2110.38.007
ADEC File No.

SUBSURFACE INVESTIGATION REPORT

FORMER CHEVRON SERVICE STATION
CHEVRON SITE 9-2609
MILE 79 SEWARD HIGHWAY
GIRDWOOD, ALASKA
ADEC FILE ID: 2110.38.007

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NOVEMBER 17, 2009
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1.0 INTRODUCTION

Conestoga-Rovers & Associates is submitting this Subsurface Investigation Report to the Alaska Department of Environmental Conservation (ADEC) on behalf of Chevron Environmental Management Company (Chevron) for the site referenced above. CRA advanced two soil borings north and west of monitoring well MW-3 to delineate the downgradient extent of petroleum hydrocarbons in soil and groundwater (Figure 2). , The soil borings were completed as 2-inch groundwater monitoring wells MW-15 and MW-16. The site background, investigation details and conclusions are presented below.

2.0 SITE BACKGROUND

2.1 SITE DESCRIPTION

The site is a former Texaco-branded service station located at Mile 79 along the southbound lane of Seward Highway in Girdwood, Alaska (Figure 1). The site operated as a Texaco-branded service station from 1971 to 1979. Former site facilities consisted of seven underground storage tanks (USTs), dispenser islands, and associated product piping. Three USTs and associated piping were removed in 1980. Four USTs, two log cribs, dispenser islands, product piping, and a septic tank were removed in 2000. The site is currently vacant with the exception of an abandoned kiosk. Fourteen groundwater monitoring wells are located on and offsite and 10 are sampled semiannually (Figure 2). The site environmental history is presented in Appendix A.

2.2 HYDROGEOLOGY

The site is located in south central Alaska, at the eastern-most extent of the Turnagain Arm between Twenty Mile River and Portage Creek. No major principal aquifer system underlies the site, however the southern/southeastern extent of the Cook Inlet Aquifer System is slightly northwest/west of the site. The Cook Inlet Aquifer System consists of boulders, cobbles, and unconsolidated gravels, sands, silts, and clays deposited by glacial, alluvial, and colluvial processes. Historical static groundwater levels have ranged between 1.31 and 11.21 feet below grade (fbg) with groundwater flowing southwest. Local tidal influence can be as great as 37 feet (ft) which likely produces groundwater fluctuations in site monitoring wells. Long-term groundwater monitoring and sampling has been conducted at the site since 1995.

2.3 REGIONAL GEOLOGY

Bedrock in Girdwood, Alaska consists of Cretaceous to Upper Jurassic slate, greywacke, argillite, conglomerate, and volcanic units. The site subsurface sediments consist primarily of sand, sandy gravel, and silt, deposited by glaciofluvial and marine processes from tidal mud flats around Cook Inlet and glaciers, such as the retreating Portage glacier.

3.0 2009 SUBSURFACE INVESTIGATION

CRA conducted the event in accordance with ADEC's *Monitoring Well Guidance, February 2009,* and CRA's Chevron approved *Health and Safety Plan,* and *Journey Management Plan*. Details of the subsurface investigation are presented below.

3.1 SOIL SAMPLE LOCATION RATIONALE

DRO has been detected in groundwater near MW-3 since 1995, additional delineation is necessary downgradient of well MW-3. Groundwater sample MW-3 contained 19 milligrams per Liter (mg/L) DRO in August 2008. Historical groundwater flow direction near MW-3 is to the northwest. CRA advanced two soil borings approximately 60 feet north and northwest of groundwater monitoring well MW-3 to delineate the downgradient extent of petroleum hydrocarbons in soil and groundwater.

3.2 INVESTIGATION DETAILS

CRA prepared a site health and safety plan to inform site workers of known hazards and to provide health and safety guidance. The plans were onsite at all times and signed daily by all onsite personnel. Alaska Digline was notified prior to drilling to clear locations with utility companies. CRA used ground penetrating radar (GPR) and an electromagnetic buried metal detector (EM61) to locate underground structures throughout the drilling area. The geophysical survey results are presented in Appendix B. CRA personnel Eric Purcell and Susan Lear conducted all sampling and soil logging. Discovery Drilling advanced the borings and installed the groundwater monitoring wells under the direction of CRA. Soil sample locations with analytical results are presented on Figure 3.

3.2.1 SOIL BORING INSTALLATION

Two soil borings were advanced to 18 fbg and completed as groundwater monitoring wells MW-15 and MW-16 (Figure 2). Soil borings were advanced to first encountered groundwater using a CME 75 drill rig equipped with 8-inch outer diameter hollow-stem augers. Soil samples were collected with a 2 ft core barrel advanced by a 300 pound slide hammer at approximately 5 ft intervals between 5 fbg and 17 fbg. Soil was logged and field screened by a trained geologist and Alaska Qualified Person during drilling. Soil samples were screened for petroleum hydrocarbon constituents using a photo ionization detector (PID). Soil samples were submitted for laboratory analysis based on PID screening results and depth.

Subsurface sediments consist primarily of sand with organic material at the surface transitioning to very fine to medium grained sand from approximately 5 fbg to the total explored depth of 18 fbg. Soil boring logs are presented as Appendix C. CRA's standard operating procedures for soil borings are presented as Appendix D. Department of Natural Resources water well logs are presented as Appendix E.

3.2.2 GROUNDWATER MONITORING WELL INSTALLATION

Monitoring wells MW-15 and MW-16 were constructed of 2-inch diameter, schedule 40 PVC pipe with 0.020-inch screen and clean #10/20 silica sand. The wells are screened from 3 fbg to 18 fbg. The well was set in a stand up well vault and graded with concrete. CRA developed groundwater monitoring wells MW-15 and MW-16 on July 17, 2009 by agitating the water column for approximately ten minutes with a surge block, followed by purging to remove silt and draw in formation water. Well development forms are presented as Appendix F. CRA's standard operating procedures for well development are presented as Appendix G.

3.2.3 LABORATORY ANALYSIS

Soil samples collected on site were analyzed for the following:

- DRO by Alaska Series Method AK102,
- GRO by Alaska Series Method AK101,
- RRO by Alaska Series Method AK103, and
- BTEX by Method SW-846 8021B.

3.2.4 WASTE DISPOSAL

Soil cuttings produced during this investigation were temporarily stored onsite in two 55-gallon U.S. Department of Transportation (DOT) approved drums. Water produced during groundwater monitoring well development was temporarily stored onsite in one 55-gallon U.S. DOT approved drum. The ADEC approved soil cutting transportation and disposal in an August 20, 2009 e-mail to CRA.

3.3 SOIL SAMPLING RESULTS

No DRO, GRO, RRO, or BTEX concentrations exceeded the *ADEC Method II-Soil Cleanup Levels, Tables B1 and B2, Over 40-Inch Zone, Migration to Groundwater, ADEC 18 AAC 75.341* (ADEC Method II Soil Cleanup Levels). DRO was detected below laboratory detection limits in soil sample SB09-1 and SB09-2. The maximum RRO (15 mg/kg) and benzene (0.02 mg/kg) was detected in soil sample SB09-02. The Lancaster Laboratories Analytical Report is presented in Appendix H. The ADEC laboratory data review and checklist is presented in Appendix I.

4.0 CONCLUSIONS

Subsurface sediments consist primarily of sand with organic matter at the surface transitioning to very fine to medium grained sand with trace silt from approximately 5 fbg to the total explored depth of 17 fbg. Groundwater was encountered at approximately 8 fbg in both soil borings.

No DRO, GRO, or RRO or BTEX was detected above ADEC Method II Soil Cleanup Levels in any collected samples. The extent of petroleum hydrocarbons in soil has been delineated downgradient of groundwater monitoring well MW-3.

5.0 RECOMMENDATIONS

CRA is preparing a corrective action plan to address petroleum hydrocarbon concentrations in soil and groundwater. CRA will continue groundwater monitoring and sampling in 2010.

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6.0 CLOSING

We appreciate the opportunity to work with Chevron and the ADEC on this project. Alaska Qualified Personnel in accordance with *18 Alaska Administrative Code (AAC) 75, Article 3 and 18 AAC 78, Article 2, 6, and 9,* conducted and/or supervised all project work. Please call Brian Duggan at (720) 975-9128 with any questions regarding this report.

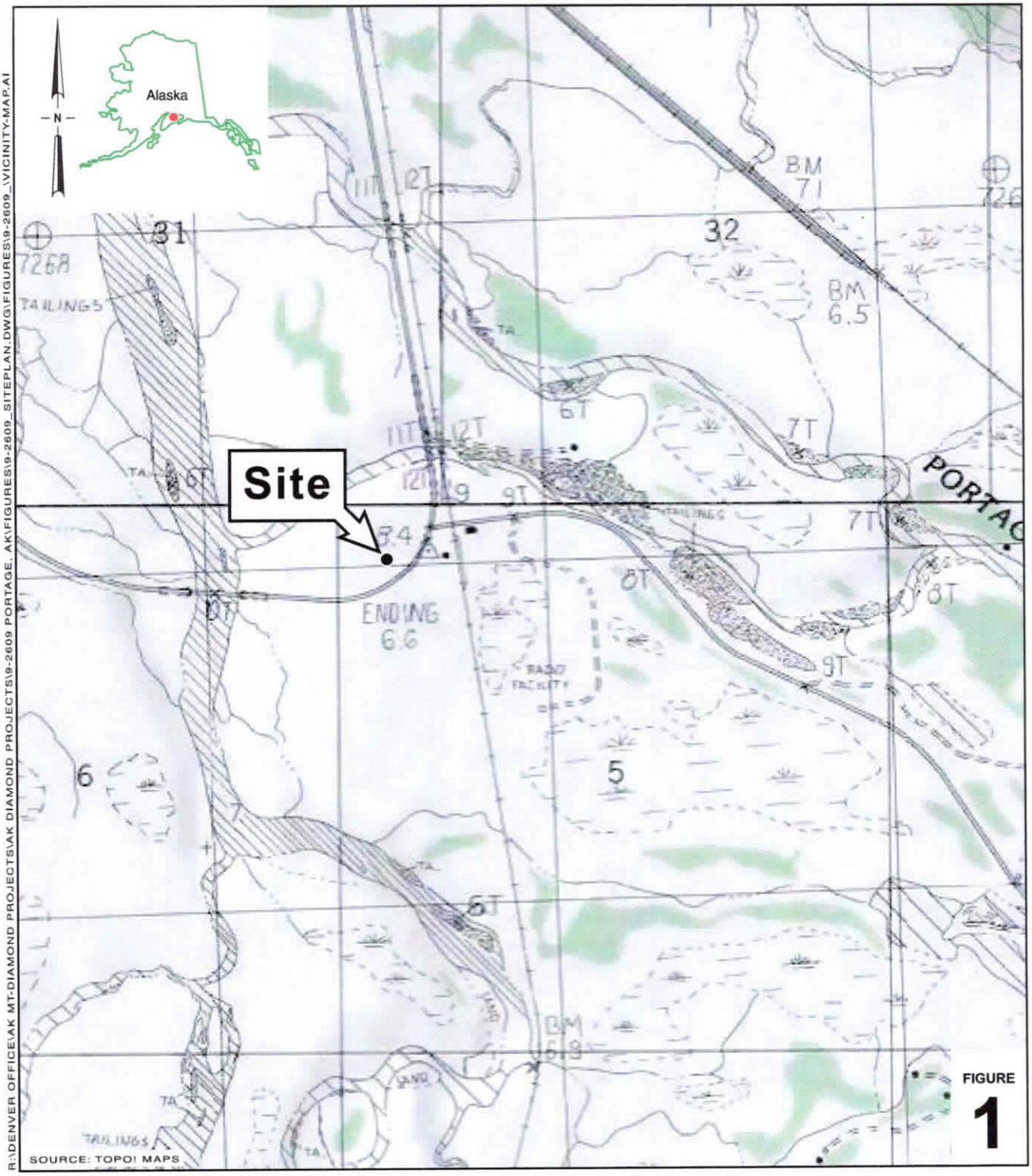
FIGURES

FIGURE 1: VICINITY MAP

FIGURE 2: SITE PLAN

FIGURE 3: PETROLEUM HYDROCARBON CONCENTRATIONS IN SOIL

07/23/07



0 1/8 1/4 1/2 1

SCALE : 1" = 1/4 MILE

FIGURE
1

Former Chevron Station 9-2609

Seward Highway Mile 79

Portage, Alaska

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Vicinity Map

TABLES

TABLE 1: SOIL ANALYTICAL DATA

Table 1
Soil Analytical Results
Former Chevron Station 9-2609
Mile 79 Seward Highway
Girdwood, Alaska

Location	Date	Sample Depth	HYDROCARBONS			PRIMARY VOCS			
			DRO	GRO	RRO	Benzene	Toluene	Ethyl-benzene	Total Xylenes
	Units	fbg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
ADEC Method II Cleanup Levels*			230	260	9700	0.025	6.5	6.9	63
SB09-1	07/16/2009	5.0	<5.8 / <5.4	<0.9 / <0.8	57 / 53	<0.009 UJ / <0.008 UJ	<0.009 UJ / 0.02 J	<0.009 UJ / <0.008 UJ	<0.03 UJ / <0.02 UJ
SB09-2	07/16/2009	5.0	<5.1	<0.7	15 J	0.02 J	0.03 J	<0.006 UJ	<0.02 UJ
Trip Blank	07/16/2009	-	-	<0.5	-	<0.005	<0.005	<0.005	<0.02
Trip Blank**	07/16/2009	-	-	<0.010	-	<0.0005	<0.0005	<0.0005	<0.0015
Equipment Blank**	07/16/2009	-	<0.048	<0.010	<0.048	<0.0005	<0.0005	<0.0005	<0.0015

Abbreviations and Methods:
RRO = Residual range organics by Alaska Series Method AK103
DRO = Diesel range organics by Alaska Series Method AK102
GRO = Gasoline range organics by Alaska Series Method AK101
BTEX = Benzene, toluene, ethylbenzene, and xylenes by EPA Method 8021B
fbg = Feet below grade
mg/kg = Milligrams per kilogram
-- = Not analyzed / applicable
J = Estimated value. Analyte detected at a level less than the Reporting Limit (RL) and greater than or equal to the Method Detection Limit (MDL).
UJ = Estimated value below the MDL.
<x = Constituent not detected above x milligrams per kilogram
ADEC = Alaska Department of Environmental Conservation
* = Levels established in ADEC Method II - Soil Cleanup Levels, Tables B1 and B2, Over 40-Inch Zone, Migration to Groundwater, (ADEC, 18 AAC 75.341)
** = Concentrations in milligrams per liter
EPA = Environmental Protection Agency

APPENDIX A

ENVIRONMENTAL HISTORY

ENVIRONMENTAL HISTORY

1993 Site Assessment: In 1993, eight borings were advanced as part of an Alaska Department of Transportation investigation. Five borings were advanced onsite and three borings were advanced offsite. Soil sample TB-8-1 contained the maximum concentration of diesel range organics (DRO) at 870 milligrams per kilogram (mg/kg) and gasoline range organics (GRO) at 2,300 mg/kg.

1995 Well Installation: Three groundwater monitoring wells MW-1 through MW-3 were installed in 1995. Sampling indicated DRO is the primary constituent of concern, although results were not available at the time of this report.

1998 Subsurface Investigation and Well Installation: Eleven soil borings were advanced and five completed as monitoring wells MW-4 through MW-8 during a 1998 subsurface investigation to delineate the lateral extent of petroleum hydrocarbons in the soil and groundwater. Soil sample B-6 contained the maximum concentration of DRO at 2,490 mg/kg and benzene at 8.09 mg/kg. GRO was detected at a maximum concentration of 5,970 mg/kg (soil) and 80,500 milligrams per liter (mg/L) in sample B-7.

2000 UST Removal and Excavation: Four USTs, two log cribs, a dispenser island, associated product piping, and a septic tank were removed in 2000. Approximately 3,500 cubic yards of soil was excavated and removed from the site. DRO was detected at a maximum concentration of 4,500 mg/kg in sample Crib 1. Soil sample S-12-5 contained the maximum concentration of GRO (7,090 mg/kg) and benzene (32.9 mg/kg).

2001 Subsurface Investigation and Well Installation: Four soil borings were advanced and completed as groundwater monitoring wells MW-9 through MW-12 in September 2001. No DRO or benzene was detected above ADEC Method II Soil Cleanup Levels (ADEC, 18 Alaska Administrative Code (AAC) 75.341). GRO was detected in soil sample MW-11-10 at a maximum concentration of 464 mg/kg.

2001 Well Reinstallation: In October 2001 a water production well SW-1 was reinstalled to provide non-potable water to the site. No soil samples were analyzed. No petroleum hydrocarbons were detected above ADEC Table C Groundwater Cleanup Levels (ADEC, 18 AAC 75.345) in the groundwater sample.

2005 Well Installation: One soil boring was advanced and completed as groundwater monitoring well MW-13 in 2005. DRO was detected at a maximum concentration from soil sample MW-13-6 at 3,900 mg/kg. The maximum concentration of GRO was detected in soil sample MW-13-6 at 1,000 mg/kg.

2008 Subsurface Investigation and Well Installation: Seven soil borings were advanced and one completed as groundwater monitoring well MW-14 in 2008 to further assess the vertical and horizontal extent of hydrocarbons in soil and groundwater. DRO was detected at a maximum concentration in soil sample CB-6-5 at 3,900 mg/kg. Soil sample MW-14-10 contained the maximum GRO concentration of 3,800 mg/kg. The maximum concentration of benzene was detected in soil sample CB-1-10 at 2.20 mg/kg.

APPENDIX B

GEOPHYSICAL SURVEY

CONESTOGA-ROVERS & ASSOCIATES

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DRAFT MEMORANDUM

TO:	Brian Duggan	REF. NO.:	620911-2009
FROM:	Sandy Serena/ck/1	DATE:	June 19, 2009
C.C.:	Andy Ellsmore, Joe Rothfischer		
RE:	**Ground Penetrating Radar Survey - Borehole Clearance** **Former Chevron Station Site 9-2609** **Portage, AK**		

1.0 INTRODUCTION

Conestoga-Rovers & Associates (CRA) conducted a geophysical investigation on behalf of Chevron at the former Chevron Station 9-2609 (Site) located on Old Seward Highway in Portage, Alaska on May 13, 2009. The objective of the investigation was to verify the absence of potential utilities in the shallow subsurface (to a depth of 8 feet) at two proposed borehole locations (SB1 and SB2). The approximate location of SB1 and SB2 are presented on Figure 1.1. CRA conducted the investigation using a Ground Penetrating Radar (GPR) system. The investigation consisted of establishing a reference grid over the proposed boreholes, data collection, processing, and plotting.

GPR surveys are considered the industry-accepted standards for underground utility investigations. However, limitations to GPR surveys include signal attenuation (i.e., dissipation) in conductive soils and/or fill, and also conductive groundwater or seawater. In addition, surficial metal objects can potentially be sources of interference which mask subsurface responses.

2.0 REFERENCE GRID

A Cartesian coordinate system was adopted and applied to the two proposed borehole locations. The survey coverage measured approximately 16 feet by 16 feet. Survey lines were established at 2-foot spaced intervals over the proposed borehole locations approximately oriented in both the north-south and east-west directions, as presented on Figure 1.1. The center of each grid marked the proposed borehole location. The corners of the grids were staked with wooden stakes, and the proposed borehole locations were marked with metal rods. Due to heavy brush surrounding the two grid locations (SB1 and SB2), the survey grids were tied into two trees located on-Site. As such, each tree was marked with a metal pin, flagged with flagging tape and painted for future reference should the grids need to be re-established. A photo log of the survey grids for proposed borehole locations SB1 and SB2 is provided in Attachment A.

3.0 DATA COLLECTION

The GPR survey was conducted using a Noggin 250 Smart Cart System, which utilizes high frequency (MHz range) electromagnetic (EM) signals to investigate subsurface conditions. Pulsed EM waves emitted from a transmitting antenna are propagated into the ground, and travel at velocities determined by the electrical properties of earth materials. If a wave hits a buried object or boundary with different electrical properties as it moves downward, part of the wave energy is reflected back to the surface and is detected by a receiving antenna. The reflected wave is stored digitally, and processed as a trace of signal versus amplitude. As the antennas are moved along a survey line, a series of traces are recorded at discrete points. When presented collectively, these traces display a profile of the subsurface. The GPR data were collected using 2 foot spaced lines in each of the survey grids. Data traces were collected at equidistant intervals specified by the GPR operating system along the survey lines, and tracked by an attached odometer.

4.0 DATA PROCESSING AND RESULTS

The GPR data were processed as trace plots for each survey line, for each of the proposed borehole locations. The plots were examined for arc-shaped signatures indicative of buried utility responses. Typically, arc-shaped responses (ie. hyperbolic reflectors) that are delineated on three or more adjacent survey lines or display a linear trend are potentially indicative of buried utilities. Conversely, reflectors that are only delineated on single survey lines and not on adjacent lines do not indicate a linear trend. As such, these single responses likely do not represent buried utilities, and may be attributed to boulders or tree roots.

The GPR results for each of the survey locations (SB1 and SB2) are discussed in detail below.

SB1

Review of the GPR trace plots for SB1 indicates that the survey results yielded a depth of signal penetration of approximately 11 feet below ground surface (ft bgs). Figure 4.1 presents trace plots of the GPR responses in closest proximity and coincident with proposed boring location SB1. Review of the trace plots for all survey lines indicate that no distinct arc-shaped responses indicative of buried utilities were delineated in the surveyed area surrounding SB1, to a depth of approximately 11 ft bgs. However, two suspected boulders were delineated during review of the trace plots. These suspected boulders appear as strong, irregular arc-shaped features in the trace plots. The first suspected boulder was delineated north of proposed borehole SB1 (Lines 8E, 10E and 14N) along the north central edge of the grid, at an approximate depth of 3 ft bgs. The second suspected boulder was delineated south-west of proposed borehole SB1 (Lines 4E, 6E, 4Nand 6N) at an approximate depth of 4.5 ft bgs.

SB2

Review of the GPR trace plots for SB2 indicates that the survey results yielded a depth of signal penetration of approximately 10 ft bgs. Figure 4.2 presents trace plots of GPR responses in closest proximity and coincident with proposed boring location SB2. Review of the trace plots for all survey lines indicate that no distinct arc-shaped responses indicative of buried utilities were delineated in the surveyed area surrounding SB2 to a depth of approximately 10 ft bgs. However, two suspected boulders were delineated during review of the trace plots. These suspected boulders appear as strong, irregular arc-shaped features in the trace plots. The first suspected boulder was delineated beneath proposed borehole location SB2

(Lines 8E, 10E, 6N and 8N at the center of the survey grid) at an approximate depth of 6.25 ft bgs. The second suspected boulder was delineated south-east of proposed borehole SB2 (Lines 2N and 4N) along the south east edge of the grid, at an approximate depth of 5.25 ft bgs.

5.0 CONCLUSIONS

As part of the health and safety procedures, Chevron requires that all proposed borehole locations be cleared up to 8 ft bgs for underground utilities prior borehole advancement. As such, the GPR results for proposed boreholes SB1 and SB2 yielded adequate depths of signal penetration beyond 8 ft bgs. Based on the GPR results presented, it is evident that no distinct arc-shaped responses indicative of buried utilities were delineated in any of the trace plots collected at the two proposed borehole locations. However, the survey results for both proposed borehole locations delineated suspected boulders within the surveyed areas. Of significance are the results for SB2, where one boulder was delineated beneath this proposed borehole location. Thus, it is recommended that proposed borehole location SB2 be moved four feet to the west along grid line 8N to avoid drilling through the suspected boulder.

Photo 1 Grid SB1 – View to the north

Photo 2 Grid SB1 – view to the east

Photo 3 Grid SB1 – View to the west

Photo 4 Grid SB1 – View to the south

Photo 5 Grid SB2 – View to the north

Photo 6 Grid SB2 – View to the west

Photo 7 Grid SB2 – view to the south

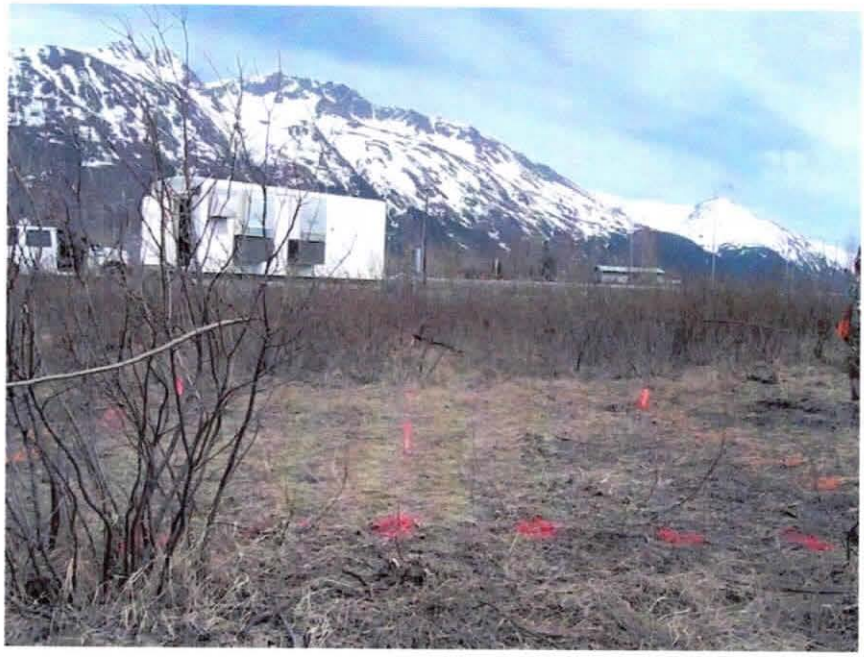

Photo 8 Grid SB2 – View to the east

Photo 9 Grid SB2 – View to the south

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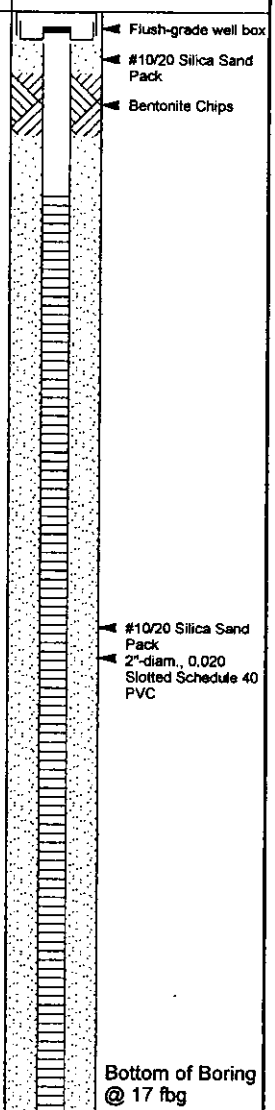
BORING / WELL LOG

CLIENT NAME	Chevron EMC	**BORING/WELL NAME**	MW-15
JOB/SITE NAME	9-2609	**DRILLING STARTED**	16-Jul-09
LOCATION	Mile 79 Seward Hwy, Girdwood Alaska	**DRILLING COMPLETED**	16-Jul-09
PROJECT NUMBER	620911	**WELL DEVELOPMENT DATE (YIELD)**	17-Jul-09 (21 gallons)
DRILLER	Discovery (Tim, Bruce)	**GROUND SURFACE ELEVATION**	NA
DRILLING METHOD	Hollow Stem Auger	**TOP OF CASING ELEVATION**	24.25 ft above msl
BORING DIAMETER	8-inches	**SCREENED INTERVALS**	3 to 18 fbg
LOGGED BY	E. Purcell	**DEPTH TO WATER (First Encountered)**	7.80 fbg (16-Jul-09) ▽
REVIEWED BY	B. Duggan, Colorado P.E. # 40693	**DEPTH TO WATER (Static)**	NA ▼
REMARKS			

PID (ppm)	BLOW COUNTS	SAMPLE ID	EXTENT	DEPTH (fbg)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH (fbg)
					SP		**SAND** Very fine to fine grained; Olive grey; Damp; Trace organic material	
0.3	1 1	SB09- 1-5		5	SP		**SAND** Very fine to fine grained; Olive grey; Very loose; Moist; Trace silt	5.0
					SP		**SAND** Very fine to fine grained; Grey; Very loose; Moist; Trace silt	6.0
					SP		**SAND** Very fine to fine grained; Grey; Very loose; Moist; Trace silt ▽	7.0
				10	SP			
					SP		**SAND** Very fine to medium grained; Grey; Compact; Wet; Trace silt	12.0
				15	SP			
					SP		**SAND** Very fine to fine grained; Grey; Compact; Wet; Trace silt	16.0
					SP		**SAND** Fine to coarse grained; Grey; Compact; Wet; Trace silt	16.5
								17.0

WELL DIAGRAM



WELL LOG (PID) U:\DENVER\LOGS\620911 MW-15,16.GPJ DEFAULT.GDT 10/2/09

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BORING / WELL LOG

CLIENT NAME	Chevron EMC	**BORING/WELL NAME**	MW-16
JOB/SITE NAME	9-2609	**DRILLING STARTED**	16-Jul-09
LOCATION	Mile 79 Seward Hwy, Girdwood Alaska	**DRILLING COMPLETED**	16-Jul-09
PROJECT NUMBER	620911	**WELL DEVELOPMENT DATE (YIELD)**	17-Jul-09 (20 gallons)
DRILLER	Discovery (Tim, Bruce)	**GROUND SURFACE ELEVATION**	NA
DRILLING METHOD	Hollow Stem Auger	**TOP OF CASING ELEVATION**	23.61 ft above msl
BORING DIAMETER	8-inches	**SCREENED INTERVALS**	3 to 18 fbg
LOGGED BY	E. Purcell	**DEPTH TO WATER (First Encountered)**	8.20 fbg (16-Jul-09) ▽
REVIEWED BY	B. Duggan, Colorado P.E. # 40693	**DEPTH TO WATER (Static)**	NA ▼
REMARKS			

PID (ppm)	BLOW COUNTS	SAMPLE ID	EXTENT	DEPTH (fbg)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH (fbg)	WELL DIAGRAM
					SP		**SAND:** Very fine grained; Olive-gray; Damp; Trace organic material		Flush-grade well box; #10/20 Silica Sand Pack; Bentonite Chips
0.3	4 5 5 5	SB09- 2-5		5	SP		**SAND:** Very fine grained; Olive-gray; Compact; Damp; Trace silt	5.0	
					SP		**SAND:** Very fine grained; Gray; Compact; Damp; Trace silt	6.0	
					SP		**SAND:** Fine to medium grained; Gray; Compact; Damp; Trace silt ▽	6.5	
	2 4 3 5			10	SP		**SAND:** Very fine grained; Gray; Medium dense; Wet; Trace silt	10.0	#10/20 Silica Sand Pack; 2"-diam., 0.020 Slotted Schedule 40 PVC
					SP		**SAND:** Fine to medium grained; Gray; Medium dense; Wet; Trace silt	11.0	
	1 1 2 1			15	SP		**SAND:** Very fine to fine grained; Gray; Loose; Wet; Trace silt	15.0	
								18.0	Bottom of Boring @ 18 fbg

WELL LOG (PID) U:\DENVER LOGS\620911 MW-15,16.GPJ DEFAULT.GDT 10/2/09

APPENDIX D

CRA'S STANDARD OPERATING PROCEDURES FOR SOIL BORINGS

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& ASSOCIATES

STANDARD FIELD PROCEDURES FOR SOIL BORINGS

This document describes Conestoga-Rovers & Associates' standard field methods for drilling and sampling soil borings. These procedures are designed to comply with Federal, State and local regulatory guidelines. Specific field procedures are summarized below.

Objectives

Soil samples are collected to characterize subsurface lithology, assess whether the soils exhibit obvious hydrocarbon or other compound vapor odor or staining, estimate groundwater depth and quality and to submit samples for chemical analysis.

Soil Classification/Logging

All soil samples are classified according to the Unified Soil Classification System by a trained geologist or engineer working under the supervision of an Alaska Qualified Person (AQP). The following soil properties are noted for each soil sample:

- Principal and secondary grain size category (i.e. sand, silt, clay or gravel),
- Approximate percentage of each grain size category,
- Color,
- Approximate water or product saturation percentage,
- Observed odor and/or discoloration,
- Other significant observations (i.e. cementation, presence of marker horizons, mineralogy), and
- Estimated permeability.

Soil Boring and Sampling

Soil borings are typically drilled using hollow-stem augers or hydraulic push technologies. Prior to drilling, the first 8 ft of the boring are cleared using an air or water knife and vacuum extraction. This minimizes the potential for impacting utilities.

At least one and one half feet of the soil column is collected for every five ft of drilled depth. Additional soil samples are collected near the water table and at lithologic changes. Samples are collected using lined split-barrel or equivalent samplers driven into undisturbed sediments beyond the bottom of the borehole. The vertical location of each soil sample is determined by measuring the distance from the middle of the soil sample tube to the end of the drive rod used to advance the split barrel sampler. All sample depths use the ground surface immediately adjacent to the boring as a datum. The horizontal location of each boring is measured in the field from an onsite permanent reference using a measuring wheel or tape measure.

Drilling and sampling equipment is decontaminated per Alaska Department of Environmental Conservation regulations prior to drilling and between borings to prevent cross-contamination. Sampling equipment is washed between samples with trisodium phosphate or an equivalent EPA-approved detergent.

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Sample Storage, Handling and Transport

Single use plastic sterile-scoops are used to transfer approximately 20 to 40 grams of soil sample from the split-spoon sampler to 4 oz. amber glass jars with Teflon lined screw cap lids containing methanol preservative such that the entire vial of methanol covers the matrix. Soil samples are labeled and stored at or below 4°C on either crushed or dry ice, depending upon local regulations. Samples are transported under chain-of-custody to a State-certified analytic laboratory.

Field Screening

The some of the remaining soil from the split-spoon sampler is collected in a plastic bag and set aside to allow hydrocarbons to volatilize from the soil. After ten to fifteen minutes, a portable photoionization detector (PID) measures volatile hydrocarbon vapor concentrations in the bag headspace, extracting the vapor through a slit in the bag. PID measurements are used along with the field observations, odors, stratigraphy and groundwater depth to select soil samples for analysis.

Water Sampling

Water samples, if they are collected from the boring, are collected from the open borehole using bailers. The groundwater samples are decanted into the appropriate containers supplied by the analytic laboratory. Samples are labeled, placed in protective foam sleeves, stored on crushed ice at or below 4°C, and transported under chain-of-custody to the laboratory.

Duplicates and Blanks

Blind duplicate water samples are collected at a rate of one blind sample for every 10 soil samples. Laboratory-supplied trip blanks accompany samples collected for all sampling programs to check for cross-contamination caused by sample handling and transport. These trip blanks are analyzed if the internal laboratory QA/QC blanks contain the suspected field contaminants. An equipment blank may also be analyzed if non-dedicated sampling equipment is used.

11/17/09

APPENDIX E

DEPARTMENT OF NATURAL RESOURCES WATER WELL LOGS

STATE OF ALASKA
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF MINING, LAND & WATER
WATER WELL LOG

Drilling Started: 07 / 16 / 2009, Completed: 07 / 16 / 2009

City/Borough:	Subdivision:	BLOCK	LOT

Property Owner Name & Address:

Robert Hall
Mile 79 Seward Highway, Portage, Alaska

Meridian Seward Township 8N Range 3W Section 5 , ____ 1/4 of ____ 1/4 of ____ 1/4 of ____ 1/4

BOREHOLE DATA: (from ground surface) **Depth**

Material: Type, Color & wetness	From	To
SAND; olive gray; moist; trace organic	0	5
SAND; olive gray, moist; trace silt	5	6
SAND; gray; moist; trace silt	6	12
SAND; gray; wet; trace silt	12	17

Drilling method: ☐ Air rotary, ☐ Cable tool ☒ Other HSA
Well use: ☐ Public supply, ☐ Domestic, ☒ Other Environmental

Depth of hole: 18 ft, Casing stickup: ____ ft
Casing type: PVC Thickness ____ inches
Casing diameter: 2 inches Casing depth 18 ft
Liner type: ____ Diameter: ____ inches Depth: ____ ft
Note: .....

Static water (from top of casing): 7.80 ft on 7 / 16 / 2009
Pumping level & yield: ____ feet after ____ hours at ____ gpm
Recovery rate: ____ gpm, Method of testing: ____
Development method: Purge and surge Duration: ____

Well intake opening type: ☐ Open end ☐ Open hole, Other ☐
☒ Screened; Start: 3 ft, Stopped 18 ft
Screen type: 0.020 Slot/mesh size ____
☐ Perforated; Start: ____ ft, Stopped ____ ft
Start: ____ ft, Stopped ____ ft
Gravel packed ☐ Yes ☒ No From 3 ft to 18 ft
Note: #10/20 sand pack

Grout type: Bentonite Volume ____
Depth; from ____ ft, to ____ ft

Pump intake depth: ____ ft
Pump size ____ hp Brand name ____

Was well disinfected upon completion? ☐ Yes ☒ No
Method of disinfection: .....

Driller comments/ disclaimers: Well installation

Well driller name: Tim Beckner
Company name: Discovery Drilling
Mailing address: 11341 Olive Land
City: Anchorage State: AK Zip 99501
Phone number: (907) 344 - 6431

Drillers signature: [signature] for Discovery Drilling
Date: 11 / 03 / 2009

Alaska state law requires that a copy of this well log be forwarded to the Department of Natural Resources within 45 days (AK statutes 38.05.020, 38.05.035, 41.08.020, 46.15.020 and AK regulations 11 AAC 93.140). Faxes are acceptable.

Alaska DNR, Division of Mining, Land and Water,
550 W 7th Avenue, Suite 1020
Anchorage, AK 99501-3562

Phone (907)269-8639 and fax (907)269-8947

If the well is within city limits, the City of Anchorage requires that a copy of this well log be forwarded to the city within 60 days and another copy of this log be forwarded to the owner of the property, on which the well is located, within 30 days.

City Permit Number: ____
Date of Issue: ____ / ____ / ____

Parcel Identification Number: ____ - ____ - ____

Is well located at approved permit location? Yes ☐ or No ☐

STATE OF ALASKA
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF MINING, LAND & WATER
WATER WELL LOG

Drilling Started: 07 / 16 / 2009, Completed: 07 / 16 / 2009

City/Borough:	Subdivision:	BLOCK	LOT

Property Owner Name & Address:

Robert Hall
Mile 79 Seward Highway, Portage, Alaska

Meridian Seward Township 8N Range 3W Section 5 , ____ 1/4 of ____ 1/4 of ____ 1/4 of ____ 1/4

BOREHOLE DATA: (from ground surface) **Depth**

Material: Type, Color & wetness	From	To
SAND; olive gray; damp; trace organic	0	5
SAND; olive gray; damp; trace silt	5	6
SAND; gray; damp; trace silt	6	6.5
SAND; gray; damp; trace silt	6.5	10
SAND; gray; wet; trace silt	10	17

Drilling method: ☐ Air rotary, ☐ Cable tool ☒ Other HSA
Well use: ☐ Public supply, ☐ Domestic, ☒ Other Environmental

Depth of hole: 18 ft, Casing stickup: ____ ft
Casing type: PVC Thickness ____ inches
Casing diameter: 2 inches Casing depth 18 ft
Liner type: ____ Diameter: ____ inches Depth: ____ ft
Note: .....

Static water (from top of casing): 8.20 ft on 7 / 16 / 2009
Pumping level & yield: ____ feet after ____ hours at ____ gpm
Recovery rate: ____ gpm, Method of testing: ____
Development method: Purge and surge Duration: ____

Well intake opening type: ☐ Open end ☐ Open hole, Other ☐
☒ Screened; Start: 3 ft, Stopped 18 ft
Screen type: 0.020 Slot/mesh size ____
☐ Perforated; Start: ____ ft, Stopped ____ ft
Start: ____ ft, Stopped ____ ft
Gravel packed ☐ Yes ☒ No From 3 ft to 18 ft
Note: #10/20 sand pack

Grout type: Bentonite Volume ____
Depth; from ____ ft, to ____ ft

Pump intake depth: ____ ft
Pump size ____ hp Brand name ____

Was well disinfected upon completion? ☐ Yes ☒ No
Method of disinfection: .....

Driller comments/ disclaimers: Well installation
.....
.....

Well driller name: Tim Beckner
Company name: Discovery Drilling
Mailing address: 11341 Olive Land
City: Anchorage State: AK Zip 99501
Phone number: (907) 344 - 6431

Drillers signature: [signature] for Discovery Drilling
Date: 11 / 05 / 2009

Alaska state law requires that a copy of this well log be forwarded to the Department of Natural Resources within 45 days (AK statutes 38.05.020, 38.05.035, 41.08.020, 46.15.020 and AK regulations 11 AAC 93.140). Faxes are acceptable.

Alaska DNR, Division of Mining, Land and Water,
550 W 7th Avenue, Suite 1020
Anchorage, AK 99501-3562

Phone (907)269-8639 and fax (907)269-8947

If the well is within city limits, the City of Anchorage requires that a copy of this well log be forwarded to the city within 60 days and another copy of this log be forwarded to the owner of the property, on which the well is located, within 30 days.

City Permit Number: ____
Date of Issue: ____/____/____

Parcel Identification Number: ____-____-____

Is well located at approved permit location? Yes ☐ or No ☐

APPENDIX F

WELL DEVELOPMENT FORMS

CONESTOGA-ROVERS & ASSOCIATES

WELL DEVELOPMENT FORM

Project Name: 9-2009	CRA Mgr: B. DUGGAN	Well ID: MW-15
Project Number: 020911	Date: 7/17/09	Well Yield:
Site Address: MILE 79.5 SEWARD HWY GIRDWOOD, AK	Development Method: SURGE BLOCK, RODS	Well Diameter: 2"
		Technician(s): EP / SL
Initial Depth to Water: 9.55	Total Well Depth: 21.55	Water Column Height: 12.00
Volume/ft: 0.16	1 Casing Volume: 1.92	10 Casing Volumes: 19.2
Purging Device: PUMP	Did Well Dewater?: NO	Total Gallons Purged: ~20

1 Casing Volume = Water column height x Volume/ ft.

Well Diam.	Volume/ft (gallons)
2"	0.16
4"	0.65
6"	1.47

Time	Activity	Water Depth	Gallons Purged	Comments
1105	SURGE	9.55	—	
1122	PURGE	—	~5	
1126	SURGE	11.31	—	DTB 22.18
1135	Purge	—	5	
1141	Surge	10.36	—	
1147	purge	—	10	purge water became clear; very slight sheen
1155	SURGE	9.70	—	DTB: 22.20

CONESTOGA-ROVERS & ASSOCIATES

WELL DEVELOPMENT FORM

Project Name: 9-2009	CRA Mgr: B. DUGGAN	Well ID: MW-16
Project Number: 020911	Date: 7/17/09	Well Yield:
Site Address: MILE 79.5 SEWARD HWY GIRDWOOD, AK	Development Method: SURGE BLOCK, ROOS	Well Diameter: 2"
		Technician(s): EP / SL
Initial Depth to Water: 8.88	Total Well Depth: 21.12	Water Column Height: 12.24
Volume/ft: 0.16	1 Casing Volume: ~2.00	10 Casing Volumes: ~20.00
Purging Device: PUMP	Did Well Dewater?: NO	Total Gallons Purged: 20.00

1 Casing Volume = Water column height x Volume/ ft.

Well Diam.	Volume/ft (gallons)
2"	0.16
4"	0.65
6"	1.47

Time	Activity	Water Depth	Gallons Purged	Comments
1205	Surge	8.88	—	
1210	purge	—	5	
1217	Surge	8.99	—	DTB - 21.72; hard bottom / minimal sediment
1222	purge	8.91	15	DTB - 21.84; HARD BOTTOM; WATER BECAME CLEAR

APPENDIX G

CRA'S STANDARD OPERATING PROCEDURES FOR WELL DEVELOPMENT

CONESTOGA-ROVERS
& ASSOCIATES

STANDARD FIELD PROCEDURES FOR MONITORING WELL DEVELOPMENT

This document presents standard field methods for developing groundwater monitoring wells. These procedures are designed to comply with Federal, State and local regulatory guidelines. Specific field procedures are summarized below.

MONITORING WELL DEVELOPMENT

Objectives

Monitoring well development objectives include removal of sediments that may have accumulated in the water column during drilling operations, stabilize the filter pack and formation materials opposite the well screen, and ensure the well produces water free of suspended solids. All development activities are conducted by a trained geologist working under the supervision of an Alaska Qualified Personnel in accordance with *18 Alaska Administrative Code (AAC) 75, Article 3 and 18 AAC 78, Article 2, 6, and 9*. Monitoring wells are developed no less than 24 hours post-installation as to allow the well seals and grout to set.

Well Development

Wells are developed using a combination of groundwater surging and purging. Surging includes the entire submerged portion of the screened interval with the use of surge blocks, bailers, or other equipment that frequently and repeatedly reverses the flow of water through the well screen. It is important that surging activities be started slowly and be increased in vigor as to free the fine particles from the sand pack, allowing them to be drawn into the water column, settling the coarser particles around the well screen and enhancing contact with the aquifer.

Purging is accomplished with the use of a bailer, submersible pump, or other equipment that adequately extracts groundwater from the water column. Development consists of a cycle of surging for several minutes followed by several minutes of purging to remove the fine sediments collecting in the well. This cycle is repeated for a minimum of 30 minutes. Purging continues until 10 well volumes of groundwater are removed or the extracted groundwater is free of suspended solids.

In the event the well is purged dry, an alternate development method is used. Following purging the well dry, one well casing volume of potable water is added to the well. The well is then surged vigorously for 10 minutes and purged dry again to complete the process. Additional water may be added to the well as necessary to properly develop the well, but should only be done as a

CONESTOGA-ROVERS
& ASSOCIATES

last resort. If the well does recover, continued development should occur only with formation water.

Groundwater Sampling

Following completion of well development activities, groundwater samples are collected for characterization using disposable bailers or the effluent portion of the pumping apparatus and decanted into the appropriate containers supplied by the analytical laboratory. Samples are labeled, placed in protective foam sleeves, stored on ice or other approved artificial cooling substance at $4^{o} \pm 2\ ^{o}C$, and transported under chain-of-custody to the laboratory. Laboratory-supplied trip blanks accompany the samples per matrix, analysis, and cooler and are analyzed to check for cross-contamination. A duplicate sample is collected and submitted per matrix, analysis, and 10 project samples for quality assurance purposes. An equipment blank will be submitted for analysis if non-dedicated sampling equipment is used.

Waste Handling and Disposal

Groundwater removed during development is typically stored onsite in sealed 55-gallon steel drums. Each drum is labeled with the drum number, date of generation, suspected contents, generator identification, and consultant contact. Upon receipt of analytical results, the water is either pumped out using a vacuum truck for transport or the individual drums are picked up and transported by licensed waste haulers to a licensed waste treatment/disposal facility where the drum contents are removed and appropriately disposed.

APPENDIX H

LANCASTER LABORATORIES ANALYTICAL REPORT

APPENDIX I

ADEC LABORATORY DATA REVIEW AND CHECKLIST

CONESTOGA-ROVERS & ASSOCIATES

1420 80th St. SW., Suite A
Everett, WA 98203
Telephone: (425) 212-5100 Fax: (425) 212-5199
www.CRAworld.com

MEMORANDUM

TO: ADEC

REF. NO.: 620911

FROM: Jeffrey Cloud

DATE: August 5, 2009

CC: John Riggi

Send via E-Mail and U.S. Mail

RE: **QA/QC Review**
ChevronTexaco Site # 9-2609
Job #1154032
July 2009

INTRODUCTION

Groundwater samples were submitted to Lancaster Laboratories, located in Lancaster, Pennsylvania. Samples were analyzed for the methods requested on the Chain of Custody.

A full Level III data package was received from Lancaster Laboratories. The final results and supporting quality assurance/quality control (QA/QC) data were reviewed. Evaluation of the data was based on information obtained from the Chain of Custody forms, finished report forms, blank data, and spike recoveries.

QA/QC REVIEW

All samples were prepared and/or analyzed within the required holding times. All samples were properly preserved and maintained at 4°C (±2°C).

All appropriate samples and blanks were spiked with surrogate compounds prior to sample preparation and/or analysis in accordance with the organic methods. All surrogate spike recoveries met the associated method criteria indicating adequate analytical efficiency with a few exceptions. Samples SB09-1-5, SB09-2-5 and DUP-1 had low 8021 surrogate recoveries. All 8021 results for samples SB09-1-5, SB09-2-5 and DUP-1 should be considered estimated due to an implied low bias.

Method blanks were prepared and analyzed with the samples for all parameters. All blank results were non-detect for the analytes of interest.

Laboratory control samples (LCS) were analyzed in duplicate for all parameters. All recoveries were within required control limits showing adequate analytical accuracy and precision.

Matrix spikes (MS) were prepared and analyzed for all parameters. The MS for DRO was analyzed in duplicate. All recoveries were within required control limits showing adequate analytical accuracy and precision.

Trip blanks were collected and analyzed with the investigative samples for all parameters. All trip blank results were non-detect for the compounds of interest.

A field duplicate was collected and submitted blind to the laboratory. The sample ID was SB09-1-5 and its duplicate was DUP-1. A comparison of the results showed good analytical and sampling precision with one exception. The toluene RPD was 86%. The toluene results for samples SB09-1-5 and DUP-1 should be considered estimated due to variability.

CONCLUSION

Based on the QA/QC review, the data submitted were judged to be acceptable for use with the qualifications noted.

Laboratory Data Review Checklist

Completed by:	Jeffrey Cloud
Title:	Project Chemist
Date:	8/5/09
CS Report Name:	Subsurface Investigation Report
Report Date:	7/28/09
Consultant Firm:	Conestoga-Rovers & Associates
Laboratory Name:	Lancaster Laboratories
Laboratory Report Number:	1154032
ADEC File Number:	
ADEC RecKey Number:	

1. Laboratory

   a. Did an ADEC CS approved laboratory receive and perform all of the submitted sample analyses?

   ☑ Yes ☐ No Comments:

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

   ☐ Yes ☐ No Comments:

   NA

2. Chain of Custody (COC)

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

   ☑ Yes ☐ No Comments:

   b. Correct analyses requested?

   ☑ Yes ☐ No Comments:

3. Laboratory Sample Receipt Documentation

a. Sample/cooler temperature documented and within range at receipt (4° ± 2° C)?

☒ Yes ☐ No Comments:

b. Sample preservation acceptable – acidified waters, Methanol preserved VOC soil (GRO, BTEX, Volatile Chlorinated Solvents, etc.)?

☒ Yes ☐ No Comments:

c. Sample condition documented – broken, leaking (Methanol), zero headspace (VOC vials)?

☒ Yes ☐ No Comments:

d. If there were any discrepancies, were they documented? For example, incorrect sample containers/preservation, sample temperature outside of acceptable range, insufficient or missing samples, etc.?

☐ Yes ☐ No Comments:

NA

e. Data quality or usability affected? Explain.

Comments:

NA

4. Case Narrative

a. Present and understandable?

☒ Yes ☐ No Comments:

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

☒ Yes ☐ No Comments:

c. Were all corrective actions documented?

☐ Yes ☐ No Comments:

NA

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

Comments:

NA

5. Samples Results

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

☒ Yes ☐ No Comments:

b. All applicable holding times met?

☒ Yes ☐ No Comments:

c. All soils reported on a dry weight basis?

☒ Yes ☐ No Comments:

d. Are the reported PQLs less than the Cleanup Level or the minimum required detection level for the project?

☒ Yes ☐ No Comments:

e. Data quality or usability affected?

Comments:

NA

6. QC Samples

a. Method Blank

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

☒ Yes ☐ No Comments:

ii. All method blank results less than PQL?

☒ Yes ☐ No Comments:

iii. If above PQL, what samples are affected?

Comments:

NA

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

☐ Yes ☐ No Comments:

NA

v. Data quality or usability affected? Explain.

Comments:

NA

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

i. Organics – One LCS/LCSD reported per matrix, analysis and 20 samples? (LCS/LCSD required per AK methods, LCS required per SW846)

☒ Yes ☐ No Comments:

ii. Metals/Inorganics – one LCS and one sample duplicate reported per matrix, analysis and 20 samples?

☐ Yes ☐ No Comments:

NA

iii. Accuracy – All percent recoveries (%R) reported and within method or laboratory limits? And project specified DQOs, if applicable. (AK Petroleum methods: AK101 60%-120%, AK102 75%-125%, AK103 60%-120%; all other analyses see the laboratory QC pages)

☒ Yes ☐ No Comments:

iv. Precision – All relative percent differences (RPD) reported and less than method or laboratory limits? And project specified DQOs, if applicable. RPD reported from LCS/LCSD, MS/MSD, and or sample/sample duplicate. (AK Petroleum methods 20%; all other analyses see the laboratory QC pages)

☒ Yes ☐ No Comments:

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

Comments:

NA

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

☐ Yes ☐ No Comments:

NA

vii. Data quality or usability affected? (Use comment box to explain)
Comments:

NA

c. Surrogates – Organics Only

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

☑ Yes ☐ No Comments:

ii. Accuracy – All percent recoveries (%R) reported and within method or laboratory limits? And project specified DQOs, if applicable. (AK Petroleum methods 50-150 %R; all other analyses see the laboratory report pages)

☐ Yes ☑ No Comments:

Samples SB09-1-5, SB09-2-5 and DUP-1 had low 8021 surrogate recovery.

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

☑ Yes ☐ No Comments:

iv. Data quality or usability affected? (Use the comment box to explain.)
Comments:

All 8021 results for samples SB09-1-5, SB09-2-5 and DUP-1 should be considered estimated due to an implied low bias.

d. Trip blank – Volatile analyses only (GRO, BTEX, Volatile Chlorinated Solvents, etc.): Water and Soil

i. One trip blank reported per matrix, analysis and for each cooler containing volatile samples? (if not, enter explanation below.)

☑ Yes ☐ No Comments:

ii. Is the cooler used to transport the trip blank and VOA samples clearly indicated on the COC? (If not, a comment explaining why must be entered below)

☐ Yes ☐ No Comments:

iii. All results less than PQL?

☑ Yes ☐ No Comments:

iv. If above PQL, what samples are affected?

Comments:

NA

v. Data quality or usability affected? Explain.

Comments:

NA

e. Field Duplicate

i. One field duplicate submitted per matrix, analysis and 10 project samples?

☒ Yes ☐ No Comments:

ii. Submitted blind to lab?

☒ Yes ☐ No Comments:

iii. Precision – All relative percent differences (RPD) less than specified DQOs? (Recommended: 30% water, 50% soil)

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

Where R_1 = Sample Concentration

R_2 = Field Duplicate Concentration

☐ Yes ☒ No Comments:

SB09-1-5/DUP toluene RPD was 86%.

iv. Data quality or usability affected? (Use the comment box to explain why or why not.)

Comments:

The toluene results for samples SB09-1-5 and DUP-1 should be considered estimated due to variability.

f. Decontamination or Equipment Blank (If not applicable, a comment stating why must be entered below.)

☐ Yes ☐ No ☒ Not Applicable

i. All results less than PQL?

☐ Yes ☐ No Comments:

NA

ii. If above PQL, what samples are affected?

Comments:

NA

iii. Data quality or usability affected? Explain.

Comments:

NA

7. Other Data Flags/Qualifiers (ACOE, AFCEE, Lab Specific, etc.)

a. Defined and appropriate?

☐ Yes ☐ No Comments:

NA

2100.38.007

Laboratory Data Review Checklist

Completed by:	Jeffrey Cloud
Title:	Project Chemist
Date:	8/5/09
CS Report Name:	Subsurface Investigation Report
Report Date:	7/28/09
Consultant Firm:	Conestoga-Rovers & Associates
Laboratory Name:	Lancaster Laboratories
Laboratory Report Number:	1154032
ADEC File Number:	2110.38.007
ADEC RecKey Number:	

1. Laboratory

   a. Did an ADEC CS approved laboratory receive and perform all of the submitted sample analyses?

   ☒ Yes ☐ No Comments:

   Lancaster Labs

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

   ☒ Yes ☐ No Comments:

   NA

2. Chain of Custody (COC)

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

   ☒ Yes ☐ No Comments:

   b. Correct analyses requested?

   ☒ Yes ☐ No Comments:

3. Laboratory Sample Receipt Documentation

a. Sample/cooler temperature documented and within range at receipt (4° ± 2° C)?

☒ Yes ☐ No Comments:

b. Sample preservation acceptable – acidified waters, Methanol preserved VOC soil (GRO, BTEX, Volatile Chlorinated Solvents, etc.)?

☒ Yes ☐ No Comments:

c. Sample condition documented – broken, leaking (Methanol), zero headspace (VOC vials)?

☒ Yes ☐ No Comments:

d. If there were any discrepancies, were they documented? For example, incorrect sample containers/preservation, sample temperature outside of acceptable range, insufficient or missing samples, etc.?

☐ Yes ☐ No Comments:

NA

e. Data quality or usability affected? Explain.

Comments:

NA 100

4. Case Narrative

a. Present and understandable?

☒ Yes ☐ No Comments:

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

☒ Yes ☐ No Comments:

c. Were all corrective actions documented?

☐ Yes ☐ No Comments:

NA

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

Comments:

NA / No

5. Samples Results

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

☒ Yes ☐ No Comments:

b. All applicable holding times met?

☒ Yes ☐ No Comments:

c. All soils reported on a dry weight basis?

☒ Yes ☐ No Comments:

d. Are the reported PQLs less than the Cleanup Level or the minimum required detection level for the project?

☒ Yes ☐ No Comments:

e. Data quality or usability affected?

Comments:

NA / No

6. QC Samples

a. Method Blank

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

☒ Yes ☐ No Comments:

ii. All method blank results less than PQL?

☒ Yes ☐ No Comments:

iii. If above PQL, what samples are affected?

Comments:

NA

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

☐ Yes ☐ No Comments:

NA

v. Data quality or usability affected? Explain.

Comments:

NA NO

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

i. Organics – One LCS/LCSD reported per matrix, analysis and 20 samples? (LCS/LCSD required per AK methods, LCS required per SW846)

☑ Yes ☐ No Comments:

ii. Metals/Inorganics – one LCS and one sample duplicate reported per matrix, analysis and 20 samples?

☑ Yes ☐ No Comments:

NA

iii. Accuracy – All percent recoveries (%R) reported and within method or laboratory limits? And project specified DQOs, if applicable. (AK Petroleum methods: AK101 60%-120%, AK102 75%-125%, AK103 60%-120%; all other analyses see the laboratory QC pages)

☑ Yes ☐ No Comments:

iv. Precision – All relative percent differences (RPD) reported and less than method or laboratory limits? And project specified DQOs, if applicable. RPD reported from LCS/LCSD, MS/MSD, and or sample/sample duplicate. (AK Petroleum methods 20%; all other analyses see the laboratory QC pages)

☑ Yes ☐ No Comments:

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

Comments:

NA

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

☐ Yes ☐ No Comments:

NA

vii. Data quality or usability affected? (Use comment box to explain)

Comments:

NA (No)

c. Surrogates – Organics Only

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

☑ Yes ☐ No Comments:

ii. Accuracy – All percent recoveries (%R) reported and within method or laboratory limits? And project specified DQOs, if applicable. (AK Petroleum methods 50-150 %R; all other analyses see the laboratory report pages)

☐ Yes ☑ No Comments:

Samples SB09-1-5, SB09-2-5 and DUP-1 had low 8021 surrogate recovery.

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

☑ Yes ☐ No Comments:

iv. Data quality or usability affected? (Use the comment box to explain.)

Comments:

All 8021 results for samples SB09-1-5, SB09-2-5 and DUP-1 should be considered estimated due to an implied low bias.

d. Trip blank – Volatile analyses only (GRO, BTEX, Volatile Chlorinated Solvents, etc.): <u>Water and Soil</u>

i. One trip blank reported per matrix, analysis and for each cooler containing volatile samples? (if not, enter explanation below.)

☑ Yes ☐ No Comments:

ii. Is the cooler used to transport the trip blank and VOA samples clearly indicated on the COC? (If not, a comment explaining why must be entered below)

☑ Yes ☐ No Comments:

iii. All results less than PQL?

☑ Yes ☐ No Comments:

iv. If above PQL, what samples are affected?

Comments:

NA

v. Data quality or usability affected? Explain.

Comments:

NA NO

e. Field Duplicate

i. One field duplicate submitted per matrix, analysis and 10 project samples?

☒ Yes ☐ No Comments:

ii. Submitted blind to lab?

☒ Yes ☐ No Comments:

iii. Precision – All relative percent differences (RPD) less than specified DQOs? (Recommended: 30% water, 50% soil)

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

Where R_1 = Sample Concentration

R_2 = Field Duplicate Concentration

☐ Yes ☒ No Comments:

SB09-1-5/DUP toluene RPD was 86%.

iv. Data quality or usability affected? (Use the comment box to explain why or why not.)

Comments:

The toluene results for samples SB09-1-5 and DUP-1 should be considered estimated due to variability.

f. Decontamination or Equipment Blank (If not applicable, a comment stating why must be entered below.)

☐ Yes ☐ No ☒ Not Applicable

i. All results less than PQL?

☐ Yes ☐ No Comments:

NA

ii. If above PQL, what samples are affected?

Comments:

NA

iii. Data quality or usability affected? Explain.

