CLEANUP AND RESTORATION REPORT
EAST SIDE OF HWY 141
NORTH BOUND LANE
NEAR MILE MARKER 127.8
GATEWAY, CO

FOR

LMH ENVIRONMENTAL
representing
GREAT WEST CASUALTY
representing
BASIN WESTERN INC.
3691 E HIGHWAY 40
PO BOX 877
ROOSEVELT, UT 84066

December 5, 2011

By

1048 Independent Ave, A-106
Grand Junction, CO 81505

S. A. Johnson
D. B. Redd

Cleanup and Restoration Report
East Side of Hwy 141
North Bound Lane
Near MM 127.8
Gateway, CO

For:

BASIN WESTERN INC.
3691 E HIGHWAY 40
PO BOX 877
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NRC #993433
CDPHE #2011-0767

On October 24, 2011 an accident occurred involving a trailer truck from Basin Western Inc. on Colorado Highway 141 near mile marker 127.8 on the east side of the north bound lane. The accident caused a rupture of the truck's tanker spilling approximately 4,700 gallons of crude oil onto the right of way and adjacent properties. The oil flowed down gradient into a classified "wetlands" area and from there seeped into West Creek. Girardi's Towing Inc. removed the truck and trailer from the accident site at about 9:00pm on the same date as the accident. The location of the accident site is shown on a U.S.G.S map of the area (Figure 1). Figure 2 shows the spill location, wetlands location, beaver pond, and boom locations. Figure 3 shows the excavated area and the soil sample locations.

The National Response Center was notified on October 24, 2011 and they assigned case #993433. CDPHE was notified and they assigned case #2011-0767. Steve Way with the Environmental Protection Agency was one of the first agencies onsite along with Ray Muldrew of LMH Environmental and coordination efforts were conducted between the EPA, LMH, STTI, and URS for the containment and clean-up efforts. The clean-up efforts were also coordinated with Mike Verketis of the Colorado Department of Transportation, U.S. Fish and Wildlife, Colorado Division of Wildlife, Army Corps of Engineers, and the affected land owner's.

On October 24, 2011 at about 11:45 am, Storage Tank Technology, Inc. (STTI) was retained by LMH Environmental Inc., environmental consultants for Great Western Casualty, to complete the environmental cleanup. STTI personnel arrived onsite about 2:45pm to assess the accident scene. When STTI arrived the Grand Junction Fire Department (GJFD) was in command of the scene. The GJFD along with the Colorado State Patrol had closed the north bound lane and was allowing one lane of traffic through the accident site. The GJFD was also placing oil absorbent booms downstream in West Creek. About 1 mile downstream of the accident GJFD and CDOT attempted to install an underflow dam to try and capture any floating oil prior to going downstream. The underflow dam failed about 2 hours later. STTI personnel were instructed by the GJFD to install booms upstream from the underflow dam to the accident

site. STTI also installed booms downstream in accessible sites to just east of Gateway at Niche Road. A small seep was noticed from the wetlands area into West Creek and booms were installed to collect the oil. Once the truck and trailer were towed away from the scene the GJFD handed over command of the cleanup to STTI. This happened around 10:00 pm on October 24, 2011.

On October 25, 2011 STTI personnel went back to the site to meet with Steve Way of the Environmental Protection Agency (EPA) and Ray Muldrew (LMH Environmental) to plan remediation efforts. The seep from the wetlands area was addressed and a small catch basin was established that captured the oil as it came out of the bank. The wetlands had captured most of the oil within its banks however; there was a considerable amount of oil seeping into the catch basin. The oil was transferred from this catch basin to tanks using a trash pump (3 inch and 4 inch trash pumps were used) to prevent overflow into the creek. Downstream, plastic skimmer skirts were made to divert the floating oil into eddy's to allow for physical removal. Rows of booms were placed downstream in a beaver pond to collect the floating oil preventing its migration further downstream. A skirted containment boom was rented and installed in the beaver pond to help the oil collect and not pass under. Workers with backpack weed blowers walked down the stream from the source to the beaver pond pushing the floating oil down to the collection booms. Once the oil was collected behind the booms workers using a hose attached to a vacuum truck skimmed the water surface collecting the oil. This process was done several times per day to collect the oil. At the source, a trench was dug by M & M Construction (subcontracted by STTI) along the birm of the wetlands catchment to a sump pit to allow for removal of the oil and to dewater the catchment allowing the oil from the wetlands to seep into the trench. A 20,000 gallon frac tank was delivered to an area close to the trench which was used to hold the oil/water mixture. The oil/water mixture was transferred from the sump pit to the frac tank using the trash pumps where tanker trucks (Reams Construction subcontracted by STTI) then transferred into their tanks and disposed of the mixture at 80 Ponds in Naturita, Colorado (Waste Manifests attached in Appendix III). Approximately 3,285 barrels (95970 gallons) of the oil/water mixture was removed from the wetlands and beaver pond. Reams was able to separate the oil from water on the first day of work. Approximately 600 gallons of oil were recovered from the beaver pond that day. Later truck loads had much less oil and separate measurements were not possible.

The affected landowners were contacted and granted clearance to do whatever was needed to conduct the removal and restoration. Pictures were taken of the land prior to any work being performed to help establish a baseline for restoration efforts. Fences were marked that were taken down to allow access for construction equipment and temporary fences were installed to corral two of the landowner's horses. The horses were eventually moved across Highway 141 to a neighboring property to prevent the horses from being disturbed.

Clearance was given by the U.S. Fish and Wildlife to allow digging of the wetlands area and dispose of the contaminated soil. The contaminated soil was hauled to 80 Ponds in trucks operated by Reams Construction. Approximately 1,016 yards of contaminated soil was disposed of at 80 Ponds. A silt fence was placed on the berm of the stream bank to prevent any contaminated soil from spilling into the stream. Once the contaminated soil was removed from

the wetlands area and the water within it was transferred into the frac tank the catch basin was cleaned a final time and clean fill was placed inside it. After the clean fill was compacted, ten inch river cobble was placed on top of it to help prevent erosion.

Daily efforts were made to walk downstream and push any pockets of oil down to the beaver pond that had the containment booms. Approximately 10 people per day walked the stream pushing the oil with rakes/shovels/skimmers to the booms over a 13 day period. The personnel were dressed in chest waders and rubber gloves while performing this duty. The booms that were installed in the stream were replaced daily with new booms. The spent booms and waders were placed in double lined plastic drum bags and set in a lined containment area where they remained until clearance of waste characterization was given by the S Road Facility for disposal.

The area where the tanker truck had ended up after the accident was a steep boulder slope. After confirming with CDOT that the slope could not be disturbed but remediation efforts needed to be conducted to remove the oil that had stained the boulders and settled into the crevices a plan was established to apply Microblaze (bacterial bioremediation agent). CDOT is requiring at least three (3) Microblaze applications. The first application was applied on November 3rd 2011, the second will be applied during the middle of December 2011, and the third will be applied in late spring of 2012 after temperatures warm. In the first application, a 10% mixture of MicroBlaze and water (535 gallons) heated to approximately 90 degrees Fahrenheit was applied to the boulders using a bladder pump, hose, and spray nozzle operated by STTI personnel. 1,000 gallons of heated water was applied to the boulders and crevices prior to the MicroBlaze to allow for a more suitable working condition for the microorganisms.

A permit was required to repair and replace the damaged guard rail within the CDOT ROW on Highway 141. CC Enterprises supplied the traffic control plan. A Special Use Permit (#3110349-S) was issued by the Colorado Department of Transportation. A copy of the permit is included in Appendix II.

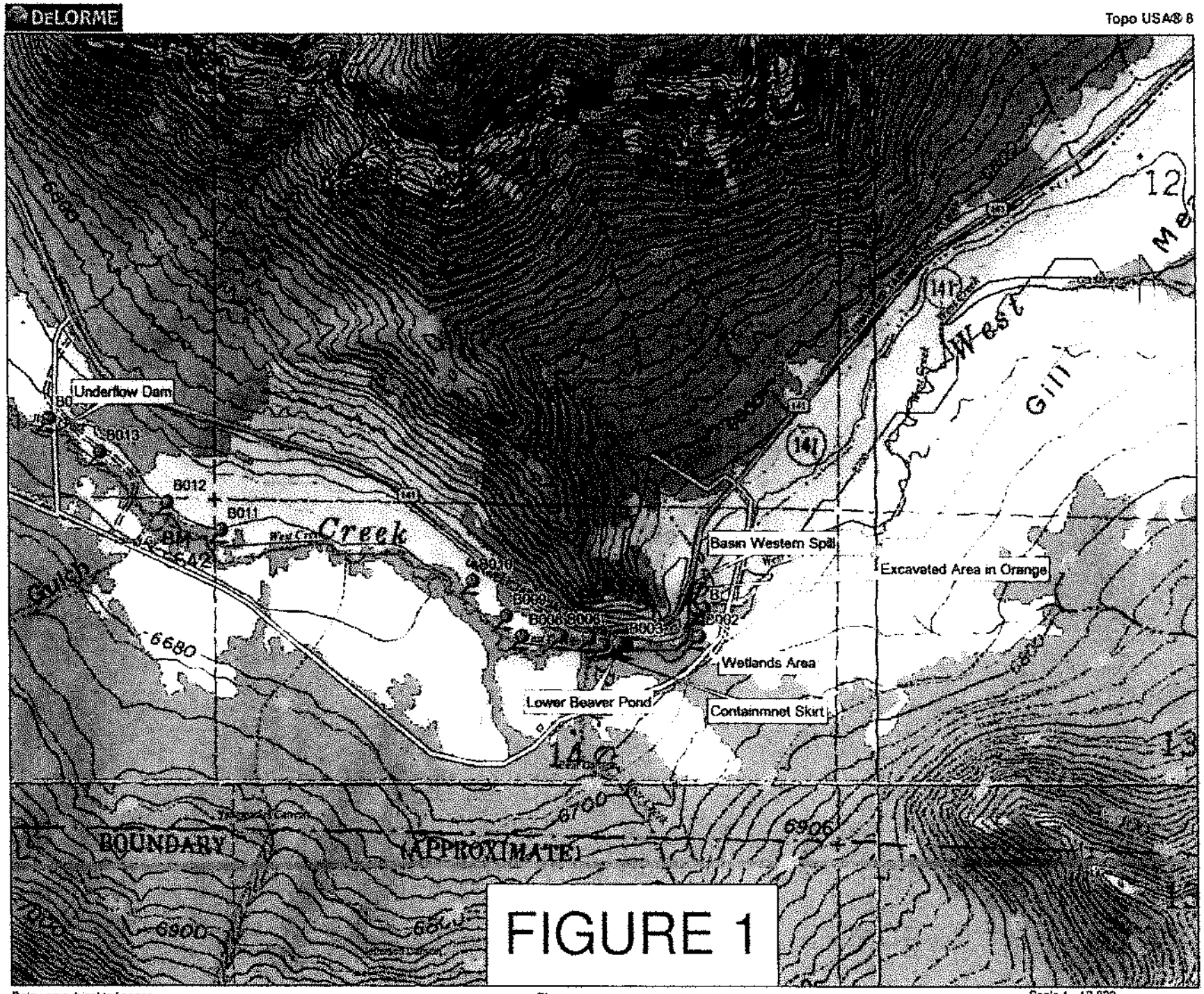
Restoration

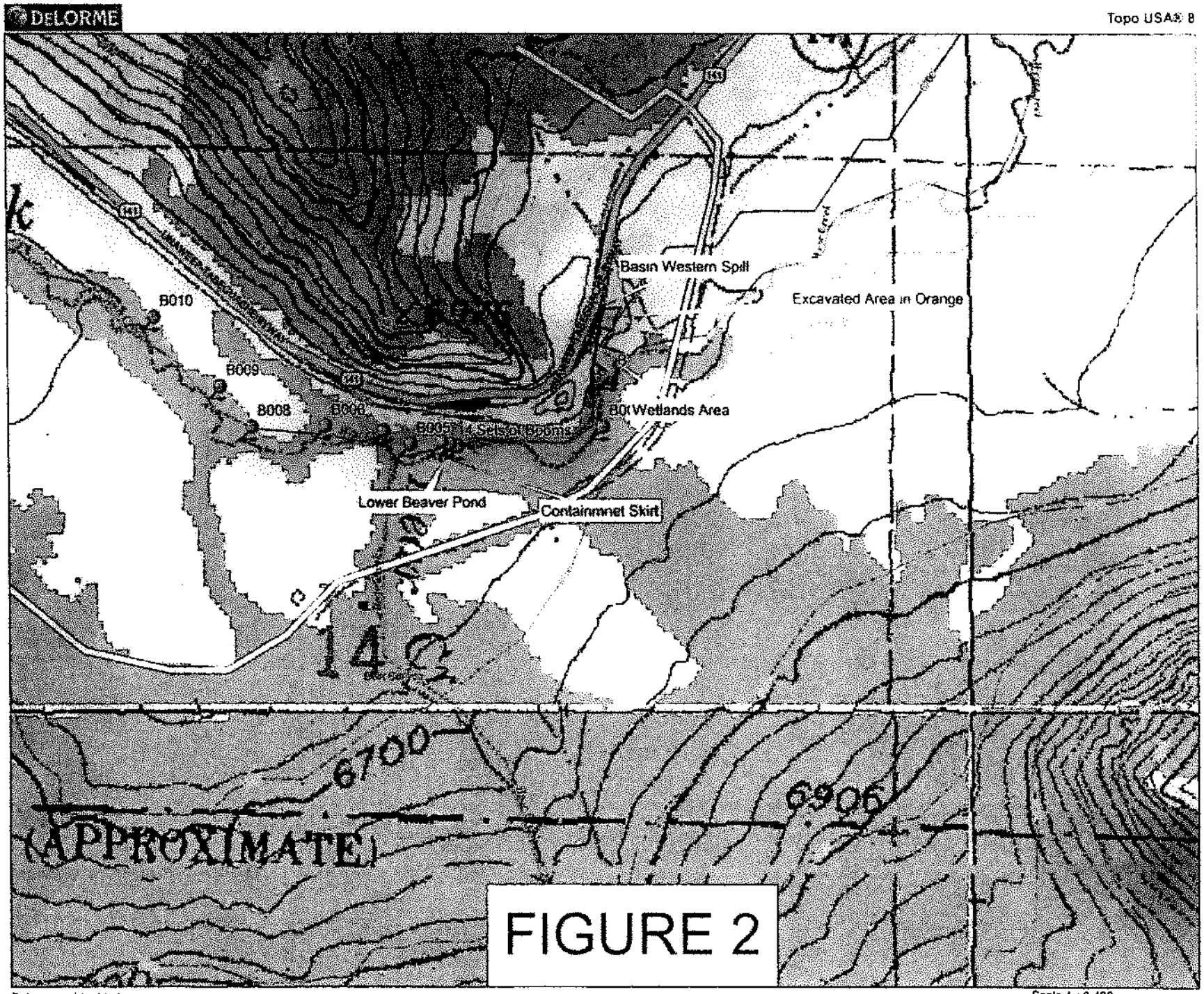
Once the contaminated soil had been removed and the absorbent booms were showing no staining of oil the restoration of the land was conducted. Four (4) soil samples were collected from the wetlands surface and from the area excavated along the toe of the boulder slope and analyzed for Diesel Range Organics (DRO) to conclude that the all of the contaminated soil had been removed (Table 1). The soil sample collected at the toe of the boulder slope was also analyzed using test 8260. The sample taken at the toe of the boulder slope (G-TOE,1') had 8260 results all with "no detection" results except m/p xylene which was 0.0012 mg/Kg (this value is less than the Practical Quantitation Limit). The analysis was conducted by Key Laboratories in Grand Junction, Colorado (results in Appendix I). All of the DRO samples were below detection limits. Clean fill was brought in from a local gravel pit and spread over the excavated area along the toe of the boulder slope down to the edge of the wetlands. The fill material was contoured to close to existing grade that met the landowner's needs. Local topsoil was then placed on top of the fill material. Furrows were tracked in perpendicular to the grade allowing for optimum

germination beds for vegetation. Green "T" stakes, treated round fence posts, and 4-strand barb wire were used to replace the fence that was removed during excavation. 400 linear feet straw waddles were placed along the contoured slope in multiple locations to help prevent soil erosion. 30 pounds of native grass seed was spread over the restored area in early November to allow for optimum germination in the spring.

The land near the beaver pond had 2 inch gravel spread over it for a road during remediation efforts. The fence along the county road was also taken down to allow access. The contaminated soil near the beaver pond was removed and hauled to the landfill. Once all of the booms were removed from the beaver pond the gravel was pushed into a pile and left for the landowners use. The fence was replaced using green "T" stakes, treated round fence posts, and barbed wire. Prior to the beaver ponds and stream freezing all of the booms were removed and disposed of. The area where the underflow dam was installed was contoured back to existing grade and the fence was replaced.

Photographs from various stages in the cleanup process are included in Appendix IV.


DeLORME
Topo USA® 8
Underflow Dam
B013
B012
B011
Creek
Gulch
6680
Basin Western Spill
Excaveted Area in Orange
B009
B008
B007
B003
B002
Wetlands Area
Lower Beaver Pond
Containmnet Skirt
West
Gill
141
6700
6900
BOUNDARY
(APPROXIMATE)
FIGURE 1
Data use subject to license
© DeLorme. Topo USA® 8
www.delorme.com
Scale 1 : 12,800
1" = 1,066.7 ft
Data Zoom 14.0



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Scale 1 : 6 400

1" = 533.3 ft

Data Zoom 15.0

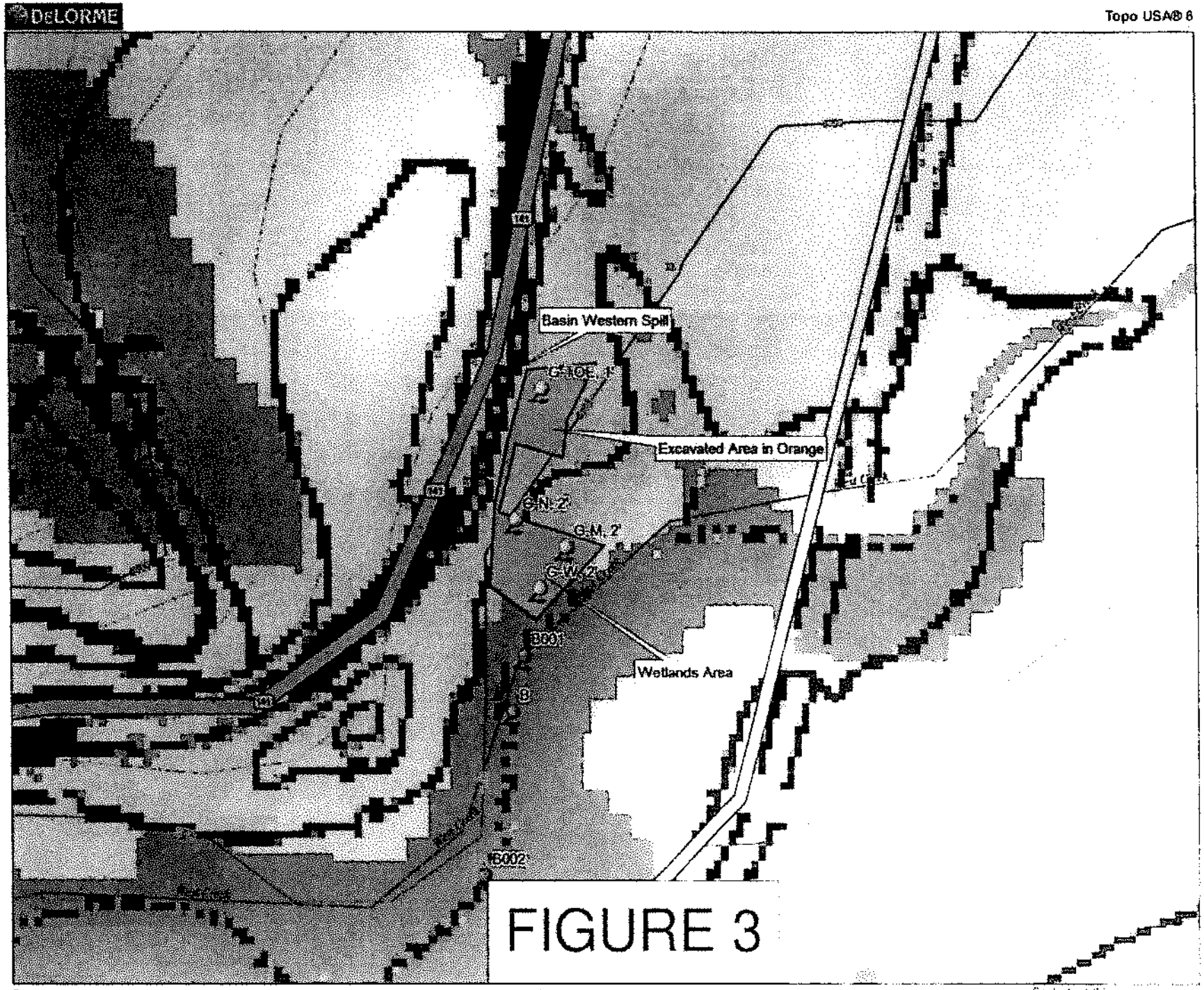

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TABLE 1

Lab results for accident at MM127.8 Highway 141

Sample	Date	DRO (mg/Kg)	Chromium (mg/Kg)	Arsenic (mg/Kg)	Selenium (mg/Kg)	Silver (mg/Kg)	Cadmium (mg/Kg)	Barium (mg/Kg)	Mercury (mg/Kg)	Lead (mg/Kg)	Oil/Grease (mg/Kg)	Sulfides (mg/L)	Cyanides (mg/Kg)
G-N,2'	11/4/2011	<19.9											
G-W,2'	11/4/2011	<20.0											
G-M,2'	11/4/2011	<19.9											
G-TOE, 1'	11/7/2011	<19.9											
Sample prior to excavation													
BW-WC	10/24/2011		8.4	0.78	ND	ND	0.12	47	ND	9.1	34,300	ND	ND

CDPHE Environmental Release and Incident System Report

Print date 10/24/2011

CASE NUMBER: 2011-0767 DATE ENTERED: 10/24/2011 TIME ENTERED: 12:18

WHO TOOK REPORT: ANN NEDROW DATE REPORTED: 10/24/2011 TIME REPORTED: 12:12:00 PM

NRC NUMBER: 993433

CALLER: TROY MARVEL CONFIDENTIAL: N PHONE: 970-249-4392

ORGANIZATION: COLORADO STATE PATROL HAZMAT

STREET: 2420 NORTH TOWNSEND AVE

CITY: MONTROSE COUNTY:

STATE: CO ZIP CODE: 81401-

POTENTIALLY RESPONSIBLE PARTY UNKNOWN AT THIS TIME

PRP CONTACT: PRP PHONE:

ADDRESS: FAX:

CITY: COUNTY:

STATE: CO ZIP CODE

EVENT DATE: 10/24/2011 EVENT TIME: 11:14:00 AM

LOCATION HIGHWAY 141, MM 128 MILE MARKER: 128

CITY: GRAND JUNCTION COUNTY: MESA

STATE: CO ZIP CODE

Latitude:

Longitude:

TYPE OF MATERIAL OIL

MATERIAL1:	CRUDE OIL	QUANTITY1:	7700	UNIT1:	OIL	QTY TO WATER1:	5000 UNIT1: G
MATERIAL2:		QUANTITY2:		UNIT2:		QTY TO WATER2:	UNIT2:
MATERIAL3:		QUANTITY3:		UNIT3:		QTY TO WATER3:	UNIT3:

SOURCE: H

SOURCE TYPE MOTOR VEHICLE

CAUSE: TRANSPORTATION ACCIDENT

CAUSE INFORMATION: Tanker was involved in rollover accident, spilling approx 7700 gallons of crude oil onto soil and a small unnamed creek. Montrose office of the state patrol looked it up and for now thinks the closest creek is likely West Creek, which drains to Bear Creek.

MEDIUM IMPACTED: WATER AND LAND ☐ Fixed Facility ☑ Land ☐ Air ☐ Groundwater

☑ Surface Water Waterway Impacted: WEST CREEK? --> BEAR CREEK

NUMBER OF DEATHS: 0 NUMBER OF INJURIES: 0 EVACUATION: N NUMBER EVACUATED:

CDPHE Environmental Release and Incident System Report

Print date 10/24/2011

ACTION TAKEN: Colorado State Patrol Hazmat is on the scene.

CDPHE NOTIFIED: CDOT: ANDY FLURKEY; WQCD: NICOLE OWENS, DAVID KURZ, JENNIFER MILLER, PAUL KOSIK, JOCELYN MULLEN, TOM SCHAFFER, MICHELLE THIEBAUD; HMWMD: WALTER AVRAMENKO, ROBERT BEIERLE, JERRY HENDERSON, JEFF EMMONS, KATHRYN STEWART, DAVID FOSTER, DPW: JAMIE ANTHONY, ERI

COMMENTS:

RESPONDERS: COLORADO STATE PATROL
HAZMAT

RESPONDER COMMENTS:

ADDITIONAL COMMENTS:

Key Laboratories, Inc.
2479A Riverside Parkway
Grand Junction, Colorado 81505-1319
Phone (970) 243-5311 Fax (970) 243-6010

Client	Storage Tank Technology, Inc.		
Client Project Name	LMH-Gateway		
Client Project Number			
Client Sample Number	BW-WC		
Client Sample Location	Hwy 141 Spill	Key Lab #	11-1360
Sampling Date	10/24/2011	Work Order #	1101111360
Sampling Time	18:30	Date Received	11/01/11
Sample Matrix	Soil	Analyst	11/08/11 RP
Sampler	Brett	Sample Prep	Total, Closed Vessel
Analysis Method	*ICP-MS, EPA Methods 6020 / 200.8	Prep Method	EPA SW846 Microwave Digestion Methods 3051 / 3015

Date Analyzed:	Monday, November 07, 2011 18:04:50	Monday, November 07, 2011 16:11:35
Key Lab Prep Batch Sample ID#	SI-1103-11-1360-12 1X10X	SI-1103-11-0000-01_LMB
Sample Comments:		LMB
Sample Aliquot [mgl]:	1127.7	1000
Prep Rh Spike Recovery:	1.061	1.038
Prep/Digestion DF==>>	44	50
Pass Audit =a>> x Total DF==>>	443	500

Significant Figures:	2
Reporting units:	mg

Analysis Method	Ion Mass	Time [ms]*	Symbol	RCRA Limit**	Audit	Analyte	Reported Value	Units	Method Blank	Blank DF	MDL ppm	PQL ppm	Max QL ppm
					8	<<== # Analytes Reported							
ICP-MS*	7	100	Li			Lithium		mg/Kg		500	0.25	1	100
ICP-MS*	9	10	Be			Beryllium		mg/Kg			<	<	<
ICP-MS*	11	10	B			Boron		mg/Kg			<	<	<
ICP-MS*	23	10	Na			Sodium		mg/Kg			<	<	<
ICP-MS*	24	10	Mg			Magnesium		mg/Kg			<	<	<
ICP-MS*	27	10	Al			Aluminum		mg/Kg			<	<	<
ICP-MS*	28	10	Si			Silicon		mg/Kg			<	<	<
ICP-MS*	31	10	P			Phosphorus		mg/Kg			<	<	<
ICP-MS*	39	10	K			Potassium		mg/Kg			<	<	<
ICP-MS*	44	20	Ca			Calcium		mg/Kg			<	<	<
ICP-MS*	48	10	Ti			Titanium		mg/Kg			<	<	<
ICP-MS*	51	100	V			Vanadium		mg/Kg		500	1.6	6	1000
ICP-MS*	52	100	Cr	100	x	Chromium	8.4	mg/Kg	<	500	0.4	1.6	500
ICP-MS*	55	10	Mn			Manganese		mg/Kg			<	<	<
ICP-MS*	54	20	Fe			Iron		mg/Kg			<	<	<
ICP-MS*	59	10	Co			Cobalt		mg/Kg			<	<	<
ICP-MS*	60	10	Ni			Nickel		mg/Kg			<	<	<
ICP-MS*	63	10	Cu			Copper		mg/Kg			<	<	<
ICP-MS*	66	10	Zn			Zinc		mg/Kg			<	<	<
ICP-MS*	75	200	As	100	x	Arsenic	0.78 J	mg/Kg	<	500	0.3	1.2	200
ICP-MS*	82	200	Se	20	x	Selenium	<	mg/Kg	<	500	0.3	1.2	200
ICP-MS*	88	10	Sr			Strontium		mg/Kg			<	<	<
ICP-MS*	98	10	Mo			Molybdenum		mg/Kg			<	<	<
ICP-MS*	107	100	Ag	100	x	Silver	<	mg/Kg	<	500	0.25	1	100
ICP-MS*	111	100	Cd	20	x	Cadmium	0.12	mg/Kg	<	500	0.02	0.08	500
ICP-MS*	123	10	Sb			Antimony		mg/Kg			<	<	<
ICP-MS*	137	100	Ba	2000	x	Barium	47	mg/Kg	<	500	0.03	0.12	1000
ICP-MS*	202	200	Hg	4	x	Mercury	<	mg/Kg	0.021 J	500	0.015	0.06	10
ICP-MS*	205	10	Tl			Thallium		mg/Kg			<	<	<
ICP-MS*	208	100	Pb	100	x	Lead	9.1	mg/Kg	<	500	0.05	0.2	500
ICP-MS*	232	10	Th			Thorium		mg/Kg			<	<	<
ICP-MS*	238	10	U			Uranium		mg/Kg			<	<	<

* Typically, all metals with >= 90[ms] integration time can be reported. Available at customer's request.

Notes: LMB = laboratory method blank, M and MD = sample matrix replicates

Notes: LCS = spiked laboratory method blank, MS and MSD = spiked sample matrix replicates

Notes: Au is spiked as sample prep surrogate and to facilitate analysis of Mercury, DF = Dilution Factor,

Notes: MDL = Method Detection Limit, PQL = Primary Quantitation Limit, MQL = Maximum Quantitation Limit,

Notes: < = less than MDL, J = Greater than MDL but less than PQL (4 x MDL), E = Estimated Value because it exceeds the MQL

Notes: n.a. = Not Applicable, Blank Space = Not Requested or Not Reported

Notes: RCRA TCLP Extract Limits: Ba = 100 ppm; [Cr, As,Ag,Pb] = 5ppm; [Se, Cd] = 1 ppm; Hg = 0.2 ppm

Notes: **(Total RCRA limits) are 20 times the TCLP extract limits because of TCLP sample size (100g) and extract volume (2000mL).

**EPA SW846 Method 1311, Revision 0, July 1992, Section 7.2 If a total analysis of the waste demonstrates that individual analytes are not present in the waste at levels that are presented in and/or exceed the regulatory limit, the application of the extraction procedure would not possibly be exceeded. See 40 CFR, Part 261.24.

Analyst / Reviewer

RP

Key Laboratories, Inc.
2479A Riverside Parkway
Grand Junction, Colorado 81505-1319
Phone (970) 243-5311 Fax (970) 243-6010

Final Results
Report Date: 11/08/11

Corrosivity Results

Key Lab#	Key COC#	Client Sample Name	Client Sample Location	Instrument Result	Units
11-1360	1101111360	BW-WC	Hwy 141 Spill	7.1	s.u.

Ignitability Results

Key Lab#	Key COC#	Client Sample Name	Instrument Result	Units
11-0003	0101110003	TVH Calibration Check	105	°F

Paint Filter Results

Key Lab#	Key COC#	Client Sample Name	Instrument Result
11-0003	0101110003	TVH Calibration Check	NO FREE LIQUID

Reactivity Results

Key Lab#	Key COC#	Client Sample Name	Instrument Result	Units
11-0003	0101110003	TVH Calibration Check		
	Sulfides		nd	mg/L
	Cyanides		nd	mg/L

Oil and Grease

Oil&Grease calculation sheet

Run Date	Matrix	Key Lab #	Oil & Grease Method Blank [g]	Moisture Multiplier	Aliquot [g, mL]	Empty Tare Weight [g]	Final Weight [g]	Aliquot Multiplier for mg/[Kg,L]	net weight gain [g]
11/2/2011	Soil	11-1360	0.0001	1	100.0000	94.1382	97.5652	10.0000	3.4270
			0.0001	1					

Oil & Grease RESULTS

Key COC#	Key Lab#	Sample Location	Sample ID	Oil & Grease Result	Units
1101111360	11-1360	Hwy 141 Spill	BW-WC	34,300	mg / Kg

Diesel Range Organics TEH

TEH(DRO) calculation sheet

Run Date	Matrix	Key Lab #	Hexane Volume [mL]	TEH Run Blank [ppm]	Moisture Multiplier	Aliquot [g, mL]	Instrument DF Multiplier	Multiplied Raw T.E.H. [ppm]
11/ 2/20 -0:23		11-0001	4		1	4.00	1.000	899.1
11/ 2/20 -0:24		11-0002	4		1	20.00	1.000	54.1
11/ 2/20 -0:25	Soil	11-1360	4		1	20.10	10.000	122673.1

TEPH (DRO C10-C28) RESULTS (method blank subtracted)

Key COC#	Key Lab#	Sample Location	Sample ID	Final TEH Results	Units
0101110001	11-0001	Key Labs Quality Control	Continuing Calibration Check	899	mg /
0101110002	11-0002	Key Labs Quality Control	Method Blank	< (20)	mg /
1101111360	11-1360	Hwy 141 Spill	BW-WC	24,400	mg / Kg

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\TEH_DATA\1111N02\0101001.D
Acq On : 3 Nov 20111 123:2
Sample : 11-0001, CC TEH 1000 ppm, 0101100000,
Misc : Diesel #2 in hexane
IntFile : TERPHEN.E
Quant Time: Nov 3 8:31 19111 Quant Results File: TEH_HP5.RES

Vial: 1
Operator: KEY
Inst : TEH 5890
Multiplr: 1.00

Quant Method : C:\HPCHEM\1\METHODS\TEH_HP5.M (Chemstation Integrator)
Title : TEH_HP5
Last Update : Tue Jan 18 14:44:13 2011
Response via : Initial Calibration
DataAcq Meth : TEH_HP5.M

Volume Inj. :
Signal Phase :
Signal Info :

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
2) S o-Terphenyl	13.57	7	0.000 ppm m
Spiked Amount 48.600 Range 50 - 150		Recovery =	0.00%#
Target Compounds			
1) H TEPH [DRO]	12.60	39399273	899.128 ppm

(f)=RT Delta > 1/2 Window
(m)=manual int.
0101001.D 624_MEOH.M Thu Nov 03 08:31:47 2011

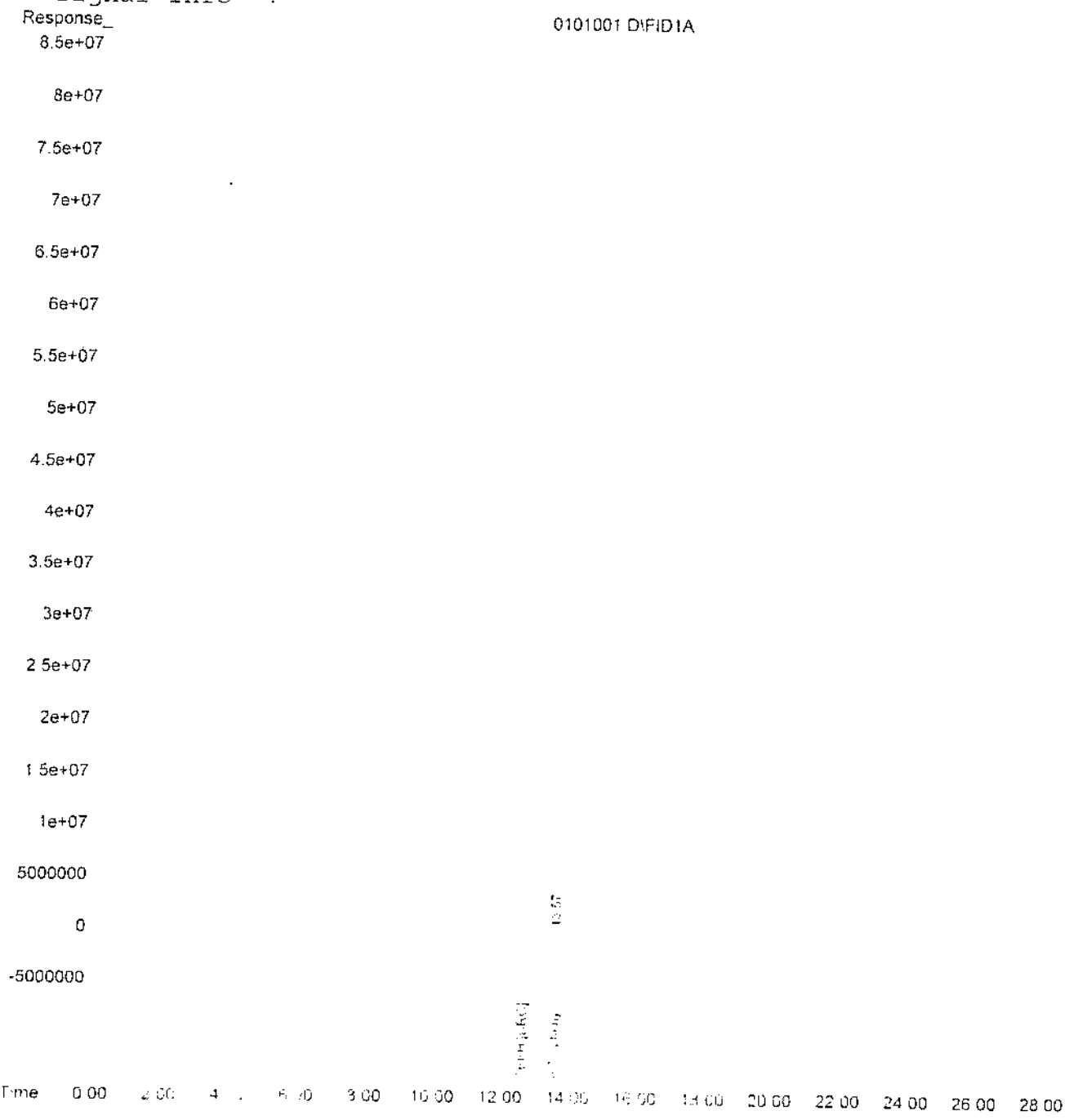
Quantitation Report

Data File : C:\HPCHEM\1\TEH_DATA\1111N02\0101001.D
Acq On : 2 Nov 20111 123:2
Sample : 11-0001, CC TEH 1000 ppm, 0101100000,
Misc : Diesel #2 in hexane
IntFile : EVENTS.E
Quant Time: Nov 3 8:31 19111 Quant Results File: TEH_HP5.RES

Vial: 1
Operator: KEY
Inst : TEH 5890
Multiplr: 1.00

Quant Method : C:\HPCHEM\1\METHODS\TEH_HP5.M (Chemstation Integrator)
Title : TEH_HP5
Last Update : Tue Jan 18 14:44:13 2011
Response via : Multiple Level Calibration
DataAcq Meth : TEH_HP5.M

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\TEH_DATA\1111N02\0201003.D
Acq On : 2 Nov 20111 124:4
Sample : 11-0002, Blank 11-02-11, 0101110000,
Misc : TEH Method Blank
IntFile : TERPHEN.E
Quant Time: Nov 2 17:10 19111 Quant Results File: TEH_HP5.RES

Vial: 2
Operator: KEY
Inst : TEH 5890
Multiplr: 1.00

Quant Method : C:\HPCHEM\1\METHODS\TEH_HP5.M (Chemstation Integrator)
Title : TEH_HP5
Last Update : Tue Jan 18 14:44:13 2011
Response via : Initial Calibration
DataAcq Meth : TEH_HP5.M

Volume Inj. :
Signal Phase :
Signal Info :

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
2) S o-Terphenyl	13.58	1370867	18.538 ppm
Spiked Amount 48.600 Range 50 - 150 Recovery = 38.14%#			
Target Compounds			
1) H TEPH [DRO]	12.60	2372147	54.135 ppm

(f)=RT Delta r/. Window (m)=manual int.
0201003.D 624_ME41.M Thu Nov 03 08:32:40 2011 RTEX5971GCMSPage 1

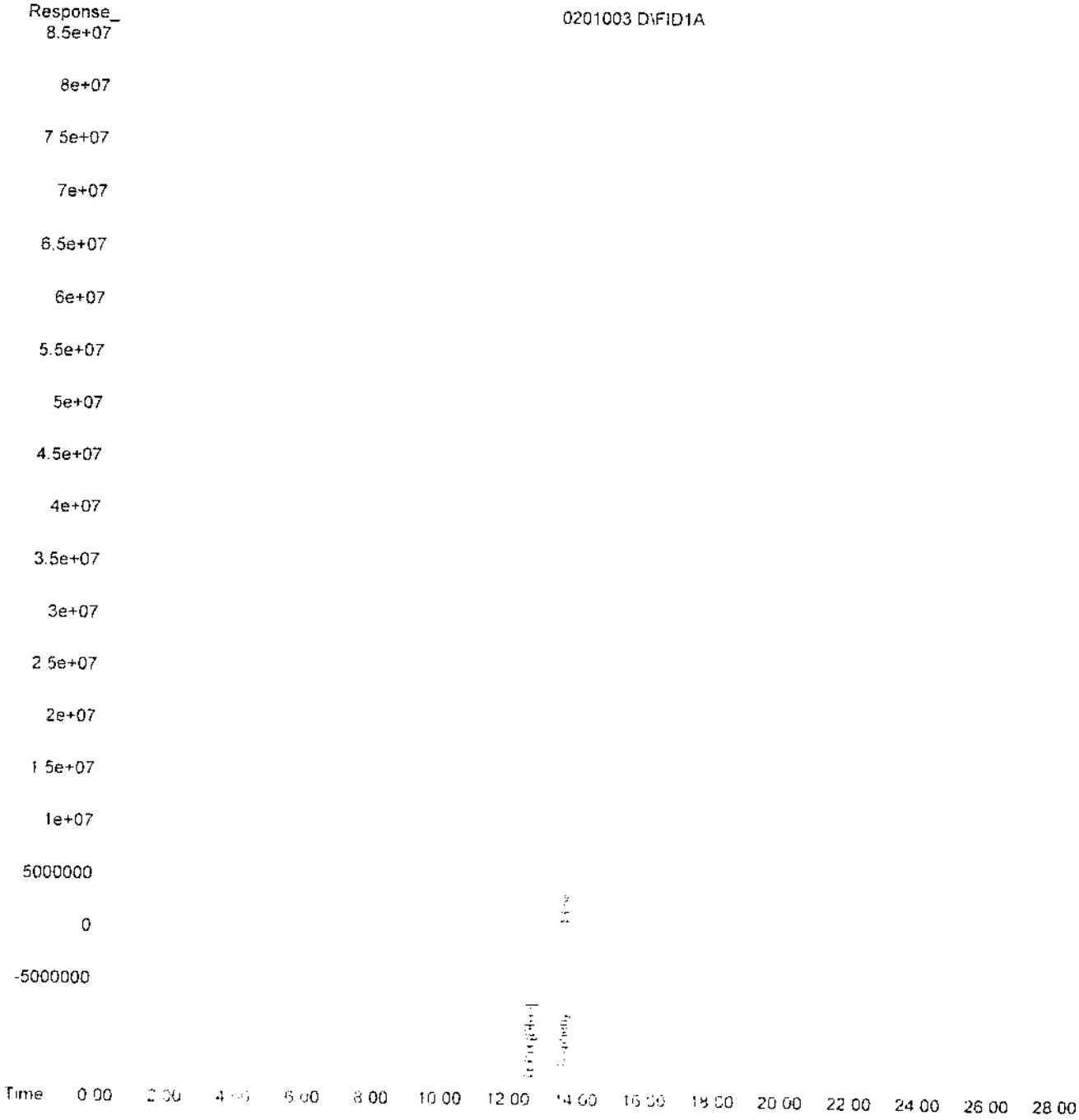
Quantitation Report

Data File : C:\HPCHEM\1\TEH_DATA\1111N02\0201003.D
Acq On : 2 Nov 20111 124:4
Sample : 11-0002, Blank 11-02-11, 0101110000,
Misc : TEH Method Blank
IntFile : EVENTS.E
Quant Time: Nov 2 17:10 19111 Quant Results File: TEH_HP5.RES

