December 9, 2005

Ms. Monica English Alaska Dept. of Environmental Conservation Contaminated Sites Program 43335 Kalifornsky Beach Rd, Suite 11 Soldotna, Alaska 99669

### Subject: Kenai Airport Fuel Service, Spill #90230026801 at UST Facility ID #2187 October 2005 Remedial Action Monitoring Report

Dear Ms. English,

On behalf of Dan Pitts and Dean Eichholz, I am enclosing the subject letter report for your review and comment. Please return comments to Dan Pitts or Dean Eichholz.

Groundwater monitoring was conducted at the KAFS site on October 26, 2005. The enclosed letter report provides details of remedial action during 2005. The monitoring event was conducted in accordance with the Remedial Action Work Plan developed for the site in 2004.

The treatment system was inspected on October 26, 2005. The AS system was still operating as designed and airflow rates through the system were about 35 standard cubic feet per minute (SCFM). The SVE system was operating effectively and tests at MP-1 and MP-4 showed that the system is generating vacuum within the treatment area and removing air that is being injected into the treatment zone by the AS blowers.

Sincerely,

Mark Prieksat, Ph.D.

cc: Dan Pitts, Dean Eichholz

## October 2005 Remedial Action Monitoring Report Kenai Airport Fuel Service, Spill #90230026801 at UST Facility ID #2187

## **Remedial Action - Air Sparging (AS)**

A system evaluation was completed during May 2005. The study evaluated the effectiveness of the existing AS wells and blower system. Pressure tests were conducted on each well to determine the cause of low airflow into the treatment zone. Data from the pressure tests indicated that regardless of the pressure applied, the wells would not allow adequate airflow into the soil. As a result, the stainless-steel drive points were pulled and replaced with conventional augured air sparging wells. Hughes Drilling replaced the AS wells on June 6 and 7, 2005. The air supply piping was reconnected on June 10, 2005 and the air sparging system brought back online. The AS system operated continuously from June 10, 2005 until November 15, 2005, when it was shut down due to frozen soil conditions.

Air flow and system pressure was checked on June 10, 2005. Air flow through the system was 37 standard cubic feet per minute (SCFM) at a pressure of about 3 pounds per square inch (PSI). The system injected roughly 6 SCFM through each of the 6 wells installed into the treatment zone. The system operated within the required temperature range of the blowers and did not overheat during the test period.

## **Remedial Action – Soil Vapor Extraction (SVE)**

The SVE system was turned on April 23, 2005 and operated until November 15, 2005. The system operated throughout the entire treatment cycle and did not require any maintenance. Soil vacuum measurements were recorded at MP-1, MP-3, and MP-4 on June 10, 2005. Soil vacuum measurements were 3.4, 3.1, and 2.9 inches of water column vacuum, respectively. These measurements are consistent with measurements taken throughout the 2004 operating season. Soil vacuum measurements indicated that the SVE system was working as designed and extracting soil gas from the treatment area.

## **Remedial Action - Groundwater Monitoring**

Groundwater samples were collected from the KAFS site on October 26, 2005. Water samples were collected from 5 existing monitor wells located at the site. The wells sampled during this event were MW-1, MW-6, MW-9, MW-12, and MW-13. The static water levels in the wells were measured prior to collection of groundwater samples. Static water levels were measured as the distance from the top of the PVC well riser to the groundwater surface. Groundwater elevations were also measured at MW-4 and MW-8. Measured elevations were 93.62 and 91.08, respectively.

Each groundwater well was purged prior to sampling by pumping water the well until the water was clear and free of sediment. At least 3 well volumes were removed from each well prior to sample collection. A portable Johnson-Keck low-flow pump was used to purge each well. Groundwater samples were collected after the wells had been purged.

## **Analytical Results**

Groundwater samples collected from wells at the site were taken to Analytica Alaska for testing to determine the presence of BTEX by EPA method 8021B and GRO by method AK101. Analytical results are presented in the following tables and results are reported in mg/l or ppm. Shaded cells indicate concentrations that exceed the cleanup levels listed in Table C of 18AAC75.345. The analytical laboratory data sheets are included in Appendix A and the back of the report.

**MW-1:** Analytical results from the October 2005 sampling event indicate that the levels of all the fuel constituents had decreased dramatically. Benzene concentration in groundwater is greater than the cleanup standard, but has dropped significantly. Groundwater collected from this location in 2004 had a noticeable odor, which was not detected during the October 2005 sampling event.

Sample ID#	Date	SWL	GRO	Benz	Tol	E-Benz	Xylenes	EDB
KA-42	8/03/94	90.8	NA	64.2	62.7	2.46	11.6	NA
KAFS-99-2	6/16/99	91.5	79	12.6	21.5	1.45	7.1	0.010000
KAFS-99-21W	9/13/99	91.6	3.4	0.5	0.7	0.13	0.4	NA
KAFS-99-24W	11/29/99	91.6	64	12.8	12.1	0.06	2.5	NA
KAFS-00-32W	7/06/00	91.6	200	32.4	45.5	2.64	12.7	NA
KAFS-00-38	12/13/00	91.1	170	34.6	45.2	2.14	10.1	NA
No ID #	5/30/02	91.3	NS	NS	NS	NS	NS	NS
KAFS-02-13	10/31/02	92.6	0.5	0.054	0.07	0.01	0.04	0.000022
KAFS-03-07	8/06/03	91.0	157	28.2	48.3	3.58	17.2	NA
KAFS91104W-1	9/11/04	91.0	137	16.5	37	2.41	8.97	NS
KAFS20051026M	10/26/05	92.04	U	0.031	0.029	0.011	0.048	NS
WSW05								
Clea	nup Level		1.3	0.005	1.00	0.70	10.0	0.000050

 Table 1 – Groundwater Analytical Results for MW-1

(results are reported in mg/l or ppm)

**MW-6:** Analytical results from the October 2005 sampling event indicate that the levels of all the fuel constituents had decreased dramatically. Benzene concentration in groundwater is only slightly greater than the cleanup level at this location. All other analytes were either not detected or were detected at levels less than cleanup standards. Groundwater collected from this location in 2004 had a noticeable odor, which was not detected during the October 2005 sampling event.

Table 2 – Groundwater A	Analytical Results for MW-6
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Sample ID#	Date	SWL	GRO	Benz	Tol	E-Benz	Xylenes	EDB
KAFS-99-25W	11/29/99	91.6	75	11.2	14.7	1.08	4.5	NA
KAFS-00-32W	7/06/00	91.1	55	9.41	12.1	0.79	3.2	NA
KAFS-00-37	12/13/00	91.1	163	30.2	41.5	2.57	11.5	NA
Not sampled	5/30/02	91.3	NS	NS	NS	NS	NS	NS
KAFS-02-14	10/31/02	92.6	0.1	0.003	0.002U	0.004	0.018	0.00002U
KAFS-03-08	8/06/03	90.9	94.9	22.2	30.2	2.63	11.6	0.00150
KAFS91104W-6	9/11/04	91.0	136	21.2	35.1	2.05	6.11	NS
KAFS20051026MW SW04	10/26/05	92.01	Ū	0.0055	0.0099	U	0.013	NS
Cleanup Level			1.3	0.005	1.00	0.70	10.0	0.000050

(results are reported in mg/l or ppm)

**MW-9:** MW-9 was installed in 2002. Analytical test results indicate most of the contamination levels have declined since the well was installed. The 2004 sample results indicated that benzene levels had declined and were near cleanup levels. The October 2005 results indicate that the benzene level increased slightly and still exceeded the cleanup standard. All other analytes were less than cleanup levels.