Comments:

NA

7. Other Data Flags/Qualifiers (ACOE, AFCEE, Lab Specific, etc.)

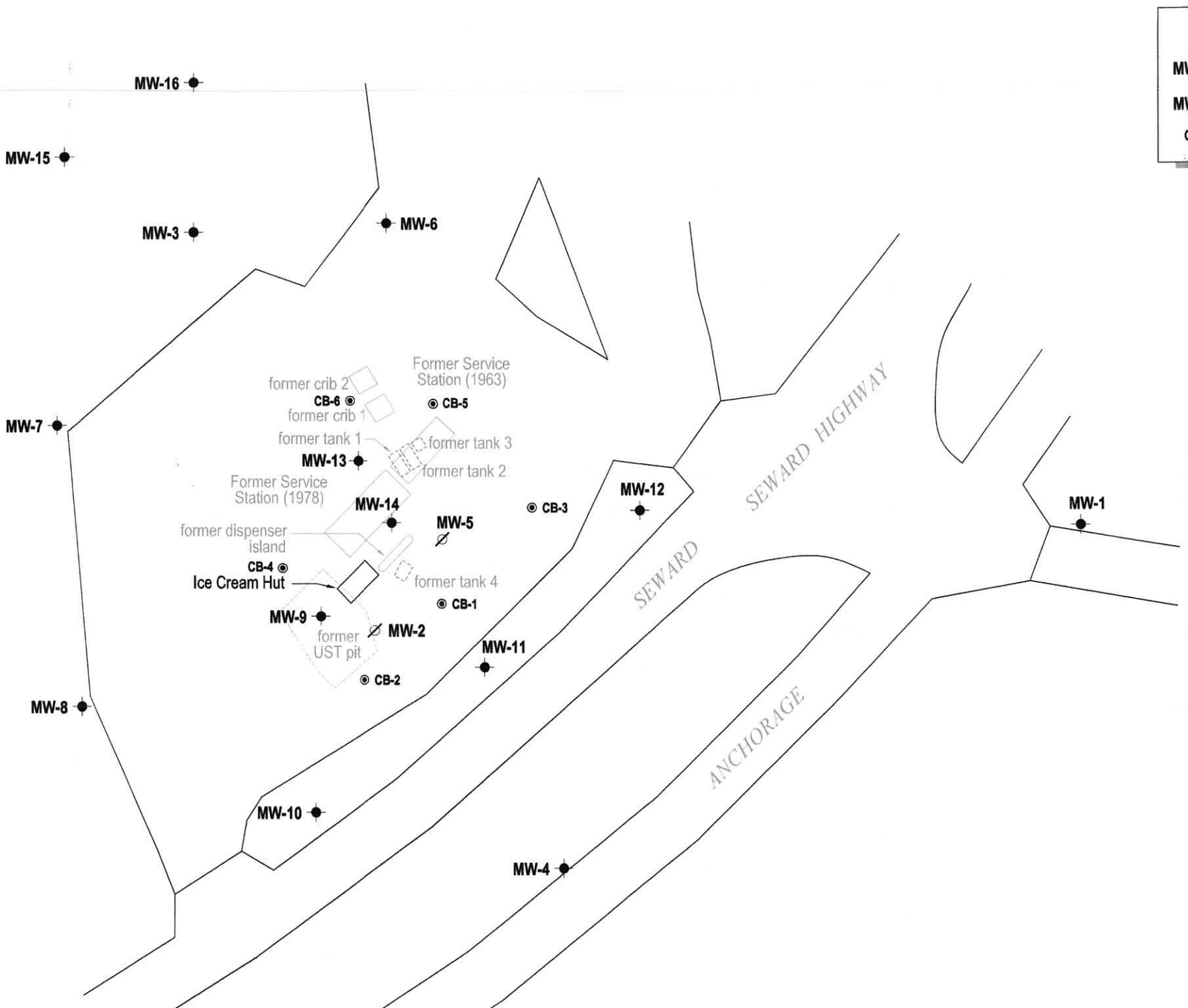
a. Defined and appropriate?

☒ Yes ☐ No Comments:

NA

Checked by Robert Weimer – ADEC 2/3/10

08/18/09



Site Plan

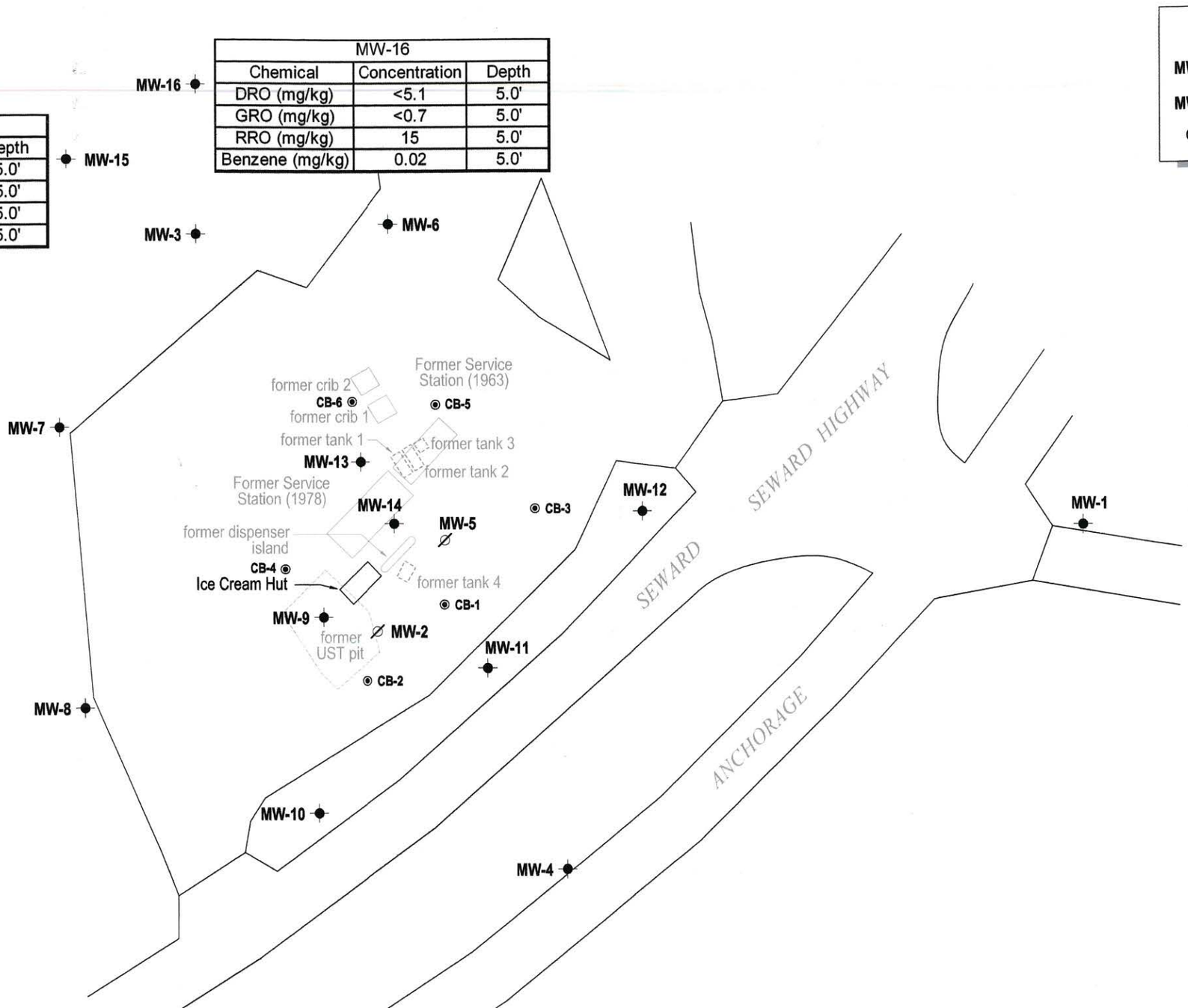
CONESTOGA-ROVERS & ASSOCIATES

tion 9-2609

08/13/09

MW-16		
Chemical	Concentration	Depth
DRO (mg/kg)	<5.1	5.0'
GRO (mg/kg)	<0.7	5.0'
RRO (mg/kg)	15	5.0'
Benzene (mg/kg)	0.02	5.0'

ntration	Depth
5.8	5.0'
0.9	5.0'
7	5.0'
009	5.0'



EXPLANATION

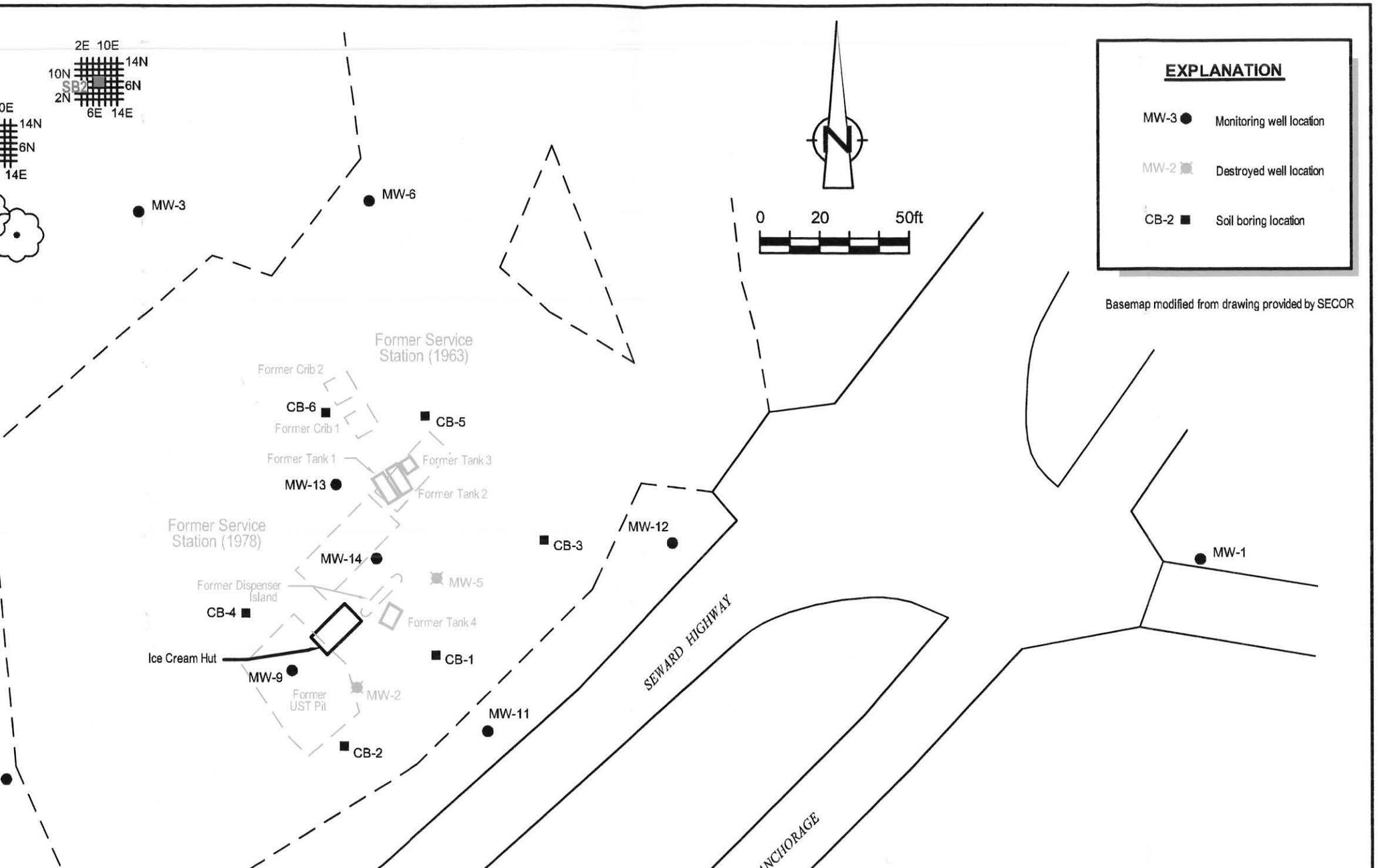
- MW-1 ⊕ Monitoring well location
- MW-2 ⌀ Destroyed well location
- CB-1 ◉ Soil boring location

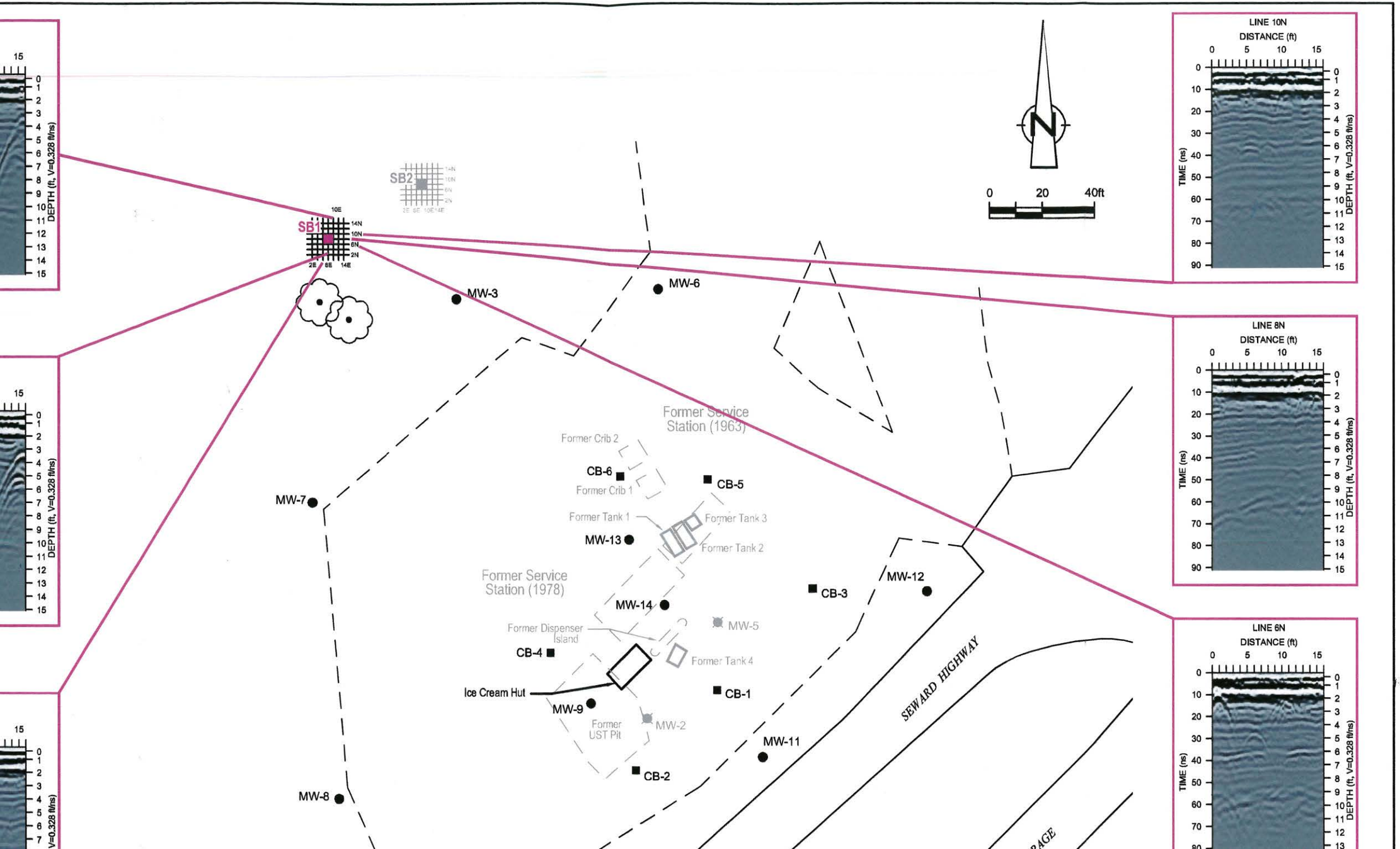
Petroleum Hydrocarbon Concentrations in Soil

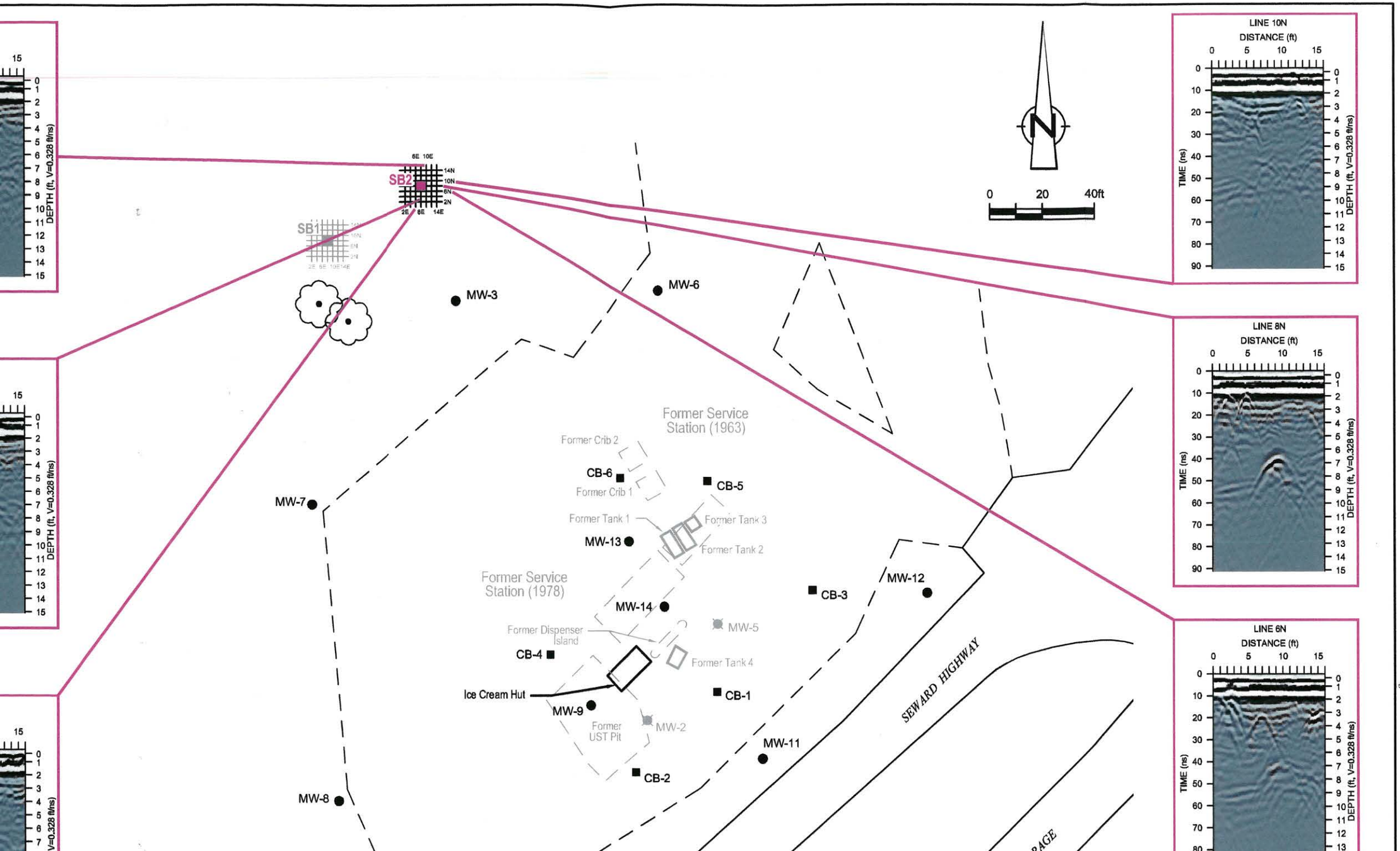
July 16, 2009

CONESTOGA-ROVERS & ASSOCIATES

tion 9-2609


2E 10E
14N
10N
SB2
6N
2N
6E 14E
14N
6N
14E
MW-3
MW-6
N
0 20 50ft
EXPLANATION
MW-3 Monitoring well location
MW-2 Destroyed well location
CB-2 Soil boring location
Basemap modified from drawing provided by SECOR
Former Service Station (1963)
Former Crib 2
CB-6
Former Crib 1
CB-5
Former Tank 1
Former Tank 3
MW-13
Former Tank 2
Former Service Station (1978)
MW-14
CB-3
MW-12
MW-1
Former Dispenser Island
MW-5
CB-4
Former Tank 4
Ice Cream Hut
CB-1
MW-9
Former UST Pit
MW-2
MW-11
CB-2
SEWARD HIGHWAY
ANCHORAGE


SB2
SB1
10E
14N
10N
6N
2N
2E
6E
14E
MW-3
MW-6
MW-7
MW-8
MW-9
MW-11
MW-12
MW-13
MW-14
MW-5
MW-2
CB-1
CB-2
CB-3
CB-4
CB-5
CB-6
Former Service Station (1963)
Former Service Station (1978)
Former Crib 2
Former Crib 1
Former Tank 1
Former Tank 2
Former Tank 3
Former Tank 4
Former Dispenser Island
Former UST Pit
Ice Cream Hut
SEWARD HIGHWAY
N
0
20
40ft
LINE 10N
DISTANCE (ft)
LINE 8N
DISTANCE (ft)
LINE 6N
DISTANCE (ft)
TIME (ns)
DEPTH (ft, V=0.328 ft/ns)


SB2
SB1
6E 10E
14N
10N
6N
2N
2E 6E 14E
0 20 40ft
MW-3
MW-6
MW-7
MW-8
MW-9
MW-11
MW-12
MW-13
MW-14
MW-5
MW-2
CB-1
CB-2
CB-3
CB-4
CB-5
CB-6
Former Service Station (1963)
Former Service Station (1978)
Former Crib 2
Former Crib 1
Former Tank 1
Former Tank 2
Former Tank 3
Former Tank 4
Former Dispenser Island
Former UST Pit
Ice Cream Hut
SEWARD HIGHWAY
LINE 10N
DISTANCE (ft)
LINE 8N
DISTANCE (ft)
LINE 6N
DISTANCE (ft)
TIME (ns)
DEPTH (ft, V=0.328 ft/ns)

Lancaster Laboratories
2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Type III Data Package
for
ChevronTexaco

SDG# AKD28

Project: 92609
Soil, Water and Methanol Samples
Collected on 07/16/09

GROUP	SAMPLE NUMBERS
1154032	5726704-5726709

PA Cert. # 36-00037
NY Cert. # 10670
NJ Cert. # PA011
NC Cert. # 521
TX Cert. # T104704194-08A-TX

Prepared by Jacqueline Tollenbaum

Reviewed by

Date 9/5/09

Lancaster Laboratories
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Table of Contents for SDG# AKD28

Lancaster Laboratories
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Sample Reference List for SDG Number AKD28 with a Data Package Type of III

10880 - ChevronTexaco

Project: 92609

Lab Sample Number	Lab Sample Code	Client Sample Description
5726704	SHG91	S-620911-071609-SL-SB09-1-5 Grab Soil Sample Facility# 92609
5726705	SHGD1	DUP-1 Grab Soil Sample Facility# 92609
5726706	SHG92	S-620911-071609-SL-SB09-2-5 Grab Soil Sample Facility# 92609
5726707	SHGEB	W-620911-071609-SL-EB-1 Grab Water Sample Facility# 92609
5726708	SHGTM	Trip_Blank Methanol Sample Facility# 92609
5726709	SHGTW	Trip_Blank Water Sample Facility# 92609

Chevron Generic Analysis Request/Chain of Custody

Lancaster Laboratories
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A12

For Lancaster Laboratories use only
Acct. #: 10880 Sample #: 5726704-09 SCR#: 013569 78333

C# 1154032

Facility #: 9-2009
Site Address: Mile 79.5 Seward Hwy, Girdwood AK
Chevron PM: B. Duggan (9. Barton) Lead Consultant:
Consultant/Office: CRA - Denver
Consultant Prj. Mgr.: B. Duggan
Consultant Phone #: (303) 433-3650 Fax #: (303) 433-3974
Sampler: S. Leak
Service Order #: ☐ Non SAR:

Sample Identification	Date Collected	Time Collected	Grab	Composite	Matrix: Soil	Matrix: Water	Matrix: Oil ☐ Air ☐	Total Number of Containers	BTEX + MTBE 8021 ☒ 8260 ☐ Naphth ☐	8260 full scan	Oxygenates	TPH G	TPH D ☐ Extended Rng. ☐ Silica Gel Cleanup	Lead Total ☐ Diss. ☐ Method	VPH/EPH	NWTPH H HCID ☐ quantification	DRO AK 102	GRO AK 101	RRO AK 103	Moisture
S-062911-071409-SL-SB09-1-5	7/14/09	0931	X		X			3	X								X	X	X	X
Dup-1	7/14/09	—	X		X			3	X								X	X	X	X
S-062911-071409-SL-SB09-2-5	7/14/09	1125	X		X			3	X								X	X	X	X

Analyses Requested / Preservation Codes

Preservative Codes
H = HCl T = Thiosulfate
N = HNO_3 B = NaOH
S = H_2SO_4 O = Other

☐ J value reporting needed
☐ Must meet lowest detection limits possible for 8260 compounds
8021 MTBE Confirmation
☐ Confirm MTBE + Naphthalene
☐ Confirm highest hit by 8260
☐ Confirm all hits by 8260
☐ Run ____ oxy's on highest hit
☐ Run ____ oxy's on all hits

Comments / Remarks
BTEX / GRO PRESERVED WITH METHANOL

Turnaround Time Requested (TAT) (please circle)
(STD. TAT) 72 hour 48 hour
24 hour 4 day 5 day

Data Package Options (please circle if required)
QC Summary Type I - Full
Type VI (Raw Data) Disk / EDD
WIP (RWQCB) Standard Format
Disk Type III (Other)

Relinquished by:	Date	Time	Received by:	Date	Time
[signature]	7-9-09		[signature]	7/13/09	2000
[signature]	7/17/09	0830	Received by:	Date	Time
Relinquished by:	Date	Time	Received by:	Date	Time
Relinquished by Commercial Carrier: UPS (FedEx) Other			Received by: Katie Hartline	7/18/09	10:00
Temperature Upon Receipt 1.8 C°			Custody Seals Intact? (Yes) No		

Chevron Generic Analysis Request/Chain of Custody

Lancaster Laboratories
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AIL

For Lancaster Laboratories use only
Acct. #: 10880 Sample #: 5726704-09 SCR#: 013535 28332
GH 1154032

Facility #: 9-21009
Site Address: Mile 79.5 Seward Hwy, Girdwood, AK
Chevron PM: G. Barton Lead Consultant:
Consultant/Office: CRA - Denver
Consultant Prj. Mgr.: Brian Duggan
Consultant Phone #: (303)433-3650 Fax #: (303)433-3974
Sampler: Susan Lear
Service Order #: ☐ Non SAR:

Sample Identification	Date Collected	Time Collected	Grab	Composite	Matrix: Soil	Matrix: Water	Matrix: Oil ☐ Air ☐	Total Number of Containers	BTEX + ~~MTBE~~ 8021	8260 ☐ Naphth ☐	8260 full scan	Oxygenates	TPH G	TPH D ☐ Extended Rng. ☐ Silica Gel Cleanup	Lead Total ☐ Diss. ☐ Method	VPH/EPH	NWTPH H HCID ☐ quantification	GRO AK101	DRO AK102	RRO AK103
W-[illegible]-071609-SL-EB-1	7/16/09	~~0915~~ 1235	X			X		5	X									X	X	X

Analyses Requested / Preservation Codes

Preservative Codes
H = HCl T = Thiosulfate
N = HNO_3 B = NaOH
S = H_2SO_4 O = Other

☐ J value reporting needed
☐ Must meet lowest detection limits possible for 8260 compounds
8021 MTBE Confirmation
☐ Confirm MTBE + Naphthalene
☐ Confirm highest hit by 8260
☐ Confirm all hits by 8260
☐ Run ____ oxy's on highest hit
☐ Run ____ oxy's on all hits

Comments / Remarks

Turnaround Time Requested (TAT) (please circle)
STD. TAT 72 hour 48 hour
24 hour 4 day 5 day

Data Package Options (please circle if required)
QC Summary Type I - Full
Type VI (Raw Data) Disk / EDD
WIP (RWQCB) Standard Format
Disk TYPE III Other

	Date	Time		Date	Time
Relinquished by:	7/17/09	1343	Received by:	7/18/09	0800
Relinquished by:	7/17/09	0830	Received by:		
Relinquished by:			Received by:		
Relinquished by Commercial Carrier: UPS FedEx Other			Received by:	7/18/09	10:00

Temperature Upon Receipt 1.8 C°
Custody Seals Intact? Yes No

Lancaster Laboratories
2425 New Holland Pike • Lancaster, PA 17601

Environmental Sample Administration
Receipt Documentation Log

Client/Project: Chevron

Date of Receipt: 7/18/09

Time of Receipt: 10:00

Source Code: SO-1

Unpacker Emp. No.: 214

Shipping Container Sealed: (YES) NO

Custody Seal Present * : (YES) NO

* Custody seal was intact unless otherwise noted in the discrepancy section

Package: (Chilled) Not Chilled

Temperature of Shipping Containers							
Cooler #	Thermometer ID	Temperature (°C)	Temp Bottle (TB) or Surface Temp (ST)	Wet Ice (WI) or Dry Ice (DI) or Ice Packs (IP)	Ice Present? Y/N	Loose (L) Bagged Ice (B) or NA	Comments
1	012975	1.8	TB	WI	Y	B	
2							
3							
4							
5							
6							

Number of Trip Blanks received NOT listed on chain of custody: 2

Paperwork Discrepancy/Unpacking Problems:

Sample Administration Internal Chain of Custody			
Name	Date	Time	Reason for Transfer
Lara Hawthorne	7/18/09	11:32	Unpacking to storage
Tammy Eberl	7/18/09	1157	Place in Storage or (Entry)
			Entry ~~ARD2B 88E4~~
			Entry

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01146 GC VOA Water Prep

An undiluted aliquot of the water sample or a dilution of the sample is purged with an inert gas and the volatiles are collected on an adsorbent trap that is subsequently desorbed onto a gas chromatographic column.

Reference: Test Methods for Evaluating Solid Wastes, SW-846 Method 5030B, December 1996.

01440 TPH-GRO AK water C6-C10

The volatile compounds are extracted by bubbling an inert gas through the sample and collecting them on a sorbent trap. The trap is thermally desorbed onto a capillary column and analysis is performed using gas chromatography with a flame ionization detector (FID) and, optionally, a photoionization detector (PID) in series. Quantitation for Gasoline Range Organics (GRO) is performed using the total peak area detected within the hydrocarbon range defined in the method.

Reference: Method AK101 for the Determination of Gasoline Range Organics, April 8, 2002

01451 TPH-GRO AK soil C6-C10

The volatile compounds are first extracted from the sample with methanol. The resulting extract is diluted prior to analysis. The volatile compounds are extracted by bubbling an inert gas through the sample and collecting them on a sorbent trap. The trap is thermally desorbed onto a capillary column and analysis is performed using gas chromatography with a flame ionization detector (FID) and, optionally, a photoionization detector (PID) in series. Quantitation for Gasoline Range Organics (GRO) is performed using the total peak area detected within the hydrocarbon range defined in the method.

Reference: Method AK101 for the Determination of Gasoline Range Organics, April 8, 2002

01588 BTEX

The volatile compounds are extracted by bubbling an inert gas through the sample and collecting them on a sorbent trap. The trap is thermally desorbed onto a capillary column and analysis is performed using gas chromatography with a photoionization detector (PID).

Reference: Test Methods for Evaluating Solid Wastes, SW-846 Method 8021B, December 1996.

05878 BTEX

The volatile compounds are first extracted from the sample with methanol. The resulting extract is diluted prior to analysis. The volatile compounds are extracted by bubbling an inert gas through the sample and collecting them on a sorbent trap. The trap is thermally desorbed onto a capillary column and analysis is performed using gas chromatography with a photoionization detector (PID).

Reference: Test Methods for Evaluating Solid Wastes, SW-846 Method 8021B, December 1996.

02923 TPH-DRO/RRO (AK) water

Sample extracts in methylene chloride are analyzed by capillary chromatography using flame ionization detection. Quantitation is performed using the total peak area detected within the hydrocarbon ranges defined in the method.

Reference: AK 102/103 4/08/02 modified

01738 TPH-DRO/RRO (AK)

Sample extracts in methylene chloride are analyzed by capillary chromatography using flame ionization detection. Quantitation is performed using the total peak area detected within the hydrocarbon ranges defined in the method.

Reference: Alaska Method 102/103 for Determination of Diesel Range Organics, April 8, 2002.

02135 Extraction - DRO Water Special

An aliquot of sample is extracted with methylene chloride using either separatory funnel extraction or micro extraction technique.

Reference: Alaska Method 102/103 for Determination of Diesel Range Organics, April 8, 2002.

04833 Extraction / Fuel TPH (Soils)

Soil samples blended with sodium sulfate are serially extracted with methylene chloride using sonic probe. The serial extracts are combined, dried and concentrated.

Reference: Alaska Method 102/103 for Determination of Diesel Range Organics, April 8, 2002.

00111 Moisture

A well-mixed sample is placed in a tared container and dried to a constant weight in an oven at 103-105C. The increase in weight is the total solids.

Reference: Standard Methods for the Examination of Water and Wastewater, 20th Edition, 1998, Method 2540 G

06119 GC - Field Preserved (AK-101)

The sample is collected and preserved with methanol in the field using jars that were prepared and pre-weighed at the laboratory. The preparation consist of adding 25 ml of methanol and the appropriate amount of surrogate spiking solution to a 125 ml wide mouth amber glass jar. The jars are identified with a unique tracking number on the label and the mass of the vial,label, and methanol is determined prior to shipment into the field. Once in the field, 25g +/- 2.5 of soil is added to the jar and then iced at 4 +/- 2 degree C until the time they are returned to the lab. Upon receipt from the field, the container is then re-weighed to determine the exact weight of the soil added to the jar. Since an approximate amount of soil is added to the vials in the field, the dilution factors may vary from sample to sample.

Reference: Method AK101 for the Determination of Gasoline Range Organics, April 8, 2002

Lancaster Laboratories

ANALYTICAL RESULTS

Prepared for:

ChevronTexaco
6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

925-842-8582

Prepared by:

Lancaster Laboratories
2425 New Holland Pike
Lancaster, PA 17605-2425

July 28, 2009

SAMPLE GROUP

The sample group for this submittal is 1154032. Samples arrived at the laboratory on Saturday, July 18, 2009. The PO# for this group is 0015039416 and the release number is BARTON.

Client Description	Lancaster Labs Number
S-620911-071609-SL-SB09-1-5 Grab Soil Sample	5726704
DUP-1 Grab Soil Sample	5726705
S-620911-071609-SL-SB09-2-5 Grab Soil Sample	5726706
W-620911-071609-SL-EB-1 Grab Water Sample	5726707
Trip_Blank Methanol Sample	5726708
Trip_Blank Water Sample	5726709

METHODOLOGY

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

ELECTRONIC COPY TO	CRA	Attn: Nick Greco
ELECTRONIC COPY TO	Chevron	Attn: CRA EDD
ELECTRONIC COPY TO	CRA	Attn: Eric Purcell
ELECTRONIC COPY TO	CRA	Attn: Brian Duggan
1 COPY TO	Data Package Group	

AKD28 6887

Lancaster Laboratories, Inc.
2425 New Holland Pike
PO Box 12425
Lancaster, PA 17605-2425
717-656-2300 Fax: 717-656-2681

Lancaster Laboratories

Questions? Contact your Client Services Representative
Angela M Miller at (717) 656-2300

Respectfully Submitted,

Valerie L. Tomayko
Group Leader

[redacted]

Lancaster Laboratories, Inc.
2425 New Holland Pike
PO Box 12425
Lancaster, PA 17605-2425
717-656-2300 Fax: 717-656-2681

Lancaster Laboratories
2425 New Holland Pike • Lancaster, PA 17601

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

RL	Reporting Limit	**BMQL**	Below Minimum Quantitation Level
N.D.	none detected	**MPN**	Most Probable Number
TNTC	Too Numerous To Count	**CP Units**	cobalt-chloroplatinate units
IU	International Units	**NTU**	nephelometric turbidity units
umhos/cm	micromhos/cm		
C	degrees Celsius	**F**	degrees Fahrenheit
meq	milliequivalents	**lb.**	pound(s)
g	gram(s)	**kg**	kilogram(s)
ug	microgram(s)	**mg**	milligram(s)
ml	milliliter(s)	**l**	liter(s)
m3	cubic meter(s)	**ul**	microliter(s)

< less than - The number following the sign is the limit of quantitation, the smallest amount of analyte which can be reliably determined using this specific test.

> greater than

J estimated value – The result is ≥ the Method Detection Limit (MDL) and < the Limit of Quantitation (LOQ).

ppm parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg), or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter of gas per liter of gas.

ppb parts per billion

Dry weight basis Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

U.S. EPA CLP Data Qualifiers:

Organic Qualifiers

A	TIC is a possible aldol-condensation product
B	Analyte was also detected in the blank
C	Pesticide result confirmed by GC/MS
D	Compound quantitated on a diluted sample
E	Concentration exceeds the calibration range of the instrument
N	Presumptive evidence of a compound (TICs only)
P	Concentration difference between primary and confirmation columns >25%
U	Compound was not detected
X,Y,Z	Defined in case narrative

Inorganic Qualifiers

B	Value is <CRDL, but ≥IDL
E	Estimated due to interference
M	Duplicate injection precision not met
N	Spike sample not within control limits
S	Method of standard additions (MSA) used for calculation
U	Compound was not detected
W	Post digestion spike out of control limits
*****	Duplicate analysis not within control limits
+	Correlation coefficient for MSA <0.995

Analytical test results for methods listed on the laboratories' accreditation scope meet all requirements of NELAC unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. This report shall not be reproduced except in full, without the written approval of the laboratory.

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Analysis Report

Lancaster Laboratories

Lancaster Laboratories Sample No. SW 5726704

Group No. 1154032
AK

S-620911-071609-SL-SB09-1-5 Grab Soil Sample
Facility# 92609
Mile 79.5 Seward Hwy - Girdwood, AK

Collected: 07/16/2009 09:31 by SL

Account Number: 10880

Submitted: 07/18/2009 10:00
Reported: 07/28/2009 at 13:59
Discard: 08/28/2009

ChevronTexaco
6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

SHG91 SDG#: AKD28-01

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
AK 101	**GC Volatiles**		**mg/kg**	**mg/kg**	**mg/kg**	
01451	TPH-GRO AK soil C6-C10	n.a.	N.D.	0.9	8.7	30.25
SW-846 8021B	**GC Volatiles**		**mg/kg**	**mg/kg**	**mg/kg**	
05878	Benzene	71-43-2	N.D.	0.009	0.03	30.25
05878	Ethylbenzene	100-41-4	N.D.	0.009	0.03	30.25
05878	Toluene	108-88-3	N.D.	0.009	0.03	30.25
05878	Total Xylenes	1330-20-7	N.D.	0.03	0.09	30.25
AK 102/AK 103 04/08/02	**GC Extractable TPH**		**mg/kg**	**mg/kg**	**mg/kg**	
01738	C10-<C25 DRO	n.a.	N.D.	5.8	17	1
01738	C25-C36 RRO	n.a.	57	5.8	17	1
SM20 2540 G	**Wet Chemistry**		**%**	**%**	**%**	
00111	Moisture	n.a.	30.6	0.50	0.50	1

"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.

General Sample Comments

State of Alaska Lab Certification No. UST-061

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01451	TPH-GRO AK soil C6-C10	AK 101	1	09201A16B	07/21/2009 14:39	Marie D John	30.25
05878	BTEX	SW-846 8021B	1	09201A16B	07/21/2009 14:39	Marie D John	30.25
06119	GC - Field Preserved (AK-101)	AK 101	1	200920118697	07/16/2009 09:31	Client Supplied	1
01738	TPH-DRO/RRO (AK)	AK 102/AK 103 04/08/02	1	092020025A	07/23/2009 11:33	Diane V Do	1
04833	Extraction / Fuel TPH (Soils)	AK 102/AK 103 04/08/02	1	092020025A	07/22/2009 10:45	Olivia Arosemena	1
00111	Moisture	SM20 2540 G	1	09203820001A	07/22/2009 18:40	Scott W Freisher	1

AKD28 8818

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Lancaster Laboratories

Lancaster Laboratories Sample No. SW 5726705

Group No. 1154032
AK

DUP-1 Grab Soil Sample
Facility# 92609
Mile 79.5 Seward Hwy - Girdwood, AK

Collected: 07/16/2009 by SL

Account Number: 10880

Submitted: 07/18/2009 10:00
Reported: 07/28/2009 at 13:59
Discard: 08/28/2009

ChevronTexaco
6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

SHGD1 SDG#: AKD28-02FD

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
AK 101	**GC Volatiles**		**mg/kg**		**mg/kg**	**mg/kg**	
01451	TPH-GRO AK soil C6-C10	n.a.	N.D.		0.8	7.8	28.51
SW-846 8021B	**GC Volatiles**		**mg/kg**		**mg/kg**	**mg/kg**	
05878	Benzene	71-43-2	N.D.		0.008	0.03	28.51
05878	Ethylbenzene	100-41-4	N.D.		0.008	0.03	28.51
05878	Toluene	108-88-3	0.02	J	0.008	0.03	28.51
05878	Total Xylenes	1330-20-7	N.D.		0.02	0.08	28.51
AK 102/AK 103 04/08/02	**GC Extractable TPH**		**mg/kg**		**mg/kg**	**mg/kg**	
01738	C10-<C25 DRO	n.a.	N.D.		5.4	16	1
01738	C25-C36 RRO	n.a.	53		5.4	16	1
SM20 2540 G	**Wet Chemistry**		**%**		**%**	**%**	
00111	Moisture	n.a.	26.6		0.50	0.50	1

"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.

General Sample Comments

State of Alaska Lab Certification No. UST-061

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01451	TPH-GRO AK soil C6-C10	AK 101	1	09201A16B	07/21/2009 15:17	Marie D John	28.51
05878	BTEX	SW-846 8021B	1	09201A16B	07/21/2009 15:17	Marie D John	28.51
06119	GC - Field Preserved (AK-101)	AK 101	1	200920118697	07/16/2009 00:00	Client Supplied	1
01738	TPH-DRO/RRO (AK)	AK 102/AK 103 04/08/02	1	092020025A	07/23/2009 11:06	Diane V Do	1
04833	Extraction / Fuel TPH (Soils)	AK 102/AK 103 04/08/02	1	092020025A	07/22/2009 10:45	Olivia Arosemena	1
00111	Moisture	SM20 2540 G	1	09203820001A	07/22/2009 18:40	Scott W Freisher	1

AKD28 6011

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Analysis Report

Lancaster Laboratories

Lancaster Laboratories Sample No. SW 5726706

Group No. 1154032
AK

S-620911-071609-SL-SB09-2-5 Grab Soil Sample
Facility# 92609
Mile 79.5 Seward Hwy - Girdwood, AK

Collected: 07/16/2009 11:25 by SL

Account Number: 10880

Submitted: 07/18/2009 10:00
Reported: 07/28/2009 at 13:59
Discard: 08/28/2009

ChevronTexaco
6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

SHG92 SDG#: AKD28-03

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
AK 101	**GC Volatiles**		**mg/kg**		**mg/kg**	**mg/kg**	
01451	TPH-GRO AK soil C6-C10	n.a.	N.D.		0.7	6.9	27.14
SW-846 8021B	**GC Volatiles**		**mg/kg**		**mg/kg**	**mg/kg**	
05878	Benzene	71-43-2	0.02	J	0.006	0.03	27.14
05878	Ethylbenzene	100-41-4	N.D.		0.006	0.03	27.14
05878	Toluene	108-88-3	0.03		0.006	0.03	27.14
05878	Total Xylenes	1330-20-7	N.D.		0.02	0.07	27.14
AK 102/AK 103 04/08/02	**GC Extractable TPH**		**mg/kg**		**mg/kg**	**mg/kg**	
01738	C10-<C25 DRO	n.a.	N.D.		5.1	15	1
01738	C25-C36 RRO	n.a.	15	J	5.1	15	1
SM20 2540 G	**Wet Chemistry**		**%**		**%**	**%**	
00111	Moisture	n.a.	21.8		0.50	0.50	1

"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.

General Sample Comments

State of Alaska Lab Certification No. UST-061

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time		Analyst	Dilution Factor
01451	TPH-GRO AK soil C6-C10	AK 101	1	09201A16B	07/21/2009	15:55	Marie D John	27.14
05878	BTEX	SW-846 8021B	1	09201A16B	07/21/2009	15:55	Marie D John	27.14
06119	GC - Field Preserved (AK-101)	AK 101	1	200920118697	07/16/2009	11:25	Client Supplied	1
01738	TPH-DRO/RRO (AK)	AK 102/AK 103 04/08/02	1	092020025A	07/23/2009	10:38	Diane V Do	1
04833	Extraction / Fuel TPH (Soils)	AK 102/AK 103 04/08/02	1	092020025A	07/22/2009	10:45	Olivia Arosemena	1
00111	Moisture	SM20 2540 G	1	09203820001A	07/22/2009	18:40	Scott W Freisher	1

AKD28 0812

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Analysis Report

Lancaster Laboratories

Lancaster Laboratories Sample No. WW 5726707

Group No. 1154032
AK

W-620911-071609-SL-EB-1 Grab Water Sample
Facility# 92609
Mile 79.5 Seward Hwy - Girdwood, AK

Collected: 07/16/2009 12:35 by SL

Account Number: 10880

Submitted: 07/18/2009 10:00
Reported: 07/28/2009 at 13:59
Discard: 08/28/2009

ChevronTexaco
6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

SHGEB SDG#: AKD28-04EB

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
AK 101	**GC Volatiles**		**mg/l**	**mg/l**	**mg/l**	
01440	TPH-GRO AK water C6-C10	n.a.	N.D.	0.010	0.10	1
SW-846 8021B	**GC Volatiles**		**mg/l**	**mg/l**	**mg/l**	
01588	Benzene	71-43-2	N.D.	0.0005	0.0020	1
01588	Ethylbenzene	100-41-4	N.D.	0.0005	0.0020	1
01588	Toluene	108-88-3	N.D.	0.0005	0.0020	1
01588	Total xylenes	1330-20-7	N.D.	0.0015	0.0050	1
AK 102/103 4/08/02 modified	**GC Extractable TPH**		**mg/l**	**mg/l**	**mg/l**	
02923	C10-<C25 DRO	n.a.	N.D.	0.048	2.4	1
02923	C25-C36 RRO	n.a.	N.D.	0.048	2.4	1

General Sample Comments

State of Alaska Lab Certification No. UST-061

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01440	TPH-GRO AK water C6-C10	AK 101	1	09200A53A	07/20/2009 18:55	Carrie E Miller	1
01588	BTEX	SW-846 8021B	1	09200A53A	07/20/2009 18:55	Carrie E Miller	1
01146	GC VOA Water Prep	SW-846 5030B	1	09200A53A	07/20/2009 18:55	Carrie E Miller	1
02923	TPH-DRO/RRO (AK) water	AK 102/103 4/08/02 modified	1	092020011A	07/22/2009 13:40	Diane V Do	1
02135	Extraction - DRO Water Special	AK 102/AK 103 04/08/02	1	092020011A	07/22/2009 02:45	Tracy L Schickel	1

AKD28 0813

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Analysis Report

Lancaster Laboratories

Lancaster Laboratories Sample No. G5 5726708

Group No. 1154032
AK

Trip Blank Methanol Sample
Facility# 92609
Mile 79.5 Seward Hwy - Girdwood, AK

Collected: 07/16/2009

Account Number: 10880

Submitted: 07/18/2009 10:00
Reported: 07/28/2009 at 13:59
Discard: 08/28/2009

ChevronTexaco
6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

SHGTM SDG#: AKD28-05TB

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
AK 101	**GC Volatiles**		**mg/kg**	**mg/kg**	**mg/kg**	
01451	TPH-GRO AK soil C6-C10	n.a.	N.D.	0.5	5.0	25
SW-846 8021B	**GC Volatiles**		**mg/kg**	**mg/kg**	**mg/kg**	
05878	Benzene	71-43-2	N.D.	0.005	0.02	25
05878	Ethylbenzene	100-41-4	N.D.	0.005	0.02	25
05878	Toluene	108-88-3	N.D.	0.005	0.02	25
05878	Total Xylenes	1330-20-7	N.D.	0.02	0.05	25

General Sample Comments

State of Alaska Lab Certification No. UST-061

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01451	TPH-GRO AK soil C6-C10	AK 101	1	09201A16C	07/23/2009 10:26	Marie D John	25
05878	BTEX	SW-846 8021B	1	09201A16C	07/23/2009 10:26	Marie D John	25
06119	GC - Field Preserved (AK-101)	AK 101	1	200920118697	07/16/2009 00:00	Client Supplied	1

AKD28 0814

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Analysis Report

Lancaster Laboratories

Lancaster Laboratories Sample No. WW 5726709

Group No. 1154032
AK

Trip Blank Water Sample
Facility# 92609
Mile 79.5 Seward Hwy - Girdwood, AK

Collected: 07/16/2009

Account Number: 10880

Submitted: 07/18/2009 10:00
Reported: 07/28/2009 at 13:59
Discard: 08/28/2009

ChevronTexaco
6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

SHGTW SDG#: AKD28-06TB*

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
AK 101	**GC Volatiles**		mg/l	mg/l	mg/l	
01440	TPH-GRO AK water C6-C10	n.a.	N.D.	0.010	0.10	1
SW-846 8021B	**GC Volatiles**		mg/l	mg/l	mg/l	
01588	Benzene	71-43-2	N.D.	0.0005	0.0020	1
01588	Ethylbenzene	100-41-4	N.D.	0.0005	0.0020	1
01588	Toluene	108-88-3	N.D.	0.0005	0.0020	1
01588	Total xylenes	1330-20-7	N.D.	0.0015	0.0050	1

General Sample Comments

State of Alaska Lab Certification No. UST-061

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01440	TPH-GRO AK water C6-C10	AK 101	1	09200A53A	07/20/2009 19:19	Carrie E Miller	1
01588	BTEX	SW-846 8021B	1	09200A53A	07/20/2009 19:19	Carrie E Miller	1
01146	GC VOA Water Prep	SW-846 5030B	1	09200A53A	07/20/2009 19:19	Carrie E Miller	1

AKD28 8815

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Volatiles by GC Data (Soil)

Case Narrative
Conformance/Nonconformance
Summary

Lancaster Laboratories

Where quality is a science.

Case Narrative
SDG# AKD28

Client: ChevronTexaco
Volatiles by GC - Soil

SAMPLE ANALYSES

LL Sample #	Sample Designation	Matrix Soil	Matrix Water	Comments
5726704	SHG91	X		DF 30
5726705	SHGD1	X		DF 29
5726706	SHG92	X		DF 27
5726708	SHGTM	X		DF 25

QUALITY CONTROL ANALYSES

BLK1642		X	DF 25 Method Blank
BLK1643		X	DF 25 Method Blank
BLK1644		X	DF 25 Method Blank
LCS1642		X	Lab Control Sample
LDS1642		X	Lab Control Dup
LCS1643		X	DF 25 Lab Control Sample
LDS1643		X	DF 25 Lab Control Dup

SAMPLE PREPARATION

Sample #s 5726704,05,06 - The weight for these samples was found to be outside the 22.50g-27.50g requirement when reweighed at the laboratory. Please see the VOA Prep Summary sheet in the Preparation Log section for more information.

Dilutions were necessary for the samples as listed above in the comments section.

ANALYSIS

No problems were encountered during analysis.

QUALITY CONTROL AND NONCONFORMANCE SUMMARY

See Conformance/Nonconformance Summary for the QC information.

DATA INTERPRETATION

No explanation is necessary for the data submitted.

Narrative reviewed and approved by:

Dana M. Kauffman, Manager **Date** 7/29/09

AKD28 0010

Quality Control Summary
SDG# AKD28

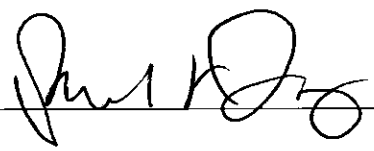
Conformance/Nonconformance Summary
Volatiles by GC

	Indicate Yes, No, N/A
1. Chromatograms Labeled/Compounds Identified (Field Samples and Method Blanks)	Yes
2. Retention times for chromatograms provided	Yes
3. Standards summary meet criteria	Yes
4. Calibration - Initial calibration performed before sample analysis and continuing calibration performed within 24 hours of sample analysis	Yes
5. Blank contamination - if yes, list compounds and concentrations in each blank	No
6. Surrogate recoveries meet criteria If not met, list those compounds which fall outside the acceptable range	No

Sample #	Surrogate	% Recovery		%Limits
5726704	Trifluorotoluene (Soil - PID)	72	D	80 - 120
5726705	Trifluorotoluene (Soil - PID)	72	D	80 - 120
5726706	Trifluorotoluene (Soil - PID)	73	D	80 - 120

If not met, were calculations checked and results qualified as "estimated"	N/A
7. Matrix spike/Matrix spike duplicate/Lab control sample/Lab control sample duplicate recoveries meet criteria	Yes
8. Retention time summary for the analysis met criteria	Yes
9. Were samples run on dissimilar columns	N/A
10. Extraction holding time met	N/A
11. Analysis holding time met - if not, list number of days exceeded for each sample	Yes

Additional Comments:

Reviewed by  Date 7/29/09

AKD28 18819

QC Summary

Quality Control Summary
SDG# AKD28

Surrogate Recovery
Volatiles by GC - Soil

LL Sample#	Sample Code	Dilution Factor	TFT-F Soil--FID % Recovery	TFT-P Soil--PID % Recovery	TOT OUT
5726704	SHG91	30.3	61	72 D	
5726705	SHGD1	28.5	61	72 D	
5726706	SHG92	27.1	61	73 D	
5726708	SHGTM	25.0	86	96	
BLK1642	METHOD BLANK	25.0	78	95	
BLK1643	METHOD BLANK	25.0	83	102	
BLK1644	METHOD BLANK	25.0	74	94	
LCS1642	LAB CONTROL	1.0	-	93	
LCS1643	LAB CONTROL	25.0	81	-	
LDS1642	LAB CON DUP	1.0	-	94	
LDS1643	LAB CON DUP	25.0	83	-	

* = Values outside quality control limits.
D = Surrogates diluted - not counted towards total out.
TOT OUT = Total # of surrogates with recovery outside control limits.

		Control Limits Lower	Upper
TFT-F	= Trifluorotoluene (Soil - FID)	60	120
TFT-P	= Trifluorotoluene (Soil - PID)	80	120

Quality Control Summary
SDG# AKD28

Method Blank
Volatiles by GC - Soil

Blank ID.....: BLK1642
Date.....: 07/20/09
Instrument.....: 5341

Batch Number.....: 09201A16A
Time.....: 12:53
Matrix.....: Methanol/Water

Sample Information

LL Sample#	Sample Code	Analysis Date	Analysis Time
LCS1642	LAB CONTROL	07/20/09	13:31
LDS1642	LAB CON DUP	07/20/09	14:09
LCS1643	LAB CONTROL	07/20/09	14:47
LDS1643	LAB CON DUP	07/20/09	15:24

Method Blank Results

CAS Number	Compound	Blank Conc. (UG/KG)	LOQ (UG/KG)	MDL (UG/KG)
1330-20-7	TOTAL XYLENES	ND	5	2
0000-00-0	GRO	ND	100	10
71-43-2	BENZENE	ND	2	.5
108-88-3	TOLUENE	ND	2	.5
100-41-4	ETHYLBENZENE	ND	2	.5

LOQ = Limit of Quantitation; MDL = Method Detection Limit
ND = None Detected; * = Above Limit of Quantitation

Quality Control Summary
SDG# AKD28

Method Blank
Volatiles by GC - Soil

Blank ID.....: BLK1643
Date.....: 07/21/09
Instrument.....: 5341

Batch Number.....: 09201A16B
Time.....: 13:23
Matrix.....: Methanol/Water

Sample Information

LL Sample#	Sample Code	Analysis Date	Analysis Time
5726704	SHG91	07/21/09	14:39
5726705	SHGD1	07/21/09	15:17
5726706	SHG92	07/21/09	15:55

Method Blank Results

CAS Number	Compound	Blank Conc. (UG/KG)	LOQ (UG/KG)	MDL (UG/KG)
1330-20-7	TOTAL XYLENES	ND	5	2
0000-00-0	GRO	ND	100	10
71-43-2	BENZENE	ND	2	.5
108-88-3	TOLUENE	ND	2	.5
100-41-4	ETHYLBENZENE	ND	2	.5

LOQ = Limit of Quantitation; MDL = Method Detection Limit
ND = None Detected; * = Above Limit of Quantitation

Quality Control Summary
SDG# AKD28

Method Blank
Volatiles by GC - Soil

Blank ID.....: BLK1644
Date.....: 07/22/09
Instrument.....: 5341

Batch Number.....: 09201A16C
Time.....: 19:14
Matrix.....: Methanol/Water

Sample Information			
LL Sample#	Sample Code	Analysis Date	Analysis Time
5726708	SHGTM	07/23/09	10:26

Method Blank Results				
CAS Number	Compound	Blank Conc. (UG/KG)	LOQ (UG/KG)	MDL (UG/KG)
1330-20-7	TOTAL XYLENES	ND	5	2
0000-00-0	GRO	ND	100	10
71-43-2	BENZENE	ND	2	.5
108-88-3	TOLUENE	ND	2	.5
100-41-4	ETHYLBENZENE	ND	2	.5

LOQ = Limit of Quantitation; MDL = Method Detection Limit
ND = None Detected; * = Above Limit of Quantitation

Lab Control/Lab Control Duplicate
Petroleum Analysis - Soil

Lab Control Sample Number....: LCS1642
Lab Control Sample Number....: LDS1642
Method Reference.....: 8020/8021

Batch Number.....: 09201A16
Date.....: 07/20/09
Instrument.....: 5341

Compound	Spike Added (UG/KG)	LCS Conc (UG/KG)	LDS Conc (UG/KG)	LCS % Recov	LDS % Recov	LCS Limits Recov	RPD	LCS Limits RPD
XYLENES (TOTAL)	60.0	62.4	63.7	104	106	78-115	2	30
BENZENE	20.0	22.2	22.4	111	112	76-118	1	30
TOLUENE	20.0	21.1	21.3	105	107	72-115	1	30
ETHYLBENZENE	20.0	20.3	20.6	101	103	77-115	2	30

LCS=Lab Control Sample; LDS=Lab Control Sample Duplicate; RPD=Relative Percent Difference

* = Value outside quality control limits.

Lab Control/Lab Control Duplicate
Petroleum Analysis - Soil

Lab Control Sample Number....: LCS1643
Lab Control Sample Number....: LDS1643
Method Reference.....: ALASKA

Batch Number.....: 09201A16
Date.....: 07/20/09
Instrument.....: 5341

Compound	Spike Added (UG/KG)	LCS Conc (UG/KG)	LDS Conc (UG/KG)	LCS % Recov	LDS % Recov	LCS Limits Recov	RPD	LCS Limits RPD
GRO	11000	10400	10200	95	93	60-120	2	20

LCS=Lab Control Sample; LDS=Lab Control Sample Duplicate; RPD=Relative Percent Difference

* = Value outside quality control limits.

Sample Data

Analysis LOQ/MDL Report

Analysis: 05878 Name: BTEX

Description: Default Values

Compound	Units	LOQ	MDL
Ethylbenzene	mg/kg	0.02	0.005
TOLUENE	mg/kg	0.02	0.005
TOTAL XYLENES	mg/kg	0.05	0.015
BENZENE	mg/kg	0.02	0.005

AKD28 0628

Analysis LOQ/MDL Report

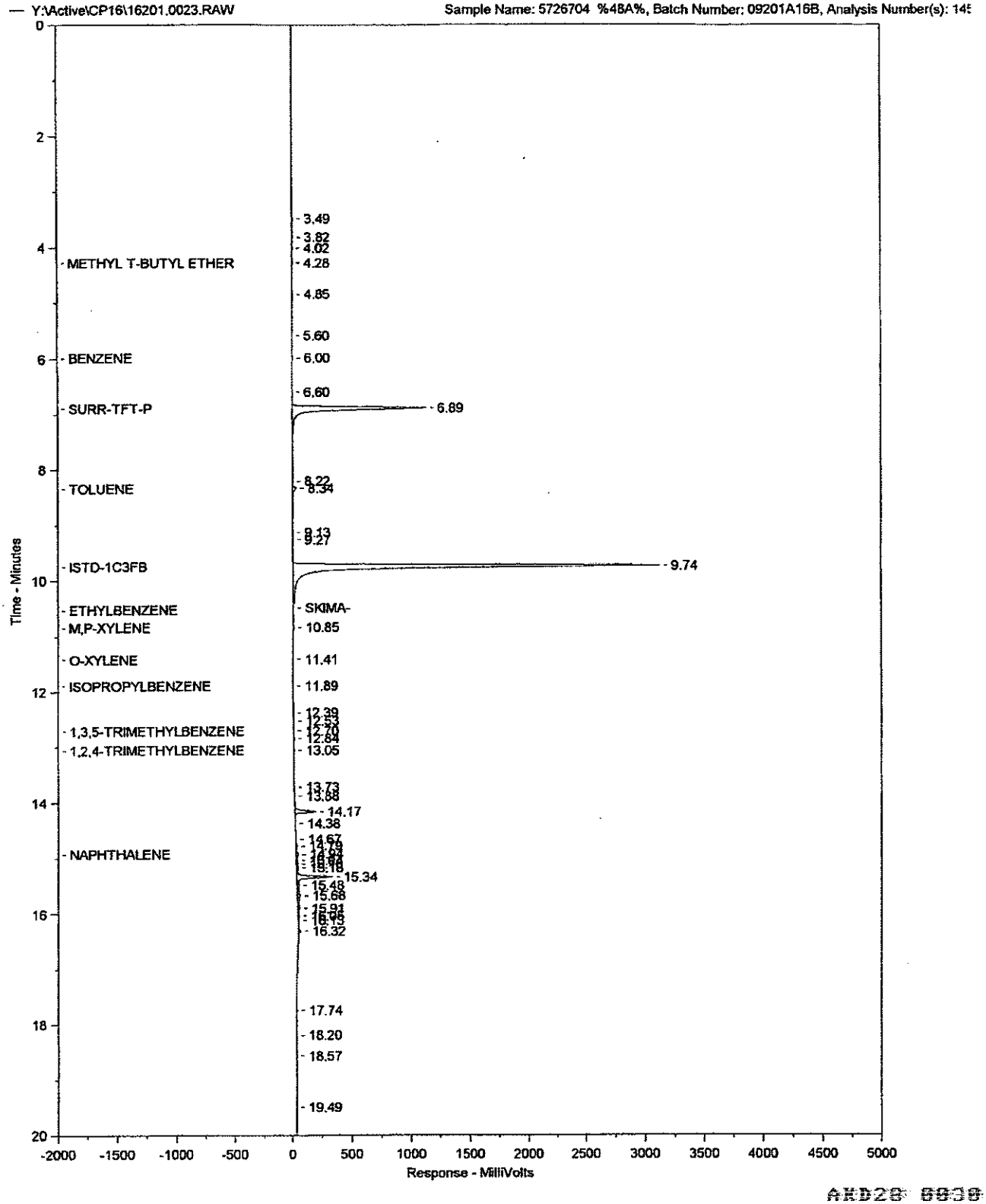
Analysis: 01451 Name: TPH-GRO AK soil C6-C10

Description: Default Values

Compound	Units	LOQ	MDL
GRO	mg/kg	5	0.5

AKDEC 8829

Sample Name: 5726704 %48A%, Batch Number: 09201A16B, Analysis Number(s): 1451,5878.
7/21/2009 2:59:44 PM Batch: 8020/21



AHD28 8838

Sample Name: 5726704 %48A%, Batch Number: 09201A16B, Analysis Number(s): 1451,5878.

