioning:

Monitoring well - No longer needed	Casing cut below grade? Yes: <input checked="" type="checkbox"/> No: <input checked="" type="checkbox"/>	Well disinfected prior to decommissioning? Yes: <input checked="" type="checkbox"/> No: <input checked="" type="checkbox"/>
	Casing fully removed? Yes: <input checked="" type="checkbox"/> No: <input checked="" type="checkbox"/>	Plumbing removed from casing? Yes: <input checked="" type="checkbox"/> No: <input checked="" type="checkbox"/>
	Casing filled with bentonite? Yes: <input checked="" type="checkbox"/> No: <input checked="" type="checkbox"/>	Liner (if any) removed? Yes: <input checked="" type="checkbox"/> No: <input checked="" type="checkbox"/>
	Casing welded closed? Yes: <input checked="" type="checkbox"/> No: <input checked="" type="checkbox"/>	Electric wiring removed from site? Yes: <input checked="" type="checkbox"/> No: <input checked="" type="checkbox"/>
	Borehole refilled? Yes: <input checked="" type="checkbox"/> No: <input checked="" type="checkbox"/>	Attached an original well log? Yes: <input checked="" type="checkbox"/> No: <input checked="" type="checkbox"/>
	Screened area filled with gravel? Yes: <input checked="" type="checkbox"/> No: <input checked="" type="checkbox"/>	Well log listed at DNR? Yes: <input checked="" type="checkbox"/> No: <input checked="" type="checkbox"/>
	Perforated area filled with gravel? Yes: <input checked="" type="checkbox"/> No: <input checked="" type="checkbox"/>	Local authorities notified? Yes: <input checked="" type="checkbox"/> No: <input checked="" type="checkbox"/>
	Excavated pit refilled? Yes: <input checked="" type="checkbox"/> No: <input checked="" type="checkbox"/>	DEC notified of decommissioning? Yes: <input checked="" type="checkbox"/> No: <input checked="" type="checkbox"/>
	Pit area mounded? Yes: <input checked="" type="checkbox"/> No: <input checked="" type="checkbox"/>	DNR notified of decommissioning? Yes: <input checked="" type="checkbox"/> No: <input checked="" type="checkbox"/>

Excavation and Fill Details

Excavation Depth (ft): _____

Type of fill used? _____

Volume of fill (cu ft): _____

Bags of bentonite in casing? < 0.2

Decommissioning process

Decommissioner / Contractor: *Dustin Stahl* Date: 05/24/2016

Owner: *Dustin Stahl* Date: 05/24/2016

Signatures (* are required):**

Signature: _____ Date: _____

Signature: _____ Date: _____

Please attach schematics and photos to further document the information provided on this form. This is particularly important for public water supply wells and also any other wells that might impact the public water supply.

1) Deliver this form to DNR and DEC within 45 days of decommissioning as per state regulations 11 AAC 03.400.
2) Attach an original water well log, if available. A blank water well log form is available for use if the lithology and well construction details are known but the original water well log is missing.
3) Attach any maintenance or water usage records that may apply to this well and provide an adequate locational description, including maps or sketches. Use additional pages as needed.
4) This form is under development and is subject to change. Please submit suggestions for changes or improvements to either DNR or DEC at the addresses listed above.



Department of Natural Resources
Division of Mining, Land & Water
550 w 7th Ave., Suite 1020
Anchorage, AK 99501-3562
<http://www.dnr.state.ak.us>



Department of Environmental Conservation
Division of Environmental Health, Drinking Water Program
555 Cordova Street
Anchorage, AK 99501
dec.dh.drinkingwater@alaska.gov

State
Of
Alaska



Well Record of Decommissioning

This form is intended to convey information regarding the decommissioning of a water well as required by both DEC and DNR. Add additional datasheets as necessary.