Sample ID#	Date	SWL	GRO	Benz	Tol	E-Benz	Xylenes	EDB
KAFS-02-06	5/30/02	90.2	29.1	5.48	6.92	0.38	0.8	0.000069
KAFS-02-10	10/31/02	91.6	5.1	0.74	0.85	0.90	0.3	0.000186
KAFS-03-09	8/06/03	90.2	0.14	0.042	0.006	0.014	0.021	0.000034
KAFS91104W-9	9/11/04	90.1	U	0.0232	U	U	0.00507	NS
KAFS20051026M WSW01	10/26/05	91.32	0.360	0.1	0.0016	0.0084	0.020	NS
Clea	anup Level		1.3	0.005	1.00	0.70	10.0	0.000050

Table 3 - Groundwater Analytical Results for MW-9

(results are reported in mg/l or ppm)

**MW-12:** MW-12 was installed in 2004 during initial testing for installation of the treatment system. Analytical test results from the April 2004 monitoring event show that benzene, toluene, and GRO were detected at concentrations greater than cleanup levels. Results from the September 2004 sampling event indicate that none of the analytes were detected at concentrations exceeding cleanup levels. However, sampling conducted in October 2005 showed that the concentration of GRO, benzene, toluene, and ethylbenzene all exceeded cleanup standards and had increased significantly since the initial sampling in April 2004.

 Table 4 - Groundwater Analytical Results at MW-12

Sample ID#	Date	SWL	GRO	Benz	Tol	E-Benz	Xylenes	EDB
KAFS-04-05W	4/11/04	92.6	71	3.19	14.8	υ	4.48	NS
KAFS91104W-12	9/11/04	91.4	U	0.0006083	U	U	U	NS
KAFS20051026M WSW03	10/26/05	93.3	130	3.9	28	1.5	9.8	NS
Clea	anup Level		1.3	0.005	1.00	0.70	10.0	0.000050

(results are reported in mg/l or ppm)

**MW-13:** MW-13 was installed in 2004 during initial testing for installation of the treatment system. Analytical test results from the April 2004 monitoring event show that none of the fuel constituents were detected at concentrations greater than cleanup levels. Results from the October 2005 sampling event confirm that fuel contamination, while present, remains at levels less than cleanup standards.

## Table 4 - Groundwater Analytical Results at MW-13

Sample ID#	Date	SWL	GRO	Benz	Tol	E-Benz	Xylenes	EDB
KAFS-04-06W	4/14/04	91.06	0.285	0.000562	U	U	U	NS
MW13 GW								
KAFS20051026M	10/26/05	93.3	0.120	0.0013	U	U	U	NS
WSW02								
Cleanup Level			1.3	0.005	1.00	0.70	10.0	0.000050

(results are reported in mg/l or ppm)

## **Interpretation of Groundwater Monitoring Results**

Groundwater elevations were used to generate a contour map of the site shown in Figure 1. Although the groundwater level was higher than previous years, the groundwater elevations measured as part of this sampling event were consistent with previous results. The direction of flow was south towards the Kenai Airport Terminal and MW-9. This is also consistent with results from the last sampling event. Overall, the gradient remained consistent at 0.0025 ft/ft when measured across the site.

The data indicates that contaminant levels have dropped in the area located to the north of the evaporation pond. Results from MW-1 and MW-6 indicate that the levels of all contaminants have decreased dramatically since 2004. This is likely a function of treatment in the up gradient area. The AS system was brought online in June 2005 and appears to be functioning as designed to remove contaminants from groundwater at the site. The fuel odor detected when MW-1 and MW-6 were sampled in 2004 was not present during the 2005 sampling event and is good indicator that the treatment system is operating effectively.

Contaminant levels at MW-12 have increased significantly since August 2004 and are greater than the initial levels measured during installation of the well. This is likely the result of fuel releases in the immediate area around MW-12. The groundwater gradient at the site indicates that water would not flow from the original tank site location into the area at MW-12. Thus, contaminants detected in that area would have been released in that same general area. The ratio of xylene and toluene are relatively high compared to that of benzene, indicating a more recent fuel release. The September 2004 Remedial Action Report provided credible evidence that fuel releases continue to be a problem at this site, due to the actions of current fueling system owners and tenants.

Groundwater contaminant levels at MW-9 have increased slightly but seem to be consistent with results of previous sampling events. Contaminant levels at MW-13 have been consistently below cleanup standards since the well was installed in 2004.

## **Conclusions and Recommendations**

The 2005 sampling results provide a positive indication that the treatment system is effectively remediating the site. The area around MW-12 remains problematic, but is within the treatment zone. Further treatment should effectively eliminate the fuel contaminant source and result in decreases in contaminant levels in groundwater at the site.

The following are recommendations for further treatment at the site:

 Bring the entire treatment system online during late March or early April 2006. The timing will ultimately be dictated by frost or frozen soil conditions. Whenever conditions indicate that the soil has thawed enough to allow airflow through the SVE system, then the entire system can be operated. It is not advised to operate the AS system without operating the SVE system to remove the injected air volume. Operating the AS system alone could result in vapor intrusion into structures at the site.

- 2) Inject an oxygen releasing compound (ORC) into MW-12 to attempt to strip contaminants from groundwater in that area. The SVE system will eventually strip contaminants from soil in the area around MW-12, but groundwater contamination remains a problem. The ORC should allow groundwater treatment in a zone not affected by the current AS system.
- 3) Discontinue monitoring at MW-13 for the current time. The well would be monitoring during site closure activities to ensure that contaminant levels in that area remain less than cleanup standards.

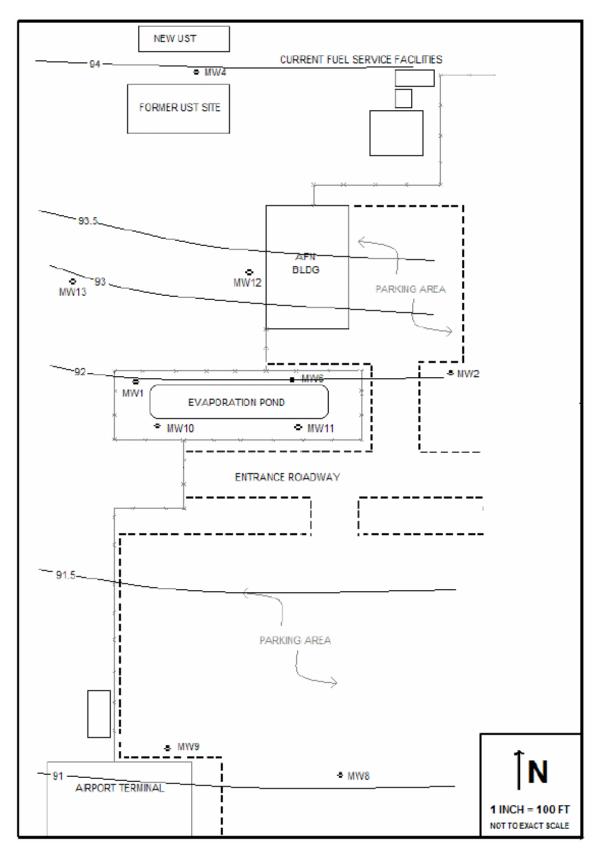


Figure 1: Groundwater Elevation Contour Plot for KAFS Site - October 2005.

Kenai Airport Fuel Service, Spill #90230026801 at UST Facility ID #2187 - October 2005 Remedial Action Monitoring Report

# Appendix A – Analytical Laboratory Data Sheets



11/18/2005 Mark Prieksat 2726 Holly Place Fort Collins, CO 80526 Attn: Mark Prieksat

Work Order #: A0510295 Date: 11/18/2005 Work ID: KAFS Date Received: 10/28/2005

#### Sample Identification

Lab Sample Number	Client Description	Lab Sample Number	Client Description
A0510295-01	KAFS20051026MWSW01	A0510295-02	KAFS20051026MWSW02
A0510295-03	KAFS20051026MWSW03	A0510295-04	KAFS20051026MWSW04
A0510295-05	KAFS20051026MWSW05		

Enclosed are the analytical results for the submitted sample(s). Please review the CASE NARRATIVE for a discussion of any data and/or quality control issues. Listings of data qualifiers, analytical codes, key dates, and QC relationships are provided at the end of the report.