Date Acquired: 7/21/2009 2:39:44 PM
Instrument: 6890-16--PID
Units: ug/kg **Vial Position: VI#**
Dilution Factor: 30.25
Raw File: Y:\Active\CP16\16201.0023.RAW
Method File: C:\Methods\16\16022[8021].met **Column:**
Analyst: 2001

Threshold: 6

Peak Table using calibration : C:\Cal\16\16022(8021).cal- Version 20
Number of Compounds: 12

Component Name	Ret. Time	Exp. Ret Time	Amount ug/kg	Peak Area (A)	Peak Height (H)*
METHYL T-BUTYL ETHER	4.28	4.28	7.68	23616	2411
BENZENE	6.00	5.94	0.43	13844	2576
SURR-TFT-P	6.89	6.87	650.51	4665877	1130485
TOLUENE	8.34	8.31	5.67	151790	29570
ISTD-1C3FB	9.74	9.75	30.00	12753490	3122883
ETHYLBENZENE	0.00	10.54	0.00	0	0
M,P-XYLENE	10.85	10.85	1.73	81418	7664
O-XYLENE	11.41	11.42	0.64	17911	2786
ISOPROPYLBENZENE	11.89	11.90	0.24	3790	1045
1,3,5-TRIMETHYLBENZENE	12.70	12.71	0.44	8457	3444
1,2,4-TRIMETHYLBENZENE	13.05	13.06	0.89	22319	5354
NAPHTHALENE	14.94	14.97	20.22	110166	20638

Total Xylenes: 2.37PPB

Surrogate Percent Recovery: 71.68

use this R35 confirms

Sample Name: 5726704 %48A%, Batch Number: 09201A16B, Analysis Number(s): 1451,5878.
Batch: 8020/21
Analyst: 2001
Raw File: Y:\Active\CP16\16201.0023.RAW
Method: C:\Methods\16\16022[8021].met
Date: 7/23/2009 11:27:43 AM

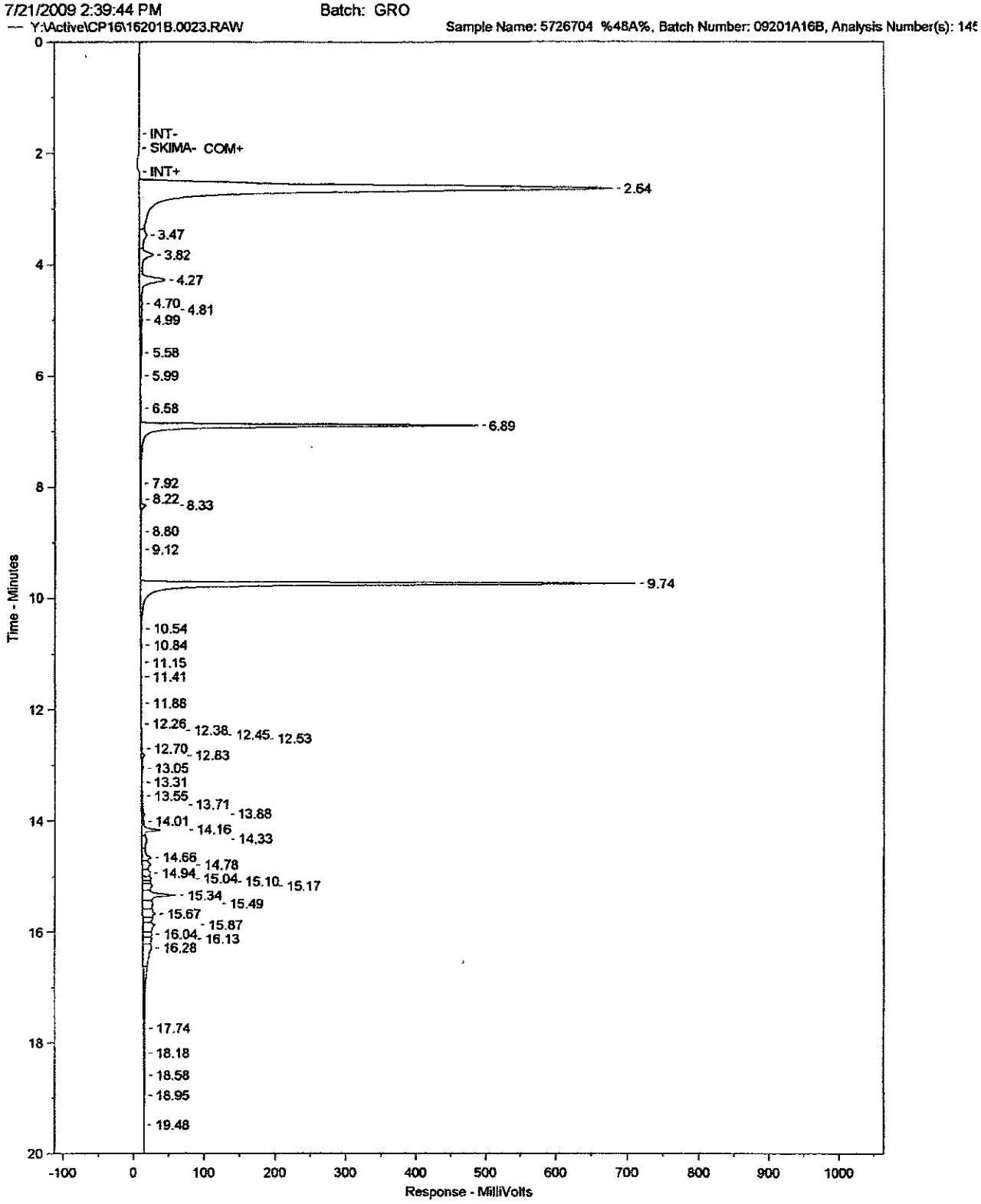
Analyst: MQ 2001 7-23-09

Verifier: 7/28/09

File: Y:\Active\CP16\16201.0023.RAW

ARD28 8831

Sample Name: 5726704 %48A%, Batch Number: 09201A16B, Analysis Number(s): 1451,5878.
7/21/2009 2:39:44 PM Batch: GRO



AKD28 0032

Sample Name: 5726704 %48A%, Batch Number: 09201A16B, Analysis Number(s): 1451,5878.

Date Acquired: 7/21/2009 2:39:44 PM
Instrument: 6890-16--FID
Units: ug/kg **Vial Position: VI#**
Dilution Factor: 30.25
Raw File: Y:\Active\CP16\16201B.0023.RAW
Method File: C:\Methods\16\AK16078.met **Column:**
Analyst: 2001

Threshold: 2

Peak Table using calibration : C:\Cal\16\AK16078.CAL- Version 22
Number of Compounds: 3

Component Name	Ret. Time	Exp. Ret Time	Amount ug/kg	Peak Area (A)*	Peak Height (H)
	2.64	0.00	0.00	6241527	672221.2
	3.47	0.00	0.00	150487	9763.682
	3.82	0.00	0.00	188457	18903.91
	4.27	0.00	0.00	314569	36113.82
	4.70	0.00	0.00	22225	3817.954
	4.81	0.00	0.00	31071	3185.14
	4.99	0.00	0.00	35918	3349.981
	5.58	0.00	0.00	30537	1951.031
	5.99	0.00	0.00	13399	1182.521
	6.58	0.00	0.00	13759	1035.256
SURR-TFT-F	6.89	6.89	550.87	1805739	479921.7
	7.92	0.00	0.00	5374	693.9213
	8.22	0.00	0.00	6804	1420.085
	8.33	0.00	0.00	40227	7438.931
	8.80	0.00	0.00	5772	678.7109
	9.12	0.00	0.00	1319	235.7598
SURR-1C3FB	9.74	9.73	811.21	2625195	703786.7
	10.54	0.00	0.00	15128	1440.686
	10.84	0.00	0.00	12126	1647.038
	11.15	0.00	0.00	1929	354.285
	11.41	0.00	0.00	1829	548.5811
	11.88	0.00	0.00	1868	480.768
	12.26	0.00	0.00	699	207.2198
	12.38	0.00	0.00	2586	602.73
	12.45	0.00	0.00	2720	882.2101
	12.53	0.00	0.00	4392	1095.265
	12.70	0.00	0.00	8039	1434.889
	12.83	0.00	0.00	26445	4724.429
	13.05	0.00	0.00	24563	2497.832
	13.31	0.00	0.00	5918	1244.247
	13.55	0.00	0.00	13748	1397.266
	13.71	0.00	0.00	7884	1560.375
	13.88	0.00	0.00	28915	3877.757
	14.01	0.00	0.00	18028	2990.209
	14.16	0.00	0.00	102603	26110.43
	14.33	0.00	0.00	73773	6533.816
	14.66	0.00	0.00	94977	12844.08
	14.78	0.00	0.00	83395	11562.74
	14.94	0.00	0.00	74979	11643.94
	15.04	0.00	0.00	49861	12400.6
	15.10	0.00	0.00	39567	12170.75
	15.17	0.00	0.00	87807	14326.97
	15.34	0.00	0.00	232184	47705.28
	15.49	0.00	0.00	115202	14470.01
	15.67	0.00	0.00	138231	18022.62
	15.87	0.00	0.00	145483	17197.06
	16.04	0.00	0.00	65906	13231.89
	16.13	0.00	0.00	89469	12817.3
	16.28	0.00	0.00	211365	12756.15
	17.74	0.00	0.00	27138	1703.164

AKD28 8833

Component Name	Ret. Time	Exp. Ret Time	Amount ug/kg	Peak Area (A)*	Peak Height (H)
	18.18	0.00	0.00	19010	1268.96
	18.58	0.00	0.00	15806	980.0064
	18.95	0.00	0.00	16852	707.8161
	19.48	0.00	0.00	3488	354.3059

RT Start	RT Stop	Unadj GRO	Total Surr.	Adj. GRO
4.59	12.72	4688655	4430934	257721

Surrogate Percent Recovery: 60.70211

Total GRO Area: 257721.00
Total GRO Concentration: 107.41 PPB

Sample Name: 5726704 %48A%, Batch Number: 09201A16B, Analysis Number(s): 1451,5878.
Batch: GRO
Analyst: 2001
Raw File: Y:\Active\CP16\16201B.0023.RAW
Method: C:\Methods\16\AK16078.met
Date: 7/23/2009 11:33:16 AM

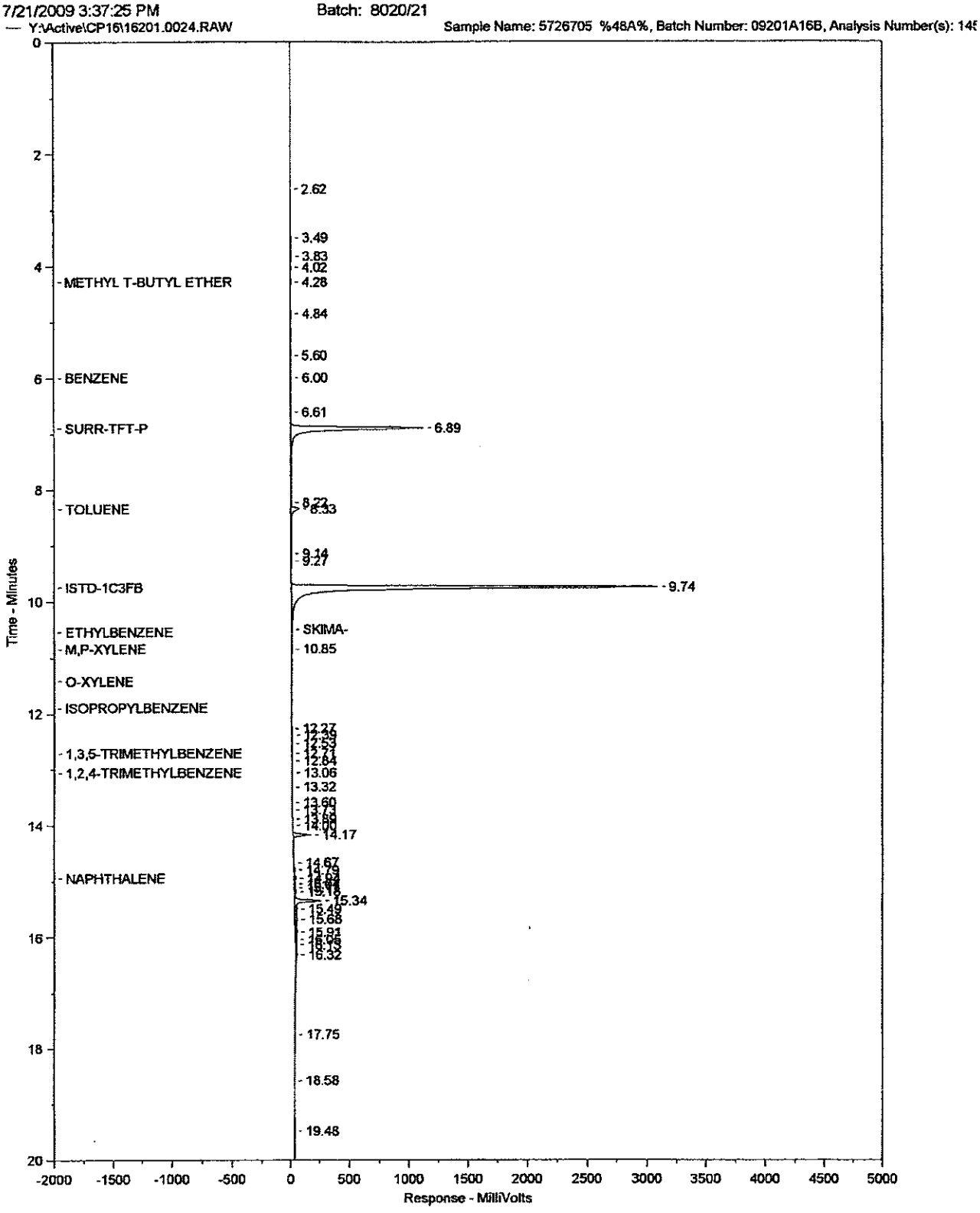
Analyst: MO 2001 7-23-09

Verifier: 7/28/09

File: Y:\Active\CP16\16201B.0023.RAW

Sample Name: 5726705 %48A%, Batch Number: 09201A16B, Analysis Number(s): 1451,5878.

7/21/2009 3:37:25 PM Batch: 8020/21



AKD28 8835

Sample Name: 5726705 %48A%, Batch Number: 09201A16B, Analysis Number(s): 1451,5878.

Date Acquired: 7/21/2009 3:17:25 PM
Instrument: 6890-16--PID
Units: ug/kg **Vial Position: VI#**
Dilution Factor: 28.51
Raw File: Y:\Active\CP16\16201.0024.RAW
Method File: C:\Methods\16\16022[8021].met **Column:**
Analyst: 2001

Threshold: 6

Peak Table using calibration : C:\Cal\16\16022(8021).cal- Version 20
Number of Compounds: 12

Component Name	Ret. Time	Exp. Ret Time	Amount ug/kg	Peak Area (A)	Peak Height (H)*
METHYL T-BUTYL ETHER	4.28	4.28	8.29	24849	2733
BENZENE	6.00	5.94	0.34	10364	2153
SURR-TFT-P	6.89	6.87	615.51	4660690	1122913
TOLUENE	8.33	8.31	12.61	317359	69092
ISTD-1C3FB	9.74	9.75	30.00	12677380	3089811
ETHYLBENZENE	0.00	10.54	0.00	0	0
M,P-XYLENE	10.85	10.85	1.43	58373	6646
O-XYLENE	0.00	11.42	0.00	0	0
ISOPROPYLBENZENE	0.00	11.90	0.00	0	0
1,3,5-TRIMETHYLBENZENE	12.71	12.71	0.38	7745	3141
1,2,4-TRIMETHYLBENZENE	13.06	13.06	0.68	19977	4275
NAPHTHALENE	14.94	14.97	16.75	95059	17951

Total Xylenes: 1.43PPB

Surrogate Percent Recovery: 71.96

use this R36 confirms

Sample Name: 5726705 %48A%, Batch Number: 09201A16B, Analysis Number(s): 1451,5878.
Batch: 8020/21
Analyst: 2001
Raw File: Y:\Active\CP16\16201.0024.RAW
Method: C:\Methods\16\16022[8021].met
Date: 7/23/2009 11:27:47 AM

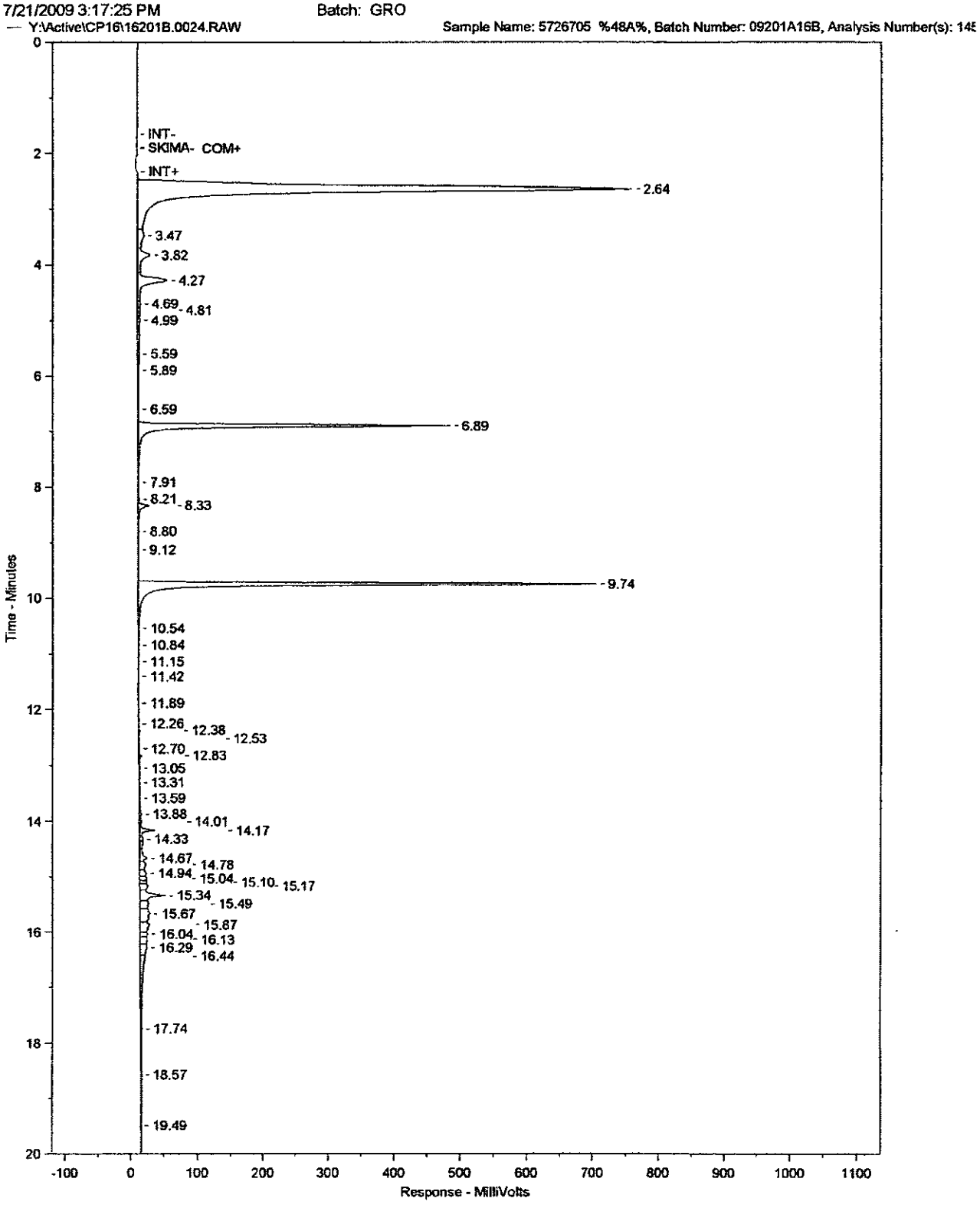
Analyst: MD 2001 7-23-09

Verifier: 7/28/09

File: Y:\Active\CP16\16201.0024.RAW

AWD28 8836

Sample Name: 5726705 %48A%, Batch Number: 09201A16B, Analysis Number(s): 1451,5878.
7/21/2009 3:17:25 PM Batch: GRO



Sample Name: 5726705 %48A%, Batch Number: 09201A16B, Analysis Number(s): 1451,5878.

Date Acquired: 7/21/2009 3:17:25 PM
Instrument: 6890-16--FID
Units: ug/kg **Vial Position: VI#**
Dilution Factor: 28.51
Raw File: Y:\Active\CP16\16201B.0024.RAW
Method File: C:\Methods\16\AK16078.met **Column:**
Analyst: 2001

Threshold: 2

Peak Table using calibration : C:\Cal\16\AK16078.CAL- Version 22
Number of Compounds: 3

Component Name	Ret. Time	Exp. Ret Time	Amount ug/kg	Peak Area (A)*	Peak Height (H)
	2.64	0.00	0.00	6938900	750664.6
	3.47	0.00	0.00	156134	10088.89
	3.82	0.00	0.00	205114	18997.69
	4.27	0.00	0.00	383403	44763.88
	4.69	0.00	0.00	25726	4238.901
	4.81	0.00	0.00	36737	3540.757
	4.99	0.00	0.00	39202	3651.961
	5.59	0.00	0.00	25401	2249.971
	5.89	0.00	0.00	9888	1362.849
	6.59	0.00	0.00	16587	1220.522
SURR-TFT-F	6.89	6.89	520.07	1808803	475880.6
	7.91	0.00	0.00	7631	945.0654
	8.21	0.00	0.00	8953	1686.178
	8.33	0.00	0.00	83487	17119.42
	8.80	0.00	0.00	7761	885.639
	9.12	0.00	0.00	3405	479.7184
SURR-1C3FB	9.74	9.73	760.61	2611684	696287.9
	10.54	0.00	0.00	10687	1350.635
	10.84	0.00	0.00	12839	1578.001
	11.15	0.00	0.00	2095	338.2506
	11.42	0.00	0.00	3369	601.8493
	11.89	0.00	0.00	1415	369.4971
	12.26	0.00	0.00	1250	318.8076
	12.38	0.00	0.00	8725	2151.766
	12.53	0.00	0.00	4312	1058.1
	12.70	0.00	0.00	5445	1241.773
	12.83	0.00	0.00	23180	3873.102
	13.05	0.00	0.00	9730	2003.77
	13.31	0.00	0.00	5241	1212.684
	13.59	0.00	0.00	11622	1216.785
	13.88	0.00	0.00	30747	3303.881
	14.01	0.00	0.00	17306	2914.864
	14.17	0.00	0.00	86536	23402.13
	14.33	0.00	0.00	26878	5357.189
	14.67	0.00	0.00	82066	11334.58
	14.78	0.00	0.00	76733	10304.02
	14.94	0.00	0.00	64961	10245.22
	15.04	0.00	0.00	44483	10987.37
	15.10	0.00	0.00	35543	11005.34
	15.17	0.00	0.00	79443	13060.21
	15.34	0.00	0.00	201374	38511.08
	15.49	0.00	0.00	100540	13302.53
	15.67	0.00	0.00	189689	16007.64
	15.87	0.00	0.00	134062	15606.17
	16.04	0.00	0.00	59149	11870.78
	16.13	0.00	0.00	79348	11360.77
	16.29	0.00	0.00	111860	11180.86
	16.44	0.00	0.00	119788	7767.149
	17.74	0.00	0.00	26669	1832.259
	18.57	0.00	0.00	19252	1134.991

AKD28 5838

Component Name	Ret. Time	Exp. Ret Time	Amount ug/kg	Peak Area (A)*	Peak Height (H)
	19.49	0.00	0.00	7080	508.5228

RT Start	RT Stop	Unadj GRO	Total Surr.	Adj. GRO
4.59	12.72	4735400	4420487	314913

Surrogate Percent Recovery: 60.80513

Total GRO Area: 314912.50
Total GRO Concentration: 123.70 PPB

Sample Name: 5726705 %48A%, Batch Number: 09201A16B, Analysis Number(s): 1451,5878.
Batch: GRO
Analyst: 2001
Raw File: Y:\Active\CP16\16201B.0024.RAW
Method: C:\Methods\16\AK16078.met
Date: 7/23/2009 11:33:21 AM

Analyst: M 2001 7-23-09

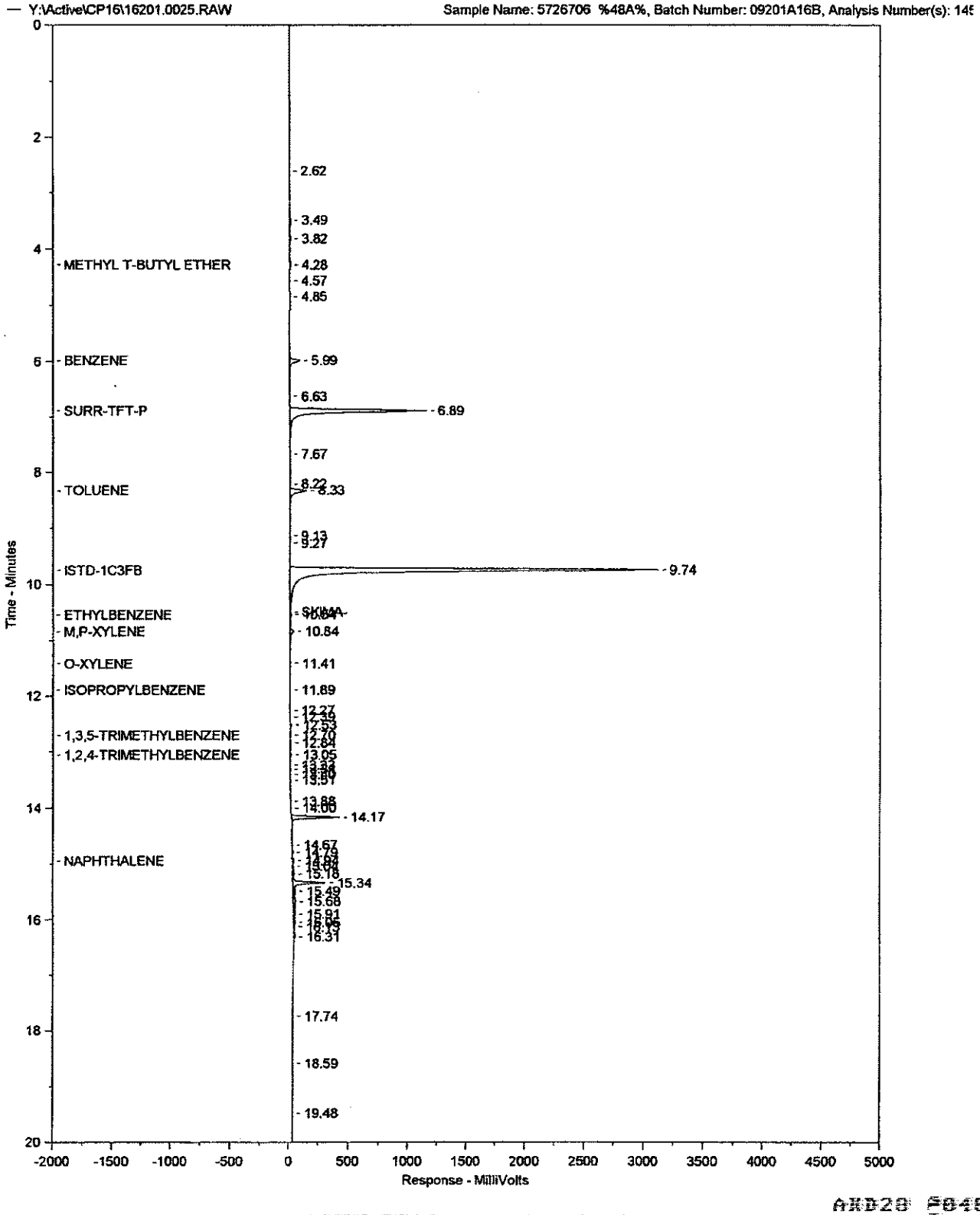
Verifier: 7/28/09

File: Y:\Active\CP16\16201B.0024.RAW

AKD28 8839

Sample Name: 5726706 %48A%, Batch Number: 09201A16B, Analysis Number(s): 1451,5878.

7/21/2009 4:15:31 PM Batch: 8020/21



AKD28 F048

Sample Name: 5726706 %48A%, Batch Number: 09201A16B, Analysis Number(s): 1451,5878.

Date Acquired: 7/21/2009 3:55:31 PM
Instrument: 6890-16--PID
Units: ug/kg **Vial Position: VI#**
Dilution Factor: 27.14
Raw File: Y:\Active\CP16\16201.0025.RAW
Method File: C:\Methods\16\16022[8021].met **Column:**
Analyst: 2001

Threshold: 6

Peak Table using calibration : C:\Cal\16\16022(8021).cal- Version 20
Number of Compounds: 12

Component Name	Ret. Time	Exp. Ret Time	Amount ug/kg	Peak Area (A)	Peak Height (H)*
METHYL T-BUTYL ETHER	4.28	4.28	26.61	75647	9308
BENZENE	5.99	5.94	13.20	375284	87978
SURR-TFT-P	6.89	6.87	596.45	4671343	1155056
TOLUENE	8.33	8.31	24.79	610525	144126
ISTD-1C3FB	9.74	9.75	30.00	12763160	3122185
ETHYLBENZENE	10.54	10.54	3.02	120284	14774
M,P-XYLENE	10.84	10.85	6.25	185981	30805
O-XYLENE	11.41	11.42	2.12	50983	10239
ISOPROPYLBENZENE	11.89	11.90	0.64	9887	3083
1,3,5-TRIMETHYLBENZENE	12.70	12.71	0.84	20600	7402
1,2,4-TRIMETHYLBENZENE	13.05	13.06	2.21	49758	14784
NAPHTHALENE	14.94	14.97	14.42	94374	16403

Total Xylenes: 8.36PPB

Surrogate Percent Recovery: 73.26

use this R37 confirms

Sample Name: 5726706 %48A%, Batch Number: 09201A16B, Analysis Number(s): 1451,5878.
Batch: 8020/21
Analyst: 2001
Raw File: Y:\Active\CP16\16201.0025.RAW
Method: C:\Methods\16\16022[8021].met
Date: 7/23/2009 11:27:52 AM

Analyst: MD 2001 7-23-09

Verifier: 7/28/09

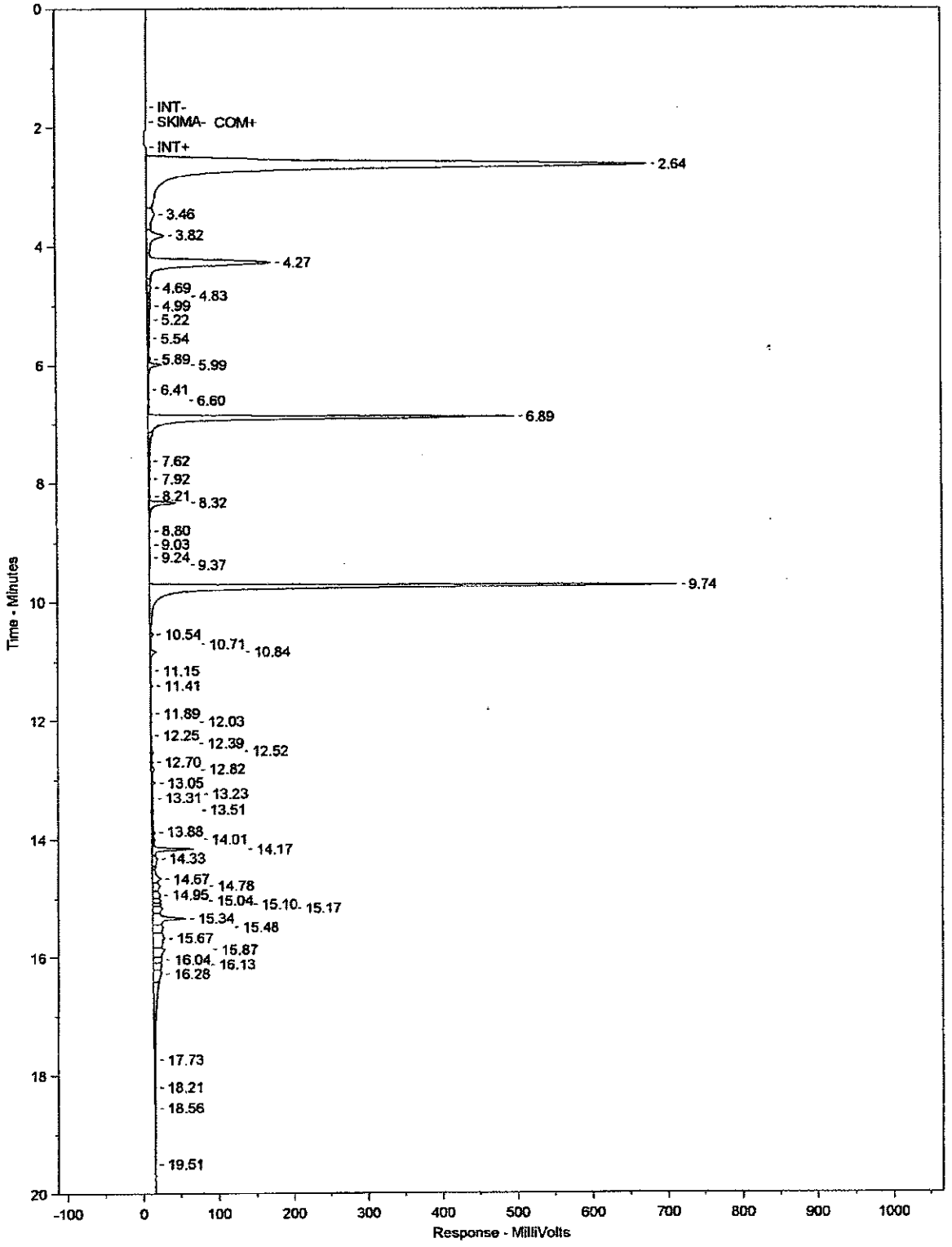
File: Y:\Active\CP16\16201.0025.RAW

AXD28 8041

Sample Name: 5726706 %48A%, Batch Number: 09201A16B, Analysis Number(s): 1451,5878.

7/21/2009 3:55:31 PM Batch: GRO

— Y:\Active\CP16\16201B.0025.RAW Sample Name: 5726706 %48A%, Batch Number: 09201A16B, Analysis Number(s): 145



AXD29 0642

Sample Name: 5726706 %48A%, Batch Number: 09201A16B, Analysis Number(s): 1451,5878.

Date Acquired: 7/21/2009 3:55:31 PM
Instrument: 6890-16--FID
Units: ug/kg **Vial Position: VI#**
Dilution Factor: 27.14
Raw File: Y:\Active\CP16\16201B.0025.RAW
Method File: C:\Methods\16\AK16078.met **Column:**
Analyst: 2001

Threshold: 2

Peak Table using calibration : C:\Cal\16\AK16078.CAL- Version 22
Number of Compounds: 3

Component Name	Ret. Time	Exp. Ret Time	Amount ug/kg	Peak Area (A)*	Peak Height (H)
	2.64	0.00	0.00	6164613	667396.1
	3.46	0.00	0.00	164318	10426.44
	3.82	0.00	0.00	209281	22776.95
	4.27	0.00	0.00	1135505	164872
	4.69	0.00	0.00	32486	5070.987
	4.83	0.00	0.00	34308	3947.323
	4.99	0.00	0.00	44969	4070.644
	5.22	0.00	0.00	47405	3103.592
	5.54	0.00	0.00	40089	2351.322
	5.89	0.00	0.00	19439	3231.322
	5.99	0.00	0.00	86261	18621.92
	6.41	0.00	0.00	18170	1449.879
	6.60	0.00	0.00	17935	1385.757
SURR-TFT-F	6.89	6.89	497.47	1817554	490596.1
	7.62	0.00	0.00	21866	1483.835
	7.92	0.00	0.00	11043	1497.361
	8.21	0.00	0.00	10054	1987.535
	8.32	0.00	0.00	155310	35383.17
	8.80	0.00	0.00	7197	1278.757
	9.03	0.00	0.00	3662	604.4025
	9.24	0.00	0.00	3116	526.1846
	9.37	0.00	0.00	4057	618.759
SURR-1C3FB	9.74	9.73	728.81	2628826	703999.1
	10.54	0.00	0.00	20964	3601.538
	10.71	0.00	0.00	5523	1008.681
	10.84	0.00	0.00	41699	7589.771
	11.15	0.00	0.00	2765	502.0017
	11.41	0.00	0.00	14125	3012.636
	11.89	0.00	0.00	5218	1343.917
	12.03	0.00	0.00	1846	510.4643
	12.25	0.00	0.00	1786	345.1358
	12.39	0.00	0.00	3024	754.2198
	12.52	0.00	0.00	17205	3296.581
	12.70	0.00	0.00	8923	2232.626
	12.82	0.00	0.00	26622	4616.497
	13.05	0.00	0.00	26154	5118.613
	13.23	0.00	0.00	5162	1355.714
	13.31	0.00	0.00	15019	2279.538
	13.51	0.00	0.00	18675	2598.62
	13.88	0.00	0.00	31044	3938.621
	14.01	0.00	0.00	19897	3785.748
	14.17	0.00	0.00	163263	55098.45
	14.33	0.00	0.00	57708	6430.26
	14.67	0.00	0.00	87122	11636.26
	14.78	0.00	0.00	74443	10566.23
	14.95	0.00	0.00	68874	10066.33
	15.04	0.00	0.00	44882	11051.62
	15.10	0.00	0.00	35826	11007.59
	15.17	0.00	0.00	79686	12955.81
	15.34	0.00	0.00	212352	43950.36

AND28 8843

Component Name	Ret. Time	Exp. Ret Time	Amount ug/kg	Peak Area(A)*	Peak Height (H)
	15.48	0.00	0.00	106010	13346.04
	15.67	0.00	0.00	199698	15923.55
	15.87	0.00	0.00	124135	15724.81
	16.04	0.00	0.00	59026	11883.31
	16.13	0.00	0.00	78345	11258.98
	16.28	0.00	0.00	109072	10918.9
	17.73	0.00	0.00	23501	1701.065
	18.21	0.00	0.00	33685	1284.871
	18.56	0.00	0.00	19067	1015.543
	19.51	0.00	0.00	3646	357.3512

RT Start	RT Stop	Unadj GRO	Total Surr.	Adj. GRO
4.59	12.72	5126826	4446380	680446

Surrogate Percent Recovery: 61.0993

Total GRO Area: 680445.50
Total GRO Concentration: 254.44 PPB

Sample Name: 5726706 %48A%, Batch Number: 09201A16B, Analysis Number(s): 1451,5878.
Batch: GRO
Analyst: 2001
Raw File: Y:\Active\CP16\16201B.0025.RAW
Method: C:\Methods\16\AK16078.met
Date: 7/23/2009 11:33:25 AM

Analyst: MD 2001 7-23-09

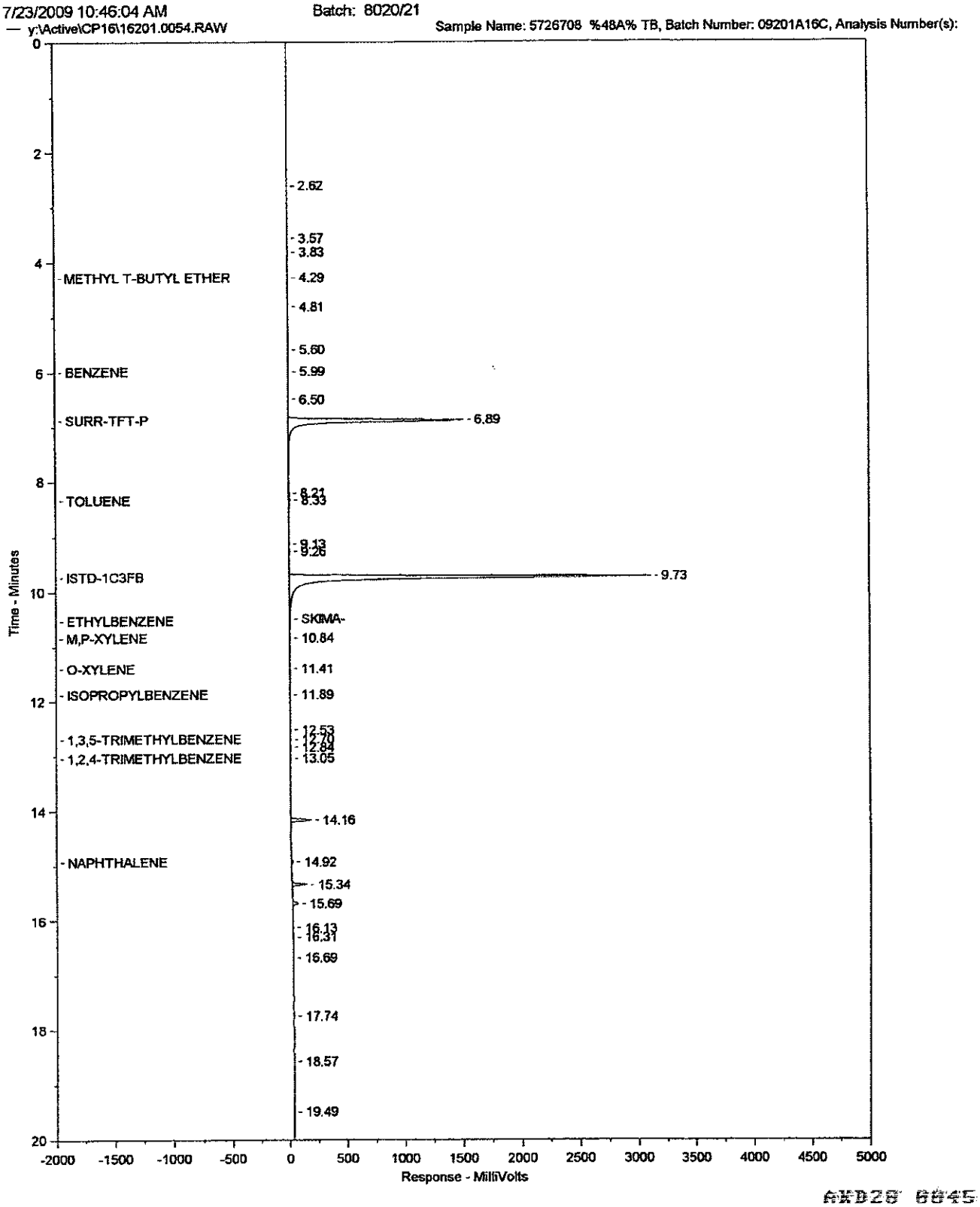
Verifier: 7/28/09

File: Y:\Active\CP16\16201B.0025.RAW

Sample Name: 5726708 %48A% TB, Batch Number: 09201A16C, Analysis Number(s): 1451,5878.

7/23/2009 10:46:04 AM Batch: 8020/21

— y:\Active\CP16\16201.0054.RAW



AWD28 0045

Sample Name: 5726708 %48A% TB, Batch Number: 09201A16C, Analysis Number(s): 1451,5878.

Date Acquired: 7/23/2009 10:26:04 AM
Instrument: 6890-16--PID
Units: ug/kg **Vial Position: VI#**
Dilution Factor: 25
Raw File: y:\Active\CP16\16201.0054.RAW
Method File: C:\Methods\16\16022[8021].met **Column:**
Analyst: 2001

Threshold: 6

Peak Table using calibration : C:\Cal\16\16022(8021).cal- Version 20
Number of Compounds: 12

Component Name	Ret. Time	Exp. Ret Time	Amount ug/kg	Peak Area (A)	Peak Height (H)*
METHYL T-BUTYL ETHER	4.29	4.28	6.82	19429	2586
BENZENE	5.99	5.94	0.24	10260	1768
SURR-TFT-P	6.89	6.87	720.53	6185348	1513605
TOLUENE	8.33	8.31	1.45	46743	9170
ISTD-1C3FB	9.73	9.75	30.00	12642600	3119752
ETHYLBENZENE	0.00	10.54	0.00	0	0
M,P-XYLENE	10.84	10.85	1.22	81658	6533
O-XYLENE	11.41	11.42	0.57	36955	2992
ISOPROPYLBENZENE	11.89	11.90	0.32	6356	1638
1,3,5-TRIMETHYLBENZENE	12.70	12.71	0.59	20523	5605
1,2,4-TRIMETHYLBENZENE	13.05	13.06	0.68	14732	4938
NAPHTHALENE	14.92	14.97	11.79	62695	14551

Total Xylenes: 1.79PPB

Surrogate Percent Recovery: 96.07

Sample Name: 5726708 %48A% TB, Batch Number: 09201A16C, Analysis Number(s): 1451,5878.
Batch: 8020/21
Analyst: 2001
Raw File: y:\Active\CP16\16201.0054.RAW
Method: C:\Methods\16\16022[8021].met
Date: 7/23/2009 10:46:07 AM

Analyst: MDO 2001 7-23-09

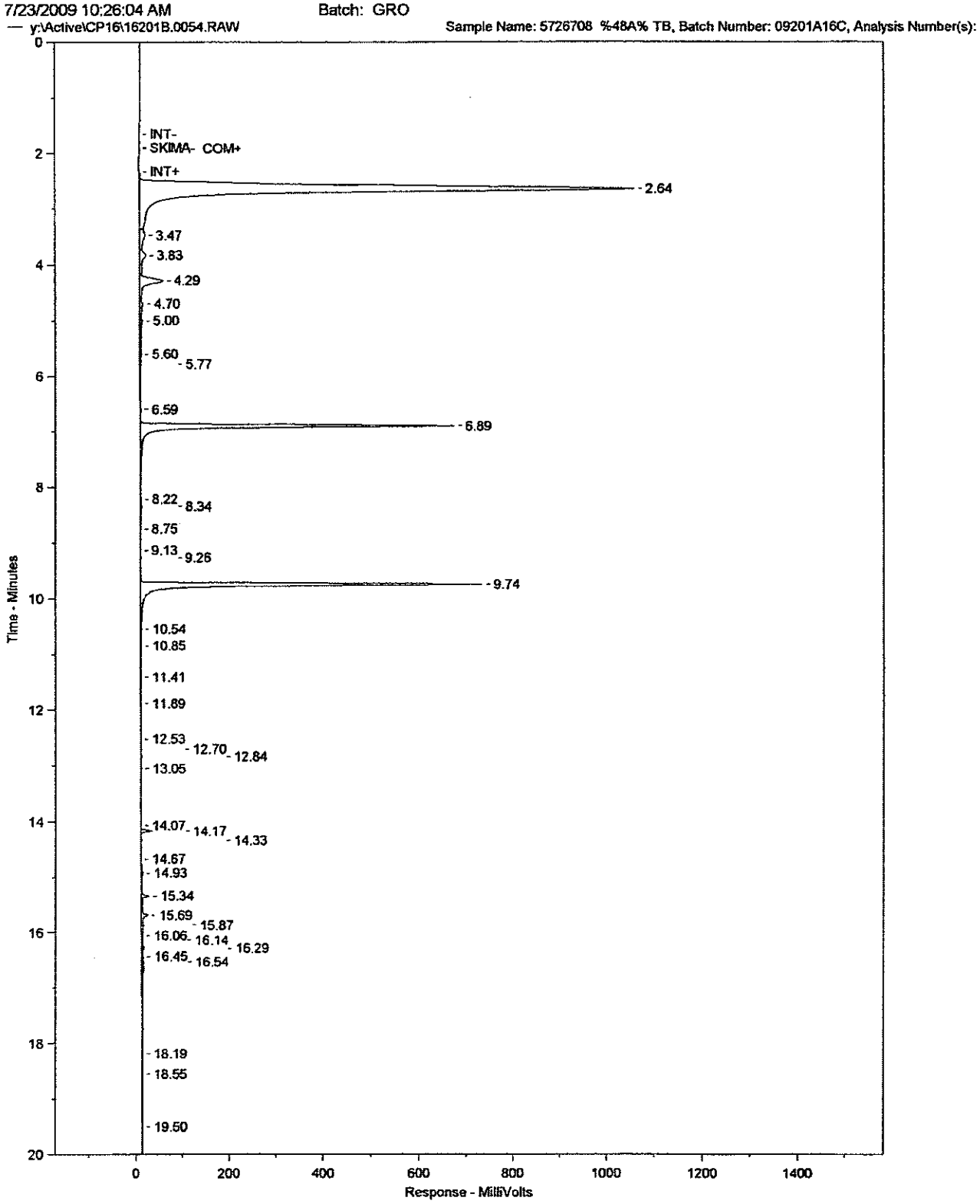
Verifier: [signature] 7/28/09

File: y:\Active\CP16\16201.0054.RAW

AKD28 8846

Sample Name: 5726708 %48A% TB, Batch Number: 09201A16C, Analysis Number(s): 1451,5878.

7/23/2009 10:26:04 AM Batch: GRO



Sample Name: 5726708 %48A% TB, Batch Number: 09201A16C, Analysis Number(s): 1451,5878.

Date Acquired: 7/23/2009 10:26:04 AM
Instrument: 6890-16--FID
Units: ug/kg **Vial Position: Vl#**
Dilution Factor: 25
Raw File: y:\Active\CP16\16201B.0054.RAW
Method File: C:\Methods\16\AK16078.met **Column:**
Analyst: 2001

Threshold: 2

Peak Table using calibration : C:\Cal\16\AK16078.CAL- Version 22
Number of Compounds: 3

Component Name	Ret. Time	Exp. Ret Time	Amount ug/kg	Peak Area (A)*	Peak Height (H)
	2.64	0.00	0.00	9275058	1051034
	3.47	0.00	0.00	185623	11769.17
	3.83	0.00	0.00	178946	13749.68
	4.29	0.00	0.00	411930	50470.16
	4.70	0.00	0.00	44251	7776.501
	5.00	0.00	0.00	55629	5539.606
	5.60	0.00	0.00	29468	3126.536
	5.77	0.00	0.00	14119	2307.667
	6.59	0.00	0.00	31331	1842.954
SURR-TFT-F	6.89	6.89	646.28	2563366	665848
	8.22	0.00	0.00	11786	2106.417
	8.34	0.00	0.00	31935	3307.635
	8.75	0.00	0.00	11653	921.7198
	9.13	0.00	0.00	5666	730.4583
	9.26	0.00	0.00	7135	1229.865
SURR-1C3FB	9.74	9.73	689.50	2699911	725689.4
	10.54	0.00	0.00	21385	1874.59
	10.85	0.00	0.00	20605	1703.363
	11.41	0.00	0.00	14072	1053.236
	11.89	0.00	0.00	3249	718.3392
	12.53	0.00	0.00	11073	1187.864
	12.70	0.00	0.00	4953	1451.913
	12.84	0.00	0.00	13820	1996.842
	13.05	0.00	0.00	9177	1736.426
	14.07	0.00	0.00	692	178.4699
	14.17	0.00	0.00	58449	24038.42
	14.33	0.00	0.00	4466	1332.271
	14.67	0.00	0.00	2401	402.0217
	14.93	0.00	0.00	22252	3965.605
	15.34	0.00	0.00	62328	17400.12
	15.69	0.00	0.00	78235	14422.55
	15.87	0.00	0.00	21462	3909.633
	16.06	0.00	0.00	17384	2956.886
	16.14	0.00	0.00	12903	3157.844
	16.29	0.00	0.00	35463	3400.389
	16.45	0.00	0.00	14126	3173.157
	16.54	0.00	0.00	20959	3027.786
	18.19	0.00	0.00	25474	1478.665
	18.55	0.00	0.00	21541	1165.794
	19.50	0.00	0.00	5093	445.3793

RT Start	RT Stop	Unadj GRO	Total Surr.	Adj. GRO
4.59	12.72	5581587	5263276	318311

Surrogate Percent Recovery: 86.17066

Total GRO Area: 318310.50
Total GRO Concentration: 109.64 PPB

Sample Name: 5726708 %48A% TB, Batch Number: 09201A16C, Analysis Number(s): 1451,5878.

Batch: GRO
Analyst: 2001
Raw File: y:\Active\CP16\16201B.0054.RAW
Method: C:\Methods\16\AK16078.met
Date: 7/23/2009 10:46:12 AM

Analyst: MDO2001 7-23-09

Verifier: [signature] 7/28/09

File: y:\Active\CP16\16201B.0054.RAW

AKB28 8849

Standards Data

Initial Calibration Summary

Instrument ID: 5341
Calibration Batch: 09022A16A
Method Reference: 8020/8021
Initial Calibration Date(s): 01/23/09-01/24/09(PID)

10022[8021].met

STANDARD	LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5	LEVEL 6	LEVEL 7	LEVEL 8
DATE INJECTED	01/23/09	01/23/09	01/23/09	01/23/09	01/23/09	01/23/09	01/23/09	01/24/09
TIME INJECTED	18:44	19:21	19:59	20:37	21:14	21:52	23:08	01:01

COMPOUND (DETECTOR)		Retention Time LEVEL 3	Retention Time Window	Relative Response Factor (RRF) LEVEL1	LEVEL2	LEVEL3	LEVEL4	LEVEL5	LEVEL6	LEVEL7	LEVEL8	MEAN	% RSD
METHYL T-BUTYL ETHER	(PID)	4.290	0.03		0.0945	0.0910	0.0892	0.0904	0.0939	0.0874	0.0921	0.0912	3
BENZENE	(PID)	5.950	0.03	1.8439	1.7833	1.7870	1.8054	1.8029	1.7597	1.6501	1.4724	1.7381	7
SURR-TFT-P	(PID)	6.870	0.03	0.5167	0.5026	0.5046	0.5012	0.5000				0.5050	1
TOLUENE	(PID)	8.320	0.03	1.6295	1.5103	1.5333	1.5559	1.5654	1.5400	1.4610	1.3338	1.5162	6
ETHYLBENZENE	(PID)	10.540	0.03	1.4459	1.2564	1.2650	1.2917	1.3077	1.2906	1.2228	1.1302	1.2763	7
M,P-XYLENE	(PID)	10.850	0.03	1.3479	1.3003	1.3452	1.3705	1.3810	1.3260	1.2032	1.0154	1.2862	10
O-XYLENE	(PID)	11.420	0.03	1.3175	1.2520	1.2732	1.2954	1.3085	1.2906	1.2215	1.1324	1.2614	5
ISOPROPYLBENZENE	(PID)	11.900	0.03	1.2828	1.2505	1.2728	1.2964	1.3029	1.2722	1.2025	1.1109	1.2489	5
1,3,5-TRIMETHYLBENZE	(PID)	12.710	0.03	2.5359	2.3485	2.3834	2.4115	2.4080	2.3272	2.1444	1.8417	2.3001	9
1,2,4-TRIMETHYLBENZE	(PID)	13.060	0.03	1.7633	1.7368	1.7902	1.8255	1.8413	1.8095	1.6937	1.5226	1.7479	6
NAPHTHALENE	(PID)	14.980	0.03		0.2812	0.2824	0.2984	0.3050	0.3113	0.2964	0.3016	0.2966	4

MCS108
1/26/09

AKD28 0051

AK16078

Initial Calibration Summary

Instrument ID: 5341
Calibration Batch: 09078A16A
Method Reference: ALASKA
Initial Calibration Date(s): 03/19/09(FID)

STANDARD DATE INJECTED TIME INJECTED	LEVEL 1 03/19/09 14:58	LEVEL 2 03/19/09 15:35	LEVEL 3 03/19/09 16:13	LEVEL 4 03/19/09 16:51	LEVEL 5 03/19/09 17:28				
	Retention Time		Relative Response Factor (RRF)						
COMPOUND (DETECTOR)	LEVEL 3	Window	LEVEL1	LEVEL2	LEVEL3	LEVEL4	LEVEL5	MEAN	% RSD
GRO (FID)	2.000	0.03	74182.9	70597.8	71434.9	73682.0	72997.8	72579.1	2
SURR-TFT-F (FID)	6.870	0.03	97675.8	98056.1	97676.7	101257.	101126.	99158.4	2

MLS NLR 6/17/09

Calibration Verification Summary

Instrument ID: 5341
Method Reference: 8020/8021
Data File: Y:\ACTIVE\CP16\16201B.0002.RAW
Date Injected: 07/20/09 Time Injected: 11:00

INTERNAL STANDARD	(DETECTOR)	AREA	LIMITS (+50/-50%)
ISTD-1C3FB	(PID)	3540818	1770409 - 5311227

COMPOUND (DETECTOR)		RETENTION TIME ACTUAL	WINDOW START	WINDOW END	THEORETICAL CONCENTRATION (UG/KG)	ACTUAL CONCENTRATION (UG/KG)	% DRIFT	%DRIFT LIMITS
BENZENE	(PID)	5.980	5.930	6.030	20.0	20.9	4	-15 to +15
SURR-TFT-P	(PID)	6.890	6.760	7.020	30.0	30.6	2	-28 to +22
TOLUENE	(PID)	8.320	8.270	8.370	20.0	20.1	0	-15 to +15
ETHYLBENZENE	(PID)	10.520	10.470	10.570	20.0	19.5	-3	-15 to +15
M,P-XYLENE	(PID)	10.830	10.780	10.880	40.0	40.2	1	-15 to +15
O-XYLENE	(PID)	11.400	11.350	11.450	20.0	19.6	-2	-15 to +15

* = %DRIFT outside control limits.

Calibration Verification Summary

Instrument ID: 5341
Method Reference: ALASKA
Data File: Y:\ACTIVE\CP16\16201B.0003.RAW
Date Injected: 07/20/09 Time Injected: 11:38

COMPOUND (DETECTOR)		RETENTION TIME ACTUAL	WINDOW START	WINDOW END	THEORETICAL CONCENTRATION (UG/KG)	ACTUAL CONCENTRATION (UG/KG)	% DRIFT	%DRIFT LIMITS
GRO	(FID)				214.6	204.0	-5	-25 to +25
SURR-TFT-F	(FID)	6.880	6.780	6.980	30.0	26.4	-12	-40 to +20

* = %DRIFT outside control limits.

Calibration Verification Summary

Instrument ID: 5341
Method Reference: ALASKA
Data File: Y:\ACTIVE\CP16\16201B.0016.RAW
Date Injected: 07/20/09 Time Injected: 20:31

COMPOUND (DETECTOR)	RETENTION TIME ACTUAL	WINDOW START	WINDOW END	THEORETICAL CONCENTRATION (UG/KG)	ACTUAL CONCENTRATION (UG/KG)	% DRIFT	%DRIFT LIMITS
GRO (FID)				214.6	221.2	3	-25 to +25
SURR-TFT-F (FID)	6.890	6.790	6.990	30.0	27.3	-9	-40 to +20

* = %DRIFT outside control limits.

Calibration Verification Summary

Instrument ID: 5341
Method Reference: 8020/8021
Data File: Y:\ACTIVE\CP16\16201B.0018.RAW
Date Injected: 07/21/09 Time Injected: 11:29

INTERNAL STANDARD	(DETECTOR)	AREA	LIMITS (+50/-50%)
ISTD-1C3FB	(PID)	3336179	1668090 - 5004269

COMPOUND	(DETECTOR)	RETENTION TIME ACTUAL	RETENTION TIME WINDOW START	RETENTION TIME WINDOW END	THEORETICAL CONCENTRATION (UG/KG)	ACTUAL CONCENTRATION (UG/KG)	% DRIFT	%DRIFT LIMITS
BENZENE	(PID)	5.980	5.930	6.030	20.0	21.3	6	-15 to +15
SURR-TFT-P	(PID)	6.890	6.760	7.020	30.0	30.8	3	-28 to +22
TOLUENE	(PID)	8.320	8.270	8.370	20.0	20.4	2	-15 to +15
ETHYLBENZENE	(PID)	10.520	10.470	10.570	20.0	19.8	-1	-15 to +15
M,P-XYLENE	(PID)	10.830	10.780	10.880	40.0	40.8	2	-15 to +15
O-XYLENE	(PID)	11.400	11.350	11.450	20.0	19.5	-2	-15 to +15

* = %DRIFT outside control limits.

Calibration Verification Summary

Instrument ID: 5341
Method Reference: ALASKA
Data File: Y:\ACTIVE\CP16\16201B.0019.RAW
Date Injected: 07/21/09 Time Injected: 12:07

COMPOUND (DETECTOR)	RETENTION TIME ACTUAL	WINDOW START	WINDOW END	THEORETICAL CONCENTRATION (UG/KG)	ACTUAL CONCENTRATION (UG/KG)	% DRIFT	%DRIFT LIMITS
GRO (FID)				214.6	188.6	-12	-25 to +25
SURR-TFT-F (FID)	6.890	6.790	6.990	30.0	25.0	-17	-40 to +20

* = %DRIFT outside control limits.

Calibration Verification Summary

Instrument ID: 5341
Method Reference: 8020/8021
Data File: Y:\ACTIVE\CP16\16201B.0032.RAW
Date Injected: 07/21/09 Time Injected: 20:21

INTERNAL STANDARD	(DETECTOR)	AREA	LIMITS (+50/-50%)
ISTD-1C3FB	(PID)	3222532	1611266 - 4833798

COMPOUND (DETECTOR)		RETENTION TIME ACTUAL	WINDOW START	WINDOW END	THEORETICAL CONCENTRATION (UG/KG)	ACTUAL CONCENTRATION (UG/KG)	% DRIFT	%DRIFT LIMITS
BENZENE	(PID)	5.980	5.930	6.030	20.0	21.4	7	-15 to +15
SURR-TFT-P	(PID)	6.890	6.760	7.020	30.0	30.2	1	-28 to +22
TOLUENE	(PID)	8.320	8.270	8.370	20.0	20.4	2	-15 to +15
ETHYLBENZENE	(PID)	10.520	10.470	10.570	20.0	19.7	-1	-15 to +15
M,P-XYLENE	(PID)	10.830	10.780	10.880	40.0	40.7	2	-15 to +15
O-XYLENE	(PID)	11.400	11.350	11.450	20.0	19.6	-2	-15 to +15

* = %DRIFT outside control limits.