Vial: 2
Operator: KEY
Inst : TEH 5890
Multiplr: 1.00

Quant Method : C:\HPCHEM\1\METHODS\TEH_HP5.M (Chemstation Integrator)
Title : TEH_HP5
Last Update : Tue Jan 18 14:44:13 2011
Response via : Multiple Level Calibration
DataAcq Meth : TEH_HP5.M

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\TEH_DATA\1111N02\0401005.D
Acq On : 2 Nov 20111 125:5
Sample : 11-1360, BW-WC, 1101111360,
Misc : Soil, 20.10g, STTI, Deery
IntFile : TERPHEN.E
Quant Time: Nov 2 18:25 19111 Quant Results File: TEH_HP5.RES

Vial: 4
Operator: KEY
Inst : TEH 5890
Multiplr: 10.00

Quant Method : C:\HPCHEM\1\METHODS\TEH_HP5.M (Chemstation Integrator)
Title : TEH_HP5
Last Update : Tue Jan 18 14:44:13 2011
Response via : Initial Calibration
DataAcq Meth : TEH_HP5.M

Volume Inj. :
Signal Phase :
Signal Info :

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
2) S o-Terphenyl	13.60	3647749	49.329 ppm
Spiked Amount 48.600 Range 50 - 150 Recovery = 101.50%			
Target Compounds			
1) H TEPH [DRO]	12.60	537546288	122673.113 ppm

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report

Data File : C:\HPCHEM\1\TEH_DATA\1111N02\0401005.D
Acq On : 2 Nov 20111 125:5
Sample : 11-1360, BW-WC, 1101111360,
Misc : Soil, 20.10g, STTI, Deery
IntFile : EVENTS.E
Quant Time: Nov 2 18:25 19111 Quant Results File: TEH_HP5.RES

Vial: 4
Operator: KEY
Inst : TEH 5890
Multiplr: 10.00

Quant Method : C:\HPCHEM\1\METHODS\TEH_HP5.M (Chemstation Integrator)
Title : TEH_HP5
Last Update : Tue Jan 18 14:44:13 2011
Response via : Multiple Level Calibration
DataAcq Meth : TEH_HP5.M

Volume Inj. :
Signal Phase :
Signal Info :

8260 Analytical Report

KEY LABORATORIES, INC.
2479A Riverside Parkway
Grand Junction, CO 81505-1319
(970) 243-5311 FAX (970) 243-6010

Client: Storage Tank Technology, Inc.
Client Project Name: LMH-Gateway
Client Project Number:
Client Sample Number: BW-WC
Client Sample Location: Hwy 141 Spill
Sampling Date: 10/24/2011
Sampling Time: 18:30
Sample Matrix: Soil
Sampler: Brett
Key Labs Report Prefix:

% LOH: WET BASIS

QC Type: M
Key Lab #: 11-1360
Work Order #: 1101111360
Date Recieved: 11/01/11
Method: EPA SW846 5030/5035/8260
Technician: KEY
Data File Name: 0301003.D
Date Analyzed: 2 Nov 2011 13:30
Data File Path: C:\MSDCHEM\1\DATA_1111NOV02\
Lab Sample Information: Soil, 11.21g, 5ul, STTI, LMH-Gateway
Lab Sample Number: BW-WC, 11-1360, M, 1101111360,

Loss On Heating multiplier =
MeOH Extract/Dilution Aliquot [uL] = 5
Dilution/Extraction volume [mL] = 10
Reported==>> x

Significant Figures = 3
Sample vol/wt = 11.21
DF = 892.061

CAS#	Type	Target Compounds	Audit	R.T.	Resp.	Amt.	MDL	Units	DF	Final Conc.		Report Units	RDL	Qual	MQL
75-71-8	MI	dichlorodifluoromethane	x				2	ug	892.061		<	ug/Kg	1784.121		428189.117
74-87-3	MP1	chloromethane	x				2	ug	892.061		<	ug/Kg	1784.121		428189.117
75-01-4	MC1	vinyl chloride	x				2	ug	892.061		<	ug/Kg	1784.121		428189.117
67-64-1	MI	acetone (2-propanone)	x				10	ug	892.061		<	ug/Kg	8920.607		428189.117
60-29-7	MI	diethyl ether	x				10	ug	892.061		<	ug/Kg	8920.607		428189.117
74-83-9	MI	bromomethane	x				2	ug	892.061		<	ug/Kg	1784.121		428189.117
75-00-3	MI	chloroethane	x				2	ug	892.061		<	ug/Kg	1784.121		428189.117
75-69-4	MI	trichlorofluoromethane	x				1	ug	892.061		<	ug/Kg	892.061		428189.117
75-35-4	MC1	1,1-dichloroethene	x				1	ug	892.061		<	ug/Kg	892.061		428189.117
75-09-2	MI	methylene chloride	x				1	ug	892.061		<	ug/Kg	892.061		428189.117
76-13-1	MI	1,1,2-trichlorotrifluoroethane	x				1	ug	892.061		<	ug/Kg	892.061		428189.117
107-05-1	MI	allyl chloride	x				1	ug	892.061		<	ug/Kg	892.061		428189.117
156-60-5	MI	trans 1,2-dichloroethene	x				1	ug	892.061		<	ug/Kg	892.061		428189.117
1634-04-4	MI	[MTBE] methyl tert-butyl ether	x				1	ug	892.061		<	ug/Kg	892.061		428189.117
75-34-3	MP1	1,1-dichloroethane	x				1	ug	892.061		<	ug/Kg	892.061		428189.117
78-93-3	MI	[MEK] 2-butanone	x	2.51	16860	7.59	10	ug	892.061		<	ug/Kg	8920.607		428189.117
156-59-4	MI	cis 1,2-dichloroethene	x				1	ug	892.061		<	ug/Kg	892.061		428189.117
590-20-7	MI	2,2-dichloropropane	x				1	ug	892.061		<	ug/Kg	892.061		428189.117
74-97-5	MI	bromochloromethane	x				1	ug	892.061		<	ug/Kg	892.061		428189.117
67-66-3	MC1	chloroform (trichloromethane)	x				1	ug	892.061		<	ug/Kg	892.061		428189.117
109-99-9	MI	tetrahydrofuran	x				10	ug	892.061		<	ug/Kg	8920.607		428189.117
71-55-6	MI	1,1,1-trichloroethane	x				1	ug	892.061		<	ug/Kg	892.061		428189.117
107-06-2	MI	1,2-dichloroethane	x				1	ug	892.061		<	ug/Kg	892.061		428189.117
563-58-6	MI	1,1-dichloropropene	x				1	ug	892.061		<	ug/Kg	892.061		428189.117
71-43-2	MI	benzene	x	3.97	4487229	33.65	1	ug	892.061	30000.		ug/Kg	892.061		428189.117
56-26-5	MI	carbon tetrachloride	x				1	ug	892.061		<	ug/Kg	892.061		428189.117
79-01-6	MI	trichloroethene (TCE)	x				1	ug	892.061		<	ug/Kg	892.061		428189.117
78-87-5	MC1	1,2-dichloropropane	x				1	ug	892.061		<	ug/Kg	892.061		428189.117
74-95-3	MI	dibromomethane	x				1	ug	892.061		<	ug/Kg	892.061		428189.117
75-27-4	MI	bromodichloromethane	x				1	ug	892.061		<	ug/Kg	892.061		428189.117
10061-01-5	MI	cis 1,3-dichloropropene	x				1	ug	892.061		<	ug/Kg	892.061		428189.117
108-10-1	MI	[MIBK] 4-methyl-2-pentanone	x	6.51	15677	2.25	1	ug	892.061	2010.		ug/Kg	892.061	J	428189.117
108-88-3	MC1	toluene	x	7.49	18633873	227.36	2	ug	892.061	203000.		ug/Kg	1784.121		428189.117
10061-02-6	MI	trans 1,3-dichloropropene	x				1	ug	892.061		<	ug/Kg	892.061		285459.411
79-00-5	MI	1,1,2-trichloroethane	x	7.08	93991	5.48	1	ug	892.061	4880.		ug/Kg	892.061		428189.117
142-28-9	MI	1,3-dichloropropane	x				1	ug	892.061		<	ug/Kg	892.061		428189.117
124-48-1	MI	dibromochloromethane	x				1	ug	892.061		<	ug/Kg	892.061		428189.117
127-18-4	MI	tetrachloroethene (PERC)	x				1	ug	892.061		<	ug/Kg	892.061		428189.117
106-93-4	MI	1,2-dibromoethane	x				1	ug	892.061		<	ug/Kg	892.061		428189.117
108-90-7	MP1	chlorobenzene	x				1	ug	892.061		<	ug/Kg	892.061		428189.117
630-20-6	MI	1,1,1,2-tetrachloroethane	x				1	ug	892.061		<	ug/Kg	892.061		428189.117
100-41-4	MC1	ethylbenzene	x	11.24	12845911	85.16	1	ug	892.061	76000.		ug/Kg	892.061		428189.117
1	MI	m/p xylene	x	11.81	36605539	311.16	1	ug	892.061	278000.		ug/Kg	892.061		856378.234
100-42-5	MI	styrene	x				1	ug	892.061		<	ug/Kg	892.061		428189.117
95-47-6	MI	o-xylene	x	12.79	14858195	125.47	1	ug	892.061	112000.		ug/Kg	892.061		428189.117
75-25-2	MP2	bromoform (tribromomethane)	x				2	ug	892.061		<	ug/Kg	1784.121		285459.411
79-34-5	MP2	1,1,2,2-tetrachloroethane	x	12.83	47388	2.36	1	ug	892.061	2110.		ug/Kg	892.061	J	428189.117
98-82-8	M2	isopropylbenzene	x	13.86	3076026	20.09	1	ug	892.061	17900.		ug/Kg	892.061		428189.117
96-18-4	M2	1,2,3-trichloropropane	x				1	ug	892.061		<	ug/Kg	892.061		428189.117
108-86-1	M2	bromobenzene	x				1	ug	892.061		<	ug/Kg	892.061		428189.117
95-49-8	M2	2-chlorotoluene	x	14.83	99306	2.69	1	ug	892.061	2400.		ug/Kg	892.061	J	428189.117
103-65-1	M2	n-propylbenzene	x	14.80	1455122	33.80	1	ug	892.061	30200.		ug/Kg	892.061		428189.117
106-43-4	M2	4-chlorotoluene	x	14.96	14750	0.40	1	ug	892.061		<	ug/Kg	892.061		428189.117
108-67-8	M2	1,3,5-trimethylbenzene	x	15.34	6162395	49.63	1	ug	892.061	44300.		ug/Kg	892.061		428189.117

8260 Analytical Report

KEY LABORATORIES, INC.
2479A Riverside Parkway
Grand Junction, CO 81505-1319
(970) 243-5311 FAX (970) 243-6010

Client : Storage Tank Technology, Inc.
Client Project Name : LMH-Gateway
Client Project Number :
Client Sample Number : BW-WC
Client Sample Location : Hwy 141 Spill
Sampling Date : 10/24/2011
Sampling Time : 18:30
Sample Matrix : Soil
Sampler : Brett
Key Labs Report Prefix:

% LOH: WET BASIS

QC Type: M
Key Lab # : 11-1360
Work Order # : 1101111360
Date Recieved : 11/01/11
Method : EPA SW846 5030/5035/8260
Technician : KEY
Data File Name: 0301003.D
Date Analyzed : 2 Nov 2011 13:30
Data File Path : C:\MSDCHEM\1\DATA_111NOV02\
Lab Sample Information : Soil, 11.21g, 5ul, STTI, LMH-Gateway
Lab Sample Number : BW-WC, 11-1360, M, 1101111360,

Loss On Heating multiplier =
MeOH Extract/Dilution Aliquot [uL] = 5
Dilution/Extraction volume [mL] = 10
Reported==>> x

Significant Figures = 3
Sample vol/wt = 11.21
DF = 892.061

CAS#	Type	Target Compounds	Audit	RT	Resp.	Amt.	MDL	Units	DF	Final Conc.	Report Units	RDL	Qual	MQL
98-06-6	M2	tert-butylbenzene	x	15.60	47630	0.42	1	ug	892.061	<	ug/Kg	892.061		428189.117
95-63-6	M2	1,2,4-trimethylbenzene	x	15.77	20955957	171.63	1	ug	892.061	153000.	ug/Kg	892.061		428189.117
96-12-8	M2	1,2-dibromo-3-chloropropane	x				2	ug	892.061	<	ug/Kg	1784.121		285459.411
541-73-1	M3	1,3-dichlorobenzene	x				1	ug	892.061	<	ug/Kg	892.061		428189.117
99-87-6	M3	p-isopropyltoluene	x	16.11	1470767	10.68	1	ug	892.061	9530.	ug/Kg	892.061		428189.117
135-98-8	M3	sec-butylbenzene	x	15.85	2522781	14.67	1	ug	892.061	13100.	ug/Kg	892.061		428189.117
106-46-7	M3	1,4-dichlorobenzene	x				1	ug	892.061	<	ug/Kg	892.061		428189.117
95-50-1	M3	1,2-dichlorobenzene	x				1	ug	892.061	<	ug/Kg	892.061		428189.117
104-51-8	M3	n-butylbenzene	x	16.50	2112026	15.51	1	ug	892.061	13800.	ug/Kg	892.061		428189.117
120-82-1	M3	1,2,4-trichlorobenzene	x	17.75	11942	0.30	2	ug	892.061	<	ug/Kg	1784.121		428189.117
87-68-3	M3	hexachlorobutadiene	x	17.98	12492	0.47	2	ug	892.061	<	ug/Kg	1784.121		428189.117
91-20-3	M3	napthylene	x	17.89	1834389	25.00	2	ug	892.061	22300.	ug/Kg	1784.121		428189.117
87-61-6	M3	1,2,3-trichlorobenzene	x	18.02	20403	0.57	2	ug	892.061	<	ug/Kg	1784.121		428189.117

CAS#	Type	Internal Standard Compounds			Resp.	Amt.	CCV Area%	Units	Initial Area%	Init. Resp.	Water Limits	Soil Limits	Spike
1868-53-7	S1	dibromofluoromethane	x	2.90	3328771	62.84	82.1	ug	68.5	4861497	81 - 120	73 - 127	69.9
17060-07-0	S1	1,2 dichloroethane-d4	x	3.33	923607	68.87	94.5	ug	78.3	1180033	82 - 118	83 - 117	69.9
2037-26-5	S1	toluene-d8	x	7.35	7381622	70.63	95.6	ug	81.1	9102043	89 - 111	86 - 114	69.9
460-00-4	S2	4-bromofluorobenzene	x	13.77	4037600	70.51	93.4	ug	80.8	4995968	81 - 119	72 - 128	69.9

CAS#	Type	Internal Standard Compounds			Resp.	Amt.	CCV Area%	Units	Initial Area%	Init. Resp.	Water Limits	Soil Limits	Spike
462-06-6	I1	fluorbenzene	x	4.29	8243655	69.90	97.3	ug	80.8	10207875	50 - 150	50 - 150	69.9
3114-55-4	I2	chlorobenzene-d5	x	10.47	1514847	69.90	94.1	ug	82.1	1845015	50 - 150	50 - 150	69.9
3855-82-1	I3	1,4-dichlorobenzene-d4	x	15.88	3263195	69.90	92.6	ug	83.6	3902664	50 - 150	50 - 150	69.9

MDL = Method Detection Limit
PQL = Practical Quantition Limit = 4 x MDL
RDL = Reporting Detection Limit = MDL x Dilution Factor
MQL = Maximum Quantitation Limit = 110% x DF x Highest Calibration Standard

Reporting basis is Kg for solids and L for liquids

J qualifier = MDL < Result < PQL
E qualifier = Estimated Result > Highest Calibration Standard

Analyst

Approved

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA_1111nov02\
Data File : 0301003.D
Acq On : 2 Nov 2011 13:30
Operator : KEY
Sample : BW-WC, 11-1360, M, 1101111360,
Misc : Soil, 11.21g, 5ul, STTI, LMH-Gateway
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Nov 02 13:50:36 2011
Quant Method : C:\MSDCHEM\1\5973N\48260VRX.M
Quant Title : 4VRX8260 5973_8260 - Method 524.2 List - Purgable Thu Jul 28 15:
:36 2011
QLast Update : Thu Jul 28 15:27:36 2011
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) fluorbenzene	4.29	96	8243655	69.90 ug	0.00
50) chlorobenzene-d5	10.47	54	1514847+	69.90 ug	0.00
64) 1,4-dichlorobenzene-d4	15.88	152	3263195+	69.90 ug	0.00

System Monitoring Compounds

22) dibromofluoromethane	2.90	113	3328771+	62.84 ug	0.00
Spiked Amount 69.900	Range 73 - 127		Recovery = 89.90%		
25) 1,2 dichloroethane-d4	3.33	67	923607	68.87 ug	0.00
Spiked Amount 69.900	Range 83 - 117		Recovery = 98.53%		
36) toluene-d8	7.35	98	7381622	70.63 ug	0.00
Spiked Amount 69.900	Range 86 - 114		Recovery = 101.04%		
55) 4-bromofluorobenzene	13.77	174	4037600+	70.51 ug	0.00
Spiked Amount 69.900	Range 72 - 128		Recovery = 100.87%		

Target Compounds

					Qvalue
2) dichlorodifluoromethane	0.00	85	0	N.D.	
3) chloromethane	0.00	50	0	N.D.	
4) vinyl chloride	0.00	62	0	N.D.	
5) acetone (2-propanone)	0.00	58	0	N.D.	
6) diethyl ether	0.00	74	0	N.D.	
7) bromomethane	0.00	94	0	N.D.	
8) chloroethane	0.00	64	0	N.D.	
9) trichlorofluoromethane	0.00	101	0	N.D.	
10) 1,1-dichloroethene	0.00	96	0	N.D.	
11) methylene chloride	0.00	84	0	N.D.	
12) 1,1,2-trichlorotrifluoroet	0.00	151	0	N.D.	
13) allyl chloride	0.00	78	0+	N.D.	
14) trans 1,2-dichloroethene	0.00	96	0	N.D.	
15) [MTBE] methyl tert-butyl e	0.00	73	0	N.D.	
16) 1,1-dichloroethane	0.00	63	0	N.D.	
17) [MEK] 2-butanone	2.51	72	16860	7.59 ug #	1
18) cis 1,2-dichloroethene	0.00	96	0	N.D.	
19) 2,2-dichloropropane	0.00	77	0	N.D.	
20) bromochloromethane	0.00	128	0+	N.D.	
21) chloroform (trichlorometha	0.00	83	0	N.D.	
23) tetrahydrofuran	0.00	72	0+	N.D.	
24) 1,1,1-trichloroethane	0.00	97	0+	N.D.	
26) 1,2-dichloroethane	0.00	62	0	N.D.	
27) 1,1-dichloropropene	0.00	75	0	N.D.	
28) benzene	3.97	78	4487229	33.65 ug	99
29) carbon tetrachloride	0.00	117	0	N.D.	
30) trichloroethene (TCE)	0.00	130	0+	N.D.	
31) 1,2-dichloropropane	0.00	63	0	N.D.	
32) dibromomethane	0.00	174	0	N.D.	
33) bromodichloromethane	0.00	83	0	N.D.	
34) cis 1,3-dichloropropene	0.00	75	0	N.D.	
35) [MIBK] 4-methyl-2-pentanon	6.51	58	15677	2.25 ug #	1
37) toluene	7.49	92	18633873	227.36 ug	98
38) trans 1,3-dichloropropene	0.00	75	0	N.D.	
39) 1,1,2-trichloroethane	7.08	83	93991	5.48 ug #	1
40) 1,3-dichloropropane	0.00	76	0	N.D.	
41) dibromochloromethane	0.00	129	0	N.D.	
42) tetrachloroethene (PERC)	0.00	166	0+	N.D.	

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA_1111nov02\
Data File : 0301003.D
Acq On : 2 Nov 2011 13:30
Operator : KEY
Sample : BW-WC, 11-1360, M, 1101111360,
Misc : Soil, 11.21g, 5ul, STTI, LMH-Gateway
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Nov 02 13:50:36 2011
Quant Method : C:\MSDCHEM\1\5973N\48260VRX.M
Quant Title : 4VRX8260 5973_8260 - Method 524.2 List - Purgable Thu Jul 28 15:
:36 2011
QLast Update : Thu Jul 28 15:27:36 2011
Response via : Initial Calibration

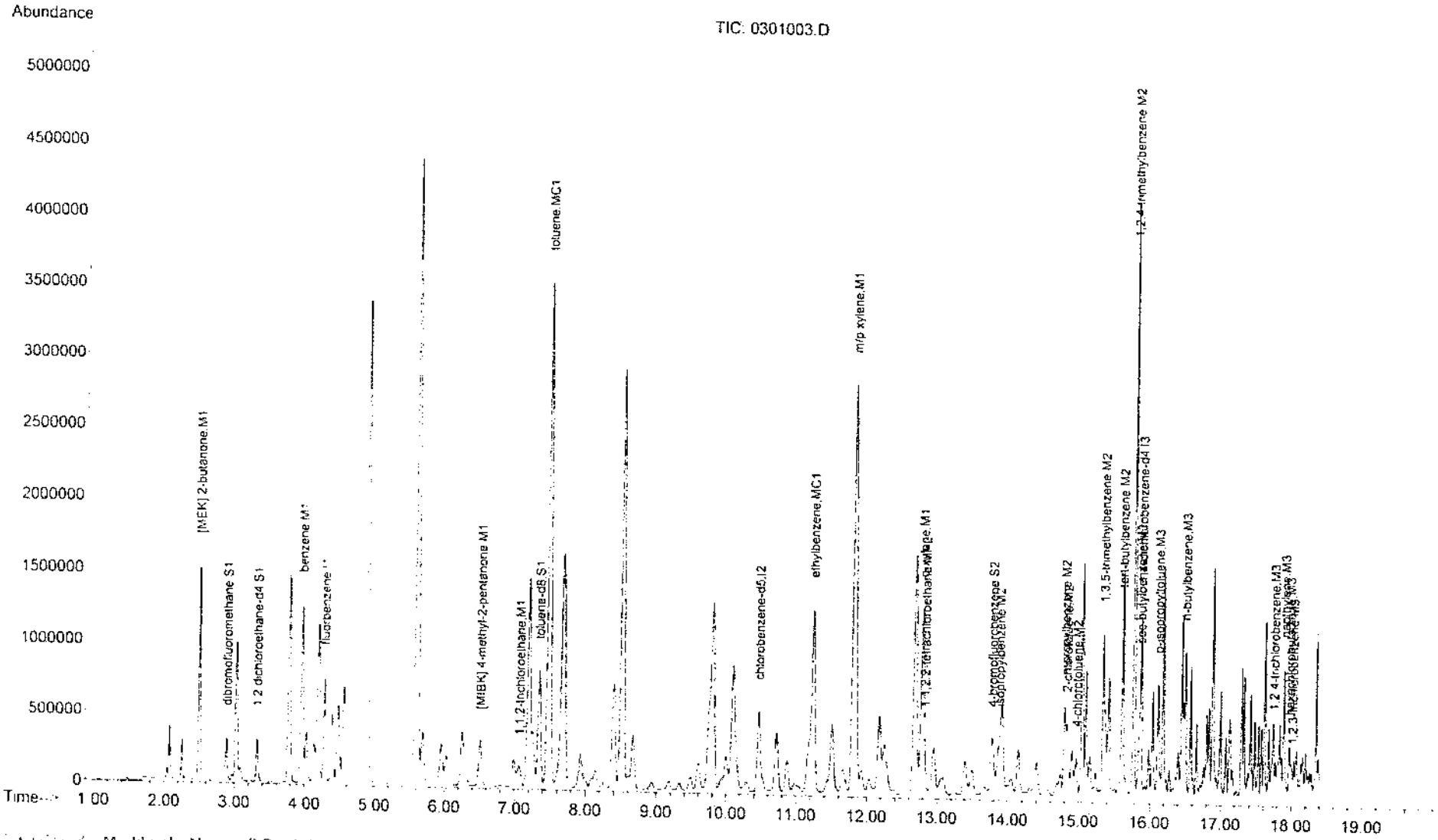
Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
43) 1,2-dibromoethane	0.00	107	0	N.D.		
44) chlorobenzene	0.00	112	0	N.D.		
45) 1,1,1,2-tetrachloroethane	0.00	131	0	N.D.		
46) ethylbenzene	11.24	91	12845911	85.16 ug		100
47) m/p xylene	11.81	91	36605539	311.16 ug		99
48) styrene	0.00	104	0	N.D.		
49) o-xylene	12.79	91	14858195	125.47 ug		100
51) bromoform (tribromomethane	0.00	173	0	N.D.		
52) 1,1,2,2-tetrachloroethane	12.83	83	47388	2.36 ug	#	29
53) isopropylbenzene	13.86	105	3076026	20.09 ug	#	99
54) 1,2,3-trichloropropane	0.00	75	0	N.D.		
56) bromobenzene	0.00	156	0	N.D.		
57) 2-chlorotoluene	14.83	126	99306	2.69 ug	#	1
58) n-propylbenzene	14.80	120	1455122	33.80 ug	#	30
59) 4-chlorotoluene	14.96	126	14750	0.40 ug	#	1
60) 1,3,5-trimethylbenzene	15.34	105	6162395	49.63 ug		97
61) tert-butylbenzene	15.60	119	47630	0.42 ug	#	85
62) 1,2,4-trimethylbenzene	15.77	105	20955957	171.63 ug		98
63) 1,2-dibromo-3-chloropropan	0.00	157	0+	N.D.		
65) 1,3-dichlorobenzene	0.00	146	0	N.D.		
66) p-isopropyltoluene	16.11	119	1470767	10.68 ug		98
67) sec-butylbenzene	15.85	105	2522781	14.67 ug	#	21
68) 1,4-dichlorobenzene	0.00	146	0	N.D.		
69) 1,2-dichlorobenzene	0.00	146	0	N.D.		
70) n-butylbenzene	16.50	91	2112026	15.51 ug	#	80
71) 1,2,4-trichlorobenzene	17.75	180	11942	0.30 ug	#	1
72) hexachlorobutadiene	17.98	225	12492	0.47 ug	#	1
73) napthylene	17.89	128	1834389	25.00 ug	#	84
74) 1,2,3-trichlorobenzene	18.02	180	20403	0.57 ug	#	1

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\ 1111nov02\
Data File : 0301003.D
Acq On : 2 Nov 2011 13:30
Operator : KEY
Sample : BW-WC, 11-1360, M, 1101111360,
Misc : Soil, 11.21g, 5ul, STTI, LMH-Gateway
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Nov 02 13:50:30 2011
Quant Method : C:\MSDCHEM\1\5973N\48260VRX.M
Quant Title : 4VRX8260 5973 8260 - Method 524.2 List - Purgable Thu Jul 28 15:27:36 2011
Quant Update : Thu Jul 28 15:27:36 2011
Response via : Initial Calibration



48260VRX.M Wed Nov 02 14:[illegible]:04 2011

8260 Analytical Report

KEY LABORATORIES, INC.
2479A Riverside Parkway
Grand Junction, CO 81505-1319
(970) 243-5311 FAX (970) 243-6010

Client : Storage Tank Technology, Inc.
Client Project Name : LMH-Gateway
Client Project Number :
Client Sample Number : BW-WC
Client Sample Location : Hwy 141 Spill
Sampling Date : 10/24/2011
Sampling Time : 18:30
Sample Matrix : Soil
Sampler : Brett
Key Labs Report Prefix:

% LOH: WET BASIS

Loss On Heating multiplier =
MeOH Extract/Dilution Aliquot [uL] = 5
Dilution/Extraction volume [mL] = 10
Reported==>> x

QC Type: MD
Key Lab # : 11-1360
Work Order # : 1101111360
Date Recieved : 11/01/11
Method : EPA SW846 5030/5035/8260
Technician : KEY
Data File Name: 0401004.D
Date Analyzed : 2 Nov 2011 13:56
Data File Path : C:\MSDCHEM\1\DATA_1111NOV02\
Lab Sample Information : Soil, 11.21g, 5ul, STTI, LMH-Gateway
Lab Sample Number : BW-WC, 11-1360, MD, 1101111360,
Significant Figures = 3
Sample vol/wt = 11.21
DF = 892.061

CAS#	Type	Target Compounds	Audit	R.T.	Resp	Amt.	MDL	Units	DF	Final Conc	Report Units	RDL	Qual	MQL
75-71-8	M1	dichlorodifluoromethane	x				2	ug	892.061	<	ug/Kg	1784.121		428189.117
74-87-3	MP1	chloromethane	x				2	ug	892.061	<	ug/Kg	1784.121		428189.117
75-01-4	MC1	vinyl chloride	x				2	ug	892.061	<	ug/Kg	1784.121		428189.117
67-64-1	M1	acetone (2-propanone)	x				10	ug	892.061	<	ug/Kg	8920.607		428189.117
60-29-7	M1	diethyl ether	x				10	ug	892.061	<	ug/Kg	8920.607		428189.117
74-83-9	M1	bromomethane	x				2	ug	892.061	<	ug/Kg	1784.121		428189.117
75-00-3	M1	chloroethane	x				2	ug	892.061	<	ug/Kg	1784.121		428189.117
75-69-4	M1	trichlorofluoromethane	x				1	ug	892.061	<	ug/Kg	892.061		428189.117
75-35-4	MC1	1,1-dichloroethene	x				1	ug	892.061	<	ug/Kg	892.061		428189.117
75-09-2	M1	methylene chloride	x				1	ug	892.061	<	ug/Kg	892.061		428189.117
76-13-1	M1	1,1,2-trichlorotrifluoroethane	x				1	ug	892.061	<	ug/Kg	892.061		428189.117
107-05-1	M1	allyl chloride	x				1	ug	892.061	<	ug/Kg	892.061		428189.117
156-60-5	M1	trans 1,2-dichloroethene	x				1	ug	892.061	<	ug/Kg	892.061		428189.117
1634-04-4	M1	[MTBE] methyl tert-butyl ether	x				1	ug	892.061	<	ug/Kg	892.061		428189.117
75-34-3	MP1	1,1-dichloroethane	x				1	ug	892.061	<	ug/Kg	892.061		428189.117
78-93-3	M1	[MEK] 2-butanone	x	2.51	16454	7.26	10	ug	892.061	<	ug/Kg	8920.607		428189.117
156-59-4	M1	cis 1,2-dichloroethene	x				1	ug	892.061	<	ug/Kg	892.061		428189.117
590-20-7	M1	2,2-dichloropropane	x				1	ug	892.061	<	ug/Kg	892.061		428189.117
74-97-5	M1	bromochloromethane	x				1	ug	892.061	<	ug/Kg	892.061		428189.117
67-66-3	MC1	chloroform (trichloromethane)	x				1	ug	892.061	<	ug/Kg	892.061		428189.117
109-99-9	M1	tetrahydrofuran	x				10	ug	892.061	<	ug/Kg	8920.607		428189.117
71-55-6	M1	1,1,1-trichloroethane	x				1	ug	892.061	<	ug/Kg	892.061		428189.117
107-06-2	M1	1,2-dichloroethane	x				1	ug	892.061	<	ug/Kg	892.061		428189.117
563-58-6	M1	1,1-dichloropropene	x				1	ug	892.061	<	ug/Kg	892.061		428189.117
71-43-2	M1	benzene	x	3.97	4718306	34.66	1	ug	892.061	30900.	ug/Kg	892.061		428189.117
56-26-5	M1	carbon tetrachloride	x				1	ug	892.061	<	ug/Kg	892.061		428189.117
79-01-6	M1	trichloroethene (TCE)	x				1	ug	892.061	<	ug/Kg	892.061		428189.117
78-87-5	MC1	1,2-dichloropropane	x				1	ug	892.061	<	ug/Kg	892.061		428189.117
74-95-3	M1	dibromomethane	x				1	ug	892.061	<	ug/Kg	892.061		428189.117
75-27-4	M1	bromodichloromethane	x				1	ug	892.061	<	ug/Kg	892.061		428189.117
10061-01-5	M1	cis 1,3-dichloropropene	x				1	ug	892.061	<	ug/Kg	892.061		428189.117
108-10-1	M1	[MIBK] 4-methyl-2-pentanone	x	6.51	17433	2.45	1	ug	892.061	2190.	ug/Kg	892.061	J	428189.117
108-88-3	MC1	toluene	x	7.48	19118066	228.46	2	ug	892.061	204000.	ug/Kg	1784.121		428189.117
10061-02-6	M1	trans 1,3-dichloropropene	x				1	ug	892.061	<	ug/Kg	892.061		285459.411
79-00-5	M1	1,1,2-trichloroethane	x	7.07	99235	5.66	1	ug	892.061	5050.	ug/Kg	892.061		428189.117
142-28-9	M1	1,3-dichloropropane	x				1	ug	892.061	<	ug/Kg	892.061		428189.117
124-48-1	M1	dibromochloromethane	x				1	ug	892.061	<	ug/Kg	892.061		428189.117
127-18-4	M1	tetrachloroethene (PERC)	x				1	ug	892.061	<	ug/Kg	892.061		428189.117
106-93-4	M1	1,2-dibromoethane	x				1	ug	892.061	<	ug/Kg	892.061		428189.117
108-90-7	MP1	chlorobenzene	x				1	ug	892.061	<	ug/Kg	892.061		428189.117
630-20-6	M1	1,1,1,2-tetrachloroethane	x				1	ug	892.061	<	ug/Kg	892.061		428189.117
100-41-4	MC1	ethylbenzene	x	11.24	13375706	86.85	1	ug	892.061	77500.	ug/Kg	892.061		428189.117
1	M1	m/p xylene	x	11.81	37743478	314.22	1	ug	892.061	280000.	ug/Kg	892.061		856378.234
100-42-5	M1	styrene	x				1	ug	892.061	<	ug/Kg	892.061		428189.117
95-47-6	M1	o-xylene	x	12.78	15230250	125.96	1	ug	892.061	112000.	ug/Kg	892.061		428189.117
75-25-2	MP2	bromoform (tribromomethane)	x				2	ug	892.061	<	ug/Kg	1784.121		285459.411
79-34-5	MP2	1,1,2,2-tetrachloroethane	x	12.82	41954	2.01	1	ug	892.061	1800.	ug/Kg	892.061	J	428189.117
98-82-8	M2	isopropylbenzene	x	13.86	3164468	19.89	1	ug	892.061	17700.	ug/Kg	892.061		428189.117
96-18-4	M2	1,2,3-trichloropropane	x				1	ug	892.061	<	ug/Kg	892.061		428189.117
108-86-1	M2	bromobenzene	x				1	ug	892.061	<	ug/Kg	892.061		428189.117
95-49-8	M2	2-chlorotoluene	x	14.83	111209	2.90	1	ug	892.061	2580.	ug/Kg	892.061	J	428189.117
103-65-1	M2	n-propylbenzene	x	14.80	1505170	33.65	1	ug	892.061	30000.	ug/Kg	892.061		428189.117
106-43-4	M2	4-chlorotoluene	x	14.97	14351	0.37	1	ug	892.061	<	ug/Kg	892.061		428189.117
108-67-8	M2	1,3,5-trimethylbenzene	x	15.34	6383708	49.48	1	ug	892.061	44100.	ug/Kg	892.061		428189.117

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA_1111nov02\
Data File : 0201002.D
Acq On : 2 Nov 2011 13:04
Operator : KEY
Sample : Blank, 11-0002, 0101110000,
Misc : 5uL #450
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Nov 02 13:24:38 2011
Quant Method : C:\MSDCHEM\1\5973N\48260VRX.M
Quant Title : 4VRX8260 5973_8260 - Method 524.2 List - Purgable Thu Jul 28 15:
:36 2011
QLast Update : Thu Jul 28 15:27:36 2011
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) fluorbenzene	4.29	96	8159586	69.90 ug	0.00
50) chlorobenzene-d5	10.46	54	1457670+	69.90 ug	0.00
64) 1,4-dichlorobenzene-d4	15.88	152	3192775+	69.90 ug	0.00
System Monitoring Compounds					
22) dibromofluoromethane	2.89	113	3449289+	65.79 ug	0.00
Spiked Amount 69.900	Range 81 - 120		Recovery = 94.12%		
25) 1,2 dichloroethane-d4	3.33	67	905115	68.19 ug	0.00
Spiked Amount 69.900	Range 82 - 118		Recovery = 97.55%		
36) toluene-d8	7.35	98	7353679	71.08 ug	0.00
Spiked Amount 69.900	Range 89 - 111		Recovery = 101.69%		
55) 4-bromofluorobenzene	13.77	174	3844002+	69.77 ug	0.00
Spiked Amount 69.900	Range 81 - 119		Recovery = 99.81%		

Target Compounds						Qvalue
2) dichlorodifluoromethane	0.00	85	0	N.D.		
3) chloromethane	0.00	50	0	N.D.		
4) vinyl chloride	0.00	62	0	N.D.		
5) acetone (2-propanone)	0.00	58	0	N.D.		
6) diethyl ether	0.00	74	0	N.D.		
7) bromomethane	0.00	94	0	N.D.		
8) chloroethane	0.00	64	0	N.D.		
9) trichlorofluoromethane	0.00	101	0	N.D.		
10) 1,1-dichloroethene	0.00	96	0	N.D.		
11) methylene chloride	0.00	84	0	N.D.		
12) 1,1,2-trichlorotrifluoroet	0.00	151	0	N.D.		
13) allyl chloride	1.74	78	41942+	0.75 ug		36
14) trans 1,2-dichloroethene	0.00	96	0	N.D.		
15) [MTBE] methyl tert-butyl e	0.00	73	0	N.D.		
16) 1,1-dichloroethane	0.00	63	0	N.D.		
17) [MEK] 2-butanone	0.00	72	0	N.D.		
18) cis 1,2-dichloroethene	0.00	96	0	N.D.		
19) 2,2-dichloropropane	0.00	77	0	N.D.		
20) bromochloromethane	0.00	128	0+	N.D.		
21) chloroform (trichlorometha	0.00	83	0	N.D.		
23) tetrahydrofuran	0.00	72	0+	N.D.		
24) 1,1,1-trichloroethane	0.00	97	0+	N.D.		
26) 1,2-dichloroethane	0.00	62	0	N.D.		
27) 1,1-dichloropropene	0.00	75	0	N.D.		
28) benzene	3.97	78	18531	0.14 ug	#	53
29) carbon tetrachloride	0.00	117	0	N.D.		
30) trichloroethene (TCE)	0.00	130	0+	N.D.		
31) 1,2-dichloropropane	0.00	63	0	N.D.		
32) dibromomethane	0.00	174	0	N.D.		
33) bromodichloromethane	0.00	83	0	N.D.		
34) cis 1,3-dichloropropene	0.00	75	0	N.D.		
35) [MIBK] 4-methyl-2-pentanon	0.00	58	0	N.D.		
37) toluene	7.50	92	67023	0.83 ug		93
38) trans 1,3-dichloropropene	0.00	75	0	N.D.		
39) 1,1,2-trichloroethane	0.00	83	0	N.D.		
40) 1,3-dichloropropane	0.00	76	0	N.D.		
41) dibromochloromethane	0.00	129	0	N.D.		
42) tetrachloroethene (PERC)	0.00	166	0+	N.D.		