Sincerely,

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Joe Egry Project Manager

"The Science of Analysis, The Art of Service"

#### **Case Narrative**

Analytica Alaska Inc. Work Order: A0510295

Samples were prepared and analyzed according to EPA or equivalent methods outlined in the following references:

Method AK101 For the Determination of Gasoline Range Organics, Revision 3.0, 01/31/96.

Test Methods for Evaluating Solid Waste, USEPA SW-846, Third Edition, Revision 4, December 1996.

REVIEW FOR COMPLIANCE WITH ANALYTICA QA PLAN A summary of our review is shown below, organized by test:

SAMPLE RECEIPT: Five (5) samples were received at a temperature of 2.4 deg C at Analytica-Anchorage on 10/28/2005 8:21:00 AM.

The samples were transferred for analysis at Analytica Environmental Laboratories (AEL); 12189 Pennsylvania St. Thornton, CO 80241 where they were received at a temperature of 1.4°C in good condition and in order per chain of custody with the following exceptions. Sample KAFS20051026MWSW01 (A0510295-01A) was received with two of the three vials broken. Sample KAFS20051026MWSW03 (A0510295-03A) had head space in all vials.

Test Method: ADEC AK101 - GRO - Aqueous

HOLDING TIMES: Holding times were met for this Test

SAMPLE PREPARATION ISSUES AND OBSERVATIONS: There were no unusual observations.

INSTRUMENT PERFORMANCE CHECKS: Instrument checks were within method criteria.

INITIAL CALIBRATIONS: Initial calibrations were within method criteria.

OPENING CONTINUING CALIBRATIONS: Opening continuing calibrations were within method criteria.

CLOSING CONTINUING CALIBRATIONS: Closing continuing calibrations were within method criteria or not applicable.

INTERNAL STANDARD AREAS: There were no Internal Standard outliers.

SURROGATE RECOVERIES: The p-Bromofluorobenzene surrogate is outside of control windows in the samples shown

below. This is a field spike, and is not controlled by the laboratory systems. The high recovery of this surrogate may indicate a matrix effect.

Sample LabID Surrogate Recovery LCL UCL

## **Case Narrative**

				Analytica Alaska Inc. Work Order: A0510295 (continued)					
	20051026MWS 20051026MWS			p-Bromofluoroben p-Bromofluoroben		134 132	70 70		Complete Complete
	METHOD BLAN There are n			liers.					
The I	LCS OUTLIER LCSD shown b		the targe	t slightly outsid	e of co	ntrol wir	ndows.		
Type LCSD			Analyte Gasoline	Range Organics	Recove 11	ry LCL 0. 74		CL .0	Status Complete
	MS/MSD and There are n			tliers.					
Test	Method: Aro	matic VO	Cs by GC/P	ID via method 802	18 - BT	EX – Aque	eous		
	HOLDING TIM Holding tim		met for th	is Test					
	SAMPLE PREP There were	-		OBSERVATIONS: tions.					
	INSTRUMENT Instrument	-		: method criteria.					
	INITIAL CAL Initial cal	-		hin method criter	ia.				
	OPENING CON Opening con			NS: ns were within me	thod cr	iteria.			
	CLOSING CON Closing con			NS: ns were within me	thod cr	iteria on	r not	appl:	icable.
	INTERNAL ST There were			rd outliers.					
	SURROGATE R method blank les have nor	shown b	elow has t	he surrogate outs veries.	ide of	control v	vindow	is. I	All associated
Samp. MB	le	Lab T051109		Surrogate p-Bromofluoroben		covery I 122	LCL 80	UCL 120	Complete
	METHOD BLAN There are n			liers.					
	LCS OUTLIER There are n		tliers.						

## **Case Narrative**

Analytica Alaska Inc. Work Order: A0510295 (continued)

There are no LCS outliers.

MS/MSD and DUP OUTLIERS: There are no MS/MSD or DUP outliers.



# Client Sample ID: KAFS20051026MWSW01

Client Project: KAFS Location: Sample Matrix: Aqueous COC #: PWS#: Comments:

Sample Comment:

Lab#:

A0510295-01A

Analytica International, Inc. 5761 Silverado Way, Unit N Anchorage, AK 99518 Phone: 907-258-2155 Fax: 907-258-6634

 Report Date:
 11/18/2005

 Receipt Date:
 10/28/2005

 Sample Date:
 10/26/2005

 Sample Time:
 5:38:00PM

 Collected By:
 MP

<u>Flag Definitions:</u> MRL = Method Reporting Limit MCL = Maximum Contaminant Limit B = Present also in Method Blank H = Exceeds Regulatory Limit M = Matrix Interference J = Estimated Value D = Lost to Dilution \*\* = RL higher than MCL; target not detected

Analysis Method						Prep	Prep	Analysis	
Parameter	Result	Units	Flags	MRL	MCL	Method	Date	Date	Analyst
8021/5030B (Aqueous) - BTI	EX				Test was	s conducted	l by: Analyt	ica - Thorr	nton
Benzene	100	ug/L	Н	1.0	5.0	5030B	11/4/2005	11/4/2005	5 MB
Ethylbenzene	8.4	ug/L		1.0	700	5030B	11/4/2005	11/4/2005	5 MB
Toluene	1.6	ug/L		1.0	1000	5030B	11/4/2005	11/4/2005	5 MB
Xylenes, Total	20	ug/L		2.0	10000	5030B	11/4/2005	11/4/2005	5 MB
Surrogate Recoveries									
p-Bromofluorobenzene	110	% Recov		0.50		5030B	11/4/2005	11/4/2005	5 MB
AK101/5030B (Aqueous) - 0	GRO				Test was	s conducted	l by: Analyt	ica - Thorr	nton
Gasoline Range Organics	360	ug/L		100		5030B	11/4/2005	11/4/2005	5 MB
Surrogate Recoveries									
p-Bromofluorobenzene	112	% Recov		1.5		5030B	11/4/2005	11/4/2005	5 MB



# Client Sample ID: KAFS20051026MWSW02

Client Project: KAFS Location: Sample Matrix: Aqueous COC #: PWS#: Comments:

Sample Comment:

Lab#:

A0510295-02A

Analytica International, Inc. 5761 Silverado Way, Unit N Anchorage, AK 99518 Phone: 907-258-2155 Fax: 907-258-6634

 Report Date:
 11/18/2005

 Receipt Date:
 10/28/2005

 Sample Date:
 10/26/2005

 Sample Time:
 6:10:00PM

 Collected By:
 MP

<u>Flag Definitions:</u> MRL = Method Reporting Limit MCL = Maximum Contaminant Limit B = Present also in Method Blank H = Exceeds Regulatory Limit M = Matrix Interference J = Estimated Value D = Lost to Dilution \*\* = RL higher than MCL; target not detected

Analysis Method						Prep	Prep	Analysis	
Parameter	Result	Units	Flags	MRL	MCL	Method	Date	Date	Analyst
8021/5030B (Aqueous) - BTI	ΞX				Test was	s conducted	by: Analyt	ica - Thorn	nton
Benzene	1.3	ug/L		1.0	5.0	5030B	11/8/2005	11/9/2005	MB
Ethylbenzene	<mrl< td=""><td>ug/L</td><td></td><td>1.0</td><td>700</td><td>5030B</td><td>11/8/2005</td><td>11/9/2005</td><td>5 MB</td></mrl<>	ug/L		1.0	700	5030B	11/8/2005	11/9/2005	5 MB
Toluene	<mrl< td=""><td>ug/L</td><td></td><td>1.0</td><td>1000</td><td>5030B</td><td>11/8/2005</td><td>11/9/2005</td><td>5 MB</td></mrl<>	ug/L		1.0	1000	5030B	11/8/2005	11/9/2005	5 MB
Xylenes, Total	<mrl< td=""><td>ug/L</td><td></td><td>2.0</td><td>10000</td><td>5030B</td><td>11/8/2005</td><td>11/9/2005</td><td>5 MB</td></mrl<>	ug/L		2.0	10000	5030B	11/8/2005	11/9/2005	5 MB
Surrogate Recoveries									
p-Bromofluorobenzene	92.1	% Recov		0.50		5030B	11/8/2005	11/9/2005	5 MB
AK101/5030B (Aqueous) - 0	GRO				Test was	s conducted	by: Analyt	ica - Thorn	nton
Gasoline Range Organics	120	ug/L		100		5030B	11/8/2005	11/9/2005	5 MB
Surrogate Recoveries									
p-Bromofluorobenzene	120	% Recov		1.5		5030B	11/8/2005	11/9/2005	5 MB