Calibration Verification Summary

Instrument ID: 5341
Method Reference: ALASKA
Data File: Y:\ACTIVE\CP16\16201B.0033.RAW
Date Injected: 07/21/09 Time Injected: 20:59

COMPOUND (DETECTOR)		RETENTION TIME ACTUAL	WINDOW START	WINDOW END	THEORETICAL CONCENTRATION (UG/KG)	ACTUAL CONCENTRATION (UG/KG)	% DRIFT	%DRIFT LIMITS
GRO	(FID)				214.6	187.9	-12	-25 to +25
SURR-TFT-F	(FID)	6.890	6.790	6.990	30.0	24.6	-18	-40 to +20

* = %DRIFT outside control limits.

Calibration Verification Summary

Instrument ID: 5341
Method Reference: 8020/8021
Data File: Y:\ACTIVE\CP16\16201B.0043.RAW
Date Injected: 07/22/09 Time Injected: 17:19

INTERNAL STANDARD	(DETECTOR)	AREA	LIMITS (+50/-50%)
ISTD-1C3FB	(PID)	3238321	1619161 - 4857482

COMPOUND (DETECTOR)		RETENTION TIME ACTUAL	WINDOW START	WINDOW END	THEORETICAL CONCENTRATION (UG/KG)	ACTUAL CONCENTRATION (UG/KG)	% DRIFT	%DRIFT LIMITS
BENZENE	(PID)	5.980	5.930	6.030	20.0	21.4	7	-15 to +15
SURR-TFT-P	(PID)	6.890	6.760	7.020	30.0	30.7	2	-28 to +22
TOLUENE	(PID)	8.320	8.270	8:370	20.0	20.5	3	-15 to +15
ETHYLBENZENE	(PID)	10.520	10.470	10.570	20.0	19.8	-1	-15 to +15
M,P-XYLENE	(PID)	10.820	10.770	10.870	40.0	40.8	2	-15 to +15
O-XYLENE	(PID)	11.390	11.340	11.440	20.0	19.5	-2	-15 to +15

* = %DRIFT outside control limits.

Calibration Verification Summary

Instrument ID: 5341
Method Reference: ALASKA
Data File: Y:\ACTIVE\CP16\16201B.0044.RAW
Date Injected: 07/22/09 Time Injected: 17:58

COMPOUND (DETECTOR)	RETENTION TIME ACTUAL	WINDOW START	WINDOW END	THEORETICAL CONCENTRATION (UG/KG)	ACTUAL CONCENTRATION (UG/KG)	% DRIFT	%DRIFT LIMITS
GRO (FID)				214.6	209.0	-3	-25 to +25
SURR-TFT-F (FID)	6.890	6.790	6.990	30.0	27.8	-7	-40 to +20

* = %DRIFT outside control limits.

Calibration Verification Summary

Instrument ID: 5341
Method Reference: ALASKA
Data File: Y:\ACTIVE\CP16\16201B.0050.RAW
Date Injected: 07/22/09 Time Injected: 23:02

COMPOUND (DETECTOR)	RETENTION TIME ACTUAL	WINDOW START	WINDOW END	THEORETICAL CONCENTRATION (UG/KG)	ACTUAL CONCENTRATION (UG/KG)	% DRIFT	%DRIFT LIMITS
GRO (FID)				214.6	220.5	3	-25 to +25
SURR-TFT-F (FID)	6.890	6.790	6.990	30.0	29.7	-1	-40 to +20

* = %DRIFT outside control limits.

Calibration Verification Summary

Instrument ID: 5341
Method Reference: 8020/8021
Data File: Y:\ACTIVE\CP16\16201B.0052.RAW
Date Injected: 07/23/09 Time Injected: 09:10

INTERNAL STANDARD	(DETECTOR)	AREA	LIMITS (+50/-50%)
ISTD-1C3FB	(PID)	3486921	1743461 - 5230382

COMPOUND (DETECTOR)		RETENTION TIME ACTUAL	WINDOW START	WINDOW END	THEORETICAL CONCENTRATION (UG/KG)	ACTUAL CONCENTRATION (UG/KG)	% DRIFT	%DRIFT LIMITS
BENZENE	(PID)	5.980	5.930	6.030	20.0	20.9	5	-15 to +15
SURR-TFT-P	(PID)	6.890	6.760	7.020	30.0	30.9	3	-28 to +22
TOLUENE	(PID)	8.320	8.270	8.370	20.0	20.1	0	-15 to +15
ETHYLBENZENE	(PID)	10.520	10.470	10.570	20.0	19.4	-3	-15 to +15
M,P-XYLENE	(PID)	10.820	10.770	10.870	40.0	40.1	0	-15 to +15
O-XYLENE	(PID)	11.400	11.350	11.450	20.0	19.5	-3	-15 to +15

* = %DRIFT outside control limits.

Calibration Verification Summary

Instrument ID: 5341
Method Reference: ALASKA
Data File: Y:\ACTIVE\CP16\16201B.0055.RAW
Date Injected: 07/23/09 Time Injected: 11:19

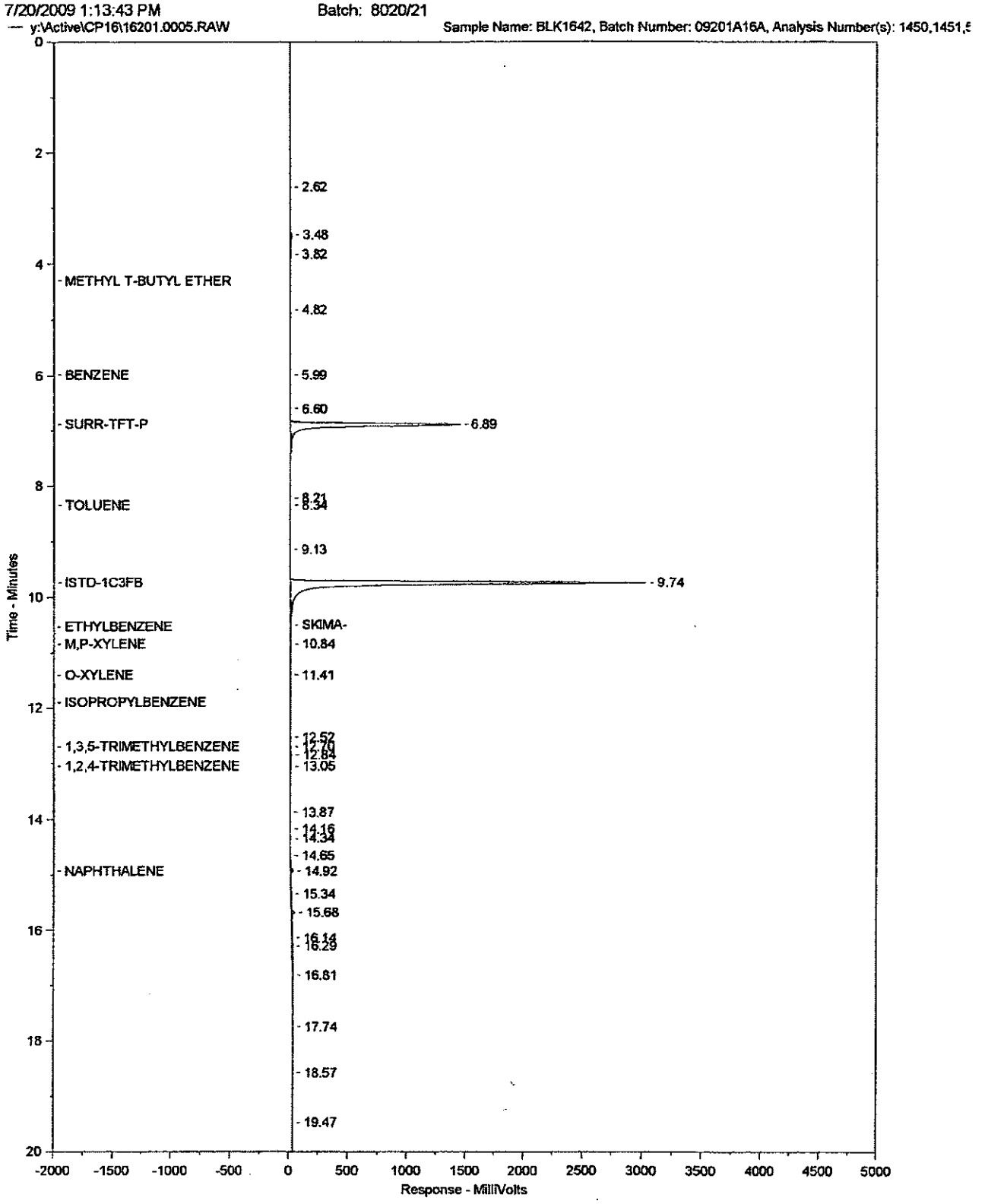
COMPOUND (DETECTOR)	RETENTION TIME ACTUAL	WINDOW START	WINDOW END	THEORETICAL CONCENTRATION (UG/KG)	ACTUAL CONCENTRATION (UG/KG)	% DRIFT	%DRIFT LIMITS
GRO (FID)				214.6	204.6	-5	-25 to +25
SURR-TFT-F (FID)	6.890	6.790	6.990	30.0	27.4	-9	-40 to +20

* = %DRIFT outside control limits.

Raw QC Data

Sample Name: BLK1642, Batch Number: 09201A16A, Analysis Number(s): 1450,1451,5878.

7/20/2009 1:13:43 PM Batch: 8020/21



AWD2B 8866

Sample Name: BLK1642, Batch Number: 09201A16A, Analysis Number(s): 1450,1451,5878.

Date Acquired: 7/20/2009 12:53:43 PM
Instrument: 6890-16--PID
Units: ug/kg **Vial Position: VI#**
Dilution Factor: 25
Raw File: y:\Active\CP16\16201.0005.RAW
Method File: C:\Methods\16\16022[8021].met **Column:**
Analyst: 2001

Threshold: 6

Peak Table using calibration : C:\Cal\16\16022(8021).cal- Version 20
Number of Compounds: 12

Component Name	Ret. Time	Exp. Ret Time	Amount ug/kg	Peak Area (A)	Peak Height (H)*
METHYL T-BUTYL ETHER	0.00	4.28	0.00	0	0
BENZENE	5.99	5.94	0.15	8461	1033
SURR-TFT-P	6.89	6.87	709.94	5771916	1450101
TOLUENE	8.34	8.31	0.55	22792	3354
ISTD-1C3FB	9.74	9.75	30.00	12393870	3033445
ETHYLBENZENE	0.00	10.54	0.00	0	0
M,P-XYLENE	10.84	10.85	1.19	75169	6183
O-XYLENE	11.41	11.42	0.45	26104	2316
ISOPROPYLBENZENE	0.00	11.90	0.00	0	0
1,3,5-TRIMETHYLBENZENE	12.70	12.71	0.34	10365	3162
1,2,4-TRIMETHYLBENZENE	13.05	13.06	1.20	39817	8457
NAPHTHALENE	14.92	14.97	19.01	100524	22810

Total Xylenes: 1.64PPB

Surrogate Percent Recovery: 94.66

Sample Name: BLK1642, Batch Number: 09201A16A, Analysis Number(s): 1450,1451,5878.
Batch: 8020/21
Analyst: 2001
Raw File: y:\Active\CP16\16201.0005.RAW
Method: C:\Methods\16\16022[8021].met
Date: 7/20/2009 1:13:48 PM

Analyst: MD 2001 7-21-09

Verifier: [signature] 7/21/09

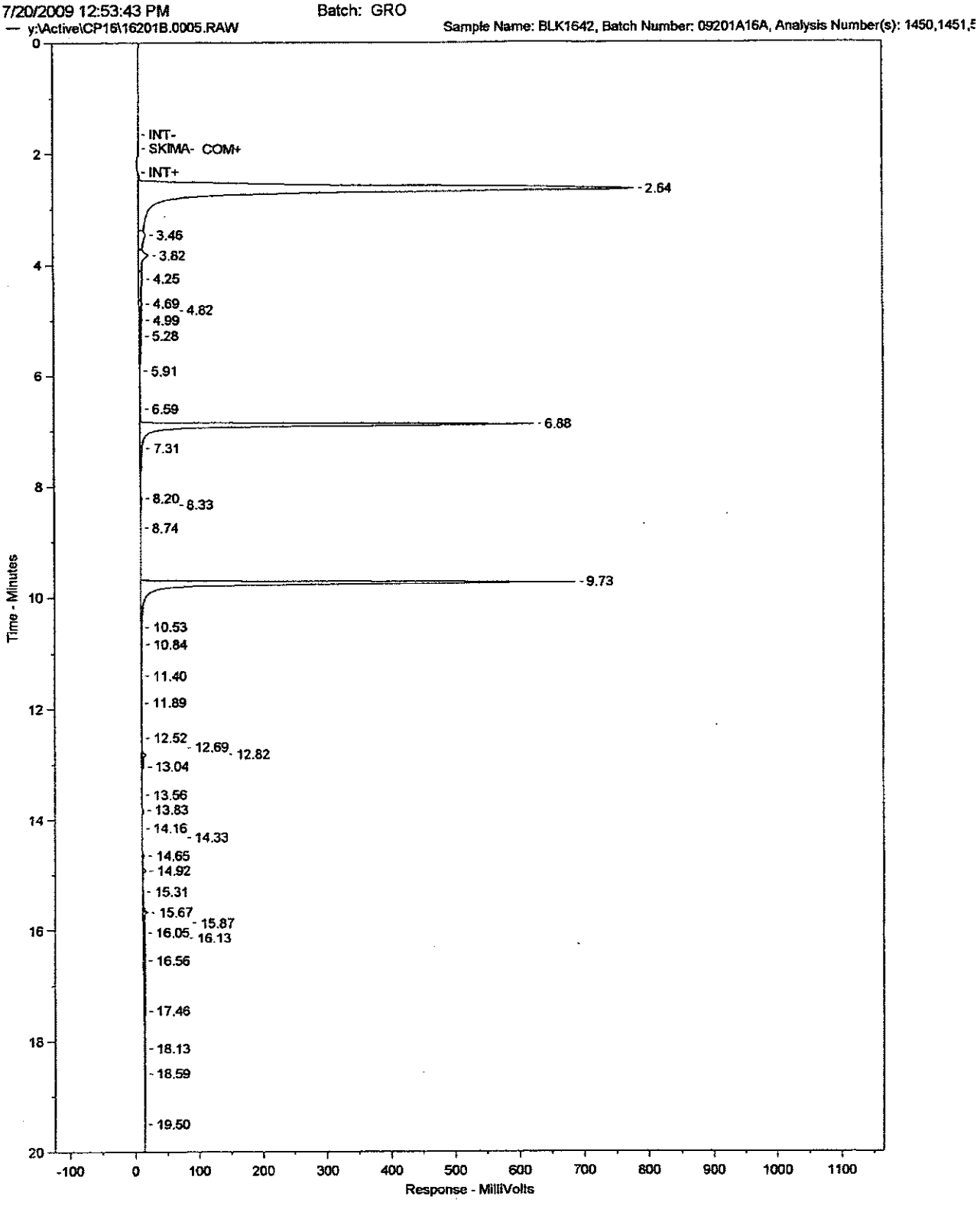
File: y:\Active\CP16\16201.0005.RAW

ARD2B 0057

Sample Name: BLK1642, Batch Number: 09201A16A, Analysis Number(s): 1450,1451,5878.

7/20/2009 12:53:43 PM Batch: GRO

y:\Active\CP16\16201B.0005.RAW



AKD2D 0060

Sample Name: BLK1642, Batch Number: 09201A16A, Analysis Number(s): 1450,1451,5878.

Date Acquired: 7/20/2009 12:53:43 PM
Instrument: 6890-16--FID
Units: ug/kg **Vial Position: Vl#**
Dilution Factor: 25
Raw File: y:\Active\CP16\16201B.0005.RAW
Method File: C:\Methods\16\AK16078.met **Column:**
Analyst: 2001

Threshold: 2

Peak Table using calibration : C:\Cal\16\AK16078.CAL- Version 20
Number of Compounds: 3

Component Name	Ret. Time	Exp. Ret Time	Amount ug/kg	Peak Area (A)*	Peak Height (H)
	2.64	0.00	0.00	7032807	771343.8
	3.46	0.00	0.00	160299	10548.23
	3.82	0.00	0.00	174010	14954.84
	4.25	0.00	0.00	137533	5158.551
	4.69	0.00	0.00	33829	4914
	4.82	0.00	0.00	42638	4276.347
	4.99	0.00	0.00	48103	4468.477
	5.28	0.00	0.00	46057	3233.773
	5.91	0.00	0.00	17729	1523.105
	6.59	0.00	0.00	24813	1860.84
SURR-TFT-F	6.88	6.88	583.06	2312604	614075.2
	7.31	0.00	0.00	75734	3781.537
	8.20	0.00	0.00	13691	2361.409
	8.33	0.00	0.00	21045	1802.736
	8.74	0.00	0.00	15315	906.4621
SURR-1C3FB	9.73	9.73	647.02	2533580	677556.6
	10.53	0.00	0.00	20220	1634.095
	10.84	0.00	0.00	16459	1496.196
	11.40	0.00	0.00	9954	729.1131
	11.89	0.00	0.00	1929	285.5505
	12.52	0.00	0.00	6833	915.8617
	12.69	0.00	0.00	10032	1523.763
	12.82	0.00	0.00	44903	6324.825
	13.04	0.00	0.00	17474	3146.76
	13.56	0.00	0.00	2860	304.0001
	13.83	0.00	0.00	13514	2010.391
	14.16	0.00	0.00	975	329.2147
	14.33	0.00	0.00	3468	522.665
	14.65	0.00	0.00	12525	3882.76
	14.92	0.00	0.00	29558	5563.304
	15.31	0.00	0.00	15658	1430.542
	15.67	0.00	0.00	56616	7750.208
	15.87	0.00	0.00	14589	2474.469
	16.05	0.00	0.00	13969	2493.09
	16.13	0.00	0.00	18873	2754.57
	16.56	0.00	0.00	33352	2864.169
	17.46	0.00	0.00	20446	1804.887
	18.13	0.00	0.00	20436	1251.684
	18.59	0.00	0.00	19083	1023.559
	19.50	0.00	0.00	3773	359.9262

RT Start	RT Stop	Unadj GRO	Total Surr.	Adj. GRO
4.58	12.71	5250562	4846184	404378

Surrogate Percent Recovery: 77.741

Total GRO Area: 404378.00
Total GRO Concentration: 139.29 PPB

Sample Name: BLK1642, Batch Number: 09201A16A, Analysis Number(s): 1450,1451,5878.

AKD28 8869

Batch: GRO
Analyst: 2001
Raw File: y:\Active\CP16\16201B.0005.RAW
Method: C:\Methods\16\AK16078.met
Date: 7/20/2009 1:13:52 PM

Analyst: MD330 01 7-21-09

Verifier: 7/21/09

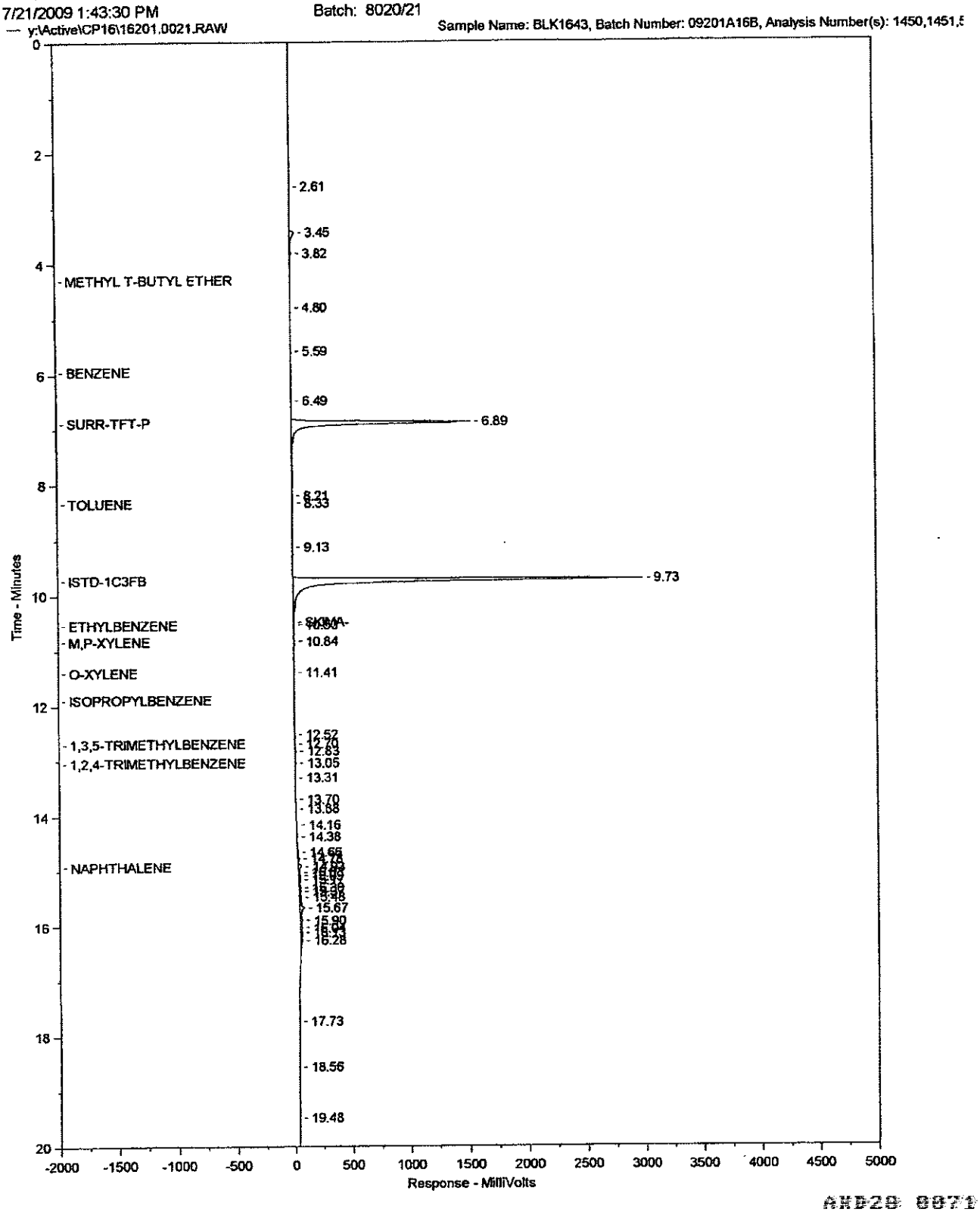
File: y:\Active\CP16\16201B.0005.RAW

AKD28 0878

Sample Name: BLK1643, Batch Number: 09201A16B, Analysis Number(s): 1450,1451,5878.

7/21/2009 1:43:30 PM Batch: 8020/21

y:\Active\CP16\16201.0021.RAW



AHD2B 8071

Sample Name: BLK1643, Batch Number: 09201A16B, Analysis Number(s): 1450,1451,5878.

Date Acquired: 7/21/2009 1:23:30 PM
Instrument: 6890-16--PID
Units: ug/kg **Vial Position: VI#**
Dilution Factor: 25
Raw File: y:\Active\CP16\16201.0021.RAW
Method File: C:\Methods\16\16022[8021].met **Column:**
Analyst: 2001

Threshold: 6

Peak Table using calibration : C:\Cal\16\16022(8021).cal- Version 20
Number of Compounds: 12

Component Name	Ret. Time	Exp. Ret Time	Amount ug/kg	Peak Area (A)	Peak Height (H)*
METHYL T-BUTYL ETHER	0.00	4.28	0.00	0	0
BENZENE	0.00	5.94	0.00	0	0
SURR-TFT-P	6.89	6.87	762.01	6327904	1536861
TOLUENE	8.33	8.31	0.72	26971	4366
ISTD-1C3FB	9.73	9.75	30.00	12267220	2995251
ETHYLBENZENE	10.53	10.54	1.74	93702	8889
M,P-XYLENE	10.84	10.85	1.94	92002	9947
O-XYLENE	11.41	11.42	0.62	25050	3128
ISOPROPYLBENZENE	0.00	11.90	0.00	0	0
1,3,5-TRIMETHYLBENZENE	12.70	12.71	0.32	8221	2976
1,2,4-TRIMETHYLBENZENE	13.05	13.06	1.40	38288	9753
NAPHTHALENE	14.93	14.97	23.65	144968	28017

Total Xylenes: 2.56PPB

Surrogate Percent Recovery: 101.60

Sample Name: BLK1643, Batch Number: 09201A16B, Analysis Number(s): 1450,1451,5878.
Batch: 8020/21
Analyst: 2001
Raw File: y:\Active\CP16\16201.0021.RAW
Method: C:\Methods\16\16022[8021].met
Date: 7/21/2009 1:43:34 PM

Analyst: MD22001 7-23-09

Verifier: 7/28/09

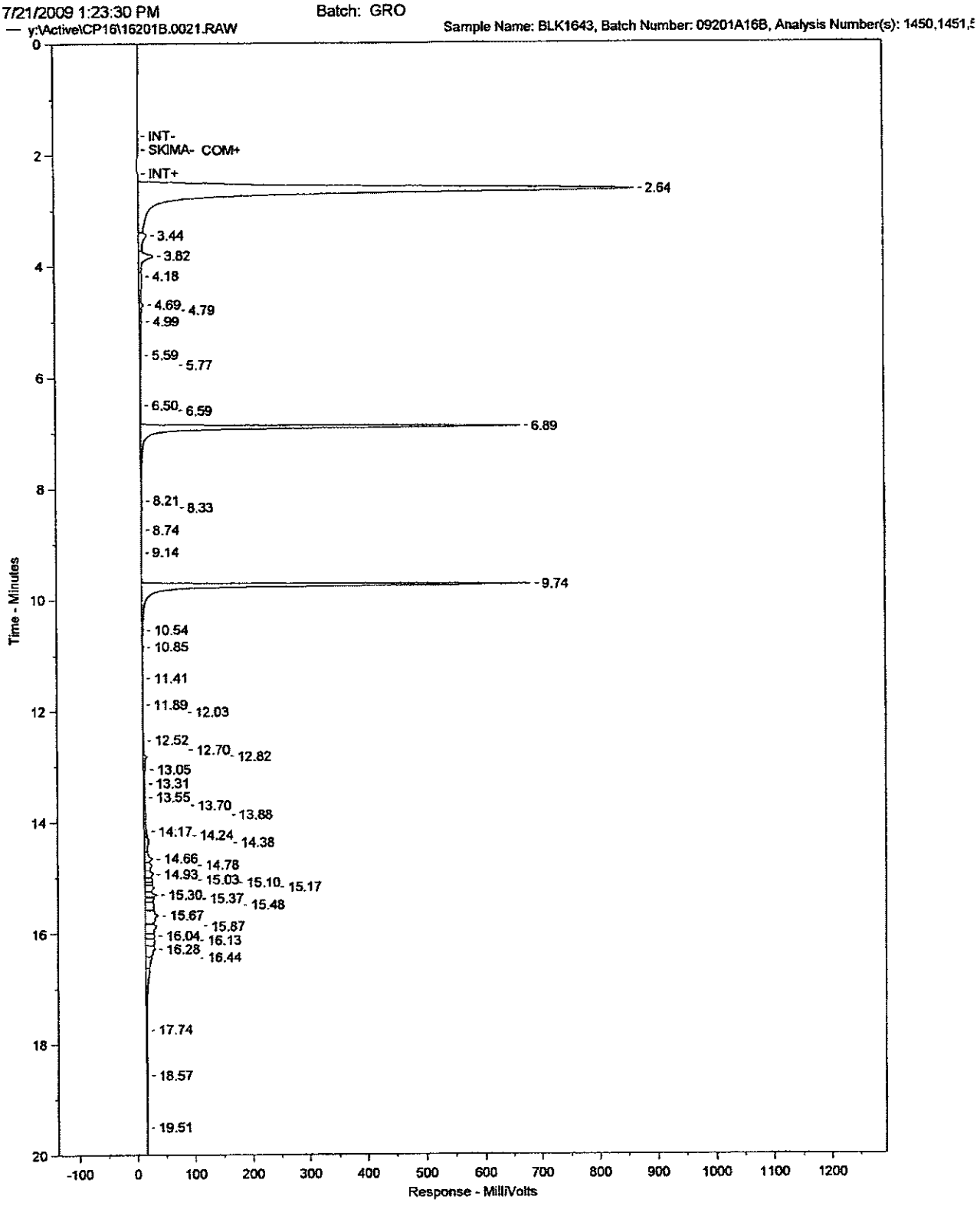
File: y:\Active\CP16\16201.0021.RAW

AMD20 5672

Sample Name: BLK1643, Batch Number: 09201A16B, Analysis Number(s): 1450,1451,5878.

7/21/2009 1:23:30 PM Batch: GRO

y:\Active\CP16\16201B.0021.RAW



AXD28 8873

Sample Name: BLK1643, Batch Number: 09201A16B, Analysis Number(s): 1450,1451,5878.

Date Acquired: 7/21/2009 1:23:30 PM
Instrument: 6890-16--FID
Units: ug/kg **Vial Position: Vl#**
Dilution Factor: 25
Raw File: y:\Active\CP16\16201B.0021.RAW
Method File: C:\Methods\16\AK16078.met **Column:**
Analyst: 2001

Threshold: 2

Peak Table using calibration : C:\Cal\16\AK16078.CAL- Version 21
Number of Compounds: 3

Component Name	Ret. Time	Exp. Ret Time	Amount ug/kg	Peak Area (A)*	Peak Height (H)
	2.64	0.00	0.00	7951360	856777.6
	3.44	0.00	0.00	169866	13870.36
	3.82	0.00	0.00	231963	24931.75
	4.18	0.00	0.00	131658	4745.45
	4.69	0.00	0.00	39776	7847.647
	4.79	0.00	0.00	39604	4410.072
	4.99	0.00	0.00	45726	4546.655
	5.59	0.00	0.00	26441	2783.025
	5.77	0.00	0.00	19768	2059.031
	6.50	0.00	0.00	7394	1177.547
	6.59	0.00	0.00	16785	1391.979
SURR-TFT-F	6.89	6.89	622.09	2467419	656673.1
	8.21	0.00	0.00	10114	1827.052
	8.33	0.00	0.00	17327	1764.275
	8.74	0.00	0.00	5529	565.8539
	9.14	0.00	0.00	3742	330.2969
SURR-1C3FB	9.74	9.74	644.79	2524828	674377.8
	10.54	0.00	0.00	18271	1994.599
	10.85	0.00	0.00	17490	2308.331
	11.41	0.00	0.00	6423	874.3284
	11.89	0.00	0.00	1063	248.8872
	12.03	0.00	0.00	763	288.1877
	12.52	0.00	0.00	8725	1078.562
	12.70	0.00	0.00	8044	1584.33
	12.82	0.00	0.00	44957	7109.018
	13.05	0.00	0.00	28257	4075.717
	13.31	0.00	0.00	7514	1864.17
	13.55	0.00	0.00	19922	1849.574
	13.70	0.00	0.00	7839	2171.181
	13.88	0.00	0.00	37077	4464.223
	14.17	0.00	0.00	35683	4655.432
	14.24	0.00	0.00	16322	5046.691
	14.38	0.00	0.00	92955	7325.585
	14.66	0.00	0.00	99379	14375.55
	14.78	0.00	0.00	96100	13124.7
	14.93	0.00	0.00	87617	14169.63
	15.03	0.00	0.00	60053	14396.12
	15.10	0.00	0.00	45514	13941.34
	15.17	0.00	0.00	99815	16155.96
	15.30	0.00	0.00	93082	21146.33
	15.37	0.00	0.00	73342	15704.24
	15.48	0.00	0.00	130556	15848.22
	15.67	0.00	0.00	254301	23678.16
	15.87	0.00	0.00	177079	20594.74
	16.04	0.00	0.00	82623	16612.71
	16.13	0.00	0.00	120505	16747.84
	16.28	0.00	0.00	160614	16902.73
	16.44	0.00	0.00	108503	11496.06
	17.74	0.00	0.00	26290	1706.287
	18.57	0.00	0.00	17335	944.6292

AKD28 0074

Component Name	Ret. Time	Exp. Ret Time	Amount ug/kg	Peak Area (A)*	Peak Height (H)
	19.51	0.00	0.00	3204	330.5945

RT Start	RT Stop	Unadj GRO	Total Surr.	Adj. GRO
4.59	12.72	5285231	4992247	292985

Surrogate Percent Recovery: 82.94529

Total GRO Area: 292984.50
Total GRO Concentration: 100.92 PPB

Sample Name: BLK1643, Batch Number: 09201A16B, Analysis Number(s): 1450,1451,5878.
Batch: GRO
Analyst: 2001
Raw File: y:\Active\CP16\16201B.0021.RAW
Method: C:\Methods\16\AK16078.met
Date: 7/21/2009 1:43:38 PM

Analyst: MD22001 7-23-09

Verifier: 7/28/09

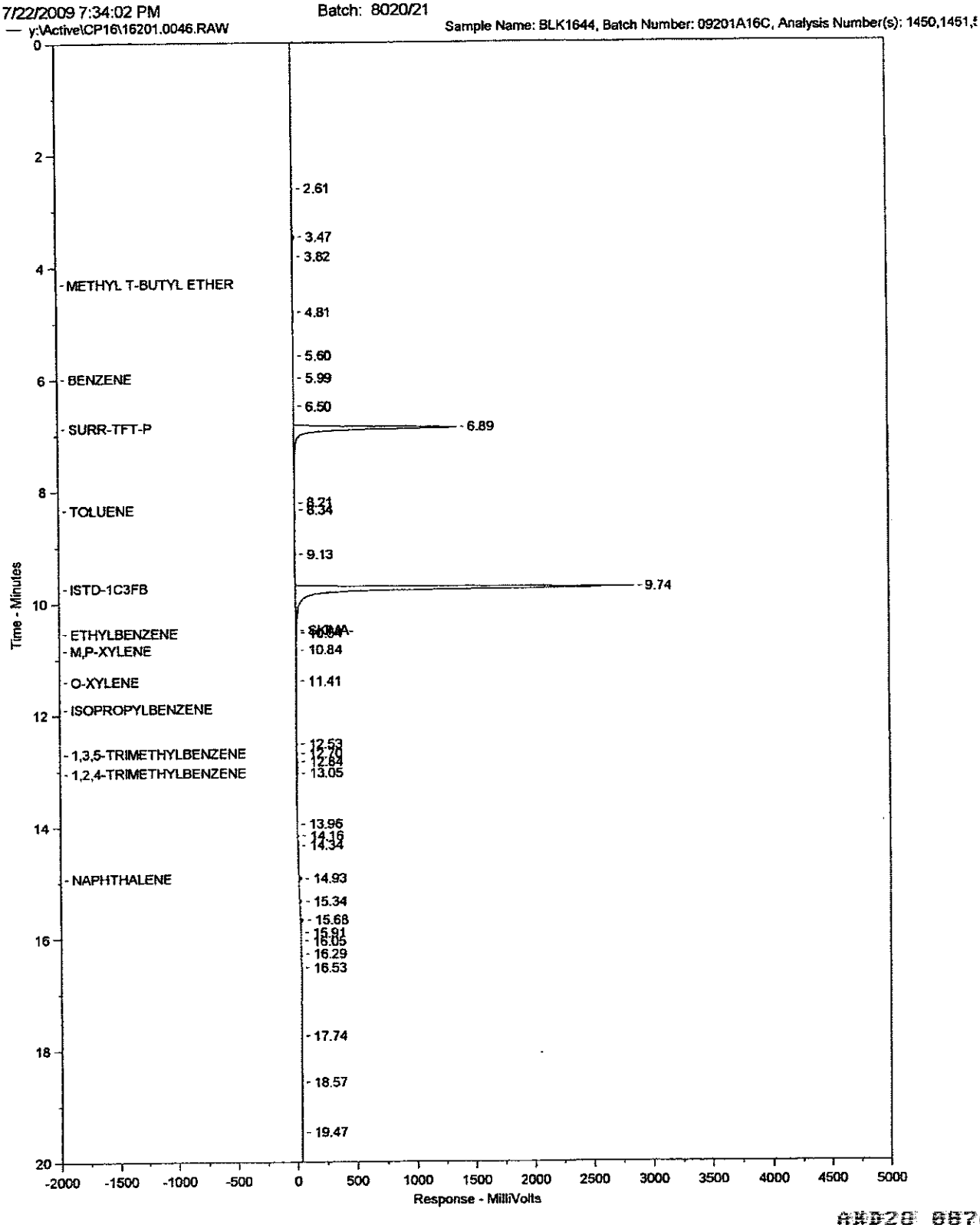
File: y:\Active\CP16\16201B.0021.RAW

AKDEC 0075

Sample Name: BLK1644, Batch Number: 09201A16C, Analysis Number(s): 1450,1451,5878.

7/22/2009 7:34:02 PM Batch: 8020/21

— y:\Active\CP16\16201.0046.RAW



AWD20 0076

Sample Name: BLK1644, Batch Number: 09201A16C, Analysis Number(s): 1450,1451,5878.

Date Acquired: 7/22/2009 7:14:01 PM
Instrument: 6890-16--PID
Units: ug/kg **Vial Position: Vl#**
Dilution Factor: 25
Raw File: y:\Active\CP16\16201.0046.RAW
Method File: C:\Methods\16\16022[8021].met **Column:**
Analyst: 2001

Threshold: 6

Peak Table using calibration : C:\Cal\16\16022(8021).cal- Version 20
Number of Compounds: 12

Component Name	Ret. Time	Exp. Ret Time	Amount ug/kg	Peak Area (A)	Peak Height (H)*
METHYL T-BUTYL ETHER	0.00	4.28	0.00	0	0
BENZENE	5.99	5.94	0.33	12389	2213
SURR-TFT-P	6.89	6.87	706.38	5543194	1358731
TOLUENE	8.34	8.31	0.67	24929	3880
ISTD-1C3FB	9.74	9.75	30.00	11620460	2856645
ETHYLBENZENE	10.54	10.54	1.69	87236	8193
M,P-XYLENE	10.84	10.85	1.56	76718	7621
O-XYLENE	11.41	11.42	0.55	15083	2652
ISOPROPYLBENZENE	0.00	11.90	0.00	0	0
1,3,5-TRIMETHYLBENZENE	12.70	12.71	0.33	8795	2903
1,2,4-TRIMETHYLBENZENE	13.05	13.06	1.21	57106	8074
NAPHTHALENE	14.93	14.97	21.11	88963	23851

Total Xylenes: 2.11PPB

Surrogate Percent Recovery: 94.18

Sample Name: BLK1644, Batch Number: 09201A16C, Analysis Number(s): 1450,1451,5878.
Batch: 8020/21
Analyst: 2001
Raw File: y:\Active\CP16\16201.0046.RAW
Method: C:\Methods\16\16022[8021].met
Date: 7/22/2009 7:34:05 PM

Analyst: MD 2001 7-23-09

Verifier: 7/28/09

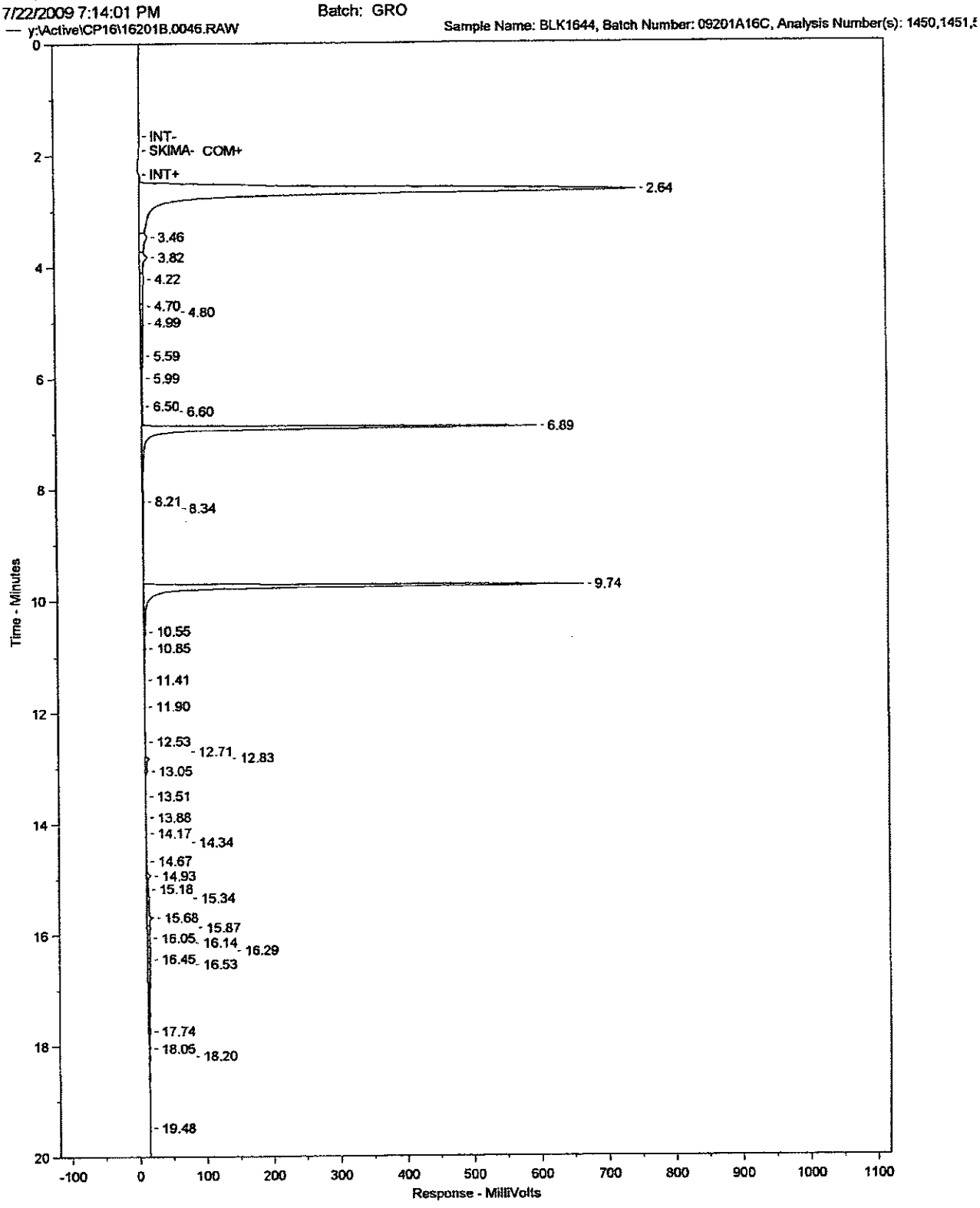
File: y:\Active\CP16\16201.0046.RAW

AWD28 0877

Sample Name: BLK1644, Batch Number: 09201A16C, Analysis Number(s): 1450,1451,5878.

7/22/2009 7:14:01 PM Batch: GRO

y:\Active\CP16\16201B.0046.RAW



AWD28 8878

Sample Name: BLK1644, Batch Number: 09201A16C, Analysis Number(s): 1450,1451,5878.

Date Acquired: 7/22/2009 7:14:01 PM
Instrument: 6890-16--FID
Units: ug/kg **Vial Position: Vl#**
Dilution Factor: 25
Raw File: y:\Active\CP16\16201B.0046.RAW
Method File: C:\Methods\16\AK16078.met **Column:**
Analyst: 2001

Threshold: 2

Peak Table using calibration : C:\Cal\16\AK16078.CAL- Version 22
Number of Compounds: 3

Component Name	Ret. Time	Exp. Ret Time	Amount ug/kg	Peak Area (A)*	Peak Height (H)
	2.64	0.00	0.00	6882048	739944.6
	3.46	0.00	0.00	166129	11074.81
	3.82	0.00	0.00	147772	10809.28
	4.22	0.00	0.00	146248	5103.946
	4.70	0.00	0.00	23281	4369.066
	4.80	0.00	0.00	47299	4608.503
	4.99	0.00	0.00	45583	4321.787
	5.59	0.00	0.00	38787	3130.297
	5.99	0.00	0.00	17392	1651.164
	6.50	0.00	0.00	9229	1343.078
	6.60	0.00	0.00	20033	1637.215
SURR-TFT-F	6.89	6.89	558.00	2213213	590361.8
	8.21	0.00	0.00	11984	1970.543
	8.34	0.00	0.00	23587	1778.985
SURR-1C3FB	9.74	9.73	624.76	2446419	656708
	10.55	0.00	0.00	21159	2044.537
	10.85	0.00	0.00	18934	1942.439
	11.41	0.00	0.00	10146	904.246
	11.90	0.00	0.00	2024	346.3817
	12.53	0.00	0.00	6547	750.8437
	12.71	0.00	0.00	6490	1354.638
	12.83	0.00	0.00	36398	5611.962
	13.05	0.00	0.00	21842	3160.661
	13.51	0.00	0.00	3896	401.9306
	13.88	0.00	0.00	1764	389.5696
	14.17	0.00	0.00	2010	670.6165
	14.34	0.00	0.00	4725	891.3929
	14.67	0.00	0.00	5307	910.6794
	14.93	0.00	0.00	36575	6612.76
	15.18	0.00	0.00	13784	2119.596
	15.34	0.00	0.00	29811	4404.594
	15.68	0.00	0.00	87567	9194.901
	15.87	0.00	0.00	42200	5227.162
	16.05	0.00	0.00	22199	3908.429
	16.14	0.00	0.00	26528	4096.173
	16.29	0.00	0.00	45929	4440.528
	16.45	0.00	0.00	16710	3987.305
	16.53	0.00	0.00	25368	3580.916
	17.74	0.00	0.00	25334	1885.513
	18.05	0.00	0.00	21923	1479.031
	18.20	0.00	0.00	19203	1479.553
	19.48	0.00	0.00	7279	537.5492

RT Start	RT Stop	Unadj GRO	Total Surr.	Adj. GRO
4.59	12.72	4962108	4659633	302476

Surrogate Percent Recovery: 74.39986

Total GRO Area: 302475.50
Total GRO Concentration: 104.19 PPB

AKD28 6879

Sample Name: BLK1644, Batch Number: 09201A16C, Analysis Number(s): 1450,1451,5878.
Batch: GRO
Analyst: 2001
Raw File: y:\Active\CP16\16201B.0046.RAW
Method: C:\Methods\16\AK16078.met
Date: 7/22/2009 7:34:10 PM

Analyst: MD2001 7-23-09

Verifier: 7/28/09

File: y:\Active\CP16\16201B.0046.RAW

Preparation Logs

Lancaster Laboratories

VOA Prep Summary by SDG: AKD28

25 - VOLATILES BY GC

Sample Number	Bottle Code	Prep Analysis#	Vial ID	Used for Analysis?	Collected	Prepared	Initial Weight	Final Weight	Net soil weight	Weight requirement	Meets require-ments?	Preserv. lot #	Preservative (volume)	Final Extraction Vol (mL)	Problem Codes
5726704	048A	06119	09200422	Y	07/16/09 09:31	07/16/09 09:31	151.20 g	178.86 g	27.66 g	22.50 g - 27.50 g	N	SS0918725 B	MeOH w/surrogate (25 mL)	25.000	A
5726705	048A	06119	09200429	Y	07/16/09 00:00	07/16/09 00:00	154.60 g	183.20 g	28.60 g	22.50 g - 27.50 g	N	SS0918725 B	MeOH w/surrogate (25 mL)	25.000	A
5726706	048A	06119	09200433	Y	07/16/09 11:25	07/16/09 11:25	154.74 g	183.54 g	28.80 g	22.50 g - 27.50 g	N	SS0918725 B	MeOH w/surrogate (25 mL)	25.000	A
5726708	048A	06119	09200434	Y	07/16/09 00:00	07/16/09 00:00	152.66 g	151.96 g	-0.70 g	TB	N/A	SS0918725 B	MeOH w/surrogate (25 mL)	25.000	

Final Extraction Vol (mL) = Preservative Vol + Added MeOH (if applicable)

KEY to problem codes:

A = wt. does not meet requirements B = vial leaked C# where # = volume of MeOH added in mL due to sample not covered/matrix (lot #)
D = sampler not full E = effervescence observed F = pH >= 2 G = headspace in container

Volatiles by GC Data (Water)

Case Narrative
Conformance/Nonconformance
Summary

Lancaster Laboratories

CLIENT: ChevronTexaco
SDG: AKD28

LANCASTER LABORATORIES

Alaska AK101 GRO/BTEX

		MATRIX			
LLI SAMPLE #	SAMPLE CODE	WATER	SOLID	LEACHATE	COMMENT
BLANKA	BLKQH	X			Method Blank
LCSA	LCSXB	X			Laboratory Control Spike
LCSB	LCSXC	X			Laboratory Control Spike
LCSDA	LCSDHL	X			Laboratory Control Spike Dup
LCSDB	LCSDHM	X			Laboratory Control Spike Dup
5725297	335P2	X			Unspiked
5725297MS	335P2MS	X			Matrix Spike
5725299	33519	X			Unspiked
5725299MS	33519MS	X			Matrix Spike
5726707	SHGEB	X			
5726709	SHGTW	X			

A. Sample Preparation:

No dilutions were necessary for the samples listed above.

B. Analysis:

No problems were encountered during analysis.

C. Quality Control:

Matrix QC may not be included if site-specific QC were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method or by the client.

Surrogate recoveries that are outside the QC window are confirmed unless attributed to a dilution or otherwise noted.

The initial calibration verification for benzene and M/P xylenes on 7/15/09 at 22:44 is outside specifications.

See the Conformance/Nonconformance Summary for the QC information.

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D. Data Interpretation:

No further interpretation is needed.

Narrative reviewed and approved by:

Dana Kauffman, Manager Data Deliverables **Date** 7/29/09

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Lancaster Laboratories

GC ANALYSIS CONFORMANCE/NON-CONFORMANCE SUMMARY

SDG: AKD28

	Indicate Yes, No, N/A
1. Chromatograms labeled / Compounds identified (Field Samples & Method Blanks)	YES
2. Retention times for chromatograms provided	YES
3. Standards summary meet criteria	NO
4. Calibration - Initial calibration performed before sample analysis and continuing calibration performed within 24 hours of sample analysis.	YES
5. Blank contamination If yes, list compounds and concentrations in each blank: N/A	NO
6. Surrogate recoveries meet criteria If not met, list those compounds and the recoveries that fall outside the acceptable range: If not met, were the calculations checked and the results qualified as "estimated"? N/A	YES
7. Matrix Spike / Matrix Spike Duplicate recoveries meet criteria. If not met, list those compounds and the recoveries that fall outside the acceptable range:	YES
8. Retention time summaries for primary and confirmation analyses meet criteria	N/A
9. Were samples run on dissimilar columns?	N/A
10. Extraction holding time met If not met, list number of days exceeded for each sample: N/A	N/A
11. Analysis holding time met If not met, list number of days exceeded for each sample: N/A	YES

Additional Comments:

The initial calibration verification for benzene and M/P xylenes on 7/15/09 at 22:44 is outside specifications.

Summary reviewed and approved by:

Dana Kauffman, Manager Data Deliverables — **Date** 7/29/09

AKD28 0087

QC Summary

2E
WATER SURROGATE RECOVERY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No: SDG No.: AKD28

GC Column (1): J&W DB-VRX ID: 75 GC Column (2): ID:

Batchnumber: 09200A53

SAMPLE	SAMPLE CODE NO.	TFTP 1 % REC #	TFTP 2 % REC #	TOT OUT
5725297	335P2	94		0
5725297 MS	335P2MS	95		0
5726707	SHGEB	95		0
5726709	SHGTW	96		0
BLANKA	BLKQH	95		0
LCSA	LCSXB	96		0
LCSDA	LCSDHL	96		0

	ADVISORY QC LIMITS	NOMINAL CONCENTRATION	
TFTP = Trifluorotoluene-P	(69 - 129)	30	ug/l

AKD28 8889

Column to be used to flag recovery values
* Values outside of QC Limits
D Surrogate diluted out

2E
WATER SURROGATE RECOVERY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No: SDG No.: AKD28

GC Column (1): J&W DB-VRX ID: 75 GC Column (2): ID:

Batchnumber: 09200A53

SAMPLE	SAMPLE CODE NO.	TFTF 1 % REC #	TFTF 2 % REC #	TOT OUT
5725299	33519	81		0
5725299 MS	33519MS	92		0
5726707	SHGEB	84		0
5726709	SHGTW	84		0
BLANKA	BLKQH	86		0
LCSB	LCSXC	97		0
LCSDB	LCSDHM	97		0

	ADVISORY QC LIMITS	NOMINAL CONCENTRATION	
TFTF = Trifluorotoluene-F	(60 - 120)	30	ug/l

AKD28 8898

Column to be used to flag recovery values
* Values outside of QC Limits
D Surrogate diluted out

3E
Water Matrix Spike/Matrix Spike Duplicate Recovery

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Matrix Spike - Sample Code No.: 335P2

Compound	Spike Added (ug/l)	Sample Concen (ug/l)	MS Concen (ug/l)	MSD Concen (ug/l)	MS % Rec #	MSD % Rec #	MS-MSD % REC Limits	% RPD #	% RPD Lim
1,2,4-TRIMETHYLBENZENE	20	0.41	24		118		(79 - 136)		30
1,3,5-TRIMETHYLBENZENE	20	0.50	24		118		(80 - 120)		30
BENZENE	20	0.70	24		117		(70 - 152)		30
Cumene	20	0	25		125		(85 - 132)		30
Ethylbenzene	20	0.084	24		120		(75 - 133)		30
M/P-XYLENES	40	2.5	51		121		(78 - 130)		30
MTBE	20	0	22		110		(50 - 162)		30
Naphthalene	20	1.8	20		91		(50 - 146)		30
o-xylene	20	0.21	24		119		(78 - 130)		30
TOLUENE	20	0.092	24		120		(78 - 129)		30
TOTAL XYLENES	60	2.7	75		121		(67 - 155)		30

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD: 0 out of 11 outside limits

Spike Recovery: 0 out of 11 outside limits

AXD20 0091

Comments: Results calculated on as-received basis.

Sample No.: 5725297 Batch: 09200A53A

3E
Water Matrix Spike/Matrix Spike Duplicate Recovery

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Matrix Spike - Sample Code No.: 33519

Compound	Spike Added (ug/l)	Sample Concen (ug/l)	MS Concen (ug/l)	MSD Concen (ug/l)	MS % Rec #	MSD % Rec #	MS-MSD % REC Limits	% RPD #	% RPD Lim
GRO	1100	17	1000		89		(60 - 120)		20

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD: 0 out of 1 outside limits

Spike Recovery: 0 out of 1 outside limits

AKD28 8892

Comments: Results calculated on as-received basis.

Sample No.: 5725299 Batch: 09200A53A

3E
Water Lab Control Spike/Lab Control Spike Duplicate Recovery

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Laboratory Control Spike - Sample Code No.: LCSXB

Compound	Spike Added (ug/l)	LCS Concen (ug/l)	LCSD Concen (ug/l)	LCS % Rec #	LCSD % Rec #	LCS-LCSD % REC Limits	% RPD #	% RPD Lim
1,2,4-TRIMETHYLBENZENE	20	23	23	115	115	(80 - 120)	0	30
1,3,5-TRIMETHYLBENZENE	20	23	23	115	115	(80 - 120)	0	30
BENZENE	20	23	23	115	115	(80 - 120)	0	30
Cumene	20	23	23	115	115	(80 - 120)	0	30
Ethylbenzene	20	23	23	115	115	(80 - 120)	0	30
M/P-XYLENES	40	47	47	118	118	(80 - 120)	0	30
MTBE	20	21	21	105	105	(77 - 132)	0	30
Naphthalene	20	20	21	100	105	(52 - 136)	5	30
o-xylene	20	23	22	115	110	(80 - 120)	4	30
TOLUENE	20	23	23	115	115	(80 - 120)	0	30
TOTAL XYLENES	60	69	69	115	115	(80 - 120)	0	30

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD: 0 out of 11 outside limits

Spike Recovery: 0 out of 22 outside limits

AKD28 8893

Comments: Results calculated on as-received basis.

Sample No.: LCSA Batch: 09200A53A

3E

Water Lab Control Spike/Lab Control Spike Duplicate Recovery

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Laboratory Control Spike - Sample Code No.: LCSXC

Compound	Spike Added (ug/l)	LCS Concen (ug/l)	LCSD Concen (ug/l)	LCS % Rec #	LCSD % Rec #	LCS-LCSD % REC Limits	% RPD #	% RPD Lim
GRO	1100	1100	1100	100	100	(60 - 120)	0	20

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD: 0 out of 1 outside limits

Spike Recovery: 0 out of 2 outside limits

AXD28 9894

Comments: Results calculated on as-received basis.

Sample No.: LCSB Batch: 09200A53A

4C

METHOD BLANK SUMMARY

SAMPLE CODE NO. BLKQH

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.: AKD28

Lab Sample ID BLANKA Batch 09200A53A Lab File ID: 53200.0004.RA

Matrix: (soil/water) WATER Extraction: (SepF/Cont/Sonc)

Sulfur Cleanup: (Y/N) N Date Extracted:

Date Analyzed (1): 7/20/2009 Date Analyzed (2):

Time Analyzed (1): 01:51:43 Time Analyzed (2):

Instrument ID (1): 10995P Instrument ID (2):

GC Column: J&W DB-VRX ID: 75 (mm) GC Column: ID: (mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS, AND MSD

	SAMPLE CODE NO.	LAB SAMPLEID	DATE ANALYZED 1	DATE ANALYZED 2
01	335P2	5725297	7/20/2009	
02	335P2MS	5725297	7/20/2009	
~~03~~	~~33519~~	~~5725299~~	~~7/20/2009~~	
04	SHGEB	5726707	7/20/2009	
05	SHGTW	5726709	7/20/2009	
06	BLKQH	BLANKA	7/20/2009	
07	LCSXB	LCSA	7/20/2009	
08	LCSDHL	LCSDA	7/20/2009	

(2) CC 2047 7-30-09

AKD28 8095

COMMENTS: _____

_____

4C

METHOD BLANK SUMMARY

SAMPLE CODE NO.