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA_1111nov02\
Data File : 0201002.D
Acq On : 2 Nov 2011 13:04
Operator : KEY
Sample : Blank, 11-0002, 0101110000,
Misc : 5uL #450
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Nov 02 13:24:38 2011
Quant Method : C:\MSDCHEM\1\5973N\48260VRX.M
Quant Title : 4VRX8260 5973_8260 - Method 524.2 List - Purgable Thu Jul 28 15
:36 2011
QLast Update : Thu Jul 28 15:27:36 2011
Response via : Initial Calibration

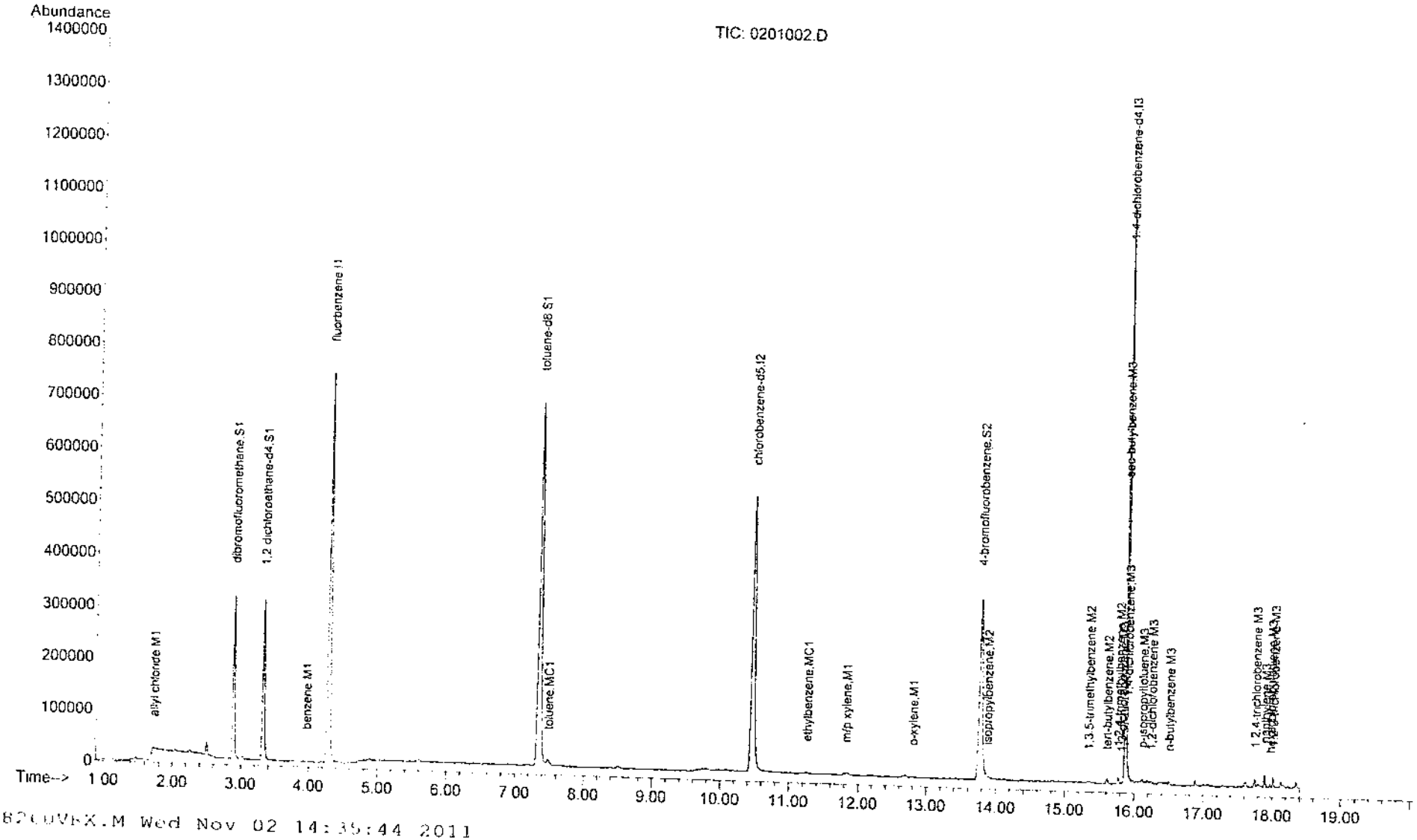
Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
43) 1,2-dibromoethane	0.00	107	0	N.D.		
44) chlorobenzene	0.00	112	0	N.D.		
45) 1,1,1,2-tetrachloroethane	0.00	131	0	N.D.		
46) ethylbenzene	11.26	91	31325	0.21 ug	#	53
47) m/p xylene	11.83	91	88456	0.76 ug	#	84
48) styrene	0.00	104	0	N.D.		
49) o-xylene	12.79	91	30497	0.26 ug	#	85
51) bromoform (tribromomethane	0.00	173	0	N.D.		
52) 1,1,2,2-tetrachloroethane	0.00	83	0	N.D.		
53) isopropylbenzene	13.87	105	14107	0.10 ug	#	47
54) 1,2,3-trichloropropane	0.00	75	0	N.D.		
56) bromobenzene	0.00	156	0	N.D.		
57) 2-chlorotoluene	0.00	126	0	N.D.		
58) n-propylbenzene	0.00	120	0	N.D.		
59) 4-chlorotoluene	0.00	126	0	N.D.		
60) 1,3,5-trimethylbenzene	15.34	105	25576	0.21 ug		89
61) tert-butylbenzene	15.60	119	10675	0.10 ug	#	25
62) 1,2,4-trimethylbenzene	15.78	105	63278	0.54 ug		92
63) 1.2-dibromo-3-chloropropan	0.00	157	0+	N.D.		
65) 1,3-dichlorobenzene	15.82	146	14325	0.21 ug	#	25
66) p-isopropyltoluene	16.11	119	20072	0.15 ug	#	33
67) sec-butylbenzene	15.85	105	23834	0.14 ug	#	1
68) 1,4-dichlorobenzene	15.90	146	22167	0.33 ug	#	1
69) 1,2-dichlorobenzene	16.25	146	14844	0.25 ug	#	25
70) n-butylbenzene	16.50	91	42965	0.32 ug	#	47
71) 1,2,4-trichlorobenzene	17.75	180	39347	0.99 ug	#	95
72) hexachlorobutadiene	17.98	225	10760	0.41 ug	#	34
73) napthylene	17.90	128	140747	1.96 ug	#	96
74) 1,2,3-trichlorobenzene	18.02	180	39116	1.12 ug	#	83

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA_1111nov02\
Data File : 0201002.D
Acq On : 2 Nov 2011 13:04
Operator : KEY
Sample : Blank, 11-0002, 0101110000,
Misc : 5uL #450
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Nov 02 13:24:38 2011
Quant Method : C:\MSDCHEM\1\5973N\48260VRX.M
Quant Title : 4VRX8260 5973_8260 - Method 524.2 List - Purgable Thu Jul 28 15:27:36 2011
QLast Update : Thu Jul 28 15:27:36 2011
Response via : Initial Calibration



48260VRX.M Wed Nov 02 14:35:44 2011

KEY Laboratories, Inc.
2479-A Riverside Pkwy
Grand Junction, CO 81505
(970) 243-5311
Fax (970) 243-6010

CHAIN OF CUSTODY RECORD

1110:11377

Proj. No./Name | Company Name: | Phone:
Email: | Fax:

SAMPLERS: (Signature) | Sampler Name: (Printed) Joel Johnson

SAMPLE ANALYSES: DRO, 8260, 11/14/11 1600 Brett

SAMPLE ID.	DATE	TIME	MATRIX	SAMPLE LOCATION	DRO	8260	CONTAINER/SIZE/TYPE	PRESERVATIVES	REMARKS	LABORATORY SAMPLE #
G-N, 2'	11/4/11	930	soil	Basin Western			1	ice	11-	1377
G-W, 2'	11/4/11	940		Hwy 141			1			1378
G-M, 2'	11/4/11	950					1			1379
G-Tue, 1'	11/7/11	1000				X	1			1380

TOTAL NO. OF CONTAINERS 4

Relinquished by: (Signature) | Date / Time 11/11/1310 | Received by: (Signature) | Relinquished by: (Signature) | Date / Time | Received by: (Signature)

Custody Seal No. NA | Custody Seal Present ☐ Intact ☐ NA | Date Required

Method of Shipment: Hand Delivery | Shipped by: (Signature) | Date Completed: | Received for Laboratory by: (Signature) William M Shaw | Date / Time 11/10/11 1310

Distribution Original Accompanies Shipment; Copy to Field Files
Form CC-01-6-92 Rev. 3/10

8260 Analytical Report

KEY LABORATORIES, INC.
2479A Riverside Parkway
Grand Junction, CO 81505-1319
(970) 243-5311 FAX (970) 243-6010

Client : Storage Tank Technology, Inc.
Client Project Name : Basin Western
Client Project Number :
Client Sample Number : G-Toe, 1'
Client Sample Location : Hwy 141
Sampling Date : 11/7/2011
Sampling Time : 10:00
Sample Matrix : Soil
Sampler : Shad
Key Labs Report Prefix:

QC Type: M
Key Lab # : 11-1380
Work Order # : 1110111377
Date Recieved : 11/10/11
Method : EPA SW846 5030/5035/8260
Technician : KEY
Data File Name: 1201012.D
Date Analyzed : 16 Nov 2011 15:18
Data File Path : C:\MSDCHEM\1\DATA_1111NOV16\
Lab Sample Information : Soil, 2.98g, STTI, Basin Western Hwy 141
Lab Sample Number : G-Toe, 1', 11-1380, M, 1110111377,

Loss On Heating multiplier =
MeOH Extract/Dilution Aliquot [uL] =
Dilution/Extraction volume [mL] =
Reported==>> x

Significant Figures = 3
Sample vol/wt = 5
DF = 1

CAS#	Type	Target Compounds	Audit	R.T.	Resp.	Amt.	MDL	Units	DF	Final Conc	Report Units	RDL	Qual	MQL
75-71-8	MI	dichlorodifluoromethane	x				2	ug	1.	<	ug/Kg	2.		480
74-87-3	MP1	chloromethane	x	1.02	10795	0.28	2	ug	1.	<	ug/Kg	2.		480
75-01-4	MC1	vinyl chloride	x				2	ug	1.	<	ug/Kg	2.		480
67-64-1	MI	acetone (2-propanone)	x				10	ug	1.	<	ug/Kg	10.		480
60-29-7	MI	diethyl ether	x				10	ug	1.	<	ug/Kg	10.		480
74-83-9	MI	bromomethane	x	1.18			2	ug	1.	<	ug/Kg	2.		480
75-00-3	MI	chloroethane	x				2	ug	1.	<	ug/Kg	2.		480
75-69-4	MI	trichlorofluoromethane	x				1	ug	1.	<	ug/Kg	1.		480
75-35-4	MC1	1,1-dichloroethene	x				1	ug	1.	<	ug/Kg	1.		480
75-09-2	MI	methylene chloride	x	1.71	20480	0.76	1	ug	1.	<	ug/Kg	1.		480
76-13-1	MI	1,1,2-trichlorotrifluoroethane	x				1	ug	1.	<	ug/Kg	1.		480
107-05-1	MI	allyl chloride	x				1	ug	1.	<	ug/Kg	1.		480
156-60-5	MI	trans 1,2-dichloroethene	x				1	ug	1.	<	ug/Kg	1.		480
1634-04-4	MI	[MTBE] methyl tert-butyl ether	x				1	ug	1.	<	ug/Kg	1.		480
75-34-3	MP1	1,1-dichloroethane	x				1	ug	1.	<	ug/Kg	1.		480
78-93-3	MI	[MEK] 2-butanone	x				10	ug	1.	<	ug/Kg	10.		480
156-59-4	MI	cis 1,2-dichloroethene	x				1	ug	1.	<	ug/Kg	1.		480
590-20-7	MI	2,2-dichloropropane	x				1	ug	1.	<	ug/Kg	1.		480
74-97-5	MI	bromochloromethane	x				1	ug	1.	<	ug/Kg	1.		480
67-66-3	MC1	chloroform (trichloromethane)	x				1	ug	1.	<	ug/Kg	1.		480
109-99-9	MI	tetrahydrofuran	x				10	ug	1.	<	ug/Kg	10.		480
71-55-6	MI	1,1,1-trichloroethane	x				1	ug	1.	<	ug/Kg	1.		480
107-06-2	MI	1,2-dichloroethane	x				1	ug	1.	<	ug/Kg	1.		480
563-58-6	MI	1,1-dichloropropene	x				1	ug	1.	<	ug/Kg	1.		480
71-43-2	MI	benzene	x	3.97	71227	0.50	1	ug	1.	<	ug/Kg	1.		480
56-26-5	MI	carbon tetrachloride	x				1	ug	1.	<	ug/Kg	1.		480
79-01-6	MI	trichloroethene (TCE)	x				1	ug	1.	<	ug/Kg	1.		480
78-87-5	MC1	1,2-dichloropropane	x				1	ug	1.	<	ug/Kg	1.		480
74-95-3	MI	dibromomethane	x				1	ug	1.	<	ug/Kg	1.		480
75-27-4	MI	bromodichloromethane	x				1	ug	1.	<	ug/Kg	1.		480
10061-01-5	MI	cis 1,3-dichloropropene	x				1	ug	1.	<	ug/Kg	1.		480
108-10-1	MI	[MIBK] 4-methyl-2-pentanone	x				1	ug	1.	<	ug/Kg	1.		480
108-88-3	MC1	toluene	x	7.49	173321	1.96	2	ug	1.	<	ug/Kg	2.		480
10061-02-6	MI	trans 1,3-dichloropropene	x				1	ug	1.	<	ug/Kg	1.		320
79-00-5	MI	1,1,2-trichloroethane	x				1	ug	1.	<	ug/Kg	1.		480
142-28-9	MI	1,3-dichloropropane	x				1	ug	1.	<	ug/Kg	1.		480
124-48-1	MI	dibromochloromethane	x				1	ug	1.	<	ug/Kg	1.		480
127-18-4	MI	tetrachloroethene (PERC)	x				1	ug	1.	<	ug/Kg	1.		480
106-93-4	MI	1,2-dibromoethane	x				1	ug	1.	<	ug/Kg	1.		480
108-90-7	MP1	chlorobenzene	x	10.55	32041	0.33	1	ug	1.	<	ug/Kg	1.		480
630-20-6	MI	1,1,1,2-tetrachloroethane	x				1	ug	1.	<	ug/Kg	1.		480
100-41-4	MC1	ethylbenzene	x	11.26	60736	0.36	1	ug	1.	<	ug/Kg	1.		480
1	MI	m/p xylene	x	11.84	152415	1.15	1	ug	1.	1.2	ug/Kg	1.	J	960
100-42-5	MI	styrene	x	12.67	19279	0.21	1	ug	1.	<	ug/Kg	1.		480
95-47-6	MI	o-xylene	x	12.79	121320	0.91	1	ug	1.	<	ug/Kg	1.		480
75-25-2	MP2	bromoform (tribromomethane)	x				2	ug	1.	<	ug/Kg	2.		320
79-34-5	MP2	1,1,2,2-tetrachloroethane	x				1	ug	1.	<	ug/Kg	1.		480
98-82-8	M2	isopropylbenzene	x	13.85	35391	0.22	1	ug	1.	<	ug/Kg	1.		480
96-18-4	M2	1,2,3-trichloropropane	x				1	ug	1.	<	ug/Kg	1.		480
108-86-1	M2	bromobenzene	x	14.13	14957	0.42	1	ug	1.	<	ug/Kg	1.		480
95-49-8	M2	2-chlorotoluene	x	14.81	11357	0.30	1	ug	1.	<	ug/Kg	1		480
103-65-1	M2	n-propylbenzene	x	14.81	17169	0.39	1	ug	1	<	ug/Kg	1.		480
106-43-4	M2	4-chlorotoluene	x	14.97	15267	0.39	1	ug	1.	<	ug/Kg	1.		480
108-67-8	M2	1,3,5-trimethylbenzene	x	15.34	105495	0.81	1	ug	1.	<	ug/Kg	1.		480

8260 Analytical Report

KEY LABORATORIES, INC.
2479A Riverside Parkway
Grand Junction, CO 81505-1319
(970) 243-5311 FAX (970) 243-6010

Client : Storage Tank Technology, Inc.
Client Project Name : Basin Western
Client Project Number :
Client Sample Number : G-Toe, 1'
Client Sample Location : Hwy 141
Sampling Date : 11/7/2011
Sampling Time : 10:00
Sample Matrix : Soil
Sampler : Shad
Key Labs Report Prefix:

QC Type: M
Key Lab # : 11-1380
Work Order # : 1110111377
Date Recieved : 11/10/11
Method : EPA SW846 5030/5035/8260
Technician : KEY
Data File Name: 1201012.D
Date Analyzed : 16 Nov 2011 15:18
Data File Path : C:\MSDCHEM\1\DATA_1111NOV16\
Lab Sample Information : Soil, 2.98g, STTI, Basin Western Hwy 141
Lab Sample Number : G-Toe, 1', 11-1380, M, 1110111377,

Loss On Heating multiplier =
MeOH Extract/Dilution Aliquot [uL] =
Dilution/Extraction volume [mL] =
Reported==>> x

Significant Figures = 3
Sample vol/wt = 5
DF = 1

CAS#	Type	Target Compounds	Audit	R.T.	Resp.	Amt.	MDL	Units	DF	Final Conc	Report Units	RDL	Qual	MQL
98-06-6	M2	tert-butylbenzene	x	15.60	34644	0.29	1	ug	1.	<	ug/Kg	1.		480
95-63-6	M2	1,2,4-trimethylbenzene	x	15.77	170737	1.34	1	ug	1.	1.3	ug/Kg	1.	J	480
96-12-8	M2	1,2-dibromo-3-chloropropane	x				2	ug	1.	<	ug/Kg	2.		320
541-73-1	M3	1,3-dichlorobenzene	x	15.82	41517	0.60	1	ug	1.	<	ug/Kg	1.		480
99-87-6	M3	p-isopropyltoluene	x	16.11	169671	1.22	1	ug	1.	1.2	ug/Kg	1.	J	480
135-98-8	M3	sec-butylbenzene	x	15.85	64969	0.38	1	ug	1.	<	ug/Kg	1.		480
106-46-7	M3	1,4-dichlorobenzene	x	15.82	41457	0.60	1	ug	1.	<	ug/Kg	1.		480
95-50-1	M3	1,2-dichlorobenzene	x	16.25	39262	0.63	1	ug	1.	<	ug/Kg	1.		480
104-51-8	M3	n-butylbenzene	x	16.50	87425	0.63	1	ug	1.	<	ug/Kg	1.		480
120-82-1	M3	1,2,4-trichlorobenzene	x	17.75	79980	1.78	2	ug	1.	<	ug/Kg	2.		480
87-68-3	M3	hexachlorobutadiene	x	17.97	56445	1.80	2	ug	1.	<	ug/Kg	2.		480
91-20-3	M3	napthylene	x	17.89	405952	4.81	2	ug	1.	4.8	ug/Kg	2.	J	480
87-61-6	M3	1,2,3-trichlorobenzene	x	18.02	126696	3.12	2	ug	1.	3.1	ug/Kg	2.	J	480

CAS#	Type	Internal Standard Compounds			Resp.	Amt.	CCV Area%	Units	Initial Area%	Init. Resp.	Water Liter Limits	Soil Limits	Spike	
1868-53-7	S1	dibromofluoromethane	x	2.90	4125201	60.24	87.3	ug	78.5	5257191	81 - 120	73 - 127	69.9	86.2
17060-07-0	S1	1,2 dichloroethane-d4	x	3.33	1086777	69.47	99.5	ug	89.7	1211955	82 - 118	83 - 117	69.9	99.4
2037-26-5	S1	toluene-d8	x	7.35	8070120	68.07	95.8	ug	90.9	8880689	89 - 111	86 - 114	69.9	97.4
460-00-4	S2	4-bromofluorobenzene	x	13.77	4166101	65.42	88.8	ug	77.7	5364577	81 - 119	72 - 128	69.9	93.6

CAS#	Type	Internal Standard Compounds			Resp.	Amt.	CCV Area%	Units	Initial Area%	Init. Resp.	Water Liter Limits	Soil Limits	Spike
462-06-6	I1	fluorbenzene	x	4.29	8928355	69.90	96.9	ug	92.8	9618321	50 - 150	50 - 150	69.9
3114-55-4	I2	chlorobenzene-d5	x	10.46	1610286	69.90	92.6	ug	84.2	1913186	50 - 150	50 - 150	69.9
3855-82-1	I3	1,4-dichlorobenzene-d4	x	15.87	3421360	69.90	88.4	ug	83.3	4107216	50 - 150	50 - 150	69.9

MDL = Method Detection Limit
PQL = Practical Quantition Limit = 4 x MDL
RDL = Reporting Detection Limit = MDL x Dilution Factor
MQL = Maximum Quantitation Limit = 110% x DF x Highest Calibration Standard

Reporting basis is Kg for solids and L for liquids

J qualifier = MDL < Result < PQL
E qualifier = Estimated Result > Highest Calibration Standard

Analyst

Approved

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA_1111nov16\
Data File : 1201012.D
Acq On : 16 Nov 2011 15:18
Operator : KEY
Sample : G-Toe, 1', 11-1380, M, 1110111377,
Misc : Soil, 2.98g, STTI, Basin Western Hwy 141
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Nov 16 15:45:05 2011
Quant Method : C:\MSDCHEM\1\5973N\48260VRX.M
Quant Title : 4VRX8260 5973_8260 - Method 524.2 List - Purgable Wed Nov 16 15:
:07 2011
QLast Update : Wed Nov 16 15:10:07 2011
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) fluorbenzene	4.29	96	8928355	69.90 ug	0.00
50) chlorobenzene-d5	10.46	54	1610286+	69.90 ug	0.00
64) 1,4-dichlorobenzene-d4	15.87	152	3421360+	69.90 ug	0.00

System Monitoring Compounds					
22) dibromofluoromethane	2.90	113	4125201+	60.24 ug	0.00
Spiked Amount 69.900	Range 73 - 127		Recovery = 86.18%		
25) 1,2 dichloroethane-d4	3.33	67	1086777	69.47 ug	0.00
Spiked Amount 69.900	Range 83 - 117		Recovery = 99.38%		
36) toluene-d8	7.35	98	8070120	68.07 ug	0.00
Spiked Amount 69.900	Range 86 - 114		Recovery = 97.38%		
55) 4-bromofluorobenzene	13.77	174	4166101+	65.42 ug	0.00
Spiked Amount 69.900	Range 72 - 128		Recovery = 93.59%		

Target Compounds					Qvalue
2) dichlorodifluoromethane	0.00	85	0	N.D.	
3) chloromethane	1.02	50	10795	0.28 ug #	1
4) vinyl chloride	0.00	62	0	N.D.	
5) acetone (2-propanone)	0.00	58	0	N.D.	
6) diethyl ether	0.00	74	0	N.D.	
7) bromomethane	1.18	94	0	N.D.	
8) chloroethane	0.00	64	0	N.D.	
9) trichlorofluoromethane	0.00	101	0	N.D.	
10) 1,1-dichloroethene	0.00	96	0	N.D.	
11) methylene chloride	1.71	84	20480	0.76 ug #	84
12) 1,1,2-trichlorotrifluoroet	0.00	151	0	N.D.	
13) allyl chloride	0.00	78	0+	N.D.	
14) trans 1,2-dichloroethene	0.00	96	0	N.D.	
15) [MTBE] methyl tert-butyl e	0.00	73	0	N.D.	
16) 1,1-dichloroethane	0.00	63	0	N.D.	
17) [MEK] 2-butanone	0.00	72	0	N.D.	
18) cis 1,2-dichloroethene	0.00	96	0	N.D.	
19) 2,2-dichloropropane	0.00	77	0	N.D.	
20) bromochloromethane	0.00	128	0+	N.D.	
21) chloroform (trichlorometha	0.00	83	0	N.D.	
23) tetrahydrofuran	0.00	72	0+	N.D.	
24) 1,1,1-trichloroethane	0.00	97	0+	N.D.	
26) 1,2-dichloroethane	0.00	62	0	N.D.	
27) 1,1-dichloropropene	0.00	75	0	N.D.	
28) benzene	3.97	78	71227	0.50 ug	93
29) carbon tetrachloride	0.00	117	0	N.D.	
30) trichloroethene (TCE)	0.00	130	0+	N.D.	
31) 1,2-dichloropropane	0.00	63	0	N.D.	
32) dibromomethane	0.00	174	0	N.D.	
33) bromodichloromethane	0.00	83	0	N.D.	
34) cis 1,3-dichloropropene	0.00	75	0	N.D.	
35) [MIBK] 4-methyl-2-pentanon	0.00	58	0	N.D.	
37) toluene	7.49	92	173321	1.96 ug	97
38) trans 1,3-dichloropropene	0.00	75	0	N.D.	
39) 1,1,2-trichloroethane	0.00	83	0	N.D.	
40) 1,3-dichloropropane	0.00	76	0	N.D.	
41) dibromochloromethane	0.00	129	0	N.D.	
42) tetrachloroethene (PERC)	0.00	166	0+	N.D.	

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA_1111nov16\
Data File : 1201012.D
Acq On : 16 Nov 2011 15:18
Operator : KEY
Sample : G-Toe, 1', 11-1380, M, 1110111377,
Misc : Soil, 2.98g, STTI, Basin Western Hwy 141
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Nov 16 15:45:05 2011
Quant Method : C:\MSDCHEM\1\5973N\48260VRX.M
Quant Title : 4VRX8260 5973_8260 - Method 524.2 List - Purgable Wed Nov 16 15:
:07 2011
QLast Update : Wed Nov 16 15:10:07 2011
Response via : Initial Calibration

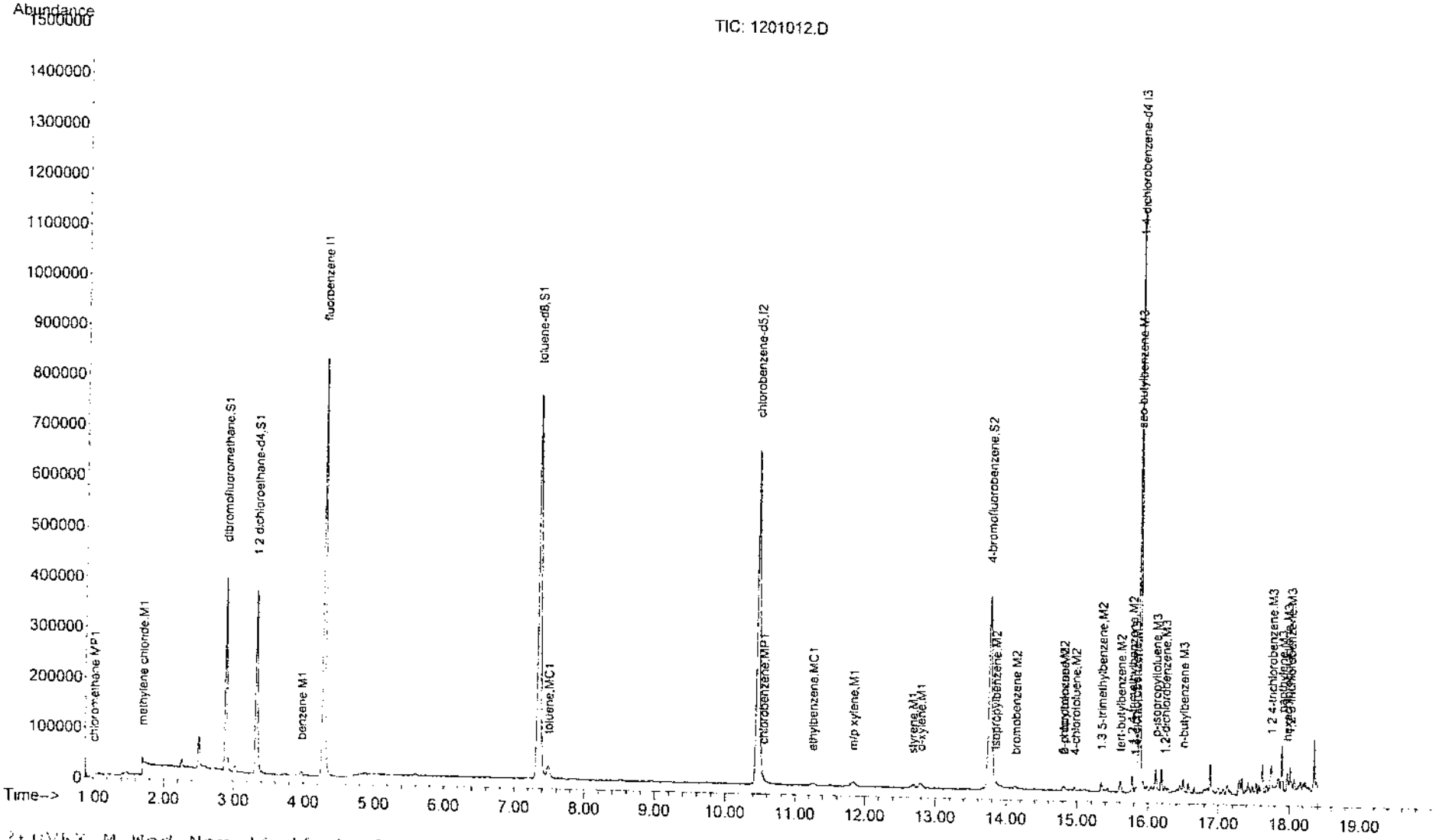
Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
43) 1,2-dibromoethane	0.00	107	0	N.D.		
44) chlorobenzene	10.55	112	32041	0.33 ug	#	1
45) 1,1,1,2-tetrachloroethane	0.00	131	0	N.D.		
46) ethylbenzene	11.26	91	60735	0.36 ug	#	88
47) m/p xylene	11.84	91	152415	1.15 ug		97
48) styrene	12.67	104	19279	0.21 ug	#	36
49) o-xylene	12.79	91	121320	0.91 ug		95
51) bromoform (tribromomethane	0.00	173	0	N.D.		
52) 1,1,2,2-tetrachloroethane	0.00	83	0	N.D.		
53) isopropylbenzene	13.85	105	35391	0.22 ug	#	47
54) 1,2,3-trichloropropane	0.00	75	0	N.D.		
56) bromobenzene	14.13	156	14957	0.42 ug	#	55
57) 2-chlorotoluene	14.81	126	11357	0.30 ug	#	62
58) n-propylbenzene	14.81	120	17169	0.39 ug	#	32
59) 4-chlorotoluene	14.97	126	15267	0.39 ug	#	88
60) 1,3,5-trimethylbenzene	15.34	105	105495	0.81 ug		96
61) tert-butylbenzene	15.60	119	34644	0.29 ug	#	71
62) 1,2,4-trimethylbenzene	15.77	105	170737	1.34 ug		99
63) 1.2-dibromo-3-chloropropan	0.00	157	0+	N.D.		
65) 1,3-dichlorobenzene	15.82	146	41517	0.60 ug		89
66) p-isopropyltoluene	16.11	119	169671	1.22 ug	#	77
67) sec-butylbenzene	15.85	105	64969	0.38 ug	#	1
68) 1,4-dichlorobenzene	15.82	146	41457	0.60 ug		89
69) 1,2-dichlorobenzene	16.25	146	39262	0.63 ug	#	76
70) n-butylbenzene	16.50	91	87425	0.63 ug	#	84
71) 1,2,4-trichlorobenzene	17.75	180	79980	1.78 ug	#	90
72) hexachlorobutadiene	17.97	225	56445	1.80 ug	#	66
73) napthylene	17.89	128	405952	4.81 ug	#	94
74) 1,2,3-trichlorobenzene	18.02	180	126696	3.12 ug	#	85

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA_111lnov16\
Data File : 1201012.D
Acq On : 16 Nov 2011 15:18
Operator : KEY
Sample : G-Toe, 1', 11-1380, M, 1110111377,
Misc : Soil, 2.98g, STTI, Basin Western Hwy 141
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Nov 16 15:45:05 2011
Quant Method : C:\MSDCHEM\1\5973N\48260VRX.M
Quant Title : 4VRX8260 5973_8260 - Method 524.2 List - Purgable Wed Nov 16 15:10:07 2011
QLast Update : Wed Nov 16 15:10:07 2011
Response via : Initial Calibration



48260VRX.M Wed Nov 16 15:46:54 2011

8260 Analytical Report

KEY LABORATORIES, INC.
2479A Riverside Parkway
Grand Junction, CO 81505-1319
(970) 243-5311 FAX (970) 243-6010

Client : Storage Tank Technology, Inc.
Client Project Name : Basin Western
Client Project Number :
Client Sample Number : G-Toe, 1'
Client Sample Location : Hwy 141
Sampling Date : 11/7/2011
Sampling Time : 10:00
Sample Matrix : Soil
Sampler : Shad
Key Labs Report Prefix:

QC Type: MD
Key Lab # : 11-1380
Work Order # : 1110111377
Date Recieved : 11/10/11
Method : EPA SW846 5030/5035/8260
Technician : KEY
Data File Name: 1401014.D
Date Analyzed : 16 Nov 2011 16:10
Data File Path : C:\MSDCHEM\1\DATA_1111NOV16\
Lab Sample Information : Soil, 2.98g, STTI, Basin Western Hwy 141
Lab Sample Number : G-Toe, 1', 11-1380, MD, 1110111377,

Loss On Heating multiplier =
MeOH Extract/Dilution Aliquot [uL] =
Dilution/Extraction volume [mL] =
Reported==>> x

Significant Figures = 3
Sample vol/wt = 5
DF = 1

CAS#	Type	Target Compounds	Audit	R.T.	Resp.	Amt.	MDL	Units	DF		Final Conc.	Report Units	RDL	Qual	MQL
75-71-8	M1	dichlorodifluoromethane	x				2	ug	1.	<	ug/Kg		2.		480
74-87-3	MP1	chloromethane	x				2	ug	1.	<	ug/Kg		2.		480
75-01-4	MC1	vinyl chloride	x				2	ug	1.	<	ug/Kg		2.		480
67-64-1	M1	acetone (2-propanone)	x				10	ug	1.	<	ug/Kg		10.		480
60-29-7	M1	diethyl ether	x				10	ug	1.	<	ug/Kg		10.		480
74-83-9	M1	bromomethane	x				2	ug	1.	<	ug/Kg		2.		480
75-00-3	M1	chloroethane	x				2	ug	1.	<	ug/Kg		2.		480
75-69-4	M1	trichlorofluoromethane	x				1	ug	1.	<	ug/Kg		1.		480
75-35-4	MC1	1,1-dichloroethene	x				1	ug	1.	<	ug/Kg		1.		480
75-09-2	M1	methylene chloride	x	1.71	13673	0.50	1	ug	1.	<	ug/Kg		1.		480
76-13-1	M1	1,1,2-trichlorotrifluoroethane	x				1	ug	1.	<	ug/Kg		1.		480
107-05-1	M1	allyl chloride	x				1	ug	1.	<	ug/Kg		1.		480
156-60-5	M1	trans 1,2-dichloroethene	x				1	ug	1.	<	ug/Kg		1.		480
1634-04-4	M1	[MTBE] methyl tert-butyl ether	x				1	ug	1.	<	ug/Kg		1.		480
75-34-3	MP1	1,1-dichloroethane	x				1	ug	1.	<	ug/Kg		1.		480
78-93-3	M1	[MEK] 2-butanone	x				10	ug	1.	<	ug/Kg		10.		480
156-59-4	M1	cis 1,2-dichloroethene	x				1	ug	1.	<	ug/Kg		1.		480
590-20-7	M1	2,2-dichloropropane	x				1	ug	1.	<	ug/Kg		1.		480
74-97-5	M1	bromochloromethane	x				1	ug	1.	<	ug/Kg		1.		480
67-66-3	MC1	chloroform (trichloromethane)	x				1	ug	1.	<	ug/Kg		1.		480
109-99-9	M1	tetrahydrofuran	x				10	ug	1.	<	ug/Kg		10.		480
71-55-6	M1	1,1,1-trichloroethane	x				1	ug	1.	<	ug/Kg		1.		480
107-06-2	M1	1,2-dichloroethane	x				1	ug	1.	<	ug/Kg		1.		480
563-58-6	M1	1,1-dichloropropene	x				1	ug	1.	<	ug/Kg		1.		480
71-43-2	M1	benzene	x	3.97	68814	0.48	1	ug	1.	<	ug/Kg		1.		480
56-26-5	M1	carbon tetrachloride	x				1	ug	1.	<	ug/Kg		1.		480
79-01-6	M1	trichloroethene (TCE)	x				1	ug	1.	<	ug/Kg		1.		480
78-87-5	MC1	1,2-dichloropropane	x				1	ug	1.	<	ug/Kg		1.		480
74-95-3	M1	dibromomethane	x				1	ug	1.	<	ug/Kg		1.		480
75-27-4	M1	bromodichloromethane	x				1	ug	1.	<	ug/Kg		1.		480
10061-01-5	M1	cis 1,3-dichloropropene	x				1	ug	1.	<	ug/Kg		1.		480
108-10-1	M1	[MIBK] 4-methyl-2-pentanone	x				1	ug	1.	<	ug/Kg		1.		480
108-88-3	MC1	toluene	x	7.49	160534	1.81	2	ug	1.	<	ug/Kg		2.		480
10061-02-6	M1	trans 1,3-dichloropropene	x				1	ug	1.	<	ug/Kg		1.		320
79-00-5	M1	1,1,2-trichloroethane	x				1	ug	1.	<	ug/Kg		1.		480
142-28-9	M1	1,3-dichloropropane	x				1	ug	1.	<	ug/Kg		1.		480
124-48-1	M1	dibromochloromethane	x				1	ug	1.	<	ug/Kg		1.		480
127-18-4	M1	tetrachloroethene (PERC)	x				1	ug	1.	<	ug/Kg		1.		480
106-93-4	M1	1,2-dibromoethane	x				1	ug	1.	<	ug/Kg		1.		480
108-90-7	MP1	chlorobenzene	x	10.55	15200	0.16	1	ug	1.	<	ug/Kg		1.		480
630-20-6	M1	1,1,1,2-tetrachloroethane	x				1	ug	1.	<	ug/Kg		1.		480
100-41-4	MC1	ethylbenzene	x	11.26	56110	0.33	1	ug	1.	<	ug/Kg		1.		480
1	M1	m/p xylene	x	11.84	134861	1.01	1	ug	1.	<	ug/Kg		1.		480
100-42-5	M1	styrene	x				1	ug	1.	1.	ug/Kg		1.	J	960
95-47-6	M1	o-xylene	x	12.79	104005	0.78	1	ug	1.	<	ug/Kg		1.		480
75-25-2	MP2	bromoform (tribromomethane)	x				1	ug	1.	<	ug/Kg		1.		480
79-34-5	MP2	1,1,2,2-tetrachloroethane	x				2	ug	1.	<	ug/Kg		2.		320
98-82-8	M2	isopropylbenzene	x	13.87	15635	0.10	1	ug	1.	<	ug/Kg		1.		480
96-18-4	M2	1,2,3-trichloropropane	x				1	ug	1.	<	ug/Kg		1.		480
108-86-1	M2	bromobenzene	x				1	ug	1.	<	ug/Kg		1.		480
95-49-8	M2	2-chlorotoluene	x				1	ug	1.	<	ug/Kg		1.		480
103-65-1	M2	n-propylbenzene	x				1	ug	1.	<	ug/Kg		1.		480
106-43-4	M2	4-chlorotoluene	x				1	ug	1.	<	ug/Kg		1.		480
108-67-8	M2	1,3,5-trimethylbenzene	x	15.34	83036	0.62	1	ug	1.	<	ug/Kg		1.		480

8260 Analytical Report

KEY LABORATORIES, INC.
2479A Riverside Parkway
Grand Junction, CO 81505-1319
(970) 243-5311 FAX (970) 243-6010

Client : Storage Tank Technology, Inc.
Client Project Name : Basin Western
Client Project Number :
Client Sample Number : G-Toe, 1'
Client Sample Location : Hwy 141
Sampling Date : 11/7/2011
Sampling Time : 10:00
Sample Matrix : Soil
Sampler : Shad
Key Labs Report Prefix:

QC Type: MD
Key Lab # : 11-1380
Work Order # : 1110111377
Date Recieved : 11/10/11
Method : EPA SW846 5030/5035/8260
Technician : KEY
Data File Name: 1401014.D
Date Analyzed : 16 Nov 2011 16:10
Data File Path : C:\MSDCHEM\1\DATA_1111NOV16\
Lab Sample Information : Soil, 2.98g, STTI, Basin Western Hwy 141
Lab Sample Number : G-Toe, 1', 11-1380, MD, 1110111377,

Loss On Heating multiplier =
MeOH Extract/Dilution Aliquot [uL] =
Dilution/Extraction volume [mL] =
Reported==>> x

Significant Figures = 3
Sample vol/wt = 5
DF = 1

CAS#	Type	Target Compounds	Audit	R.T.	Resp.	Amt.	MDL	Units	DF	Final Conc	Report Units	RDL	Qual	MQL
98-06-6	M2	tert-butylbenzene	x	15.60	11596	0.10	1	ug	1.	<	ug/Kg	1.		480
95-63-6	M2	1,2,4-trimethylbenzene	x	15.78	155801	1.18	1	ug	1.	1.2	ug/Kg	1.	J	480
96-12-8	M2	1,2-dibromo-3-chloropropane	x				2	ug	1.	<	ug/Kg	2.		320
541-73-1	M3	1,3-dichlorobenzene	x	15.82	18277	0.28	1	ug	1.	<	ug/Kg	1.		480
99-87-6	M3	p-isopropyltoluene	x	16.11	146975	1.10	1	ug	1.	1.1	ug/Kg	1.	J	480
135-98-8	M3	sec-butylbenzene	x	15.85	24735	0.15	1	ug	1.	<	ug/Kg	1.		480
106-46-7	M3	1,4-dichlorobenzene	x	15.90	33324	0.50	1	ug	1.	<	ug/Kg	1.		480
95-50-1	M3	1,2-dichlorobenzene	x	16.24	21672	0.36	1	ug	1.	<	ug/Kg	1.		480
104-51-8	M3	n-butylbenzene	x	16.50	40338	0.30	1	ug	1.	<	ug/Kg	1.		480
120-82-1	M3	1,2,4-trichlorobenzene	x	17.75	29118	0.67	2	ug	1.	<	ug/Kg	2.		480
87-68-3	M3	hexachlorobutadiene	x	17.98	15379	0.51	2	ug	1.	<	ug/Kg	2.		480
91-20-3	M3	napthylene	x	17.90	252417	3.11	2	ug	1.	3.1	ug/Kg	2.	J	480
87-61-6	M3	1,2,3-trichlorobenzene	x	18.02	39243	1.01	2	ug	1.	<	ug/Kg	2.		480

CAS#	Type	Internal Standard Compounds			Resp.	Amt.	CCV Area%	Units	Initial Area%	Init. Resp.	Water Liter Limits		Soil Limits Spike	
1868-53-7	S1	dibromofluoromethane	x	2.89	4294407	62.39	90.9	ug	81.7	5257191	81 - 120	73 - 127	69.9	89.3
17060-07-0	S1	1,2 dichloroethane-d4	x	3.33	1135458	72.21	104.	ug	93.7	1211955	82 - 118	83 - 117	69.9	103.3
2037-26-5	S1	toluene-d8	x	7.35	8175082	68.60	97.1	ug	92.1	8880689	89 - 111	86 - 114	69.9	98.1
460-00-4	S2	4-bromofluorobenzene	x	13.77	4078563	62.28	87.	ug	76.	5364577	81 - 119	72 - 128	69.9	89.1

CAS#	Type	Internal Standard Compounds			Resp.	Amt.	CCV Area%	Units	Initial Area%	Init. Resp.	Water Liter Limits		Soil Limits Spike
462-06-6	I1	fluorbenzene	x	4.29	8974760	69.90	97.4	ug	93.3	9618321	50 - 150	50 - 150	69.9
3114-55-4	I2	chlorobenzene-d5	x	10.46	1656006	69.90	95.2	ug	86.6	1913186	50 - 150	50 - 150	69.9
3855-82-1	I3	1,4-dichlorobenzene-d4	x	15.87	3286734	69.90	85.	ug	80.	4107216	50 - 150	50 - 150	69.9

MDL = Method Detection Limit
PQL = Practical Quantition Limit = 4 x MDL
RDL = Reporting Detection Limit = MDL x Dilution Factor
MQL = Maximum Quantitation Limit = 110% x DF x Highest Calibration Standard

Reporting basis is Kg for solids and L for liquids

J qualifier = MDL < Result < PQL
E qualifier = Estimated Result > Highest Calibration Standard

Analyst

Approved

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA_1111nov16\
Data File : 1401014.D
Acq On : 16 Nov 2011 16:10
Operator : KEY
Sample : G-Toe, 1', 11-1380, MD, 1110111377,
Misc : Soil, 2.98g, STTI, Basin Western Hwy 141
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Nov 16 16:30:34 2011
Quant Method : C:\MSDCHEM\1\5973N\48260VRX.M
Quant Title : 4VRX8260 5973_8260 - Method 524.2 List - Purgable Wed Nov 16 15:07 2011
QLast Update : Wed Nov 16 15:10:07 2011
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) fluorbenzene	4.29	96	8974760	69.90 ug	0.00
50) chlorobenzene-d5	10.46	54	1656006+	69.90 ug	0.00
64) 1,4-dichlorobenzene-d4	15.87	152	3286734+	69.90 ug	0.00

System Monitoring Compounds					
22) dibromofluoromethane	2.89	113	4294407+	62.39 ug	0.00
Spiked Amount 69.900	Range 73 - 127		Recovery = 89.26%		
25) 1,2 dichloroethane-d4	3.33	67	1135458	72.21 ug	0.00
Spiked Amount 69.900	Range 83 - 117		Recovery = 103.30%		
36) toluene-d8	7.35	98	8175082	68.60 ug	0.00
Spiked Amount 69.900	Range 86 - 114		Recovery = 98.14%		
55) 4-bromofluorobenzene	13.77	174	4078563+	62.28 ug	0.00
Spiked Amount 69.900	Range 72 - 128		Recovery = 89.10%		

Target Compounds					Qvalue
2) dichlorodifluoromethane	0.00	85	0	N.D.	
3) chloromethane	0.00	50	0	N.D.	
4) vinyl chloride	0.00	62	0	N.D.	
5) acetone (2-propanone)	0.00	58	0	N.D.	
6) diethyl ether	0.00	74	0	N.D.	
7) bromomethane	0.00	94	0	N.D.	
8) chloroethane	0.00	64	0	N.D.	
9) trichlorofluoromethane	0.00	101	0	N.D.	
10) 1,1-dichloroethene	0.00	96	0	N.D.	
11) methylene chloride	1.71	84	13673	0.50 ug #	80
12) 1,1,2-trichlorotrifluoroet	0.00	151	0	N.D.	
13) allyl chloride	0.00	78	0+	N.D.	
14) trans 1,2-dichloroethene	0.00	96	0	N.D.	
15) [MTBE] methyl tert-butyl e	0.00	73	0	N.D.	
16) 1,1-dichloroethane	0.00	63	0	N.D.	
17) [MEK] 2-butanone	0.00	72	0	N.D.	
18) cis 1,2-dichloroethene	0.00	96	0	N.D.	
19) 2,2-dichloropropane	0.00	77	0	N.D.	
20) bromochloromethane	0.00	128	0+	N.D.	
21) chloroform (trichlorometha	0.00	83	0	N.D.	
23) tetrahydrofuran	0.00	72	0+	N.D.	
24) 1,1,1-trichloroethane	0.00	97	0+	N.D.	
26) 1,2-dichloroethane	0.00	62	0	N.D.	
27) 1,1-dichloropropene	0.00	75	0	N.D.	
28) benzene	3.97	78	68814	0.48 ug #	86
29) carbon tetrachloride	0.00	117	0	N.D.	
30) trichloroethene (TCE)	0.00	130	0+	N.D.	
31) 1,2-dichloropropane	0.00	63	0	N.D.	
32) dibromomethane	0.00	174	0	N.D.	
33) bromodichloromethane	0.00	83	0	N.D.	
34) cis 1,3-dichloropropene	0.00	75	0	N.D.	
35) [MIBK] 4-methyl-2-pentanon	0.00	58	0	N.D.	
37) toluene	7.49	92	160534	1.81 ug	96
38) trans 1,3-dichloropropene	0.00	75	0	N.D.	
39) 1,1,2-trichloroethane	0.00	83	0	N.D.	
40) 1,3-dichloropropane	0.00	76	0	N.D.	
41) dibromochloromethane	0.00	129	0	N.D.	
42) tetrachloroethene (PERC)	0.00	166	0+	N.D.	