Well Decommissioner or Contractor		Well and Owner Particulars	
Name: Dustin Stahl	Owner's name and address: Fairbanks Beer Holdings, LLC	Well location - Street and number: 945 Elizabeth St. Fairbanks, AK	Quarters: _____
Company: Alaska Resources and Environmental Services	Well location - Subdivision, Lot & Block: 0160 Aurora-Lementa Lot 2 Block 1 Burgess Industrial Park	Meridian: _____	Datum: WGS84
Address: PO Box 80662	(continued): Fairbanks, AK 99708	Range: _____	Section: _____
Phone: 907-374-3226	Meridian: _____	Longitude: 147° 46.037' W	
Email: Dustin@ak-res.com	Well Name or Number: MW-1		

Please check all boxes that apply and provide all requested information. Do not check boxes that do not apply. **Note: Do not enter locational information for public water supplies - see note 2, below.**

Details of Former Well		Former Well Description (Not required if original well log attached)	
Public water system? (See note 2) Yes: No: <input checked="" type="checkbox"/> No: <input checked="" type="checkbox"/>	Original Driller's Name: The Drilling Company	Well depth (ft bls): 20	Date of completion: 10.18.2013
If so, PWSID number: _____	Well Type	Static water (ft bls): 14.1	Flowing artesian? Yes: No: <input checked="" type="checkbox"/> No: <input checked="" type="checkbox"/>
Single Family Domestic? Yes: No: <input checked="" type="checkbox"/> No: <input checked="" type="checkbox"/>	Drilled? Yes: No: <input checked="" type="checkbox"/> No: <input checked="" type="checkbox"/>	Bedrock (ft bls): _____	Flood prone site? Yes: No: <input checked="" type="checkbox"/> No: <input checked="" type="checkbox"/>
Commercial/ Fishery? Yes: No: <input checked="" type="checkbox"/> No: <input checked="" type="checkbox"/>	Driven? Yes: <input checked="" type="checkbox"/> No: <input checked="" type="checkbox"/>	Casing type: PVC	Well condition? Good: <input checked="" type="checkbox"/> Poor: <input checked="" type="checkbox"/>
Irrigation/Agricultural? Yes: No: <input checked="" type="checkbox"/> No: <input checked="" type="checkbox"/>	Jetted? Yes: No: <input checked="" type="checkbox"/> No: <input checked="" type="checkbox"/>	Diameter (inches): 1"	Grouted? Yes: <input checked="" type="checkbox"/> No: <input checked="" type="checkbox"/>
Heating / Cooling? Yes: No: <input checked="" type="checkbox"/> No: <input checked="" type="checkbox"/>	Dug? Yes: No: <input checked="" type="checkbox"/> No: <input checked="" type="checkbox"/>	Stickup (ft): 0	Well house? Yes: No: <input checked="" type="checkbox"/> No: <input checked="" type="checkbox"/>
	Unknown? Yes: No: <input checked="" type="checkbox"/> No: <input checked="" type="checkbox"/>		

Decommissioning notes:		Decommissioning process	
Public Water System decommissioning may require additional documentation, please contact DEC in this regard.		Well disinfected prior to decommissioning? Yes: No: <input checked="" type="checkbox"/> No: <input checked="" type="checkbox"/>	
Reason for well decommissioning:		Plumbing removed from casing? Yes: No: <input checked="" type="checkbox"/> No: <input checked="" type="checkbox"/>	
Monitoring Well - No longer needed		Liner (if any) removed? Yes: No: <input checked="" type="checkbox"/> No: <input checked="" type="checkbox"/>	
Include notes regarding any deviations from state approved methods of decommissioning the well.		Electric wiring removed from site? Yes: No: <input checked="" type="checkbox"/> No: <input checked="" type="checkbox"/>	
Excavation and Fill Details		Attached an original well log? Yes: No: <input checked="" type="checkbox"/> No: <input checked="" type="checkbox"/>	
Excavation Depth (ft)? _____		Well log listed at DNR? Yes: No: <input checked="" type="checkbox"/> No: <input checked="" type="checkbox"/>	
Type of fill used? _____		Local authorities notified? Yes: <input checked="" type="checkbox"/> No: <input checked="" type="checkbox"/>	
Volume of fill (cu ft)? _____		DEC notified of decommissioning? Yes: <input checked="" type="checkbox"/> No: <input checked="" type="checkbox"/>	
# Bags of bentonite in casing? <0.2		DNR notified of decommissioning? Yes: No: <input checked="" type="checkbox"/> No: <input checked="" type="checkbox"/>	

Signatures (*** are required)	
Owner: <i>Dustin Stahl</i>	Decommissioner/Contractor: <i>Dustin Stahl</i>
Date: 5/24/2016	Date: 05/24/2016

Please attach schematics and photos to further document the information provided on this form. This is particularly important for public water supply wells and also any other wells that might impact the public water supply.