BLKQH

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.: AKD28

Lab Sample ID BLANKA Batch 09200A53A Lab File ID: 53200B.0004.R

Matrix: (soil/water) WATER Extraction: (SepF/Cont/Sonc)

Sulfur Cleanup: (Y/N) N Date Extracted:

Date Analyzed (1): 7/20/2009 Date Analyzed (2):

Time Analyzed (1): 01:51:43 Time Analyzed (2):

Instrument ID (1): 10995F Instrument ID (2):

GC Column: J&W DB-VRX ID: 75 (mm) GC Column: ID: (mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS, AND MSD

	SAMPLE CODE NO.	LAB SAMPLEID	DATE ANALYZED 1	DATE ANALYZED 2
01	33519	5725299	7/20/2009	
02	33519MS	5725299	7/20/2009	
03	SHGEB	5726707	7/20/2009	
04	SHGTW	5726709	7/20/2009	
05	BLKQH	BLANKA	7/20/2009	
06	LCSXC	LCSB	7/20/2009	
07	LCSDHM	LCSDB	7/20/2009	

AKD28 8896

COMMENTS: _____

_____

1D

ORGANICS ANALYSIS DATA SHEET

SAMPLE CODE NO. BLKQH

Lab Name: Lancaster Laboratories **Contract:** **Batchnumber:** 09200A53A

Lab Code: **Case No.:** **SAS No.:** **SDG No.:**

Matrix: (soil/water) WATER **Lab Sample ID:** BLANKA

Sample wt/vol: 1 (g/ml) **Lab File ID:** 53200.0004.RAW

% Moisture: **Decanted: (Y/N)** **Date Received:**

Extraction: (SepF/Cont/Sonc) **Date Extracted:**

Concentrated Extract Volume: 1000 (uL) **Date Analyzed:** 7/20/2009

Injection Volume: 1 (uL) **Dilution Factor:** 1

GPC Cleanup: (Y/N) N **pH:** **Sulfur Cleanup: (Y/N)** N

CAS NO.	COMPOUND	CONCENTRATION UNITS (UG/L or UG/KG) ug/l	Q
71-43-2	BENZENE	0.50	U
108-88-3	TOLUENE	0.50	U
100-41-4	Ethylbenzene	0.50	U
1330-20-7	TOTAL XYLENES	1.5	U

AKD28 0897

1D

ORGANICS ANALYSIS DATA SHEET

SAMPLE CODE NO. BLKQH

Lab Name: Lancaster Laboratories **Contract:** **Batchnumber:** 09200A53A

Lab Code: **Case No.:** **SAS No.:** **SDG No.:**

Matrix: (soil/water) WATER **Lab Sample ID:** BLANKA

Sample wt/vol: 1 (g/ml) **Lab File ID:** 53200B.0004.RAW

% Moisture: **Decanted: (Y/N)** **Date Received:**

Extraction: (SepF/Cont/Sonc) **Date Extracted:**

Concentrated Extract Volume: 1000 (uL) **Date Analyzed:** 7/20/2009

Injection Volume: 1 (uL) **Dilution Factor:** 1

GPC Cleanup: (Y/N) N **pH:** **Sulfur Cleanup: (Y/N)** N

CAS NO.	COMPOUND	CONCENTRATION UNITS (UG/L or UG/KG) ug/l	Q
PHCG	GRO	10	U

AXD28 8898

Sample Data

Analysis LOQ/MDL Report

Analysis: 01588 Name: BTEX

Description: Default Values

Compound	Units	LOQ	MDL
Ethylbenzene	ug/l	2	0.5
TOLUENE	ug/l	2	0.5
TOTAL XYLENES	ug/l	5	1.5
BENZENE	ug/l	2	0.5

AXD28 8168

Analysis LOQ/MDL Report

Analysis: 01440 Name: TPH-GRO AK water C6-C10

Description: Default Values

Compound	Units	LOQ	MDL
GRO	ug/l	100	10

AXD28 0181

Lancaster Laboratories-Single Component Data Summary

Sample Name: 5726707 SHGEB Sample ID: AA **Batchnumber: 09200A53A**
Sample Amount: 1 Total Volume: 1 ml Analyst: 1991 SDG: AKD28 State: AK
Analyses: 01440 01588

Analysis Report (A)

Injected on : JUL 20, 2009 18:55:47
Instrument : CP53-10995P
Result file : 53200.0019.RAW
Calibration file : 8020C53194.cal
Method file : 8020C53194.met
%SSR(SURR-TFT-P : 95.3% Conc.: 28.576273

Peak name	Min	R.T.	Max	Height	Amount
SURR-TFT-P	4.98	5.01	5.05	792321	28.576273
TOLUENE	5.81	5.85	5.88	3057	0.031760
ISTD-1C3FB	6.57	6.63	6.67	1659364	30.000000
M,P-XYLENE	7.17	7.21	7.24	4020	0.044450
1,2,4-TRIMETHYLBEN	8.96	8.99	9.03	3587	0.050569
NAPHTHALENE	12.32	12.35	12.39	15572	0.245252

Summary Report

Compound Name	Detector	Amount Found	LOQ	MDL	Qualifiers	Comments
METHYL T-BUTYL ETHER	P					
BENZENE	P		<2	<0.5		
SURR-TFT-P	P	28.576273				
TOLUENE	P	0.031760	<2	<0.5		
ISTD-1C3FB	P	30.000000				
ETHYLBENZENE	P		<2	<0.5		
M,P-XYLENE	P	0.044450				
O-XYLENE	P					f
ISOPROPYLBENZENE	P					
1,3,5-TRIMETHYLBENZE	P					
1,2,4-TRIMETHYLBENZE	P	0.050569				
NAPHTHALENE	P	0.245252				
TOTAL XYLENES	P	0.044450	<5	<1.5		

Units: ug/l mg/l

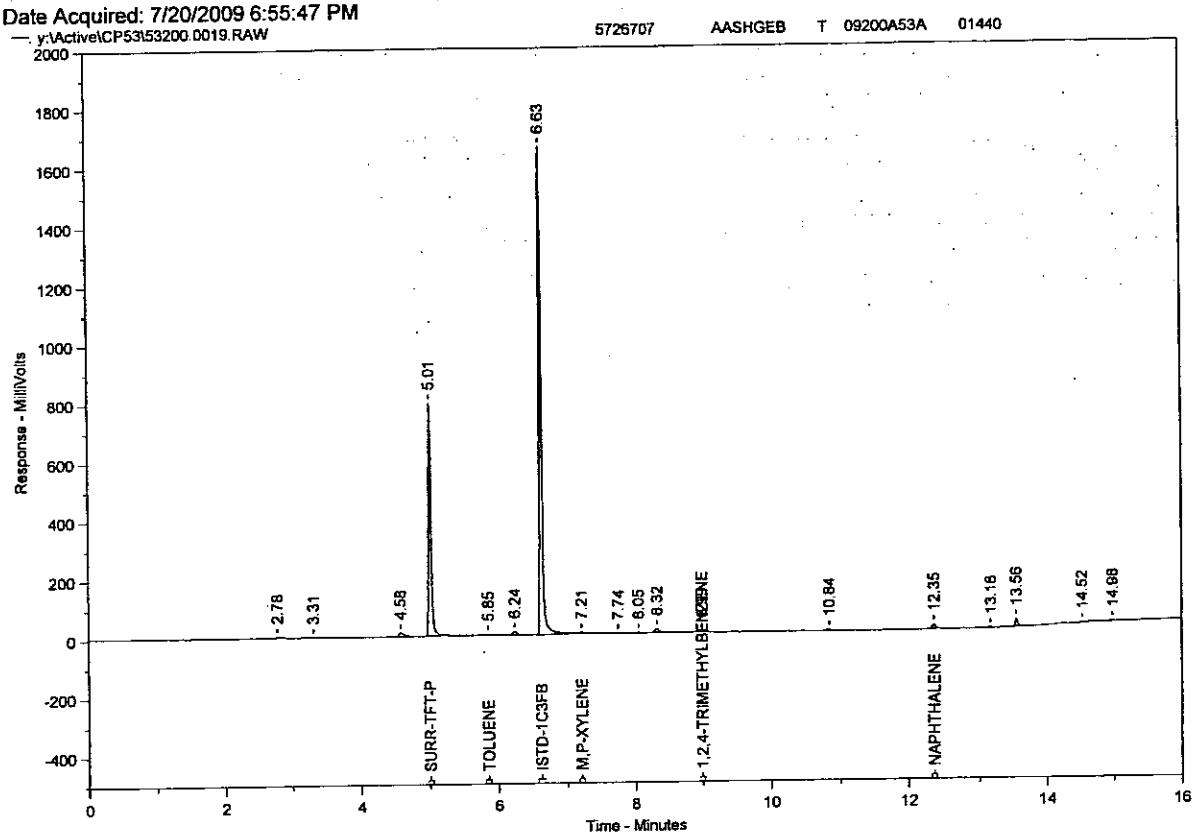
Reviewed by: cem1991 Date: 7/21/09
Verified by: [signature] Date: 7/21/09

AKD28 0182

%Difference = High - Low Amount divided by the Average times 100
** %Difference > 40
* Recovery outside QC Limits
Printed on: 7/20/2009 19:14:02

Chrom Perfect Chromatogram Report

CP53 PID 10995P 53200.0019.RAW
5726707 AASHGEB T 09200A53A 01440
Date Acquired: 7/20/2009 6:55:47 PM



5726707 AASHGEB T 09200A53A 01440
Date Acquired: 7/20/2009 6:55:47 PM
Raw File: 53200.0019.RAW
Analyst:
Dilution Factor: 1
Instrument: CP53 10995P
Units: ug/L
Method File: 8020C53194.met
Column: 30 M DB-VRX x 0.45mm x 2.55 um

Threshold: 9
Peak Table using calibration : 8020C53194.cal- Version 37
Number of Compounds: 12

Component Name	Ret. Time	Exp. Ret Time	Amount ug/L	Peak Area (A)	Peak Height (H)*
METHYL T-BUTYL ETHER	0.00	3.40	0.00	0	0
BENZENE	0.00	4.49	0.00	0	0
SURR-TFT-P	5.01	5.01	28.58	2016561	792321
TOLUENE	5.85	5.85	0.03	6903	3057
ISTD-1C3FB	6.63	6.63	30.00	3907723	1659364
ETHYLBENZENE	0.00	7.05	0.00	0	0
M,P-XYLENE	7.21	7.21	0.04	14380	4020
O-XYLENE	0.00	7.53	0.00	0	0
ISOPROPYLBENZENE	0.00	7.85	0.00	0	0
1,3,5-TRIMETHYLBENZENE	0.00	8.58	0.00	0	0
1,2,4-TRIMETHYLBENZENE	8.99	8.99	0.05	13462	3587
NAPHTHALENE	12.35	12.35	0.25	47699	15572

Total Xylenes: 0.04 ug/L

Surrogate Percent Recovery: 95.25

AKD20 0183

Lancaster Laboratories-Range Data Summary

Sample Name: 5726707 SHGEB Sample ID: AA **Batchnumber:** 09200A53A
Sample Amount: 1. Total Volume: 1. ml Analyst: 1991 SDG:AKD28 State: AK
Analyses: 01440 01588

Injection Summary

Injected on : 7/20/2009 18:55:47
Instrument : CP53--10995F
Result file : 53200B.0019.RAW
Calibration files : ALK53161.cal
Method files : ALK53161.met
Setting : ALK53161

Surrogate Recoveries

SURR-1C3FB
SURR-TFT-F 83.5% Conc.: 25.059454

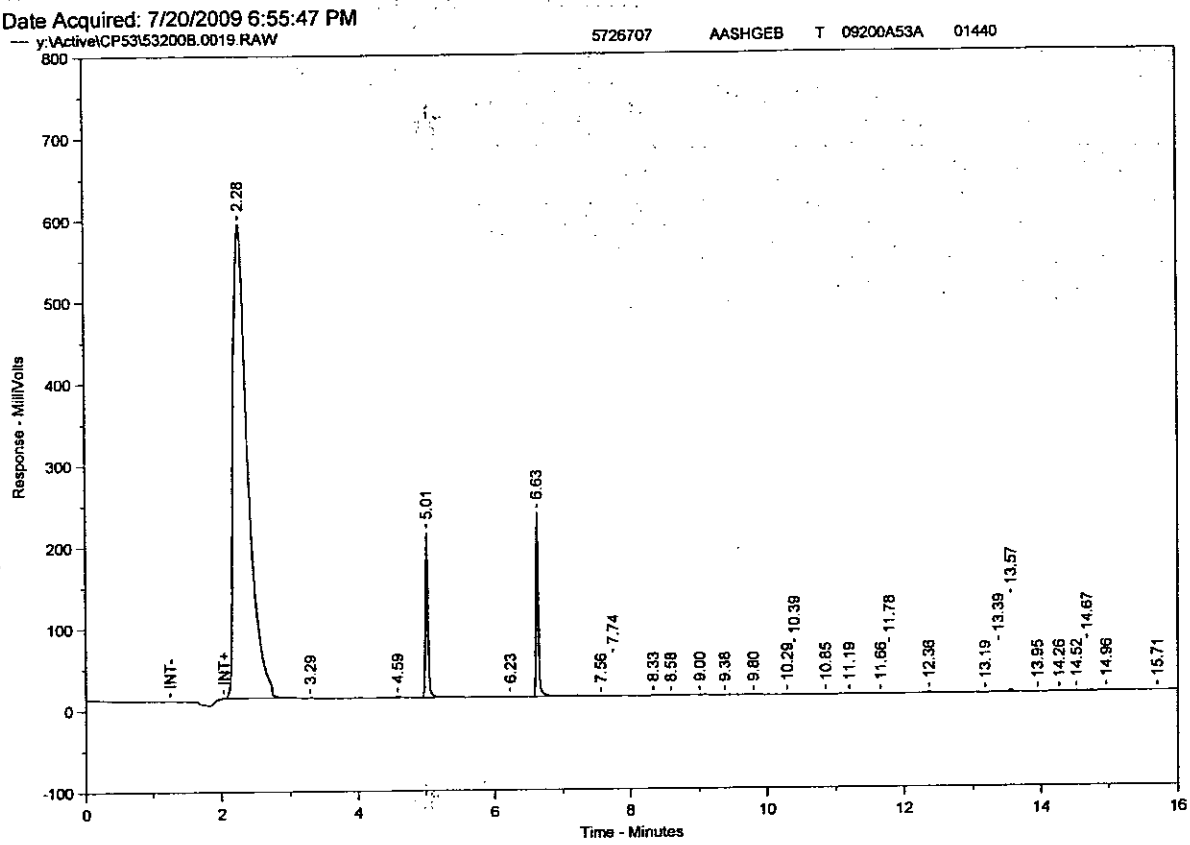
Range	Retention Times	Area	Amount	LOQ	MDL	Flags	Units
SURR-TFT-F	5.01 (4.99 - 5.06)	524176	25.0595				ppb
SURR-1C3FB	6.63 (6.60 - 6.67)	523658	23.6520				ppb
GRO	3.57 - 8.59	1076367	1.6219	<100	<10		ppb

Comments: _____

AKD28 #184

Reviewed by: 1991 Date: 7/21/09
Verified by: Date: 7/21/09

5726707 AASHGEB T 09200A53A 01440
CP53 FID 10995F 53200B.0019.RAW
Date Acquired: 7/20/2009 6:55:47 PM



5726707 AASHGEB T 09200A53A 01440
Date Acquired: 7/20/2009 6:55:47 PM
Raw File: 53200B.0019.RAW
Analyst:
Dilution Factor: 1
Instrument: CP53 10995F
Units: ug/L
Method File: ALK53161.met
Column: 30 M DB-VRX x 0.45mm x 2.55 um

Threshold: 3

Peak Table using calibration : ALK53161.cal- Version 13
Number of Compounds: 3

Component Name	Ret. Time	Exp. Ret Time	Amount ug/L	Peak Area (A)*	Peak Height (H)
	2.28	0.00	0.00	8442923	580702.5
	3.29	0.00	0.00	9495	1042.537
	4.59	0.00	0.00	8439	1843.942
SURR-TFT-F	5.01	5.02	25.06	524176	202342.9
	6.23	0.00	0.00	4426	1092.719
SURR-1C3FB	6.63	6.63	23.65	523658	226010.1
	7.56	0.00	0.00	1366	496.5773
	7.74	0.00	0.00	2930	596.1922
	8.33	0.00	0.00	10203	1375.775
	8.58	0.00	0.00	1169	420.1581
	9.00	0.00	0.00	2415	657.8298
	9.38	0.00	0.00	1306	307.8087
	9.80	0.00	0.00	5332	381.8256
	10.29	0.00	0.00	4723	585.925
	10.39	0.00	0.00	6769	727.0059
	10.85	0.00	0.00	4674	765.2714
	11.19	0.00	0.00	3257	441.4477
	11.66	0.00	0.00	2516	420.2753

AXD29 9185

Component Name	Ret. Time	Exp. Ret Time	Amount ug/L	Peak Area (A)*	Peak Height (H)
	11.78	0.00	0.00	2160	522.6305
	12.36	0.00	0.00	9963	2058.397
	13.19	0.00	0.00	3760	511.4291
	13.39	0.00	0.00	2600	475.6718
	13.57	0.00	0.00	8928	3523.67
	13.95	0.00	0.00	3076	505.245
	14.26	0.00	0.00	4780	673.2264
	14.52	0.00	0.00	2943	628.4683
	14.67	0.00	0.00	4293	579.2054
	14.96	0.00	0.00	5014	654.9664
	15.71	0.00	0.00	4606	357.5388
	16.27	0.00	0.00	1991	353.7297
	17.68	0.00	0.00	4786	486.4129

RT Start	RT Stop	Unadj GRO	Total Surr.	Adj. GRO
3.57	8.59	1076367	1047834	28533

Surrogate Percent Recovery: 83.53151

Total GRO Area: 28532.94
Total GRO Concentration: 1.62 ug/L

File: y:\Active\CP53\53200B.0019.RAW

AKD28 8186

Lancaster Laboratories Single Component Data Summary

Sample Name: 5726709 SHGTW Sample ID: AA **Batchnumber: 09200A53A**
Sample Amount: 1 Total Volume: 1 ml Analyst: 1991 SDG: AKD28 State: AK
Analyses: 01440 01588

Analysis Report (A)

Injected on : JUL 20, 2009 19:19:51
Instrument : CP53--10995P
Result file : 53200.0020.RAW
Calibration file : 8020C53194.cal
Method file : 8020C53194.met
%SSR(SURR-TFT-P : 95.6% Conc.: 28.681284

Peak name	Min	R.T.	Max	Height	Amount
SURR-TFT-P	4.98	5.01	5.05	804990	28.681284
TOLUENE	5.81	5.88	5.88	3394	0.034833
ISTD-1C3FB	6.57	6.62	6.67	1679723	30.000000
NAPHTHALENE	12.32	12.35	12.39	8540	0.132870

Summary Report

Compound Name	Detector	Amount Found	LOQ	MDL	Qualifiers	Comments
METHYL T-BUTYL ETHER	P					
BENZENE	P		<2	<0.5		
SURR-TFT-P	P	28.681284				
TOLUENE	P	0.034833	<2	<0.5		
ISTD-1C3FB	P	30.000000				
ETHYLBENZENE	P		<2	<0.5		
M,P-XYLENE	P					
O-XYLENE	P					
ISOPROPYLBENZENE	P					
1,3,5-TRIMETHYLBENZE	P					
1,2,4-TRIMETHYLBENZE	P					
NAPHTHALENE	P	0.132870				
TOTAL XYLENES	P		<5	<1.5		

Units: ug/l mg/l

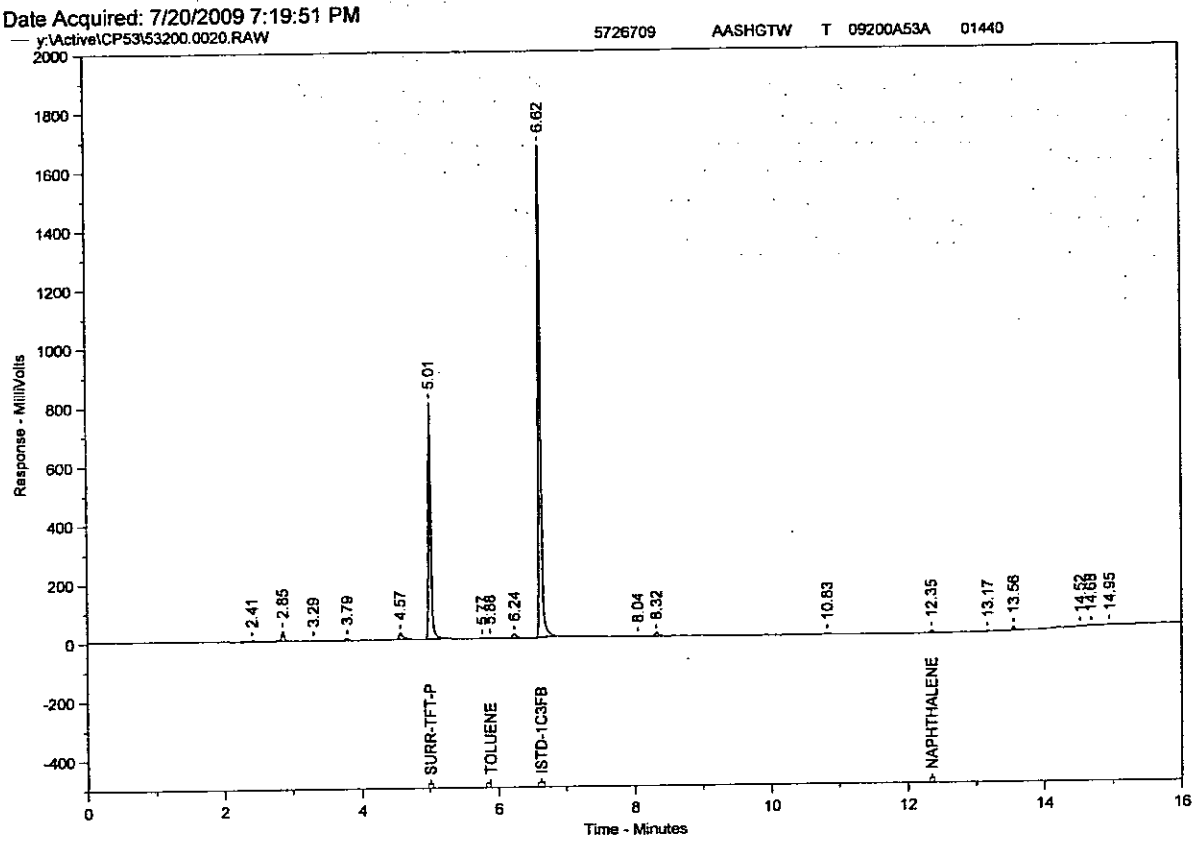
Reviewed by: CAM1991 Date: 7/21/09
Verified by: [illegible] Date: 7/21/09

AKD28 B107

%Difference = High - Low Amount divided by the Average times 100
** %Difference > 40
* Recovery outside QC Limits
Printed on: 7/20/2009 19:38:05

Chrom Perfect Chromatogram Report

CP53 PID 10995P 53200.0020.RAW
5726709 AASHGTW T 09200A53A 01440
Date Acquired: 7/20/2009 7:19:51 PM



5726709 AASHGTW T 09200A53A 01440
Date Acquired: 7/20/2009 7:19:51 PM
Raw File: 53200.0020.RAW
Analyst:
Dilution Factor: 1
Instrument: CP53 10995P
Units: ug/L
Method File: 8020C53194.met
Column: 30 M DB-VRX x 0.45mm x 2.55 um

Threshold: 9
Peak Table using calibration : 8020C53194.cal- Version 37
Number of Compounds: 12

Component Name	Ret. Time	Exp. Ret Time	Amount ug/L	Peak Area (A)	Peak Height (H)*
METHYL T-BUTYL ETHER	0.00	3.40	0.00	0	0
BENZENE	0.00	4.49	0.00	0	0
SURR-TFT-P	5.01	5.01	28.68	2072478	804990
TOLUENE	5.88	5.85	0.03	12034	3394
ISTD-1C3FB	6.62	6.63	30.00	3890027	1679723
ETHYLBENZENE	0.00	7.05	0.00	0	0
M,P-XYLENE	0.00	7.21	0.00	0	0
O-XYLENE	0.00	7.53	0.00	0	0
ISOPROPYLBENZENE	0.00	7.85	0.00	0	0
1,3,5-TRIMETHYLBENZENE	0.00	8.58	0.00	0	0
1,2,4-TRIMETHYLBENZENE	0.00	8.99	0.00	0	0
NAPHTHALENE	12.35	12.35	0.13	28802	8540

Total Xylenes: 0.00 ug/L

Surrogate Percent Recovery: 95.60

AKD2D 8188

Lancaster Laboratories-Range Data Summary

Sample Name: 5726709 SHGTW Sample ID: AA **Batchnumber:** 09200A53A
Sample Amount: 1. Total Volume: 1. ml Analyst: 1991 SDG:AKD28 State: AK
Analyses: 01440 01588

Injection Summary

Injected on	: 7/20/2009 19:19:52
Instrument	: CP53--10995F
Result file	: 53200B.0020.RAW
Calibration files	: ALK53161.cal
Method files	: ALK53161.met
Setting	: ALK53161

Surrogate Recoveries

SURR-1C3FB
SURR-TFT-F 83.9% Conc.: 25.161129

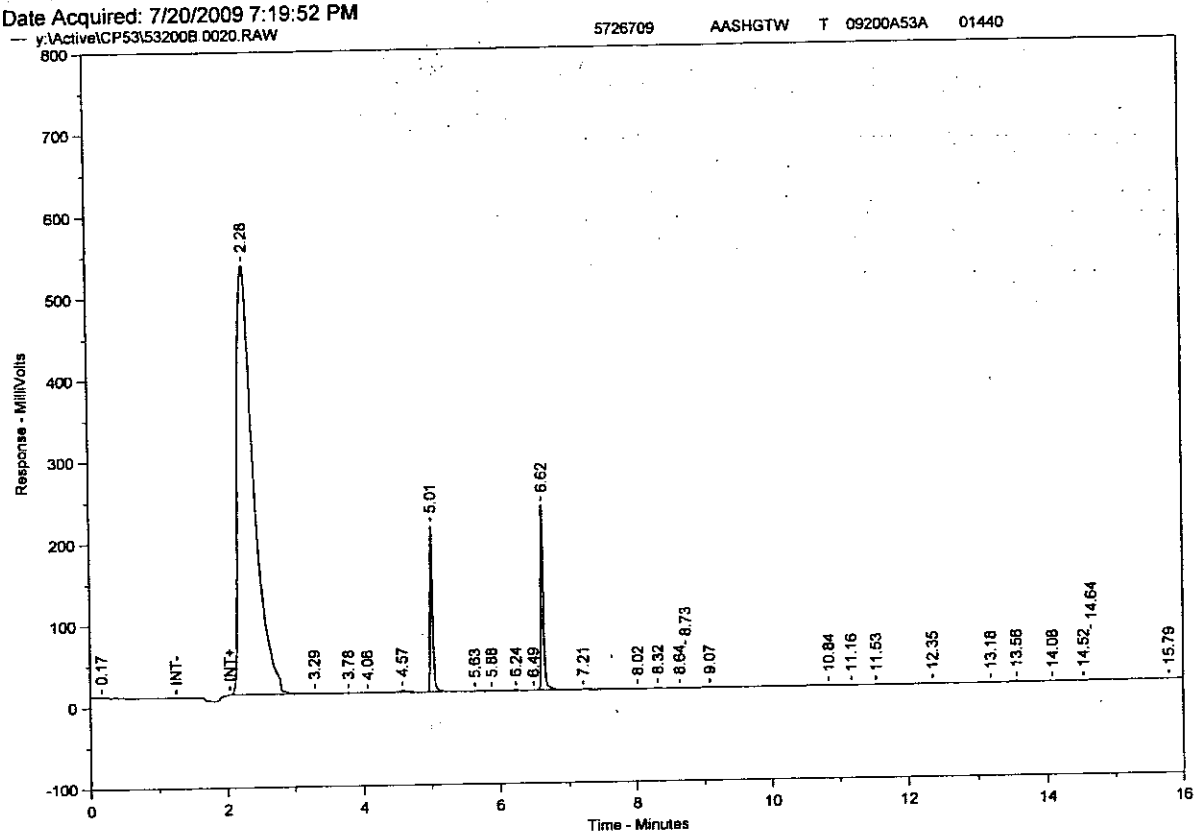
Range	Retention Times	Area	Amount	LOQ	MDL	Flags	Units
SURR-TFT-F	5.01 (4.99 - 5.06)	526303	25.1611				ppb
SURR-1C3FB	6.62 (6.60 - 6.67)	544978	24.6150				ppb
GRO	3.57 - 8.59	1126268	3.1256	<100	<10		ppb

Comments: _____

AKD28 8109

Reviewed by: 1991 Date: 7/21/09
Verified by: _____ Date: 7/21/09

5726709 AASHGTW T 09200A53A 01440
CP53 FID 10995F 53200B.0020.RAW
Date Acquired: 7/20/2009 7:19:52 PM



5726709 AASHGTW T 09200A53A 01440
Date Acquired: 7/20/2009 7:19:52 PM
Raw File: 53200B.0020.RAW
Analyst:
Dilution Factor: 1

Instrument: CP53 10995F
Units: ug/L
Method File: ALK53161.met
Column: 30 M DB-VRX x 0.45mm x 2.55 um

Threshold: 3

Peak Table using calibration : ALK53161.cal- Version 13
Number of Compounds: 3

Component Name	Ret. Time	Exp. Ret Time	Amount ug/L	Peak Area (A)*	Peak Height (H)
	0.17	0.00	0.00	4024	520.6149
	2.28	0.00	0.00	8721278	525592.2
	3.29	0.00	0.00	10200	1277.515
	3.78	0.00	0.00	2211	853.5142
	4.06	0.00	0.00	923	270.4292
	4.57	0.00	0.00	14026	2899.244
SURR-TFT-F	5.01	5.02	25.16	526303	202916.1
	5.63	0.00	0.00	3245	438.6339
	5.88	0.00	0.00	2047	523.4527
	6.24	0.00	0.00	6419	1347.702
	6.49	0.00	0.00	1076	378.109
SURR-1C3FB	6.62	6.63	24.61	544978	227831
	7.21	0.00	0.00	14869	854.431
	8.02	0.00	0.00	3405	621.1561
	8.32	0.00	0.00	6767	1222.649
	8.64	0.00	0.00	5539	522.2833
	8.73	0.00	0.00	2688	546.4001
	9.07	0.00	0.00	4462	653.5277

AKD28 8119

Component Name	Ret. Time	Exp. Ret Time	Amount ug/L	Peak Area (A)*	Peak Height (H)
	10.84	0.00	0.00	2122	526.5379
	11.16	0.00	0.00	4681	570.5073
	11.53	0.00	0.00	956	368.5507
	12.35	0.00	0.00	4807	1307.829
	13.18	0.00	0.00	2885	428.4627
	13.56	0.00	0.00	5219	1546.239
	14.08	0.00	0.00	2672	328.5517
	14.52	0.00	0.00	1381	466.1165
	14.64	0.00	0.00	4787	804.5372
	15.79	0.00	0.00	1005	419.3286
	16.19	0.00	0.00	1620	386.9907
	16.31	0.00	0.00	2719	505.3801
	16.50	0.00	0.00	5076	539.7424
	17.53	0.00	0.00	1677	308.3939

RT Start	RT Stop	Unadj GRO	Total Surr.	Adj. GRO
3.57	8.59	1126268	1071281	54988

Surrogate Percent Recovery: 83.87043

Total GRO Area: 54987.50
Total GRO Concentration: 3.13 ug/L

File: y:\Active\CP53\53200B.0020.RAW

AKD28 0111

Standards Data

6D
INITIAL CALIBRATION - RETENTION TIME SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Instrument: 10995P Calibration File: 8020C53194

GC Column (1) : J&W DB-VRX ID: 75 (mm) Update File:

Date(s) Analyzed: 7/14/2009 7/14/2009

COMPOUND	RT OF STANDARDS								MIDPOINT	RT WINDOW	
	LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5	LEVEL 6	LEVEL 7	LEVEL 8	RT	FROM	TO
MTBE	3.39	3.40	3.40	3.40	3.40	3.40	3.40	3.41	3.40	3.37	3.44
BENZENE	4.49	4.49	4.49	4.49	4.49	4.49	4.49	4.50	4.49	4.45	4.52
Trifluorotoluene-P	5.01	5.01	5.00	5.01	5.01				5.01	4.97	5.04
TOLUENE	5.84	5.85	5.84	5.85	5.85	5.85	5.85	5.85	5.84	5.81	5.88
1-Chloro-3-fluorobenzene	6.62	6.63	6.62	6.62	6.62	6.62	6.62	6.63	6.62	6.57	6.67
Ethylbenzene	7.05	7.05	7.05	7.05	7.05	7.05	7.05	7.05	7.05	7.01	7.08
M/P-XYLENES	7.21	7.21	7.20	7.21	7.21	7.21	7.21	7.21	7.21	7.17	7.24
o-xylene	7.53	7.53	7.52	7.53	7.53	7.53	7.53	7.53	7.53	7.49	7.56
Cumene	7.85	7.85	7.85	7.85	7.85	7.85	7.85	7.86	7.85	7.82	7.89
1,3,5-TRIMETHYLBENZENE	8.58	8.58	8.57	8.58	8.58	8.58	8.58	8.58	8.58	8.54	8.61
1,2,4-TRIMETHYLBENZENE	8.99	8.99	8.99	8.99	8.99	8.99	8.99	8.99	8.99	8.95	9.02
Naphthalene	12.36	12.36	12.35	12.35	12.35	12.35	12.35	12.35	12.35	12.32	12.39

7/24/09

AKD28 8113

6E
INITIAL CALIBRATION - CALIBRATION FACTOR SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Instrument: 10995P Calibration File: 8020C53194

GC Column (1) : J&W DB-VRX ID: 75 (mm) Date(s) Analyzed: 7/14/2009 7/14/2009

COMPOUND	CALIBRATION FACTORS									%RSD
	LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5	LEVEL 6	LEVEL 7	LEVEL 8	MEAN	
MTBE		6.88E-01	7.23E-01	7.06E-01	6.92E-01	6.54E-01	6.53E-01	5.87E-01	6.73E-01	6.3
BENZENE	1.65E+00	1.72E+00	1.84E+00	1.75E+00	1.79E+00	1.73E+00	1.72E+00	1.65E+00	1.73E+00	3.6
Trifluorotoluene-P	4.07E-01	4.72E-01	5.27E-01	5.39E-01	5.62E-01				5.01E-01	12.5
TOLUENE		1.69E+00	1.85E+00	1.80E+00	1.81E+00	1.72E+00	1.69E+00	1.60E+00	1.74E+00	4.7
1-Chloro-3-fluorobenzene	5.75E+04	5.86E+04	5.77E+04	5.90E+04	5.95E+04	6.08E+04	5.76E+04	5.71E+04	5.84E+04	2.4
Ethylbenzene		1.51E+00	1.66E+00	1.63E+00	1.62E+00	1.54E+00	1.49E+00	1.39E+00	1.55E+00	5.6
M/P-XYLENES		1.64E+00	1.79E+00	1.76E+00	1.73E+00	1.62E+00	1.50E+00	1.38E+00	1.63E+00	8.7
o-xylene		1.47E+00	1.59E+00	1.56E+00	1.56E+00	1.48E+00	1.45E+00	1.38E+00	1.50E+00	4.7
Cumene		1.03E+00	1.18E+00	1.17E+00	1.17E+00	1.11E+00	1.09E+00	1.03E+00	1.11E+00	5.7
1,3,5-TRIMETHYLBENZENE		1.63E+00	1.82E+00	1.80E+00	1.78E+00	1.69E+00	1.65E+00	1.57E+00	1.70E+00	5.4
1,2,4-TRIMETHYLBENZENE		1.21E+00	1.34E+00	1.34E+00	1.33E+00	1.27E+00	1.26E+00	1.21E+00	1.28E+00	4.2
Naphthalene			1.11E+00	1.12E+00	1.17E+00	1.14E+00	1.18E+00	1.15E+00	1.15E+00	2.3

Average % RSD: 5.5083

AXD20 0114

6D
INITIAL CALIBRATION - RETENTION TIME SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Instrument: 10995F Calibration File: ALK53161

GC Column (1): J&W DB-VRX ID: 75 (mm) Update File:

Date(s) Analyzed: 6/10/2009 6/12/2009

COMPOUND	RT OF STANDARDS							MIDPOINT RT	RT WINDOW	
	LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5	LEVEL 6	LEVEL 7		FROM	TO
1-Chloro-3-fluorobenzene	6.62	6.63	6.62	6.62	6.63	6.63	6.63	6.63	6.60	6.67
Trifluorotoluene-F	5.01	5.01	5.01	5.01	5.01	5.04	5.05	5.02	4.99	5.06

AKD28 5115

FORM VI-1

6E
INITIAL CALIBRATION - CALIBRATION FACTOR SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Instrument: 10995F Calibration File: ALK53161

GC Column (1): J&W DB-VRX ID: 75 (mm) Date(s) Analyzed: 6/10/2009 6/12/2009

COMPOUND	CALIBRATION FACTORS								
	LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5	LEVEL 6	LEVEL 7	MEAN	%RSD
1-Chloro-3-fluorobenzene	1.92E+04	1.93E+04	1.96E+04	2.12E+04	2.18E+04	2.66E+04	2.74E+04	2.21E+04	15.7
Trifluorotoluene-F	2.07E+04	1.84E+04	2.12E+04	2.21E+04	2.22E+04			2.09E+04	7.3

Average % RSD: 11.5

MCSNE8
6/18/09

AKD28 8116

6F
INITIAL CALIBRATION OF MULTICOMPONENT ANALYTES

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Instrument: 10995F Calibration File: ALK53161

GC Column (1) : J&W DB-VRX ID: 75 (mm) Date(s) Analyzed: 6/10/2009 6/12/2009

COMPOUND	PEAK	RT	RT WINDOW FROM	RT WINDOW TO	CALIBRATION FACTOR	LEVEL	AMOUNT (ng)	PEAK AREA	%RSD
GRO	1		3.56	8.59	17593	1	21.5	391372	3.4
						2	53.6	939338	
						3	107.3	1923552	
						4	536.4	9113836	
						5	1072.8	18342580	
						6	2682	45574900	
						7	5364	98758624	

MS/MSD 6/18/10a

AKD28 0117

FORM VI-3

7E
CALIBRATION VERIFICATION SUMMARY

Lab Name: Lancaster Laboratories
Contract:
Lab Code: Case No.: SAS No.: SDG No.:
Instrument: 10995P Detector: PID Init. Calib Date(s): 07/15/09 07/15/09
GC Column (1) : J&W DB-VRX ID: 75 (mm) Date Analyzed: 07/15/09
Lab File ID: 53194.0038.RAW Time Analyzed: 22:44
Lab Standard ID: PICVXAP Initial Calibration: 8020C53194
Method: 8021B

COMPOUND	RT	RT WINDOW FROM	TO	CALC AMOUNT	NOM AMOUNT	%D	Limits
MTBE	3.41	3.37	3.44	21.52	20.00	7.6	-15 to +15
BENZENE	4.50	4.45	4.52	23.18	20.00	15.9*	-15 to +15
TOLUENE	5.85	5.81	5.88	22.89	20.00	14.4	-15 to +15
Ethylbenzene	7.06	7.01	7.08	22.86	20.00	14.3	-15 to +15
M/P-XYLENES	7.21	7.17	7.24	46.88	40.00	17.2*	-15 to +15
o-xylene	7.54	7.49	7.56	22.50	20.00	12.5	-15 to +15
Cumene	7.86	7.82	7.89	23.00	20.00	15.0	-15 to +15
1,3,5-TRIMETHYLBENZENE	8.59	8.54	8.61	22.76	20.00	13.8	-15 to +15
1,2,4-TRIMETHYLBENZENE	9.00	8.95	9.02	22.55	20.00	12.7	-15 to +15
Naphthalene	12.36	12.32	12.39	20.87	20.00	4.4	-15 to +15

Average of %D: 12.8

AKD28 8118

7E
CALIBRATION VERIFICATION SUMMARY

Lab Name: Lancaster Laboratories
Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Instrument: 10995F Detector: FID Init. Calib Date(s): 06/16/09 06/16/09

GC Column (1) : J&W DB-VRX ID: 75 (mm) Date Analyzed: 06/16/09

Lab File ID: 53165B.0012.RAW Time Analyzed: 0:50

Lab Standard ID: LCSY9 Initial Calibration: ALK53161

Method: 8015B

COMPOUND	RT	RT WINDOW FROM	TO	CALC AMOUNT	NOM AMOUNT	%D	Limits
GRO		3.56	8.59	1103.92	1100.00	0.4	-15 to +15

Average of %D: .4

AKD28 9119

7E
CALIBRATION VERIFICATION SUMMARY

Lab Name: Lancaster Laboratories
Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Instrument: 10995P Detector: PID Init. Calib Date(s): 07/13/09 07/14/09

GC Column (1) : J&W DB-VRX ID: 75 (mm) Date Analyzed: 07/20/09

Lab File ID: 53200.0002.RAW Time Analyzed: 1:03

Lab Standard ID: WCCPXCC Initial Calibration: 8020C53194

Method: 8021B

COMPOUND	RT	RT WINDOW FROM	TO	CALC AMOUNT	NOM AMOUNT	%D	Limits
MTBE	3.40	3.37	3.44	20.33	20.00	1.7	-15 to +15
BENZENE	4.49	4.46	4.53	19.28	20.00	-3.6	-15 to +15
Trifluorotoluene-P	5.01	4.98	5.05	28.96	30.00	-3.5	-31 to +29
TOLUENE	5.84	5.81	5.88	19.45	20.00	-2.7	-15 to +15
Ethylbenzene	7.04	7.01	7.08	19.43	20.00	-2.8	-15 to +15
M/P-XYLENES	7.20	7.17	7.24	40.18	40.00	0.4	-15 to +15
o-xylene	7.52	7.50	7.57	19.73	20.00	-1.4	-15 to +15
Cumene	7.85	7.82	7.89	19.22	20.00	-3.9	-15 to +15
1,3,5-TRIMETHYLBENZENE	8.57	8.55	8.62	19.51	20.00	-2.5	-15 to +15
1,2,4-TRIMETHYLBENZENE	8.98	8.96	9.03	19.83	20.00	-0.9	-15 to +15
Naphthalene	12.35	12.32	12.39	22.47	20.00	12.4	-15 to +15

Average of %D: 3.3

AK929 8128

FORM VII

7E
CALIBRATION VERIFICATION SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Instrument: 10995F Init. Calib Date(s): 06/10/09 06/12/09

GC Column (1) : J&W DB-VRX ID: 75 (mm) Date Analyzed: 07/20/09

Lab File ID: 53200B.0003.RAW Time Analyzed: 1:27

Lab Standard ID: WGCCXMK Initial Calibration: ALK53161

COMPOUND	RT	RT WINDOW FROM	TO	CALC AMOUNT (ng/ml)	NOM AMOUNT (ng/ml)	%D
GRO		3.57	8.59	544.28	536.4	1.5
Trifluorotoluene-F	5.01	4.99	5.06	26.07	30.00	-13.1
1-Chloro-3-fluorobenzene	6.62	6.60	6.67	25.24	30.00	-15.9
					Average of %D:	10.2

AKD20 8121

7E
CALIBRATION VERIFICATION SUMMARY

Lab Name: Lancaster Laboratories
Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Instrument: 10995P Detector: PID Init. Calib Date(s): 07/20/09 07/20/09

GC Column (1) : J&W DB-VRX ID: 75 (mm) Date Analyzed: 07/20/09

Lab File ID: 53200.0017.RAW Time Analyzed: 18:07

Lab Standard ID: WCCPXCM Initial Calibration: 8020C53194

Method: 8021B

COMPOUND	RT	RT WINDOW FROM	TO	CALC AMOUNT	NOM AMOUNT	%D	Limits
MTBE	3.40	3.37	3.44	20.97	20.00	4.9	-15 to +15
BENZENE	4.49	4.46	4.53	21.32	20.00	6.6	-15 to +15
Trifluorotoluene-P	5.01	4.98	5.05	28.81	30.00	-4.0	-31 to +29
TOLUENE	5.84	5.81	5.88	21.28	20.00	6.4	-15 to +15
Ethylbenzene	7.05	7.01	7.08	21.41	20.00	7.1	-15 to +15
M/P-XYLENES	7.20	7.17	7.24	43.77	40.00	9.4	-15 to +15
o-xylene	7.53	7.50	7.57	21.27	20.00	6.3	-15 to +15
Cumene	7.85	7.82	7.89	21.54	20.00	7.7	-15 to +15
1,3,5-TRIMETHYLBENZENE	8.58	8.55	8.62	21.47	20.00	7.3	-15 to +15
1,2,4-TRIMETHYLBENZENE	8.99	8.96	9.03	21.24	20.00	6.2	-15 to +15
Naphthalene	12.35	12.32	12.39	19.20	20.00	-4.0	-15 to +15

Average of %D: 6.4

ARD29 0122

FORM VII

7E

CALIBRATION VERIFICATION SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Instrument: 10995F Init. Calib Date(s): 07/20/09 07/20/09

GC Column (1) : J&W DB-VRX ID: 75 (mm) Date Analyzed: 07/20/09

Lab File ID: 53200B.0018.RAW Time Analyzed: 18:31

Lab Standard ID: WGCCXNC Initial Calibration: ALK53161

COMPOUND	RT	RT WINDOW FROM	TO	CALC AMOUNT (ng/ml)	NOM AMOUNT (ng/ml)	%D
GRO		3.57	8.59	571.10	536.4	6.5
Trifluorotoluene-F	5.02	4.99	5.06	26.89	30.00	-10.4
1-Chloro-3-fluorobenzene	6.63	6.60	6.67	25.98	30.00	-13.4
					Average of %D:	10.1

AKD28 8123

7E
CALIBRATION VERIFICATION SUMMARY

Lab Name: Lancaster Laboratories
Contract:
Lab Code: Case No.: SAS No.: SDG No.:
Instrument: 10995F
Init. Calib Date(s): 07/20/09 07/20/09
GC Column (1) : J&W DB-VRX ID: 75 (mm)
Date Analyzed: 07/20/09
Lab File ID: 53200B.0026.RAW
Time Analyzed: 21:45
Lab Standard ID: WGCCXML
Initial Calibration: ALK53161

COMPOUND	RT	RT WINDOW FROM	TO	CALC AMOUNT (ng/ml)	NOM AMOUNT (ng/ml)	%D
GRO		3.57	8.59	510.16	536.4	-4.9
Trifluorotoluene-F	5.01	4.99	5.06	25.73	30.00	-14.2
1-Chloro-3-fluorobenzene	6.63	6.60	6.67	24.69	30.00	-17.7
					Average of %D:	12.3

AKD28 8124

FORM VII

8D
ANALYTICAL SEQUENCE

Sequence: 53194 Lab Name: Lancaster laboratories Contract:

Lab Code: Case No.: SAS No: SDG No.:

GC Column: JW DB-VRX ID: 75

Instrument: 10995P

THIS ANALYTICAL SEQUENCE OF BLANKS, SAMPLES AND STANDARDS IS GIVEN BELOW:

	Sample Code No.	Lab Sample ID	Date Analyzed	Time Analyzed	Calibration File	TFTP
001	AA	CBLK	07/13/2009	21:48:00	8020C53194	5.01
002	AA	CBLK	07/13/2009	22:12:06	8020C53194	
003	AA	CBLK	07/13/2009	22:36:20	8020C53194	
004	AA	CBLK	07/13/2009	23:00:33	8020C53194	5.01
005	W8021AA	W80210925N	07/13/2009	23:24:49	8020C53194	5.01
006	W8022AA	W80220925M	07/13/2009	23:48:56	8020C53194	5.01
007	W8023AA	W80230925M	07/14/2009	00:13:04	8020C53194	5.01
008	W8024AA	W80240925M	07/14/2009	00:37:12	8020C53194	5.01
009	W8025AA	W80250925M	07/14/2009	01:01:21	8020C53194	5.01
010	W8026AA	W80260925M	07/14/2009	01:25:27	8020C53194	5.01
011	W8027AA	W80270925M	07/14/2009	01:49:34	8020C53194	
012	AA	CBLK	07/14/2009	02:13:36	8020C53194	5.01
013	W8028AA	W80280925M	07/14/2009	02:37:46	8020C53194	
014	AA	CBLK	07/14/2009	03:01:52	8020C53194	
015	AA	CBLK	07/14/2009	03:26:03	8020C53194	5.01
016	AA	CBLK	07/14/2009	03:50:16	8020C53194	5.01
017	AA	CBLK	07/14/2009	13:13:42	8020C53194	5.01
018	PMDLXAJ	PMDLX0925F	07/14/2009	13:37:29	8020C53194	5.01
019	AA	CBLK	07/14/2009	18:06:24	8020C53194	5.01
020	AA	CBLK	07/14/2009	18:30:23	8020C53194	
021	AA	CBLK	07/14/2009	18:54:32	8020C53194	
022	AA	CBLK	07/14/2009	19:18:48	8020C53194	
023	AA	CBLK	07/14/2009	19:43:15	8020C53194	
024	W8021AA	W80210925O	07/14/2009	20:07:23	8020C53194	5.00
025	W8022AA	W80220925N	07/14/2009	20:31:30	8020C53194	5.01
026	W8023AA	W80230925N	07/14/2009	20:55:36	8020C53194	5.00
027	W8024AA	W80240925N	07/14/2009	21:19:43	8020C53194	5.01
028	W8025AA	W80250925N	07/14/2009	21:43:52	8020C53194	5.01
029	AA	CBLK	07/14/2009	22:44:45	8020C53194	5.01
030	AA	CBLK	07/14/2009	23:19:21	8020C53194	5.01
031	AA	CBLK	07/14/2009	23:43:17	8020C53194	5.01
032	AA	CBLK	07/15/2009	00:07:24	8020C53194	5.00
033	PMDLXAK	PMDLX0925F	07/15/2009	00:31:34	8020C53194	5.00

	ICAL Dates		ICAL RT	QC Limits
8020C53194	07/13/2009 - 07/14/2009	TFTP = Trifluorotoluene-P	5.01	(4.97 - 5.05 Minutes)

AKD28 8125

8D
ANALYTICAL SEQUENCE

Sequence: 53194 Lab Name: Lancaster laboratories Contract:

Lab Code: Case No.: SAS No: SDG No.:

GC Column: JW DB-VRX ID: 75

Instrument: 10995P

THIS ANALYTICAL SEQUENCE OF BLANKS, SAMPLES AND STANDARDS IS GIVEN BELOW:

	Sample Code No.	Lab Sample ID	Date Analyzed	Time Analyzed	Calibration File	TFTP
034	PICVXAN	PICVX0925G	07/15/2009	00:55:47	8020C53194	5.01
035	AA	CBLK	07/15/2009	17:50:38	8020C53194	5.01
036	PICVXAO	PICVX0925H	07/15/2009	18:14:38	8020C53194	5.01
037	WCCPXAH	WCCPX0925EN	07/15/2009	21:31:32	8020C53194	5.01
038	PICVXAP	PICVX0925H	07/15/2009	22:44:26	8020C53194	5.02

	ICAL Dates		ICAL RT QC Limits	
8020C53194	07/13/2009 - 07/14/2009	TFTP = Trifluorotoluene-P	5.01	(4.97 - 5.05 Minutes)

AMD28 9126

8D
ANALYTICAL SEQUENCE

Sequence: 53161B Lab Name: Lancaster laboratories Contract:

Lab Code: Case No.: SAS No: SDG No.:

GC Column: JW DB-VRX ID: 75

Instrument: 10995F

THIS ANALYTICAL SEQUENCE OF BLANKS, SAMPLES AND STANDARDS IS GIVEN BELOW:

	Sample Code No.	Lab Sample ID	Date Analyzed	Time Analyzed	Calibration File	TFTF
001	AA	GRO RT MARKI	06/10/2009	20:41:40	TPH53161	5.03
002	WGRO1AA	WGRO10925AH	06/10/2009	21:54:30	8015B53161	5.01
003	WGRO2AA	WGRO20925AE	06/10/2009	22:18:29	8015B53161	5.01
004	WGRO3AA	WGRO30925AF	06/10/2009	22:42:32	8015B53161	5.01
005	WGRO4AA	WGRO40925AD	06/10/2009	23:06:53	8015B53161	5.01
006	WGRO5AA	WGRO50925AE	06/10/2009	23:31:27	8015B53161	5.01
007	WGRO6AA	WGRO60925AB	06/10/2009	23:56:27	8015B53161	5.04
008	WGRO7AA	WGRO70925Y	06/11/2009	00:20:21	8015B53161	5.04

	ICAL Dates		ICAL RT	QC Limits
8015B53161	06/10/2009 - 06/11/2009	TFTF = Trifluorotoluene-F	5.02	(4.99 - 5.05 Minutes)
ALK53161	06/11/2009 - 06/11/2009	TFTF = Trifluorotoluene-F	5.01	(4.97 - 5.04 Minutes)
TPH53161	06/10/2009 - 06/12/2009	TFTF = Trifluorotoluene-F	5.02	(4.99 - 5.05 Minutes)

AKB28 8127

8D
ANALYTICAL SEQUENCE

Sequence: 53162B | Lab Name: Lancaster laboratories | Contract:

Lab Code: | Case No.: | SAS No: | SDG No.:

GC Column: JW DB-VRX | ID: 75

Instrument: 10995F

THIS ANALYTICAL SEQUENCE OF BLANKS, SAMPLES AND STANDARDS IS GIVEN BELOW:

	Sample Code No.	Lab Sample ID	Date Analyzed	Time Analyzed	Calibration File	TFTF
001	WGRO7AA	WGRO70925Z	06/12/2009	00:33:59	TPH53161	5.04

	ICAL Dates		ICAL RT	QC Limits
TPH53161	06/10/2009 - 06/12/2009	TFTF = Trifluorotoluene-F	5.02	(4.99 - 5.05 Minutes)

AXD28 0128

8D
ANALYTICAL SEQUENCE

Sequence: 53165B | Lab Name: Lancaster laboratories | Contract:

Lab Code: | Case No.: | SAS No: | SDG No.:

GC Column: JW DB-VRX | ID: 75

Instrument: 10995F

THIS ANALYTICAL SEQUENCE OF BLANKS, SAMPLES AND STANDARDS IS GIVEN BELOW:

	Sample Code No.	Lab Sample ID	Date Analyzed	Time Analyzed	Calibration File	TFTF
001	AA	GRO MARKER	06/14/2009	21:02:28	8015B53161	5.01
002	WCCPXRJ	WCCPX0925DM	06/14/2009	21:26:27	8015B53161	5.01
003	WGCCXUD	WGCCX0925GM	06/14/2009	21:50:30	8015B53161	5.01
004	WGCCXUK	WGCCX0925GM	06/14/2009	22:27:15	8015B53161	5.01
005	CBLKYN	CBLK	06/15/2009	20:52:27	8015B53161	5.01
006	WCCPXSD	WCCPX0925DN	06/15/2009	21:16:28	8015B53161	5.01
007	WGCCXVA	WGCCX0925GO	06/15/2009	21:40:46	8015B53161	5.01
008	BLKQF	BLANKA	06/15/2009	23:14:20	8015B53161	5.01
009	AA	GRO DLS	06/15/2009	23:38:15	TPH53161	5.00
010	LCSY8	LCSA	06/16/2009	00:02:20	8015B53161	5.01
011	LCSDTM	LCSDA	06/16/2009	00:26:27	8015B53161	5.01
012	LCSY9	GICVX0925A	06/16/2009	00:50:40	8015B53161	5.01
013	LCSDTN	LCSDB	06/16/2009	01:15:08	8015B53161	5.01
014	N	5694799	06/16/2009	01:39:04	8015B53161	5.01
015	N	5694793	06/16/2009	02:03:15	8015B53161	5.00
016	N	5694794	06/16/2009	02:27:20	8015B53161	5.00
017	WCCPXSE	WCCPX0925DO	06/16/2009	02:51:28	8015B53161	5.00
018	WGCCXVB	WGCCX0925GO	06/16/2009	03:15:42	8015B53161	5.01
019	N	5694795	06/16/2009	03:39:45	8015B53161	5.01
020	N	5694796	06/16/2009	04:04:14	8015B53161	5.01
021	N	5694797	06/16/2009	04:28:28	8015B53161	5.01
022	N	5694798	06/16/2009	04:52:38	8015B53161	5.01
023	37606	5696712	06/16/2009	05:16:39	8015B53161	5.01
024	37608	5696713	06/16/2009	05:40:42	8015B53161	5.00
025	37607	5696714	06/16/2009	06:04:50	8015B53161	5.01
026	37609	5696715	06/16/2009	06:28:56	8015B53161	5.01

	ICAL Dates		ICAL RT	QC Limits
8015B53161	06/10/2009 - 06/12/2009	TFTF = Trifluorotoluene-F	5.02	(4.99 - 5.05 Minutes)
ALK53161	06/10/2009 - 06/12/2009	TFTF = Trifluorotoluene-F	5.02	(4.98 - 5.06 Minutes)
GX53161	06/10/2009 - 06/11/2009	TFTF = Trifluorotoluene-F	5.02	(4.99 - 5.05 Minutes)
TPH53161	06/10/2009 - 06/12/2009	TFTF = Trifluorotoluene-F	5.02	(4.99 - 5.05 Minutes)

AKD28 8129

8D
ANALYTICAL SEQUENCE

Sequence: 53165B | Lab Name: Lancaster laboratories | Contract:

Lab Code: | Case No.: | SAS No: | SDG No.:

GC Column: JW DB-VRX | ID: 75

Instrument: 10995F

THIS ANALYTICAL SEQUENCE OF BLANKS, SAMPLES AND STANDARDS IS GIVEN BELOW:

	Sample Code No.	Lab Sample ID	Date Analyzed	Time Analyzed	Calibration File	TFTF
027	37602	5696716	06/16/2009	06:52:58	8015B53161	5.00
028	WCCPXSF	WCCPX0925DO	06/16/2009	07:17:06	8015B53161	5.01
029	WGCCXVC	WGCCX0925GO	06/16/2009	07:41:12	8015B53161	5.01
030	37604	5696718	06/16/2009	08:29:17	8015B53161	5.01
031	37605	5696719	06/16/2009	08:53:15	8015B53161	5.00
032	HJ066	5696823	06/16/2009	09:38:57	8015B53161	5.01
033	HJ079	5696824	06/16/2009	10:02:56	8015B53161	5.00
034	HJ080	5696825	06/16/2009	10:27:03	8015B53161	5.01
035	FPB09	5696860	06/16/2009	10:51:08	8015B53161	5.00
036	FPB08	5696861	06/16/2009	11:15:14	8015B53161	5.00
037	HJ080MS	5696825	06/16/2009	11:39:24	8015B53161	5.01
038	WCCPXSG	WCCPX0925DO	06/16/2009	12:03:22	8015B53161	5.00
039	WGCCXVD	WGCCX0925GO	06/16/2009	12:27:24	8015B53161	5.01
040	37608MS	5696713	06/16/2009	12:51:28	8015B53161	5.00
041	WCCPXSH	WCCPX0925DO	06/16/2009	13:15:30	8015B53161	5.01
042	WGCCXVE	WGCCX0925GO	06/16/2009	13:39:29	8015B53161	5.01

	ICAL Dates		ICAL RT	QC Limits
8015B53161	06/10/2009 - 06/12/2009	TFTF = Trifluorotoluene-F	5.02	(4.99 - 5.05 Minutes)
ALK53161	06/10/2009 - 06/12/2009	TFTF = Trifluorotoluene-F	5.02	(4.98 - 5.06 Minutes)
GX53161	06/10/2009 - 06/11/2009	TFTF = Trifluorotoluene-F	5.02	(4.99 - 5.05 Minutes)
TPH53161	06/10/2009 - 06/12/2009	TFTF = Trifluorotoluene-F	5.02	(4.99 - 5.05 Minutes)

AKD28 6138

8D
ANALYTICAL SEQUENCE

Sequence: 53200 Lab Name: Lancaster laboratories Contract:

Lab Code: Case No.: SAS No: SDG No.:

GC Column: JW DB-VRX ID: 75

Instrument: 10995P

THIS ANALYTICAL SEQUENCE OF BLANKS, SAMPLES AND STANDARDS IS GIVEN BELOW:

	Sample Code No.	Lab Sample ID	Date Analyzed	Time Analyzed	Calibration File	TFTP
001	AA	GRO MARKER	07/20/2009	00:39:37	8020C53194	5.02
002	WCCPXCC	WCCPX0925ER	07/20/2009	01:03:36	8020C53194	5.01
003	WGCCXMK	WGCCX0925IB	07/20/2009	01:27:37	8020C53194	5.01
004	BLKQH	BLANKA	07/20/2009	01:51:43	8020C53194	5.01
005	LCSXB	LCSA	07/20/2009	02:15:47	8020C53194	5.01
006	LCSDHL	LCSDA	07/20/2009	02:39:54	8020C53194	5.01
007	LCSXC	LCSB	07/20/2009	03:03:54	8020C53194	5.01
008	LCSDHM	LCSDB	07/20/2009	03:28:05	8020C53194	5.01
009	335TB	5725301	07/20/2009	03:52:14	8020C53194	5.01
010	TBOLD	5725653	07/20/2009	04:16:20	8020C53194	5.01
011	335P1	5725296	07/20/2009	04:40:26	8020C53194	5.01
012	335P2	5725297	07/20/2009	05:04:35	8020C53194	5.01
013	335P3	5725298	07/20/2009	05:28:36	8020C53194	5.01
014	33519	5725299	07/20/2009	05:52:37	8020C53194	5.01
015	33520	5725300	07/20/2009	06:16:43	8020C53194	5.01
016	AA	CBLK	07/20/2009	17:43:24	8020C53194	5.02
017	WCCPXCM	WCCPX0925ES	07/20/2009	18:07:21	8020C53194	5.01
018	WGCCXNC	WGCCX0925IC	07/20/2009	18:31:29	8020C53194	5.01
019	SHGEB	5726707	07/20/2009	18:55:47	8020C53194	5.01
020	SHGTW	5726709	07/20/2009	19:19:51	8020C53194	5.01
021	SHEB1	5726720	07/20/2009	19:44:08	8020C53194	5.00
022	SHTBW	5726722	07/20/2009	20:08:13	8020C53194	5.01
023	P2OLD	5725654	07/20/2009	20:32:21	8020C53194	5.01
024	335P2MS	5725297	07/20/2009	20:56:41	8020C53194	5.01
025	33519MS	5725299	07/20/2009	21:20:53	8020C53194	5.01
026	WGCCXML	WGCCX0925IB	07/20/2009	21:45:00	8020C53194	5.01

	ICAL Dates		ICAL RT	QC Limits
8020C53194	07/13/2009 - 07/14/2009	TFTP = Trifluorotoluene-P	5.01	(4.98 - 5.05 Minutes)

AKD28 0131

8D
ANALYTICAL SEQUENCE

Sequence: 53200B | Lab Name: Lancaster laboratories | Contract:

Lab Code: | Case No.: | SAS No: | SDG No.:

GC Column: JW DB-VRX | ID: 75

Instrument: 10995F

THIS ANALYTICAL SEQUENCE OF BLANKS, SAMPLES AND STANDARDS IS GIVEN BELOW:

	Sample Code No.	Lab Sample ID	Date Analyzed	Time Analyzed	Calibration File	TFTF
001	AA	GRO MARKER	07/20/2009	00:39:37	ALK53161	5.02
002	WCCPXCC	WCCPX0925ER	07/20/2009	01:03:35	ALK53161	5.01
003	WGCCXMK	WGCCX0925IB	07/20/2009	01:27:38	ALK53161	5.01
004	BLKQH	BLANKA	07/20/2009	01:51:43	ALK53161	5.01
005	LCSXB	LCSA	07/20/2009	02:15:48	ALK53161	5.01
006	LCSDHL	LCSDA	07/20/2009	02:39:54	ALK53161	5.01
007	LCSXC	LCSB	07/20/2009	03:03:54	ALK53161	5.01
008	LCSDHM	LCSDB	07/20/2009	03:28:06	ALK53161	5.01
009	335TB	5725301	07/20/2009	03:52:15	ALK53161	5.01
010	TBOLD	5725653	07/20/2009	04:16:20	ALK53161	5.01
011	335P1	5725296	07/20/2009	04:40:26	ALK53161	5.02
012	335P2	5725297	07/20/2009	05:04:34	ALK53161	5.01
013	335P3	5725298	07/20/2009	05:28:36	ALK53161	5.01
014	33519	5725299	07/20/2009	05:52:37	ALK53161	5.01
015	33520	5725300	07/20/2009	06:16:44	ALK53161	5.01
016	AA	CBLK	07/20/2009	17:43:25	ALK53161	5.01
017	WCCPXCM	WCCPX0925ES	07/20/2009	18:07:20	ALK53161	5.01
018	WGCCXNC	WGCCX0925IC	07/20/2009	18:31:29	ALK53161	5.02
019	SHGEB	5726707	07/20/2009	18:55:47	ALK53161	5.01
020	SHGTW	5726709	07/20/2009	19:19:52	ALK53161	5.01
021	SHEB1	5726720	07/20/2009	19:44:07	ALK53161	5.01
022	SHTBW	5726722	07/20/2009	20:08:13	ALK53161	5.01
023	P2OLD	5725654	07/20/2009	20:32:21	ALK53161	5.01
024	335P2MS	5725297	07/20/2009	20:56:41	ALK53161	5.01
025	33519MS	5725299	07/20/2009	21:20:54	ALK53161	5.01
026	WGCCXML	WGCCX0925IB	07/20/2009	21:45:00	ALK53161	5.01

ICAL Dates

ALK53161 06/10/2009 - 06/12/2009

TFTF = Trifluorotoluene-F

ICAL RT QC Limits

5.02 (4.98 - 5.06 Minutes)

AKD28 9132

FORM VIII PEST

Raw QC Data

Lancaster Laboratories-Single Component Data Summary

Sample Name: BLANKA BLKQH Sample ID: AA **Batchnumber: 09200A53A**
Sample Amount: 1 Total Volume: 1 ml Analyst: 1991 SDG: State:
Analyses: 01440 01551 01588 01636 01729 02102 02159 02763 04224 05879 06464 08207 08213 08214 08215
Analyses: 08216 08219 08227 08267 08268 08274 08320 08329 08805

Analysis Report (A)

Injected on : JUL 20, 2009 01:51:43
Instrument : CP53--10995P
Result file : 53200.0004.RAW
Calibration file : 8020C53194.cal
Method file : 8020C53194.met
%SSR(SURR-TFT-P : 94.7% Conc.: 28.39613