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA_1111nov16\
Data File : 1401014.D
Acq On : 16 Nov 2011 16:10
Operator : KEY
Sample : G-Toe, 1', 11-1380, MD, 1110111377,
Misc : Soil, 2.98g, STTI, Basin Western Hwy 141
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Nov 16 16:30:34 2011
Quant Method : C:\MSDCHEM\1\5973N\48260VRX.M
Quant Title : 4VRX8260 5973_8260 - Method 524.2 List - Purgable Wed Nov 16 15:
:07 2011
QLast Update : Wed Nov 16 15:10:07 2011
Response via : Initial Calibration

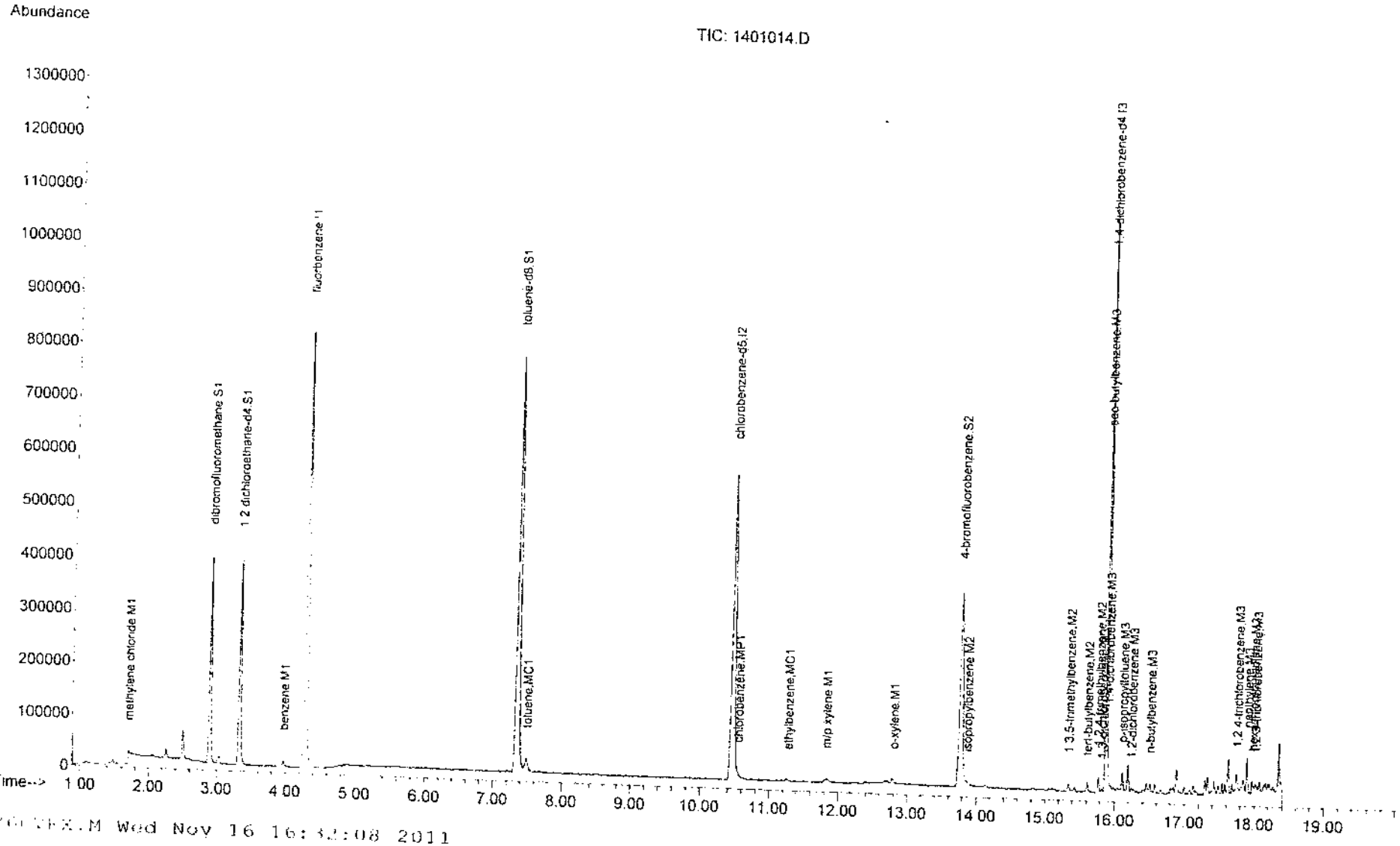
Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
43) 1,2-dibromoethane	0.00	107	0	N.D.		
44) chlorobenzene	10.55	112	15200	0.16 ug	#	1
45) 1,1,1,2-tetrachloroethane	0.00	131	0	N.D.		
46) ethylbenzene	11.26	91	56110	0.33 ug	#	91
47) m/p xylene	11.84	91	134861	1.01 ug	#	94
48) styrene	0.00	104	0	N.D.		
49) o-xylene	12.79	91	104005	0.78 ug	#	89
51) bromoform (tribromomethane	0.00	173	0	N.D.		
52) 1,1,2,2-tetrachloroethane	0.00	83	0	N.D.		
53) isopropylbenzene	13.87	105	15635	0.10 ug	#	47
54) 1,2,3-trichloropropane	0.00	75	0	N.D.		
56) bromobenzene	0.00	156	0	N.D.		
57) 2-chlorotoluene	0.00	126	0	N.D.		
58) n-propylbenzene	0.00	120	0	N.D.		
59) 4-chlorotoluene	0.00	126	0	N.D.		
60) 1,3,5-trimethylbenzene	15.34	105	83036	0.62 ug		97
61) tert-butylbenzene	15.60	119	11596	0.10 ug	#	70
62) 1,2,4-trimethylbenzene	15.78	105	155801	1.18 ug		92
63) 1.2-dibromo-3-chloropropan	0.00	157	0+	N.D.		
65) 1,3-dichlorobenzene	15.82	146	18277	0.28 ug	#	70
66) p-isopropyltoluene	16.11	119	146975	1.10 ug		94
67) sec-butylbenzene	15.85	105	24735	0.15 ug	#	1
68) 1,4-dichlorobenzene	15.90	146	33324	0.50 ug	#	7
69) 1,2-dichlorobenzene	16.24	146	21672	0.36 ug	#	71
70) n-butylbenzene	16.50	91	40338	0.30 ug	#	62
71) 1,2,4-trichlorobenzene	17.75	180	29118	0.67 ug	#	55
72) hexachlorobutadiene	17.98	225	15379	0.51 ug	#	45
73) napthylene	17.90	128	252417	3.11 ug	#	94
74) 1,2,3-trichlorobenzene	18.02	180	39243	1.01 ug	#	49

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA_1111nov16\
Data File : 1401014.D
Acq On : 16 Nov 2011 16:10
Operator : KEY
Sample : G-Toe, 1', 11-1380, MD, 1110111377,
Misc : Soil, 2.9mg, STTI, Basin Western Hwy 141
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Nov 16 16:30:34 2011
Quant Method : C:\MSDCHEM\1\5973N\48260VRX.M
Quant Title : 4VRX8260 5973_8260 - Method 524.2 List - Purgable Wed Nov 16 15:10:07 2011
Last Update : Wed Nov 16 15:10:07 2011
Response via : Initial Calibration



48260VRX.M Wed Nov 16 16:32:08 2011

Spike Recovery and RPD Summary Report - SOIL

Method Path : C:\MSDCHEM\1\5973N\
Method File : 48260VRX.M
Title : 4VRX8260 5973_8260 - Method 524.2 List - Purgable Wed Nov 16 15:10:07 2011
Last Update : Wed Nov 16 15:10:07 2011
Response Via : Initial Calibration

Datafile Path: C:\MSDCHEM\1\DATA_1111NOV16\

------Sample-------
File : 1401014.D
Name : G-Toe, 1', 11-1380, MD, 1110111377, Acq Time: 16 Nov 2011 16:10

------Spike--------
File : 1601015.D
Name : G-Toe, 1', 11-1380, MS, 1110111377, Acq Time: 16 Nov 2011 16:36

--Spike Duplicate--
File : 1601016.D
Name : G-Toe, 1', 11-1380, MSD, 1110111377, Acq Time: 16 Nov 2011 17:02

Compound	Sample Conc	Spike Added	Spike Res	Dup Res	Spike %Rec	Dup %Rec	RPD	QC Limits RPD	QC Limits Rec
dichlorodifluorometh	0.0	40	47	45	117	112	5	50	50-150
chloromethane	0.0	40	53	49	132	122	8	50	50-150
vinyl chloride	0.0	40	48	44	120	110	9	50	50-150
acetone (2-propanone	0.0	40	57	53	143	131	8	50	50-150
diethyl ether	0.0	40	51	47	127	119	7	50	50-150
bromomethane	0.0	40	49	47	121	119	2	50	50-150
chloroethane	0.0	40	51	48	126	119	6	50	50-150
trichlorofluorometha	0.0	40	48	45	121	113	6	50	50-150
1,1-dichloroethene	0.0	40	51	45	127	113	11	50	50-150
methylene chloride	0.5	40	53	46	130	115	13	50	50-150
1,1,2-trichlorotrifl	0.0	40	48	45	119	112	6	50	50-150
allyl chloride	0.0	40	43	42	108	104	4	50	50-150
trans 1,2-dichloroet	0.0	40	49	44	123	110	11	50	50-150
[MTBE] methyl tert-b	0.0	40	48	46	119	116	3	50	50-150
1,1-dichloroethane	0.0	40	47	43	118	107	10	50	50-150
[MEK] 2-butanone	0.0	40	41	38	103	95	8	50	50-150
cis 1,2-dichloroethe	0.0	40	39	35	97	89	9	50	50-150
2,2-dichloropropane	0.0	40	37	33	91	84	9	50	50-150
bromochloromethane	0.0	40	39	41	98	102	4	50	50-150
chloroform (trichlor	0.0	40	41	40	102	101	1	50	50-150
tetrahydrofuran	0.0	40	47	47	117	118	1	50	50-150
1,1,1-trichloroethan	0.0	40	38	36	95	90	5	50	50-150
1,2-dichloroethane	0.0	40	46	43	116	108	7	50	50-150
1,1-dichloropropene	0.0	40	44	41	110	102	8	50	50-150
benzene	0.5	40	47	43	116	107	8	50	50-150
carbon tetrachloride	0.0	40	35	34	88	85	4	50	50-150
trichloroethene (TCE	1.0	40	44	41	111	102	5	50	50-150
1,2-dichloropropane	0.0	40	48	42	111	105	6	50	50-150
dibromomethane	0.0	40	43	41	112	102	9	50	50-150
bromodichloromethane	0.0	40	36	34	90	84	7	50	50-150
cis 1,3-dichloroprop	0.0	40	34	31	85	78	10	50	50-150
[MIBK] 4-methyl-2-pe	0.0	40	41	38	102	96	7	50	50-150
toluene	1.6	40	47	44	113	105	7	50	50-150
trans 1,3-dichloropr	0.0	40	30	26	74	64	14	50	50-150
1,1,2-trichloroethan	0.0	40	46	43	115	108	6	50	50-150
1,3-dichloropropane	0.0	40	47	42	119	106	12	50	50-150
dibromochloromethane	0.0	40	39	37	98	92	6	50	50-150
tetrachloroethene	[illegible]	40	44	41	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
1,2-dibromoethane	[illegible]	40	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
chlorobenzene	[illegible]	40	44	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
1,1,1,2-tetrachloroet	[illegible]	[illegible]	[illegible]	34	85	85	[illegible]	[illegible]	50-150
ethylbenzene	[illegible]	40	44	40	108	100	8	50	50-150

m/p xylene	1.0	80	86	80	106	99	7	50	50-150
styrene	0.0	40	40	37	101	93	9	50	50-150
o-xylene	0.8	40	44	42	109	102	7	50	50-150
bromoform (tribromom	0.0	40	30	28	75	71	6	50	50-150
1,1,2,2-tetrachloroe	0.0	40	47	42	117	105	11	50	50-150
isopropylbenzene	0.1	40	44	40	110	100	9	50	50-150
1,2,3-trichloropropa	0.0	40	46	42	116	105	10	50	50-150
bromobenzene	0.0	40	43	39	108	97	11	50	50-150
2-chlorotoluene	0.0	40	44	41	110	101	8	50	50-150
n-propylbenzene	0.0	40	43	40	108	99	8	50	50-150
4-chlorotoluene	0.0	40	42	39	106	98	8	50	50-150
1,3,5-trimethylbenze	0.6	40	44	40	108	99	9	50	50-150
tert-butylbenzene	0.1	40	44	40	109	100	8	50	50-150
1,2,4-trimethylbenze	1.2	40	42	38	101	93	8	50	50-150
1,2-dibromo-3-chloro	0.0	40	32	27	80	68	16	50	50-150
1,3-dichlorobenzene	0.3	40	44	41	110	103	7	50	50-150
p-isopropyltoluene	1.1	40	46	43	112	104	7	50	50-150
sec-butylbenzene	0.2	40	45	43	113	107	6	50	50-150
1,4-dichlorobenzene	0.5	40	45	42	112	104	7	50	50-150
1,2-dichlorobenzene	0.4	40	46	42	114	104	9	50	50-150
n-butylbenzene	0.3	40	44	41	108	101	7	50	50-150
1,2,4-trichlorobenze	0.7	40	37	36	91	89	2	50	50-150
hexachlorobutadiene	0.5	40	34	33	84	81	4	50	50-150
napthylene	3.1	40	42	42	98	98	0	50	50-150
1,2,3-trichlorobenze	1.0	40	36	36	87	86	1	50	50-150

- Fails Limit Check

48260VRX.M Thu Nov 17 08:18:36 2011

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA_1111nov16\
Data File : 1501015.D
Acq On : 16 Nov 2011 16:36
Operator : KEY
Sample : G-Toe, 1', 11-1380, MS, 1110111377,
Misc : Soil, 3.00g, STTI, Basin Western Hwy 141
ALS Vial : 15 Sample Multiplier: 1

Quant Time: Nov 16 16:56:23 2011
Quant Method : C:\MSDCHEM\1\5973N\48260VRX.M
Quant Title : 4VRX8260 5973_8260 - Method 524.2 List - Purgable Wed Nov 16 15:
:07 2011
QLast Update : Wed Nov 16 15:10:07 2011
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) fluorbenzene	4.29	96	9193271	69.90 ug	0.00
50) chlorobenzene-d5	10.46	54	1737347+	69.90 ug	0.00
64) 1,4-dichlorobenzene-d4	15.87	152	3582261+	69.90 ug	0.00

System Monitoring Compounds					
22) dibromofluoromethane	2.90	113	4352592+	61.73 ug	0.00
Spiked Amount 69.900	Range 73 - 127		Recovery = 88.31%		
25) 1,2 dichloroethane-d4	3.33	67	1166512	72.42 ug	0.00
Spiked Amount 69.900	Range 83 - 117		Recovery = 103.61%		
36) toluene-d8	7.35	98	8440120	69.14 ug	0.00
Spiked Amount 69.900	Range 86 - 114		Recovery = 98.91%		
55) 4-bromofluorobenzene	13.77	174	4512581+	65.68 ug	0.00
Spiked Amount 69.900	Range 72 - 128		Recovery = 93.96%		

Target Compounds						Qvalue
2) dichlorodifluoromethane	0.96	85	2839886	46.96 ug		99
3) chloromethane	1.02	50	2081272	52.69 ug	#	96
4) vinyl chloride	1.07	62	1871849	48.07 ug	#	93
5) acetone (2-propanone)	1.49	58	131584	57.02 ug	#	1
6) diethyl ether	1.53	74	518698	50.67 ug	#	73
7) bromomethane	1.20	94	1333932	48.54 ug		99
8) chloroethane	1.24	64	1075830	50.59 ug		97
9) trichlorofluoromethane	1.43	101	3386064	48.29 ug		99
10) 1,1-dichloroethene	1.64	96	1543490	50.77 ug		97
11) methylene chloride	1.71	84	1464376	52.62 ug		97
12) 1,1,2-trichlorotrifluoroet	1.74	151	1035536	47.54 ug		99
13) allyl chloride	1.75	78	2939897+	43.21 ug		100
14) trans 1,2-dichloroethene	2.05	96	1570651	49.16 ug		98
15) [MTBE] methyl tert-butyl e	2.13	73	2393348	47.52 ug		99
16) 1,1-dichloroethane	2.20	63	2605311	47.36 ug		99
17) [MEK] 2-butanone	2.54	72	144919	41.28 ug	#	1
18) cis 1,2-dichloroethene	2.61	96	1605414	38.94 ug		96
19) 2,2-dichloropropane	2.84	77	1391495	36.58 ug		93
20) bromochloromethane	2.73	128	1512232+	39.18 ug		99
21) chloroform (trichlorometha	2.79	83	2850051	40.92 ug		99
23) tetrahydrofuran	3.09	72	221227+	46.76 ug		90
24) 1,1,1-trichloroethane	3.50	97	3739418+	38.07 ug		100
26) 1,2-dichloroethane	3.41	62	1798915	46.31 ug		98
27) 1,1-dichloropropene	3.73	75	2572254	43.90 ug		99
28) benzene	3.97	78	6867049	46.77 ug		100
29) carbon tetrachloride	3.90	117	1948184	35.37 ug		98
30) trichloroethene (TCE)	4.87	130	3823606+	44.33 ug		100
31) 1,2-dichloropropane	4.78	63	1438149	44.58 ug		100
32) dibromomethane	4.70	174	764801	44.78 ug		99
33) bromodichloromethane	4.92	83	1503693	35.96 ug		96
34) cis 1,3-dichloropropene	6.07	75	1294405	34.17 ug		97
35) [MIBK] 4-methyl-2-pentanon	6.43	58	292219	40.78 ug		90
37) toluene	7.48	92	4280742	47.03 ug		100
38) trans 1,3-dichloropropene	6.94	75	791585	29.68 ug		97
39) 1,1,2-trichloroethane	7.12	83	927945	45.85 ug		98
40) 1,3-dichloropropane	7.62	76	1914471	47.48 ug		99
41) dibromochloromethane	7.99	129	823441	32.74 ug		97
42) tetrachloroethene (PERC)	8.05	166	3349607+	43.71 ug		99

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA_1111nov16\
Data File : 1501015.D
Acq On : 16 Nov 2011 16:36
Operator : KEY
Sample : G-Toe, 1', 11-1380, MS, 1110111377,
Misc : Soil, 3.00g, STTI, Basin Western Hwy 141
ALS Vial : 15 Sample Multiplier: 1

Quant Time: Nov 16 16:56:23 2011
Quant Method : C:\MSDCHEM\1\5973N\48260VRX.M
Quant Title : 4VRX8260 5973_8260 - Method 524.2 List - Purgable Wed Nov 16 15:
:07 2011
QLast Update : Wed Nov 16 15:10:07 2011
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
43) 1,2-dibromoethane	8.46	107	991365	43.00	ug		92
44) chlorobenzene	10.54	112	4395092	44.35	ug	#	30
45) 1,1,1,2-tetrachloroethane	10.39	131	1118577	37.35	ug	#	99
46) ethylbenzene	11.24	91	7597526	43.68	ug		99
47) m/p xylene	11.82	91	11704403	85.86	ug		99
48) styrene	12.62	104	3805036	40.46	ug		99
49) o-xylene	12.79	91	6093857	44.45	ug		99
51) bromoform (tribromomethane	11.60	173	350678	30.03	ug	#	98
52) 1,1,2,2-tetrachloroethane	12.76	83	1217568	46.67	ug		98
53) isopropylbenzene	13.86	105	7501736	43.99	ug	#	98
54) 1,2,3-trichloropropane	13.12	75	896432	46.41	ug		97
56) bromobenzene	14.10	156	1672277	43.20	ug		100
57) 2-chlorotoluene	14.80	126	1801638	44.11	ug		99
58) n-propylbenzene	14.80	120	2023617	43.06	ug		97
59) 4-chlorotoluene	14.95	126	1769419	42.37	ug		99
60) 1,3,5-trimethylbenzene	15.34	105	6175968	43.84	ug		99
61) tert-butylbenzene	15.59	119	5556453	43.60	ug		100
62) 1,2,4-trimethylbenzene	15.77	105	5726928	41.51	ug		98
63) 1.2-dibromo-3-chloropropan	16.69	157	239272+	32.17	ug		97
65) 1,3-dichlorobenzene	15.81	146	3184520	44.19	ug		99
66) p-isopropyltoluene	16.11	119	6680150	45.87	ug		99
67) sec-butylbenzene	15.85	105	8118123	45.38	ug	#	97
68) 1,4-dichlorobenzene	15.90	146	3286290	45.24	ug		99
69) 1,2-dichlorobenzene	16.24	146	2997701	45.97	ug		96
70) n-butylbenzene	16.50	91	6311112	43.64	ug		100
71) 1,2,4-trichlorobenzene	17.75	180	1749440	37.18	ug		100
72) hexachlorobutadiene	17.98	225	1125719	34.21	ug		98
73) napthylene	17.89	128	3727068	42.19	ug	#	98
74) 1,2,3-trichlorobenzene	18.01	180	1522841	35.84	ug		97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA_1111nov16\
Data File : 1601016.D
Acq On : 16 Nov 2011 17:02
Operator : KEY
Sample : G-Toe, 1', 11-1380, MSD, 1110111377,
Misc : Soil, 3.01g, STTI, Basin Western Hwy 141
ALS Vial : 16 Sample Multiplier: 1

Quant Time: Nov 16 17:22:14 2011
Quant Method : C:\MSDCHEM\1\5973N\48260VRX.M
Quant Title : 4VRX8260 5973_8260 - Method 524.2 List - Purgable Wed Nov 16 15:
:07 2011
QLast Update : Wed Nov 16 15:10:07 2011
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) fluorbenzene	4.29	96	9255779	69.90 ug	0.00
50) chlorobenzene-d5	10.47	54	1766173+	69.90 ug	0.00
64) 1,4-dichlorobenzene-d4	15.88	152	3599366+	69.90 ug	0.00

System Monitoring Compounds					
22) dibromofluoromethane	2.90	113	4815825+	67.84 ug	0.00
Spiked Amount 69.900	Range 73 - 127		Recovery = 97.05%		
25) 1,2 dichloroethane-d4	3.33	67	1163383	71.74 ug	0.00
Spiked Amount 69.900	Range 83 - 117		Recovery = 102.63%		
36) toluene-d8	7.35	98	8471513	68.93 ug	0.00
Spiked Amount 69.900	Range 86 - 114		Recovery = 98.61%		
55) 4-bromofluorobenzene	13.77	174	4588502+	65.69 ug	0.00
Spiked Amount 69.900	Range 72 - 128		Recovery = 93.98%		

Target Compounds						Qvalue
2) dichlorodifluoromethane	0.96	85	2722330	44.72 ug		99
3) chloromethane	1.02	50	1933548	48.62 ug	#	98
4) vinyl chloride	1.07	62	1729567	44.12 ug	#	92
5) acetone (2-propanone)	1.48	58	122148	52.58 ug	#	88
6) diethyl ether	1.53	74	489250	47.47 ug		97
7) bromomethane	1.20	94	1312364	47.43 ug		96
8) chloroethane	1.24	64	1022446	47.75 ug		99
9) trichlorofluoromethane	1.43	101	3201508	45.35 ug		100
10) 1,1-dichloroethene	1.64	96	1385344	45.26 ug		99
11) methylene chloride	1.71	84	1302229	46.48 ug		99
12) 1,1,2-trichlorotrifluoroet	1.74	151	978210	44.60 ug		97
13) allyl chloride	1.75	78	2843017+	41.50 ug		100
14) trans 1,2-dichloroethene	2.05	96	1415624	44.01 ug		99
15) [MTBE] methyl tert-butyl e	2.13	73	2347258	46.29 ug		100
16) 1,1-dichloroethane	2.20	63	2379441	42.96 ug		98
17) [MEK] 2-butanone	2.54	72	134074	37.93 ug	#	1
18) cis 1,2-dichloroethene	2.61	96	1470490	35.43 ug		96
19) 2,2-dichloropropane	2.84	77	1281519	33.46 ug		94
20) bromochloromethane	2.73	128	1578601+	40.62 ug		99
21) chloroform (trichlorometha	2.79	83	2833719	40.41 ug		100
23) tetrahydrofuran	3.09	72	225223+	47.28 ug		96
24) 1,1,1-trichloroethane	3.50	97	3566997+	36.07 ug		100
25) 1,2-dichloroethane	3.41	62	1685861	43.11 ug		99
27) 1,1-dichloropropene	3.74	75	2399789	40.68 ug		100
28) benzene	3.97	78	6411477	43.37 ug		99
29) carbon tetrachloride	3.90	117	1893534	34.15 ug		98
30) trichloroethene (TCE)	4.87	130	3537673+	40.74 ug		100
31) 1,2-dichloropropane	4.79	63	1363437	41.98 ug		98
32) dibromomethane	4.71	174	702678	40.87 ug		99
33) bromodichloromethane	4.92	83	1410640	33.50 ug		97
34) cis 1,3-dichloropropene	6.07	75	1182414	31.01 ug		99
35) [MIBK] 4-methyl-2-pentanon	6.43	58	275638	38.21 ug	#	96
37) toluene	7.49	92	4029689	43.97 ug		100
38) trans 1,3-dichloropropene	6.94	75	690869	25.73 ug		97
39) 1,1,2-trichloroethane	7.12	83	882720	43.32 ug		95
40) 1,3-dichloropropane	7.62	76	1717014	42.30 ug		[illegible]
41) dibromochloromethane	7.44	129	966104	40.25 ug		[illegible]
42) tetrachloroethene PEP 1	4.95	164	1158069+	40.68 ug		[illegible]

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA_1111nov16\
Data File : 1601016.D
Acq On : 16 Nov 2011 17:02
Operator : KEY
Sample : G-Toe, 1', 11-1380, MSD, 1110111377,
Misc : Soil, 3.01g, STTI, Basin Western Hwy 141
ALS Vial : 16 Sample Multiplier: 1

Quant Time: Nov 16 17:22:14 2011
Quant Method : C:\MSDCHEM\1\5973N\48260VRX.M
Quant Title : 4VRX8260 5973_8260 - Method 524.2 List - Purgable Wed Nov 16 15:
:07 2011
QLast Update : Wed Nov 16 15:10:07 2011
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
43) 1,2-dibromoethane	8.46	107	926669	39.93 ug		99
44) chlorobenzene	10.54	112	4018760	40.28 ug	#	28
45) 1,1,1,2-tetrachloroethane	10.39	131	1024406	33.98 ug	#	98
46) ethylbenzene	11.24	91	7050717	40.26 ug		99
47) m/p xylene	11.82	91	11033233	80.39 ug		99
48) styrene	12.62	104	3510619	37.08 ug		98
49) o-xylene	12.79	91	5742935	41.61 ug		99
51) bromoform (tribromomethane	11.61	173	334984	28.22 ug	#	99
52) 1,1,2,2-tetrachloroethane	12.76	83	1109968	41.85 ug		97
53) isopropylbenzene	13.86	105	6956871	40.13 ug	#	100
54) 1,2,3-trichloropropane	13.12	75	825204	42.02 ug		98
56) bromobenzene	14.10	156	1523112	38.71 ug		98
57) 2-chlorotoluene	14.80	126	1682234	40.52 ug		100
58) n-propylbenzene	14.80	120	1896444	39.69 ug		98
59) 4-chlorotoluene	14.95	126	1667124	39.27 ug		99
60) 1,3,5-trimethylbenzene	15.34	105	5770599	40.29 ug		100
61) tert-butylbenzene	15.59	119	5195418	40.10 ug		100
62) 1,2,4-trimethylbenzene	15.77	105	5380484	38.36 ug		98
63) 1,2-dibromo-3-chloropropan	16.69	157	206330+	27.29 ug		98
65) 1,3-dichlorobenzene	15.81	146	2988776	41.28 ug		99
66) p-isopropyltoluene	16.11	119	6266304	42.82 ug		99
67) sec-butylbenzene	15.85	105	7695150	42.81 ug	#	98
68) 1,4-dichlorobenzene	15.90	146	3086881	42.29 ug		99
69) 1,2-dichlorobenzene	16.24	146	2756174	42.07 ug		99
70) n-butylbenzene	16.50	91	5927704	40.79 ug		99
71) 1,2,4-trichlorobenzene	17.75	180	1719548	36.37 ug		100
72) hexachlorobutadiene	17.98	225	1090702	32.98 ug		96
73) napthylene	17.89	128	3744707	42.19 ug	#	99
74) 1,2,3-trichlorobenzene	18.01	180	1518786	35.58 ug		99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

8260 Analytical Report

KEY LABORATORIES, INC.
2479A Riverside Parkway
Grand Junction, CO 81505-1319
(970) 243-5311 FAX (970) 243-6010

Client : Key Laboratories, Inc.
Client Project Name : Quality Control Sample
Client Project Number :
Client Sample Number : Continuing Calibration Check
Client Sample Location : Key Labs Quality Control
Sampling Date :
Sampling Time :
Sample Matrix :
Sampler : KEY
Key Labs Report Prefix:

QC Type: CCV
Key Lab # : 11-0001
Work Order # : 0101110001
Date Recieved :
Method : EPA SW846 5030/5035/8260
Technician : KEY
Data File Name: 0301003.D
Date Analyzed : 16 Nov 2011 11:25
Data File Path : C:\MSDCHEM\1\DATA_1111NOV16\
Lab Sample Information : 5uL #450 + 1uL #453 + 1ul #459
Lab Sample Number : 8260 40ppb, 11-0001, 0101110000,

Loss On Heating multiplier =
MeOH Extract/Dilution Aliquot [uL] =
Dilution/Extraction volume [mL] =
Reported==>> x

Significant Figures = 3
Sample vol/wt = 5
DF = 1

CAS#	Type	Target Compounds	Anal.	R.T.	Resp.	Amt.	MDL	Units	DF	Final Conc.	Report Units	RDL	Qual	MQL		
75-71-8	M1	dichlorodifluoromethane	x	0.96	2828687	46.59	2	ug	1.	46.6	ug/L	2.		480	40.	116.5
74-87-3	MP1	chloromethane	x	1.01	1800565	45.52	2	ug	1.	45.5	ug/L	2.		480	40.	113.8
75-01-4	MC1	vinyl chloride	x	1.07	1686728	43.68	2	ug	1.	43.7	ug/L	2.		480	40.	109.2
67-64-1	M1	acetone (2-propanone)	x	1.48	109146	46.39	10	ug	1.	46.4	ug/L	10.		480	40.	116.0
60-29-7	M1	diethyl ether	x	1.53	441120	43.00	10	ug	1.	43.	ug/L	10.		480	40.	107.5
74-83-9	M1	bromomethane	x	1.19	1208018	43.82	2	ug	1.	43.8	ug/L	2.		480	40.	109.5
75-00-3	M1	chloroethane	x	1.24	971635	45.54	2	ug	1.	45.5	ug/L	2.		480	40.	113.8
75-69-4	M1	trichlorofluoromethane	x	1.43	3079652	43.99	1	ug	1.	44.	ug/L	1.		480	40.	110.0
75-35-4	MC1	1,1-dichloroethene	x	1.64	1315820	43.41	1	ug	1.	43.4	ug/L	1.		480	40.	108.5
75-09-2	M1	methylene chloride	x	1.71	1195286	43.12	1	ug	1.	43.1	ug/L	1.		480	40.	107.8
76-13-1	M1	1,1,2-trichlorotrifluoroethane	x	1.74	992933	45.05	1	ug	1.	45.	ug/L	1.		480	40.	112.6
107-05-1	M1	allyl chloride	x	1.75	2837001	41.67	1	ug	1.	41.7	ug/L	1.		480	40.	104.2
156-60-5	M1	trans 1,2-dichloroethene	x	2.05	1383129	43.27	1	ug	1.	43.3	ug/L	1.		480	40.	108.2
1634-04-4	M1	[MTBE] methyl tert-butyl ether	x	2.13	2064374	41.12	1	ug	1.	41.1	ug/L	1.		480	40.	102.8
75-34-3	MP1	1,1-dichloroethane	x	2.19	3329078	42.29	1	ug	1.	42.3	ug/L	1.		480	40.	105.7
78-93-3	M1	[MEK] 2-butanone	x	2.54	163766	46.51	10	ug	1.	46.5	ug/L	10.		480	40.	116.3
156-59-4	M1	cis 1,2-dichloroethene	x	2.61	1714865	41.67	1	ug	1.	41.7	ug/L	1.		480	40.	104.2
590-20-7	M1	2,2-dichloropropane	x	2.84	1332231	35.24	1	ug	1.	35.2	ug/L	1.		480	40.	88.1
74-97-5	M1	bromochloromethane	x	2.73	1566488	40.78	1	ug	1.	40.8	ug/L	1.		480	40.	102.0
67-66-3	MC1	chloroform (trichloromethane)	x	2.79	2846697	40.95	1	ug	1.	41.	ug/L	1.		480	40.	102.4
109-99-9	M1	tetrahydrofuran	x	3.09	182403	38.27	10	ug	1.	38.3	ug/L	10.	J	480	40.	95.7
71-55-6	M1	1,1,1-trichloroethane	x	3.50	3738113	38.14	1	ug	1.	38.1	ug/L	1.		480	40.	95.4
107-06-2	M1	1,2-dichloroethane	x	3.41	1548075	40.12	1	ug	1.	40.1	ug/L	1.		480	40.	100.3
563-58-6	M1	1,1-dichloropropene	x	3.73	2455584	41.87	1	ug	1.	41.9	ug/L	1.		480	40.	104.7
71-43-2	M1	benzene	x	3.97	6324697	43.00	1	ug	1.	43.	ug/L	1.		480	40.	107.5
56-26-5	M1	carbon tetrachloride	x	3.90	2054653	37.46	1	ug	1.	37.5	ug/L	1.		480	40.	93.6
79-01-6	M1	trichloroethene (TCE)	x	4.86	3597864	41.66	1	ug	1.	41.7	ug/L	1.		480	40.	104.2
78-87-5	MC1	1,2-dichloropropane	x	4.78	1285757	39.94	1	ug	1.	39.9	ug/L	1.		480	40.	99.9
74-95-3	M1	dibromomethane	x	4.70	670743	39.37	1	ug	1.	39.4	ug/L	1.		480	40.	98.4
75-27-4	M1	bromodichloromethane	x	4.92	1538060	37.08	1	ug	1.	37.1	ug/L	1.		480	40.	92.7
10061-01-5	M1	cis 1,3-dichloropropene	x	6.06	1279710	34.03	1	ug	1.	34.	ug/L	1.		480	40.	85.1
108-10-1	M1	[MIBK] 4-methyl-2-pentanone	x	6.43	281081	39.34	1	ug	1.	39.3	ug/L	1.		480	40.	98.3
108-88-3	MC1	toluene	x	7.48	3904078	42.85	2	ug	1.	42.8	ug/L	2.		480	40.	107.1
10061-02-6	M1	trans 1,3-dichloropropene	x	6.94	768575	29.16	1	ug	1.	29.2	ug/L	1.		320	40.	72.9
79-00-5	M1	1,1,2-trichloroethane	x	7.12	793878	39.48	1	ug	1.	39.5	ug/L	1.		480	40.	98.7
142-28-9	M1	1,3-dichloropropane	x	7.62	1629384	40.42	1	ug	1.	40.4	ug/L	1.		480	40.	101.1
124-48-1	M1	dibromochloromethane	x	7.98	846587	34.15	1	ug	1.	34.1	ug/L	1.		480	40.	85.4
127-18-4	M1	tetrachloroethene (PERC)	x	8.95	3212878	42.02	1	ug	1.	42.	ug/L	1.		480	40.	105.0
106-93-4	M1	1,2-dibromoethane	x	8.46	835457	36.61	1	ug	1.	36.6	ug/L	1.		480	40.	91.5
108-90-7	MP1	chlorobenzene	x	10.53	4194530	42.31	1	ug	1.	42.3	ug/L	1.		480	40.	105.8
630-20-6	M1	1,1,1,2-tetrachloroethane	x	10.39	1082939	36.40	1	ug	1.	36.4	ug/L	1.		480	40.	91.0
100-41-4	MC1	ethylbenzene	x	11.24	7289403	41.84	1	ug	1.	41.8	ug/L	1.		480	40.	104.6
1	M1	m/p xylene	x	11.82	11499617	84.35	1	ug	1.	84.4	ug/L	1.		960	80.	105.4
100-42-5	M1	styrene	x	12.62	3690330	39.31	1	ug	1.	39.3	ug/L	1.		480	40.	98.3
95-47-6	M1	o-xylene	x	12.78	5714049	41.71	1	ug	1.	41.7	ug/L	1.		480	40.	104.3
75-25-2	MP2	bromoform (tribromomethane)	x	11.60	368615	32.11	2	ug	1.	32.1	ug/L	2.		320	40.	80.3
79-34-5	MP2	1,1,2,2-tetrachloroethane	x	12.76	980281	38.13	1	ug	1.	38.1	ug/L	1.		480	40.	95.3
98-82-8	M2	isopropylbenzene	x	13.86	7225882	42.26	1	ug	1.	42.3	ug/L	1.		480	40.	105.6
96-18-4	M2	1,2,3-trichloropropane	x	13.12	729209	38.03	1	ug	1.	38.	ug/L	1.		480	40.	95.1
108-86-1	M2	bromobenzene	x	14.09	1594946	41.23	1	ug	1.	41.2	ug/L	1.		480	40.	103.1
95-49-8	M2	2-chlorotoluene	x	14.80	1768820	43.27	1	ug	1.	43.3	ug/L	1.		480	40.	108.2
103-65-1	M2	n-propylbenzene	x	14.79	1978380	42.15	1	ug	1.	42.2	ug/L	1.		480	40.	105.4
106-43-4	M2	4-chlorotoluene	x	14.95	1733600	41.61	1	ug	1.	41.6	ug/L	1.		480	40.	104.0
108-67-8	M2	1,3,5-trimethylbenzene	x	15.34	5977593	42.46	1	ug	1.	42.5	ug/L	1.		480	40.	106.2