# Client Sample ID: KAFS20051026MWSW03

Client Project: KAFS Location: Sample Matrix: Aqueous COC #: PWS#: Comments:

Sample Comment:

Lab#:

A0510295-03A

Analytica International, Inc. 5761 Silverado Way, Unit N Anchorage, AK 99518 Phone: 907-258-2155 Fax: 907-258-6634

 Report Date:
 11/18/2005

 Receipt Date:
 10/28/2005

 Sample Date:
 10/26/2005

 Sample Time:
 6:40:00PM

 Collected By:
 MP

Flag Definitions: MRL = Method Reporting Limit MCL = Maximum Contaminant Limit B = Present also in Method Blank H = Exceeds Regulatory Limit M = Matrix Interference J = Estimated Value D = Lost to Dilution \*\* = RL higher than MCL; target not detected

Analysis Method						Prep	Prep	Analysis	
Parameter	Result	Units	Flags	MRL	MCL	Method	Date	Date	Analyst
8021/5030B (Aqueous) - BTH	ΞX				Test was	conducted	l by: Analyt	ica - Thorn	nton
Benzene	3900	ug/L	Н	1,000	5.0	5030B	11/8/2005	11/9/2005	MB
Ethylbenzene	1500	ug/L	Н	1,000	700	5030B	11/8/2005	11/9/2005	5 MB
Toluene	28000	ug/L	Н	1,000	1000	5030B	11/8/2005	11/9/2005	5 MB
Xylenes, Total	9800	ug/L		2,000	10000	5030B	11/8/2005	11/9/2005	5 MB
Surrogate Recoveries									
p-Bromofluorobenzene	118	% Recov		500		5030B	11/8/2005	11/9/2005	5 MB
AK101/5030B (Aqueous) - 0	GRO				Test was	conducted	l by: Analyt	ica - Thorn	nton
Gasoline Range Organics	130000	ug/L		100,000		5030B	11/8/2005	11/9/2005	5 MB
Surrogate Recoveries									
p-Bromofluorobenzene	135	% Recov		1,500		5030B	11/8/2005	11/9/2005	5 MB



# Client Sample ID: KAFS20051026MWSW04

Client Project: KAFS Location: Sample Matrix: Aqueous COC #: PWS#: Comments:

Sample Comment:

Lab#:

A0510295-04A

Analytica International, Inc. 5761 Silverado Way, Unit N Anchorage, AK 99518 Phone: 907-258-2155 Fax: 907-258-6634

 Report Date:
 11/18/2005

 Receipt Date:
 10/28/2005

 Sample Date:
 10/26/2005

 Sample Time:
 7:00:00PM

 Collected By:
 MP

Flag Definitions: MRL = Method Reporting Limit MCL = Maximum Contaminant Limit B = Present also in Method Blank H = Exceeds Regulatory Limit M = Matrix Interference J = Estimated Value D = Lost to Dilution \*\* = RL higher than MCL; target not detected

Analysis Method						Prep	Prep	Analysis	
Parameter	Result	Units	Flags	MRL	MCL	Method	Date	Date	Analyst
8021/5030B (Aqueous) - BTI	EX				Test was	s conducted	by: Analyt	ica - Thorn	ton
Benzene	5.5	ug/L	Н	5.0	5.0	5030B	11/8/2005	11/9/2005	MB
Ethylbenzene	<mrl< td=""><td>ug/L</td><td></td><td>5.0</td><td>700</td><td>5030B</td><td>11/8/2005</td><td>11/9/2005</td><td>MB</td></mrl<>	ug/L		5.0	700	5030B	11/8/2005	11/9/2005	MB
Toluene	9.9	ug/L		5.0	1000	5030B	11/8/2005	11/9/2005	MB
Xylenes, Total	13	ug/L		10	10000	5030B	11/8/2005	11/9/2005	MB
Surrogate Recoveries									
p-Bromofluorobenzene	113	% Recov		2.5		5030B	11/8/2005	11/9/2005	MB
AK101/5030B (Aqueous) - 0	GRO				Test was	s conducted	by: Analyt	ica - Thorn	ton
Gasoline Range Organics	<mrl< td=""><td>ug/L</td><td></td><td>500</td><td></td><td>5030B</td><td>11/8/2005</td><td>11/9/2005</td><td>MB</td></mrl<>	ug/L		500		5030B	11/8/2005	11/9/2005	MB
Surrogate Recoveries									
p-Bromofluorobenzene	133	% Recov		7.5		5030B	11/8/2005	11/9/2005	MB



# Client Sample ID: KAFS20051026MWSW05

Client Project: KAFS Location: Sample Matrix: Aqueous COC #: PWS#: Comments:

Sample Comment:

Lab#:

A0510295-05A

Analytica International, Inc. 5761 Silverado Way, Unit N Anchorage, AK 99518 Phone: 907-258-2155 Fax: 907-258-6634

 Report Date:
 11/18/2005

 Receipt Date:
 10/28/2005

 Sample Date:
 10/26/2005

 Sample Time:
 7:25:00PM

 Collected By:
 MP

Flag Definitions: MRL = Method Reporting Limit MCL = Maximum Contaminant Limit B = Present also in Method Blank H = Exceeds Regulatory Limit M = Matrix Interference J = Estimated Value D = Lost to Dilution \*\* = RL higher than MCL; target not detected

Analysis Method						Prep	Prep	Analysis	
Parameter	Result	Units	Flags	MRL	MCL	Method	Date	Date	Analyst
8021/5030B (Aqueous) - BTI	ΞX				Test was	s conducted	l by: Analyı	ica - Thorr	nton
Benzene	31	ug/L	Н	5.0	5.0	5030B	11/8/2005	11/9/2005	5 MB
Ethylbenzene	11	ug/L		5.0	700	5030B	11/8/2005	11/9/2005	5 MB
Toluene	29	ug/L		5.0	1000	5030B	11/8/2005	11/9/2005	5 MB
Xylenes, Total	48	ug/L		10	10000	5030B	11/8/2005	11/9/2005	5 MB
Surrogate Recoveries									
p-Bromofluorobenzene	111	% Recov		2.5		5030B	11/8/2005	11/9/2005	5 MB
AK101/5030B (Aqueous) - 0	GRO				Test was	s conducted	l by: Analyi	ica - Thorr	nton
Gasoline Range Organics	<mrl< td=""><td>ug/L</td><td></td><td>500</td><td></td><td>5030B</td><td>11/8/2005</td><td>11/9/2005</td><td>5 MB</td></mrl<>	ug/L		500		5030B	11/8/2005	11/9/2005	5 MB
Surrogate Recoveries									
p-Bromofluorobenzene	128	% Recov		7.5		5030B	11/8/2005	11/9/2005	5 MB