Peak name	Min	R.T.	Max	Height	Amount
SURR-TFT-P	4.98	5.01	5.05	785502	28.396130
ISTD-1C3FB	6.57	6.62	6.67	1655519	30.000000
1,2,4-TRIMETHYLBEN	8.96	8.99	9.03	7555	0.106767
NAPHTHALENE	12.32	12.35	12.39	45183	0.713264

Summary Report

Compound Name	Detector	Amount Found	LOQ	MDL	Qualifiers	Comments
METHYL T-BUTYL ETHER	P		<1	<0.15		
			<1	<0.3		
			<10	<2.5		
BENZENE	P		<0.5	<0.15		
			<0.5	<0.2		
			<1	<0.2		
			<2	<0.5		
SURR-TFT-P	P	28.396130				
TOLUENE	P		<1	<0.15		
			<1	<0.2		
			<2	<0.5		
ISTD-1C3FB	P	30.000000				
ETHYLBENZENE	P		<1	<0.2		
			<2	<0.5		
M,P-XYLENE	P		<2	<0.4		
O-XYLENE	P		<1	<0.2		
ISOPROPYLBENZENE	P		<1	<0.2		
1,3,5-TRIMETHYLBENZE	P		<1	<0.2		
1,2,4-TRIMETHYLBENZE	P	0.106767	<1	<0.2		
NAPHTHALENE	P	0.713264	<5	<1		
M/P-XYLENES	P		<2	<0.4		
TOTAL XYLENES	P		<3	<0.4		
			<3	<0.6		
			<5	<1.5		

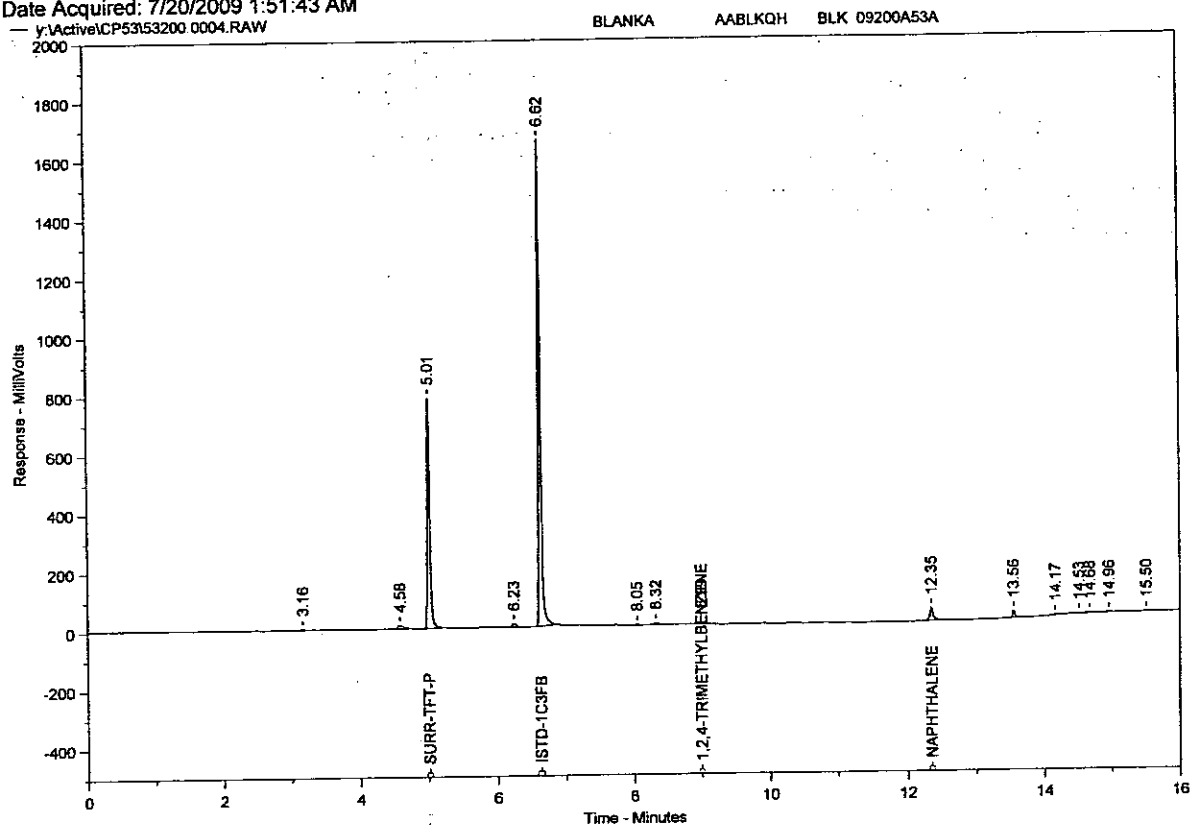
Units:

Reviewed by: 1991 Date: 7/21/09
Verified by: Date: 7/21/09

AXD28 0134

%Difference = High - Low Amount divided by the Average times 100
** %Difference > 40
* Recovery outside QC Limits
Printed on: 7/20/2009 02:10:04

CP53 PID 10995P 53200.0004.RAW
BLANKA AABLKQH BLK 09200A53A
Date Acquired: 7/20/2009 1:51:43 AM



BLANKA AABLKQH BLK 09200A53A
Date Acquired: 7/20/2009 1:51:43 AM
Raw File: 53200.0004.RAW
Analyst:
Dilution Factor: 1
Instrument: CP53 10995P
Units: ug/L
Method File: 8020C53194.met
Column: 30 M DB-VRX x 0.45mm x 2.55 um

Threshold: 9
Peak Table using calibration : 8020C53194.cal- Version 37
Number of Compounds: 12

Component Name	Ret. Time	Exp. Ret Time	Amount ug/L	Peak Area (A)	Peak Height (H)*
METHYL T-BUTYL ETHER	0.00	3.40	0.00	0	0
BENZENE	0.00	4.49	0.00	0	0
SURR-TFT-P	5.01	5.01	28.40	2020683	785502
TOLUENE	0.00	5.85	0.00	0	0
ISTD-1C3FB	6.62	6.63	30.00	3833895	1655519
ETHYLBENZENE	0.00	7.05	0.00	0	0
M,P-XYLENE	0.00	7.21	0.00	0	0
O-XYLENE	0.00	7.53	0.00	0	0
ISOPROPYLBENZENE	0.00	7.85	0.00	0	0
1,3,5-TRIMETHYLBENZENE	0.00	8.58	0.00	0	0
1,2,4-TRIMETHYLBENZENE	8.99	8.99	0.11	41644	7555
NAPHTHALENE	12.35	12.35	0.71	163320	45183

Total Xylenes: 0.00 ug/L

Surrogate Percent Recovery: 94.65

AKD2B 0135

Lancaster Laboratories-Range Data Summary

Sample Name: BLANKA BLKQH Sample ID: AA **Batchnumber:** 09200A53A

Sample Amount: 1. Total Volume: 1. ml Analyst: 1991 SDG: State:

Analyses: 01440 01551 01588 01636 01729 02102 02159 02763 04224 05879
06464 08207 08213 08214 08215 08216 08219 08227 08267 08268
08274 08329 08329 08805

Injection Summary

Injected on : 7/20/2009 01:51:43
Instrument : CP53--10995F
Result file : 53200B.0004.RAW
Calibration files : ALK53161.cal
Method files : ALK53161.met
Setting : ALK53161

Surrogate Recoveries

SURR-1C3FB	86.1%	Conc.: 25.826542
SURR-TFT-F	86.1%	Conc.: 25.826542
	86.1%	Conc.: 25.826542

Range	Retention Times	Area	Amount	LOQ	MDL	Flags	Units
SURR-TFT-F	5.01 (4.99 - 5.06)	540221	25.8265				ppb
SURR-1C3FB	6.63 (6.60 - 6.67)	525864	23.7517				ppb
GRO	3.57 - 8.59	1102716	2.0821	0.05	0.02		ppb
				<50	<20		
				<100	<10		
				<100	<50		
				<250	<50		

Comments: _____

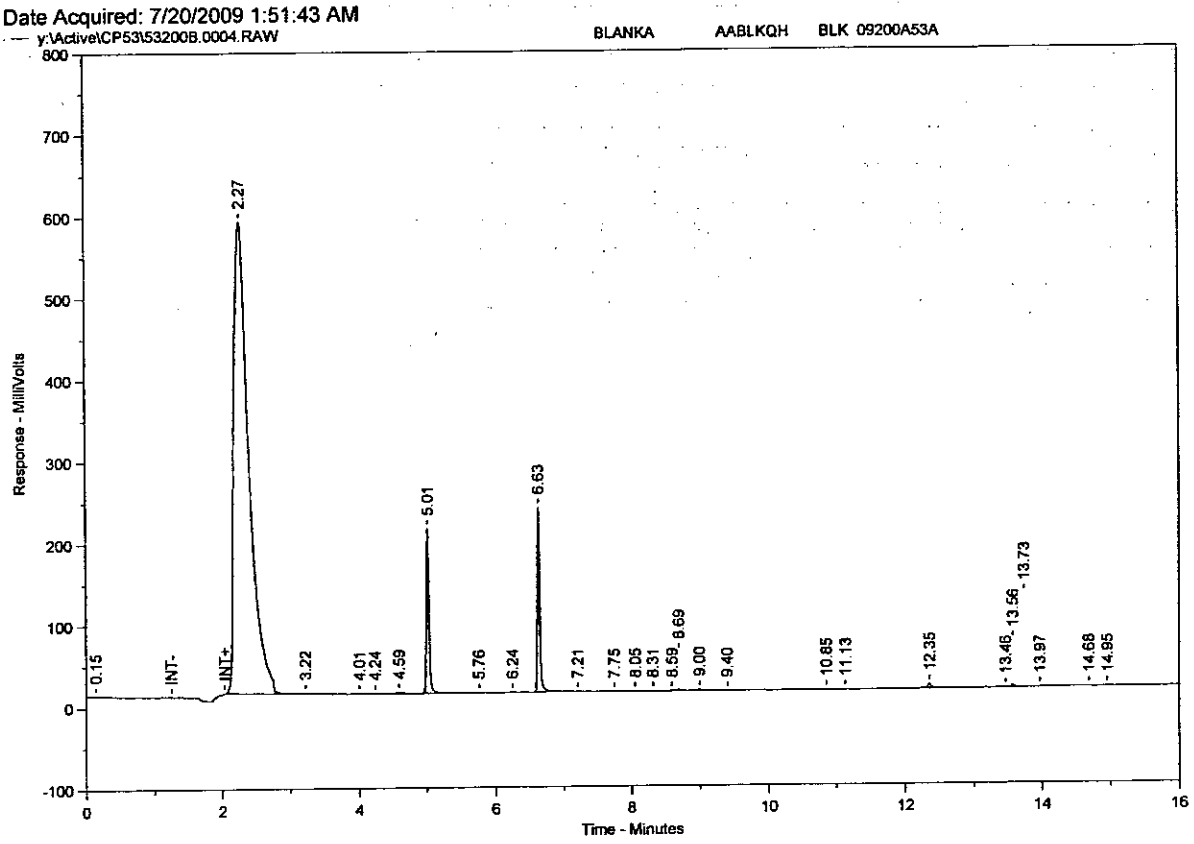
AKD28 [8136

Reviewed by: CAM 1991 Date: 7/21/09

Verified by: [signature] Date: 7/21/09

7/20/09 2:10

BLANKA AABLKQH BLK 09200A53A
CP53 FID 10995F 53200B.0004.RAW
Date Acquired: 7/20/2009 1:51:43 AM



BLANKA AABLKQH BLK 09200A53A
Date Acquired: 7/20/2009 1:51:43 AM
Raw File: 53200B.0004.RAW
Analyst:
Dilution Factor: 1
Instrument: CP53 10995F
Units: ug/L
Method File: ALK53161.met
Column: 30 M DB-VRX x 0.45mm x 2.55 um

Threshold: 3

Peak Table using calibration : ALK53161.cal- Version 13
Number of Compounds: 3

Component Name	Ret. Time	Exp. Ret Time	Amount ug/L	Peak Area (A)*	Peak Height (H)
	0.15	0.00	0.00	3374	457.5961
	2.27	0.00	0.00	8722856	577259.9
	3.22	0.00	0.00	3417	1048.848
	4.01	0.00	0.00	3453	461.6824
	4.24	0.00	0.00	1261	325.3477
	4.59	0.00	0.00	13298	2063.217
SURR-TFT-F	5.01	5.02	25.83	540221	202850.6
	5.76	0.00	0.00	4287	521.6151
	6.24	0.00	0.00	6421	1250.269
SURR-1C3FB	6.63	6.63	23.75	525864	227074.4
	7.21	0.00	0.00	2644	590.0352
	7.75	0.00	0.00	1528	427.7959
	8.05	0.00	0.00	2528	494.8705
	8.31	0.00	0.00	1211	459.7743
	8.59	0.00	0.00	2648	566.0068
	8.69	0.00	0.00	8273	1850.037
	9.00	0.00	0.00	3690	1133.498
	9.40	0.00	0.00	994	371.7095

AWD28 8137

Component Name	Ret. Time	Exp. Ret Time	Amount ug/L	Peak Area (A)*	Peak Height (H)
	10.85	0.00	0.00	1026	400.9891
	11.13	0.00	0.00	1911	413.5003
	12.35	0.00	0.00	21739	5615.906
	13.46	0.00	0.00	1023	390.4643
	13.56	0.00	0.00	9441	3206.603
	13.73	0.00	0.00	1315	445.4898
	13.97	0.00	0.00	1958	351.3217
	14.68	0.00	0.00	4362	639.324
	14.95	0.00	0.00	2390	508.1123

RT Start	RT Stop	Unadj GRO	Total Surr.	Adj. GRO
3.57	8.59	1102716	1066085	36630

Surrogate Percent Recovery: 86.08847

Total GRO Area: 36630.38
Total GRO Concentration: 2.08 ug/L

File: y:\Active\CP53\53200B.0004.RAW

AKD28 8138

Preparation Logs

Batchlog Summary 09200A53A

QC	ID	Sample Code	Amt	SS/IS S	Amt (mL)	MS Sol.	Amt (mL)	FV (mL)	SW	DF	PH	BC	Comments
5725297MS	AA	335P2MS	1.00	SS0917725A	0.0002	MS0919625C	0.002000	1.00		1.00	≤2	104B	
5725299MS	AA	33519MS	1.00	SS0917725A	0.0002	MS0918725A	0.000220	1.00		1.00	≤2	104B	
BLANKA	AA	BLKQH	1.00	SS0917725A	0.0002			1.00		1.00			
LCSA	AA	LCSXB	1.00	SS0917725A	0.0002	MS0919625C	0.002000	1.00		1.00			
LCSB	AA	LCSXC	1.00	SS0917725A	0.0002	MS0918725A	0.000220	1.00		1.00			
LCSDA	AA	LCSDHL	1.00	SS0917725A	0.0002	MS0919625C	0.002000	1.00		1.00			
LCSDB	AA	LCSDHM	1.00	SS0917725A	0.0002	MS0918725A	0.000220	1.00		1.00			

Sample#	ID	Sample Code	Amt	SS/IS Std.	Amt (mL)	FV (mL)	SW	DF	PH	BC	HS	Due Date	Hold Date	P	Analyses	Comments
5725296	AA	335P1	1.00	SS0917725A	0.0002	1.00		1.00	≤2	104A	☐	**7/21**	7/30	S	01440 01588	
5725297	AA	335P2	1.00	SS0917725A	0.0002	1.00		1.00		104A	☐	**7/21**	7/30	S	01440 01588	
5725298	AA	335P3	1.00	SS0917725A	0.0002	1.00		1.00		104A	☐	**7/21**	7/30	S	01440 01588	
5725299	AA	33519	1.00	SS0917725A	0.0002	1.00		1.00		104A	☐	**7/21**	7/30	S	01440 01588	
5725300	AA	33520	1.00	SS0917725A	0.0002	1.00		1.00		104A	☐	**7/21**	7/30	S	01440 01588	
5725301	AA	335TB	1.00	SS0917725A	0.0002	1.00		1.00		104A	☐	**7/21**	7/30	S	01440 01588	
5725653	AA	TBOLD	1.00	SS0917725A	0.0002	1.00		1.00		104A	☑	**7/27**	7/30	P	01440 01588	
5725654	AA	P2OLD	1.00	SS0917725A	0.0040	1.00		20.00		104C	☐	**7/27**	7/30	P	01440 01588	h. Sinkhammer DF20
5726707	AA	SHGEB	1.00	SS0917725A	0.0002	1.00		1.00		104A	☐	**7/28**	7/30	P	01440 01588	
5726709	AA	SHGTW	1.00	SS0917725A	0.0002	1.00		1.00		104A	☐	**7/28**	7/30	P	01440 01588	
5726720	AA	SHEB1	1.00	SS0917725A	0.0002	1.00		1.00		104A	☐	**7/28**	7/29	P	01440 01588	
5726722	AA	SHTBW	1.00	SS0917725A	0.0002	1.00		1.00		104A	☐	**7/28**	7/28	P	01440 01588	

Spike Solutions:

MS0918725A	Waters GRO Spike #2
MS0919625C	Waters MI working Spike
SS0917725A	Waters 2 Component Surr. Sol.

AKD28 8148

Analyst: KR 2368

Date: 7-20-09

Verifier:

Date: 7/21/09

Comments

TPH DRO/RRO (AK) Data

Case Narrative
Conformance/Nonconformance
Summary

Lancaster Laboratories

CLIENT: ChevronTexaco
SDG: AKD28

LANCASTER LABORATORIES
TPH-DRO/RRO (AK)

		MATRIX		
LLI SAMPLE #	**SAMPLE CODE**	**WATER**	**SOLID**	**COMMENT**
BLANKA	PBLKSX	X		Method Blank
LCSA	LCSZW	X		Lab Control Spike
LCSDA	LCSDJ9	X		Lab Control Spike Dup
5726707	SHGEB	X		Client Blank
BLANKA	PBLKTO		X	Method Blank
LCSA	LCS0J		X	Lab Control Spike
LCSDA	LCSDJL		X	Lab Control Spike Dup
5726704	SHG91		X	Unspiked
5726704MS	SHG91MS		X	Matrix Spike
5726704MSD	SHG91MSD		X	Matrix Spike Dup
5726705	SHGD1		X	
5726706	SHG92		X	

A. Sample Preparation:
No problems were encountered with the preparation of the samples.

B. Analysis:
Due to software limitations, a form 7 (check standard summary) cannot be automatically generated. Raw data containing this information is in the standards section of this data package.
No problems were encountered during analysis.

C. Quality Control:
Matrix QC may not be included if site-specific QC were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method or by the client.

For preparation/method blank results >LOQ, corrective action is not required if the sample result is >10 times the blank concentration, unless otherwise specified in the method or by the client.

Surrogate recoveries that are outside the QC window are confirmed unless attributed to a dilution or otherwise noted.

See the Conformance/Nonconformance Summary for the QC information.

D. Data Interpretation:

Data indicating manual integration requires the following codes:
1 = missed peak
2 = improper baseline
The peaks/area that have been manually changed are indicated with an "M" on the raw data.

No further interpretation is needed.

AKD28 0143

Lancaster Laboratories

Narrative reviewed and approved by:

Dana Kauffman, Manager Data Deliverables — **Date** 7/30/07

Lancaster Laboratories

GC ANALYSIS CONFORMANCE/NON-CONFORMANCE SUMMARY

SDG: AKD28

	Indicate Yes, No, N/A
1. Chromatograms labeled / Compounds identified (Field Samples & Method Blanks)	YES
2. Standards summary meet criteria	YES
3. Calibration - Initial calibration performed before sample analysis and continuing calibration performed within 24 hours of sample analysis.	YES
4. Blank contamination If yes, list compounds and concentrations in each blank: N/A	NO
5. Surrogate recoveries meet criteria (if applicable) If not met, list those compounds and their recoveries which fall outside the acceptable range: N/A If not met, were the calculations checked and the results qualified as "estimated"? N/A	YES
6. Matrix Spike/Matrix Spike Dup recoveries meet criteria If not met, list those compounds and their recoveries which fall outside the acceptable range: N/A	YES
7. Were samples run on dissimilar columns?	N/A
8. Extraction holding time met If not met, list number of days exceeded for each sample: N/A	YES
9. Analysis holding time met If not met, list number of days exceeded for each sample: N/A	YES
10. Chromatograms submitted for all standards, blanks, & samples if GC fingerprinting conducted	N/A

Additional Comments: None.

Summary reviewed and approved by:

Dana Kauffman, Manager Data Deliverables — **Date** 7/30/09

QC Summary

2E
WATER SURROGATE RECOVERY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No: SDG No.: AKD28

GC Column (1): RTX-5 ID: .53 GC Column (2): ID:

Batchnumber: 092020011

SAMPLE	SAMPLE CODE NO.	O-TP 1 % REC #	O-TP 2 % REC #	C30 1 % REC #	C30 2 % REC #	TOT OUT
5726707	SHGEB	101		95		0
BLANKA	PBLKSX	100		94		0
LCSA	LCSZW	102		86		0
LCSDA	LCSDJ9	98		84		0

	ADVISORY QC LIMITS	NOMINAL CONCENTRATION
O-TP = o-Terphenyl	(60 - 120)	0.0200 mg/l
C30 = n-Triacontane-d62	(60 - 120)	0.0200 mg/l

AKD28 B547

Column to be used to flag recovery values
* Values outside of QC Limits
D Surrogate diluted out

2F
SOIL SURROGATE RECOVERY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No: SDG No.: AKD28

GC Column (1): RTX-5 ID: .53 GC Column (2): ID:

Batchnumber: 092020025

SAMPLE	SAMPLE CODE NO.	O-TP 1 % REC #	O-TP 2 % REC #	C30 1 % REC #	C30 2 % REC #	TOT OUT
5726704	SHG91	92		88		0
5726704 MS	SHG91MS	98		84		0
5726704 MSD	SHG91MSD	97		84		0
5726705	SHGD1	93		89		0
5726706	SHG92	94		92		0
BLANKA	PBLKTO	93		90		0
LCSA	LCS0J	95		84		0
LCSDA	LCSDJL	97		83		0

	ADVISORY QC LIMITS	NOMINAL CONCENTRATION
O-TP = o-Terphenyl	(60 - 120)	0.800 mg/kg
C30 = n-Triacontane-d62	(60 - 120)	0.800 mg/kg

AKD28 0148

Column to be used to flag recovery values
* Values outside of QC Limits
D Surrogate diluted out

3F
Soil Matrix Spike/Matrix Spike Duplicate Recovery

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Matrix Spike - Sample Code No.: SHG91

Compound	Spike Added (mg/kg)	Sample Concen (mg/kg)	MS Concen (mg/kg)	MSD Concen (mg/kg)	MS % Rec #	MSD % Rec #	MS-MSD % REC Limits	% RPD #	% RPD Lim
C10-<C25 DRO	57.79	0	55.91	54.22	97	94	(60 - 140)	3	50
C25-C36 RRO	103.75	57.29	161.67	139.80	101	80	(60 - 140)	15	50

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD: 0 out of 2 outside limits

Spike Recovery: 0 out of 4 outside limits

Comments:

AKD28 0149

Sample No.: 5726704 Batch: 092020025A

3E

Water Lab Control Spike/Lab Control Spike Duplicate Recovery

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Laboratory Control Spike - Sample Code No.: LCSZW

Compound	Spike Added (mg/l)	LCS Concen (mg/l)	LCSD Concen (mg/l)	LCS % Rec #	LCSD % Rec #	LCS-LCSD % REC Limits	% RPD #	% RPD Lim
C10-<C25 DRO	0.70	0.67	0.65	96	93	(75 - 125)	3	20
C25-C36 RRO	1.2	1.3	1.2	108	100	(60 - 120)	8	20

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD: 0 out of 2 outside limits

Spike Recovery: 0 out of 4 outside limits

Comments: Results calculated on as-received basis. 9KB28 6159

Sample No.: LCSA Batch: 092020011A

3F

Soil Lab Control Spike/Lab Control Spike Duplicate Recovery

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Laboratory Control Spike - Sample Code No.: LCS0J

Compound	Spike Added (mg/kg)	LCS Concen (mg/kg)	LCSD Concen (mg/kg)	LCS % Rec #	LCSD % Rec #	LCS-LCSD % REC Limits	% RPD #	% RPD Lim
C10-<C25 DRO	40.11	38.12	37.76	95	94	(75 - 125)	1	50
C25-C36 RRO	72.00	71.62	72.09	99	100	(75 - 125)	1	50

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD: 0 out of 2 outside limits

Spike Recovery: 0 out of 4 outside limits

Comments: Results calculated on as-received basis. AKD20 8151

Sample No.: LCSA Batch: 092020025A

4C

METHOD BLANK SUMMARY

SAMPLE CODE NO. PBLKSX

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.: AKD28

Lab Sample ID BLANKA Batch 092020011A

Lab File ID: M201.70R

Matrix: (soil/water) WATER

Extraction: (SepF/Cont/Sonc) SEPF

Sulfur Cleanup: (Y/N) N

Date Extracted: 7/22/2009

Date Analyzed (1): 7/22/2009

Date Analyzed (2):

Time Analyzed (1): 12:17:33

Time Analyzed (2):

Instrument ID (1): H5386B

Instrument ID (2):

GC Column: RTX-5 ID: 0.53 (mm)

GC Column: ID: (mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS, AND MSD

	SAMPLE CODE NO.	LAB SAMPLEID	DATE ANALYZED 1	DATE ANALYZED 2
01	SHGEB	5726707	7/22/2009	
02	PBLKSX	BLANKA	7/22/2009	
03	LCSZW	LCSA	7/22/2009	
04	LCSDJ9	LCSDA	7/22/2009	

AKD28 B152

COMMENTS: _____

1D

ORGANICS ANALYSIS DATA SHEET

SAMPLE CODE NO. PBLKSX

Lab Name: Lancaster Laboratories **Contract:** **Batchnumber:** 092020011A

Lab Code: **Case No.:** **SAS No.:** **SDG No.:**

Matrix: (soil/water) WATER **Lab Sample ID:** BLANKA

Sample wt/vol: 1000 **(g/ml)** ml **Lab File ID:** M201.70R

% Moisture: **Decanted: (Y/N)** **Date Received:**

Extraction: (SepF/Cont/Sonc) SEPF **Date Extracted:** 7/22/2009

Concentrated Extract Volume: 1000 **(uL)** **Date Analyzed:** 7/22/2009

Injection Volume: 1 **(uL)** **Dilution Factor:** 1

GPC Cleanup: (Y/N) N **pH:** **Sulfur Cleanup: (Y/N)** N

CAS NO.	COMPOUND	CONCENTRATION UNITS (UG/L or UG/KG) mg/l	Q
C10-<C25 DRO	C10-<C25 DRO	0.050	U
C25-C36 RRO	C25-C36 RRO	0.050	U

AXB28 0153

4C

METHOD BLANK SUMMARY

SAMPLE CODE NO.

PBLKTO

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.: AKD28

Lab Sample ID BLANKA Batch 092020025A

Lab File ID: M204.07R

Matrix: (soil/water) SOIL

Extraction: (SepF/Cont/Sonc) SONC

Sulfur Cleanup: (Y/N) N

Date Extracted: 7/22/2009

Date Analyzed (1): 7/23/2009

Date Analyzed (2):

Time Analyzed (1): 10:10:51

Time Analyzed (2):

Instrument ID (1): H5386B

Instrument ID (2):

GC Column: RTX-5 ID: 0.53 (mm)

GC Column: ID: (mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS, AND MSD

	SAMPLE CODE NO.	LAB SAMPLEID	DATE ANALYZED 1	DATE ANALYZED 2
01	SHG91	5726704	7/23/2009	
02	SHG91MS	5726704	7/23/2009	
03	SHG91MSD	5726704	7/23/2009	
04	SHGD1	5726705	7/23/2009	
05	SHG92	5726706	7/23/2009	
06	PBLKTO	BLANKA	7/23/2009	
07	LCS0J	LCSA	7/23/2009	
08	LCSDJL	LCSDA	7/23/2009	

AKD28 8154

COMMENTS: _____

1D

ORGANICS ANALYSIS DATA SHEET

SAMPLE CODE NO. PBLKTO

Lab Name: Lancaster Laboratories **Contract:** **Batchnumber:** 092020025A

Lab Code: **Case No.:** **SAS No.:** **SDG No.:**

Matrix: (soil/water) SOIL **Lab Sample ID:** BLANKA

Sample wt/vol: 25 (g/ml) g **Lab File ID:** M204.07R

% Moisture: **Decanted: (Y/N)** **Date Received:**

Extraction: (SepF/Cont/Sonc) SONC **Date Extracted:** 7/22/2009

Concentrated Extract Volume: 1000 (uL) **Date Analyzed:** 7/23/2009

Injection Volume: 1 (uL) **Dilution Factor:** 1

GPC Cleanup: (Y/N) N **pH:** **Sulfur Cleanup: (Y/N)** N

CAS NO.	COMPOUND	CONCENTRATION UNITS (UG/L or UG/KG) mg/kg	Q
C10-<C25 DRO	C10-<C25 DRO	4.0	U
C25-C36 RRO	C25-C36 RRO	4.0	U

Sample Data

Analysis LOQ/MDL Report

Analysis: 01738 Name: TPH-DRO/RRO (AK)

Description: Default Values

Compound	Units	LOQ	MDL
C10-<C25 DRO	mg/kg	12	4
C25-C36 RRO	mg/kg	12	4

AKD20 8155

Analysis LOQ/MDL Report

Analysis: 02923 Name: TPH-DRO/RRO (AK) water

Description: Default Values

Compound	Units	LOQ	MDL
C10-<C25 DRO	mg/l	2.5	0.05
C25-C36 RRO	mg/l	2.5	0.05

AKD28 8158

Lancaster Laboratories-Range Data Summary

Sample Name: 5726704 SHG91 Sample ID: AA **Batchnumber:** 092020025A
Sample Amount: 25. Total Volume: 1. ml Analyst: 2105 SDG:AKD28 State: AK
Analyses: 01738 02238

Injection Summary

Injected on : 7/23/09 11:33:54
Instrument : CP24--H5386B
Result file : M204.10R
Calibration files : AKRM061B.CAL
Method files : AKRMSUM.MET REAKRM.MET
Setting : AKRM061B

Surrogate Recoveries

O-TERPHENYL SURR	91.9%	Conc.: 0.735378
C30-D62 SURR	88.2%	Conc.: 0.705851

Range	Retention Times	Area	Amount	LOQ	MDL	Flags	Units
C10-<C25 DRO	2.60 - 12.11	2365110	3.1571	<12	<4		ppm
C25-C36 RRO	12.11 - 14.73	12471524	39.7617	12	4		ppm
o-Terphenyl SURR	9.93 (9.88 - 9.98)	541098	0.7354				ppm
C30-d62 SURR	13.31 (13.26 - 13.36)	418376	0.7059				ppm

Comments: _____

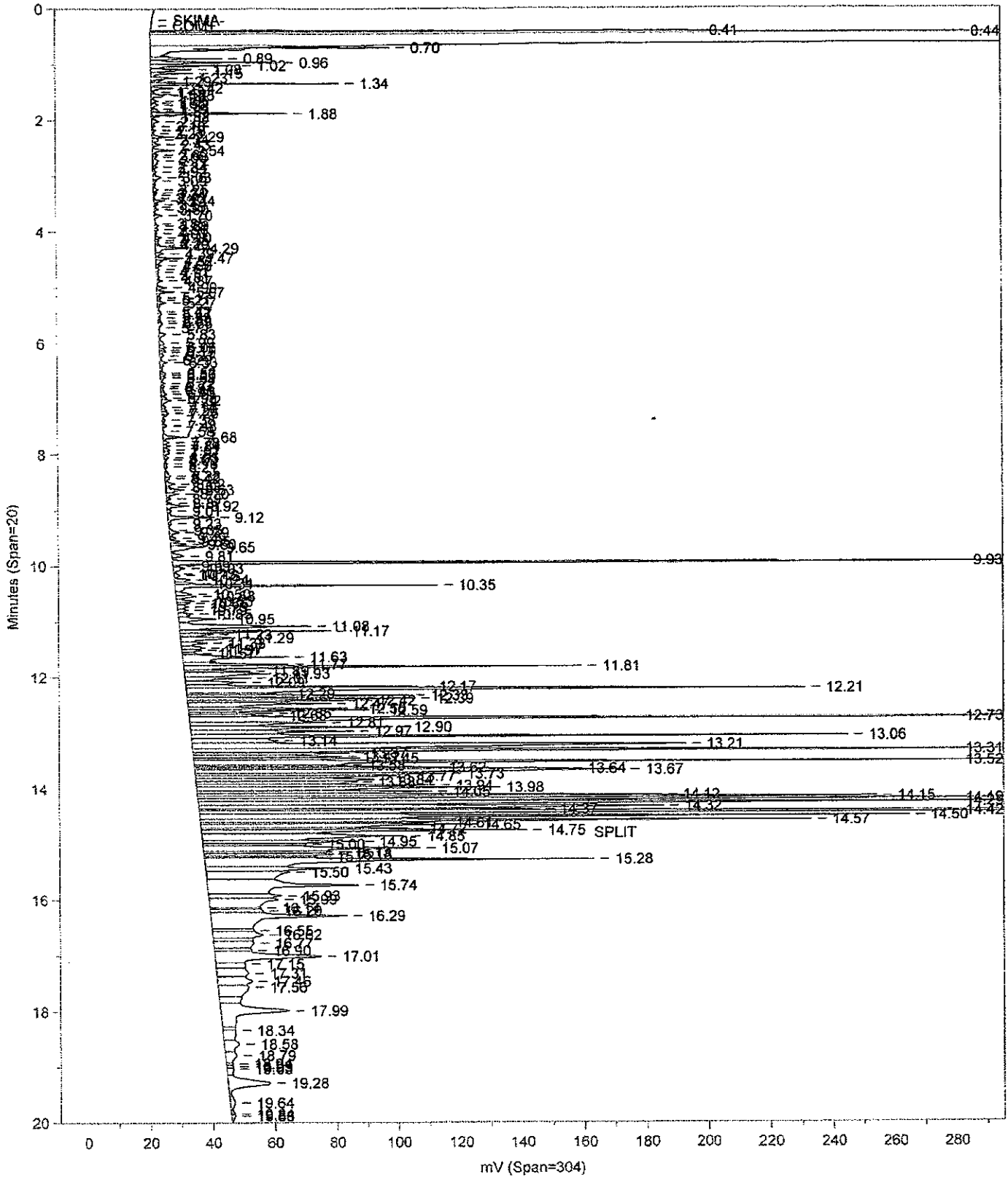
AKD28 6159

Reviewed by: _____ Date: 7/23/09
Verified by: _____ Date: 7/23/09

AK 102/103

5726704 AASHG91 T 092020025A 01738

C:\CPWIN\DATA1\M204.10R

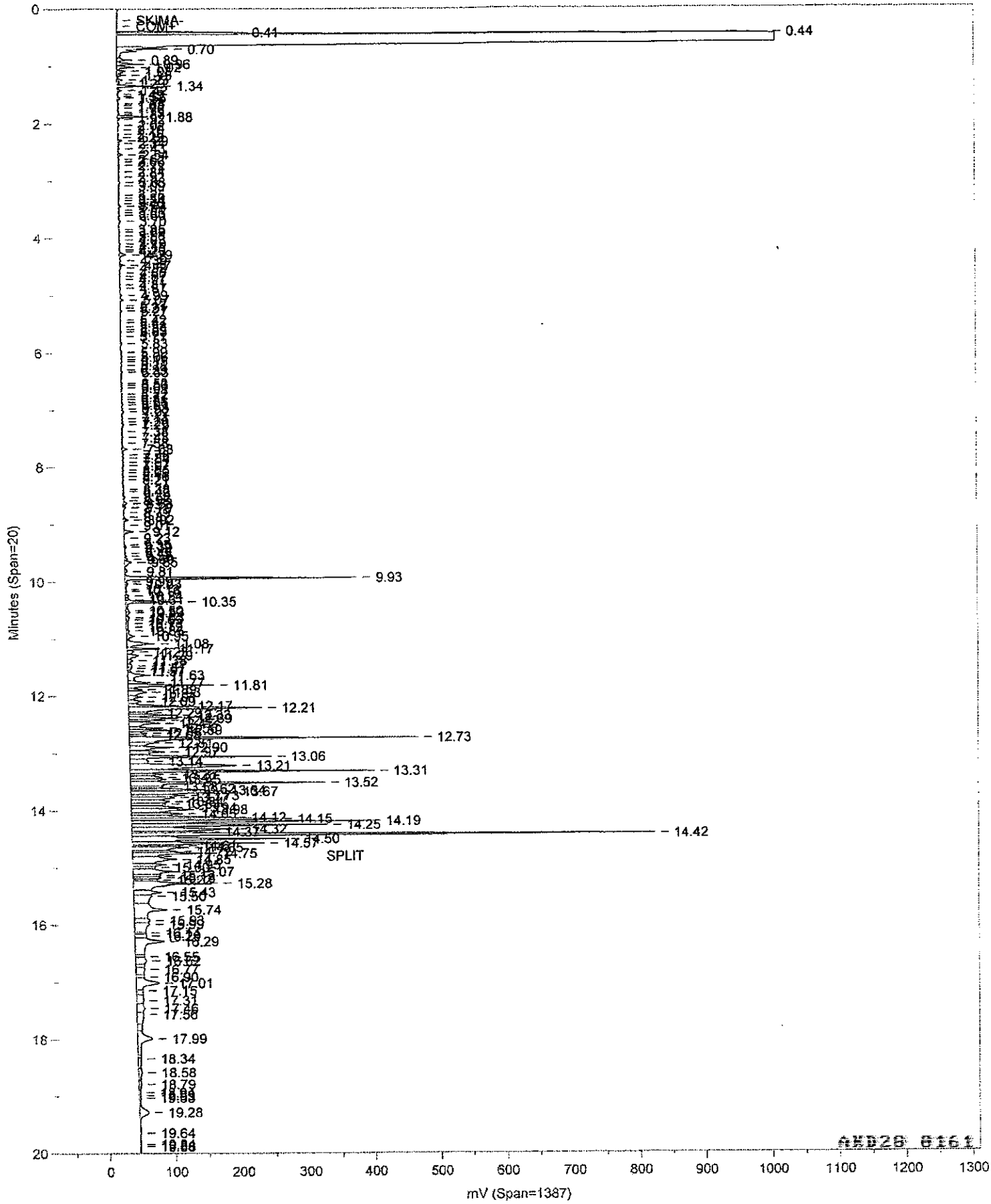


Instrument ID:CP24--H5386B Injected on: 7/23/2009 11:33:53 AM

Volume Inj. per Column: 1 GC Column: RTX-5 30Mx 0.32mm x 0.25um INJ 300C: DET 320C

Oven Parameters: 50C 1min; 15C/min to 180C; 30C/min to 340C HOLD 1.05min

Sample Amount: 25 Dilution Factor: 1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1.88
9.93
10.35
11.81
12.21
12.73
13.06
13.21
13.31
13.52
13.67
14.12
14.15
14.25
14.19
14.42
14.50
14.57
SPLIT
15.28
15.74
17.99
18.34
18.58
19.28
19.64
Minutes (Span=20)
mV (Span=1387)
0
100
200
300
400
500
600
700
800
900
1000
1100
1200
1300
2
4
6
8
10
12
14
16
18
20

AK 102/103

Sample ID: 5726704 AASHG91 T 092020025A 01738
Instrument ID:CP24--H5386B Injected on: 7/23/2009 11:33:53 AM
Volume Inj. per Column: 1 GC Column: RTX-5 30Mx 0.32mm x 0.25um INJ 300C: DET 320C
Oven Parameters: 50C 1min; 15C/min to 180C; 30C/min to 340C HOLD 1.05min
Sample Amount: 25 Dilution Factor: 1
Analyst: 2105

Peak #	Ret Time (min)	Peak Name	Amount PPM	Peak Area	Peak Width (min)	Peak Height
33	2.722	C10	.	9533	.075	2028
127	9.933	o-Terphenyl SURR	.7442	547575	.024	347737
155	11.935	C24	.	95984	.036	27930
159	12.209	C25	.	485952	.029	202058
176	13.31	C30-d62 SURR	1.0069	596844	.021	367513
201	14.614	C36	.	115811	.017	76380

Slice	Start Time	Stop Time	Slice Amount	Amount %	Slice Area	Area %
1	2.600	12.110	18.605	42.497	2365110.0	11.023
2	9.880	9.980	18.605	42.497	547575.3	2.552
3	12.110	14.730	25.174	57.503	12471530.0	58.126
4	13.260	13.360	25.174	57.503	596843.7	2.782

Total slice amount= 87.556 Total slice area= 15981050.0
Total slice amount %= 200.0 Total slice area %= 74.5

********** RESULTS TABLE **********

C10-<C25 DRO AREA = 1817535
C10-<C25 DRO AMT = 3.145898 PPM

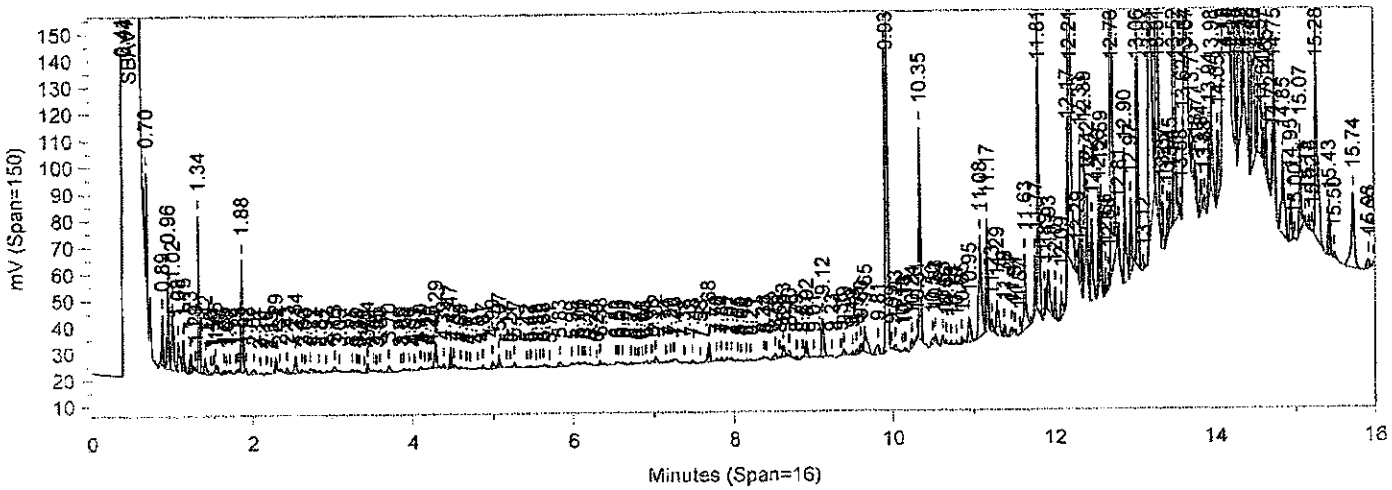
C25-C36 RRO AREA = 1.187468E+07
C25-C36 RRO AMT = 39.17301 PPM

FILES:
Area File: C:\CPWIN\DATA1\M204.10A
Method File: C:\CPWIN\DATA1\AKRMSUM.MET
Calibration File: C:\CPWIN\DATA1\AKRM061B.CAL
Format File: C:\CPWIN\DATA1\AKRMSUM.FMT
Area file created on: 7/23/2009 11:54:00 AM
File reported on: 7/23/2009 at 11:54:03 AM

AK 102/103

5726704 AASHG91 T 092020025A 01738

C:\CPWIN\DATA1\M204.10R



Sample Name:5726704 AASHG91 T 092020025A 01738A

Instrument ID:CP24--H5386B
Injected on: 7/23/2009 11:33:53 AM
Volume Inj. per Column: 1
GC Column: RTX-5 30Mx 0.32mm x 0.25um INJ 300C: DET 320C
Oven Parameters: 50C 1min; 15C/min to 180C; 30C/min to 340C HOLD 1.05min
Sample Amount: 25
Dilution Factor: 1
Analyst: 2105

Peak #	Ret Time (min)	Peak Name	Amount PPM	Peak Area	Peak Width (min)	Peak Height
33	2.722	C10	.	5787	.075	1558
127	9.933	o-Terphenyl SURR	.7354	541098	.024	346487
155	11.935	C24	.	34150	.036	15898
159	12.209	C25	.	320539	.029	171428
176	13.31	C30-d62 SURR	.7059	418376	.021	322862
201	14.614	C36	.	12068	.017	14501

Slice	Start Time	Stop Time	Slice Amount	Amount %	Slice Area	Area %

Total slice amount= 0.000
Total slice amount %= 0.0
Total slice area= 0.0
Total slice area %= 0.0

O-TERPHENYL % RECOVERY = 91.92222 %
C30-D62 SURR % RECOVERY = 88.23141 %

FILES:
Area File: C:\CPWIN\DATA1\M204.10A
Method File: C:\CPWIN\DATA1\REAKRM.MET
Calibration File: C:\CPWIN\DATA1\AKRM061B.CAL
Format File: C:\CPWIN\DATA1\REAKRM.FMT
Area file created on: 7/23/2009 11:54:18 AM
File reported on: 7/23/2009 at 11:54:19 AM

AKD28 B163

Lancaster Laboratories Range Data Summary

Sample Name: 5726705 SHGD1 Sample ID: AA **Batchnumber:** 092020025A
Sample Amount: 25. Total Volume: 1. ml Analyst: 2105 SDG:AKD28 State: AK
Analyses: 01738

Injection Summary

Injected on : 7/23/09 11:06:05
Instrument : CP24--H5386B
Result file : M204.09R
Calibration files : AKRM061B.CAL
Method files : AKRMSUM.MET REAKRM.MET
Setting : AKRM061B

Surrogate Recoveries

O-TERPHENYL SURR	92.6%	Conc.: 0.741373
C30-D62 SURR	89.5%	Conc.: 0.715599

Range	Retention Times	Area	Amount	LOQ	MDL	Flags	Units
C10-<C25 DRO	2.60 - 12.11	2388275	3.1896	<12	<4		ppm
C25-C36 RRO	12.11 - 14.73	12197382	38.8383	12	4		ppm
o-Terphenyl SURR	9.93 (9.88 - 9.98)	545509	0.7414				ppm
C30-d62 SURR	13.31 (13.26 - 13.36)	424154	0.7156				ppm

Comments: _____

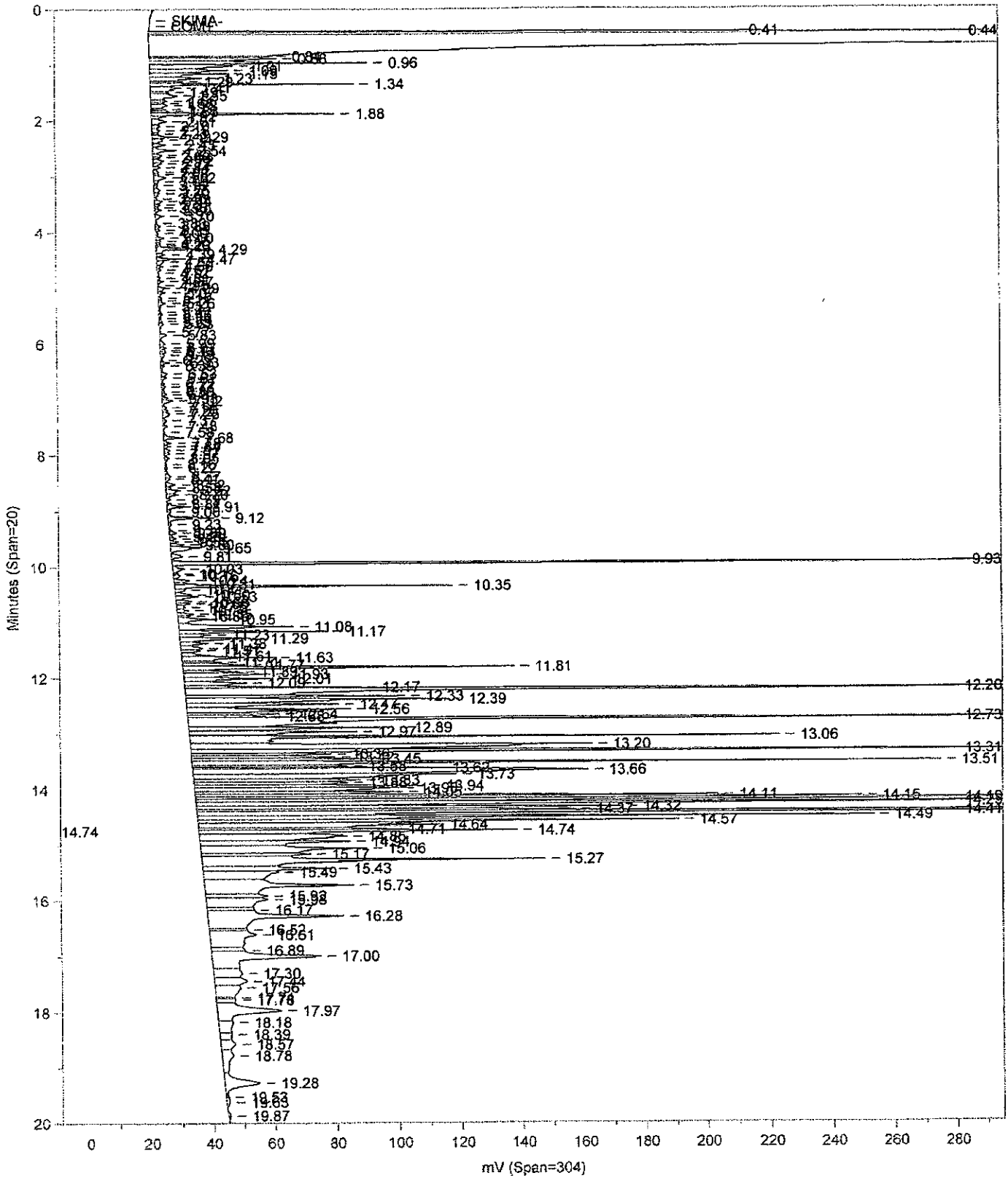
AKD28 0164

Reviewed by: MJH Date: 7/28/09
Verified by: DaCH Date: 7-28-09

AK 102/103

5726705 AASHGD1 T 092020025A 01738

C:\CPWIN\DATA1\M204.09R

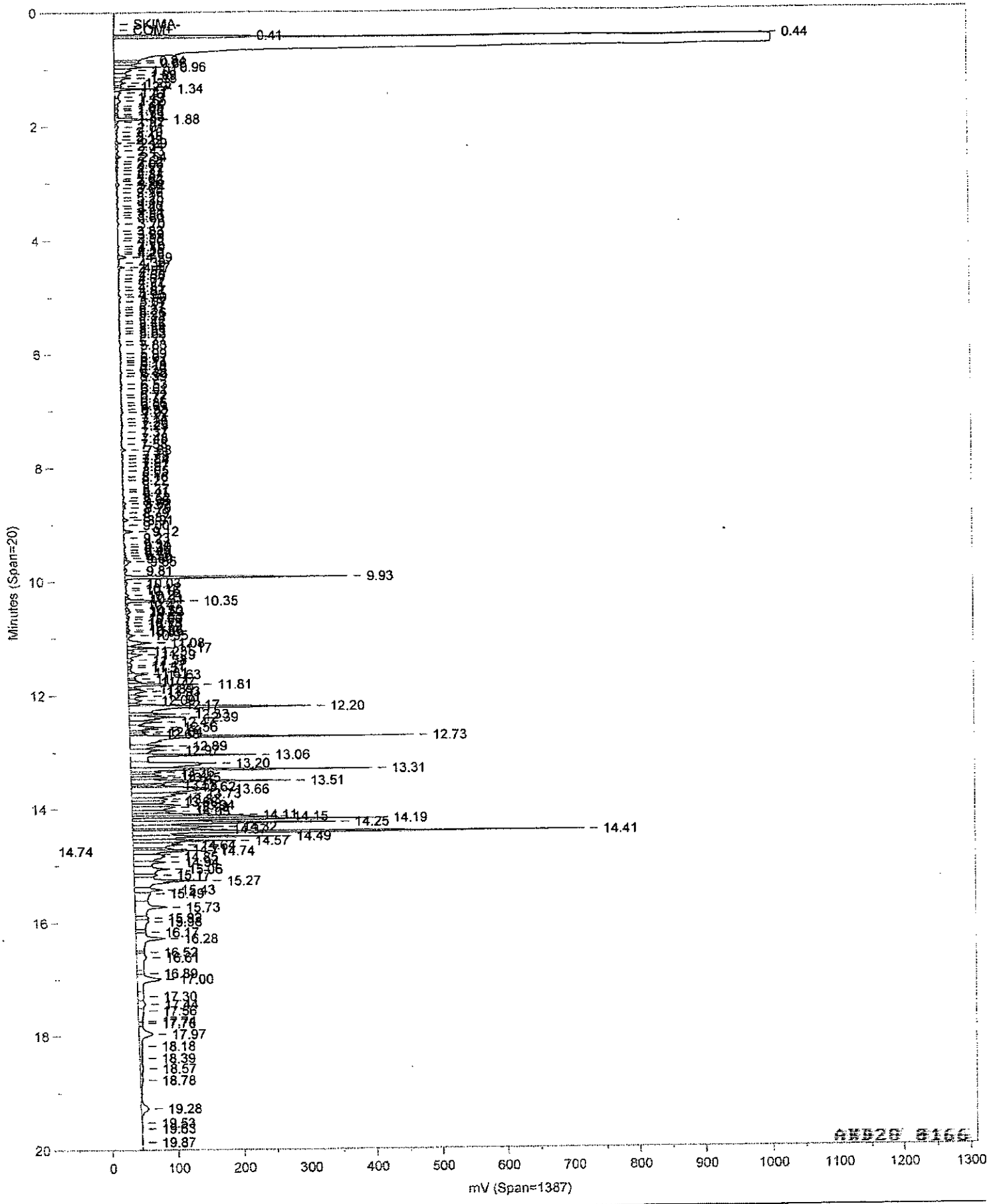


Instrument ID:CP24--H5386B
Injected on: 7/23/2009 11:06:04 AM
AWD28 0165

Volume Inj. per Column: 1
GC Column: RTX-5 30Mx 0.32mm x 0.25um INJ 300C: DET 320C

Oven Parameters: 50C 1min; 15C/min to 180C; 30C/min to 340C HOLD 1.05min

Sample Amount: 25
Dilution Factor: 1


SKIMA-
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0.44
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1.88
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10.35
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13.20
13.31
13.51
13.66
14.11
14.15
14.19
14.25
14.41
14.49
14.57
14.74
14.74
15.17
15.27
15.43
15.73
15.98
16.17
16.28
16.52
16.61
16.89
17.00
17.30
17.56
17.74
17.97
18.18
18.39
18.57
18.78
19.28
19.53
19.63
19.87
Minutes (Span=20)
0
2
4
6
8
10
12
14
16
18
20
0
100
200
300
400
500
600
700
800
900
1000
1100
1200
1300
mV (Span=1387)

AK 102/103

Sample ID: 5726705 AASHGD1 T 092020025A 01738
Instrument ID:CP24--H5386B Injected on: 7/23/2009 11:06:04 AM
Volume Inj. per Column: 1 GC Column: RTX-5 30Mx 0.32mm x 0.25um INJ 300C: DET 320C
Oven Parameters: 50C 1min; 15C/min to 180C; 30C/min to 340C HOLD 1.05min
Sample Amount: 25 Dilution Factor: 1
Analyst: 2105

Peak #	Ret Time (min)	Peak Name	Amount PPM	Peak Area	Peak Width (min)	Peak Height
32	2.722	C10	.	10466	.043	3401
129	9.932	o-Terphenyl SURR	.7456	548610	.025	338200
159	11.933	C24	.	90272	.033	28054
163	12.201	C25	.	740914	.031	275104
175	13.309	C30-d62 SURR	1.0561	625970	.021	377830
198	14.641	C36	.	338745	.057	74703

Slice	Start Time	Stop Time	Slice Amount	Amount %	Slice Area	Area %
1	2.600	12.110	18.640	41.383	2388275.0	11.235
2	9.880	9.980	18.640	41.383	548609.7	2.581
3	12.110	14.730	26.402	58.617	12197380.0	57.379
4	13.260	13.360	26.402	58.617	625970.0	2.945

Total slice amount= 90.084 Total slice area= 15760240.0
Total slice amount %= 200.0 Total slice area %= 74.1

********** RESULTS TABLE **********

C10-<C25 DRO AREA = 1839666
C10-<C25 DRO AMT = 3.184203 PPM

C25-C36 RRO AREA = 1.157141E+07
C25-C36 RRO AMT = 38.17256 PPM

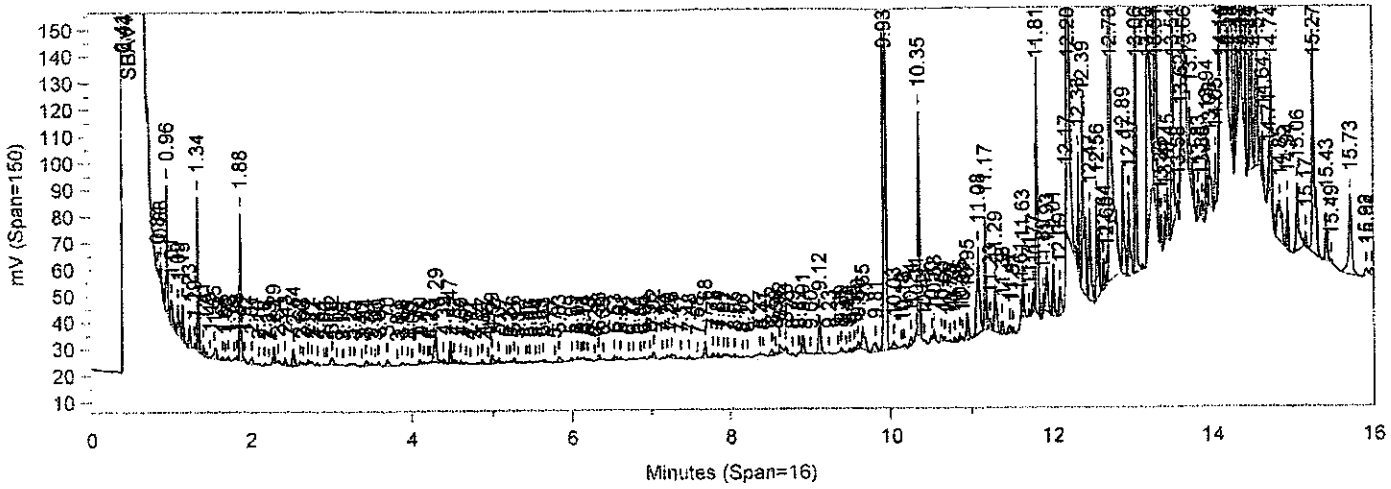
FILES:
Area File: C:\CPWIN\DATA1\M204.09A
Method File: C:\CPWIN\DATA1\AKRMSUM.MET
Calibration File: C:\CPWIN\DATA1\AKRM061B.CAL
Format File: C:\CPWIN\DATA1\AKRMSUM.FMT
Area file created on: 7/23/2009 11:26:12 AM
File reported on: 7/23/2009 at 11:26:14 AM

AKD28 8167

AK 102/103

5726705 AASHGD1 T 092020025A 01738

C:\CPWIN\DATA1\M204.09R



Sample Name:5726705 AASHGD1 T 092020025A 01738A

Instrument ID:CP24--H5386B Injected on: 7/23/2009 11:06:04 AM
Volume Inj. per Column: 1 GC Column: RTX-5 30Mx 0.32mm x 0.25um INJ 300C: DET 320C
Oven Parameters: 50C 1min; 15C/min to 180C; 30C/min to 340C HOLD 1.05min
Sample Amount: 25 Dilution Factor: 1
Analyst: 2105

Peak #	Ret Time (min)	Peak Name	Amount PPM	Peak Area	Peak Width (min)	Peak Height
32	2.722	C10	.	2954	.043	1631
129	9.932	o-Terphenyl SURR	.7414	545509	.025	337693
159	11.933	C24	.	32315	.033	16854
163	12.201	C25	.	469899	.031	236011
175	13.309	C30-d62 SURR	.7156	424154	.021	332235
198	14.641	C36	.	32054	.055	20093

Slice	Start Time	Stop Time	Slice Amount	Amount %	Slice Area	Area %

Total slice amount= 0.000
Total slice amount %= 0.0

Total slice area= 0.0
Total slice area %= 0.0

O-TERPHENYL % RECOVERY = 92.67165 %
C30-D62 SURR % RECOVERY = 89.44992 %

FILES:
Area File: C:\CPWIN\DATA1\M204.09A
Method File: C:\CPWIN\DATA1\REAKRM.MET
Calibration File: C:\CPWIN\DATA1\AKRM061B.CAL
Format File: C:\CPWIN\DATA1\REAKRM.FMT
Area file created on: 7/23/2009 11:26:28 AM
File reported on: 7/23/2009 at 11:26:30 AM

Lancaster Laboratories-Range Data Summary

Sample Name: 5726706 SHG92 Sample ID: AA **Batchnumber:** 092020025A
Sample Amount: 25. Total Volume: 1. ml Analyst: 2105 SDG:AKD28 State: AK
Analyses: 01738

Injection Summary

Injected on : 7/23/09 10:38:27
Instrument : CP24--H5386B
Result file : M204.08R
Calibration files : AKRM061B.CAL
Method files : AKRMSUM.MET REAKRM.MET
Setting : AKRM061B

Surrogate Recoveries

O-TERPHENYL SURR	93.8%	Conc.: 0.751037
C30-D62 SURR	91.6%	Conc.: 0.732404

Range	Retention Times	Area	Amount	LOQ	MDL	Flags	Units
C10-<C25 DRO	2.60 - 12.11	1982092	2.4742	<12	<4		ppm
C25-C36 RRO	12.11 - 14.73	4012867	11.8058	<12	4	J	ppm
o-Terphenyl SURR	9.93 (9.88 - 9.98)	552620	0.7510				ppm
C30-d62 SURR	13.31 (13.26 - 13.36)	434115	0.7324				ppm