1) Deliver this form to DNR and DEC within 45 days of decommissioning as per state regulations 11 AAC 93.144.
2) Attach an original water well log, if available. A blank water well log form is available for use if the lithology and well construction details are known but the original water well log is missing.
3) Attach any maintenance or water usage records that may apply to this well and provide an adequate locational description, including maps or sketches. Use additional pages as needed.
4) This form is under development and is subject to change. Please submit suggestions for changes or improvements to either DNR or DEC at the address listed above.

APPENDIX D

ADEC Building Inventory and Indoor Air Sampling Questionnaire

ALASKA DEPARTMENT OF ENVIRONMENTAL CONSERVATION
BUILDING INVENTORY AND INDOOR AIR SAMPLING QUESTIONNAIRE

This form should be prepared by a person familiar with indoor air assessments with assistance from a person knowledgeable about the building. Complete this form for each building where interior samples (e.g., indoor air, crawl space, or slab soil gas samples) will be collected. Section I of this form should be used to assist in choosing an investigative strategy during workplan development. Section II should be used to assist in identification of complicating factors during a presampling building walk-through.

Preparer's Name DUSTIN STAHL Date/Time Prepared 04/04/2016 0800
Preparer's Affiliation ARES Phone No. 907 570 0316
Purpose of Investigation VAPOR INTRUSION SURVEY RELATED TO FORMER UST RELEASE

SECTION I: BUILDING INVENTORY

1. OCCUPANT OR BUILDING PERSONNEL:

Interviewed: Y / N

Last Name MINDHAM First Name SAM

Address 945 ELIZABETH STREET

City FAIRBANKS

Phone No. 907 456 - 2303

Number of Occupants/people at this location 40 Age of Occupants 21 - 64

2. OWNER or LANDLORD: (Check if same as occupant ____.)

Interviewed: Y / N

Last Name FAIRBANKS BEER HOLDINGS LLC First Name _____

Address PO BOX 9300

City RENTON WA

Phone No. _____

3. BUILDING CHARACTERISTICS

Type of Building: (Circle appropriate response.)

Residential
Industrial

School
Church

Commercial/Multi-use
Other _____

If the property is residential, what type? (Circle appropriate response.)

Ranch
Raised Ranch
Cape Cod
Duplex
Modular

2-Family
Split Level
Contemporary
Apartment House
Log Home

3-Family
Colonial
Mobile Home
Townhouse/Condo
Other WAREHOUSE w/ ATTACHED OFFICES

If multiple units, how many? _____

If the property is commercial, what type?

Business types(s) PACKAGED ALCOHOL DISTRIBUTION CENTER

Does it include residences (i.e., multi-use)? Y N If yes, how many? _____

Other characteristics:

Number of floors 2 ON NORTH 1/2 1 ON SOUTH HALF Building age 1975

Is the building insulated? Y N How airtight? Tight / Average / Not Tight

Have occupants noticed chemical odors in the building? Y N

If yes, please describe: NO FUEL/CHEMICAL ODOOR REPORTS

4. AIRFLOW

Use air current tubes, tracer smoke, or knowledge about the building to evaluate airflow patterns and qualitatively describe:

Airflow between floors

ALL OFFICES HAVE AIR RETURNS TO THE FORCED AIR BOILER.
AIR FROM GROUND FLOOR IS KEPT AT 50°F. SLIGHT STACK EFFECT FROM
GROUND FLOOR TO SECOND FLOOR VIA OPEN STAIRWELL

Airflow in building near suspected source

WAREHOUSE - LARGE OPEN AIR - GARAGE DOORS OPEN OFTEN, OVERHEAD HEATERS
WITH EXTERNAL AIR INTAKE (SLIGHT POSITIVE PRESSURE)

Outdoor air infiltration

OUT DOOR AIR ^{QAH} ~~ENTERS~~ AROUND SPACE / GAPS AROUND 4 WAREHOUSE GARAGE DOORS.
THESE ARE ALSO OPENED SEVERAL TIMES A DAY FOR DELIVERIES (TRUCKS OFF!)