				LC	CS/LCSD I	REPORT						
Prep Batch:	T051107013											
Xylenes, Total	ND	32.7	30.5	30.0	30.0	109.0	101.7	7.0	80 - 120	20		
Ethylbenzene	ND	10.5	9.47	10.0	10.0	105.0	94.7	10.3	80 - 120	20		
Toluene	ND	11.3	9.68	10.0	10.0	113.0	96.8	15.4	80 - 120	20		
<u>Analyte Name</u> Benzene	<u>SampResult</u> ND	10.5	9.03	10.0	<u>SPDLev</u> 10.0	<u>Recov.</u> 105.0	<u>SD Recov</u> 90.3	<u>RPD</u> 15.1	<u>Recov Lim</u> 80 - 120	20	<u>Flag</u>	
LCS Anal. Date:	11/8/2005 12:4	1:00PML					0PM Matri	ix:	Aqueous			
Analysis: MB Anal. Date:	Aromatic VOC 11/8/2005 3:29	•	D via me	thod 80	21B - BTE	X	MB: Prep Units	Date:	T0511090 11/8/2005 ug/L	12-MB		
			D .	-	S/LCSD I	-				10.105		
Prep Batch:	T051109012											
Xylenes, Total	ND	34.1	33.4	30.0	30.0	113.7	111.3	2.1	80 - 120	20		
Ethylbenzene	ND	11.4	11.4	10.0	10.0	114.0	114.0	0.0	80 - 120	20		
Toluene	ND	11.5	11.4	10.0	10.0	115.0	114.0	0.9	80 - 120	20		
<u>Analyte Name</u> Benzene	<u>SampResult</u> ND	<u>LCSRes</u> 11.5	<u>SDRes.</u> 11.3	<u>SPLev</u> 10.0	<u>SPDLev</u> 10.0	<u>Recov.</u> 115.0	<u>SD Recov</u> 113.0	<u>RPD</u> 1.8	<u>Recov Lim</u> 80 - 120	<u>RPDLim</u> 20	<u>Flag</u>	
LCS Anal. Date:	11/4/2005 6:5	5:00PM L0	CSD Ana			5 7:29:0		ix:	Aqueous			
MB Anal. Date:	11/4/2005 9:4:						Units		ug/L			
Analysis:	LCS/LCSD REPORTAromatic VOCs by GC/PID via method 8021B - BTEXMB:T051107012-MBPrep Date:11/4/2005											
Prep Batch:	T051107012											
Workorder (SDG): Project: Project Number:	KAFS	QUALITY CONTROL REPORT										
Tests Run at:	Analytica Environmental Laboratories - Thornton, Colorado											



Tests Run at:	Analytica Environmental Laboratories - Thornton, Colorado											
Workorder (SDG):												
Project: Project Number:	KAFS	QUALITY CONTROL REPORT										
Prep Batch:	T05110701	13										
					LC	S/LCSD R	REPORT	ſ				
Analysis:	ADEC AK101 - GRO MB: T051107013-MB											
-		Prep Date: 11/4/2005										
MB Anal. Date:	11/4/2005	9:43:00	)PM					Units:		ug/L		
LCS Anal. Date:	11/4/2005	8:03:00	PM LC	SD Anal	. Date:	11/4/2005	5 8:36:0	0PM Matrix	x:	Aqueous		
Analyte Name	SampRe	esult I	LCSRes.	SDRes.	SPLev	SPDLev	Recov.	SD Recov	<u>RPD</u>	Recov Lim	<u>RPDLim</u>	<u>Flag</u>
Gasoline Range Org	anics N	JD	505	553	500	500	101.0	110.6	9.1	74 - 110	20 highduj	р
			-									
Prep Batch:	T05110901	13										
					LC	S/LCSD R	REPORT	ĩ				
Analysis:	ADEC AK	101 - G	RO					MB:		T05110901	13-MB	
								Prep I	Date:	11/8/2005		
MB Anal. Date:	11/8/2005	3:29:00	)PM					Units:		ug/L		
LCS Anal. Date:	11/8/2005	1:48:00	PM LC	SD Anal	. Date:	11/8/2005	5 2:22:04	0PM Matrix	x:	Aqueous		
Analyte Name	<u>SampRe</u>	esult <u>I</u>	CSRes.	SDRes.	SPLev	SPDLev	Recov.	SD Recov	<u>RPD</u>	Recov Lim	<u>RPDLim</u>	<u>Flag</u>
Gasoline Range Org	anics N	JD	479	478	500	500	95.8	95.6	0.2	74 - 110	20	
1						omiome						

#### FOOTNOTES TO QC REPORT

Note 1: Results are shown to three significant figures to avoid rounding errors in calculations.

Note 2: If the sample concentration is greater than 4 times the spike level, a recovery is not meaningful, and the result should be used as a replicate. In such cases the spike is not as high as expected random measurement variability of the sample result itself.

Note 3: For sample duplicates, if the result is less than the PQL, the duplicate RPD is not applicable. If the sample and duplicate results are not five times the PQL or greater, then the RPD is not expected to fall within the window shown and the comparison should be made on the basis of the absolute difference. Analytica uses the criterion that the absolute difference should be less than the PQL for water or less than 2XPQL for other matrices.

Note 4: For serial dilutions, if the result is less than the PQL, the duplicate RPD is not applicable. If the sample result is not 50 times the MDL or greater, then the fact that the RPD does not meet the 10% criterion has little significance. Otherwise it indicates that a matrix bias may exist at the analytical step.