Comments: _____

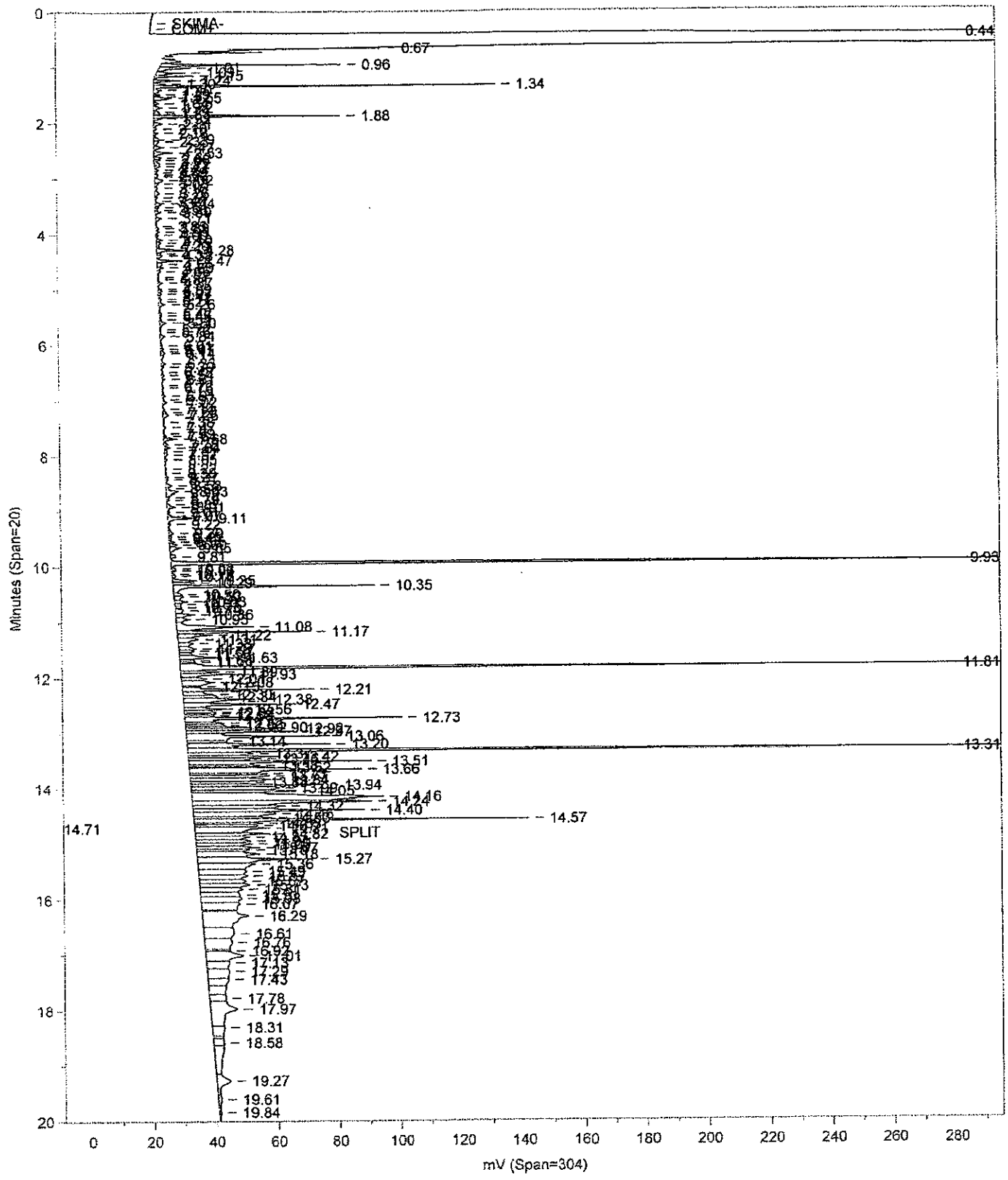
AKD28 0169

Reviewed by: _____ Date: 7/28/09
Verified by: _____ Date: 7-27-09

AK 102/103

5726706 AASHG92 T 092020025A 01738

C:\CPWIN\DATA1\M204.08R



Instrument ID:CP24--H5386B

Injected on: 7/23/2009 10:38:26 AM

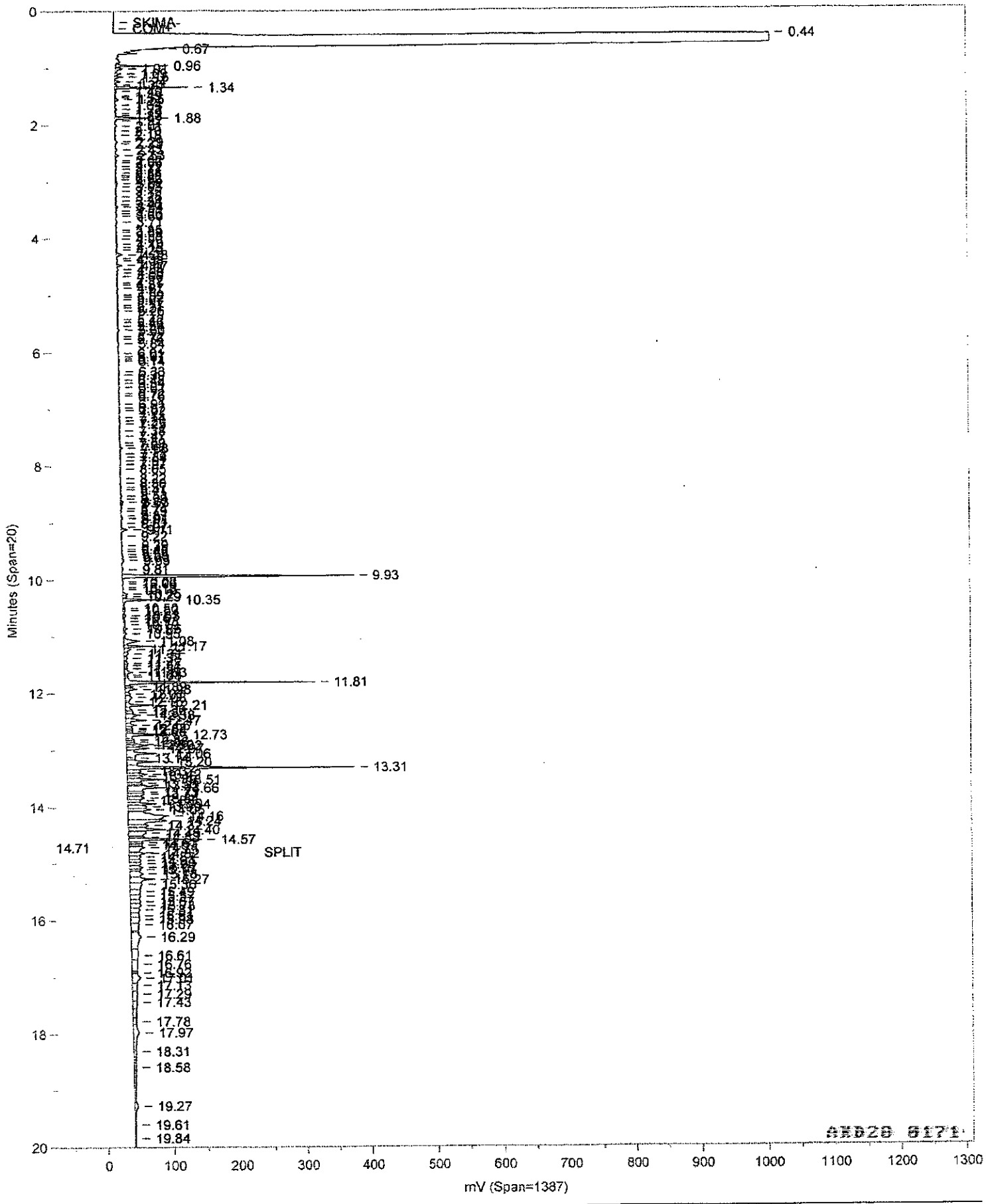
Volume Inj. per Column: 1

GC Column: RTX-5 30Mx 0.32mm x 0.25um INJ 300C: DET 320C

Oven Parameters: 50C 1min; 15C/min to 180C; 30C/min to 340C HOLD 1.05min

Sample Amount: 25

Dilution Factor: 1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1.88
9.93
10.35
11.81
12.73
13.31
14.57
14.71
SPLIT
16.29
16.61
17.29
17.43
17.78
17.97
18.31
18.58
19.27
19.61
19.84
Minutes (Span=20)
mV (Span=1387)
0
100
200
300
400
500
600
700
800
900
1000
1100
1200
1300
2
4
6
8
10
12
14
16
18
20

AK 102/103

Sample ID: 5726706 AASHG92 T 092020025A 01738
Instrument ID:CP24--H5386B Injected on: 7/23/2009 10:38:26 AM
Volume Inj. per Column: 1 GC Column: RTX-5 30Mx 0.32mm x 0.25um INJ 300C: DET 320C
Oven Parameters: 50C 1min; 15C/min to 180C; 30C/min to 340C HOLD 1.05min
Sample Amount: 25 Dilution Factor: 1
Analyst: 2105

Peak #	Ret Time (min)	Peak Name	Amount PPM	Peak Area	Peak Width (min)	Peak Height
29	2.723	C10	.	6159	.052	1761
125	9.933	o-Terphenyl SURR	.7548	555356	.025	349660
154	11.931	C24	.	42382	.023	18604
158	12.211	C25	.	73754	.02	42564
176	13.308	C30-d62 SURR	.8705	515957	.021	354841
198	14.628	C36	.	40752	.018	22114

Slice	Start Time	Stop Time	Slice Amount	Amount %	Slice Area	Area %
1	2.600	12.110	18.869	46.440	1982092.0	21.920
2	9.880	9.980	18.869	46.440	555356.4	6.142
3	12.110	14.730	21.762	53.560	4012867.0	44.379
4	13.260	13.360	21.762	53.560	515957.4	5.706

Total slice amount= 81.262 Total slice area= 7066273.0
Total slice amount %= 200.0 Total slice area %= 78.1

********** RESULTS TABLE **********

C10-<C25 DRO AREA = 1426735
C10-<C25 DRO AMT = 2.469478 PPM

C25-C36 RRO AREA = 3496910
C25-C36 RRO AMT = 11.53584 PPM

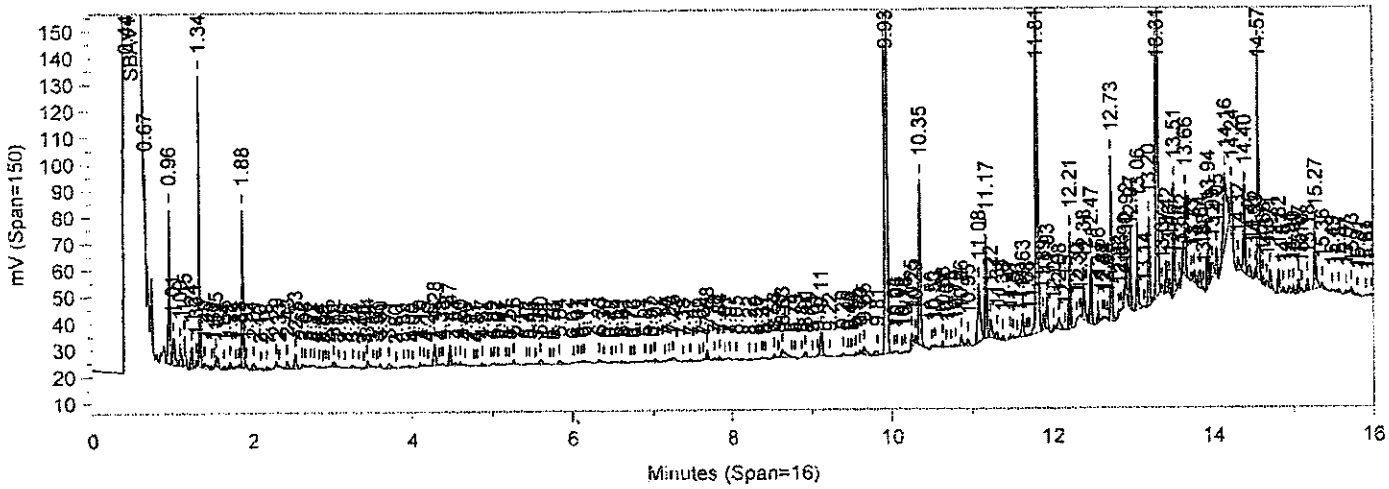
FILES:
Area File: C:\CPWIN\DATA1\M204.08A
Method File: C:\CPWIN\DATA1\AKRMSUM.MET
Calibration File: C:\CPWIN\DATA1\AKRM061B.CAL
Format File: C:\CPWIN\DATA1\AKRMSUM.FMT
Area file created on: 7/23/2009 10:58:34 AM
File reported on: 7/23/2009 at 10:58:36 AM

AXD28 6172

AK 102/103

5726706 AASHG92 T 092020025A 01738

C:\CPWIN\DATA1\M204.08R



Sample Name:5726706 AASHG92 T 092020025A 01738A

Instrument ID:CP24--H5386B Injected on: 7/23/2009 10:38:26 AM
Volume Inj. per Column: 1 GC Column: RTX-5 30Mx 0.32mm x 0.25um INJ 300C: DET 320C
Oven Parameters: 50C 1min; 15C/min to 180C; 30C/min to 340C HOLD 1.05min
Sample Amount: 25 Dilution Factor: 1
Analyst: 2105

Peak #	Ret Time (min)	Peak Name	Amount PPM	Peak Area	Peak Width (min)	Peak Height
29	2.723	C10	.	1545	.052	705
125	9.933	o-Terphenyl SURR	.751	552620	.025	349230
154	11.931	C24	.	16301	.023	12290
158	12.211	C25	.	46172	.02	36561
176	13.308	C30-d62 SURR	.7324	434115	.021	338125
198	14.628	C36	.	3418	.018	3447

Slice	Start Time	Stop Time	Slice Amount	Amount %	Slice Area	Area %

Total slice amount= 0.000
Total slice amount %= 0.0

Total slice area= 0.0
Total slice area %= 0.0

O-TERPHENYL % RECOVERY = 93.87966 %
C30-D62 SURR % RECOVERY = 91.55048 %

FILES:
Area File: C:\CPWIN\DATA1\M204.08A
Method File: C:\CPWIN\DATA1\REAKRM.MET
Calibration File: C:\CPWIN\DATA1\AKRM061B.CAL
Format File: C:\CPWIN\DATA1\REAKRM.FMT
Area file created on: 7/23/2009 10:58:50 AM
File reported on: 7/23/2009 at 10:58:51 AM

AKB28 0173

Lancaster Laboratories Range Data Summary

Sample Name: 5726707 SHGEB Sample ID: AA **Batchnumber:** 092020011A
Sample Amount: 1046. Total Volume: 1. ml Analyst: 2105 SDG:AKD28 State: AK
Analyses: 02923

Injection Summary

Injected on : 7/22/09 13:40:23
Instrument : CP24--H5386B
Result file : M201.73R
Calibration files : AKRM061B.CAL
Method files : AKRMSUM.MET REAKRM.MET
Setting : AKRM061B

Surrogate Recoveries

O-TERPHENYL SURR	100.7%	Conc.: 0.019259
C30-D62 SURR	95%	Conc.: 0.018162

Range	Retention Times	Area	Amount	LOQ	MDL	Flags	Units
C10-<C25 DRO	2.60 - 12.11	945220	0.0146	<2.3901	<0.0478		ppm
C25-C36 RRO	12.11 - 14.73	790372	0.0268	<2.3901	<0.0478		ppm
o-Terphenyl SURR	9.93 (9.88 - 9.98)	592919	0.0193				ppm
C30-d62 SURR	13.31 (13.26 - 13.36)	450408	0.0182				ppm

Comments: _____

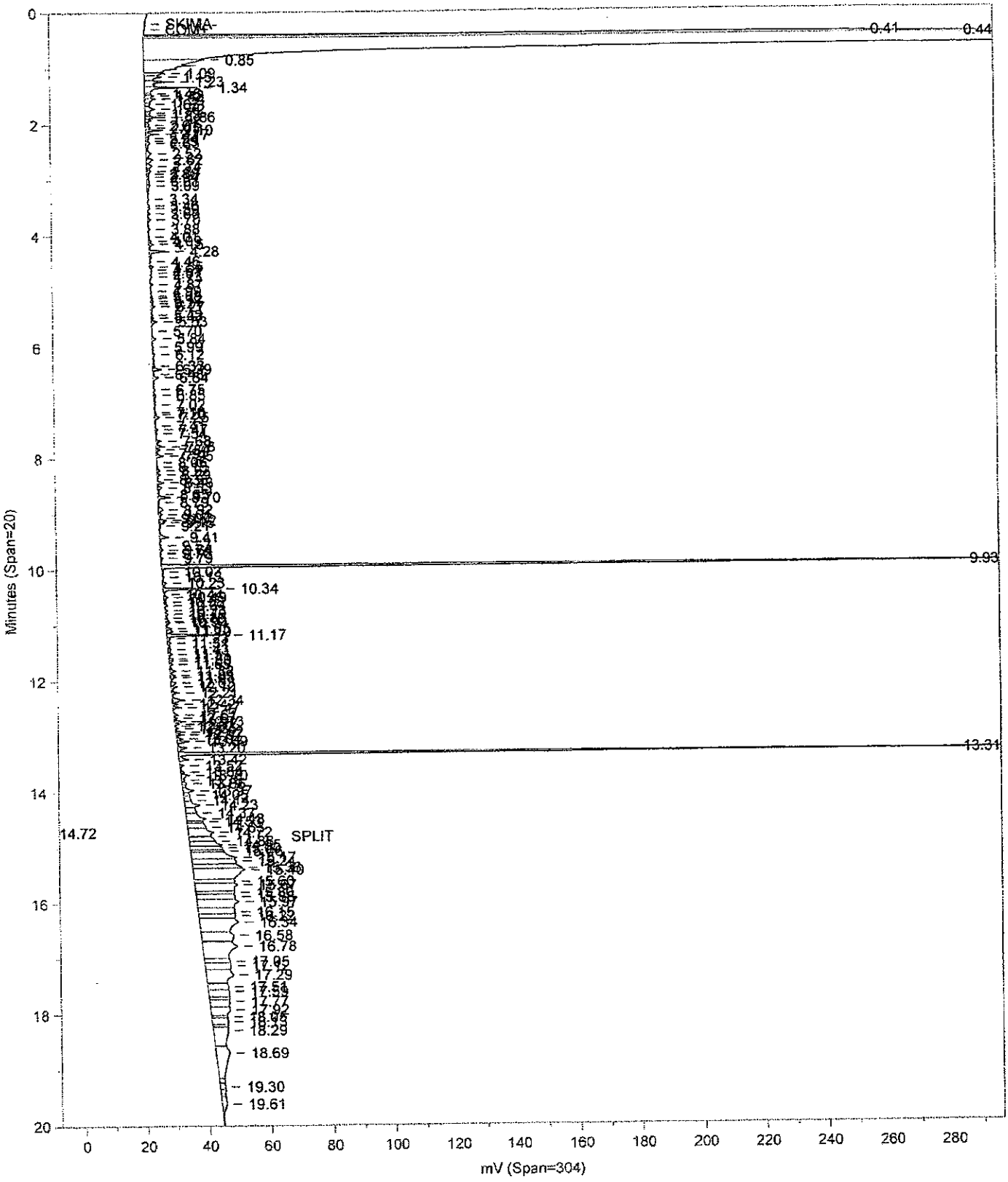
AKD28 8174

Reviewed by: [signature] Date: 7/23/09
Verified by: _____ Date: _____

AK 102/103

5726707 AASHGEB T 092020011A 02923

C:\CPWIN\DATA1\M201.73R



Instrument ID:CP24--H5386B

Injected on: 7/22/2009 1:40:22 PM

Volume Inj. per Column: 1

GC Column: RTX-5 30Mx 0.32mm x 0.25um INJ 300C: DET 320C AKD28 0175

Oven Parameters: 50C 1min; 15C/min to 180C; 30C/min to 340C HOLD 1.05min

Sample Amount: 1046

Dilution Factor: 1

AK 102/103

Sample ID: 5726707 AASHGEB T 092020011A 02923
Instrument ID:CP24--H5386B Injected on: 7/22/2009 1:40:22 PM
Volume Inj. per Column: 1 GC Column: RTX-5 30Mx 0.32mm x 0.25um INJ 300C: DET 320C
Oven Parameters: 50C 1min; 15C/min to 180C; 30C/min to 340C HOLD 1.05min
Sample Amount: 1046 Dilution Factor: 1
Analyst: 2105

Peak #	Ret Time (min)	Peak Name	Amount PPM	Peak Area	Peak Width (min)	Peak Height
26	2.744	C10	.	6391	.046	1746
100	9.933	o-Terphenyl SURR	.0193	593221	.023	394356
126	11.93	C24	.	3857	.023	1952
129	12.212	C25	.	4816	.021	2629
144	13.308	C30-d62 SURR	.0183	453400	.021	350616
158	14.63	C36	.	31847	.071	5941

Slice	Start Time	Stop Time	Slice Amount	Amount %	Slice Area	Area %
1	2.600	12.110	20.155	51.314	945220.4	16.878
2	9.880	9.980	20.155	51.314	593220.6	10.592
3	12.110	14.730	19.124	48.686	790371.9	14.113
4	13.260	13.360	19.124	48.686	453399.8	8.096

Total slice amount= 78.558 Total slice area= 2782213.0
Total slice amount %= 200.0 Total slice area %= 49.7

********** RESULTS TABLE **********

C10-<C25 DRO AREA = 351999.8
C10-<C25 DRO AMT = 1.456172E-02 PPM

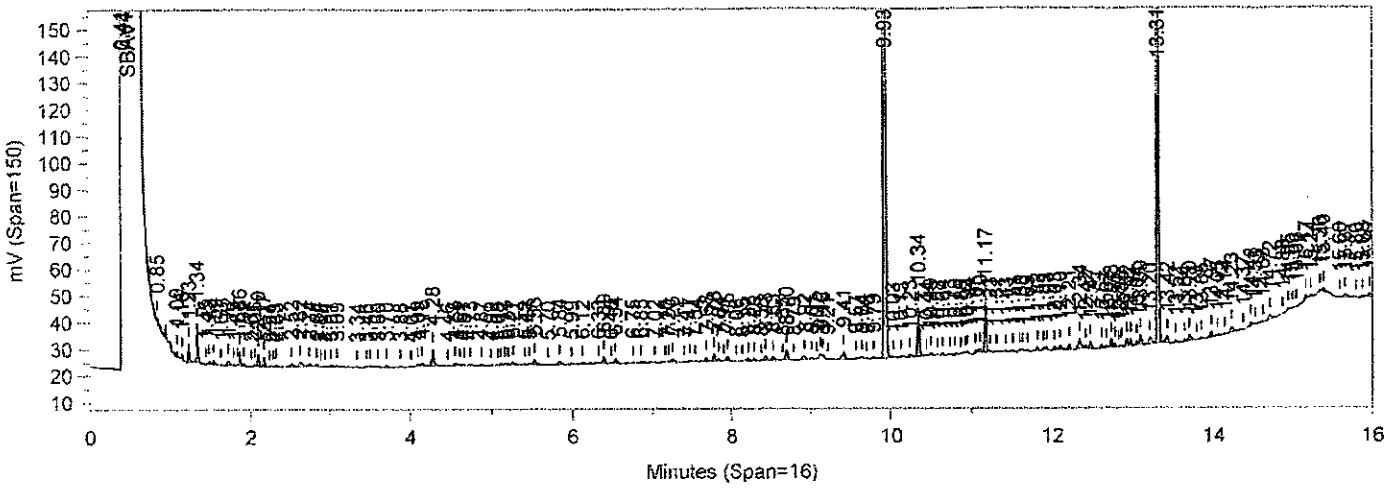
C25-C36 RRO AREA = 336972
C25-C36 RRO AMT = 2.656851E-02 PPM

FILES:
Area File: C:\CPWIN\DATA1\M201.73A
Method File: C:\CPWIN\DATA1\AKRMSUM.MET
Calibration File: C:\CPWIN\DATA1\AKRM061B.CAL
Format File: C:\CPWIN\DATA1\AKRMSUM.FMT
Area file created on: 7/22/2009 2:00:30 PM
File reported on: 7/22/2009 at 2:00:32 PM

AK 102/103

5726707 AASHGEB T 092020011A 02923

C:\CPWIN\DATA1\M201.73R



Sample Name:5726707 AASHGEB T 092020011A 02923A

Instrument ID:CP24--H5386B Injected on: 7/22/2009 1:40:22 PM
Volume Inj. per Column: 1 GC Column: RTX-5 30Mx 0.32mm x 0.25um INJ 300C: DET 320C
Oven Parameters: 50C 1min; 15C/min to 180C; 30C/min to 340C HOLD 1.05min
Sample Amount: 1046 Dilution Factor: 1
Analyst: 2105

Peak #	Ret Time (min)	Peak Name	Amount PPM	Peak Area	Peak Width (min)	Peak Height
26	2.744	C10	.	2359	.046	923
100	9.933	o-Terphenyl SURR	.0193	592919	.023	394323
126	11.93	C24	.	1282	.021	1229
129	12.212	C25	.	3873	.021	2478
144	13.308	C30-d62 SURR	.0182	450408	.021	350087
158	14.63	C36	.	1480	.071	313

Slice	Start Time	Stop Time	Slice Amount	Amount %	Slice Area	Area %

Total slice amount= 0.000 Total slice area= 0.0
Total slice amount %= 0.0 Total slice area %= 0.0

O-TERPHENYL % RECOVERY = 100.7257 %
C30-D62 SURR % RECOVERY = 94.98663 %

FILES:
Area File: C:\CPWIN\DATA1\M201.73A
Method File: C:\CPWIN\DATA1\REAKRM.MET
Calibration File: C:\CPWIN\DATA1\AKRM061B.CAL
Format File: C:\CPWIN\DATA1\REAKRM.FMT
Area file created on: 7/22/2009 2:00:44 PM
File reported on: 7/22/2009 at 2:00:46 PM

AKD28 0177

Standards Data

Calibration File Name: **C:\CPWIN\DATA1\AKRM061A.CAL** Version = 7
External standard calibration
No injection volume correction
No sample weight correction
Area reject threshold = 0
Reference peak area reject threshold = 0
Amount units = PPM
8 components with 5 levels each

1 DRO RF C10-<C25
Retention time = 0.001 min., Search window = 0.000 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 23109.9
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	40.000	778303.9	19457.6	Manual	3/9/2009 12:04:4
2	360.000	7555367.0	20987.13	Manual	3/9/2009 12:04:4
3	920.000	22994960.0	24994.52	Manual	3/9/2009 12:04:4
4	1400.000	35127440.0	25091.03	Manual	3/9/2009 12:04:4
5	2000.000	50038460.0	25019.23	Manual	3/9/2009 12:07:2

Calibration formula: Y = 23109.9 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9839, Average error = 10.00%
Average CF = 23109.9000 with RSD = 11.64%

Used Model. 05-09
Model. IV-20
for ical
Dunzo
3/9/09
ICV-M061.25
DRO%D = 16.7% RRO%D = 4.5%
Num/375
3-10-09
MS
7/29/09

2 RRO RF C25-C36
Retention time = 0.016 min., Search window = 0.050 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 12125.37
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	75.000	790246.4	11289.23	Manual	3/9/2009 12:04:4
2	600.000	7858144.0	13096.91	Manual	3/9/2009 12:04:4
3	1600.000	19370130.0	12106.33	Manual	3/9/2009 12:04:4
4	2400.000	28908370.0	12045.15	Manual	3/9/2009 12:04:4
5	3500.000	42312320.0	12089.23	Manual	3/9/2009 12:07:2

Calibration formula: Y = 12125.37 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9996, Average error = 3.20%
Average CF = 12125.3700 with RSD = 5.30%

3 C10
Retention time = 2.830 min., Search window = 0.050 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0

AKD28 8179

No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	1.000	0.0	0	Manual	3/9/2009 12:04:4
2	-1.000	0		Manual	3/9/2009 12:04:4
3	-1.000	0		Manual	3/9/2009 12:04:4
4	-1.000	0		Manual	3/9/2009 12:04:4
5	-1.000	0		Manual	3/9/2009 12:07:2

Calibration formula: No data points to graph
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 1.0000, Average error = 100.00%
Average CF = 0.0000 with RSD = 0.00%

4 o-Terphenyl SURR
Retention time = 10.080 min., Search window = 0.050 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 29432.37
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	2.000	63346.0	31673	Manual	3/9/2009 12:04:4
2	8.000	241629.0	30203.63	Manual	3/9/2009 12:04:4
3	16.000	459814.0	28738.38	Manual	3/9/2009 12:04:4
4	20.000	576128.0	28806.4	Manual	3/9/2009 12:04:4
5	40.000	1109617.0	27740.43	Manual	3/9/2009 12:07:2

Calibration formula: Y = 29432.37 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9923, Average error = 4.09%
Average CF = 29432.3700 with RSD = 5.19%

5 C24
Retention time = 12.030 min., Search window = 0.050 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	1.000	0.0	0	Manual	3/9/2009 12:04:4
2	-1.000	0		Manual	3/9/2009 12:04:4
3	-1.000	0		Manual	3/9/2009 12:04:4
4	-1.000	0		Manual	3/9/2009 12:04:4
5	-1.000	0		Manual	3/9/2009 12:07:2

AKD28 6106

Calibration formula: No data points to graph
Fit type = Avg CF with equal weighting, forced to origin

Coefficient of determination = 1.0000, Average error = 100.00%
Average CF = 0.0000 with RSD = 0.00%

6 C25
Retention time = 12.310 min., Search window = 0.050 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	1.000	0.0	0	Manual	3/9/2009 12:04:4
2	-1.000	0		Manual	3/9/2009 12:04:4
3	-1.000	0		Manual	3/9/2009 12:04:4
4	-1.000	0		Manual	3/9/2009 12:04:4
5	-1.000	0		Manual	3/9/2009 12:07:2

Calibration formula: No data points to graph
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 1.0000, Average error = 100.00%
Average CF = 0.0000 with RSD = 0.00%

7 C30-d62 SURR
Retention time = 13.400 min., Search window = 0.050 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 23709.04
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	2.000	51908.0	25954	Manual	3/9/2009 12:04:4
2	8.000	194062.0	24257.75	Manual	3/9/2009 12:04:4
3	16.000	368300.0	23018.75	Manual	3/9/2009 12:04:4
4	20.000	460149.0	23007.45	Manual	3/9/2009 12:04:4
5	40.000	892289.0	22307.22	Manual	3/9/2009 12:07:2

Calibration formula: Y = 23709.04 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9915, Average error = 4.71%
Average CF = 23709.0400 with RSD = 6.07%

8 C36
Retention time = 14.710 min., Search window = 0.050 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	1.000	0.0	0	Manual	3/9/2009 12:04:4

AKD2B 0181

Level	Amount	Area	Area/Amt	Source	Date and time
2	-1.000	0		Manual	3/9/2009 12:04:4
3	-1.000	0		Manual	3/9/2009 12:04:4
4	-1.000	0		Manual	3/9/2009 12:04:4
5	-1.000	0		Manual	3/9/2009 12:07:2

Calibration formula: No data points to graph
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 1.0000, Average error = 100.00%
Average CF = 0.0000 with RSD = 0.00%

AKD28 8182

Calibration File Name: **C:\CPWIN\DATA1\AKRM061B.CAL** Version = 1
External standard calibration
No injection volume correction
No sample weight correction
Area reject threshold = 0
Reference peak area reject threshold = 0
Amount units = PPM
8 components with 5 levels each

1 DRO RF C10-<C25
Retention time = 0.001 min., Search window = 0.000 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 23109.9
No retention time reference component
Single peak quantification by area

used M201.27 for KMupdate DMZW 7/21/09

Level	Amount	Area	Area/Amt	Source	Date and time
1	40.000	778303.9	19457.6	Manual	3/9/2009 12:04:4
2	360.000	7555367.0	20987.13	Manual	3/9/2009 12:04:4
3	920.000	22994960.0	24994.52	Manual	3/9/2009 12:04:4
4	1400.000	35127440.0	25091.03	Manual	3/9/2009 12:04:4
5	2000.000	50038460.0	25019.23	Manual	3/9/2009 12:08:0

√ TMC/14 7-21-09

Calibration formula: Y = 23109.9 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9839, Average error = 10.00%
Average CF = 23109.9000 with RSD = 11.64%

2 RRO RF C25-C36
Retention time = 0.016 min., Search window = 0.050 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 12125.37
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	70.000	790246.4	11289.23	Manual	3/9/2009 12:04:4
2	600.000	7858144.0	13096.91	Manual	3/9/2009 12:04:4
3	1600.000	19370130.0	12106.33	Manual	3/9/2009 12:04:4
4	2400.000	28908370.0	12045.15	Manual	3/9/2009 12:04:4
5	3500.000	42312320.0	12089.23	Manual	3/9/2009 12:08:0

Calibration formula: Y = 12125.37 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9996, Average error = 3.20%
Average CF = 12125.3700 with RSD = 5.30%

3 C10
Retention time = 2.700 min., Search window = 0.050 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0

AKB28 0183

No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	1.000	0.0	0	Manual	3/9/2009 12:04:4
2	-1.000	0		Manual	3/9/2009 12:04:4
3	-1.000	0		Manual	3/9/2009 12:04:4
4	-1.000	0		Manual	3/9/2009 12:04:4
5	-1.000	0		Manual	3/9/2009 12:08:0

Calibration formula: No data points to graph
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 1.0000, Average error = 100.00%
Average CF = 0.0000 with RSD = 0.00%

4 o-Terphenyl SURR
Retention time = 9.930 min., Search window = 0.050 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 29432.37
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	2.000	63346.0	31673	Manual	3/9/2009 12:04:4
2	8.000	241629.0	30203.63	Manual	3/9/2009 12:04:4
3	16.000	459814.0	28738.38	Manual	3/9/2009 12:04:4
4	20.000	576128.0	28806.4	Manual	3/9/2009 12:04:4
5	40.000	1109617.0	27740.43	Manual	3/9/2009 12:08:0

Calibration formula: Y = 29432.37 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9923, Average error = 4.09%
Average CF = 29432.3700 with RSD = 5.19%

5 C24
Retention time = 11.930 min., Search window = 0.050 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	1.000	0.0	0	Manual	3/9/2009 12:04:4
2	-1.000	0		Manual	3/9/2009 12:04:4
3	-1.000	0		Manual	3/9/2009 12:04:4
4	-1.000	0		Manual	3/9/2009 12:04:4
5	-1.000	0		Manual	3/9/2009 12:08:0

AKD28 8194

Calibration formula: No data points to graph
Fit type = Avg CF with equal weighting, forced to origin

Coefficient of determination = 1.0000, Average error = 100.00%
Average CF = 0.0000 with RSD = 0.00%

6 C25
Retention time = 12.210 min., Search window = 0.050 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	1.000	0.0	0	Manual	3/9/2009 12:04:4
2	-1.000	0		Manual	3/9/2009 12:04:4
3	-1.000	0		Manual	3/9/2009 12:04:4
4	-1.000	0		Manual	3/9/2009 12:04:4
5	-1.000	0		Manual	3/9/2009 12:08:0

Calibration formula: No data points to graph
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 1.0000, Average error = 100.00%
Average CF = 0.0000 with RSD = 0.00%

7 C30-d62 SURR
Retention time = 13.310 min., Search window = 0.050 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 23709.04
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	2.000	51908.0	25954	Manual	3/9/2009 12:04:4
2	8.000	194062.0	24257.75	Manual	3/9/2009 12:04:4
3	16.000	368300.0	23018.75	Manual	3/9/2009 12:04:4
4	20.000	460149.0	23007.45	Manual	3/9/2009 12:04:4
5	40.000	892289.0	22307.22	Manual	3/9/2009 12:08:0

Calibration formula: Y = 23709.04 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9915, Average error = 4.71%
Average CF = 23709.0400 with RSD = 6.07%

8 C36
Retention time = 14.630 min., Search window = 0.050 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	1.000	0.0	0	Manual	3/9/2009 12:04:4

AKD28 8185

Level	Amount	Area	Area/Amt	Source	Date and time
2	-1.000	0		Manual	3/9/2009 12:04:4
3	-1.000	0		Manual	3/9/2009 12:04:4
4	-1.000	0		Manual	3/9/2009 12:04:4
5	-1.000	0		Manual	3/9/2009 12:08:0

Calibration formula: No data points to graph
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 1.0000, Average error = 100.00%
Average CF = 0.0000 with RSD = 0.00%

AKD28 0186

AK 102/103

Sample ID: AKCK30932A IPAKCK3IP CCAL 0920199999
Instrument ID:CP24--H5386B Injected on: 7/22/2009 11:49:53 AM
Volume Inj. per Column: 1 GC Column: RTX-5 30Mx 0.32mm x 0.25um INJ 300C: DET 320C
Oven Parameters: 50C 1min; 15C/min to 180C; 30C/min to 340C HOLD 1.05min
Sample Amount: 1 Dilution Factor: 1
Analyst: 2105

Peak #	Ret Time (min)	Peak Name	Amount PPM	Peak Area	Peak Width (min)	Peak Height
35	2.7	C10	.	152464	.022	79659
143	9.934	o-Terphenyl SURR	24.2362	713330	.026	319678
171	11.934	C24	.	274106	.022	53292
175	12.213	C25	.	286143	.038	60126
192	13.311	C30-d62 SURR	37.2375	882865	.02	470829
209	14.583	C36	.	818090	.055	147768

Slice	Start Time	Stop Time	Slice Amount	Amount %	Slice Area	Area %
1	2.600	12.110	24.236	39.425	19962020.0	30.449
2	12.110	14.730	37.238	60.575	19377710.0	29.558
3	9.880	9.980	24.236	39.425	713329.9	1.088
4	13.260	13.360	37.238	60.575	1310314.0	1.999

Total slice amount= 122.948
Total slice amount %= 200.0
Total slice area= 41363370.0
Total slice area %= 63.1

********** RESULTS TABLE **********

C10-<C25 DRO AREA = 1.924869E+07
C10-<C25 DRO AMT = 832.9198 PPM

C25-C36 RRO AREA = 1.806739E+07
C25-C36 RRO AMT = 1490.049 PPM

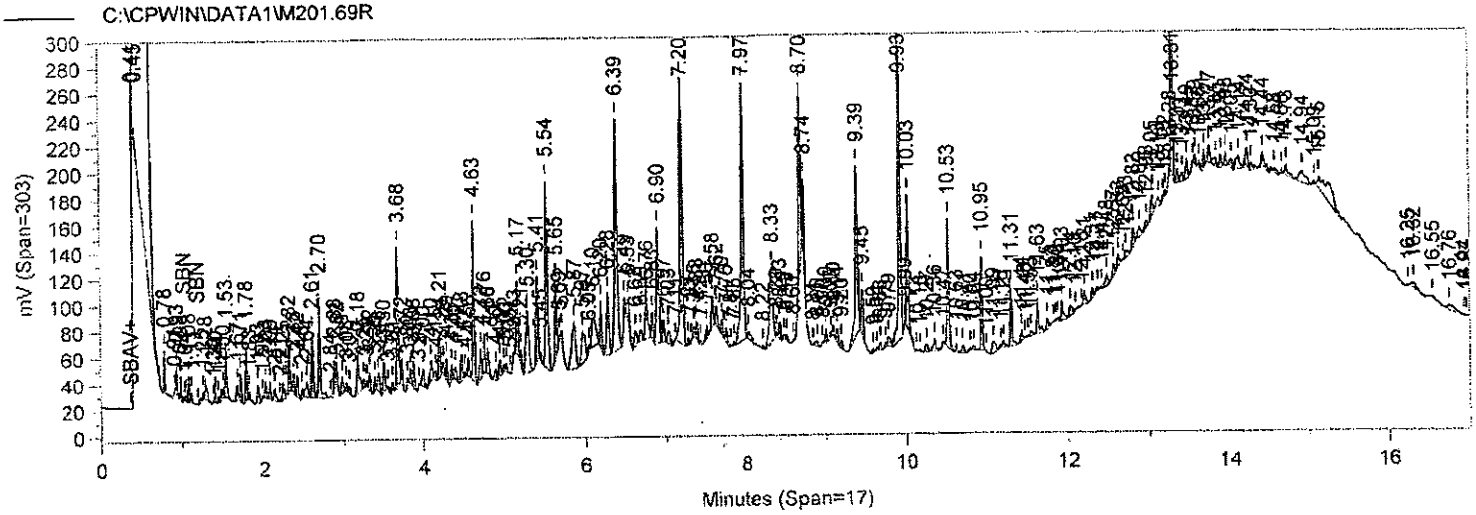
Level #2 % DRO Difference = 131.3666 %
Level #2 % RRO Difference = 148.3414 %

Level #3 % DRO Difference = -9.465241 %
Level #3 % RRO Difference = -6.871957 %

Level #4 % DRO Difference = -40.50573 %
Level #4 % RRO Difference = -37.91464 %

FILES:
Area File: C:\CPWIN\DATA1\M201.69A
Method File: C:\CPWIN\DATA1\AKRMSTD.MET
Calibration File: C:\CPWIN\DATA1\AKRM061B.CAL
Format File: C:\CPWIN\DATA1\AKRMSTD.FMT
Area file created on: 7/22/2009 12:10:02 PM
File reported on: 7/22/2009 at 12:10:04 PM

AK 102/103 SURROGATE
AKCK30932A IPAKCK3IP CCAL 0920199999
C:\CPWIN\DATA1\M201.69R



Sample Name:AKCK30932A IPAKCK3IP CCAL 0920199999A

Instrument ID:CP24--H5386B
Injected on: 7/22/2009 11:49:53 AM
Volume Inj. per Column: 1
GC Column: RTX-5 30Mx 0.32mm x 0.25um INJ 300C: DET 320C
Oven Parameters: 50C 1min; 15C/min to 180C; 30C/min to 340C HOLD 1.05min
Sample Amount: 1
Dilution Factor: 1
Analyst: 2105

Peak #	Ret Time (min)	Peak Name	Amount PPM	Peak Area	Peak Width (min)	Peak Height
34	2.7	C10	.	124307	.022	76637
142	9.934	o-Terphenyl SURR	17.2837	508701	.026	291015
170	11.934	C24	.	29990	.022	15592
174	12.213	C25	.	20459	.038	10798
191	13.311	C30-d62 SURR	16.9556	402001	.02	326569
208	14.583	C36	.	8195	.064	3618

Slice	Start Time	Stop Time	Slice Amount	Amount %	Slice Area	Area %
1	9.880	9.980	17.284	50.479	508701.2	2.874
2	13.260	13.360	16.956	49.521	410403.1	2.319

Total slice amount= 34.239
Total slice amount %= 100.0
Total slice area= 919104.3
Total slice area %= 5.2

o-Terphenyl Level 2 % Difference = 72.83736 %
C30-d62 Level 2 % Difference = 69.55624 %

o-Terphenyl Level 3 % Difference = -13.58132 %
C30-d62 Level 3 % Difference = -15.22188 %

o-Terphenyl Level 4 % Difference = -56.79066 %
C30-d62 Level 4 % Difference = -57.61094 %

FILES:
Area File: C:\CPWIN\DATA1\M201.69A
Method File: C:\CPWIN\DATA1\REAKRMST.MET
Calibration File: C:\CPWIN\DATA1\AKRM061B.CAL
Format File: C:\CPWIN\DATA1\REAKRMST.FMT
Area file created on: 7/22/2009 12:10:20 PM
File reported on: 7/22/2009 at 12:10:22 PM

AKD28 8188

AK 102/103

Sample ID: AKCK40932A HFAKCK4HF CCAL 0920199999
Instrument ID:CP24--H5386B Injected on: 7/22/2009 2:35:37 PM
Volume Inj. per Column: 1 GC Column: RTX-5 30Mx 0.32mm x 0.25um INJ 300C: DET 320C
Oven Parameters: 50C 1min; 15C/min to 180C; 30C/min to 340C HOLD 1.05min
Sample Amount: 1 Dilution Factor: 1
Analyst: 2105

Peak #	Ret Time (min)	Peak Name	Amount PPM	Peak Area	Peak Width (min)	Peak Height
34	2.701	C10	.	226248	.022	127003
137	9.937	o-Terphenyl SURR	47.7426	1405178	.025	729674
162	11.933	C24	.	528833	.021	100876
166	12.213	C25	.	634733	.037	111809
180	13.312	C30-d62 SURR	73.4028	1740309	.02	928525
196	14.622	C36	.	29635	-.01	-8000044000

Slice	Start Time	Stop Time	Slice Amount	Amount %	Slice Area	Area %
1	2.600	12.110	47.743	39.409	36741240.0	35.271
2	12.110	14.730	73.403	60.591	34428850.0	33.051
3	9.880	9.980	47.743	39.409	1405178.0	1.349
4	13.260	13.360	73.403	60.591	2548212.0	2.446

Total slice amount= 242.291
Total slice amount %= 200.0
Total slice area= 75123490.0
Total slice area %= 72.1

********** RESULTS TABLE **********

C10-<C25 DRO AREA = 3.533607E+07
C10-<C25 DRO AMT = 1529.045 PPM

C25-C36 RRO AREA = 3.188064E+07
C25-C36 RRO AMT = 2629.25 PPM

Level #2 % DRO Difference = 324.7346 %
Level #2 % RRO Difference = 338.2084 %

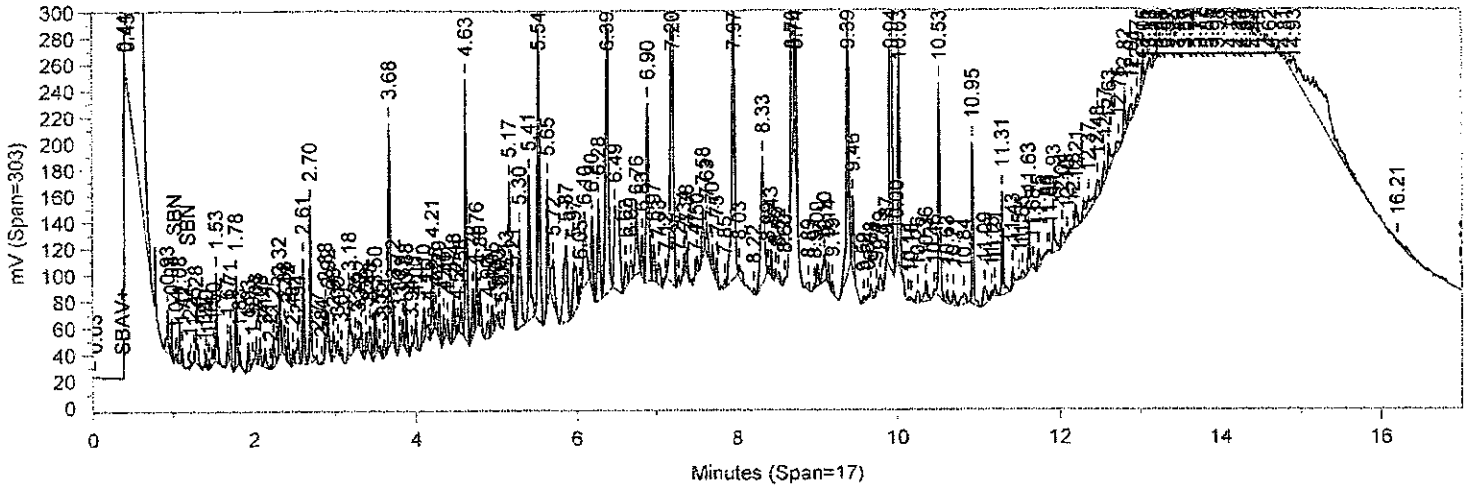
Level #3 % DRO Difference = 66.20049 %
Level #3 % RRO Difference = 64.32816 %

Level #4 % DRO Difference = 9.217464 %
Level #4 % RRO Difference = 9.552109 %

FILES:
Area File: C:\CPWIN\DATA1\M201.75A
Method File: C:\CPWIN\DATA1\AKRMSTD.MET
Calibration File: C:\CPWIN\DATA1\AKRM061B.CAL
Format File: C:\CPWIN\DATA1\AKRMSTD.FMT
Area file created on: 7/22/2009 2:55:44 PM
File reported on: 7/22/2009 at 2:55:46 PM

AED28 8589

AK 102/103 SURROGATE
AKCK40932A HFAKCK4HF CCAL 0920199999
C:\CPWIN\DATA1\M201.75R



Sample Name:AKCK40932A HFAKCK4HF CCAL 0920199999A

Instrument ID:CP24--H5386B Injected on: 7/22/2009 2:35:37 PM
Volume Inj. per Column: 1 GC Column: RTX-5 30Mx 0.32mm x 0.25um INJ 300C: DET 320C
Oven Parameters: 50C 1min; 15C/min to 180C; 30C/min to 340C HOLD 1.05min
Sample Amount: 1 Dilution Factor: 1
Analyst: 2105

Peak #	Ret Time (min)	Peak Name	Amount PPM	Peak Area	Peak Width (min)	Peak Height
1	.027	RRO RF C25-C36	.022	267	.045	140
34	2.701	C10	.	174709	.022	118628
137	9.937	o-Terphenyl SURR	34.9303	1028081	.025	665880
162	11.933	C24	.	52021	.021	26185
166	12.213	C25	.	33377	.037	18065
180	13.312	C30-d62 SURR	35.0672	831410	.02	679866
195	14.621	C36	.	2188	.029	3846

Slice	Start Time	Stop Time	Slice Amount	Amount %	Slice Area	Area %
1	9.880	9.980	34.930	49.887	1028081.0	4.261
2	13.260	13.360	35.067	50.082	840748.8	3.485

Total slice amount= 69.997 Total slice area= 1868830.0
Total slice amount %= 100.0 Total slice area %= 7.7

o-Terphenyl Level 2 % Difference = 249.3028 %
C30-d62 Level 2 % Difference = 250.6721 %

o-Terphenyl Level 3 % Difference = 74.6514 %
C30-d62 Level 3 % Difference = 75.33605 %

o-Terphenyl Level 4 % Difference = -12.6743 %
C30-d62 Level 4 % Difference = -12.33197 %

FILES:
Area File: C:\CPWIN\DATA1\M201.75A
Method File: C:\CPWIN\DATA1\REAKRMST.MET
Calibration File: C:\CPWIN\DATA1\AKRM061B.CAL
Format File: C:\CPWIN\DATA1\REAKRMST.FMT
Area file created on: 7/22/2009 2:56:00 PM
File reported on: 7/22/2009 at 2:56:03 PM

AED28 6198

AK 102/103 RT

Sample ID: AKRTX0932B ZNAKRTXZN CCAL 0920099999
Instrument ID:CP24--H5386B Injected on: 7/22/2009 3:03:11 PM
Volume Inj. per Column: 1 GC Column: RTX-5 30Mx 0.32mm x 0.25um INJ 300C: DET 320C
Oven Parameters: 50C 1min; 15C/min to 180C; 30C/min to 340C HOLD 1.05min
Sample Amount: 1 Dilution Factor: 1
Analyst: 2105

Peak #	Ret Time (min)	Peak Name	Amount PPM	Peak Area	Peak Width (min)	Peak Height
1	.033	RRO RF C25-C36	.0129	156	.022	219
18	2.701	C10	.	262011	.022	192463
75	9.932	o-Terphenyl SURR	10.1134	297661	.024	191942
94	11.932	C24	.	285762	.019	233151
97	12.212	C25	.	233321	.018	199579
111	13.307	C30-d62 SURR	10.4813	248501	.02	197846
124	14.63	C36	.	44142	.023	31024

Slice	Start Time	Stop Time	Slice Amount	Amount %	Slice Area	Area %
1	10.030	10.130	0.000	0.000	1623.6	0.011
2	13.350	13.450	0.000	0.000	5689.9	0.039

Total slice amount= 0.000
Total slice amount %= 0.0
Total slice area= 7313.4
Total slice area %= 0.1

********** RESULTS TABLE **********

TZ (C24 - C25) = 19.20247

FILES:
Area File: C:\CPWIN\DATA1\M201.76A
Method File: C:\CPWIN\DATA1\AKRTM.MET
Calibration File: C:\CPWIN\DATA1\AKRM061B.CAL
Format File: C:\CPWIN\DATA1\AKRTM.FMT
Area file created on: 7/22/2009 3:19:18 PM
File reported on: 7/22/2009 at 3:19:20 PM

AKD28 0191

AK 102/103 RT

Sample ID: AKRTX0932B ZNAKRTXZN CCAL 0920099999
Instrument ID:CP24--H5386B Injected on: 7/23/2009 7:52:17 AM
Volume Inj. per Column: 1 GC Column: RTX-5 30Mx 0.32mm x 0.25um INJ 300C: DET 320C
Oven Parameters: 50C 1min; 15C/min to 180C; 30C/min to 340C HOLD 1.05min
Sample Amount: 1 Dilution Factor: 1
Analyst: 2105

Peak #	Ret Time (min)	Peak Name	Amount PPM	Peak Area	Peak Width (min)	Peak Height
18	2.699	C10	.	212070	.021	157281
67	9.932	o-Terphenyl SURR	9.6679	284548	.024	186304
83	11.933	C24	.	247399	.019	202628
86	12.213	C25	.	229106	.02	187401
99	13.309	C30-d62 SURR	9.1158	216127	.021	167414
109	14.623	C36	.	117531	.021	88968

Slice	Start Time	Stop Time	Slice Amount	Amount %	Slice Area	Area %
1	10.030	10.130	0.000	0.000	1349.8	0.010
2	13.350	13.450	0.000	0.000	3770.0	0.029

Total slice amount= 0.000 Total slice area= 5119.8
Total slice amount %= 0.0 Total slice area %= 0.0

********** RESULTS TABLE **********

TZ (C24 - C25) = 18.59054

FILES:
Area File: C:\CPWIN\DATA1\M204.02A
Method File: C:\CPWIN\DATA1\AKRTM.MET
Calibration File: C:\CPWIN\DATA1\AKRM061B.CAL
Format File: C:\CPWIN\DATA1\AKRTM.FMT
Area file created on: 7/23/2009 8:08:26 AM
File reported on: 7/23/2009 at 8:08:27 AM

AK 102/103

Sample ID: AKCK20932A JFAKCK2JF CCAL 0920199999
Instrument ID:CP24--H5386B Injected on: 7/23/2009 8:19:52 AM
Volume Inj. per Column: 1 GC Column: RTX-5 30Mx 0.32mm x 0.25um INJ 300C: DET 320C
Oven Parameters: 50C 1min; 15C/min to 180C; 30C/min to 340C HOLD 1.05min
Sample Amount: 1 Dilution Factor: 1
Analyst: 2105

Peak #	Ret Time (min)	Peak Name	Amount PPM	Peak Area	Peak Width (min)	Peak Height
35	2.698	C10	.	49732	.022	31190
142	9.931	o-Terphenyl SURR	10.1514	298780	.026	169658
168	11.932	C24	.	50776	.02	17569
173	12.212	C25	.	92326	.026	18911
188	13.307	C30-d62 SURR	17.3881	412256	.02	205130
208	14.613	C36	.	263450	.078	47651

Slice	Start Time	Stop Time	Slice Amount	Amount %	Slice Area	Area %
1	2.600	12.110	10.151	36.861	7302068.0	23.827
2	12.110	14.730	17.388	63.139	6521107.0	21.279
3	9.880	9.980	10.151	36.861	298779.8	0.975
4	13.260	13.360	17.388	63.139	546781.7	1.784

Total slice amount= 55.079 Total slice area= 14668740.0
Total slice amount %= 200.0 Total slice area %= 47.9

********** RESULTS TABLE **********

C10-<C25 DRO AREA = 7003288
C10-<C25 DRO AMT = 303.0428 PPM

C25-C36 RRO AREA = 5974326
C25-C36 RRO AMT = 492.7128 PPM

Level #2 % DRO Difference = -15.82146 %
Level #2 % RRO Difference = -17.8812 %

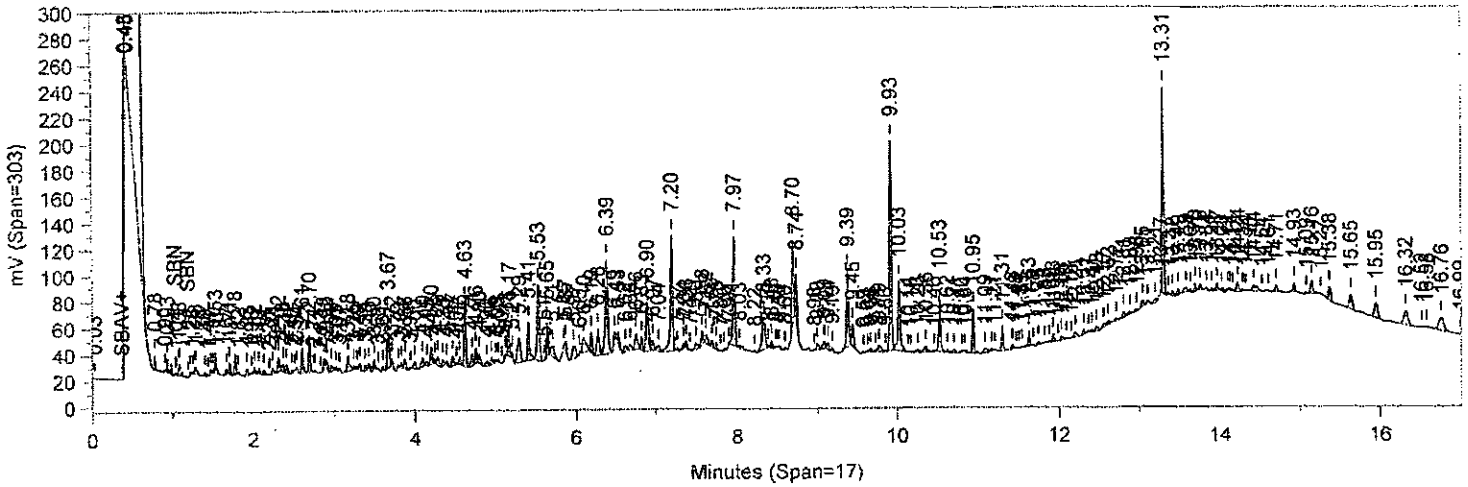
Level #3 % DRO Difference = -67.06056 %
Level #3 % RRO Difference = -69.20545 %

Level #4 % DRO Difference = -78.35409 %
Level #4 % RRO Difference = -79.4703 %

FILES:
Area File: C:\CPWIN\DATA1\M204.03A
Method File: C:\CPWIN\DATA1\AKRMSTD.MET
Calibration File: C:\CPWIN\DATA1\AKRM061B.CAL
Format File: C:\CPWIN\DATA1\AKRMSTD.FMT
Area file created on: 7/23/2009 8:40:00 AM
File reported on: 7/23/2009 at 8:40:02 AM

AKD28 0193

AK 102/103 SURROGATE
AKCK20932A JFAKCK2JF CCAL 0920199999
C:\CPWIN\DATA1\M204.03R



Sample Name:AKCK20932A JFAKCK2JF CCAL 0920199999A

Instrument ID:CP24--H5386B
Injected on: 7/23/2009 8:19:52 AM
Volume Inj. per Column: 1
GC Column: RTX-5 30Mx 0.32mm x 0.25um INJ 300C: DET 320C
Oven Parameters: 50C 1min; 15C/min to 180C; 30C/min to 340C HOLD 1.05min
Sample Amount: 1
Dilution Factor: 1
Analyst: 2105

Peak #	Ret Time (min)	Peak Name	Amount PPM	Peak Area	Peak Width (min)	Peak Height
1	.032	RRO RF C25-C36	.0136	165	.039	149
35	2.698	C10	.	40650	.022	29027
142	9.931	o-Terphenyl SURR	8.9909	264625	.026	162211
168	11.932	C24	.	8376	.02	6070
173	12.212	C25	.	7455	.026	4120
188	13.307	C30-d62 SURR	8.294	196643	.02	158641
208	14.613	C36	.	2393	.038	1535

Slice	Start Time	Stop Time	Slice Amount	Amount %	Slice Area	Area %
1	9.880	9.980	8.991	51.975	264624.5	2.050
2	13.260	13.360	8.294	47.946	198743.3	1.540

Total slice amount= 17.285
Total slice amount %= 99.9
Total slice area= 463367.8
Total slice area %= 3.6

o-Terphenyl Level 2 % Difference = -10.09064 %
C30-d62 Level 2 % Difference = -17.05989 %

o-Terphenyl Level 3 % Difference = -55.04532 %
C30-d62 Level 3 % Difference = -58.52994 %

o-Terphenyl Level 4 % Difference = -77.52266 %
C30-d62 Level 4 % Difference = -79.26498 %

FILES:
Area File: C:\CPWIN\DATA1\M204.03A
Method File: C:\CPWIN\DATA1\REAKRMST.MET
Calibration File: C:\CPWIN\DATA1\AKRM061B.CAL
Format File: C:\CPWIN\DATA1\REAKRMST.FMT
Area file created on: 7/23/2009 8:40:18 AM
File reported on: 7/23/2009 at 8:40:20 AM

AKD28 6194

AK 102/103

Sample ID: AKCK30932A IQAKCK3IQ CCAL 0920199999
Instrument ID:CP24--H5386B Injected on: 7/23/2009 12:56:55 PM
Volume Inj. per Column: 1 GC Column: RTX-5 30Mx 0.32mm x 0.25um INJ 300C: DET 320C
Oven Parameters: 50C 1min; 15C/min to 180C; 30C/min to 340C HOLD 1.05min
Sample Amount: 1 Dilution Factor: 1
Analyst: 2105

Peak #	Ret Time (min)	Peak Name	Amount PPM	Peak Area	Peak Width (min)	Peak Height
34	2.703	C10	.	146891	.023	92472
138	9.935	o-Terphenyl SURR	26.421	777634	.026	387476
162	11.934	C24	.	266970	.023	69059
166	12.212	C25	.	456469	.039	77312
181	13.312	C30-d62 SURR	51.6752	1225169	.019	564306
197	14.605	C36	.	1870811	.151	163301

Slice	Start Time	Stop Time	Slice Amount	Amount %	Slice Area	Area %
1	2.600	12.110	26.421	33.831	25062350.0	32.623
2	12.110	14.730	51.675	66.169	23479310.0	30.563
3	9.880	9.980	26.421	33.831	777633.5	1.012
4	13.260	13.360	51.675	66.169	1791808.0	2.332

Total slice amount= 156.192 Total slice area= 51111100.0
Total slice amount %= 200.0 Total slice area %= 66.5