Infiltration into air ducts

??
NOT EVALUATED

5. BASEMENT AND CONSTRUCTION CHARACTERISTICS (Circle all that apply.)

- a. Above-grade construction: wood frame log concrete brick STEEL FRAME/METAL SIDING
 constructed on pilings with enclosed air space constructed on pilings with open air space
- b. Basement type: full crawlspace slab-on-grade other NONE
- c. Basement floor: concrete dirt stone other NONE
- d. Basement floor: unsealed sealed sealed with N/A
- e. Foundation walls: poured block stone other _____
- f. Foundation walls: unsealed sealed sealed with ?
- g. The basement is: wet damp dry NONE
- h. The basement is: finished unfinished partially finished N/A
- i. Sump present? Y/N A FORMER DRAIN (NOW SEALED) EXISTS IN THE GROUND LEVEL WAREHOUSE FLOOR NEAR THE SOUTH END
- j. Water in sump? Y/N not applicable

Basement or lowest level depth below grade ENTIRE BUILDING IS ON GRADE NO BASEMENT (feet).

Identify potential soil vapor entry points and approximate size (e.g., cracks, utility ports, and drains).

SLAB HAS 3 PLUMBING PENETRATIONS, A SUMP W/A SEALED DRAIN, CONCRETE EXPANSION JOINTS, A FEW CRACKS, MANY 3/8-1/2" HOLES drilled in slab to mount racks that hold product

6. HEATING, VENTING, and AIR CONDITIONING (Circle all that apply.)

Type of heating system(s) used in this building: (Circle all that apply – not just primary.)

- Hot air circulation Heat pump Hot water baseboard
 Space heaters Stream radiation Radiant floor
 Electric baseboard Wood stove Outdoor wood boiler Other _____

The primary type of fuel used is:

- Natural gas Fuel oil Kerosene
 Electric Propane Solar
 Wood Coal

Domestic hot water tank is fueled by: _____

Boiler/furnace is located in: Basement Outdoors Main floor Other WAREHOUSE

Do any of the heating appliances have cold-air intakes? Y/N OFFICE HEATER + WAREHOUSE ROOF UNITS
 Type of air conditioning or ventilation used in this building: PULL AIR FROM COLD ROOF CAVITY VENTED TO OUTSIDE

- Central air Window units Open windows None
 Commercial HVAC Heat-recovery system Passive air system

Are there air distribution ducts present? Y/N WAREHOUSE HAS ELECTRIC A/C UNITS IN CEILING TO KEEP @ 50°F
 I-3 COLD chiller unit in Keg Room
 Keep @ 37°F

Describe the ventilation system in the building, its condition where visible, and the tightness of duct joints. Indicate the location of air supply and exhaust points on the floor plan.

EXHAUST, AND REPLY, FOR FURNACE ARE INSIDE CEILING
AND WALL + COULD NOT BE EVALUATED

Is there a radon mitigation system for the building/structure? Y N Date of Installation _____

Is the system active or passive? Active/Passive

7. OCCUPANCY

Is basement/lowest level occupied? Full-time Occasionally Seldom Almost never (NO BASEMENT)

Level	General Use of Each Floor (e.g., family room, bedroom, laundry, workshop, or storage).
Basement	<u>N/A</u>
1 st Floor	<u>6-10</u>
2 nd Floor	<u>20-30</u>
3 rd Floor	<u>N/A</u>

8. WATER AND SEWAGE

Water supply: Public water Drilled well Driven well Dug well Other _____
Sewage disposal: Public sewer Septic tank Leach field Dry well Other _____