8260 Analytical Report

KEY LABORATORIES, INC.
2479A Riverside Parkway
Grand Junction, CO 81505-1319
(970) 243-5311 FAX (970) 243-6010

Client : Key Laboratories, Inc.
Client Project Name : Quality Control Sample
Client Project Number :
Client Sample Number : Continuing Calibration Check
Client Sample Location : Key Labs Quality Control
Sampling Date :
Sampling Time :
Sample Matrix :
Sampler : KEY
Key Labs Report Prefix:

QC Type: CCV
Key Lab # : 11-0001
Work Order # : 0101110001
Date Recieved :
Method : EPA SW846 5030/5035/8260
Technician : KEY
Data File Name: 0301003.D
Date Analyzed : 16 Nov 2011 11:25
Data File Path : C:\MSDCHEM\1\DATA_111NOV16\
Lab Sample Information : 5uL #450 + 1uL #453 + 1ul #459
Lab Sample Number : 8260 40ppb, 11-0001, 0101110000,

Loss On Heating multiplier =
MeOH Extract/Dilution Aliquot [uL] =
Dilution/Extraction volume [mL] =
Reported==>> x

Significant Figures = 3
Sample vol/wt = 5
DF = 1

CAS#	Type	Target Compounds	Audit	R.T.	Resp.	Amt.	MDL	Units	DF	Final Conc	Report Units	RDL	Qual	MQL		
98-06-6	M2	tert-butylbenzene	x	15.59	5488456	42.91	1	ug	1.	42.9	ug/L	1.		480	40.	107.3
95-63-6	M2	1,2,4-trimethylbenzene	x	15.77	5902403	42.66	1	ug	1.	42.7	ug/L	1.		480	40.	106.6
96-12-8	M2	1,2-dibromo-3-chloropropane	x	16.69	220876	30.31	2	ug	1.	30.3	ug/L	2.		320	40.	75.8
541-73-1	M3	1,3-dichlorobenzene	x	15.81	3275582	42.14	1	ug	1.	42.1	ug/L	1.		480	40.	105.4
99-87-6	M3	p-isopropyltoluene	x	16.11	6663266	42.24	1	ug	1.	42.2	ug/L	1.		480	40.	105.6
135-98-8	M3	sec-butylbenzene	x	15.85	8373323	43.22	1	ug	1.	43.2	ug/L	1.		480	40.	108.0
106-46-7	M3	1,4-dichlorobenzene	x	15.90	3349098	42.73	1	ug	1.	42.7	ug/L	1.		480	40.	106.8
95-50-1	M3	1,2-dichlorobenzene	x	16.24	2909728	41.39	1	ug	1.	41.4	ug/L	1.		480	40.	103.5
104-51-8	M3	n-butylbenzene	x	16.50	6762531	43.21	1	ug	1.	43.2	ug/L	1.		480	40.	108.0
120-82-1	M3	1,2,4-trichlorobenzene	x	17.75	2009376	39.70	2	ug	1.	39.7	ug/L	2.		480	40.	99.3
87-68-3	M3	hexachlorobutadiene	x	17.98	1472915	41.29	2	ug	1.	41.3	ug/L	2.		480	40.	103.2
91-20-3	M3	napthylene	x	17.89	3489012	36.90	2	ug	1.	36.9	ug/L	2.		480	40.	92.3
87-61-6	M3	1,2,3-trichlorobenzene	x	18.01	1814375	39.73	2	ug	1.	39.7	ug/L	2.		480	40.	99.3

CAS#	Type	Internal Standard Compounds			Resp.	Amt.	CCV Area%	Units	Initial Area%	Init. Resp.	Water Liter Limits		Soil Limits	Spike
1868-53-7	S1	dibromofluoromethane	x	2.89	4722881	67.13	100.	ug	89.8	5257191	81 - 120	73 - 127	69.9	96.
17060-07-0	S1	1,2 dichloroethane-d4	x	3.33	1091743	67.96	100.	ug	90.1	1211955	82 - 118	83 - 117	69.9	97.2
2037-26-5	S1	toluene-d8	x	7.35	8421064	68.91	100.	ug	94.8	8880689	89 - 111	86 - 114	69.9	98.6
460-00-4	S2	4-bromofluorobenzene	x	13.77	4689710	68.21	100.	ug	87.4	5364577	81 - 119	72 - 128	69.9	97.6

CAS#	Type	Internal Standard Compounds			Resp.	Amt.	CCV Area%	Units	Initial Area%	Init. Resp.	Water Liter Limits		Soil Limits	Spike
462-06-6	I1	fluorbenzene	x	4.29	9211760	69.90	100.	ug	95.8	9618321	50 - 150	50 - 150	69.9	
3114-55-4	I2	chlorobenzene-d5	x	10.46	1738816	69.90	100.	ug	90.9	1913186	50 - 150	50 - 150	69.9	
3855-82-1	I3	1,4-dichlorobenzene-d4	x	15.87	3868310	69.90	100.	ug	94.2	4107216	50 - 150	50 - 150	69.9	

MDL = Method Detection Limit
PQL = Practical Quantition Limit = 4 x MDL
RDL = Reporting Detection Limit = MDL x Dilution Factor
MQL = Maximum Quantitation Limit = 110% x DF x Highest Calibration Standard

Reporting basis is Kg for solids and L for liquids

J qualifier = MDL < Result < PQL
E qualifier = Estimated Result > Highest Calibration Standard

Analyst

Approved

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA_1111nov16\
Data File : 0301003.D
Acq On : 16 Nov 2011 11:25
Operator : KEY
Sample : 8260 40ppb, 11-0001, 0101110000,
Misc : 5uL #450 + 1uL #453 + 1ul #459
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Nov 16 14:55:27 2011
Quant Method : C:\MSDCHEM\1\5973N\48260VRX.M
Quant Title : 4VRX8260 5973_8260 - Method 524.2 List - Purgable Wed Nov 16 14:
:23 2011
QLast Update : Wed Nov 16 14:48:23 2011
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) fluorbenzene	4.29	96	9211760	69.90 ug	0.00
50) chlorobenzene-d5	10.46	54	1738816+	69.90 ug	0.00
64) 1,4-dichlorobenzene-d4	15.87	152	3868310+	69.90 ug	0.00

System Monitoring Compounds					
22) dibromofluoromethane	2.89	113	4722881+	67.13 ug	0.00
Spiked Amount 69.900	Range 81 - 120		Recovery = 96.04%		
25) 1,2 dichloroethane-d4	3.33	67	1091743	67.96 ug	0.00
Spiked Amount 69.900	Range 82 - 118		Recovery = 97.22%		
36) toluene-d8	7.35	98	8421064	68.91 ug	0.00
Spiked Amount 69.900	Range 89 - 111		Recovery = 98.58%		
55) 4-bromofluorobenzene	13.77	174	4689710+	68.21 ug	0.00
Spiked Amount 69.900	Range 81 - 119		Recovery = 97.58%		

Target Compounds						Qvalue
2) dichlorodifluoromethane	0.96	85	2828687	46.59 ug		99
3) chloromethane	1.01	50	1800565	45.52 ug		96
4) vinyl chloride	1.07	62	1686728	43.68 ug	#	94
5) acetone (2-propanone)	1.48	58	109146	46.39 ug	#	24
6) diethyl ether	1.53	74	441120	43.00 ug		97
7) bromomethane	1.19	94	1208018	43.82 ug		98
8) chloroethane	1.24	64	971635	45.54 ug		99
9) trichlorofluoromethane	1.43	101	3079652	43.99 ug		99
10) 1,1-dichloroethene	1.64	96	1315820	43.41 ug		97
11) methylene chloride	1.71	84	1195286	43.12 ug		99
12) 1,1,2-trichlorotrifluoroet	1.74	151	992933	45.05 ug		99
13) allyl chloride	1.75	78	2837001+	41.67 ug		98
14) trans 1,2-dichloroethene	2.05	96	1383129	43.27 ug		99
15) [MTBE] methyl tert-butyl e	2.13	73	2064374	41.12 ug		100
16) 1,1-dichloroethane	2.19	63	2329078	42.29 ug		99
17) [MEK] 2-butanone	2.54	72	163766	46.51 ug	#	89
18) cis 1,2-dichloroethene	2.61	96	1714865	41.67 ug		100
19) 2,2-dichloropropane	2.84	77	1332231	35.24 ug	#	75
20) bromochloromethane	2.73	128	1566488+	40.78 ug		99
21) chloroform (trichlorometha	2.79	83	2846697	40.95 ug		100
23) tetrahydrofuran	3.09	72	182403+	38.27 ug		96
24) 1,1,1-trichloroethane	3.50	97	3738113+	38.14 ug		98
26) 1,2-dichloroethane	3.41	62	1548075	40.12 ug		97
27) 1,1-dichloropropene	3.73	75	2455584	41.87 ug		99
28) benzene	3.97	78	6324697	43.00 ug		100
29) carbon tetrachloride	3.90	117	2054653	37.46 ug		99
30) trichloroethene (TCE)	4.86	130	3597864+	41.66 ug		98
31) 1,2-dichloropropane	4.78	63	1285757	39.94 ug		97
32) dibromomethane	4.70	174	670743	39.37 ug		98
33) bromodichloromethane	4.92	83	1538060	37.08 ug		99
34) cis 1,3-dichloropropene	6.06	75	1279710	34.03 ug		97
35) [MIBK] 4-methyl-2-pentanon	6.43	58	281081	39.34 ug	#	89
37) toluene	7.48	92	3904078	42.85 ug		99
38) trans 1,3-dichloropropene	6.94	75	768575	29.16 ug		99
39) 1,1,2-trichloroethane	7.12	83	793878	39.48 ug		49
40) 1,3-dichloropropane	7.[illegible]	76	1629384	40.42 ug		91
41) dibromochloromethane	7.93	129	946587	34.15 ug		98
42) tetrachloroethene (PERC)	5.[illegible]	166	4212878+	42.02 ug		99

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA_1111nov16\
Data File : 0301003.D
Acq On : 16 Nov 2011 11:25
Operator : KEY
Sample : 8260 40ppb, 11-0001, 0101110000,
Misc : 5uL #450 + 1uL #453 + 1ul #459
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Nov 16 14:55:27 2011
Quant Method : C:\MSDCHEM\1\5973N\48260VRX.M
Quant Title : 4VRX8260 5973_8260 - Method 524.2 List - Purgable Wed Nov 16 14:
:23 2011
QLast Update : Wed Nov 16 14:48:23 2011
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
43) 1,2-dibromoethane	8.46	107	835457	36.61	ug		97
44) chlorobenzene	10.53	112	4194530	42.31	ug	#	60
45) 1,1,1,2-tetrachloroethane	10.39	131	1082939	36.40	ug	#	98
46) ethylbenzene	11.24	91	7289403	41.84	ug		99
47) m/p xylene	11.82	91	11499617	84.35	ug		100
48) styrene	12.62	104	3690330	39.31	ug		98
49) o-xylene	12.78	91	5714049	41.71	ug		100
51) bromoform (tribromomethane	11.60	173	368615	32.11	ug	#	98
52) 1,1,2,2-tetrachloroethane	12.76	83	980281	38.13	ug		99
53) isopropylbenzene	13.86	105	7225882	42.26	ug	#	99
54) 1,2,3-trichloropropane	13.12	75	729209	38.03	ug		98
56) bromobenzene	14.09	156	1594946	41.23	ug		99
57) 2-chlorotoluene	14.80	126	1768820	43.27	ug		91
58) n-propylbenzene	14.79	120	1978380	42.15	ug		85
59) 4-chlorotoluene	14.95	126	1733600	41.61	ug		96
60) 1,3,5-trimethylbenzene	15.34	105	5977593	42.46	ug		99
61) tert-butylbenzene	15.59	119	5488456	42.91	ug		99
62) 1,2,4-trimethylbenzene	15.77	105	5902403	42.66	ug		99
63) 1.2-dibromo-3-chloropropan	16.69	157	220876+	30.31	ug		98
65) 1,3-dichlorobenzene	15.81	146	3275582	42.14	ug		99
66) p-isopropyltoluene	16.11	119	6663266	42.24	ug		98
67) sec-butylbenzene	15.85	105	8373323	43.22	ug	#	89
68) 1,4-dichlorobenzene	15.90	146	3349098	42.73	ug		99
69) 1,2-dichlorobenzene	16.24	146	2909728	41.39	ug		99
70) n-butylbenzene	16.50	91	6762531	43.21	ug		98
71) 1,2,4-trichlorobenzene	17.75	180	2009376	39.70	ug		98
72) hexachlorobutadiene	17.98	225	1472915	41.29	ug		97
73) napthylene	17.89	128	3489012	36.90	ug	#	98
74) 1,2,3-trichlorobenzene	18.01	180	1814375	39.73	ug		98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Evaluate Continuing Calibration Report

Data Path : C:\MSDChem\1\DATA_1111nov16\
Data File : 0301003.D
Acq On : 16 Nov 2011 11:25
Operator : KEY
Sample : 8260 40ppb, 11-0001, 0101110000,
Misc : 5uL #450 + 1uL #453 + 1ul #459
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Nov 16 14:57:06 2011
Quant Method : C:\MSDCHEM\1\5973N\48260VRX.M
Quant Title : 4VRX8260 5973_8260 - Method 524.2 List - Purgable Wed Nov 16 14:
:23 2011
QLast Update : Wed Nov 16 14:48:23 2011
Response via : Initial Calibration

Min. RRF : 0.100 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 150%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I1	fluorbenzene	1.000	1.000	0.0	95	0.00
2	M1	dichlorodifluoromethane	0.460	0.537	-16.7	97	0.00
3	MP1	chloromethane	0.300	0.342	-14.0	95	0.00
4	MC1	vinyl chloride	0.296	0.320	-8.1	90	0.00
5	M1	acetone (2-propanone)	0.018	0.021#	-16.7	110	0.00
6	M1	diethyl ether	0.078	0.084#	-7.7	95	0.00
7	M1	bromomethane	0.209	0.229	-9.6	96	0.00
8	M1	chloroethane	0.162	0.184	-13.6	96	0.00
9	M1	trichlorofluoromethane	0.533	0.584	-9.6	92	0.00
10	MC1	1,1-dichloroethene	0.231	0.250	-8.2	91	0.00
11	M1	methylene chloride	0.212	0.227	-7.1	91	0.00
12	M1	1,1,2-trichlorotrifluoroeth	0.166	0.188	-13.3	103	0.00
13	M1	allyl chloride	0.517	0.538	-4.1	94	0.00
14	M1	trans 1,2-dichloroethene	0.243	0.262	-7.8	94	0.00
15	M1	[MTBE] methyl tert-butyl et	0.383	0.392	-2.3	91	0.00
16	MP1	1,1-dichloroethane	0.418	0.442	-5.7	94	0.00
17	M1	[MEK] 2-butanone	0.027	0.031#	-14.8	96	0.00
18	M1	cis 1,2-dichloroethene	0.313	0.325	-3.8	92	0.00
19	M1	2,2-dichloropropane	0.289	0.253	12.5	88	0.00
20	M1	bromochloromethane	0.293	0.297	-1.4	90	0.00
21	MC1	chloroform (trichloromethan	0.530	0.540	-1.9	92	0.00
22	S1	dibromofluoromethane	0.536	0.513	4.3	91	0.00
23	M1	tetrahydrofuran	0.036	0.035#	2.8	100	0.00
24	M1	1,1,1-trichloroethane	0.747	0.709	5.1	91	0.00
25	S1	1,2 dichloroethane-d4	0.122	0.119	2.5	91	0.00
26	M1	1,2-dichloroethane	0.295	0.294	0.3	88	0.00
27	M1	1,1-dichloropropene	0.445	0.466	-4.7	94	0.00
28	M1	benzene	1.116	1.200	-7.5	95	0.00
29	M1	carbon tetrachloride	0.419	0.390	6.9	90	0.00
30	M1	trichloroethene (TCE)	0.656	0.683	-4.1	94	0.00
31	MC1	1,2-dichloropropane	0.245	0.244	0.4	92	0.00
32	M1	dibromomethane	0.130	0.127	2.3	91	0.00
33	M1	bromodichloromethane	0.318	0.292	8.2	87	0.00
34	M1	cis 1,3-dichloropropene	0.288	0.243	15.6	86	0.00
35	M1	[MIBK] 4-methyl-2-pentanone	0.054	0.053#	1.9	91	0.00
36	S1	toluene-d8	0.928	0.914	1.5	94	0.00
37	MC1	toluene	0.692	0.741	-7.1	94	0.00
38	M1	trans 1,3-dichloropropene	0.203	0.146	28.1#	81	0.00
39	M1	1,1,2-trichloroethane	0.154	0.151	1.9	88	0.00
40	M1	1,3-dichloropropane	0.307	0.309	-0.7	93	0.00
41	M1	dibromochloromethane	0.191	0.161	15.7	81	0.00
42	M1	tetrachloroethene (PERC)	0.583	0.609	-4.5	92	0.00
43	M1	1,2-dibromoethane	0.175	0.158	9.7	85	0.00
44	MP1	chlorobenzene	0.753	0.796	-5.7	94	0.00
45	M1	1,1,1,2-tetrachloroethane	0.228	0.205	10.1	88	0.00
46	MC1	ethylbenzene	1.322	1.383	-4.6	95	0.00
47	M1	m/p xylene	1.037	1.091	-5.2	94	0.00
48	M1	styrene	0.715	0.700	2.1	92	0.00
49	M1	o-xylene	1.042	1.084	-4.0	93	0.00

Evaluate Continuing Calibration Report

Data Path : C:\MSDChem\1\DATA_1111nov16\
Data File : 0301003.D
Acq On : 16 Nov 2011 11:25
Operator : KEY
Sample : 8260 40ppb, 11-0001, 0101110000,
Misc : 5uL #450 + 1uL #453 + 1ul #459
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Nov 16 14:57:06 2011
Quant Method : C:\MSDCHEM\1\5973N\48260VRX.M
Quant Title : 4VRX8260 5973_8260 - Method 524.2 List - Purgable Wed Nov 16 14:
:23 2011
QLast Update : Wed Nov 16 14:48:23 2011
Response via : Initial Calibration

Min. RRF : 0.100 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 150%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
50	I2	chlorobenzene-d5	1.000	1.000	0.0	92	0.00
51	MP2	bromoform (tribromomethane)	0.470	0.370	21.3	77	0.00
52	MP2	1,1,2,2-tetrachloroethane	1.050	0.985	6.2	81	0.00
53	M2	isopropylbenzene	6.861	7.262	-5.8	94	0.00
54	M2	1,2,3-trichloropropane	0.777	0.733	5.7	86	0.00
55	S2	4-bromofluorobenzene	2.764	2.697	2.4	92	0.00
56	M2	bromobenzene	1.557	1.603	-3.0	91	0.00
57	M2	2-chlorotoluene	1.643	1.778	-8.2	93	0.00
58	M2	n-propylbenzene	1.891	1.988	-5.1	91	0.00
59	M2	4-chlorotoluene	1.680	1.742	-3.7	90	0.00
60	M2	1,3,5-trimethylbenzene	5.668	6.007	-6.0	91	0.00
61	M2	tert-butylbenzene	5.127	5.516	-7.6	95	0.00
62	M2	1,2,4-trimethylbenzene	5.551	5.932	-6.9	94	0.00
63	M2	1,2-dibromo-3-chloropropane	0.299	0.222	25.8#	74	0.00
64	I3	1,4-dichlorobenzene-d4	1.000	1.000	0.0	91	0.00
65	M3	1,3-dichlorobenzene	1.406	1.480	-5.3	91	0.00
66	M3	p-isopropyltoluene	2.842	3.010	-5.9	94	0.00
67	M3	sec-butylbenzene	3.490	3.783	-8.4	94	0.00
68	M3	1,4-dichlorobenzene	1.418	1.513	-6.7	91	0.00
69	M3	1,2-dichlorobenzene	1.272	1.314	-3.3	90	0.00
70	M3	n-butylbenzene	2.822	3.055	-8.3	93	0.00
71	M3	1,2,4-trichlorobenzene	0.918	0.908	1.1	88	0.00
72	M3	hexachlorobutadiene	0.642	0.665	-3.6	95	0.00
73	M3	napthylene	1.724	1.576	8.6	84	0.00
74	M3	1,2,3-trichlorobenzene	0.829	0.820	1.1	88	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0

8260 Analytical Report

KEY LABORATORIES, INC.
2479A Riverside Parkway
Grand Junction, CO 81505-1319
(970) 243-5311 FAX (970) 243-6010

Client : Key Laboratories, Inc.
Client Project Name : Quality Control Sample
Client Project Number :
Client Sample Number : Method Blank
Client Sample Location : Key Labs Quality Control
Sampling Date :
Sampling Time :
Sample Matrix :
Sampler : KEY
Key Labs Report Prefix:

QC Type: Blank
Key Lab # : 11-0002
Work Order # : 0101110002
Date Recieved :
Method : EPA SW846 5030/5035/8260
Technician : KEY
Data File Name: 1301013.D
Date Analyzed : 16 Nov 2011 15:44
Data File Path : C:\MSDCHEM\1\DATA_1111NOV16\
Lab Sample Information : 5uL #450
Lab Sample Number : Blank, 11-0002, 0101110000,

Loss On Heating multiplier =
MeOH Extract/Dilution Aliquot [uL] =
Dilution/Extraction volume [mL] =
Reported==>> x

Significant Figures = 3
Sample vol/wt = 5
DF = 1

CAS#	Type	Target Compounds	Analt	R.T.	Resp.	Amt.	MDL	Units	DF		Final Conc	Report Units	RDL	Qual	MQL
75-71-8	M1	dichlorodifluoromethane	x				2	ug	1.	<		ug/L	2.		480
74-87-3	MP1	chloromethane	x				2	ug	1.	<		ug/L	2.		480
75-01-4	MC1	vinyl chloride	x				2	ug	1.	<		ug/L	2.		480
67-64-1	M1	acetone (2-propanone)	x				10	ug	1.	<		ug/L	10.		480
60-29-7	M1	diethyl ether	x				10	ug	1.	<		ug/L	10.		480
74-83-9	M1	bromomethane	x				2	ug	1.	<		ug/L	2.		480
75-00-3	M1	chloroethane	x				2	ug	1.	<		ug/L	2.		480
75-69-4	M1	trichlorofluoromethane	x				1	ug	1.	<		ug/L	1.		480
75-35-4	MC1	1,1-dichloroethene	x				1	ug	1.	<		ug/L	1.		480
75-09-2	M1	methylene chloride	x				1	ug	1.	<		ug/L	1.		480
76-13-1	M1	1,1,2-trichlorotrifluoroethane	x				1	ug	1.	<		ug/L	1.		480
107-05-1	M1	allyl chloride	x				1	ug	1.	<		ug/L	1.		480
156-60-5	M1	trans 1,2-dichloroethene	x				1	ug	1.	<		ug/L	1.		480
1634-04-4	M1	[MTBE] methyl tert-butyl ether	x				1	ug	1.	<		ug/L	1.		480
75-34-3	MP1	1,1-dichloroethane	x				1	ug	1.	<		ug/L	1.		480
78-93-3	M1	[MEK] 2-butanone	x				10	ug	1.	<		ug/L	10.		480
156-59-4	M1	cis 1,2-dichloroethene	x				1	ug	1.	<		ug/L	1.		480
590-20-7	M1	2,2-dichloropropane	x				1	ug	1.	<		ug/L	1.		480
74-97-5	M1	bromochloromethane	x				1	ug	1.	<		ug/L	1.		480
67-66-3	MC1	chloroform (trichloromethane)	x				1	ug	1.	<		ug/L	1.		480
109-99-9	M1	tetrahydrofuran	x				10	ug	1.	<		ug/L	10.		480
71-55-6	M1	1,1,1-trichloroethane	x				1	ug	1.	<		ug/L	1.		480
107-06-2	M1	1,2-dichloroethane	x				1	ug	1.	<		ug/L	1.		480
563-58-6	M1	1,1-dichloropropene	x				1	ug	1.	<		ug/L	1.		480
71-43-2	M1	benzene	x	3.97	38891	0.25	1	ug	1.	<		ug/L	1.		480
56-26-5	M1	carbon tetrachloride	x				1	ug	1.	<		ug/L	1.		480
79-01-6	M1	trichloroethene (TCE)	x				1	ug	1.	<		ug/L	1.		480
78-87-5	MC1	1,2-dichloropropane	x				1	ug	1.	<		ug/L	1.		480
74-95-3	M1	dibromomethane	x				1	ug	1.	<		ug/L	1.		480
75-27-4	M1	bromodichloromethane	x				1	ug	1.	<		ug/L	1.		480
10061-01-5	M1	cis 1,3-dichloropropene	x				1	ug	1.	<		ug/L	1.		480
108-10-1	M1	[MIBK] 4-methyl-2-pentanone	x				1	ug	1.	<		ug/L	1.		480
108-88-3	MC1	toluene	x	7.50	48077	0.50	2	ug	1.	<		ug/L	2.		480
10061-02-6	M1	trans 1,3-dichloropropene	x				1	ug	1.	<		ug/L	1.		320
79-00-5	M1	1,1,2-trichloroethane	x				1	ug	1.	<		ug/L	1.		480
142-28-9	M1	1,3-dichloropropane	x				1	ug	1.	<		ug/L	1.		480
124-48-1	M1	dibromochloromethane	x				1	ug	1.	<		ug/L	1.		480
127-18-4	M1	tetrachloroethene (PERC)	x				1	ug	1.	<		ug/L	1.		480
106-93-4	M1	1,2-dibromoethane	x				1	ug	1.	<		ug/L	1.		480
108-90-7	MP1	chlorobenzene	x	10.54	21113	0.20	1	ug	1.	<		ug/L	1.		480
630-20-6	M1	1,1,1,2-tetrachloroethane	x				1	ug	1.	<		ug/L	1.		480
100-41-4	MC1	ethylbenzene	x	11.27	43557	0.24	1	ug	1.	<		ug/L	1.		480
1	M1	m/p xylene	x	11.84	78596	0.54	1	ug	1.	<		ug/L	1.		960
100-42-5	M1	styrene	x	12.65	11313	0.11	1	ug	1.	<		ug/L	1.		480
95-47-6	M1	o-xylene	x	12.79	43070	0.30	1	ug	1.	<		ug/L	1.		480
75-25-2	MP2	bromoform (tribromomethane)	x				2	ug	1.	<		ug/L	2.		320
79-34-5	MP2	1,1,2,2-tetrachloroethane	x				1	ug	1.	<		ug/L	1.		480
98-82-8	M2	isopropylbenzene	x	13.87	15128	0.08	1	ug	1.	<		ug/L	1.		480
96-18-4	M2	1,2,3-trichloropropane	x				1	ug	1.	<		ug/L	1.		480
108-86-1	M2	bromobenzene	x				1	ug	1.	<		ug/L	1.		480
95-49-8	M2	2-chlorotoluene	x				1	ug	1.	<		ug/L	1.		480
103-65-1	M2	n-propylbenzene	x				1	ug	1.	<		ug/L	1.		480
106-43-4	M2	4-chlorotoluene	x				1	ug	1.	<		ug/L	1.		480
108-67-8	M2	1,3,5-trimethylbenzene	x	15.34	43851	0.30	1	ug	1.	<		ug/L	1.		480

8260 Analytical Report

KEY LABORATORIES, INC.
2479A Riverside Parkway
Grand Junction, CO 81505-1319
(970) 243-5311 FAX (970) 243-6010

Client : Key Laboratories, Inc.
Client Project Name : Quality Control Sample
Client Project Number :
Client Sample Number : Method Blank
Client Sample Location : Key Labs Quality Control
Sampling Date :
Sampling Time :
Sample Matrix :
Sampler : KEY
Key Labs Report Prefix:

QC Type: Blank
Key Lab # : 11-0002
Work Order # : 0101110002
Date Recieved :
Method : EPA SW846 5030/5035/8260
Technician : KEY
Data File Name: 1301013.D
Date Analyzed : 16 Nov 2011 15:44
Data File Path : C:\MSDCHEM\1\DATA_1111NOV16\
Lab Sample Information : 5uL #450
Lab Sample Number : Blank, 11-0002, 0101110000,

Loss On Heating multiplier =
MeOH Extract/Dilution Aliquot [uL] =
Dilution/Extraction volume [mL] =
Reported==>> x

Significant Figures = 3
Sample vol/wt = 5
DF = 1

CAS#	Type	Target Compounds	Audit	R.T.	Resp.	Amt.	MDL	Units	DF	Final Conc	Report Units	RDL	Qual	MQL
98-06-6	M2	tert-butylbenzene	x	15.59	19521	0.15	1	ug	1.	<	ug/L	1.		480
95-63-6	M2	1,2,4-trimethylbenzene	x	15.78	46273	0.32	1	ug	1.	<	ug/L	1.		480
96-12-8	M2	1,2-dibromo-3-chloropropane	x				2	ug	1.	<	ug/L	2.		320
541-73-1	M3	1,3-dichlorobenzene	x	15.82	28052	0.34	1	ug	1.	<	ug/L	1.		480
99-87-6	M3	p-isopropyltoluene	x	16.11	21591	0.13	1	ug	1.	<	ug/L	1.		480
135-98-8	M3	sec-butylbenzene	x	15.85	38970	0.19	1	ug	1.	<	ug/L	1.		480
106-46-7	M3	1,4-dichlorobenzene	x	15.90	50377	0.61	1	ug	1.	<	ug/L	1.		480
95-50-1	M3	1,2-dichlorobenzene	x	16.25	25219	0.34	1	ug	1.	<	ug/L	1.		480
104-51-8	M3	n-butylbenzene	x	16.50	31852	0.19	1	ug	1.	<	ug/L	1.		480
120-82-1	M3	1,2,4-trichlorobenzene	x	17.75	36209	0.68	2	ug	1.	<	ug/L	2.		480
87-68-3	M3	hexachlorobutadiene	x	17.98	14469	0.39	3	ug	1.	<	ug/L	2.		480
91-20-3	M3	napthylene	x	17.90	150051	1.50	2	ug	1.	<	ug/L	2.		480
87-61-6	M3	1,2,3-trichlorobenzene	x	18.02	58470	1.22	2	ug	1.	<	ug/L	2.		480

CAS#	Type	Internal Stanard Compounds			Resp.	Amt.	CCV Area%	Units	Initial Area%	Init. Resp.	Water Limit Limits		Soil Limits Spike	
1868-53-7	S1	dibromofluoromethane	x	2.90	4142112	55.40	87.7	ug	78.8	5257191	81 - 120	73 - 127	69.9	79.3
17060-07-0	S1	1,2 dichloroethane-d4	x	3.33	1205579	70.59	110.4	ug	99.5	1211955	82 - 118	83 - 117	69.9	101.
2037-26-5	S1	toluene-d8	x	7.35	9079913	70.15	107.8	ug	102.2	8880689	89 - 111	86 - 114	69.9	100.4
460-00-4	S2	4-bromofluorobenzene	x	13.77	4885889	67.56	104.2	ug	91.1	5364577	81 - 119	72 - 128	69.9	96.7

CAS#	Type	Internal Stanard Compounds			Resp.	Amt.	CCV Area%	Units	Initial Area%	Init. Resp.	Water Limit Limits		Soil Limits Spike
462-06-6	I1	fluorbenzene	x	4.29	9747793	69.90	105.8	ug	101.3	9618321	50 - 150	50 - 150	69.9
3114-55-4	I2	chlorobenzene-d5	x	10.46	1828528	69.90	105.2	ug	95.6	1913186	50 - 150	50 - 150	69.9
3855-82-1	I3	1,4-dichlorobenzene-d4	x	15.88	4054703	69.90	104.8	ug	98.7	4107216	50 - 150	50 - 150	69.9

MDL = Method Detection Limit
PQL = Practical Quantition Limit = 4 x MDL
RDL = Reporting Detection Limit = MDL x Dilution Factor
MQL = Maximum Quantitation Limit = 110% x DF x Highest Calibration Standard

Reporting basis is Kg for solids and L for liquids

J qualifier = MDL < Result < PQL
E qualifier = Estimated Result > Highest Calibration Standard

Analyst

Approved

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA_1111nov16\
Data File : 1301013.D
Acq On : 16 Nov 2011 15:44
Operator : KEY
Sample : Blank, 11-0002, 0101110000,
Misc : 5uL #450
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Nov 16 16:04:41 2011
Quant Method : C:\MSDCHEM\1\5973N\48260VRX.M
Quant Title : 4VRX8260 5973_8260 - Method 524.2 List - Purgable Wed Nov 16 15:
:07 2011
QLast Update : Wed Nov 16 15:10:07 2011
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) fluorbenzene	4.29	96	9747793	69.90 ug	0.00
50) chlorobenzene-d5	10.46	54	1828528+	69.90 ug	0.00
64) 1,4-dichlorobenzene-d4	15.88	152	4054703+	69.90 ug	0.00

System Monitoring Compounds					
22) dibromofluoromethane	2.90	113	4142112+	55.40 ug	0.00
Spiked Amount 69.900	Range 81 - 120		Recovery = 79.26%#		
25) 1,2 dichloroethane-d4	3.33	67	1205579	70.59 ug	0.00
Spiked Amount 69.900	Range 82 - 118		Recovery = 100.99%		
36) toluene-d8	7.35	98	9079913	70.15 ug	0.00
Spiked Amount 69.900	Range 89 - 111		Recovery = 100.36%		
55) 4-bromofluorobenzene	13.77	174	4885889+	67.56 ug	0.00
Spiked Amount 69.900	Range 81 - 119		Recovery = 96.65%		

Target Compounds					Qvalue
2) dichlorodifluoromethane	0.00	85	0	N.D.	
3) chloromethane	0.00	50	0	N.D.	
4) vinyl chloride	0.00	62	0	N.D.	
5) acetone (2-propanone)	0.00	58	0	N.D.	
6) diethyl ether	0.00	74	0	N.D.	
7) bromomethane	0.00	94	0	N.D.	
8) chloroethane	0.00	64	0	N.D.	
9) trichlorofluoromethane	0.00	101	0	N.D.	
10) 1,1-dichloroethene	0.00	96	0	N.D.	
11) methylene chloride	0.00	84	0	N.D.	
12) 1,1,2-trichlorotrifluoroet	0.00	151	0	N.D.	
13) allyl chloride	0.00	78	0+	N.D.	
14) trans 1,2-dichloroethene	0.00	96	0	N.D.	
15) [MTBE] methyl tert-butyl e	0.00	73	0	N.D.	
16) 1,1-dichloroethane	0.00	63	0	N.D.	
17) [MEK] 2-butanone	0.00	72	0	N.D.	
18) cis 1,2-dichloroethene	0.00	96	0	N.D.	
19) 2,2-dichloropropane	0.00	77	0	N.D.	
20) bromochloromethane	0.00	128	0+	N.D.	
21) chloroform (trichlorometha	0.00	83	0	N.D.	
23) tetrahydrofuran	0.00	72	0+	N.D.	
24) 1,1,1-trichloroethane	0.00	97	0+	N.D.	
26) 1,2-dichloroethane	0.00	62	0	N.D.	
27) 1,1-dichloropropene	0.00	75	0	N.D.	
28) benzene	3.97	78	38891	0.25 ug #	53
29) carbon tetrachloride	0.00	117	0	N.D.	
30) trichloroethene (TCE)	0.00	130	0+	N.D.	
31) 1,2-dichloropropane	0.00	63	0	N.D.	
32) dibromomethane	0.00	174	0	N.D.	
33) bromodichloromethane	0.00	83	0	N.D.	
34) cis 1,3-dichloropropene	0.00	75	0	N.D.	
35) [MIBK] 4-methyl-2-pentanon	0.00	58	0	N.D.	
37) toluene	7.50	92	48077	0.50 ug	94
38) trans 1,3-dichloropropene	0.00	75	0	N.D.	
39) 1,1,2-trichloroethane	0.00	83	0	N.D.	
40) 1,3-dichloropropane	0.00	76	0	N.D.	
41) dibromochloromethane	0.00	129	0	N.D.	
42) tetrachloroethene (PERC)	0.00	166	0+	N.D.	