## SURROGATE RECOVERY SUMMARY REPORT



Test Method:	ADEC AK101 - GR	0				
Lab Sample #:	A0510295-01A		Di	lution:	1	
Analysis Date:	11/4/2005 10:17:00PI	M	Cl	ient Sample:	KAFS20051026MWSW01	
Batch Number:	T051107013		Da	ta File:	05110414.D	
<u>AnalyteName</u>		SSRecov	LCL	UCL	SSFlag	<b>Result Status</b>
<u>p-Bromofluorobenz</u>	zene	112	70	130		Complete
Lab Sample #:	A0510295-02A			lution:	1	
Analysis Date:	11/9/2005 1:06:00AN	Л	Cl	ient Sample:	KAFS20051026MWSW02	
Batch Number:	T051109013		Da	ta File:	05110830.D	
<u>AnalyteName</u>		<b>SSRecov</b>	LCL	UCL	<u>SSFlag</u>	<u>Result Status</u>
p-Bromofluorobenz	zene	120	70	130		Complete
Lab Sample #:	A0510295-04A		Di	lution:	5	
Analysis Date:	11/9/2005 1:40:00AN	М		ient Sample:	KAFS20051026MWSW04	
Batch Number:	T051109013		Da	ta File:	05110831.D	
<u>AnalyteName</u>		<b>SSRecov</b>	LCL	UCL	SSFlag	<u>Result Status</u>
p-Bromofluorobenz	zene	133	70	130	HIGH	Complete
Lab Sample #:	A0510295-03A		Di	lution:	1,000	
Analysis Date:	11/9/2005 2:13:00AN	Ν	Cl	ient Sample:	KAFS20051026MWSW03	
Batch Number:	T051109013		Da	ta File:	05110832.D	
<u>AnalyteName</u>		<b>SSRecov</b>	LCL	<u>UCL</u>	SSFlag	<u>Result Status</u>
p-Bromofluorobenz	zene	135	70	130	HIGH	Complete
Lab Sample #:	A0510295-05A		Di	lution:	5	
Analysis Date:	11/9/2005 2:47:00AN	Ν	Cl	ient Sample:	KAFS20051026MWSW05	
Analysis Date: Batch Number:	11/9/2005 2:47:00AN T051109013	Λ	Cl	ient Sample: ta File:	KAFS20051026MWSW05 05110833.D	
Batch Number: AnalyteName	T051109013	<u>SSRecov</u>	Cl Da <u>LCL</u>	ta File: <u>UCL</u>		<u>Result Status</u>
Batch Number:	T051109013		Cl Da	ita File:	05110833.D	<u>Result Status</u> Complete
Batch Number: <u>AnalyteName</u> <u>p-Bromofluorobenz</u> Lab Sample #:	T051109013 zene T051107013-MB	SSRecov 128	Cl Da <u>LCL</u> 70 Di	ta File: <u>UCL</u> 130 lution:	05110833.D <u>SSFlag</u> 1	
Batch Number: <u>AnalyteName</u> p-Bromofluorobenz Lab Sample #: Analysis Date:	T051109013 zene T051107013-MB 11/4/2005 9:43:00PN	SSRecov 128	Cl Da <u>LCL</u> 70 Di Cl	ta File: <u>UCL</u> 130 lution: ient Sample:	05110833.D <u>SSFlag</u> 1 <u>MB</u>	
Batch Number: <u>AnalyteName</u> <u>p-Bromofluorobenz</u> Lab Sample #:	T051109013 zene T051107013-MB	SSRecov 128	Cl Da <u>LCL</u> 70 Di Cl	ta File: <u>UCL</u> 130 lution:	05110833.D <u>SSFlag</u> 1	
Batch Number: <u>AnalyteName</u> <u>p-Bromofluorobenz</u> Lab Sample #: Analysis Date: Batch Number: <u>AnalyteName</u>	T051109013 zene T051107013-MB 11/4/2005 9:43:00PN T051107013	SSRecov 128 1 SSRecov	Cl Da <u>LCL</u> 70 Di Cl Da LCL	tta File: <u>UCL</u> 130 lution: ient Sample: tta File: <u>UCL</u>	05110833.D <u>SSFlag</u> 1 <u>MB</u>	
Batch Number: <u>AnalyteName</u> <u>p-Bromofluorobenz</u> Lab Sample #: Analysis Date: Batch Number:	T051109013 zene T051107013-MB 11/4/2005 9:43:00PN T051107013	<u>SSRecov</u> 128	Cl Da <u>LCL</u> 70 Di Cl Da LCL 70	tta File: <u>UCL</u> 130 lution: ient Sample: tta File: <u>UCL</u> 130	05110833.D <u>SSFlag</u> 1 <u>MB</u> 05110413.D	Complete
Batch Number: <u>AnalyteName</u> <u>p-Bromofluorobenz</u> Lab Sample #: Analysis Date: Batch Number: <u>AnalyteName</u> <u>p-Bromofluorobenz</u> Lab Sample #:	T051109013 zene T051107013-MB 11/4/2005 9:43:00PM T051107013 zene T051109013-MB	SSRecov 128 1 SSRecov 117	Cl Da <u>LCL</u> 70 Di Cl Da <u>LCL</u> 70 Di	ta File: <u>UCL</u> <u>130</u> lution: ient Sample: ta File: <u>UCL</u> <u>130</u> lution:	05110833.D <u>SSFlag</u> 1 <u>MB</u> 05110413.D <u>SSFlag</u> 1	Complete Result Status
Batch Number: <u>AnalyteName</u> p-Bromofluorobenz Lab Sample #: Analysis Date: Batch Number: <u>AnalyteName</u> p-Bromofluorobenz Lab Sample #: Analysis Date:	T051109013 zene T051107013-MB 11/4/2005 9:43:00PN T051107013 zene T051109013-MB 11/8/2005 3:29:00PN	SSRecov 128 1 SSRecov 117	Cl Da <u>LCL</u> 70 Di Cl Da <u>LCL</u> 70 Di Cl	tta File: <u>UCL</u> 130 lution: ient Sample: ita File: <u>UCL</u> 130 lution: ient Sample:	05110833.D <u>SSFlag</u> 1 <u>MB</u> 05110413.D <u>SSFlag</u> 1 <u>MB</u>	Complete Result Status
Batch Number: <u>AnalyteName</u> <u>p-Bromofluorobenz</u> Lab Sample #: Analysis Date: Batch Number: <u>AnalyteName</u> <u>p-Bromofluorobenz</u> Lab Sample #:	T051109013 zene T051107013-MB 11/4/2005 9:43:00PM T051107013 zene T051109013-MB	SSRecov 128 1 SSRecov 117	Cl Da <u>LCL</u> 70 Di Cl Da <u>LCL</u> 70 Di Cl	ta File: <u>UCL</u> <u>130</u> lution: ient Sample: ta File: <u>UCL</u> <u>130</u> lution:	05110833.D <u>SSFlag</u> 1 <u>MB</u> 05110413.D <u>SSFlag</u> 1	Complete Result Status
Batch Number: <u>AnalyteName</u> <u>p-Bromofluorobenz</u> Lab Sample #: Analysis Date: Batch Number: <u>AnalyteName</u> <u>p-Bromofluorobenz</u> Lab Sample #: Analysis Date: Batch Number: <u>AnalyteName</u>	T051109013 zene T051107013-MB 11/4/2005 9:43:00PM T051107013 zene T051109013-MB 11/8/2005 3:29:00PM T051109013	SSRecov 128 1 SSRecov 117 1 SSRecov	Cl Da <u>LCL</u> 70 Di Cl Da <u>LCL</u> 70 Di Cl	ta File: <u>UCL</u> 130 lution: ient Sample: ta File: <u>UCL</u> lution: ient Sample: ta File: <u>UCL</u>	05110833.D <u>SSFlag</u> 1 <u>MB</u> 05110413.D <u>SSFlag</u> 1 <u>MB</u>	Complete Result Status
Batch Number: <u>AnalyteName</u> p-Bromofluorobenz Lab Sample #: Analysis Date: Batch Number: <u>AnalyteName</u> p-Bromofluorobenz Lab Sample #: Analysis Date: Batch Number:	T051109013 zene T051107013-MB 11/4/2005 9:43:00PM T051107013 zene T051109013-MB 11/8/2005 3:29:00PM T051109013	<u>SSRecov</u> 128 4 <u>SSRecov</u> 117 4	Cl Da <u>LCL</u> 70 Di Cl Da <u>LCL</u> 70 Di Cl Da	tta File: <u>UCL</u> 130 lution: ient Sample: tta File: <u>UCL</u> 130 lution: ient Sample: ita File:	05110833.D <u>SSFlag</u> 1 <u>MB</u> 05110413.D <u>SSFlag</u> 1 <u>MB</u> 05110813.D	Complete <u>Result Status</u> Complete
Batch Number: <u>AnalyteName</u> p-Bromofluorobenz Lab Sample #: Analysis Date: Batch Number: <u>AnalyteName</u> p-Bromofluorobenz Lab Sample #: Analysis Date: Batch Number: <u>AnalyteName</u> p-Bromofluorobenz Lab Sample #:	T051109013 zene T051107013-MB 11/4/2005 9:43:00PM T051107013 zene T051109013-MB 11/8/2005 3:29:00PM T051109013	SSRecov 128 1 SSRecov 117 1 SSRecov	Cl Da <u>LCL</u> 70 Di Cl Da <u>LCL</u> 70 Di Cl Da L <u>CL</u> 70	ta File: <u>UCL</u> 130 lution: ient Sample: ta File: <u>UCL</u> lution: ient Sample: ta File: <u>UCL</u>	05110833.D <u>SSFlag</u> 1 <u>MB</u> 05110413.D <u>SSFlag</u> 1 <u>MB</u> 05110813.D	Complete <u>Result Status</u> <u>Complete</u> <u>Result Status</u>
Batch Number: <u>AnalyteName</u> <u>p-Bromofluorobenz</u> Lab Sample #: Analysis Date: Batch Number: <u>AnalyteName</u> <u>p-Bromofluorobenz</u> Lab Sample #: <u>AnalyteName</u> <u>p-Bromofluorobenz</u> Lab Sample #: <u>AnalyteName</u> <u>p-Bromofluorobenz</u> Lab Sample #: Analysis Date:	T051109013 zene T051107013-MB 11/4/2005 9:43:00PM T051107013 zene T051109013-MB 11/8/2005 3:29:00PM T051109013 zene T051107013-LCS 11/4/2005 8:03:00PM	<u>SSRecov</u> 128 4 <u>SSRecov</u> 117 4 <u>SSRecov</u> 126	Cl Da <u>LCL</u> 70 Di Cl Da <u>LCL</u> 70 Di Cl Da L <u>CL</u> 70 Di Cl Di Cl	ta File: <u>UCL</u> 130 lution: ient Sample: ta File: <u>UCL</u> 130 lution: ient Sample: <u>UCL</u> 130 lution: ient Sample: <u>UCL</u> 130	05110833.D <u>SSFlag</u> 1 <u>MB</u> 05110413.D <u>SSFlag</u> 1 <u>MB</u> 05110813.D <u>SSFlag</u> 1 <u>LCS</u>	Complete <u>Result Status</u> <u>Complete</u> <u>Result Status</u>
Batch Number: <u>AnalyteName</u> p-Bromofluorobenz Lab Sample #: Analysis Date: Batch Number: <u>AnalyteName</u> p-Bromofluorobenz Lab Sample #: <u>AnalyteName</u> p-Bromofluorobenz Lab Sample #:	T051109013 zene T051107013-MB 11/4/2005 9:43:00PM T051107013 zene T051109013-MB 11/8/2005 3:29:00PM T051109013 zene T051107013-LCS	<u>SSRecov</u> 128 4 <u>SSRecov</u> 117 4 <u>SSRecov</u> 126	Cl Da <u>LCL</u> 70 Di Cl Da <u>LCL</u> 70 Di Cl Da L <u>CL</u> 70 Di Cl Di Cl	tta File: <u>UCL</u> 130 lution: ient Sample: tta File: <u>UCL</u> 130 lution: ient Sample: ita File: <u>UCL</u> 130 lution: ient Sample: ient	05110833.D <u>SSFlag</u> 1 <u>MB</u> 05110413.D <u>SSFlag</u> 1 <u>MB</u> 05110813.D <u>SSFlag</u> 1 1	Complete <u>Result Status</u> <u>Complete</u> <u>Result Status</u>