9. FLOOR PLANS

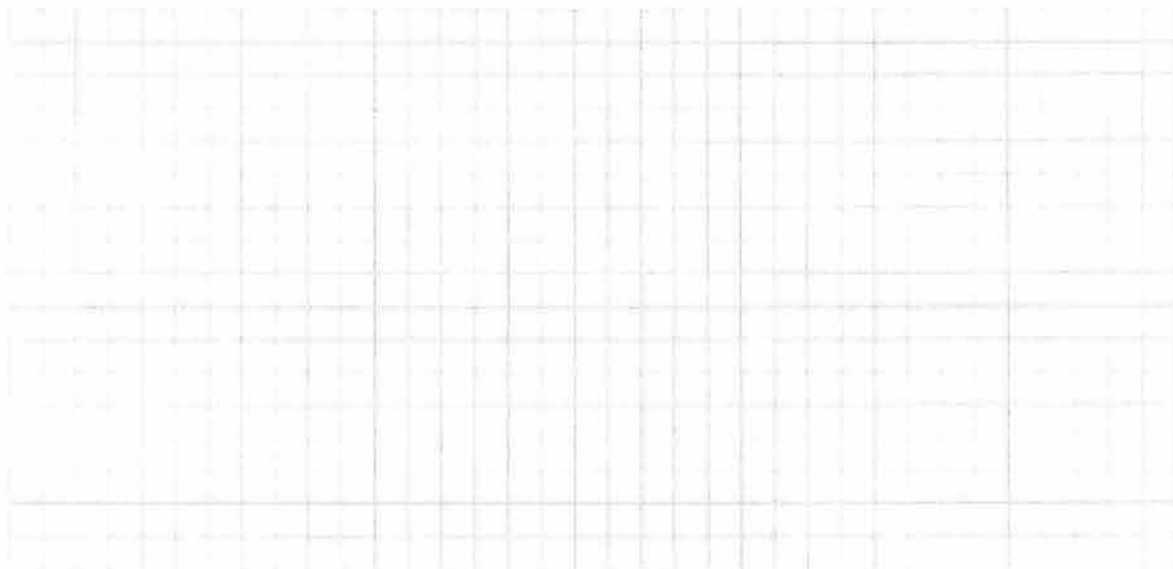
Draw a plan view sketch of the basement and first floor of the building. Indicate air sampling locations, possible indoor air pollution sources and PID meter readings. If the building does not have a basement, please note that.

Basement:

PLEASE SEE ATTACHED K+L PROVIDED FLOOR PLAN
WITH ARES PROPOSED SAMPLING LOCATIONS



First Floor:



10. OUTDOOR PLOT

Draw a sketch of the area surrounding the building being sampled. If applicable, provide information on spill locations, potential air contamination sources (e.g., industries, gas stations, repair shops, landfills, etc.), outdoor air sampling locations and PID meter readings.

Also indicate compass direction, wind direction and speed during sampling, the location of the well and septic system, if applicable, and a qualifying statement to help locate the site on a topographic map.

PLEASE SEE ATTACHED FLOOR PLAN W/
SOURCE AREA IDENTIFIED

SECTION II: INDOOR AIR SAMPLING QUESTIONNAIRE

This section should be completed during a presampling walk-through. If indoor air sources of COCs are identified and removed, consider ventilating the building prior to sampling. However, ventilation and heating systems should be operating normally for 24 hours prior to sampling.

a) 1. FACTORS THAT MAY INFLUENCE INDOOR AIR QUALITY

- Is there an attached garage? WAREHOUSE Y / N NO COMBUSTION ENGINES IN WAREHOUSE
- Does the garage have a separate heating unit? Y / N / NA ALL ELECTRIC LIFTS
- Are petroleum-powered machines or vehicles stored in the garage (e.g., lawnmower, ATV, or car)? Y / N / NA 3 OVERHEAD FORCED AIR
ON DELIVERY TRUCK OCCASIONALLY
 Please specify STORED IN WAREHOUSE
- Has the building ever had a fire? Y / N When? _____
- Is a kerosene or unvented gas space heater present? Y / N Where? _____
- Is there a workshop or hobby/craft area? Y / N Where and type SMALL TOOL ROOM
MIDDLE OF GROUND FLOOR
- Is there smoking in the building? Y / N How frequently? INDOOR SMOKING AREA NEXT
TO SOUTH WAREHOUSE EXIT
- Has painting/staining been done in the last six months? Y / N Where and when? _____
- Is there new carpet, drapes or other textiles? Y / N Where and when? _____
- Is there a kitchen exhaust fan? Y / N If yes, where is it vented? ROOF
- Is there a bathroom exhaust fan? Y / N If yes, where is it vented? ROOF
- Is there a clothes dryer? Y / N If yes, is it vented outside? Y / N