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA_1111nov16\
Data File : 1301013.D
Acq On : 16 Nov 2011 15:44
Operator : KEY
Sample : Blank, 11-0002, 0101110000,
Misc : 5uL #450
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Nov 16 16:04:41 2011
Quant Method : C:\MSDCHEM\1\5973N\48260VRX.M
Quant Title : 4VRX8260 5973_8260 - Method 524.2 List - Purgable Wed Nov 16 15:
:07 2011
QLast Update : Wed Nov 16 15:10:07 2011
Response via : Initial Calibration

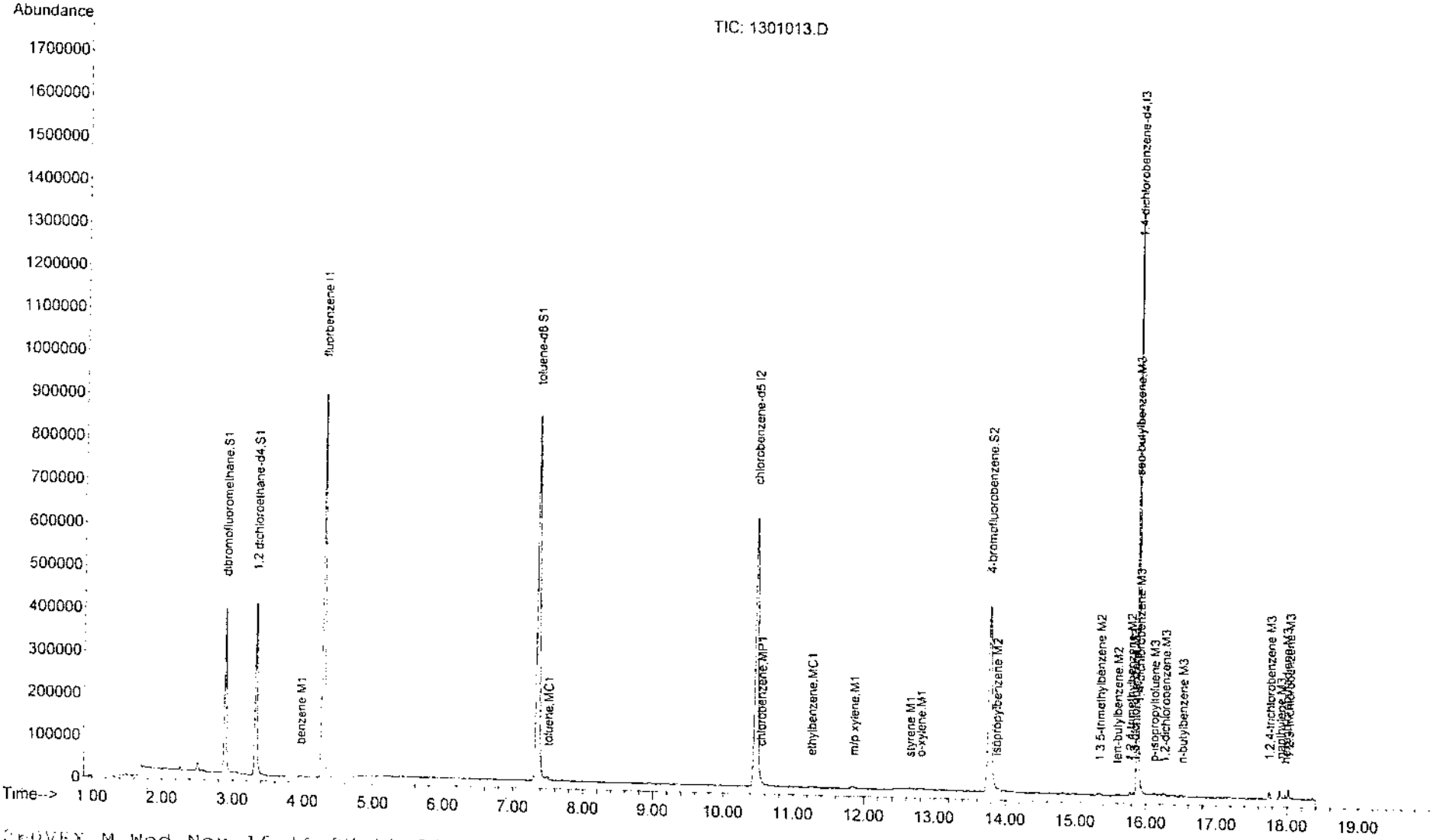
Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
43) 1,2-dibromoethane	0.00	107	0	N.D.		
44) chlorobenzene	10.54	112	21113	0.20 ug	#	1
45) 1,1,1,2-tetrachloroethane	0.00	131	0	N.D.		
46) ethylbenzene	11.27	91	43557	0.24 ug	#	54
47) m/p xylene	11.84	91	78596	0.54 ug	#	91
48) styrene	12.65	104	11313	0.11 ug	#	36
49) o-xylene	12.79	91	43070	0.30 ug	#	75
51) bromoform (tribromomethane	0.00	173	0	N.D.		
52) 1,1,2,2-tetrachloroethane	0.00	83	0	N.D.		
53) isopropylbenzene	13.87	105	15128	0.08 ug	#	47
54) 1,2,3-trichloropropane	0.00	75	0	N.D.		
56) bromobenzene	0.00	156	0	N.D.		
57) 2-chlorotoluene	0.00	126	0	N.D.		
58) n-propylbenzene	0.00	120	0	N.D.		
59) 4-chlorotoluene	0.00	126	0	N.D.		
60) 1,3,5-trimethylbenzene	15.34	105	43851	0.30 ug		87
61) tert-butylbenzene	15.59	119	19521	0.15 ug	#	62
62) 1,2,4-trimethylbenzene	15.78	105	46273	0.32 ug		95
63) 1.2-dibromo-3-chloropropan	0.00	157	0+	N.D.		
65) 1,3-dichlorobenzene	15.82	146	28052	0.34 ug	#	87
66) p-isopropyltoluene	16.11	119	21591	0.13 ug	#	50
67) sec-butylbenzene	15.85	105	38970	0.19 ug	#	1
68) 1,4-dichlorobenzene	15.90	146	50377	0.61 ug	#	42
69) 1,2-dichlorobenzene	16.25	146	25219	0.34 ug	#	91
70) n-butylbenzene	16.50	91	31852	0.19 ug	#	87
71) 1,2,4-trichlorobenzene	17.75	180	36209	0.68 ug	#	59
72) hexachlorobutadiene	17.98	225	14469	0.39 ug	#	32
73) napthylene	17.90	128	150051	1.50 ug	#	93
74) 1,2,3-trichlorobenzene	18.02	180	58470	1.22 ug		94

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA_1111nov16\
Data File : 1301013.D
Acq On : 16 Nov 2011 15:44
Operator : KEY
Sample : Blank, 11-0002, 0101110000,
Misc : 5uL #450
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Nov 16 16:04:41 2011
Quant Method : C:\MSDCHEM\1\5973N\48260VRX.M
Quant Title : 4VRX8260 5973 8260 - Method 524.2 List - Purgable Wed Nov 16 15:10:07 2011
QLast Update : Wed Nov 16 15:10:07 2011
Response via : Initial Calibration



48260VRX.M Wed Nov 16 16:07:59 2011

KEM Laboratories, Inc
2479-A Riverside Pkwy
Grand Junction, CO 81505
(970) 243-5311
Fax (970) 243-6010

CHAIN OF CUSTODY RECORD

1110111377

Proj. No./Name | Company Name: | Phone: | Email: | Fax:

SAMPLERS: (Signature) | Sampler Name: (Printed) Shad Johnson

SAMPLE ID	DATE	TIME	MATRIX	SAMPLE LOCATION	SAMPLE ANALYSES: DRO	CONTAINER/SIZE/TYPE	PRESERVATIVES	REMARKS	LABORATORY SAMPLE #
G-N, 2'	11/4/11	930	[illegible]	Basin Western	↓	1	ice	11-	1377
G-W, 2'	11/4/11	940	↓	Hwy 141	↓	1	↓	↓	1378
G-M, 2'	11/4/11	950	↓		↓	1	↓	↓	1379
G-Tue, 1'	11/7/11	1000	↓		↓	1	↓	↓	1380

TOTAL NO. OF CONTAINERS: 4

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
[signature]	11/10/11 1310				

Custody Seal No.: NA

Custody Seal Present / Intact: NA

Date Required:

Method of Shipment: Hand Delivery

Shipped by: (Signature)

Date Completed:

Received for Laboratory by: (Signature) William M Shum | Date / Time: 11/10/11 1310

Distribution: Original Accompanies Shipment; Copy to Field Files
Form CC-01-6-92 Rev. 3/10

Diesel Range Organics TEH

TEH(DRO) calculation sheet

Run Date	Matrix	Key Lab #	Hexane Volume [mL]	TEH Run Blank [ppm]	Moisture Multiplier	Aliquot [g, mL]	Instrument DF Multiplier	Multiplied Raw T.E.H. [ppm]
11/10/20 -0:23		11-0001	4		1	4.00	1.000	1048.0
11/10/20 -0:25		11-0002	4		1	20.00	1.000	72.5
11/10/20 -0:25	Soil	11-1377	4		1	20.11	1.000	84.0
11/10/20 -0:26	Soil	11-1378	4		1	19.99	1.000	72.3
11/10/20 -0:27	Soil	11-1379	4		1	20.12	1.000	70.1
11/10/20 -0:27	Soil	11-1380	4		1	20.06	1.000	98.1

TEPH (DRO C10-C28) RESULTS (method blank subtracted)

Key COC#	Key Lab#	Sample Location	Sample ID	Final TEH Results	Units
0101110001	11-0001	Key Labs Quality Control	Continuing Calibration Check	1050	mg /
0101110002	11-0002	Key Labs Quality Control	Method Blank	< (20)	mg /
1110111377	11-1377	Hwy 141	G-N, 2'	< (19.9)	mg / Kg
1110111377	11-1378	Hwy 141	G-W, 2'	< (20)	mg / Kg
1110111377	11-1379	Hwy 141	G-M, 2'	< (19.9)	mg / Kg
1110111377	11-1380	Hwy 141	G-Toe, 1'	< (19.9)	mg / Kg

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\TEH_DATA\1111N10\0301004.D Vial: 3
Acq On : 10 Nov 20111 125:4 Operator: KEY
Sample : 11-1377, G-N, 1110111377, Inst : TEH 5890/
Misc : Soil, 20.11g, STTI, Basin Western Hwy 14 Multiplr: 1.00
IntFile : TERPHEN.E
Quant Time: Nov 10 18:16 19111 Quant Results File: TEH_HP5.RES

Quant Method : C:\HPCHEM\1\METHODS\TEH_HP5.M (Chemstation Integrator)
Title : TEH_HP5
Last Update : Tue Jan 18 14:44:13 2011
Response via : Initial Calibration
DataAcq Meth : TEH_HP5.M

Volume Inj. : 2 uL
Signal Phase : HP-5 = 50m x 0.2mm x 0.33um
Signal Info :

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
2) S o-Terphenyl	13.59	2042065	27.615 ppm
Spiked Amount 48.600 Range 50 - 150 Recovery = 56.82%			
Target Compounds			
1) H TEPH [DRO]	12.60	3679454	83.969 ppm

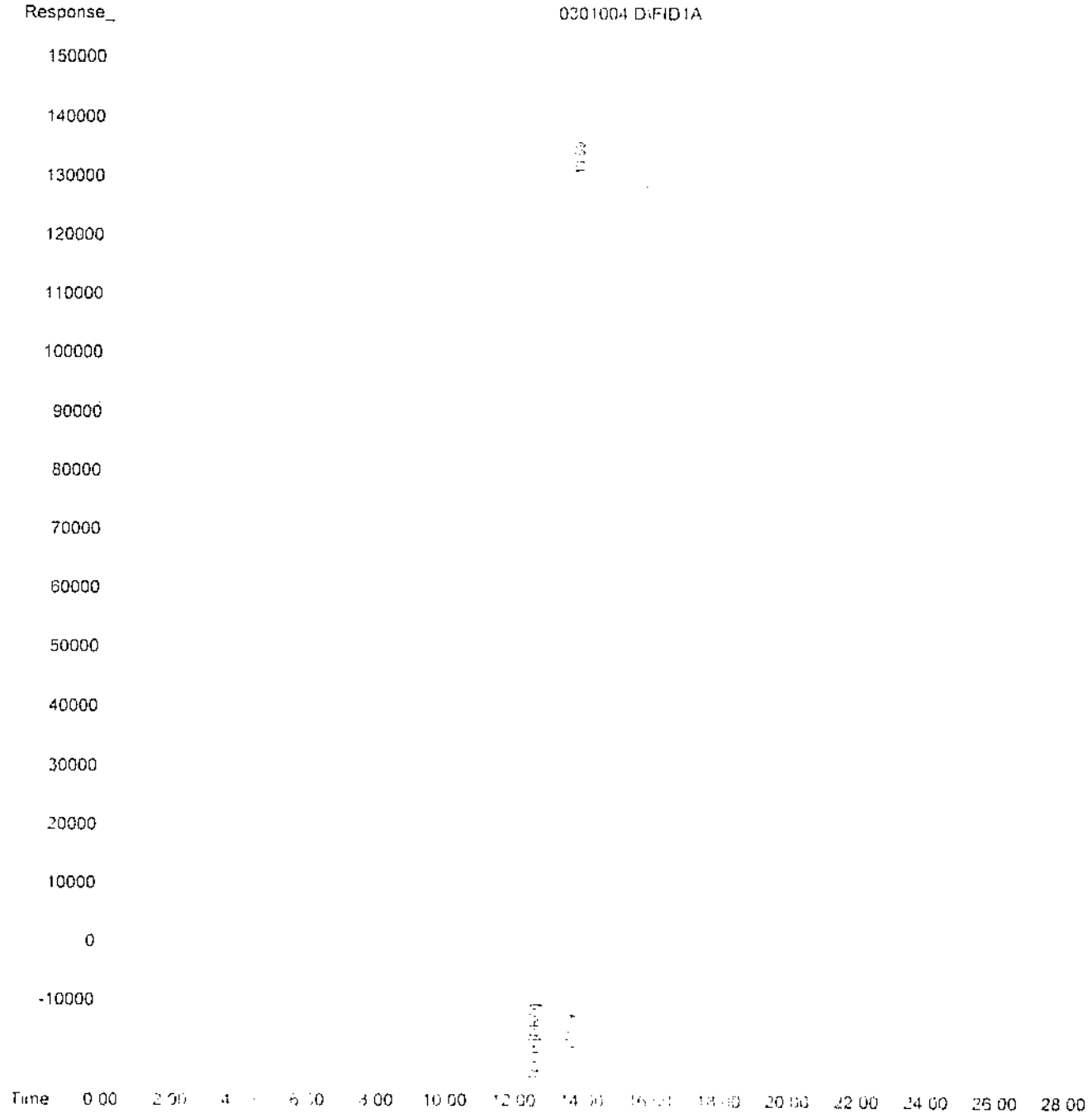
(F)=RT Delta .7 Window (m)=manual int.
0301004.D TEH_HP5.M Fri Nov 11 [illegible]

Quantitation Report

Data File : [illegible]\HPCHEM\1\TEH_DATA\1111N10\0301004.D Vial: 3
Acq On : [illegible] Nov 20111 125:4 Operator: KEY
Sample : [illegible]-1377, G-N, 1110111[illegible], Inst : TEH 5890/
Misc : [illegible]il, 20.11g, STTI, Basin Western Hwy 14 Multiplr: 1.00
IntFile : TEH_HP5.E
Quant Time: Nov 10 18:16 19111 Quant Results File: TEH_HP5.RES

Quant Method : C:\HPCHEM\1\METHODS\TEH_HP5.M (Chemstation Integrator)
Title : TEH_HP5
Last Update : Tue Jan 18 14:44:13 2011
Response via : Multiple Level Calibration
DataAcq Meth : TEH_HP5.M

Volume Inj. : 2 uL
Signal Phase : HP-5 = 50m x 0.2mm x [illegible]um
Signal Info :



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\TEH_DATA\1111N10\0401005.D Vial: 4
Acq On : 10 Nov 20111 126:2 Operator: KEY
Sample : 11-1378, G-W, 1110111377, Inst : TEH 5890/
Misc : Soil, 19.99g, STTI, Basin Western Hwy 14 Multiplr: 1.00
IntFile : TERPHEN.E
Quant Time: Nov 10 18:53 19111 Quant Results File: TEH_HP5.RES

Quant Method : C:\HPCHEM\1\METHODS\TEH_HP5.M (Chemstation Integrator)
Title : TEH_HP5
Last Update : Tue Jan 18 14:44:13 2011
Response via : Initial Calibration
DataAcq Meth : TEH_HP5.M

Volume Inj. : 2 uL
Signal Phase : HP-5 = 50m x 0.2mm x 0.33um
Signal Info :

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
2) S o-Terphenyl	13.59	2431631	32.883 ppm
Spiked Amount 48.600 Range 50 - 150 Recovery = 67.66%			
Target Compounds			
1) H TEPH [DRO]	12.60	3168814	72.315 ppm

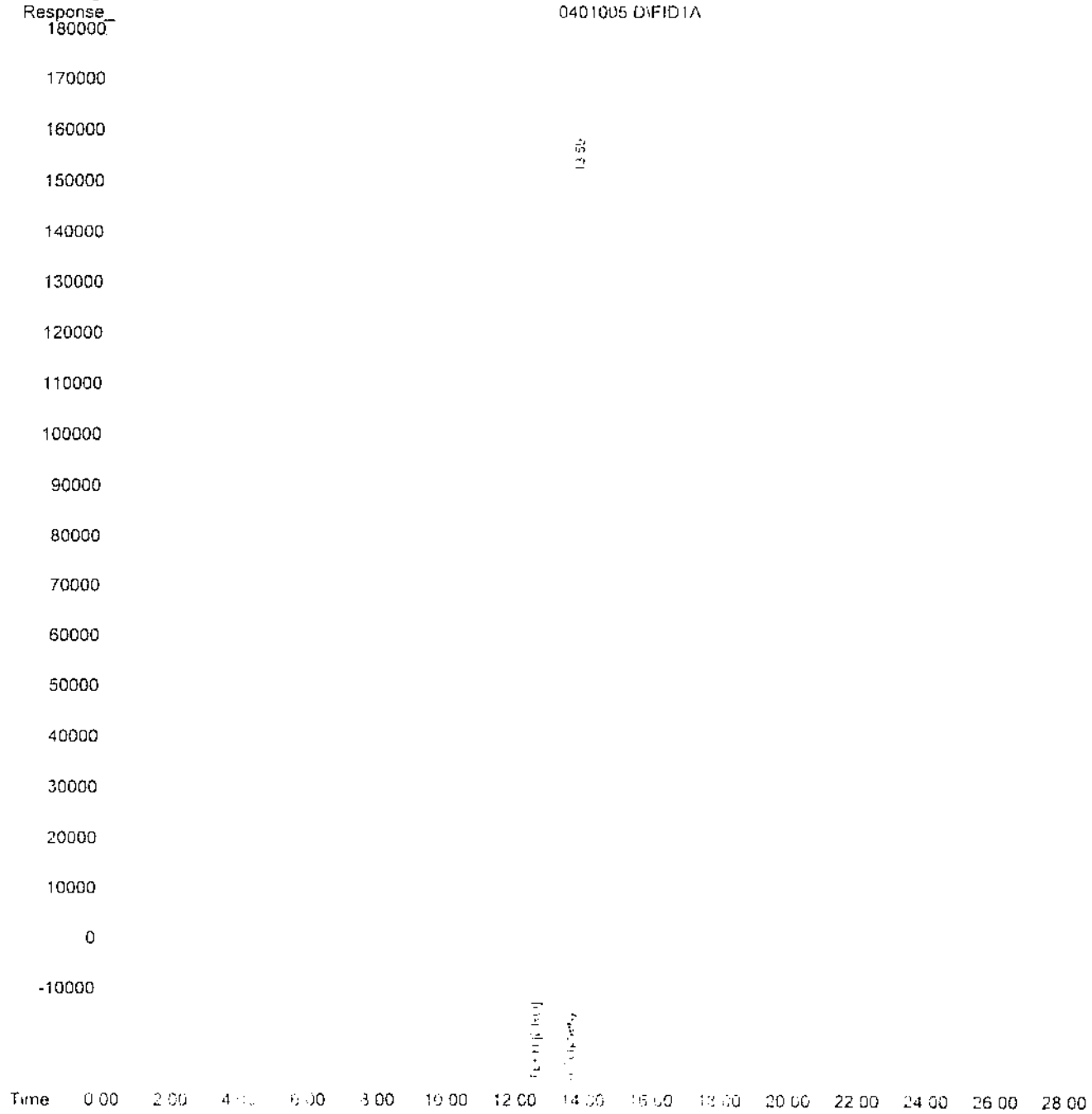
(f)=RT Delta ... Window (m)=manual int.
0401005.D TEH_HP5.M Fri Nov 11 10:56:41 2011 BTEX5971GCMS Page 1

Quantitation Report

Data File : [illegible]:\HPCHEM\1\TEH_DATA\1111N10\0401005.D Vial: 4
Acq On : [illegible] Nov 20111 126:2 Operator: KEY
Sample : [illegible]-1378, G-W, 1110111377, Inst : TEH 5890/
Misc : Soil, 19.99g, STTI, Basin Western Hwy 14 Multiplr: 1.00
IntFile : TEH_HP5.E
Quant Time: Nov 10 18:53 19111 Quant Results File: TEH_HP5.RES

Quant Method : C:\HPCHEM\1\METHODS\TEH_HP5.M (Chemstation Integrator)
Title : TEH_HP5
Last Update : Tue Jan 18 14:44:13 2011
Response via : Multiple Level Calibration
DataAcq Meth : TEH_HP5.M

Volume Inj. : 2 uL
Signal Phase : HP-5 = 50m x 0.2mm x [illegible]um
Signal Info :



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\TEH_DATA\1111N10\0501006.D Vial: 5
Acq On : 10 Nov 20111 127:0 Operator: KEY
Sample : 11-1379, G-M, 1110111377, Inst : TEH 5890/
Misc : Soil, 20.12g, STTI, Basin Western Hwy 14 Multiplr: 1.00
IntFile : TERPHEN.E
Quant Time: Nov 10 19:31 19111 Quant Results File: TEH_HP5.RES

Quant Method : C:\HPCHEM\1\METHODS\TEH_HP5.M (Chemstation Integrator)
Title : TEH_HP5
Last Update : Tue Jan 18 14:44:13 2011
Response via : Initial Calibration
DataAcq Meth : TEH_HP5.M

Volume Inj. : 2 uL
Signal Phase : HP-5 = 50m x 0.2mm x 0.33um
Signal Info :

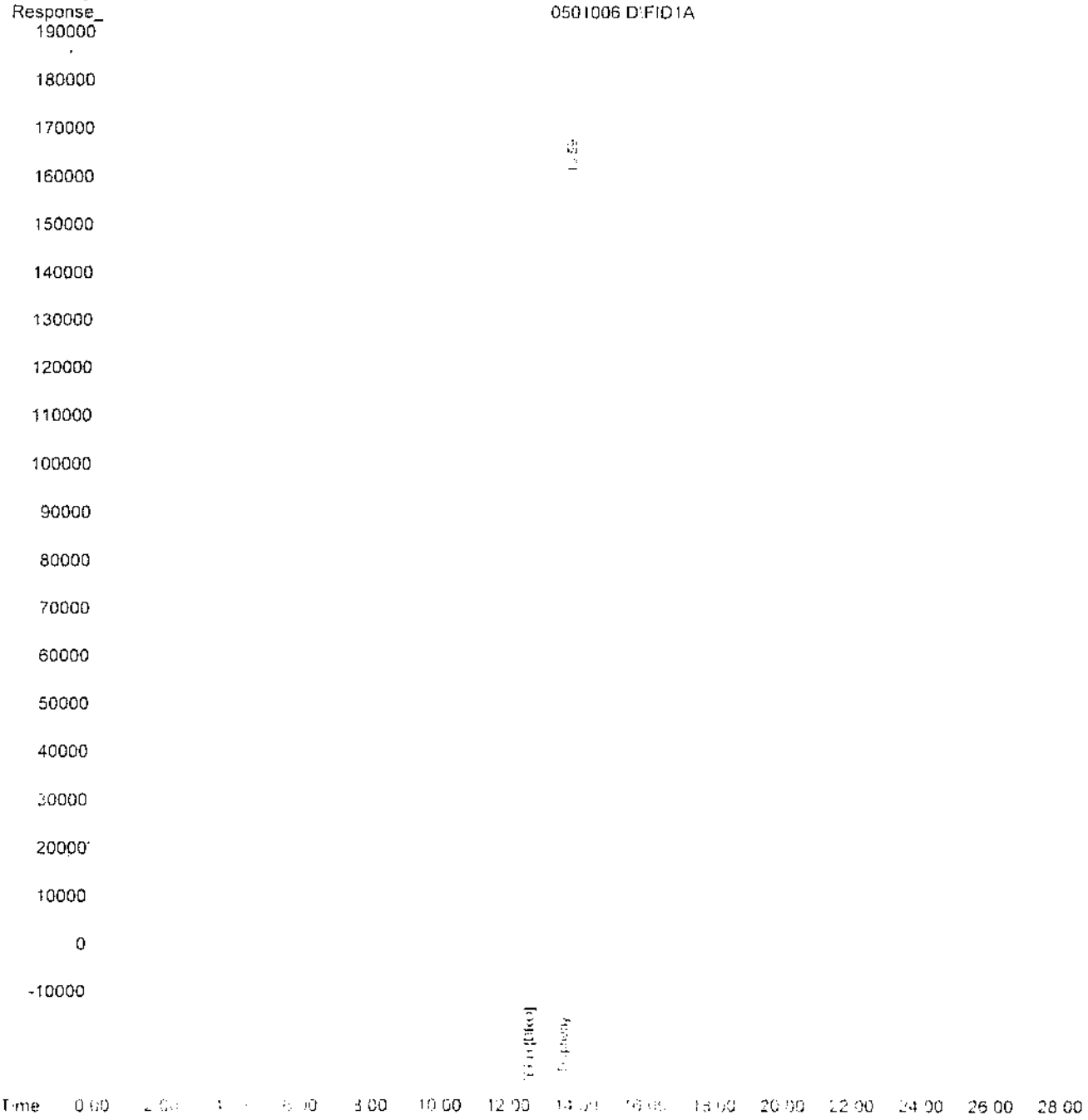
Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
2) S o-Terphenyl	13.59	2614531	35.356 ppm
Spiked Amount 48.600 Range 50 - 150 Recovery = 72.75%			
Target Compounds			
1) H TEPH [DRO]	12.60	3073606	70.143 ppm

Quantitation Report

Data File : C:\HPCHEM\1\TEH_DATA\1111N10\0501006.D Vial: 5
Acq On : 10 Nov 20111 127:0 Operator: KEY
Sample : 11-1379, G-M, 1110111377, Inst : TEH 5890/
Misc : Soil, 20.12g, STTI, Basin Western Hwy 14 Multiplr: 1.00
IntFile : TEH_HP5.E
Quant Time: Nov 10 19:31 19111 Quant Results File: TEH_HP5.RES

Quant Method : C:\HPCHEM\1\METHODS\TEH_HP5.M (Chemstation Integrator)
Title : TEH_HP5
Last Update : Tue Jan 18 14:44:13 2011
Response via : Multiple Level Calibration
DataAcq Meth : TEH_HP5.M

Volume Inj. : 2 uL
Signal Phase : HP-5 = 50m x 0.2mm x 0.33um
Signal Info :



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\TEH_DATA\1111N10\0601007.D Vial: 6
Acq On : 10 Nov 20111 127:3 Operator: KEY
Sample : 11-1380, G-Toe, 1110111377, Inst : TEH 5890/
Misc : Soil, 20.06g, STTI, Basin Western Hwy 14 Multiplr: 1.00
IntFile : TERPHEN.E
Quant Time: Nov 10 20:08 19111 Quant Results File: TEH_HP5.RES

Quant Method : C:\HPCHEM\1\METHODS\TEH_HP5.M (Chemstation Integrator)
Title : TEH_HP5
Last Update : Tue Jan 18 14:44:13 2011
Response via : Initial Calibration
DataAcq Meth : TEH_HP5.M

Volume Inj. : 2 uL
Signal Phase : HP-5 = 50m x 0.2mm x 0.33um
Signal Info :

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
2) S o-Terphenyl	13.59	2634839	35.631 ppm
Spiked Amount 48.600 Range 50 - 150		Recovery =	73.31%
Target Compounds			
1) H TEPH [DRO]	12.60	4299809	98.126 ppm

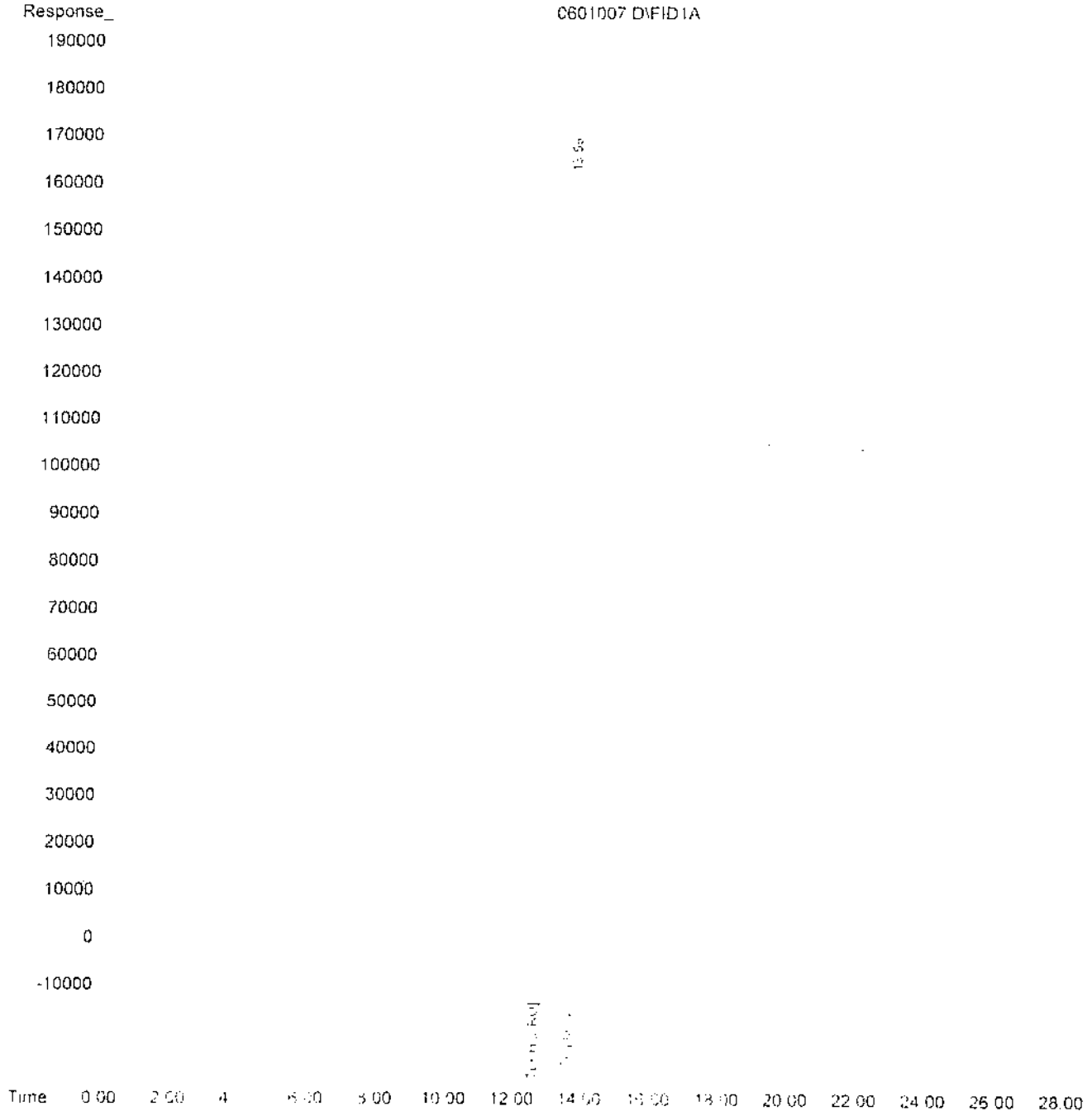
(f)=RT Delta window (m)=manual int.

Quantitation Report

Data File : C:\HPCHEM\1\TEH_DATA\1111N10\0601007.D Vial: 6
Acq On : 10 Nov 20111 127:3 Operator: KEY
Sample : 11-1380, G-Toe, 1110111377, Inst : TEH 5890/
Misc : Soil, 20.06g, STTI, Basin Western Hwy 14 Multiplr: 1.00
IntFile : TEH_HP5.E
Quant Time: Nov 10 20:08 19111 Quant Results File: TEH_HP5.RES

Quant Method : C:\HPCHEM\1\METHODS\TEH_HP5.M (Chemstation Integrator)
Title : TEH_HP5
Last Update : Tue Jan 18 14:44:14 2011
Response via : Multiple Level Calibration
DataAcq Meth : TEH_HP5.M

Volume Inj. : 2 uL
Signal Phase : HP-5 = 50m x 0.2mm x 0.33um
Signal Info :



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\TEH_DATA\1111N10\0101001.D
Acq On : 10 Nov 20111 123:5
Sample : 11-0001, CC TEH 1000 ppm, 0101110000,
Misc : Diesel #2 in hexane
IntFile : TERPHEN.E
Quant Time: Nov 11 10:56 19111 Quant Results File: TEH_HP5.RES

Vial: 1
Operator: KEY
Inst : TEH 5890/
Multiplr: 1.00

Quant Method : C:\HPCHEM\1\METHODS\TEH_HP5.M (Chemstation Integrator)
Title : TEH_HP5
Last Update : Tue Jan 18 14:44:13 2011
Response via : Initial Calibration
DataAcq Meth : TEH_HP5.M

Volume Inj. : 2 uL
Signal Phase : HP-5 = 50m x 0.2mm x 0.33um
Signal Info :

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
2) S o-Terphenyl	13.58	2	0.000 ppm m
Spiked Amount 48.600 Range 50 - 150		Recovery =	0.00%#
Target Compounds			
1) H TEPH [DRO]	12.60	45920733	1047.954 ppm

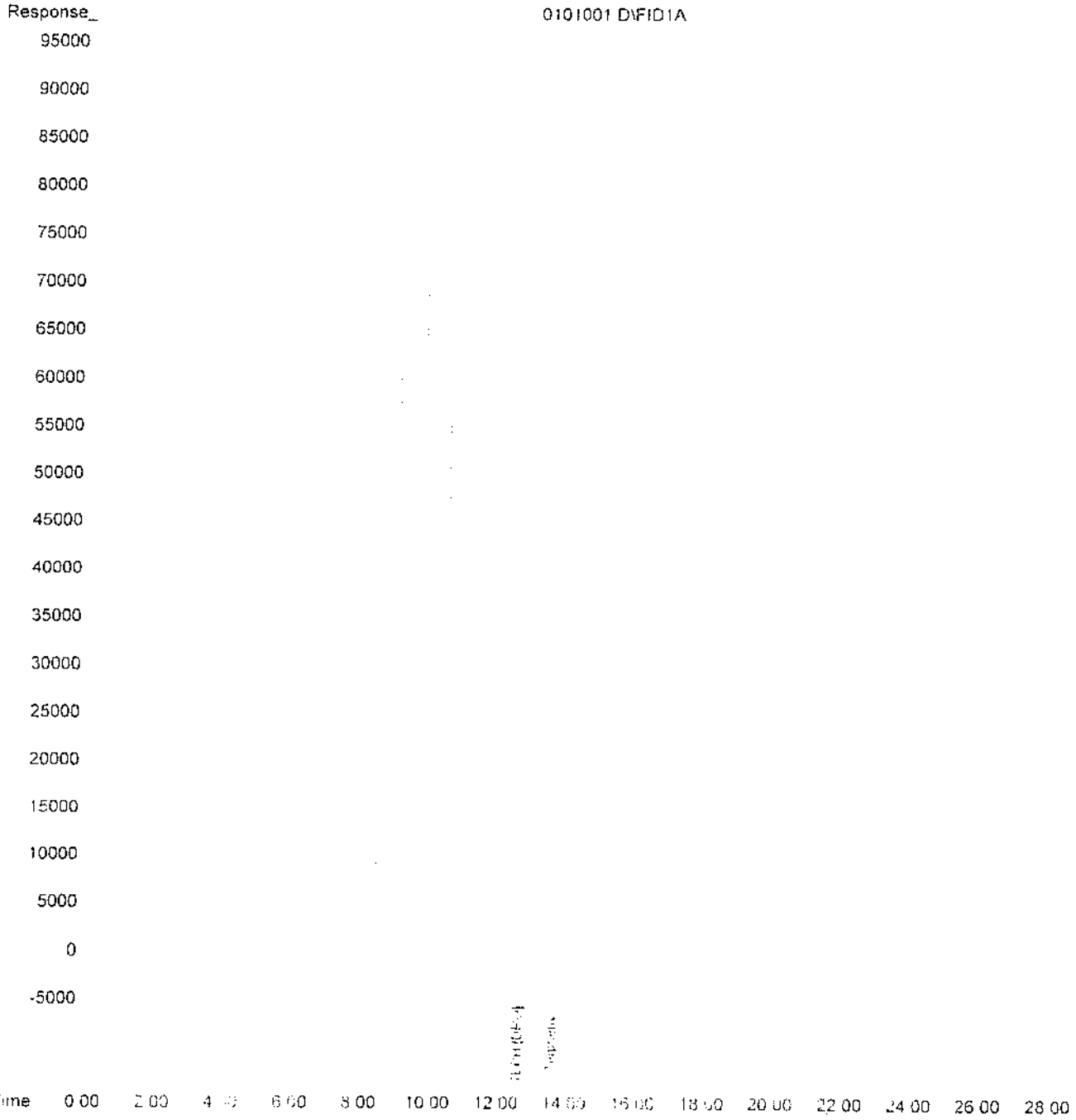
(f)=RT Delta ... Window (m)=manual int.

Quantitation Report

Data File : [illegible]:\HPCHEM\1\TEH_DATA\1111N10\0101001.D Vial: 1
Acq On : [illegible] Nov 20111 123:5 Operator: KEY
Sample : 11-0001, CC TEH 1000 ppm, 0101110000, Inst : TEH 5890/
Misc : Diesel #2 in hexane Multiplr: 1.00
IntFile : TEH_HP5.E
Quant Time: Nov 11 10:56 19111 Quant Results File: TEH_HP5.RES

Quant Method : C:\HPCHEM\1\METHODS\TEH_HP5.M (Chemstation Integrator)
Title : TEH_HP5
Last Update : Tue Jan 18 14:44:13 2011
Response via : Multiple Level Calibration
DataAcq Meth : TEH_HP5.M

Volume Inj. : 2 uL
Signal Phase : HP-5 = 50m x 0.2mm x 0.33um
Signal Info :



Quantitation Report (QT Reviewed)

Data File : [illegible]:\HPCHEM\1\TEH_DATA\1111N10\0201003.D
Acq On : [illegible] Nov 20111 125:0
Sample : [illegible]-0002, Blank 11-10-11, 0101110000,
Misc : TEH Soil Blank
IntFile : TERPHEN.E
Quant Time: [illegible] 10 17:39 19111 Quant Results File: TEH_HP5.RES

Vial: 2
Operator: KEY
Inst : TEH 5890/
Multiplr: 1.00

Quant Method : C:\HPCHEM\1\METHODS\TEH_HP5.M (Chemstation Integrator)
Title : TEH_HP5
Last Update : Tue Jan 18 14:44:1[illegible] 2011
Response via : Initial Calibration
DataAcq Meth : TEH_HP5.M

Volume Inj. : 2 uL
Signal Phase : HP-5 = 50m x 0.2mm x 0.33um
Signal Info :

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
2) S o-Terphenyl	13.00	2584466	34.950 ppm
Spiked Amount [illegible].500 Range 50 - 150		Recovery =	71.91%
Target Compounds			
1) H TEPH [DRO]	12.60	3176311	72.486 ppm

(f)=RT Delta [illegible] Window (m)=manual int.
0201003.D TEH HP5.M Fri Nov 11 10:57:35 2011

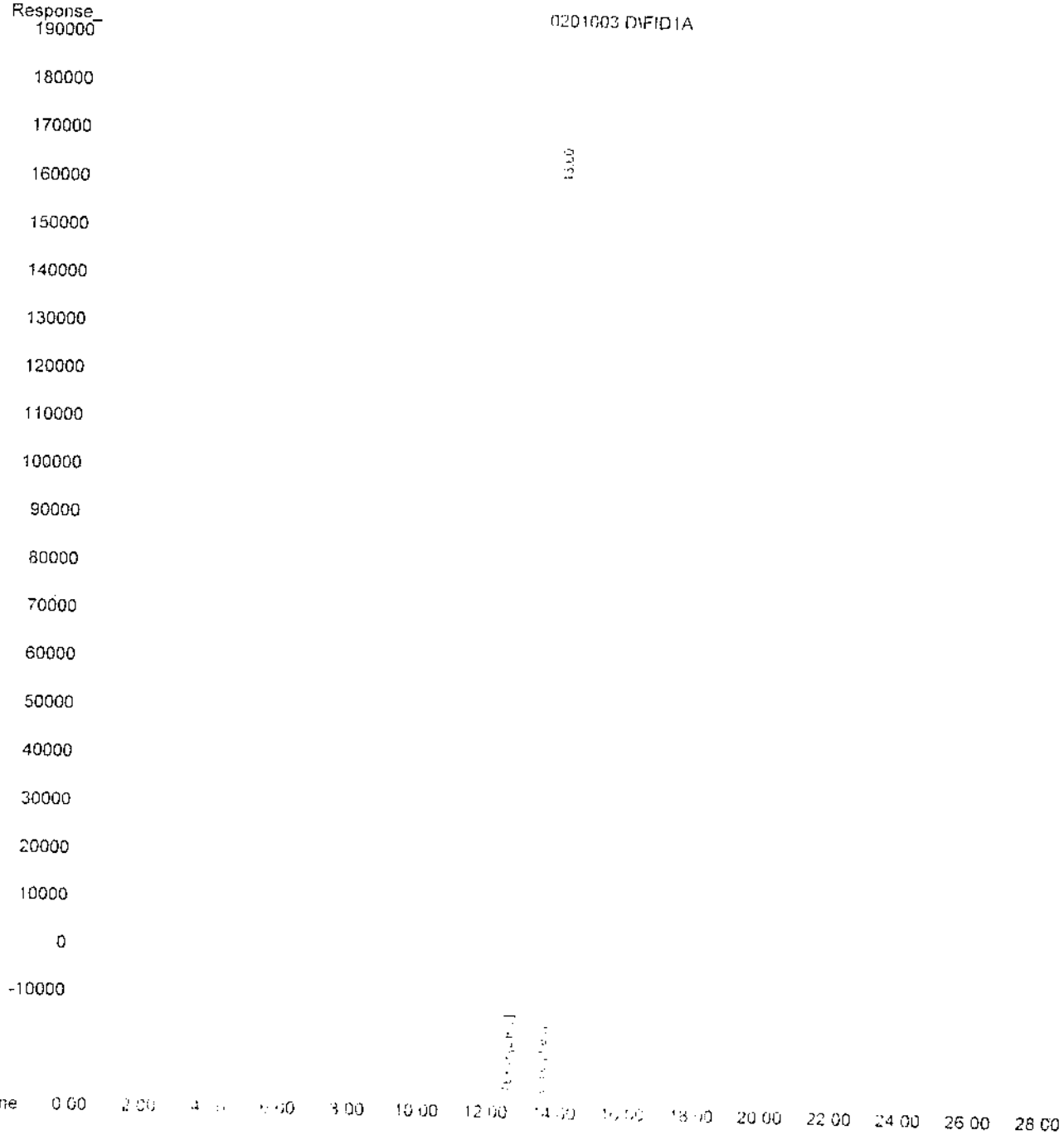
Quantitation Report

Data File : [illegible]\HPCHEM\1\TEH_DATA\1111N10\0201003.D
Acq On : [illegible] Nov 20111 125:0
Sample : 11-0002, Blank 11-10-11, 0101110000,
Misc : TEH Soil Blank
IntFile : TEH_HP5.E
Quant Time: Nov 10 17:39 19111 Quant Results File: TEH_HP5.RES

Vial: 2
Operator: KEY
Inst : TEH 5890/
Multiplr: 1.00

Quant Method : C:\HPCHEM\1\METHODS\TEH_HP5.M (Chemstation Integrator)
Title : TEH_HP5
Last Update : Tue Jan 18 14:44:13 2011
Response via : Multiple Level Calibration
DataAcq Meth : TEH_HP5.M

Volume Inj. : 2 uL
Signal Phase : HP-5 = 50m x 0.2mm x 0.33um
Signal Info :



KEN Laboratories, Inc
2479-A Riverside Pkwy
Grand Junction, CO 81505
(970) 243-5311
Fax (970) 243-6010

CHAIN OF CUSTODY RECORD

102711 1356

W Sump Grid
Proj No /Name: [illegible]
Company Name: SHi
Phone:
Email:
Fax

SAMPLERS: (Signature)
Sampler Name: (Printed) Shad

SAMPLE ID	DATE	TIME	MATRIX	SAMPLE LOCATION	SAMPLE ANALYSES: DRO	SAMPLE ANALYSES: 10:6	CONTAINER/SIZE/TYPE	PRESERVATIVES	REMARKS	LABORATORY SAMPLE #
Sump Soil	10/26			BW Spill			1	ice	baggie	1356
						TOTAL NO. OF CONTAINERS				

Relinquished by (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Lisa Redd	10/27 10:40				

Custody Seal No.