********** RESULTS TABLE **********

C10-<C25 DRO AREA = 2.428472E+07
C10-<C25 DRO AMT = 1050.836 PPM

C25-C36 RRO AREA = 2.16875E+07
C25-C36 RRO AMT = 1788.605 PPM

Level #2 % DRO Difference = 191.8989 %
Level #2 % RRO Difference = 198.1009 %

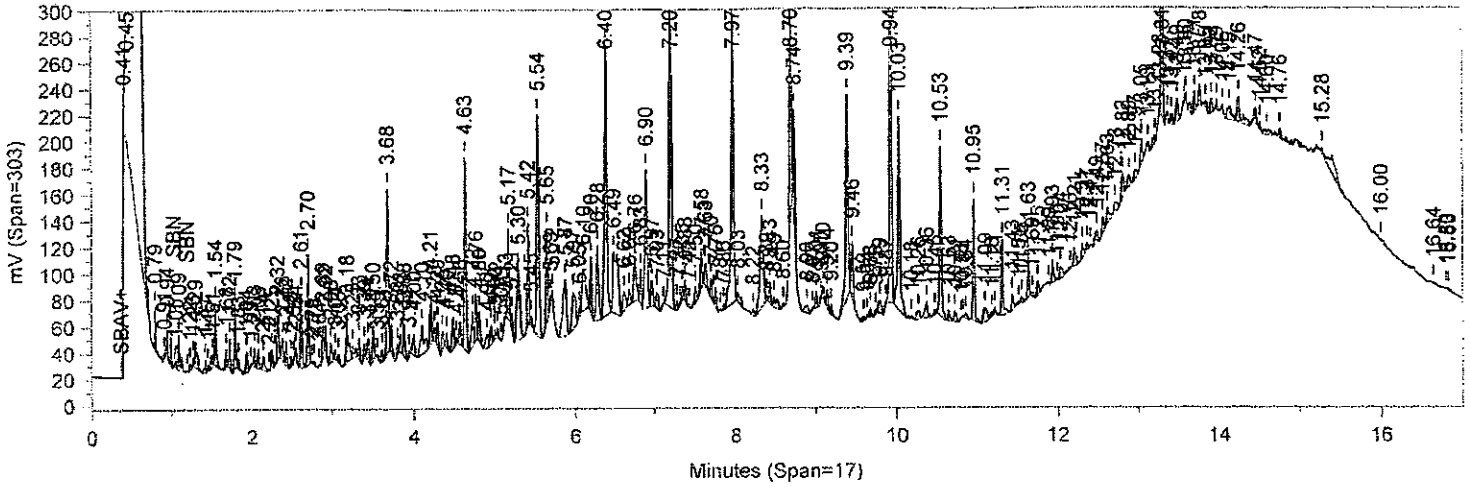
Level #3 % DRO Difference = 14.22131 %
Level #3 % RRO Difference = 11.78783 %

Level #4 % DRO Difference = -24.94028 %
Level #4 % RRO Difference = -25.47478 %

FILES:
Area File: C:\CPWIN\DATA1\M204.13A
Method File: C:\CPWIN\DATA1\AKRMSTD.MET
Calibration File: C:\CPWIN\DATA1\AKRM061B.CAL
Format File: C:\CPWIN\DATA1\AKRMSTD.FMT
Area file created on: 7/23/2009 1:17:04 PM
File reported on: 7/23/2009 at 1:17:06 PM

AKB28 0195

AK 102/103 SURROGATE
AKCK30932A IQAKCK3IQ CCAL 0920199999
C:\CPWIN\DATA1\M204.13R



Sample Name:AKCK30932A IQAKCK3IQ CCAL 0920199999A

Instrument ID:CP24--H5386B Injected on: 7/23/2009 12:56:55 PM
Volume Inj. per Column: 1 GC Column: RTX-5 30Mx 0.32mm x 0.25um INJ 300C: DET 320C
Oven Parameters: 50C 1min; 15C/min to 180C; 30C/min to 340C HOLD 1.05min
Sample Amount: 1 Dilution Factor: 1
Analyst: 2105

Peak #	Ret Time (min)	Peak Name	Amount PPM	Peak Area	Peak Width (min)	Peak Height
34	2.703	C10	.	123453	.023	86663
140	9.935	o-Terphenyl SURR	19.2181	565633	.026	348022
164	11.934	C24	.	27710	.023	18047
168	12.212	C25	.	26808	.039	13771
183	13.312	C30-d62 SURR	20.0086	474384	.02	390308
199	14.605	C36	.	21654	.101	4858

Slice	Start Time	Stop Time	Slice Amount	Amount %	Slice Area	Area %
1	9.880	9.980	19.218	48.992	565633.2	2.835
2	13.260	13.360	20.009	51.008	483773.6	2.425

Total slice amount= 39.227 Total slice area= 1049407.0
Total slice amount %= 100.0 Total slice area %= 5.3

o-Terphenyl Level 2 % Difference = 92.18067 %
C30-d62 Level 2 % Difference = 100.0859 %

o-Terphenyl Level 3 % Difference = -3.909665 %
C30-d62 Level 3 % Difference = 4.293919E-02 %

o-Terphenyl Level 4 % Difference = -51.95483 %
C30-d62 Level 4 % Difference = -49.97853 %

FILES:
Area File: C:\CPWIN\DATA1\M204.13A
Method File: C:\CPWIN\DATA1\REAKRMST.MET
Calibration File: C:\CPWIN\DATA1\AKRM061B.CAL
Format File: C:\CPWIN\DATA1\REAKRMST.FMT
Area file created on: 7/23/2009 1:17:20 PM
File reported on: 7/23/2009 at 1:17:22 PM

AKD20 8196

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CHROM PERFECT SEQUENCE FILE

Sequence File: \\cp24\C-Drive\CPWIN\DATA1\m061.seq
Chromatography Directory: \\cp24\C-Drive\cpwin\DATA1
Method Directory: \\cp24\C-Drive\cpwin\DATA1
Number of Entries: 52

	Samplename	Code	ID	FileName	Method	Samp Wt	DF	Int Std	Batch Number	Analysis
1	CONDITIONER	MISC	AA	m061.01R	AKDMSTD.MET	1	1	1	096099999	
2	CONDITIONER	MISC	AA	m061.02R	AKDMSTD.MET	1	1	1	096099999	
3	CONDITIONER	MISC	AA	m061.03R	AKDMSTD.MET	1	1	1	096099999	
4	AKRTX0832E	CCAL	XW	m061.04R	AKRTM.MET	1	1	1	096099999	
5	AKSS10832B	ICAL	AA	m061.05R	AKRMSTD.MET	1	1	1	096099999	
6	AKSS20832B	ICAL	AA	m061.06R	AKRMSTD.MET	1	1	1	096099999	
7	AKSS30832B	ICAL	AA	m061.07R	AKRMSTD.MET	1	1	1	096099999	
8	AKSS40832B	ICAL	AA	m061.08R	AKRMSTD.MET	1	1	1	096099999	
9	AKSS50832B	ICAL	AA	m061.09R	AKRMSTD.MET	1	1	1	096099999	
10	1FUL10932A	ICAL	AA	m061.10R	AKDMSTD.MET	1	1	1	096099999	
11	1FUL20932A	ICAL	AA	m061.11R	AKDMSTD.MET	1	1	1	096099999	
12	1FUL30932A	ICAL	AA	m061.12R	AKDMSTD.MET	1	1	1	096099999	
13	1FUL40832J	ICAL	AA	m061.13R	AKDMSTD.MET	1	1	1	096099999	
14	1FUL50932A	ICAL	AA	m061.14R	AKDMSTD.MET	1	1	1	096099999	
15	MECL2	MISC	AA	m061.15R	AKRLSTD.MET	1	1	1	096099999	
16	AKSW10832B	ICAL	AA	m061.16R	AKRMSTD.MET	1	1	1	096099999	
17	AKSW20832B	ICAL	AA	m061.17R	AKRMSTD.MET	1	1	1	096099999	
18	AKSW30832B	ICAL	AA	m061.18R	AKRMSTD.MET	1	1	1	096099999	
19	AKSW40832B	ICAL	AA	m061.19R	AKRMSTD.MET	1	1	1	096099999	
20	AKSW50832B	ICAL	AA	m061.20R	AKRMSTD.MET	1	1	1	096099999	
21	MECL2	MISC	AA	m061.21R	AKRMSTD.MET	1	1	1	096099999	
22	1MDLX0832E	CCAL	DB	m061.22R	AKDMSTD.MET	1	1	1	096099999	
23	AKMDX0832B	CCAL	BK	m061.23R	AKRMSTD.MET	1	1	1	096099999	
24	AKCDX0832B	CCAL	AM	m061.24R	AKDMSTD.MET	1	1	1	096099999	
25	AKCRX0832B	CCAL	AN	m061.25R	AKRMSTD.MET	1	1	1	096099999	
26	AKRTX0832E	CCAL	XV	m061.26R	AKRTM.MET	1	1	1	096099999	
27	MECL2	MISC	AA	m061.27R	AKRLSTD.MET	1	1	1	096099999	
28	CNIC10832C	ICAL	AA	m061.28R	CTMSTD.MET	1	1	1	096099999	
29	CNIC20832C	ICAL	AA	m061.29R	CTMSTD.MET	1	1	1	096099999	
30	CNIC30832C	ICAL	AA	m061.30R	CTMSTD.MET	1	1	1	096099999	
31	CNIC40832C	ICAL	AA	m061.31R	CTMSTD.MET	1	1	1	096099999	
32	CNIC50832C	ICAL	AA	m061.32R	CTMSTD.MET	1	1	1	096099999	
33	MECL2	MISC	AA	m061.33R	AKRLSTD.MET	1	1	1	096099999	
34	FLA_10832D	ICAL	AA	m061.34R	FLAMSTD.MET	1	1	1	096099999	
35	FLA_20832D	ICAL	AA	m061.35R	FLAMSTD.MET	1	1	1	096099999	
36	FLA_30832D	ICAL	AA	m061.36R	FLAMSTD.MET	1	1	1	096099999	
37	FLA_40832D	ICAL	AA	m061.37R	FLAMSTD.MET	1	1	1	096099999	
38	FLA_50832D	ICAL	AA	m061.38R	FLAMSTD.MET	1	1	1	096099999	
39	MECL2	MISC	AA	m061.39R	AKRLSTD.MET	1	1	1	096099999	
40	FPCKX0832B	CCAL	BA	m061.40R	FLAMSTD.MET	1	1	1	096099999	
41	TPH_10832C	ICAL	AA	m061.41R	TNMCK.MET	1	1	1	096099999	
42	TPH_20932A	ICAL	AA	m061.42R	TNMCK.MET	1	1	1	096099999	
43	TPH_30932A	ICAL	AA	m061.43R	TNMCK.MET	1	1	1	096099999	
44	TPH_40932A	ICAL	AA	m061.44R	TNMCK.MET	1	1	1	096099999	
45	TPH_50832C	ICAL	AA	m061.45R	TNMCK.MET	1	1	1	096099999	
46	TNIC10832B	ICAL	AA	m061.46R	TNMCK.MET	1	1	1	096099999	
47	TNIC20832B	ICAL	AA	m061.47R	TNMCK.MET	1	1	1	096099999	
48	TNIC30832B	ICAL	AA	m061.48R	TNMCK.MET	1	1	1	096099999	
49	TNIC40832B	ICAL	AA	m061.49R	TNMCK.MET	1	1	1	096099999	
50	TNIC50832B	ICAL	AA	m061.50R	TNMCK.MET	1	1	1	096099999	

AWB28 8197

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CHROM PERFECT SEQUENCE FILE

Sequence File: \\cp24\C-Drive\CPWIN\DATA1\m061.seq
Chromatography Directory: \\cp24\C-Drive\cpwin\DATA1
Method Directory: \\cp24\C-Drive\cpwin\DATA1
Number of Entries: 52

	Samplename	Code	ID	FileName	Method	Samp Wt	DF	Int Std	Batch Number	Analysis
51	MECL2	MISC	AA	m061.51R	AKRLSTD.MET	1	1	1	096099999	
52	TNCKX0832C	CCAL	OM	m061.52R	TNMCK.MET	1	1	1	096099999	

AKD20 0198

Set-up by: _____ Date: 3/10/09

3/10/09

Lancaster Laboratories

CHROM PERFECT SEQUENCE FILE

Sequence File: \\cp24\C-Drive\CPWIN\DATA1\M201.seq
Chromatography Directory: \\cp24\C-Drive\cpwin\DATA1
Method Directory: \\cp24\C-Drive\cpwin\DATA1
Number of Entries: 76

	Samplename	Code	ID	FileName	Method	Samp Wt	DF	Int Std	Batch Number	Analysis
1	CONDITIONER	MISC	AA	M201.01R	WILSTD.MET	1	1	1	0920099999	
2	CONDITIONER	MISC	AA	M201.02R	WILSTD.MET	1	1	1	0920099999	
3	CONDITIONER	MISC	AA	M201.03R	WILSTD.MET	1	1	1	0920099999	
4	CONDITIONER	MISC	AA	M201.04R	WILSTD.MET	1	1	1	0920099999	
5	AKRTX0932B	CCAL	ZN	M201.05R	AKRTM.MET	1	1	1	0920099999	
6	AKFL20932A	CCAL	LE	M201.06R	AKDMSTD.MET	1	1	1	0920099999	
7	BLANKA 7/20/09	BLK	AA	M201.07R	AKDMSUM.MET	1000	1	1	091990009A	01741
8	LCSA 7/20/09	LCS	AA	M201.08R	AKDMSUM.MET	1000	1	1	091990009A	01741
9	LCSDA 7/20/09	LCSD	AA	M201.09R	AKDMSUM.MET	1000	1	1	091990009A	01741
10	5725296	T	AA	M201.10R	AKDMSUM.MET	1008	1	1	091990009A	01741
11	5725297	T	AA	M201.11R	AKDMSUM.MET	1060	1	1	091990009A	01741
12	5725298	T	AA	M201.12R	AKDMSUM.MET	927	1	1	091990009A	01741
13	5725299	T	AA	M201.13R	AKDMSUM.MET	1005	1	1	091990009A	01741
14	5725300	T	AA	M201.14R	AKDMSUM.MET	938	1	1	091990009A	01741
15	5725654DF10	T	AB	M201.15R	AKDMSUM.MET	895	10	1	091990009A	01741
16	AKFL30932A	CCAL	LO	M201.16R	AKDMSTD.MET	1	1	1	0920099999	
17	BLANKA 7/19/09	BLK	AA	M201.17R	AKDMSUM.MET	25	1	1	091990006A	01742
18	LCSA 7/19/09	LCS	AA	M201.18R	AKDMSUM.MET	25	1	1	091990006A	01742
19	LCSDA 7/19/09	LCSD	AA	M201.19R	AKDMSUM.MET	25	1	1	091990006A	01742
20	5725304	T	AA	M201.20R	AKDMSUM.MET	25	1	1	091990006A	01742
21	5725302	T	AA	M201.21R	AKDMSUM.MET	25	1	1	091990006A	01742
22	5725302MS	MS	AA	M201.22R	AKDMSUM.MET	25	1	1	091990006A	01742
23	5725302MSD	MSD	AA	M201.23R	AKDMSUM.MET	25	1	1	091990006A	01742
24	MECL2	MISC	AA	M201.24R	WIMSUM.MET	1	1	1	0920099999	
25	5725303DF10	T	AB	M201.25R	AKDMSUM.MET	25	10	1	091990006A	01742
26	AKFL40932A	CCAL	KA	M201.26R	AKDMSTD.MET	1	1	1	0920099999	
27	AKRTX0932B	CCAL	ZN	M201.27R	AKRTM.MET	1	1	1	0920099999	
28	CONDITIONER	MISC	AA	M201.28R	WILSTD.MET	1	1	1	0920099999	
29	AKRTX0932B	CCAL	ZN	M201.29R	AKRTM.MET	1	1	1	0920099999	
30	AKFL30932A	CCAL	LP	M201.30R	AKDMSTD.MET	1	1	1	0920099999	
31	5725302DF50	T	AB	M201.31R	AKDMSUM.MET	25	50	1	091990006A	01742
32	5725300DF10	T	AB	M201.32R	AKDMSUM.MET	938	10	1	091990009A	01741
33	5725654	T	AA	M201.33R	AKDMSUM.MET	895	1	1	091990009A	01741
34	5725300DF20	T	AC	M201.34R	AKDMSUM.MET	938	20	1	091990009A	01741
35	AKFL20932A	CCAL	LF	M201.35R	AKDMSTD.MET	1	1	1	0920099999	
36	AKRTX0932B	CCAL	ZN	M201.36R	AKRTM.MET	1	1	1	0920099999	
37	AKCK20932A	CCAL	JD	M201.37R	AKRMSTD.MET	1	1	1	0920199999	
38	BLANKA 7/20/09	BLK	AA	M201.38R	AKRMSUM.MET	25	1	1	092010024A	01738
39	5725300DF40	T	AD	M201.39R	AKDLSUM.MET	938	40	1	091990009A	01741
40	AKFL40932A	CCAL	KB	M201.40R	AKDMSTD.MET	1	1	1	0920099999	
41	AKFL40932A	CCAL	KB	M201.41R	AKDMSTD.MET	1	1	1	0920099999	
42	AKCK20932A	CCAL	JD	M201.42R	AKRMSTD.MET	1	1	1	0920199999	
43	LCSA 7/20/09	LCS	AA	M201.43R	AKRMSUM.MET	25	1	1	092010024A	01738
44	LCSDA 7/20/09	LCSD	AA	M201.44R	AKRMSUM.MET	25	1	1	092010024A	01738
45	5726710	T	AA	M201.45R	AKRMSUM.MET	25	1	1	092010024A	01738
46	5726710MS	MS	AA	M201.46R	AKRMSUM.MET	25	1	1	092010024A	01738
47	5726710MSD	MSD	AA	M201.47R	AKRMSUM.MET	25	1	1	092010024A	01738
48	5726711	T	AA	M201.48R	AKRMSUM.MET	25	1	1	092010024A	01738
49	5726712	T	AA	M201.49R	AKRMSUM.MET	25	1	1	092010024A	01738
50	AKCK30932A	CCAL	IO	M201.50R	AKRMSTD.MET	1	1	1	0920199999	AKD28 8199

RT update MS 7/29/09

Lancaster Laboratories

CHROM PERFECT SEQUENCE FILE

Sequence File: \\cp24\C-Drive\CPWIN\DATA1\M201.seq
Chromatography Directory: \\cp24\C-Drive\cpwin\DATA1
Method Directory: \\cp24\C-Drive\cpwin\DATA1
Number of Entries: 76

Samplename	Code	ID	FileName	Method	Samp Wt	DF	Int Std	Batch Number	Analysis
51 5726713	T	AA	M201.51R	AKRMSUM.MET	25	1	1	092010024A	01738
52 5726714	T	AA	M201.52R	AKRMSUM.MET	25	1	1	092010024A	01738
53 5726719	T	AA	M201.53R	AKRMSUM.MET	25	1	1	092010024A	01738
54 5726718	T	AA	M201.54R	AKRMSUM.MET	25	1	1	092010024A	01738
55 5726717	T	AA	M201.55R	AKRMSUM.MET	25	1	1	092010024A	01738
56 5726716DF5	T	AB	M201.56R	AKRMSUM.MET	25	5	1	092010024A	01738
57 5726715DF10	T	AB	M201.57R	AKRMSUM.MET	25	10	1	092010024A	01738
58 AKCK40932A	CCAL	HE	M201.58R	AKRMSTD.MET	1	1	1	0920199999	
59 AKRTX0932B	CCAL	ZN	M201.59R	AKRTM.MET	1	1	1	0920099999	
60 CONDITIONER	MISC	AA	M201.60R	WILSTD.MET	1	1	1	0920099999	
61 AKRTX0932B	CCAL	ZN	M201.61R	AKRTM.MET	1	1	1	0920099999	
62 AKCK20932A	CCAL	JE	M201.62R	AKRMSTD.MET	1	1	1	0920199999	
63 5726714 RI	T	AA	M201.63R	AKRLSUM.MET	25	1	1	092010024A	01738
64 5726718 RI	T	AA	M201.64R	AKRLSUM.MET	25	1	1	092010024A	01738
65 5726717DF20	T	AB	M201.65R	AKRLSUM.MET	25	20	1	092010024A	01738
66 5726716DF5	T	AB	M201.66R	AKRLSUM.MET	25	5	1	092010024A	01738
67 5726715	T	AA	M201.67R	AKRLSUM.MET	25	1	1	092010024A	01738
68 MECL2	MISC	AA	M201.68R	WILSTD.MET	1	1	1	0920299999	
69 AKCK30932A	CCAL	IP	M201.69R	AKRMSTD.MET	1	1	1	0920199999	
70 BLANKA 7/22/09	BLK	AA	M201.70R	AKRMSUM.MET	1000	1	1	092020011A	02923
71 LCSA 7/22/09	LCS	AA	M201.71R	AKRMSUM.MET	1000	1	1	092020011A	02923
72 LCSDA 7/22/09	LCSD	AA	M201.72R	AKRMSUM.MET	1000	1	1	092020011A	02923
73 5726707	T	AA	M201.73R	AKRMSUM.MET	1046	1	1	092020011A	02923
74 5726720	T	AA	M201.74R	AKRMSUM.MET	964	1	1	092020011A	02923
75 AKCK40932A	CCAL	HF	M201.75R	AKRMSTD.MET	1	1	1	0920199999	
76 AKRTX0932B	CCAL	ZN	M201.76R	AKRTM.MET	1	1	1	0920099999	

ARD28 8-98

Set-up by: Tracy A. Cole Date: 7-22-09

7/22/09

Lancaster Laboratories

CHROM PERFECT SEQUENCE FILE

Sequence File: \\cp24\C-Drive\cpwin\DATA1\M204.seq

Chromatography Directory: \\cp24\C-Drive\cpwin\DATA1

Method Directory: \\cp24\C-Drive\cpwin\DATA1

Number of Entries: 99

Samplename	Code	ID	FileName	Method	Samp Wt	DF	Int Std	Batch Number	Analysis
1 CONDITIONER	MISC	AA	M204.01R	WILSTD.MET	1	1	1	0920099999	
2 AKRTX0932B	CCAL	ZN	M204.02R	AKRTM.MET	1	1	1	0920099999	
3 AKCK20932A	CCAL	JF	M204.03R	AKRMSTD.MET	1	1	1	0920199999	
4 5726717DF10	T	AC	M204.04R	AKRMSUM.MET	25	10	1	092010024A	01738
5 LCSA 7/22/09	LCS	AA	M204.05R	AKRMSUM.MET	25	1	1	092020025A	01738
6 LCSDA 7/22/09	LCSD	AA	M204.06R	AKRMSUM.MET	25	1	1	092020025A	01738
7 BLANKA 7/22/09	BLK	AA	M204.07R	AKRMSUM.MET	25	1	1	092020025A	01738
8 5726706	T	AA	M204.08R	AKRMSUM.MET	25	1	1	092020025A	01738
9 5726705	T	AA	M204.09R	AKRMSUM.MET	25	1	1	092020025A	01738
10 5726704	T	AA	M204.10R	AKRMSUM.MET	25	1	1	092020025A	01738
11 5726704MS	MS	AA	M204.11R	AKRMSUM.MET	25	1	1	092020025A	01738
12 5726704MSD	MSD	AA	M204.12R	AKRMSUM.MET	25	1	1	092020025A	01738
13 AKCK30932A	CCAL	IQ	M204.13R	AKRMSTD.MET	1	1	1	0920199999	
14 CNIC20932A	CCAL	RW	M204.14R	CTMSTD.MET	1	1	1	0920399999	
15 BLANKA 7/22/09S	BLK	AB	M204.15R	CTMSUM.MET	30	1	1	092020026A	02769
16 LCSA 7/22/09S	LCS	AB	M204.16R	CTMSUM.MET	30	1	1	092020026A	02769
17 5727655S DF10	T	AC	M204.17R	CTMSUM.MET	30	10	1	092020026A	02769
18 5727656S DF10	T	AC	M204.18R	CTMSUM.MET	30	10	1	092020026A	02769
19 5727657S DF10	T	AC	M204.19R	CTMSUM.MET	30	10	1	092020026A	02769
20 5727658S DF10	T	AC	M204.20R	CTMSUM.MET	30	10	1	092020026A	02769
21 5727654 7/22/09S DF20	DUP	AC	M204.21R	CTMSUM.MET	30	20	1	092020026A	02769
22 5727654S DF20	T	AC	M204.22R	CTMSUM.MET	30	20	1	092020026A	02769
23 5727654MSS DF20	MS	AC	M204.23R	CTMSUM.MET	30	20	1	092020026A	02769
24 MECL2	MISC	AA	M204.24R	WILSTD.MET	1	1	1	0920399999	
25 CNIC30932A	CCAL	TK	M204.25R	CTMSTD.MET	1	1	1	0920399999	
26 AKRTX0932B	CCAL	ZN	M204.26R	AKRTM.MET	1	1	1	0920099999	
27 CONDITIONER	MISC	AA	M204.27R	WILSTD.MET	1	1	1	0920099999	
28 AKRTX0932B	CCAL	ZN	M204.28R	AKRTM.MET	1	1	1	0920099999	
29 AKCK40932A	CCAL	HG	M204.29R	AKRMSTD.MET	1	1	1	0920199999	
30 BLANKA 7/23/09	BLK	AA	M204.30R	AKRMSUM.MET	25	1	1	092040008A	01738
31 LCSA 7/23/09	LCS	AA	M204.31R	AKRMSUM.MET	25	1	1	092040008A	01738
32 LCSDA 7/23/09	LCSD	AA	M204.32R	AKRMSUM.MET	25	1	1	092040008A	01738
33 5726710R	T	AA	M204.33R	AKRMSUM.MET	25	1	1	092040008A	01738
34 5726711R	T	AA	M204.34R	AKRMSUM.MET	25	1	1	092040008A	01738
35 5726714R	T	AA	M204.35R	AKRMSUM.MET	25	1	1	092040008A	01738
36 5726718R	T	AA	M204.36R	AKRMSUM.MET	25	1	1	092040008A	01738
37 AKCK20932A	CCAL	JG	M204.37R	AKRMSTD.MET	1	1	1	0920199999	
38 AKFL20932A	CCAL	LG	M204.38R	AKDMSTD.MET	1	1	1	0920499999	
39 BLANKA 7/23/09	BLK	AA	M204.39R	AKDMSUM.MET	1000	1	1	092040014A	01741
40 5726718RDF20	T	AB	M204.40R	AKRMSUM.MET	25	20	1	092040008A	01738
41 AKCK30932A	CCAL	IR	M204.41R	AKRMSTD.MET	1	1	1	0920199999	
42 LCSA 7/23/09	LCS	AA	M204.42R	AKDMSUM.MET	1000	1	1	092040014A	01741
43 LCSDA 7/23/09	LCSD	AA	M204.43R	AKDMSUM.MET	1000	1	1	092040014A	01741
44 5729057	T	AA	M204.44R	AKDMSUM.MET	885	1	1	092040014A	01741
45 5729058	T	AA	M204.45R	AKDMSUM.MET	936	1	1	092040014A	01741
46 5729059	T	AA	M204.46R	AKDMSUM.MET	989	1	1	092040014A	01741
47 5729061	T	AA	M204.47R	AKDMSUM.MET	1007	1	1	092040014A	01741
48 5730498	T	AA	M204.48R	AKDMSUM.MET	1003	1	1	092040014A	01741
49 AKFL30932A	CCAL	LQ	M204.49R	AKDMSTD.MET	1	1	1	0920499999	
50 5730499	T	AA	M204.50R	AKDMSUM.MET	912	1	1	092040014A	01741

Lancaster Laboratories

CHROM PERFECT SEQUENCE FILE

Sequence File: \\cp24\C-Drive\cpwin\DATA1\M204.seq

Chromatography Directory: \\cp24\C-Drive\cpwin\DATA1

Method Directory: \\cp24\C-Drive\cpwin\DATA1

Number of Entries: 99

Samplename	Code	ID	FileName	Method	Samp Wt	DF	Int Std	Batch Number	Analysis
51 5730500	T	AA	M204.51R	AKDMSUM.MET	926	1	1	092040014A	01741
52 5730501	T	AA	M204.52R	AKDMSUM.MET	938	1	1	092040014A	01741
53 5730502	T	AA	M204.53R	AKDMSUM.MET	987	1	1	092040014A	01741
54 5730503	T	AA	M204.54R	AKDMSUM.MET	913	1	1	092040014A	01741
55 5730504	T	AA	M204.55R	AKDMSUM.MET	960	1	1	092040014A	01741
56 5730505	T	AA	M204.56R	AKDMSUM.MET	932	1	1	092040014A	01741
57 5729060	T	AA	M204.57R	AKDMSUM.MET	957	1	1	092040014A	01741
58 AKFL40932A	CCAL	KC	M204.58R	AKDMSTD.MET	1	1	1	0920499999	
59 AKRTX0932B	CCAL	ZN	M204.59R	AKRTM.MET	1	1	1	0920099999	
60 CNIC40932A	CCAL	RT	M204.60R	CTMSTD.MET	1	1	1	0920399999	
61 5727658S	T	AB	M204.61R	CTMSUM.MET	30	1	1	092020026A	02769
62 5727656S DF2	T	AD	M204.62R	CTMSUM.MET	30	2	1	092020026A	02769
63 MECL2	MISC	AA	M204.63R	WILSTD.MET	1	1	1	0920499999	
64 CNIC20932A	CCAL	RX	M204.64R	CTMSTD.MET	1	1	1	0920399999	
65 CONDITIONER	MISC	AA	M204.65R	WILSTD.MET	1	1	1	0920099999	
66 CONDITIONER	MISC	AA	M204.66R	WILSTD.MET	1	1	1	0920099999	
67 CONDITIONER	MISC	AA	M204.67R	WILSTD.MET	1	1	1	0920099999	
68 AKRTX0932B	CCAL	ZN	M204.68R	AKRTM.MET	1	1	1	0920099999	
69 AKFL20932A	CCAL	LH	M204.69R	AKDMSTD.MET	1	1	1	0920499999	
70 BLANKA 7/24/09	BLK	AA	M204.70R	AKDMSUM.MET	25	1	1	092050010A	01742
71 LCSA 7/24/09	LCS	AA	M204.71R	AKDMSUM.MET	25	1	1	092050010A	01742
72 LCSDA 7/24/09	LCSD	AA	M204.72R	AKDMSUM.MET	25	1	1	092050010A	01742
73 5731561	T	AA	M204.73R	AKDMSUM.MET	25	1	1	092050010A	01742
74 5731560DF5	T	AB	M204.74R	AKDMSUM.MET	25	5	1	092050010A	01742
75 5730658DF5	T	AB	M204.75R	AKDMSUM.MET	25	5	1	092050010A	01742
76 5731560	T	AA	M204.76R	AKDMSUM.MET	25	1	1	092050010A	01742
77 5730658	T	AA	M204.77R	AKDMSUM.MET	25	1	1	092050010A	01742
78 5730658MS	MS	AA	M204.78R	AKDMSUM.MET	25	1	1	092050010A	01742
79 5730658MSD	MSD	AA	M204.79R	AKDMSUM.MET	25	1	1	092050010A	01742
80 AKFL30932B	CCAL	LS	M204.80R	AKDMSTD.MET	1	1	1	0920499999	
81 MECL2	MISC	AA	M204.81R	WILSTD.MET	1	1	1	0920799999	
82 5730662	T	AA	M204.82R	AKDMSUM.MET	25	1	1	092050010A	01742
83 5730663	T	AA	M204.83R	AKDMSUM.MET	25	1	1	092050010A	01742
84 5730659	T	AA	M204.84R	AKDMSUM.MET	25	1	1	092050010A	01742
85 5729058DF10	T	AB	M204.85R	AKDMSUM.MET	936	10	1	092040014A	01741
86 5730498DF2	T	AB	M204.86R	AKDMSUM.MET	1003	2	1	092040014A	01741
87 5730503DF2	T	AB	M204.87R	AKDMSUM.MET	913	2	1	092040014A	01741
88 5730504DF5	T	AB	M204.88R	AKDMSUM.MET	960	5	1	092040014A	01741
89 5730505DF5	T	AB	M204.89R	AKDMSUM.MET	932	5	1	092040014A	01741
90 AKFL40932B	CCAL	KE	M204.90R	AKDMSTD.MET	1	1	1	0920499999	
91 5730499 RI	T	AA	M204.91R	AKDMSUM.MET	912	1	1	092040014A	01741
92 5730500 RI	T	AA	M204.92R	AKDMSUM.MET	926	1	1	092040014A	01741
93 5730501 RI	T	AA	M204.93R	AKDMSUM.MET	938	1	1	092040014A	01741
94 5730502 RI	T	AA	M204.94R	AKDMSUM.MET	987	1	1	092040014A	01741
95 5729060 RI	T	AA	M204.95R	AKDMSUM.MET	957	1	1	092040014A	01741
96 AKFL20932B	CCAL	LI	M204.96R	AKDMSTD.MET	1	1	1	0920499999	
97 AKRTX0932B	CCAL	ZN	M204.97R	AKRTM.MET	1	1	1	0920099999	
98 MS0920532A	MISC	AA	M204.98R	AKRMSUM.MET	1	1	1	0920799999	
99 MS0920532B	MISC	AA	M204.99R	AKRMSUM.MET	1	1	1	0920799999	

AKD20 02262

Set-up by: Danielle Date: 7/28/09

7/28/09

Raw QC Data

Lancaster Laboratories Range Data Summary

Sample Name: BLANKA 7/22/09 PBLKSX Sample ID: AA **Batchnumber:** 092020011A
Sample Amount: 1000. Total Volume: 1. ml Analyst: 2105 SDG: State:
Analyses: 02923

Injection Summary

Injected on : 7/22/09 12:17:33
Instrument : CP24--H5386B
Result file : M201.70R
Calibration files : AKRM061B.CAL
Method files : AKRMSUM.MET REAKRM.MET
Setting : AKRM061B

Surrogate Recoveries

O-TERPHENYL SURR	99.8%	Conc.: 0.019966
C30-D62 SURR	94%	Conc.: 0.018808

Range	Retention Times	Area	Amount	LOQ	MDL	Flags	Units
C10-<C25 DRO	2.60 - 12.11	955587	0.0159	<2.5	<0.05		ppm
C25-C36 RRO	12.11 - 14.73	871784	0.0351	<2.5	<0.05		ppm
o-Terphenyl SURR	9.93 (9.88 - 9.98)	587647	0.0200				ppm
C30-d62 SURR	13.30 (13.26 - 13.36)	445915	0.0188				ppm

Comments: _____

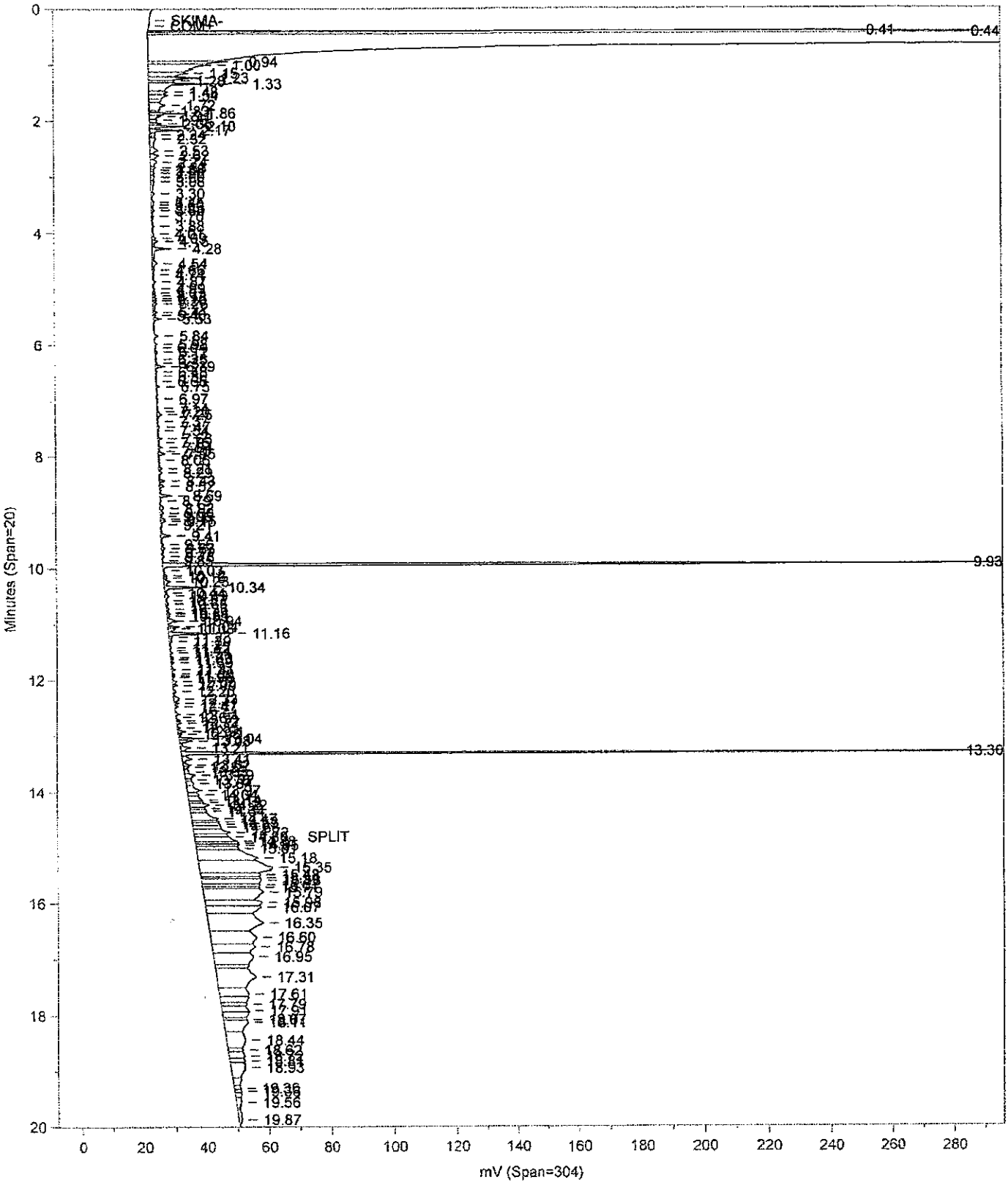
AKD28 5284

Reviewed by: MJH Date: 7/23/9
Verified by: _____ Date: _____

AK 102/103

BLANKA 7/22/09 AAPBLKSX BLK 092020011A 02923

C:\CPWIN\DATA1\M201.70R



Instrument ID:CP24--H5386B
Injected on: 7/22/2009 12:17:32 PM

Volume Inj. per Column: 1
GC Column: RTX-5 30Mx 0.32mm x 0.25um INJ 300C: DET 320C

Oven Parameters: 50C 1min; 15C/min to 180C; 30C/min to 340C HOLD 1.05min

Sample Amount: 1000
Dilution Factor: 1

AKD28 0285

AK 102/103

Sample ID: BLANKA 7/22/09 AAPBLKSX BLK 092020011A 02923
Instrument ID:CP24--H5386B Injected on: 7/22/2009 12:17:32 PM
Volume Inj. per Column: 1 GC Column: RTX-5 30Mx 0.32mm x 0.25um INJ 300C: DET 320C
Oven Parameters: 50C 1min; 15C/min to 180C; 30C/min to 340C HOLD 1.05min
Sample Amount: 1000 Dilution Factor: 1
Analyst: 2105

Peak #	Ret Time (min)	Peak Name	Amount PPM	Peak Area	Peak Width (min)	Peak Height
23	2.741	C10	.	10652	.048	1981
95	9.928	o-Terphenyl SURR	.02	588665	.024	387996
123	11.925	C24	.	1299	.017	926
127	12.205	C25	.	2614	.047	957
141	13.303	C30-d62 SURR	.0191	452848	.02	355750
159	14.628	C36	.	32675	.042	9104

Slice	Start Time	Stop Time	Slice Amount	Amount %	Slice Area	Area %
1	2.600	12.110	20.001	51.151	955587.1	14.215
2	9.880	9.980	20.001	51.151	588664.5	8.757
3	12.110	14.730	19.100	48.849	871784.3	12.969
4	13.260	13.360	19.100	48.849	452847.9	6.737

Total slice amount= 78.202 Total slice area= 2868884.0
Total slice amount %= 200.0 Total slice area %= 42.7

********** RESULTS TABLE **********

C10-<C25 DRO AREA = 366922.6
C10-<C25 DRO AMT = 1.587729E-02 PPM

C25-C36 RRO AREA = 418936.3
C25-C36 RRO AMT = 3.455039E-02 PPM

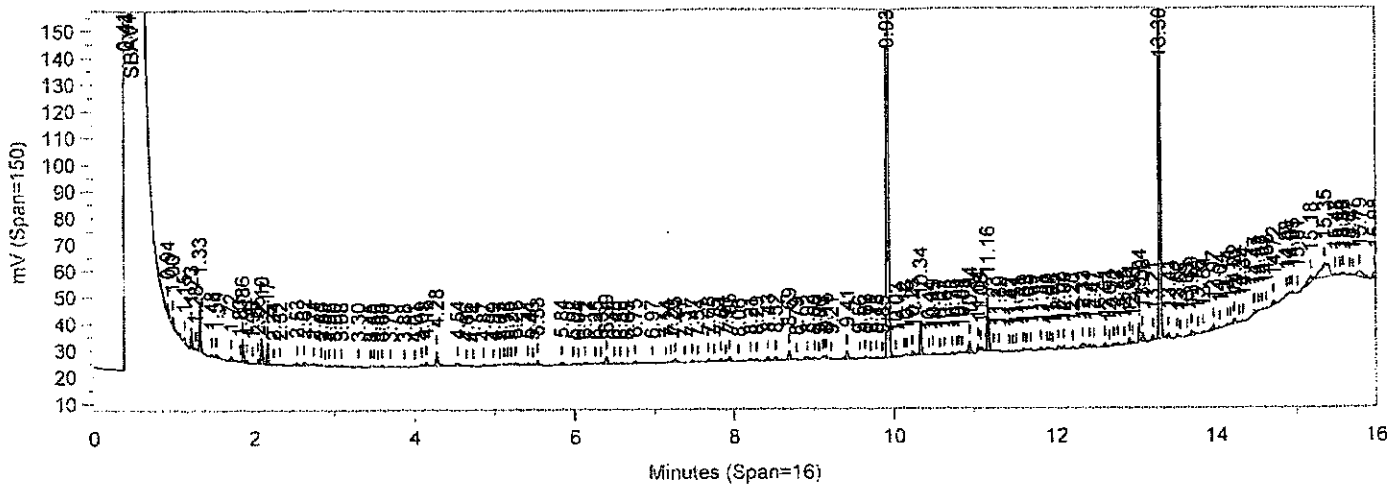
FILES:
Area File: C:\CPWIN\DATA1\M201.70A
Method File: C:\CPWIN\DATA1\AKRMSUM.MET
Calibration File: C:\CPWIN\DATA1\AKRM061B.CAL
Format File: C:\CPWIN\DATA1\AKRMSUM.FMT
Area file created on: 7/22/2009 12:37:40 PM
File reported on: 7/22/2009 at 12:37:41 PM

AKB28 8286

AK 102/103

BLANKA 7/22/09 AAPBLKSX BLK 092020011A 02923

C:\CPWIN\DATA1\M201.70R



Sample Name:BLANKA 7/22/09 AAPBLKSX BLK 092020011A 02923A

Instrument ID:CP24--H5386B Injected on: 7/22/2009 12:17:32 PM
Volume Inj. per Column: 1 GC Column: RTX-5 30Mx 0.32mm x 0.25um INJ 300C: DET 320C
Oven Parameters: 50C 1min; 15C/min to 180C; 30C/min to 340C HOLD 1.05min
Sample Amount: 1000 Dilution Factor: 1
Analyst: 2105

Peak #	Ret Time (min)	Peak Name	Amount PPM	Peak Area	Peak Width (min)	Peak Height
23	2.741	C10	.	2504	.048	857
95	9.928	o-Terphenyl SURR	.02	587647	.024	387890
123	11.925	C24	.	448	.017	535
127	12.205	C25	.	2169	.047	875
141	13.303	C30-d62 SURR	.0188	445915	.02	354531
159	14.628	C36	.	563	.041	339

Slice	Start Time	Stop Time	Slice Amount	Amount %	Slice Area	Area %

Total slice amount= 0.000 Total slice area= 0.0
Total slice amount %= 0.0 Total slice area %= 0.0

O-TERPHENYL % RECOVERY = 99.83002 %
C30-D62 SURR % RECOVERY = 94.03895 %

FILES:
Area File: C:\CPWIN\DATA1\M201.70A
Method File: C:\CPWIN\DATA1\REAKRM.MET
Calibration File: C:\CPWIN\DATA1\AKRM061B.CAL
Format File: C:\CPWIN\DATA1\REAKRM.FMT
Area file created on: 7/22/2009 12:37:54 PM
File reported on: 7/22/2009 at 12:37:56 PM

ARD28 8287

Lancaster Laboratories Range Data Summary

Sample Name: BLANKA 7/22/09 PBLKTO Sample ID: AA **Batchnumber:** 092020025A
Sample Amount: 25. Total Volume: 1. ml Analyst: 2105 SDG: State:
Analyses: 01738 02238

Injection Summary

Injected on : 7/23/09 10:10:51
Instrument : CP24--H5386B
Result file : M204.07R
Calibration files : AKRM061B.CAL
Method files : AKRMSUM.MET REAKRM.MET
Setting : AKRM061B

Surrogate Recoveries

O-TERPHENYL SURR	93.2%	Conc.: 0.745928
C30-D62 SURR	89.8%	Conc.: 0.718593

Range	Retention Times	Area	Amount	LOQ	MDL	Flags	Units
C10-<C25 DRO	2.60 - 12.11	1058720	0.8825	<12	<4		ppm
C25-C36 RRO	12.11 - 14.73	764252	1.1161	<12	<4		ppm
o-Terphenyl SURR	9.93 (9.88 - 9.98)	548861	0.7459				ppm
C30-d62 SURR	13.31 (13.26 - 13.36)	425929	0.7186				ppm

Comments: _____

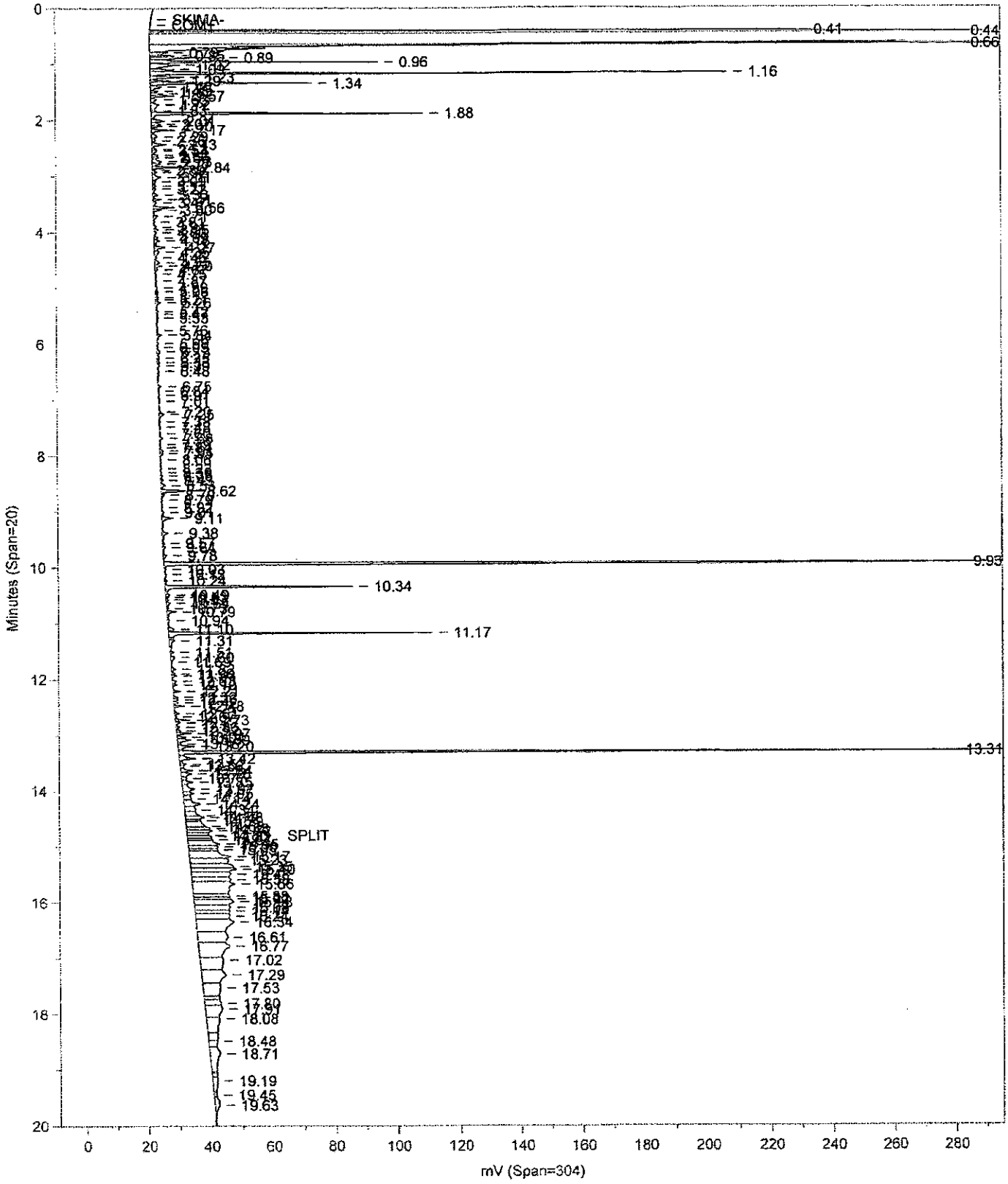
AKD28 6285

Reviewed by: _____ Date: 7/23/09
Verified by: _____ Date: 7-23-09

AK 102/103

BLANKA 7/22/09 AAPBLKTO BLK 092020025A 01738

C:\CPWIN\DATA1\M204.07R



Instrument ID:CP24–H5386B Injected on: 7/23/2009 10:10:50 AM

Volume Inj. per Column: 1 GC Column: RTX-5 30Mx 0.32mm x 0.25um INJ 300C: DET 320C AKD28 8289

Oven Parameters: 50C 1min; 15C/min to 180C; 30C/min to 340C HOLD 1.05min

Sample Amount: 25 Dilution Factor: 1

AK 102/103

Sample ID: BLANKA 7/22/09 AAPBLKTO BLK 092020025A 01738
Instrument ID:CP24--H5386B Injected on: 7/23/2009 10:10:50 AM
Volume Inj. per Column: 1 GC Column: RTX-5 30Mx 0.32mm x 0.25um INJ 300C: DET 320C
Oven Parameters: 50C 1min; 15C/min to 180C; 30C/min to 340C HOLD 1.05min
Sample Amount: 25 Dilution Factor: 1
Analyst: 2105

Peak #	Ret Time (min)	Peak Name	Amount PPM	Peak Area	Peak Width (min)	Peak Height
33	2.732	C10	.	8556	.038	3000
109	9.932	o-Terphenyl SURR	.7475	550026	.025	352149
129	11.931	C24	.	2732	.022	1704
132	12.212	C25	.	3474	.02	2338
148	13.309	C30-d62 SURR	.7299	432658	.021	335315
164	14.632	C36	.	30417	.046	6066

Slice	Start Time	Stop Time	Slice Amount	Amount %	Slice Area	Area %
1	2.600	12.110	18.688	50.594	1058720.0	16.820
2	9.880	9.980	18.688	50.594	550025.5	8.738
3	12.110	14.730	18.249	49.406	764251.6	12.142
4	13.260	13.360	18.249	49.406	432658.1	6.874

Total slice amount= 73.873 Total slice area= 2805655.0
Total slice amount %= 200.0 Total slice area %= 44.6

********** RESULTS TABLE **********

C10-<C25 DRO AREA = 508694.5
C10-<C25 DRO AMT = 0.8804789 PPM

C25-C36 RRO AREA = 331593.5
C25-C36 RRO AMT = 1.093883 PPM

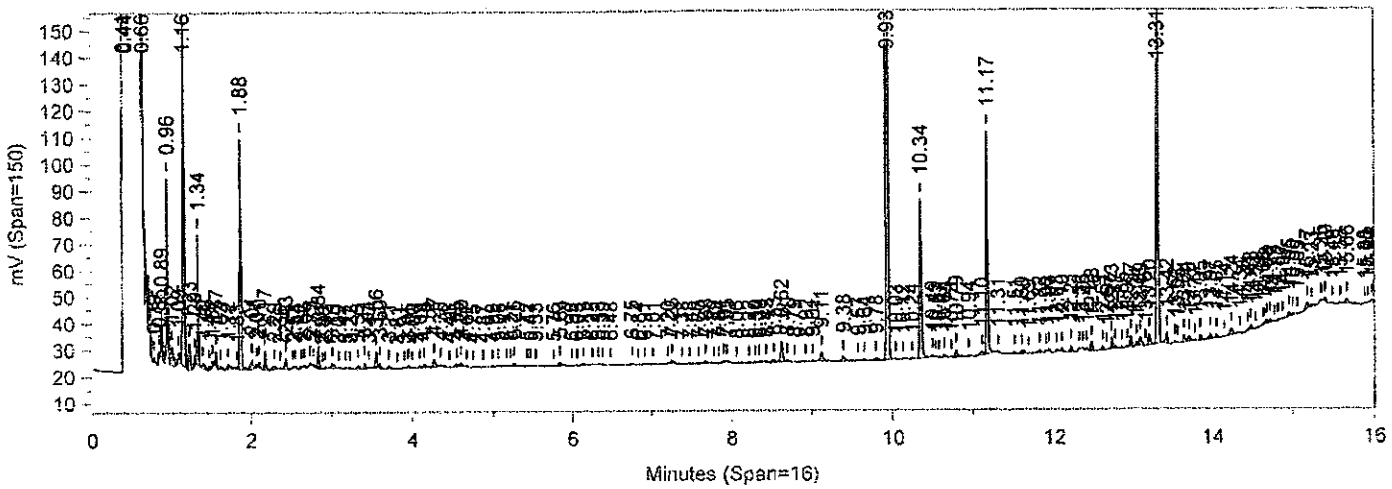
FILES:
Area File: C:\CPWIN\DATA1\M204.07A
Method File: C:\CPWIN\DATA1\AKRMSUM.MET
Calibration File: C:\CPWIN\DATA1\AKRM061B.CAL
Format File: C:\CPWIN\DATA1\AKRMSUM.FMT
Area file created on: 7/23/2009 10:30:58 AM
File reported on: 7/23/2009 at 10:30:59 AM

AKD28 8215

AK 102/103

BLANKA 7/22/09 AAPBLKTO BLK 092020025A 01738

C:\CPWIN\DATA1\M204.07R



Sample Name:BLANKA 7/22/09 AAPBLKTO BLK 092020025A 01738A

Instrument ID:CP24--H5386B Injected on: 7/23/2009 10:10:50 AM
Volume Inj. per Column: 1 GC Column: RTX-5 30Mx 0.32mm x 0.25um INJ 300C: DET 320C
Oven Parameters: 50C 1min; 15C/min to 180C; 30C/min to 340C HOLD 1.05min
Sample Amount: 25 Dilution Factor: 1
Analyst: 2105

Peak #	Ret Time (min)	Peak Name	Amount PPM	Peak Area	Peak Width (min)	Peak Height
33	2.732	C10	.	2676	.038	1448
109	9.932	o-Terphenyl SURR	.7459	548861	.025	352017
129	11.931	C24	.	1338	.02	1287
132	12.212	C25	.	3431	.02	2337
148	13.309	C30-d62 SURR	.7186	425929	.021	334140
164	14.632	C36	.	350	.019	195

Slice	Start Time	Stop Time	Slice Amount	Amount %	Slice Area	Area %

Total slice amount= 0.000 Total slice area= 0.0
Total slice amount %= 0.0 Total slice area %= 0.0

O-TERPHENYL % RECOVERY = 93.24104 %
C30-D62 SURR % RECOVERY = 89.82413 %

FILES:
Area File: C:\CPWIN\DATA1\M204.07A
Method File: C:\CPWIN\DATA1\REAKRM.MET
Calibration File: C:\CPWIN\DATA1\AKRM061B.CAL
Format File: C:\CPWIN\DATA1\REAKRM.FMT
Area file created on: 7/23/2009 10:31:12 AM
File reported on: 7/23/2009 at 10:31:14 AM

ARD28 [illegible]

Extraction/Distillation/Digestion Logs

Organic Extraction Batchlog

092020011A

Reviewed By: DMM Start Date: 7/22/09 Start Time: 2:45

Tech 1: Tracy Schichel Tech 2:

Prep Group # 327 AK TPH/DRO/RRO in Water Dept: 32 Prep Analysis # 02135 Extraction - DRO Water Special

QC	Sample Code	Amt (mL)	SS/IS Sol.	Amt (mL)	MS Sol.	Amt (mL)	FV (mL)	pH	pH	BC	Comments
BLANKA	PBLKSX	1000	SS0918332B	1.0			1.0	2	NA	NA	DIH2O
LCSA	LCSZW	↓	SS0918332B	↓	MS0917732B	1.0	↓	2	↓	↓	↓
LCSDA	LCSDJ9	↓	SS0918332B	↓	MS0917732B	↓	↓	2	↓	↓	↓

Solvent Used	Lot No.
1:1 HCl	9091-10
Methylene Chloride	HI7E25
Sodium Sulfate	092003A

Spike Solutions: **Witness:** DHUD

SS0918332B AK SURROGATE STANDARD
MS0917732B AK 102/103 WATER SPIKE

*added 5mL of 1:1 HCl to the blank, LCS, LCSD

	Sample #	Sample Code	Amt (mL)	SS/IS Sol.	Amt (mL)	FV (mL)	pH	pH	BC	Comments	Analyses	Due Date	Pr
1	5726707	SHGEB	1046	SS0918332B	1.0	1.0	2	NA	29A	Clear H2O	2923	7/28/2009	P
2	5726720	SHEB1	964	SS0918332B	↓	↓	2	↓	↓	↓	2923	7/28/2009	P
3													
4													
5													
6													
7													
8													
9													
10													
11													
12													
13													
14													
15													
16													
17													
18													
19													
20													

TS 1933 7/28/09

Rack ID:		Work Station:	H20Le
Internal Standard		Balance #	M

S-bath ID	90 °C	S-bath ID	°C	N-Evap	°C	M-vap	°C	092020011A

Documented temps are NIST corrected.

DF = Dilution Factor FV = Final Volume

Organic Extraction Batchlog

092020025A

Reviewed By: DMZ Start Date: 7-22-09 Start Time: 10:45 A.M.

Tech 1: 02898 Tech 2:

Prep Group # 427 AK TPH/DRO/RRO in Soil Dept: 32 Prep Analysis # 04833 Extraction / Fuel TPH (Soils)

QC	Sample Code	Amt (g)	SS/IS Sol.	Amt (mL)	MS Sol.	Amt (mL)	FV (mL)	pH	pH	BC	Comments
BLANKA	PBLKTO	25.0*	SS0918332B	1.0			1.0	NA	NA	NA	02898 ② 7/22/09 ~~30~~ OTTAWA Sand
LCSA	LCS0J	25.0*	SS0918332B		MS0917732A	1.0					
LCSDA	LCSDJL	25.0*	SS0918332B		MS0917732A						
5726704MS	SHG91MS		SS0918332B		MS0917732A					49A	moist Dark gray
5726704MSD	SHG91MSD		SS0918332B		MS0917732A						

02898 7-22-09

* 02898 ③ 7/22/09.

Solvent Used	Lot No.
Filter paper	K11671187
Methylene Chloride	093185
Ottawa Sand	503010-AA
Sodium Sulfate	092003A.

Spike Solutions: **Witness:** KRR02240

SS0918332B AK SURROGATE STANDARD
MS0917732A AK SOIL 102/103 SPIKE

	Sample #	Sample Code	Amt (g)	SS/IS Sol.	Amt (mL)	FV (mL)	pH	pH	BC	Comments	Analyses	Due Date	Pr
1	5726704 bkg	SHG91	25	SS0918332B	1.0	1.0	NA	NA	49A	moist Dark gray.	1738	7/28/2009	P
2	5726705	SHGD1	25	SS0918332B							1738	7/28/2009	P
3	5726706	SHG92	25	SS0918332B							1738	7/28/2009	P
4													
5													
6													
7													
8													
9													
10													
11													
12													
13													
14													
15													
16													
17													
18													
19													
20				micro-SOBs									

02898 7-22-09

Rack ID:		Work Station:	Sor Hood 5	S-bath ID 12	90 °C	S-bath ID	°C	N-Evap	°C	M-vap	°C	092020025A
Internal Standard		Balance #	2910									

Documented temps are NIST corrected.

DF = Dilution Factor FV = Final Volume

Moisture Data

Lancaster Laboratories

CLIENT: ChevronTexaco
SDG: AKD28

MOISTURE

SAMPLE NUMBERS:

Sample #	Sample Code
5726704	SHG91
5726705	SHGD1FD
5726706	SHG92

Laboratory Compliance Quality Control

Analysis Name	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: 09203820001A	Sample number(s): 5726704-5726706				
Moisture	100		99-101		

Sample Matrix Quality Control

Analysis Name	BKG Conc	DUP Conc	RPD	RPD Max
Batch number: 09203820001A	Sample number(s): 5726704-5726706			
Moisture	19.7	19.5	1	15

* - Outside of specification
(1) - The result for one or both determinations was less than five times the LOQ.

Moisture Data Report

Batch #: 09203820001

Sample ID	Batch ID	Analysis#	Tare Wt	Sample Wt	Dry Wt	%Moisture	Analysis Date (Emp#)	Verified Date (Emp#)
LCS 89.5% Std.			1.1060	5.0150	1.6369	89.41	7/22/09 (1201/SWF)	7/23/09 (0236/CW)
5726704	A	00111	1.1046	7.5818	6.3643	30.63	7/22/09 (1201/SWF)	7/23/09 (0236/CW)
5726705FD	A	00111	1.0972	8.8356	7.5803	26.63	7/22/09 (1201/SWF)	7/23/09 (0236/CW)
5726706	A	00111	1.0934	9.4450	8.4822	21.77	7/22/09 (1201/SWF)	7/23/09 (0236/CW)

AKD28 6216