Are cleaning products, cosmetic products, or pesticides used that could interfere with indoor air sampling? Y / N

If yes, please describe CLEANING PRODUCTS STORED IN ENTRY WAY CLOSETS & UNDER
BATHROOM / KITCHEN SINKS. TOOL ROOM ON GROUND FLOOR HALLWAY
WITH WD-40, LUBRICATES, CLEANERS

Do any of the building occupants use solvents at work? Y / N

(For example, is the building used for chemical manufacturing or a laboratory, auto mechanic or auto body shop, painting shop, fuel oil delivery area, or do any of the occupants work as a boiler mechanic, pesticide applicator, or cosmetologist?)

If yes, what types of solvents are used? LUBRICANTS ON FORK LIFT / TRUCKS
STORED IN ADJACENT BUILDINGS

If yes, are his/her/their clothes washed at work? Y / N

Do any of the building occupants regularly use or work at a dry-cleaning service? (Circle appropriate response)

Yes, use dry cleaning regularly (weekly) No

Yes, use dry cleaning infrequently (monthly or less) Unknown

Yes, work at a dry cleaning services H/DA

KEY

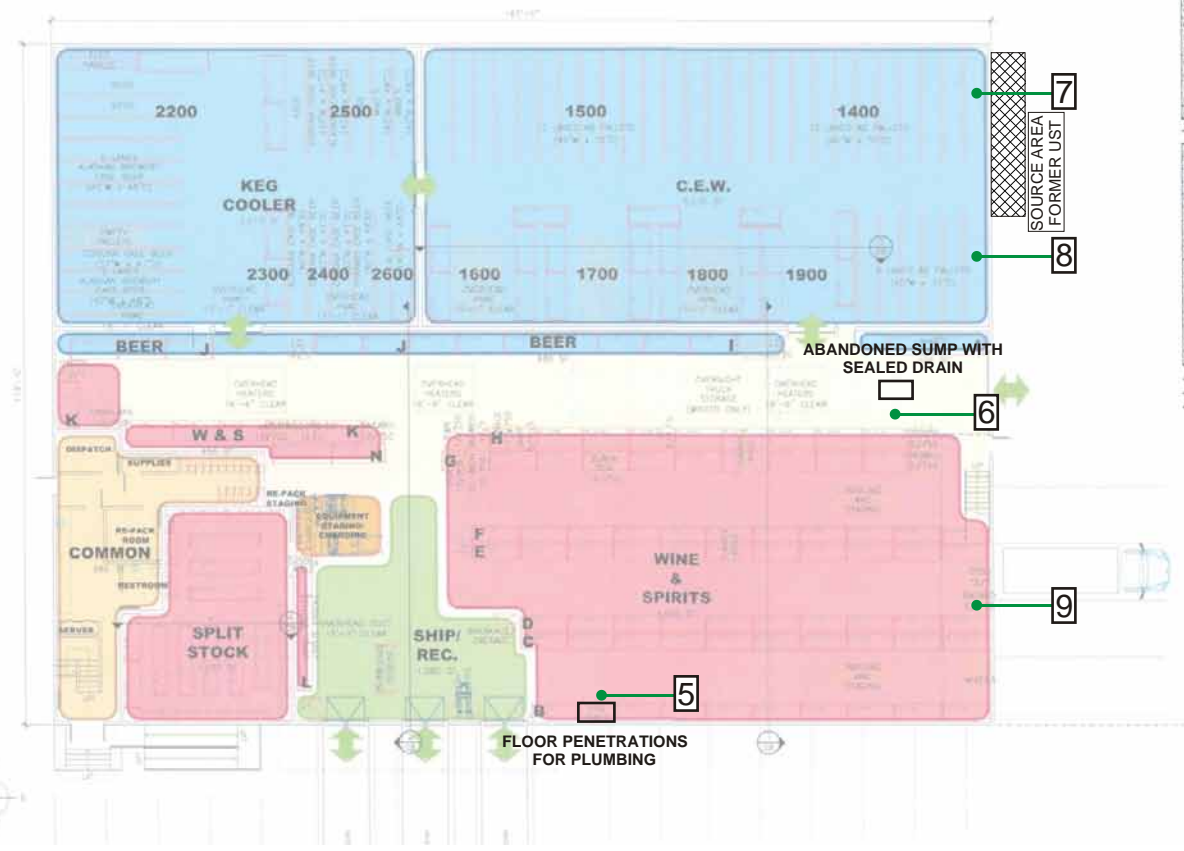


PROPOSED ANALYTICAL TO-17
AIR SAMPLE LOCATION

AREA SUMMARY

Main Facility Department	Sq. Ft.
BEER	
C.E.W.	3,000
Draft Cooler	3,215
Beer Storage	76
BEER Subtotal	6,071
WINE & SPIRITS	
Wine & Spirits Warehouse Rack	3,118
Wine & Spirits Split Stock	1,077
Wine & Spirits Mezzanine	318
Beer Storage Mezzanine	76
WINE & SPIRITS Subtotal	4,590
COMMON AREAS	
Barney's Changing	290
Electrical Room/Office	1,080