Custody Seal Present Intact

Date Required

Method of Shipment:

Shipped by: (Signature)

Date Completed:

Received for Laboratory by: (Signature) [illegible]

Date / Time 10/27/11 1040

Distribution: Original Accompanies Shipment; Copy to Field Files
Form CC-01-6-92 Rev. 3/10

Diesel Range Organics TEH

TEH(DRO) calculation sheet

Run Date	Matrix	Key Lab #	Hexane Volume [mL]	TEH Run Blank [ppm]	Moisture Multiplier	Aliquot [g, mL]	Instrument DF Multiplier	Multiplied Raw T.E.H. [ppm]
10/27/20 -0:10		11-0002	4		1	20.00	1.000	59.7
10/27/20 -0:32	Soil	11-1356	4		1.49	20.17	1.000	105.2

TEPH (DRO C10-C28) RESULTS (method blank subtracted)

Key COC#	Key Lab#	Sample Location	Sample ID	Final TEH Results	Units
0101110002	11-0002	Key Labs Quality Control	Method Blank	< (20)	mg /
1027111356	11-1356	BW Spill	Sump Soil	31.1	mg / Kg

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\TEH_DATA\1110O27\0601007.D Vial: 6
Acq On : 27 Oct 20111 132:5 Operator: KEY
Sample : 11-1356, Sump Soil, 1027111356, Inst : TEH 5890/
Misc : Soil, 20.17g, STTI, BW Spill Multiplr: 1.00
IntFile : TERPHEN.E
Quant Time: Oct 27 13:28 19111 Quant Results File: TEH_HP5.RES

Quant Method : C:\HPCHEM\1\METHODS\TEH_HP5.M (Chemstation Integrator)
Title : TEH_HP5
Last Update : Tue Jan 18 14:44:13 2011
Response via : Initial Calibration
DataAcq Meth : TEH_HP5.M

Volume Inj. : 2 uL
Signal Phase : HP-5 = 50m x 0.2mm x 0.33um
Signal Info :

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
2) S o-Terphenyl	13.59	1523489	20.602 ppm
Spiked Amount 48.600 Range 50 - 150 Recovery = 42.39%#			
Target Compounds			
1) H TEPH [DRO]	12.60	4611286	105.234 ppm

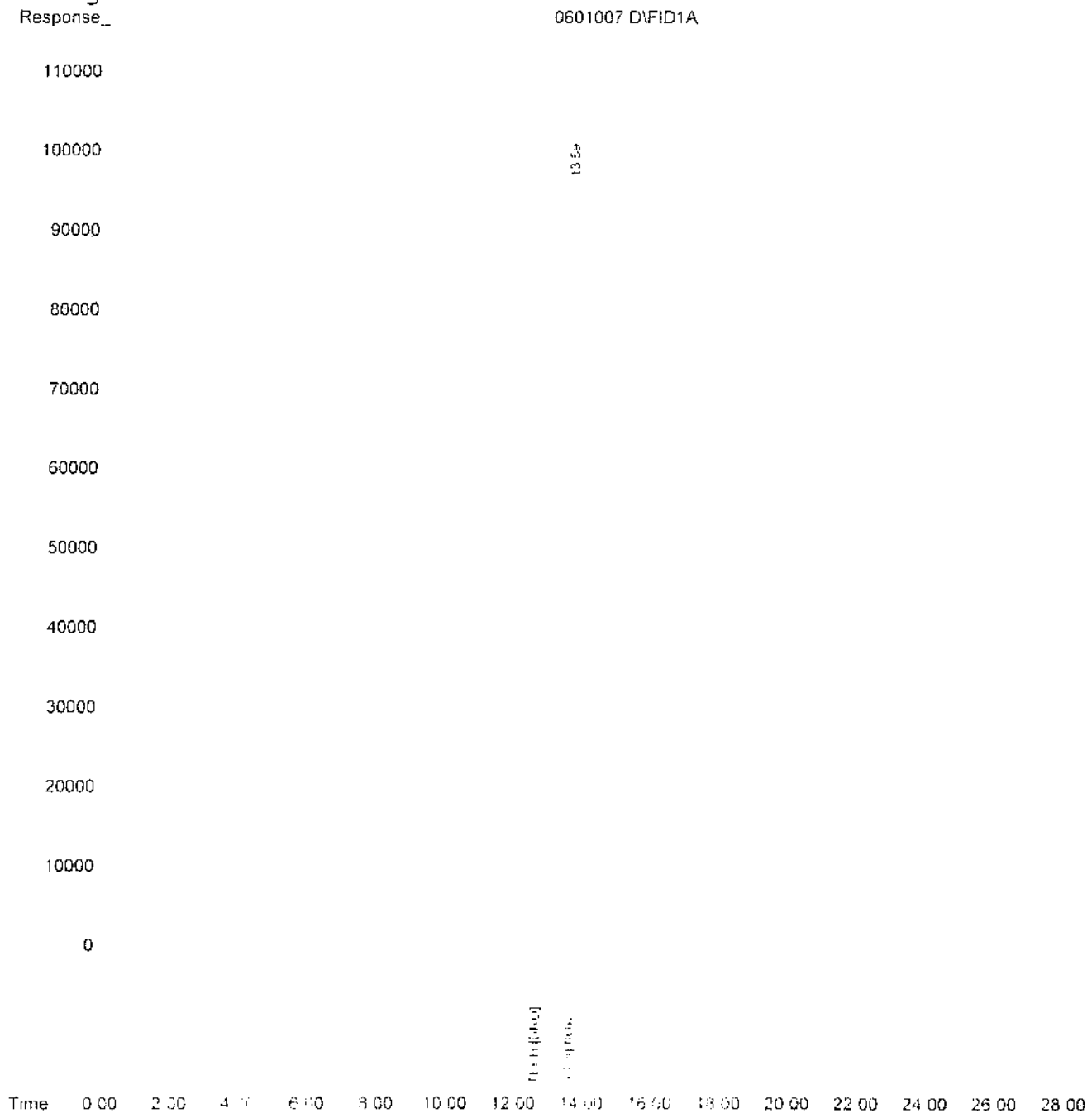
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report

Data File : C:\HPCHEM\1\TEH_DATA\1110O27\0601007.D Vial: 6
Acq On : 27 Oct 20111 132:5 Operator: KEY
Sample : 11-1356, Sump Soil, 1027111356, Inst : TEH 5890/
Misc : Soil, 20.17g, STTI, BW Spill Multiplr: 1.00
IntFile : TEH_HP5.E
Quant Time: Oct 27 13:28 19111 Quant Results File: TEH_HP5.RES

Quant Method : C:\HPCHEM\1\METHODS\TEH_HP5.M (Chemstation Integrator)
Title : TEH_HP5
Last Update : Tue Jan 18 14:44:13 2011
Response via : Multiple Level Calibration
DataAcq Meth : TEH_HP5.M

Volume Inj. : 2 uL
Signal Phase : HP-5 = 50m x 0.2mm x 0.33um
Signal Info :



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\TEH_DATA\1110027\0102002.D Vial: 1
Acq On : 27 Oct 20111 9:5 Operator: KEY
Sample : 11-0001, CC TEH 1000 ppm, 0101100000, Inst : TEH 5890/
Misc : Diesel #2 in hexane Multiplr: 1.00
IntFile : TERPHEN.E
Quant Time: Oct 27 9:44 19111 Quant Results File: TEH_HP5.RES

Quant Method : C:\HPCHEM\1\METHODS\TEH_HP5.M (Chemstation Integrator)
Title : TEH_HP5
Last Update : Tue Jan 18 14:44:13 2011
Response via : Initial Calibration
DataAcq Meth : TEH_HP5.M

Volume Inj. : 2 uL
Signal Phase : HP-5 = 50m x 0.2mm x 0.33um
Signal Info :

Compound	R.T.	Response	Conc	Units	
System Monitoring Compounds					
2) S o-Terphenyl	13.57	0	N.D.	ppm	m
Spiked Amount 48.600 Range 50 - 150 Recovery = 0.00%#					
Target Compounds					
1) H TEPH [DRO]	12.60	48283490	1101.875	ppm	

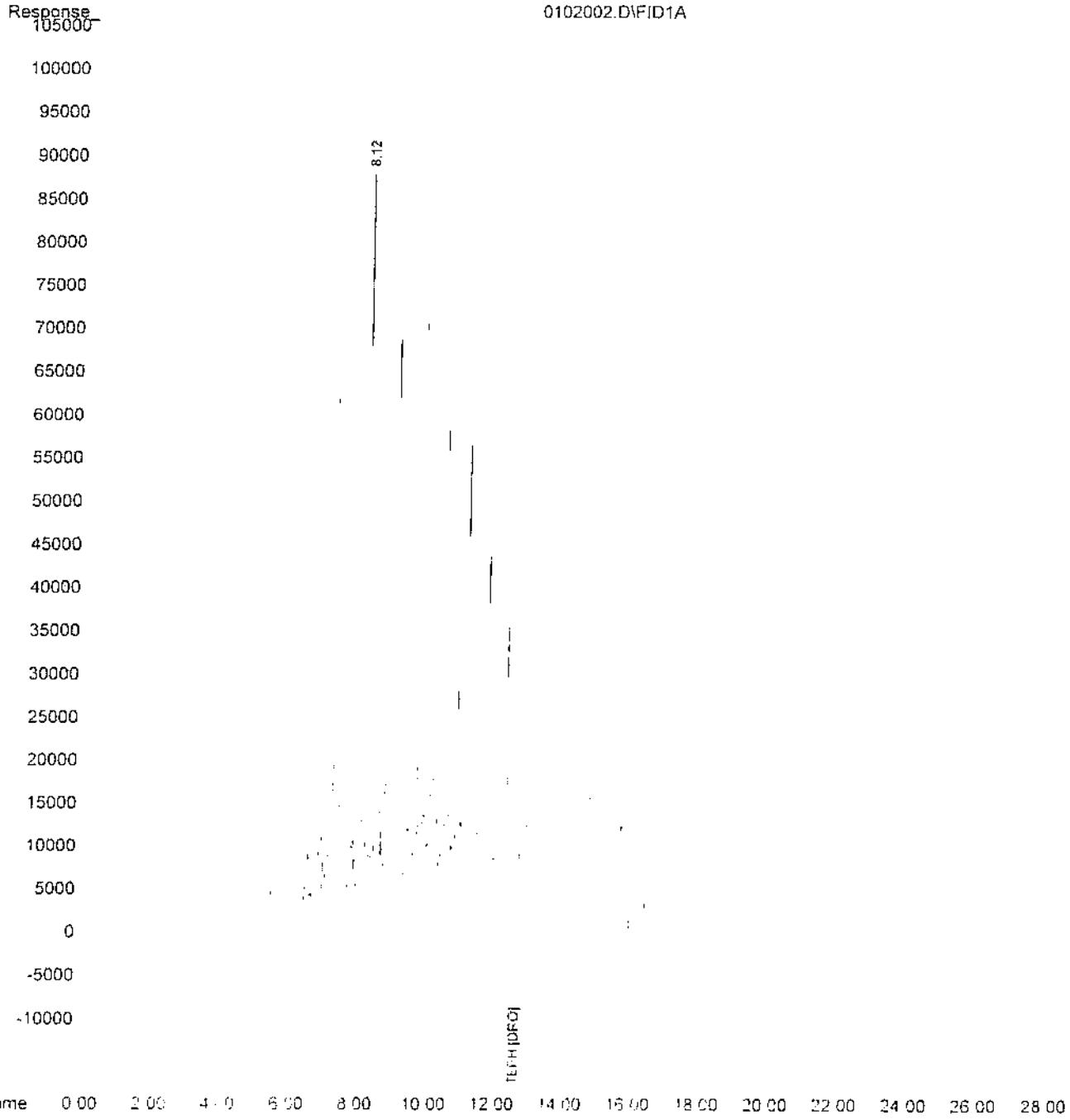
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report

Data File : C:\HPCHEM\1\TEH_DATA\1110O27\0102002.D Vial: 1
Acq On : 27 Oct 20111 9:5 Operator: KEY
Sample : 11-0001, CC TEH 1000 ppm, 0101100000, Inst : TEH 5890/
Misc : Diesel #2 in hexane Multiplr: 1.00
IntFile : TEH_HP5.E
Quant Time: Oct 27 9:44 19111 Quant Results File: TEH_HP5.RES

Quant Method : C:\HPCHEM\1\METHODS\TEH_HP5.M (Chemstation Integrator)
Title : TEH_HP5
Last Update : Tue Jan 18 14:44:13 2011
Response via : Multiple Level Calibration
DataAcq Meth : TEH_HP5.M

Volume Inj. : 2 uL
Signal Phase : HP-5 = 50m x 0.2mm x 0.33um
Signal Info :



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\TEH_DATA\1110O27\0201003.D Vial: 2
Acq On : 27 Oct 20111 10:2 Operator: KEY
Sample : 11-0002, Blank 10-27-11, 0101110000, Inst : TEH 5890/
Misc : TEH Method Blank Multiplr: 1.00
IntFile : TERPHEN.E
Quant Time: Oct 27 10:57 19111 Quant Results File: TEH_HP5.RES

Quant Method : C:\HPCHEM\1\METHODS\TEH_HP5.M (Chemstation Integrator)
Title : TEH_HP5
Last Update : Tue Jan 18 14:44:13 2011
Response via : Initial Calibration
DataAcq Meth : TEH_HP5.M

Volume Inj. : 2 uL
Signal Phase : HP-5 = 50m x 0.2mm x 0.33um
Signal Info :

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
2) S o-Terphenyl	13.60	2437210	32.959 ppm
Spiked Amount 48.600 Range 50 - 150 Recovery = 67.82%			
Target Compounds			
1) H TEPH [DRO]	12.60	2616638	59.714 ppm

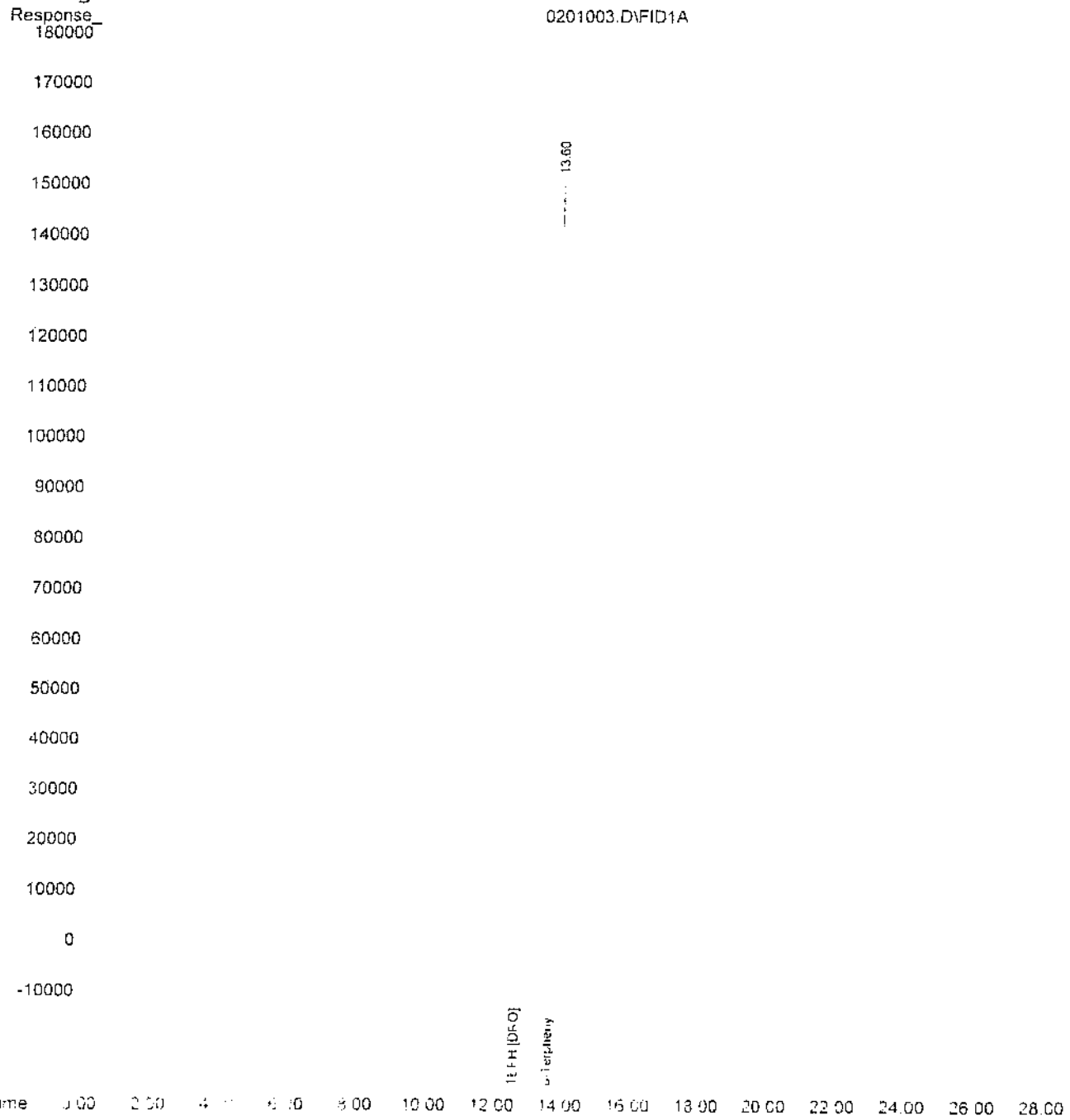
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report

Data File : C:\HPCHEM\1\TEH_DATA\1110O27\0201003.D Vial: 2
Acq On : 27 Oct 20111 10:2 Operator: KEY
Sample : 11-0002, Blank 10-27-11, 0101110000, Inst : TEH 5890/
Misc : TEH Method Blank Multiplr: 1.00
IntFile : TEH_HP5.E
Quant Time: Oct 27 10:57 19111 Quant Results File: TEH_HP5.RES

Quant Method : C:\HPCHEM\1\METHODS\TEH_HP5.M (Chemstation Integrator)
Title : TEH_HP5
Last Update : Tue Jan 18 14:44:13 2011
Response via : Multiple Level Calibration
DataAcq Meth : TEH_HP5.M

Volume Inj. : 2 uL
Signal Phase : HP-5 = 50m x 0.2mm x 0.33um
Signal Info :



Injection Log

Directory: c:\hpchem\1\teh_data\1110o27

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	1	0101001.d	1	11-0001, CC TEH 1000 ppm, 0101100000,	Diesel #2 in hexane	27 Oct 111 12:
2	1	0102002.d	1	11-0001, CC TEH 1000 ppm, 0101100000,	Diesel #2 in hexane	27 Oct 111 12::
3	2	0201003.d	1	11-0002, Blank 10-27-11, 0101110000,	TEH Method Blank	27 Oct 111 13::
4	3	0301004.d	20.	11-1354, Release, 1025111354,	Soil, 20.11g, EAA, Halliburton Slick Rock Hil	27 Oct 111 13::
5	4	0401005.d	1	11-1355, Back Ground, 1025111354,	Soil, 20.48g, EAA, Halliburton Slick Rock Hil	27 Oct 111 13::
6	5	0501006.d	10.	11-1354, Release, 1025111354,	Soil, 20.11g, EAA, Halliburton Slick Rock Hil	27 Oct 111 13::
7	6	0601007.d	1	11-1356, Sump Soil, 1027111356,	Soil, 20.17g, STTI, BW Spill	27 Oct 111 13::

Oil and Grease

Oil&Grease calculation sheet

Run Date	Matrix	Key Lab #	Oil & Grease Method Blank [g]	Moisture Multiplier	Aliquot [g, mL]	Empty Tare Weight [g]	Final Weight [g]	Aliquot Multiplier for mg/[Kg,L]	net weight gain [g]
10/27/2011	Soil	11-1356	0.0001	1	100.2800	102.3606	102.3625	9.9721	0.0019

Oil & Grease RESULTS

Key COC#	Key Lab#	Sample Location	Sample ID	Oil & Grease Result	Units
1027111356	11-1356	BW Spill	Sump Soil	< (19.9)	mg / Kg

Loss On Heating

Loss On Heating calculation data

Total Solids Dried at 103-105C

SM 2540 B

Run Date	Matrix	Key Lab #	Weighing Dish Serial#	Aliquot [g, mL]	Empty Dish Wt[g]	Wet Dish Wt[g]	Dry Dish Wt[g]	Key COC#	Key Lab#	Date Received	Date Sampled	Sample Location	Sample ID	% Moisture	Rounded Moisture Multiplier
10/27/11	Soil	11-1356	513	68.47	107.43	175.90	153.38	1027111356	11-1356	10/27/11	10/26/11	BW Spill	Sump Soil	32.89	1.49

KEY Laboratories Inc
2479-A Riverside Pkwy
Grand Junction, CO 81505
(970) 243-5311
Fax (970) 243-6010

CHAIN OF CUSTODY RECORD

1108111372

Proj. No./Name: [illegible]
Company Name: [illegible]
Phone: 243 1642
Email:
Fax:

SAMPLERS: (Signature) [illegible]
Sampler Name (Printed) D. Brett Redd

SAMPLE ID.	DATE	TIME	MATRIX	SAMPLE LOCATION	SAMPLE ANALYSES: BTEX	SAMPLE ANALYSES: Ignitability	CONTAINER/SIZE/TYPE	PRESERVATIVES	REMARKS	LABORATORY SAMPLE #
BW-LF	11-8-11	10:07	Soil	Hwy 141 mm128	✓	✓ >140°F	3	ice		1372

TOTAL NO. OF CONTAINERS: 3

Relinquished by (Signature)	Date / Time	Received by (Signature)	Relinquished by (Signature)	Date / Time	Received by (Signature)
D. Brett Redd	11-8-11 1210				

Custody Seal No.	Custody Seal Present Intact	Date Required
NA	NA	

Method of Shipment	Shipped by: (Signature)	Date Completed:	Received for Laboratory by: (Signature)	Date / Time
Hand Retrieved			[illegible]	11/8/11 1210

Distribution: Original Accompanies Shipment, Copy to Field Files
Form CC-01-6-92 Rev. 3/10

Key Laboratories, Inc.
2479A Riverside Parkway
Grand Junction, Colorado 81505-1319
Phone (970) 243-5311 Fax (970) 243-6010

Final Results
Report Date: 11/08/11

Ignitability Results

Key Lab#	Key COC#	Client Sample Name	Instrument Result	Units
11-1372	1108111372	BW-LF	>140	°F

BTEX Analytical Report

KEY LABORATORIES, INC.

2479A Riverside Parkway
Grand Junction, CO 81505-1319
(970) 243-5311 FAX (970) 243-6010

Client : Storage Tank Technology, Inc.
Client Project Name : LMH-Gateway
Client Project Number :
Client Sample ID : BW-LF
Client Sample Location : LMH
Sampling Date : 11/08/11
Sampling Time : 10:00
Sample Matrix : Soil
Sampler : Brett
Key Labs Report Prefix:

% LOH: 7.676

QC Type:
Key Lab # : 11-1372
Work Order # : 1108111372
Date Recieved : 11/08/11
Method : EPA SW846 5030/5035/8260
Technician : KEY
Data File Name: 0301003.D
Date Analyzed : 8 Nov 2011 13:31
Data File Path : C:\MSDCHEM\1\DATA_1111NOV08\
Lab Sample Information : Soil, 1.34g, STTI, LMH-Gateway
Lab Sample Number : BW-LF, 11-1372, 1108111372,

Loss On Heating multiplier = 1.083
MeOH Extract/Dilution Aliquot [uL] =
Dilution/Extraction volume [mL] =
Reported==>> x

Significant Figures= 2
Sample vol/wt = 1.34
DF = 4.041

CAS#	Type	Target Compounds	Audit	R.T.	Resp.	Amt.	MDL	Units	DF	Final Conc	Final Units	RDL	Qual	MQL	Spike	%REC
	H1	TVH [GRO] [C6-C10]					150	ug								
1634-04-4	M1	MTBE					0.25	ug								
71-43-2	M1	Benzene	x	3.973	1033063	8.30	0.33	ug	4.041	34.	ug/Kg	1.33		1940.		
108-88-3	MC1	Toluene	x	7.485	3854360	48.94	0.57	ug	4.041	200.	ug/Kg	2.3		1940.		
100-41-4	MC2	Ethylbenzene	x	11.24	4226563	28.07	0.27	ug	4.041	110.	ug/Kg	1.09		1940.		
		XYLENES (Total)	x		22696876	194.1	1.2	ug	4.041	780.	ug/Kg	4.85		5819.		
91-20-3	M3	Napthylene	x	17.89	2095093	29.36	2	ug	4.041	120.	ug/Kg	8.08		1940.		

CAS#	Type	Target Compounds	Audit	R.T.	Resp.	Amt.	MDL	Units	DF	Final Conc	Final Units	RDL	Qual	MQL	Spike	%REC
	M2	M/P Xylene	x	11.81	14881201	126.96	1.1	ug	4.041	510.	ug/Kg	4.45		3879.		
95-47-6	M2	O-Xylene	x	12.78	7815675	67.12	0.47	ug	4.041	270.	ug/Kg	1.9		1940.		
108-67-8	M2	1,3,5-Trimethylbenzene	x	15.34	4530040	37.81	0.65	ug	4.041	150.	ug/Kg	2.63		1940.		
95-63-6	M2	1,2,4-Trimethylbenzene	x	15.77	17574382	145.63	1.18	ug	4.041	590.	ug/Kg	4.77		1940.		
		TVH GRO (C6-C10) Subtraction Blank =														

CAS#	Type	System Monitoring Compounds		R.T.	Resp.	Amt.	CCV Area%	Units	Initial Area%	Init.Resp.	Water Limits	Soil Limits	Spike	%Rec
1868-53-7	S1	Dibromofluromethane	x	2.895	4113486	87.10	95.	ug	132.7	3100050	81 - 126	73 - 127	69.9	124.6
17060-07-0	S1	1,2-Dichloroethane-d4	x	3.33	993159	75.19	97.9	ug	114.9	864029	82 - 118	83 - 117	69.9	107.6
2037-26-5	S1	Toluene-d8	x	7.352	4923867	70.86	98.1	ug	109.2	4510628	89 - 111	86 - 114	69.9	101.4
460-00-4	S2	4-Bromofluorobenzene	x	13.77	3927227	73.62	92.4	ug	116.2	3378383	81 - 119	72 - 128	69.9	105.3

CAS#	Type	Internal Stanard Compounds		R.T.	Resp.	Amt.	CCV Area%	Units	Initial Area%	Init.Resp.	Water Limits	Soil Limits	ISS Conc
462-06-6	I1	fluorbenzene	x	4.291	8352039	69.95	95.7	ug	107.7	7754231	50 - 200	50 - 200	69.9
3114-55-4	I2	Chlorbenzene-d5	x	10.47	1434219	69.95	95.5	ug	109.2	1313683	50 - 200	50 - 200	69.9
3855-82-1	I3	1,4-Dichlorobenzene-d4	x	15.88	3131623	69.95	91.6	ug	114.3	2740791	50 - 200	50 - 200	69.9

MDL = Method Detection Limit
PQL = Practical Quantition Limit = 4 x MDL
RDL = Reporting Detection Limit = MDL x Dilution Factor
MQL = Maximum Quantitation Limit = 110% x DF x Highest Calibration Standard

Reporting basis is Kg for solids and L for liquids

J qualifier = MDL < Result < PQL
E qualifier = Estimated Result > Highest Calibration Standard

Analyst

Approved

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA_1111nov08\
Data File : 0301003.D
Acq On : 8 Nov 2011 13:31
Operator : KEY
Sample : BW-LF, 11-1372, 1108111372,
Misc : Soil, 1.34g, STTI, LMH-Gateway
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Nov 08 14:16:00 2011
Quant Method : C:\MSDCHEM\1\5973N\4BTEXVRX.M
Quant Title : 4VRXBTEX 8260/BTEX
QLast Update : Tue Nov 08 12:50:01 2011
Response via : Initial Calibration

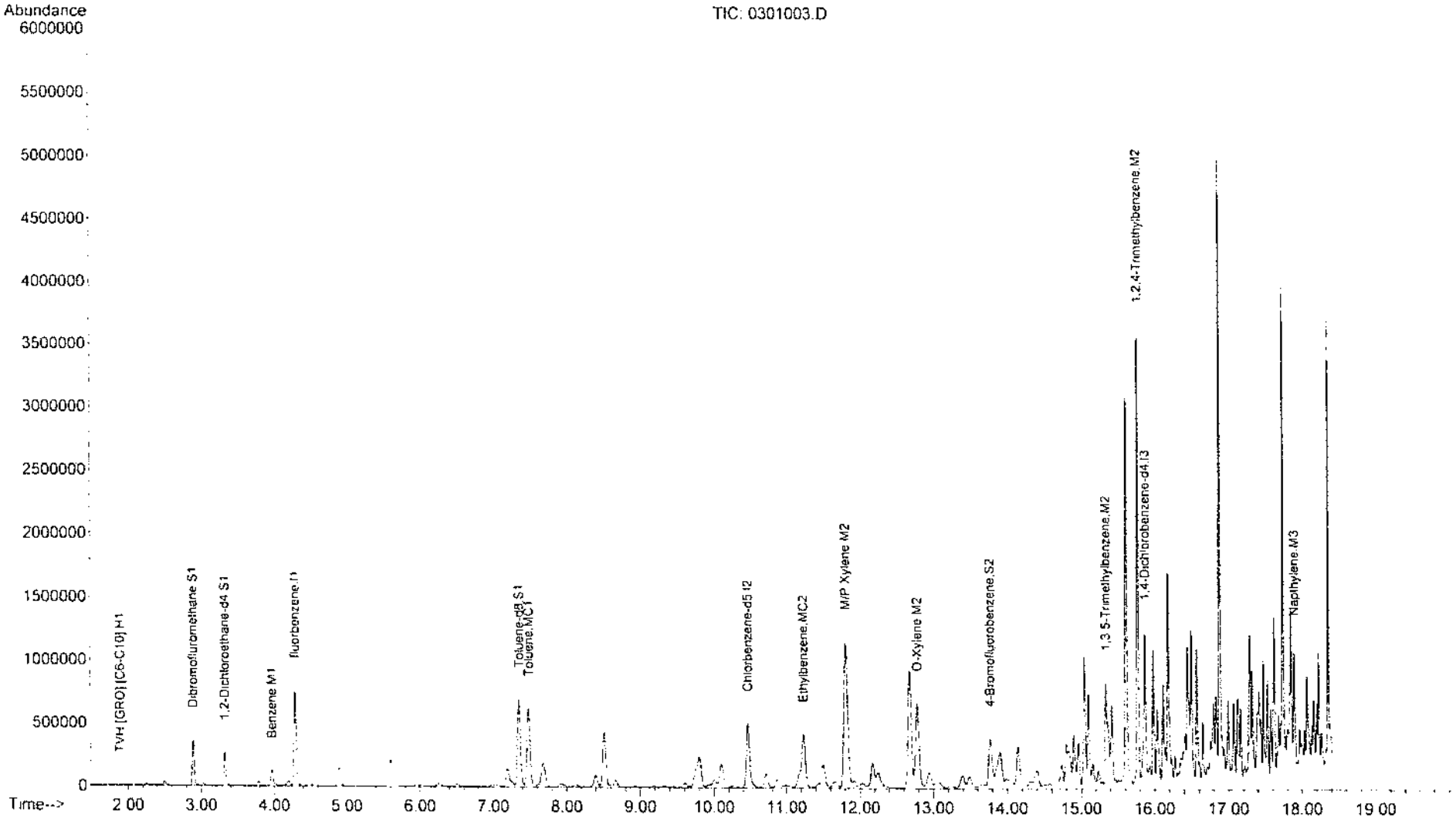
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) fluorbenzene	4.29	96	8352039	69.95	ug	0.00
9) Chlorbenzene-d5	10.47	54	1434219+	69.95	ug	0.00
16) 1,4-Dichlorobenzene-d4	15.88	152	3131623+	69.95	ug	0.00
System Monitoring Compounds						
4) Dibromofluromethane	2.89	113	4113486+	87.10	ug	0.00
Spiked Amount 69.900	Range 73 - 127		Recovery = 124.61%			
5) 1,2-Dichloroethane-d4	3.33	67	993159	75.19	ug	0.00
Spiked Amount 69.900	Range 83 - 117		Recovery = 107.57%			
7) Toluene-d8	7.35	100	4923867	70.86	ug	0.00
Spiked Amount 69.900	Range 86 - 114		Recovery = 101.37%			
13) 4-Bromofluorobenzene	13.77	174	3927227+	73.62	ug	0.00
Spiked Amount 69.900	Range 72 - 128		Recovery = 105.32%			
Target Compounds						Qvalue
2) TVH [GRO] [C6-C10]	1.90	TIC	439421251m	3873.40	ug	
3) MTBE	0.00	73	0	N.D.		
6) Benzene	3.97	78	1033063	8.30	ug #	98
8) Toluene	7.48	92	3854360	48.94	ug	97
10) Ethylbenzene	11.24	91	4226563	28.07	ug	99
11) M/P Xylene	11.81	91	14881201	126.96	ug	99
12) O-Xylene	12.78	91	7815675	67.12	ug	98
14) 1,3,5-Trimethylbenzene	15.34	105	4530040	37.81	ug	99
15) 1,2,4-Trimethylbenzene	15.77	105	17574382	145.63	ug	100
17) Napthylene	17.89	128	2095093	29.36	ug #	87

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA_1111nov08\
Data File : 0301003.D
Acq On : 8 Nov 2011 13:31
Operator : KEY
Sample : BW-LF, 11-1372, 1108111372,
Misc : Soil, 1.34g, STTI, LMH-Gateway
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Nov 08 14:16:00 2011
Quant Method : C:\MSDCHEM\1\5973N\4BTEXVRX.M
Quant Title : 4VRXBTEX 8260/BTEX
QLast Update : Tue Nov 08 12:50:01 2011
Response via : Initial Calibration



BTEX Analytical Report

KEY LABORATORIES, INC.
2479A Riverside Parkway
Grand Junction, CO 81505-1319
(970) 243-5311 FAX (970) 243-6010

Client : Key Laboratories, Inc.
Client Project Name : Quality Control Sample
Client Project Number :
Client Sample ID : Continuing Calibration Check
Client Sample Location : Key Labs Quality Control
Sampling Date :
Sampling Time :
Sample Matrix :
Sampler : KEY
Key Labs Report Prefix:

QC Type: CCV
Key Lab # : 11-0001
Work Order # : 0101110001
Date Recieved :
Method : EPA SW846 5030/5035/8260
Technician : KEY
Data File Name: 0101001.D
Date Analyzed : 8 Nov 2011 12:39
Data File Path : C:\MSDCHEM\1\DATA_1111NOV08\
Lab Sample Information : 5uL #450 + 1uL #453 + #454
Lab Sample Number : CC BTEX 40ppb, 11-0001, 0101110000,

Loss On Heating multiplier =
MeOH Extract/Dilution Aliquot [uL] =
Dilution/Extraction volume [mL] =
Reported==>> x

Significant Figures= 2
Sample vol/wt = 5
DF = 1

CAS#	Type	Target Compounds	Audit	R.T.	Resp.	Amt.	MDL	Units	DF	Final Conc	Final Units	RDL	Qual	MQL	Spike	%REC
	H1	TVH [GRO] [C6-C10[	x	1.9	85765011	723.47	150	ug	1.	.7	ug/L	.15		40.		
1634-04-4	M1	MTBE	x	2.131	2136790	45.41	0.25	ug	1.	45.	ug/L	.25		480.	40.	113.5
71-43-2	M1	Benzene	x	3.972	5163917	39.73	0.33	ug	1.	40.	ug/L	.33		480.	40.	99.3
108-88-3	MC1	Toluene	x	7.485	3306170	40.17	0.57	ug	1.	40.	ug/L	.57		480.	40.	100.4
100-41-4	MC2	Ethylbenzene	x	11.24	6384533	40.49	0.27	ug	1.	40.	ug/L	.27		480.	40.	101.2
		XYLENES (Total)	x		15246154	124.5	1.2	ug	1.	120.	ug/L	1.2		1440.	120.	103.7
91-20-3	M3	Napthylene	x	17.89	3233915	41.52	2	ug	1.	42.	ug/L	2.		480.	40.	103.8

CAS#	Type	Target Compounds	Audit	R.T.	Resp.	Amt.	MDL	Units	DF	Final Conc	Final Units	RDL	Qual	MQL	Spike	%REC
	M2	M/P Xylene	x	11.83	10278216	83.74	1.1	ug	1.	84.	ug/L	1.1		960.	80.	104.7
95-47-6	M2	O-Xylene	x	12.79	4967939	40.74	0.47	ug	1.	41.	ug/L	.47		480.	40.	101.9
108-67-8	M2	1,3,5-Trimethylbenzene	x	15.34	5161140	41.14	0.65	ug	1.	41.	ug/L	.65		480.	40.	102.8
95-63-6	M2	1,2,4-Trimethylbenzene	x	15.77	5386340	42.62	1.18	ug	1.	43.	ug/L	1.18		480.	40.	106.6
		TVH GRO (C6-C10) Subtraction Blank =														

CAS#	Type	System Monitoring Compounds		R.T.	Resp.	Amt.	CCV Area%	Units	Initial Area%	Init.Resp.	Water Limits	Soil Limits	Spike	%Rec
1868-53-7	S1	Dibromofluromethane	x	2.893	4330450	87.75	100.	ug	139.7	3100050	81 - 126	73 - 127	69.9	125.5
17060-07-0	S1	1,2-Dichloroethane-d4	x	3.329	1014784	73.52	100.	ug	117.4	864029	82 - 118	83 - 117	69.9	105.2
2037-26-5	S1	Toluene-d8	x	7.353	5019893	69.13	100.	ug	111.3	4510628	89 - 111	86 - 114	69.9	98.9
460-00-4	S2	4-Bromofluorobenzene	x	13.77	4250396	76.09	100.	ug	125.8	3378383	81 - 119	72 - 128	69.9	108.9

CAS#	Type	Internal Stanard Compounds		R.T.	Resp.	Amt.	CCV Area%	Units	Initial Area%	Init.Resp.	Water Limits	Soil Limits	ISS Conc
462-06-6	I1	fluorbenzene	x	4.29	8727522	69.95	100.	ug	112.6	7754231	50 - 200	50 - 200	69.9
3114-55-4	I2	Chlorbenzene-d5	x	10.47	1501945	69.95	100.	ug	114.3	1313683	50 - 200	50 - 200	69.9
3855-82-1	I3	1,4-Dichlorobenzene-d4	x	15.88	3418447	69.95	100.	ug	124.7	2740791	50 - 200	50 - 200	69.9

MDL = Method Detection Limit
PQL = Practical Quantition Limit = 4 x MDL
RDL = Reporting Detection Limit = MDL x Dilution Factor
MQL = Maximum Quantitation Limit = 110% x DF x Highest Calibration Standard

Reporting basis is Kg for solids and L for liquids

J qualifier = MDL < Result < PQL
E qualifier = Estimated Result > Highest Calibration Standard

Analyst

Approved

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA_1111nov08\
Data File : 0101001.D
Acq On : 8 Nov 2011 12:39
Operator : KEY
Sample : CC BTEX 40ppb, 11-0001, 0101110000,
Misc : 5uL #450 + 1uL #453 + #454
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Nov 08 13:00:20 2011
Quant Method : C:\MSDCHEM\1\5973N\4BTEXVRX.M
Quant Title : 4VRXBTEX 8260/BTEX
QLast Update : Tue Nov 08 12:50:01 2011
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) fluorbenzene	4.29	96	8727522	69.95	ug	0.00
9) Chlorbenzene-d5	10.47	54	1501945+	69.95	ug	0.00
16) 1,4-Dichlorobenzene-d4	15.88	152	3418447+	69.95	ug	0.00
System Monitoring Compounds						
4) Dibromofluromethane	2.89	113	4330450+	87.75	ug	0.00
Spiked Amount 69.900	Range 81 - 126		Recovery	=	125.54%	
5) 1,2-Dichloroethane-d4	3.33	67	1014784	73.52	ug	0.00
Spiked Amount 69.900	Range 82 - 118		Recovery	=	105.18%	
7) Toluene-d8	7.35	100	5019893	69.13	ug	0.00
Spiked Amount 69.900	Range 89 - 111		Recovery	=	98.90%	
13) 4-Bromofluorobenzene	13.77	174	4250396+	76.09	ug	0.00
Spiked Amount 69.900	Range 81 - 119		Recovery	=	108.86%	

Target Compounds							Qvalue
2) TVH [GRO] [C6-C10]	1.90	TIC	85765011m	723.47	ug		
3) MTBE	2.13	73	2136790	45.41	ug		98
6) Benzene	3.97	78	5163917	39.73	ug	#	98
8) Toluene	7.49	92	3306170	40.17	ug		95
10) Ethylbenzene	11.24	91	6384533	40.49	ug		99
11) M/P Xylene	11.83	91	10278216	83.74	ug		99
12) O-Xylene	12.79	91	4967939	40.74	ug		98
14) 1,3,5-Trimethylbenzene	15.34	105	5161140	41.14	ug		100
15) 1,2,4-Trimethylbenzene	15.77	105	5386340	42.62	ug		98
17) Napthylene	17.89	128	3233915	41.52	ug	#	100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Evaluate Continuing Calibration Report

Data Path : C:\MSDChem\1\DATA_1111nov08\
Data File : 0101001.D
Acq On : 8 Nov 2011 12:39
Operator : KEY
Sample : CC BTEX 40ppb, 11-0001, 0101110000,
Misc : 5uL #450 + 1uL #453 + #454
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Nov 08 13:00:20 2011
Quant Method : C:\MSDCHEM\1\5973N\4BTEXVRX.M
Quant Title : 4VRXBTEX 8260/BTEX
QLast Update : Tue Nov 08 12:50:01 2011
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 150%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I1	fluorbenzene	1.000	1.000	0.0	107	0.00
2	H1	TVH [GRO] [C6-C10]	0.950	0.982	-3.4	115	0.00
3	M1	MTBE	0.377	0.428	-13.5	121	0.00
4	S1	Dibromofluromethane	0.396	0.496	-25.3#	126	0.00
5	S1	1,2-Dichloroethane-d4	0.111	0.116	-4.5	112	0.00
6	M1	Benzene	1.042	1.035	0.7	107	0.00
7	S1	Toluene-d8	0.582	0.575	1.2	105	0.00
8	MC1	Toluene	0.660	0.662	-0.3	109	0.00
9	I2	Chlorbenzene-d5	1.000	1.000	0.0	107	0.00
10	MC2	Ethylbenzene	7.344	7.434	-1.2	113	0.00
11	M2	M/P Xylene	5.717	5.984	-4.7	116	0.00
12	M2	O-Xylene	5.679	5.784	-1.8	117	0.00
13	S2	4-Bromofluorobenzene	2.602	2.830	-8.8	117	0.00
14	M2	1,3,5-Trimethylbenzene	5.843	6.009	-2.8	116	0.00
15	M2	1,2,4-Trimethylbenzene	5.886	6.271	-6.5	120	0.00
16	I3	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	115	0.00
17	M3	Napthylene	1.594	1.654	-3.8	130	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0

BTEX Analytical Report

KEY LABORATORIES, INC.

2479A Riverside Parkway
Grand Junction, CO 81505-1319
(970) 243-5311 FAX (970) 243-6010

Client : Key Laboratories, Inc.
Client Project Name : Quality Control Sample
Client Project Number :
Client Sample ID : Method Blank
Client Sample Location : Key Labs Quality Control
Sampling Date :
Sampling Time :
Sample Matrix :
Sampler : KEY
Key Labs Report Prefix:

QC Type: Blank
Key Lab # : 11-0002
Work Order # : 0101110002
Date Recieved :
Method : EPA SW846 5030/5035/8260
Technician : KEY
Data File Name: 0201002.D
Date Analyzed : 8 Nov 2011 13:05
Data File Path : C:\MSDCHEM\1\DATA_1111NOV08\
Lab Sample Information : 5uL #450
Lab Sample Number : Blank, 11-0002, 0101110000,

Loss On Heating multiplier =
MeOH Extract/Dilution Aliquot [uL] =
Dilution/Extraction volume [mL] =
Reported==>> x

Significant Figures= 2
Sample vol/wt = 5
DF = 1

CAS#	Type	Target Compounds	Audit	R.T.	Resp.	Amt.	MDL	Units	DF	Final Conc	Final Units	RDL	Qual	MQL	Spike	%REC
	H1	TVH [GRO] [C6-C10]	x	1.9	-2147484	-139.44	150	ug	1.	<	ug/L	.15		40.		
1634-04-4	M1	MTBE	x				0.25	ug	1.	<	ug/L	.25		480.		
71-43-2	M1	Benzene	x	3.978	7944	0.06	0.33	ug	1.	<	ug/L	.33		480.		
108-88-3	MC1	Toluene	x	7.489	17830	0.21	0.57	ug	1.	<	ug/L	.57		480.		
100-41-4	MC2	Ethylbenzene	x	11.27	12932	0.08	0.27	ug	1.	<	ug/L	.27		480.		
		XYLENES (Total)	x		37917	.3	1.2	ug	1.	<	ug/L	1.2		1440.		
91-20-3	M3	Napthylene	x	17.9	143675	1.83	2	ug	1.	<	ug/L	2.		480.		