Test Method:	ADEC AK101 - GR	0				
Lab Sample #:	T051107013-LCS		Di	lution:	1	
Analysis Date:	11/4/2005 8:03:00PM	Ν	Cli	ient Sample	: <u>LCS</u>	
Batch Number:	T051107013		Da	ta File:	05110410.D	
<b>AnalyteName</b>		<b>SSRecov</b>	LCL	UCL	SSFlag	<u>Result Status</u>
<u>p-Bromofluorobenz</u>	ene	113	70	130		Complete
Lab Sample #:	T051109013-LCS		Di	lution:	1	
Analysis Date:	11/8/2005 1:48:00PM	Ν	Cli	ient Sample	: <u>LCS</u>	
Batch Number:	T051109013		Da	ta File:	05110810.D	
<u>AnalyteName</u>		SSRecov	LCL	UCL	SSFlag	<u>Result Status</u>
p-Bromofluorobenz	ene	129	70	130		Complete
Lab Sample #:	T051107013-LCSD		Di	lution:	1	
Analysis Date:	11/4/2005 8:36:00PM	Ν	Cli	ient Sample	: LCSD	
Batch Number:	T051107013		Da	ta File:	05110411.D	
<u>AnalyteName</u>		SSRecov	LCL	UCL	SSFlag	<u>Result Status</u>
p-Bromofluorobenz	ene	116	70	130		Complete
Lab Sample #:	T051109013-LCSD		Di	lution:	1	
Analysis Date:	11/8/2005 2:22:00PM	Ν	Cli	ient Sample	: LCSD	
Batch Number:	T051109013		Da	ta File:	05110811.D	
<u>AnalyteName</u>		SSRecov	LCL	<u>UCL</u>	SSFlag	<u>Result Status</u>
p-Bromofluorobenz	ene	127	70	130		Complete



Test Method:	Aromatic VOCs by (	GC/PID via n	nethod 802	1B - BTEX		
Lab Sample #:	A0510295-01A		Di	lution:	1	
Analysis Date:	11/4/2005 10:17:00P	М	Cl	ient Sample:	KAFS20051026MWSW01	
Batch Number:	T051107012		Da	ta File:	05110414.D	
<b>AnalyteName</b>		<b>SSRecov</b>	LCL	UCL	<u>SSFlag</u>	<b>Result Status</b>
<u>p-Bromofluorobenz</u>	zene	110	80	120		Complete
Lab Sample #:	A0510295-02A		Di	lution:	1	
Analysis Date:	11/9/2005 1:06:00A	M	Cl	ient Sample:	KAFS20051026MWSW02	
Batch Number:	T051109012		Da	ta File:	05110830.D	
<u>AnalyteName</u>		<b>SSRecov</b>	LCL	UCL	<u>SSFlag</u>	<b>Result Status</b>
p-Bromofluorobenz	zene	92	80	120		Complete
Lab Sample #:	A0510295-04A		Di	lution:	5	
Analysis Date:	11/9/2005 1:40:00AI	M	Cl	ient Sample:	KAFS20051026MWSW04	
Batch Number:	T051109012		Da	ta File:	05110831.D	
<u>AnalyteName</u>		SSRecov	LCL	UCL	<u>SSFlag</u>	<b>Result Status</b>
p-Bromofluorobenz	zene	113	80	120		Complete
Lab Sample #:	A0510295-03A		Di	lution:	1,000	
Analysis Date:	11/9/2005 2:13:00AI	Μ	Cl	ient Sample:	KAFS20051026MWSW03	
Batch Number:	T051109012		Da	ta File:	05110832.D	
<u>AnalyteName</u>		<b>SSRecov</b>	LCL	UCL	<u>SSFlag</u>	<b>Result Status</b>
p-Bromofluorobenz	zene	118	80	120	<u> </u>	Complete
Lab Sample #:	A0510295-05A		Di	lution:	5	
Analysis Date:	11/9/2005 2:47:00A	M	Cl	ient Sample:	KAFS20051026MWSW05	
Batch Number:	T051109012		Da	ta File:	05110833.D	
<u>AnalyteName</u>		SSRecov	LCL	<u>UCL</u>	<u>SSFlag</u>	<b>Result Status</b>
p-Bromofluorobenz	zene	111	80	120		Complete
Lab Sample #:	T051107012-MB		Di	lution:	1	
Analysis Date:	11/4/2005 9:43:00PM	Л	Cl	ient Sample:	MB	
Batch Number:	T051107012		Da	ta File:	05110413.D	
AnalyteName		<b>SSRecov</b>	LCL	UCL	<u>SSFlag</u>	<b>Result Status</b>
p-Bromofluorobenz	zene	114	80	120		Complete
Lab Sample #:	T051109012-MB		Di	lution:	1	
Analysis Date:	11/8/2005 3:29:00PM	Л		ient Sample:	MB	
Batch Number:	T051109012			ta File:	05110813.D	
<u>AnalyteName</u>		<b>SSRecov</b>	LCL	UCL	<u>SSFlag</u>	<b>Result Status</b>
p-Bromofluorobenz	zene	122	80	120	HIGH	Complete
Lab Sample #:	T051107012-LCS		Di	lution:	1	
Analysis Date:	11/4/2005 6:56:00PM	Л		ient Sample:	LCS	
Batch Number:	T051107012			ta File:	05110408.D	
<u>AnalyteName</u>		<u>SSRecov</u>	<u>LCL</u>	<u>UCL</u>	<u>SSFlag</u>	<u>Result Status</u>



Test Method:	Aromatic VOCs by	GC/PID via r	nethod 802	1B - BTEX		
Lab Sample #:	T051107012-LCS		Di	lution:	1	
Analysis Date:	11/4/2005 6:56:00PM	Ν	Cli	ient Sample	: <u>LCS</u>	
Batch Number:	T051107012		Da	ta File:	05110408.D	
<b>AnalyteName</b>		SSRecov	LCL	UCL	<b>SSFlag</b>	<u>Result Status</u>
<u>p-Bromofluorobenz</u>	ene	116	80	120		Complete
Lab Sample #:	T051109012-LCS		Di	lution:	1	
Analysis Date:	11/8/2005 12:41:00P	М	Cli	ient Sample	: <u>LCS</u>	
Batch Number:	T051109012		Da	ta File:	05110808.D	
<b>AnalyteName</b>		SSRecov	LCL	UCL	<b>SSFlag</b>	<u>Result Status</u>
<u>p-Bromofluorobenz</u>	ene	115	80	120		Complete
Lab Sample #:	T051107012-LCSD		Di	lution:	1	
Analysis Date:	11/4/2005 7:29:00PM	Ν	Cli	ient Sample	: LCSD	
Batch Number:	T051107012		Da	ta File:	05110409.D	
<b>AnalyteName</b>		SSRecov	LCL	UCL	<b>SSFlag</b>	<u>Result Status</u>
<u>p-Bromofluorobenz</u>	ene	114	80	120		Complete
Lab Sample #:	T051109012-LCSD		Di	lution:	1	
Analysis Date:	11/8/2005 1:14:00PM	Ν	Cli	ient Sample	: <u>LCSD</u>	
Batch Number:	T051109012		Da	ta File:	05110809.D	
<u>AnalyteName</u>		SSRecov	LCL	UCL	SSFlag	<u>Result Status</u>
p-Bromofluorobenz	ene	108	80	120		Complete