Common 1st Floor	385
Office 2nd Floor	1,890
Restroom Aesthetics	75
Lab/Storage	2,170
COMMON AREAS Subtotal	6,360
Main Facility Total Square Footage	17,091

ANNEX Department	Sq. Ft.
BEER	
PCN ANNEX	412
BEER Subtotal	412
WINE & SPIRITS	
Personal Wine & Spirits ANNEX	1,635
Finger Puller & Driveway ANNEX	508
Cape Paper Products ANNEX	331
WINE & SPIRITS Subtotal	2,374
COMMON AREAS	
Vehicle Storage ANNEX	3,170
Vehicle Maintenance ANNEX	474
Complex Design Mezz. ANNEX	327
Complex Design Storage ANNEX	76
Restroom ANNEX	75
Circulation	252
COMMON AREAS Subtotal	4,274
ANNEX Total Square Footage	7,817
Total Square Footage	25,234



Alaska Resources and Environmental Services, LLC
 284 Topside Fairbanks, AK 99701
 PH. (907) 374-3226
 FAX (907) 374-3219

1951 TOPOGRAPHICAL
 MAP
 FAIRBANKS, AK
 QUAD D-2



DATE: 04/05/16
 DRAWN: JDG
 SCALE IN FEET:

PROJECT: INDOOR AIR SAMPLING K & I
 DISTRIBUTERS,
 FAIRBANKS, AK



FIGURE
4

APPENDIX E

EPA Method TO-17 Sampling Protocol



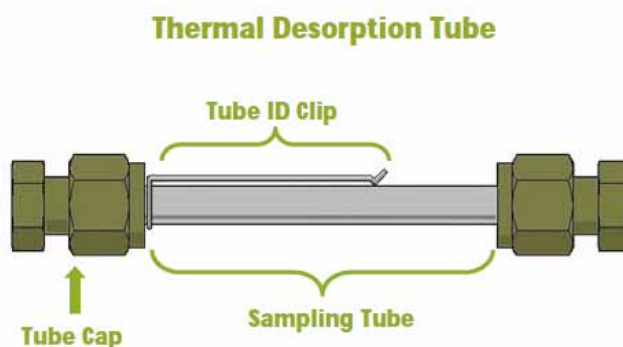
EPA Method TO-17

Volatile Organic Compounds by Thermal Desorption

EPA Method TO-17 is used for the sampling of volatile organic compounds in ambient air using a solid sorbent packed into a tube. The compounds are introduced into a gas chromatograph via thermal desorption where they are identified and quantified by mass spectrometry. Refer to the method for further details (<http://www.epa.gov/ttn/amtic/files/ambient/airtox/to-17ar.pdf>).