CAS#	Type	Target Compounds	Audit	R.T.	Resp.	Amt.	MDL	Units	DF	Final Conc	Final Units	RDL	Qual	MQL	Spike	%REC
	M2	M/P Xylene	x	11.84	27842	0.22	1.1	ug	1.	<	ug/L	1.1		960.		
95-47-6	M2	O-Xylene	x	12.81	10075	0.08	0.47	ug	1.	<	ug/L	.47		480.		
108-67-8	M2	1,3,5-Trimethylbenzene	x	15.35	19734	0.15	0.65	ug	1.	<	ug/L	.65		480.		
95-63-6	M2	1,2,4-Trimethylbenzene	x	15.78	23188	0.17	1.18	ug	1.	<	ug/L	1.18		480.		
		TVH GRO (C6-C10) Subtraction Blank =														

CAS#	Type	System Monitoring Compounds		R.T.	Resp.	Amt.	CCV Area%	Units	Initial Area%	Init.Resp.	Water Limits	Soil Limits	Spike	%Rec
1868-53-7	S1	Dibromofluromethane	x	2.895	4408351	87.08	101.8	ug	142.2	3100050	81 - 126	73 - 127	69.9	124.6
17060-07-0	S1	1,2-Dichloroethane-d4	x	3.33	1068220	75.44	105.3	ug	123.6	864029	82 - 118	83 - 117	69.9	107.9
2037-26-5	S1	Toluene-d8	x	7.353	5215214	70.01	103.9	ug	115.6	4510628	89 - 111	86 - 114	69.9	100.2
460-00-4	S2	4-Bromofluorobenzene	x	13.77	4313679	73.54	101.5	ug	127.7	3378383	81 - 119	72 - 128	69.9	105.2

CAS#	Type	Internal Stanard Compounds		R.T.	Resp.	Amt.	CCV Area%	Units	Initial Area%	Init.Resp.	Water Limits	Soil Limits	ISS Conc
462-06-6	I1	fluorbenzene	x	4.291	8952623	69.95	102.6	ug	115.5	7754231	50 - 200	50 - 200	69.9
3114-55-4	I2	Chlorbenzene-d5	x	10.47	1577070	69.95	105.	ug	120.	1313683	50 - 200	50 - 200	69.9
3855-82-1	I3	1,4-Dichlorobenzene-d4	x	15.88	3445428	69.95	100.8	ug	125.7	2740791	50 - 200	50 - 200	69.9

MDL = Method Detection Limit
PQL = Practical Quantition Limit = 4 x MDL
RDL = Reporting Detection Limit = MDL x Dilution Factor
MQL = Maximum Quantitation Limit = 110% x DF x Highest Calibration Standard

Reporting basis is Kg for solids and L for liquids

J qualifier = MDL < Result < PQL
E qualifier = Estimated Result > Highest Calibration Standard

Analyst

Approved

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA_1111nov08\
Data File : 0201002.D
Acq On : 8 Nov 2011 13:05
Operator : KEY
Sample : Blank, 11-0002, 0101110000,
Misc : 5uL #450
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Nov 08 14:15:35 2011
Quant Method : C:\MSDCHEM\1\5973N\4BTEXVRX.M
Quant Title : 4VRXBTEX 8260/BTEX
QLast Update : Tue Nov 08 12:50:01 2011
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) fluorbenzene	4.29	96	8952623	69.95	ug	0.00
9) Chlorbenzene-d5	10.47	54	1577070+	69.95	ug	0.00
16) 1,4-Dichlorobenzene-d4	15.88	152	3445428+	69.95	ug	0.00
System Monitoring Compounds						
4) Dibromofluromethane	2.89	113	4408351+	87.08	ug	0.00
Spiked Amount 69.900	Range 81 - 126		Recovery = 124.58%			
5) 1,2-Dichloroethane-d4	3.33	67	1068220	75.44	ug	0.00
Spiked Amount 69.900	Range 82 - 118		Recovery = 107.93%			
7) Toluene-d8	7.35	100	5215214	70.01	ug	0.00
Spiked Amount 69.900	Range 89 - 111		Recovery = 100.16%			
13) 4-Bromofluorobenzene	13.77	174	4313679+	73.54	ug	0.00
Spiked Amount 69.900	Range 81 - 119		Recovery = 105.21%			

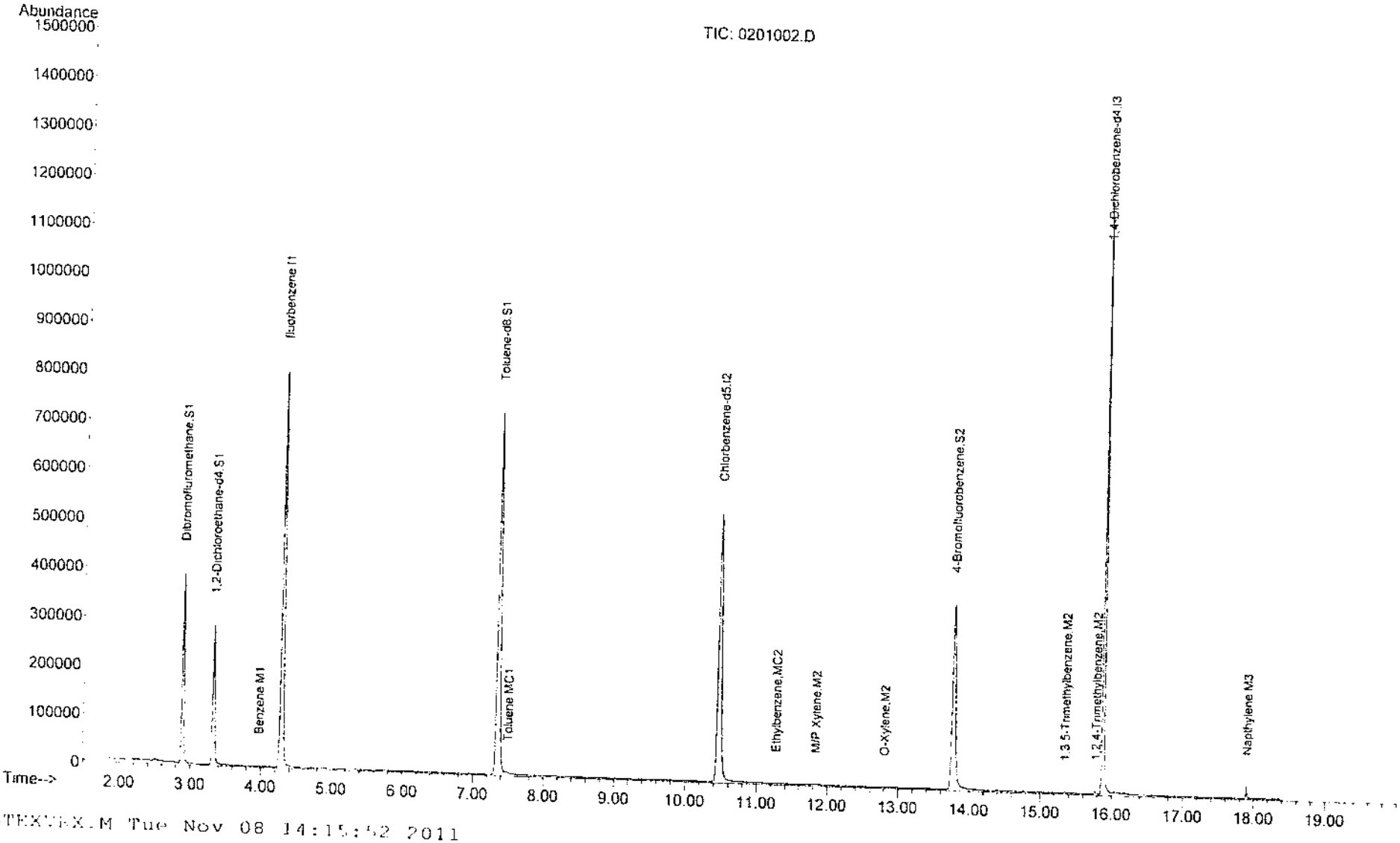
Target Compounds						Qvalue
2) TVH [GRO] [C6-C10]	1.90	TIC	-16956663m	Below Cal		
3) MTBE	0.00	73	0	N.D.		
6) Benzene	3.98	78	7944	0.06 ug	#	53
8) Toluene	7.49	92	17830	0.21 ug	#	88
10) Ethylbenzene	11.27	91	12932	0.08 ug	#	71
11) M/P Xylene	11.84	91	27842	0.22 ug	#	84
12) O-Xylene	12.81	91	10075	0.08 ug	#	69
14) 1,3,5-Trimethylbenzene	15.35	105	19734	0.15 ug	#	60
15) 1,2,4-Trimethylbenzene	15.78	105	23188	0.17 ug	#	94
17) Napthylene	17.90	128	143675	1.83 ug	#	97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Integration Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA_111nov08\
Data File : 0201002.D
Acq On : 8 Nov 2011 13:05
Operator : KEY
Sample : Blank, II-0002, 0101110000,
Misc : SuL #450
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Nov 08 14:15:35 2011
Quant Method : C:\MSDCHEM\1\5973N\4BTEXVRX.M
Quant Title : 4VRXBTEX 8260/BTEX
QLast Update : Tue Nov 08 12:50:01 2011
Response via : Initial Calibration



APPENDIX IV
PHOTOGRAPHS

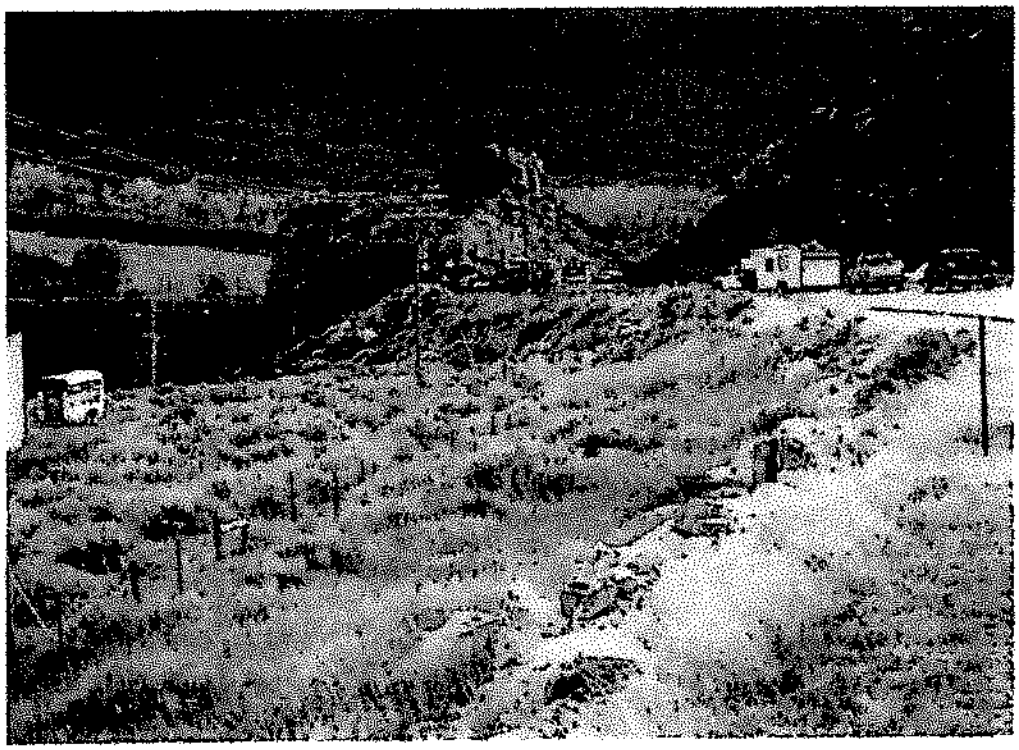


Figure 1 Truck being towed uphill from accident site.

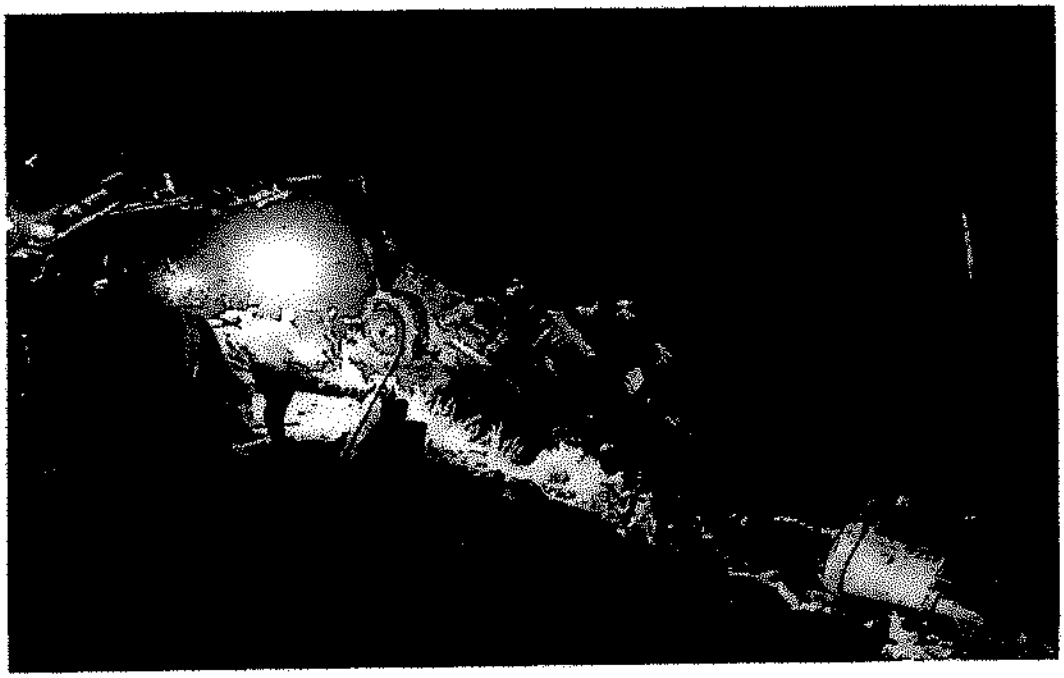


Figure 2 First look at scene

Figure 3 Ruptured tank draining towards creek and wetlands

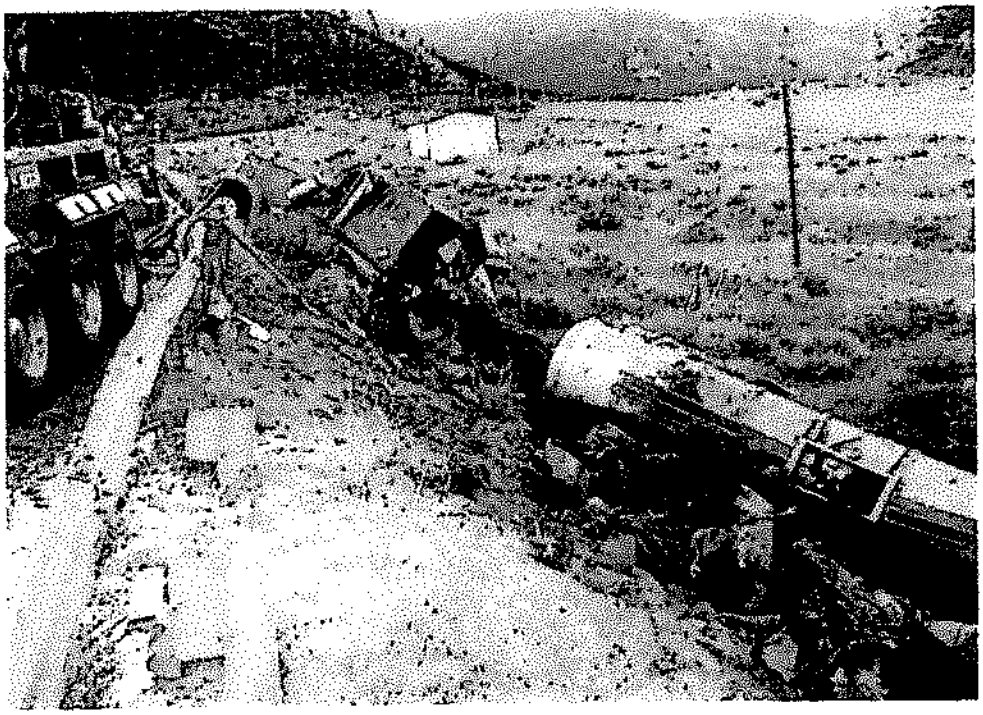


Figure 4 Truck lying on side of bank through guard rail.

Figure 5 Underflow dam downstream from source.

Figure 6 Oil collecting in wetlands

Figure 7 Wetlands area prior to excavation

Figure 8 Stained boulders under temporary guard rail

Figure 9 Diversion skirt/boom at irrigation outlet showing collection of oil

Figure 10 Oil collection in front of irrigation outlet

Figure 11 Cutting trench in wetlands for oil collection

Figure 12 Sump pit used to remove oil/water from wetlands

Figure 13 Catch basin from seep of wetlands

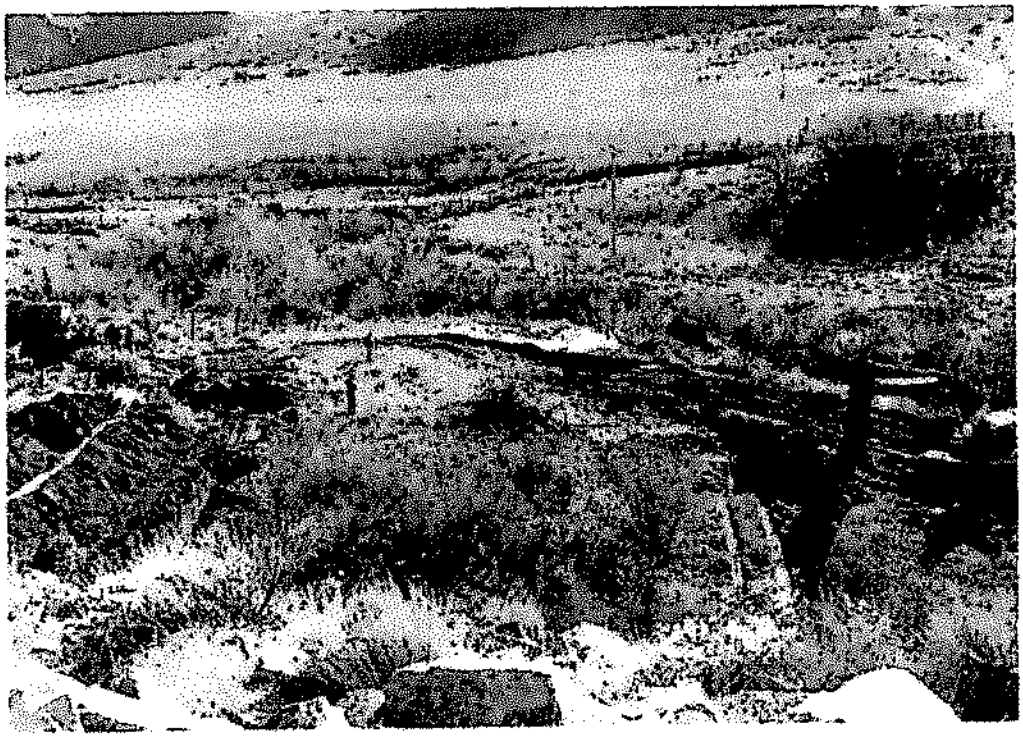


Figure 14 Wetlands trenches and sump pit

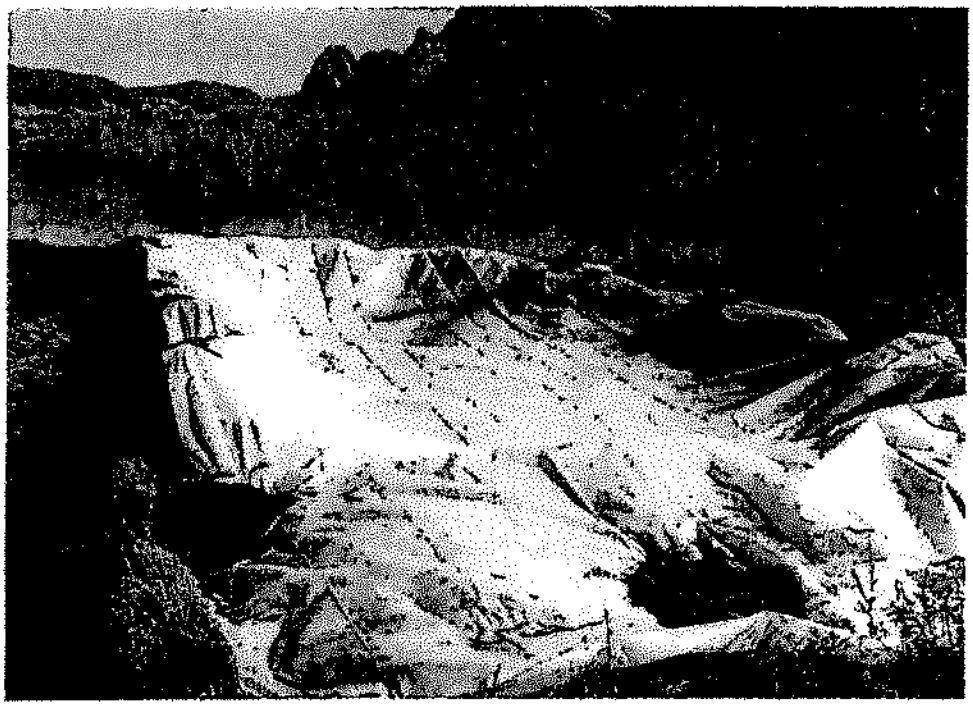


Figure 15 Lined trash containment area

Figure 16 Catch basin being pumped into frac tank

Figure 17 Vacuum skimming on beaver pond into tanker

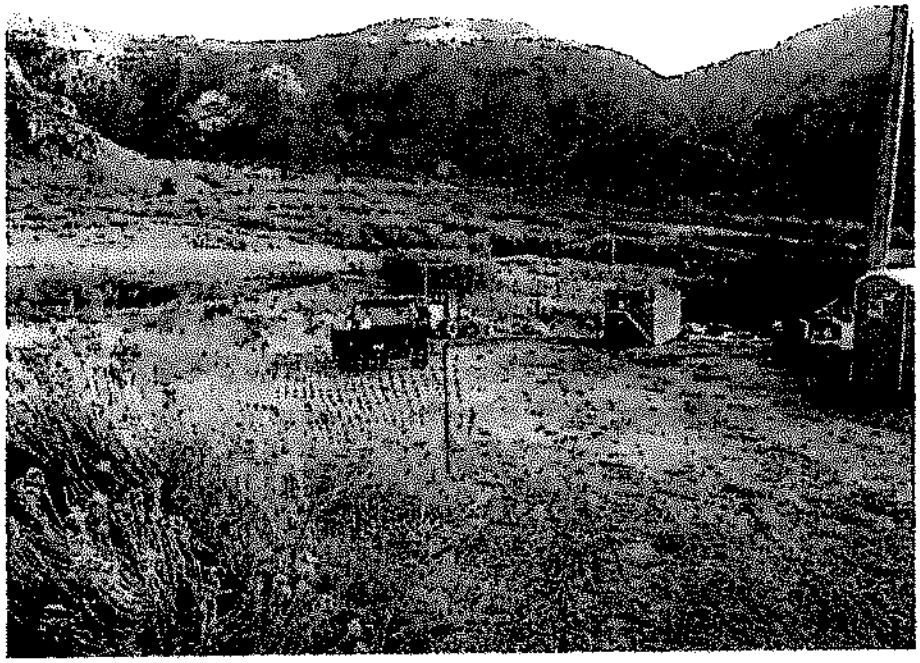


Figure 18 Frac tank and temporary fencing at work site

Figure 19 Contaminated soil removal from wetlands

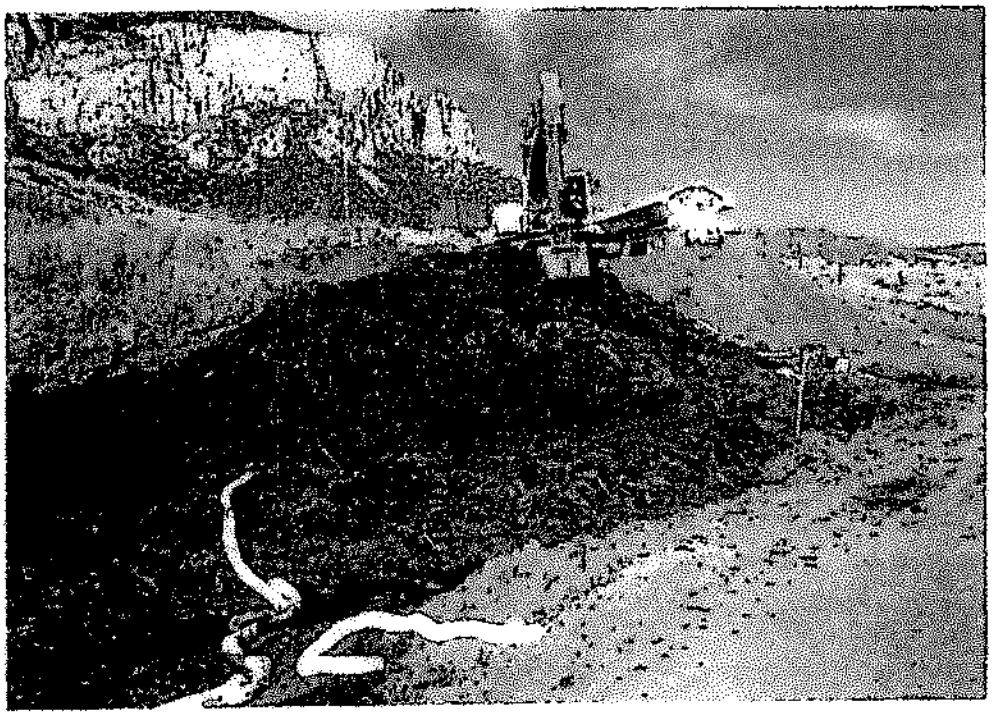


Figure 20 Contaminated soil removal

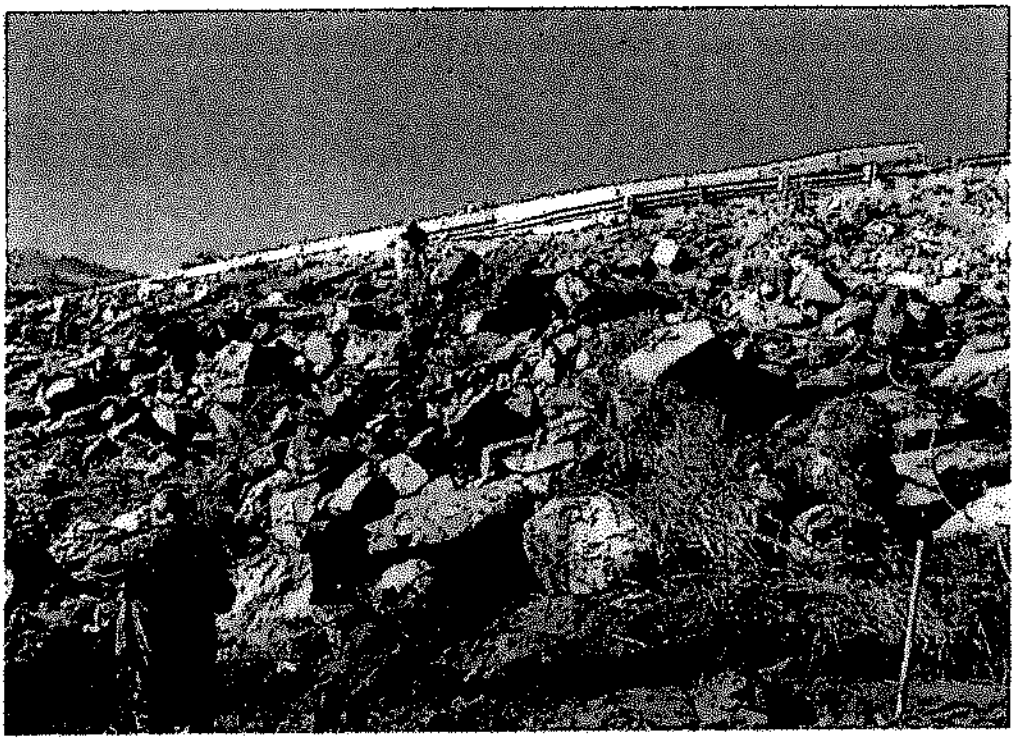


Figure 21 Applying MicroBlaze onto CDOT ROW

Figure 22 Clean soil applied to catch basin once oil was removed

Figure 23 Snow on November 8th slowed process down some

Figure 24 Clean fill material being spread over excavated area

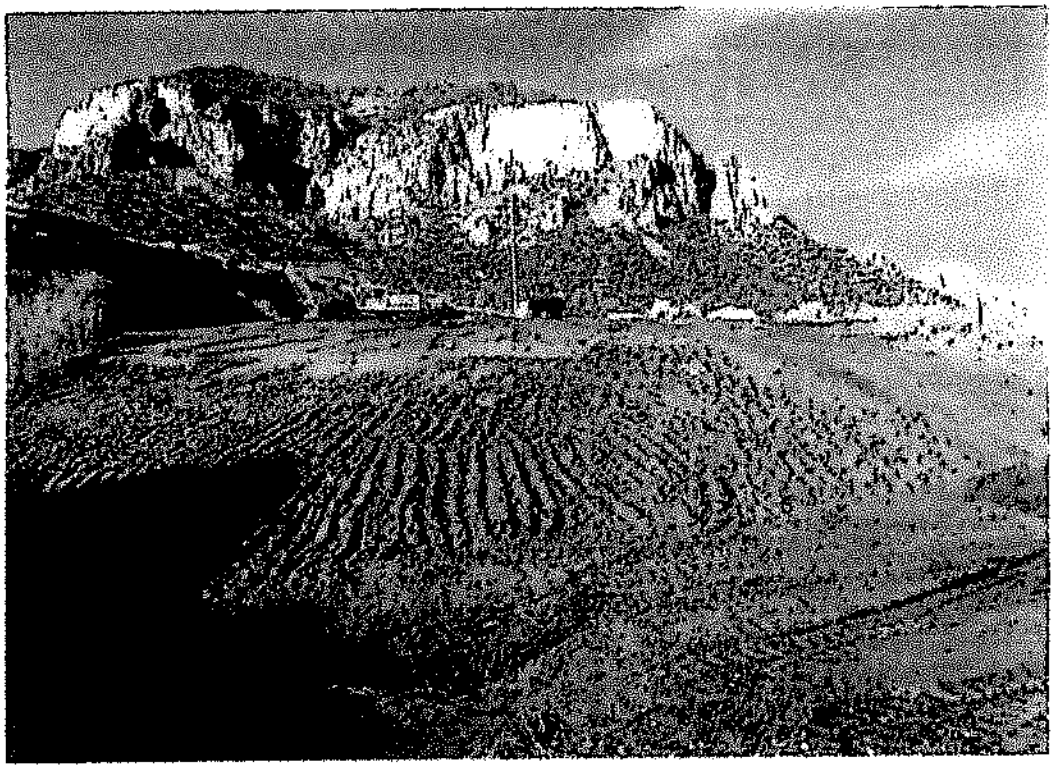


Figure 25 Contouring slope back to existing grade

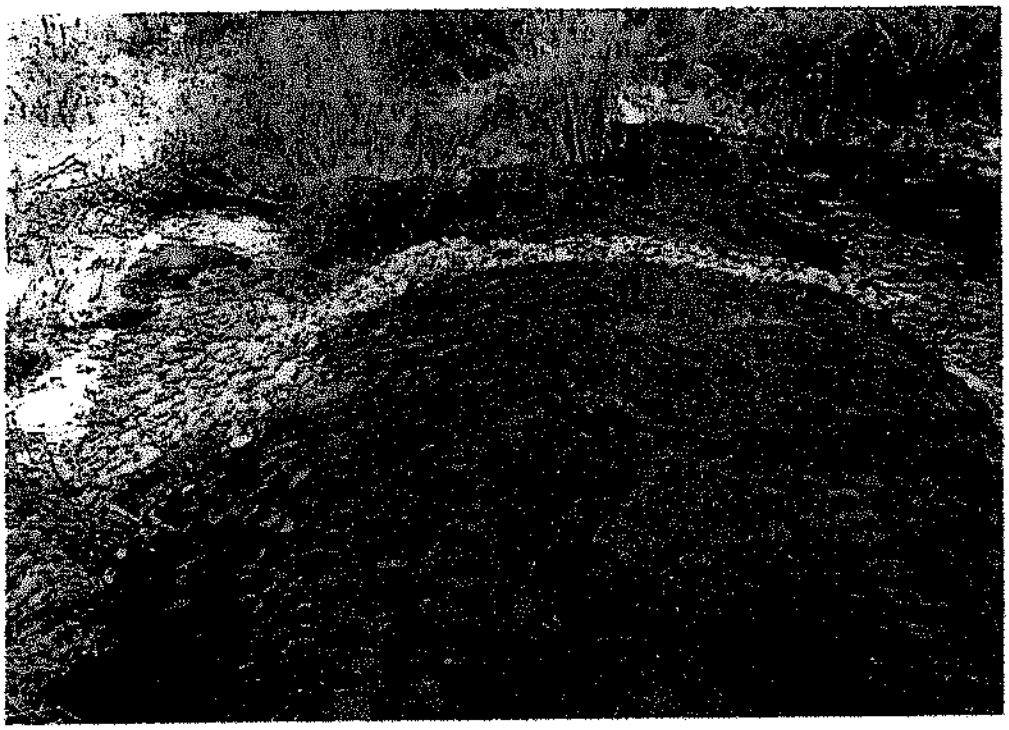


Figure 26 10 inch river cobble over catch basin for stability and in spill way

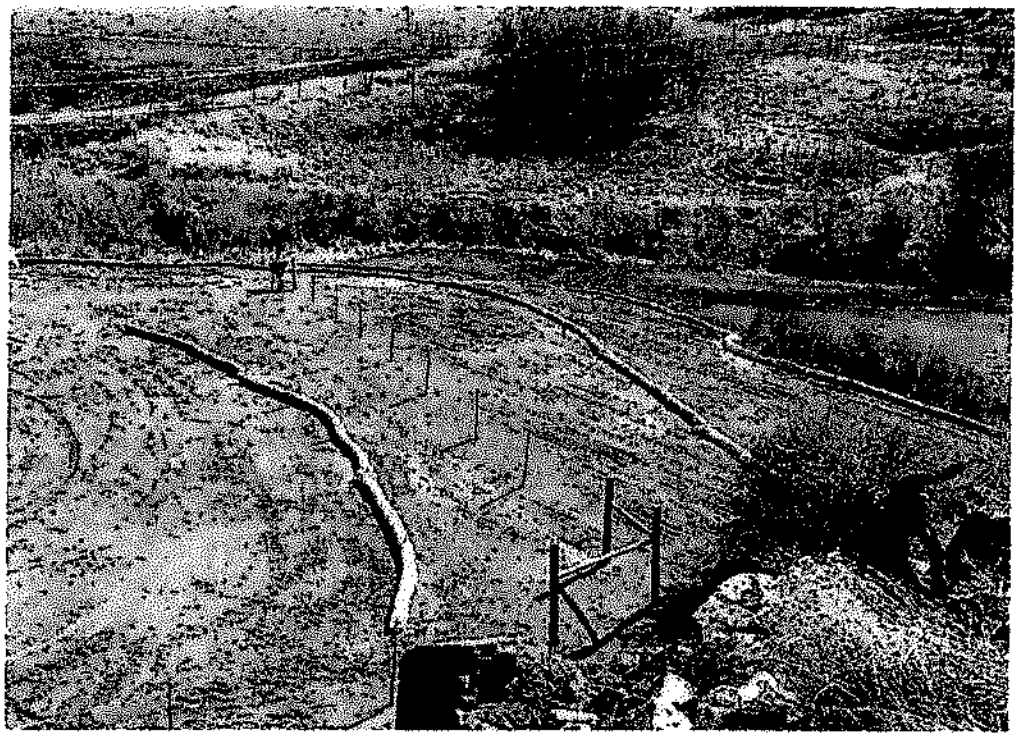


Figure 27 New fence, contoured slope, seeding application, and straw waddles to prevent erosion

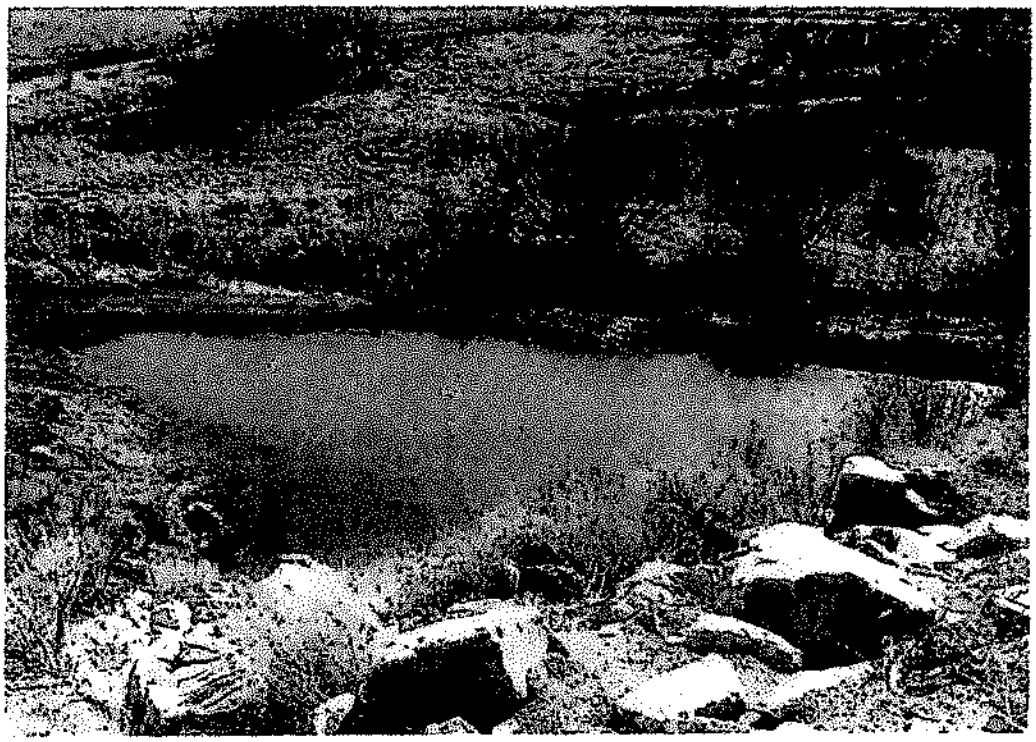


Figure 28 Finished wetlands restoration prior to winter

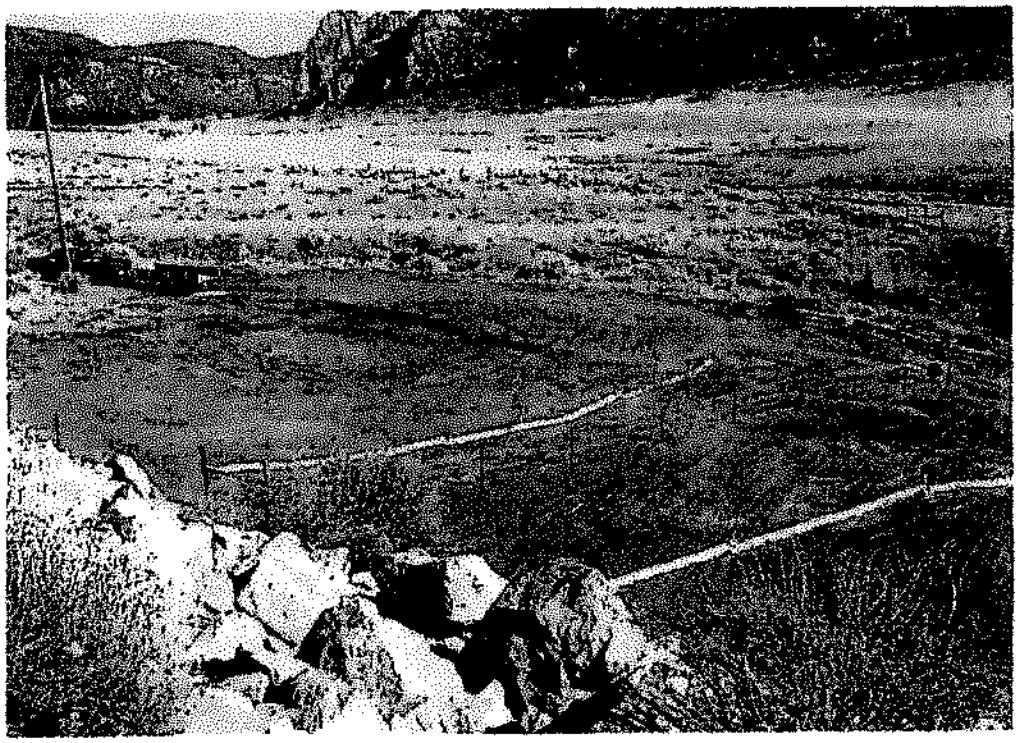


Figure 29 Contoured grade, fence, waddles and seed application

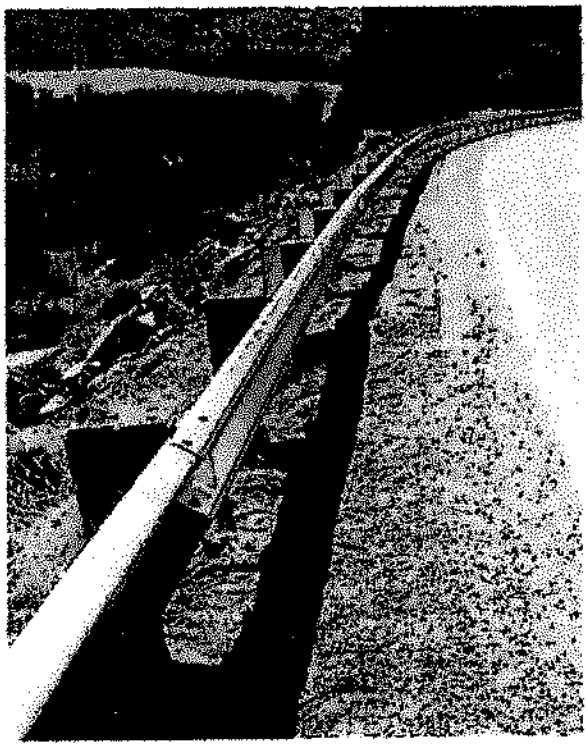


Figure 30 New guard rail installed