### QC BATCH ASSOCIATIONS - BY METHOD BLANK

Lab Project ID:	50,472	Lab Project Number:	A0510295	
Lab Method Blank Id: Prep Batch ID: Method:	•	GC/PID via method 8021B		Prep Date: 11/4/2005
		e associated with the following		
SampleNum	ClientSampleName	DataF		<u>AnalysisDate</u>
T051107012-LCS	LCS		0408.D	11/4/2005 6:56:00PM
T051107012-LCSD	LCSD		0409.D	11/4/2005 7:29:00PM
A0510295-01A	KAFS20051026MWSV	V01 0511	0414.D	11/4/2005 10:17:00PM
Lab Method Blank Id:	T051107013-MB			Prep Date: 11/4/2005
Prep Batch ID:	T051107013			
Method:	ADEC AK101 - GF	-		
		re associated with the following		•
<u>SampleNum</u>	<u>ClientSampleName</u>	DataF	ile	AnalysisDate
A0510295-01A	KAFS20051026MWSW	V01 0511	0414.D	11/4/2005 10:17:00PM
T051107013-LCS	LCS	0511	0410.D	11/4/2005 8:03:00PM
T051107013-LCSD	LCSD	0511	0411.D	11/4/2005 8:36:00PM
				Prep Date: 11/8/2005
Lab Method Blank Id: Prep Batch ID:	T051109012-MB T051109012			
Method:	Aromatic VOCs by	GC/PID via method 8021B	- BTEX	
This Method blank and	sample preparation batch an	e associated with the following	g samples, spikes, and du	plicates:
SampleNum	ClientSampleName	DataF	ile	AnalysisDate
T051109012-LCS	LCS	0511	0808.D	11/8/2005 12:41:00PM
T051109012-LCSD	LCSD	0511	0809.D	11/8/2005 1:14:00PM
A0510295-02A	KAFS20051026MWSW	V02 0511	0830.D	11/9/2005 1:06:00AM
A0510295-04A	KAFS20051026MWSW	V04 0511	0831.D	11/9/2005 1:40:00AM
A0510295-03A	KAFS20051026MWSV	V03 0511	0832.D	11/9/2005 2:13:00AM
A0510295-05A	KAFS20051026MWSW		0833.D	11/9/2005 2:47:00AM



### QC BATCH ASSOCIATIONS - BY METHOD BLANK

Lab Project ID:	50,472	Lab Project Number:	A0510295		
				Prep Date:	11/8/2005
Lab Method Blank Id:	T051109013-MB				
Prep Batch ID:	T051109013				
Method:	ADEC AK101 - G	RO			
This Method blank and	sample preparation batch a	are associated with the following	samples, spikes, and dupl	icates:	
SampleNum	<u>ClientSampleName</u>	DataFil	<u>e</u>	AnalysisDat	<u>e</u>
A0510295-05A	KAFS20051026MWS	W05 05110	833.D	11/9/2005	2:47:00AM
A0510295-03A	KAFS20051026MWS	W03 05110	832.D	11/9/2005	2:13:00AM
A0510295-04A	KAFS20051026MWS	W04 05110	831.D	11/9/2005	1:40:00AM
A0510295-02A	KAFS20051026MWS	W02 05110	830.D	11/9/2005	1:06:00AM
T051109013-LCS	LCS	05110	810.D	11/8/2005	1:48:00PM
T051109013-LCSD	LCSD	05110	811.D	11/8/2005	2:22:00PM



### **REPORTING CONVENTIONS FOR THIS REPORT**

A0510295

<u>TestPkgName</u> 8021/5030B (Aqueous) - BTEX AK101/5030B (Aqueous) - GRO Basis As Received As Received

<u># Sig Figs</u> 2 2 Reporting Limit Report to PQL

Report to PQL Report to PQL

Pageof		Section To be Completed by Analytica		10210912	Account #. Credit Card	Invoice to Name & Address:				P.O. or Contract No:	Requested Analysis/Method	рә. рәл		Pres. Field Pr Pres: Pres: Lot #: Lot #: Lot #: Lot #: Lot #: Lot #: Pres: Pre								Section To Be Completed by Analytica	THO ANC JNU FBKS		24	Client
Analytica Chain of Custody Form	5438 Shaune Drive         5761 Silverado Way, # N         3330 Industrial Ave.         12189 Pennsylvania Sl           Juneau, AK 99801         Anchorage, AK 99518         Fairbarks, AK 99701         Thornton, CO 80241           (907), 780-6668         (907) 758-5634 fax         (907) 456-3116         (303) 469-5868           (907) 780-6670 fax         (907) 258-6634 fax         (907) 456-3125 fax         (303) 469-5854 fax	Public Water System (PWS) ID#:	Project Name:	KAF.		naround Time for Results (TAT)	K Standard Expedited (< 10 days, prior authorization required)	(please specify due date below; add't charges may apply)	Requested Due Date for Results:	U.A.		QAL , T		Lot #: No. of Contair Pres: Pres: Pres:	10/20/05 5:35,0~ Ew 3/ X	122105 6:10 - 00 - 10 - 10 - 10 - 10 - 10 - 10 -	10/26/05 E140 PM E2 3 X	10/26 /05 7:20 m 612 31 ×	10/26/05 7:25 pm Ear 3 X	-		Received by: Date Time	KEUEN 10/28 93	Revelved hv: Date Time Temp/Loc		Shipped Via:
	ANALYTICA	Client Name & Address:	Mint Pricksh	2736 Hully Parce	Ferticium, W Eusze	Report to: Nerk Pricksch	Phone No: (940) 493-1418	Fax No: (930) 443 - 1418		Special Instructions/Comments:			Kit Prep/Shipping Charge: \$	Client Sample Identification / Location	KAF520051026 musures	K.0000 2005 1020 2000 2000	KARS 2005 10 2 LANUS - 50 2	LARS 200510 X MUSEUS	KAPS 2005, 10 26 musu us			Relinquished by: Date Time	Ut idre bai	- AWW		Name of Sampler: (printed)

Version 2.0

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# **Cooler Receipt Form**

Client: Mark Project: Mark	Cli	ent Code: 701326		Order #: A0510295
Cooler ID: 1				
A. Preliminary Examination	<u>Phase</u> :	Date cooler opened: Cooler opened by:	10/28/2005 dw	Signature:
1. Was airbill Attached?	No	Airbill #:		Carrier Name: Client
2. Custody Seals?	No	How many?	Location:	Seal Name:
3. Seals intact?	N/A			
4. COC Attached?	Yes	Properly Completed?	Yes	Signed by AEL employee? Yes
5. Project Identification fro	om custody paper:	KAFS		
6. Preservative:	BlueGel	Tempera	ature: 2.4	
Designated person initial he	re to acknowledge	e receipt:		Date: 10/28/05
COMMENTS:				

B. Log-In Phase: Samples Log-in	Date: 10/28/2005	Log-in By: dw	
1. Packing Type:	Bubblewrap		
2. Were samples in separate bags?	Yes		
3. Were containers intact?	Yes	Labels agree with COC?	Yes
4. Number of bottles received:	15	Number of samples received:	5
5. Correct containers used?	Yes	Correct preservatives added?	Yes
6. Sufficient sample volume?	Yes		
7. Bubbles in VOA samples?	No		
8. Was Project manager called and stat	us discussed?	No	
9. Was anyone called? No	Who was called?	By whom?	Date:
COMMENTS:			