Equipment

1. Air sampling pump capable of sampling between 20-100 ml/min with the sampling medium in-line.
2. Airflow calibrator (ex., bubble meter, Bios DryCal flow meter, etc.)
3. Thermal desorption tube(s) – preconditioned from laboratory.
4. Field blank - A field blank should be included in the sampling event. Field blanks should be subjected to exactly the same handling as the samples (open, seal, and transport), except that no air is drawn through them.
5. Wrenches – Two adjustable wrenches, or one 9/16" and one 1/2" wrench.



Ambient and Indoor Sampling Guidelines

Time (minutes)	Flow Rate (mL/min)					
	20	40	50	60	80	100
5	100	200	250	300	400	500
10	200	400	500	600	800	1000
15	300	600	750	900	1200	1500
20	400	800	1000	1200	1600	2000
30	600	1200	1500	1800	2400	3000
60	1200	2400	3000	3600	4800	6000

- Sample volume (in mL) suitable for high ppb to mid ppb, i.e. odor investigations, industrial facilities
- Sample volume (in mL) suitable for mid ppb to low ppb, i.e. indoor environment where chemicals are present, low-level odor investigations
- Sample volume (in mL) suitable for low ppb to ppt, i.e. low-level indoor air (non-industrial/office), outdoor ambient

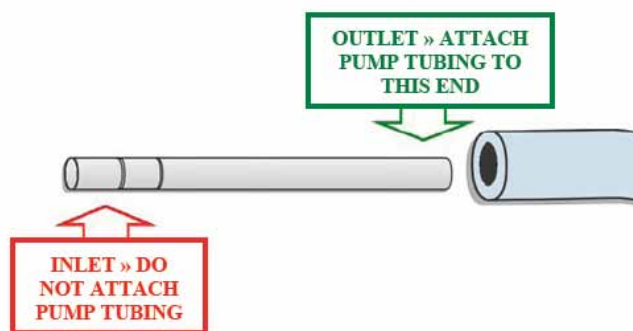
Consult with laboratory before developing a sampling plan to ensure usable results. **Do not exceed maximum recommended volume.** For other sources or applications, please consult with the laboratory to determine optimal flow rates and sampling intervals.

If Sampling Pump is Not Received Pre-calibrated:

1. Using an airflow calibrator, calibrate pump with representative media inline, following directions provided from vendor. Use the calibration tube provided from the lab. **Do not use a sample tube.**

Sampling with a Calibrated Pump:

1. Remove the sample tubes from the shipping container.
2. Record the serial number for the tube. **DO NOT write/scratch any additional information or put labels or tape on the tube.**
3. Using the adjustable wrenches (or one 9/16" and one 1/2" wrench), remove the caps from the ends of the tube. Do not remove the tube ID clip from the tube.
4. Locate the end of the sampling tube with the grooved ring(s). This is the INLET, the end through which the sample air will be drawn.
5. Place the other end (the OUTLET) of the sorbent tube into the tubing attached to the sampling pump.
6. Set up the sampling tube in the sampling location.
7. Turn the pump on and note the starting time and date.
8. If collecting a field blank, uncap the field blank tube to expose it to field conditions, and then immediately reseal the tube. Place the field blank tube back in the storage container.
9. Sample at the calibrated flow rate for the recommended period of time. **Do not exceed maximum recommended application volume.**
10. At the end of the sampling period, record the final sampling time and turn off the pump.
11. Disconnect the sorbent tube from the pump and re-cap both ends using the original fittings. Tighten each cap only 1/4 turn past "finger tight". **Do not overtighten. Overtightening may damage the tube and hinder analysis.**
12. Place the capped tubes in the plastic shipping case and then put the encased tube in the corresponding plastic bag labeled with sample information (provided).



Storage and Shipping Instructions

1. Carefully pack sample tubes and field blank in a cooler containing frozen blue ice packs. Be sure to include all pertinent information (e.g. sample identification, sampling date, time and sample volume, etc.,) on the Chain of Custody form.
2. Ship the cooler to the laboratory using an overnight courier service (FedEx, UPS, etc.). If unable to ship the samples back to the laboratory that day, store the samples in sealed containers at 4° C.



For more information, scan the QR code or visit

www.alsglobal.com/environmental/services/north-america-environmental-services/air-quality-testing-services.aspx



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