



# Total Volatile Petroleum Hydrocarbons (Gasoline) Case Narrative

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## **NMED Hazardous Waste Bureau**

**KAFB – BFF 3Q11**

Work Order Number: 1108152

1. This report consists of 1 water sample. The sample was received cool and intact by ALS on 08/11/2011.

The water sample was free of head space prior to analysis.

The sample had a pH < 2 at the time of analysis.

2. The sample was prepared and analyzed according to SW-846, 3rd Edition procedures. Specifically, the water sample was prepared by heating and purging 5ml using purge and trap procedures based on Method 5030B. The calibration curve was also prepared using the heated purge.
3. The sample was analyzed using a GC with a DB-624 capillary column and a flame ionization detector (FID) according to Standard Operating Procedure 425 Revision 15 generally based on SW-846 Methods 8000C and 8015C. The procedures are based on these methods because SW-846 does not have a specific method for TVPH or gasoline range organics. The only true modification from these methods is that TVPH is a multicomponent mixture and is quantitated by summing the entire range, rather than individual peaks. The carbon range integrated in this test extends from C<sub>6</sub> to C<sub>10</sub>. All positive results in this range were quantitated using the responses from the initial calibration curve using the external standard technique.
4. All initial and continuing calibration criteria were met.
5. The method blank associated with this project was below the MDL for gasoline range organics.
6. All laboratory control sample and laboratory control sample duplicate recoveries and RPDs were within the acceptance criteria.

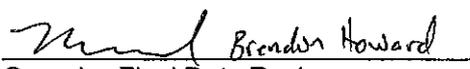


7. Per method requirements, matrix QC was performed for this analysis. Since a sample from this order number was not the selected quality control (QC) sample, matrix specific QC results are not included in this report.
8. The sample was extracted and analyzed within the established holding time.
9. All surrogate recoveries were within acceptance criteria.
10. Manual integrations are performed when needed to provide consistent and defensible data following the guidelines in Standard Operating Procedure 939 Revision 4.

The data contained in the following report have been reviewed and approved by the personnel listed below. In addition, ALS certifies that the analyses reported herein are true, complete and correct within the limits of the methods employed.

  
Mindy Norton  
Organics Primary Data Reviewer

09-07-11  
Date

  
Brendon Howard  
Organics Final Data Reviewer

9/6/11  
Date



**ALS**  
**Data Qualifier Flags**  
**Fuels**

- G:** This flag indicates that a pattern resembling gasoline was detected in this sample.
- D:** This flag indicates that a pattern resembling diesel was detected in this sample.
- M:** This flag indicates that a pattern resembling motor oil was detected in this sample.
- H:** This flag indicates that the fuel pattern was in the heavier end of the retention time window for the analyte of interest.
- L:** This flag indicates that the fuel pattern was in the lighter end of the retention time window for the analyte of interest.
- Z:** This flag indicates that a significant fraction of the reported result did not resemble the patterns of any of the following petroleum hydrocarbon products:  
gasoline  
JP-4  
JP-8  
diesel  
mineral spirits  
motor oil  
Stoddard solvent  
bunker C

Multiple flags may be used to indicate the presence of more than one product or component.



**ALS**  
**Data Qualifier Flags**  
**Chromatography and Mass Spectrometry**

- U or ND:** This flag indicates that the compound was analyzed for but not detected.
- J:** This flag indicates an estimated value. This flag is used as follows : (1) when estimating a concentration for tentatively identified compounds (TICs) where a 1:1 response is assumed; (2) when the mass spectral and retention time data indicate the presence of a compound that meets the volatile and semivolatile GC/MS identification criteria, and the result is less than the reporting limit (RL) but greater than the method detection limit (MDL); (3) when the data indicate the presence of a compound that meets the identification criteria, and the result is less than the RL but greater than the MDL; and (4) the reported value is estimated.
- B:** This flag is used when the analyte is detected in the associated method blank as well as in the sample. It indicates probable blank contamination and warns the data user. This flag shall be used for a tentatively identified compound (TIC) as well as for a positively identified target compound.
- E:** This flag identifies compounds whose concentration exceeds the upper level of the calibration range.
- A:** This flag indicates that a tentatively identified compound is a suspected aldol-condensation product.
- X:** This flag indicates that the analyte was diluted below an accurate quantitation level.
- \*:** This flag indicates that a spike recovery is outside the control criteria.
- +:** This flag indicates that the relative percent difference (RPD) exceeds the control criteria.

# ALS Environmental -- FC

## Sample Number(s) Cross-Reference Table

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**OrderNum:** 1108152

**Client Name:** NMED Hazardous Waste Bureau

**Client Project Name:** KAFB - BFF 3Q11

**Client Project Number:**

**Client PO Number:** 10-667-00-13453

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Client Sample Number	Lab Sample Number	COC Number	Matrix	Date Collected	Time Collected
106061-A	1108152-1		WATER	10-Aug-11	12:32
106061-B	1108152-2		WATER	10-Aug-11	12:38
106061-C	1108152-3		WATER	10-Aug-11	12:43
106061-D	1108152-4		WATER	10-Aug-11	12:54
106061-E	1108152-5		WATER	10-Aug-11	12:57
106061-F	1108152-6		WATER	10-Aug-11	12:59
106061-G	1108152-7		WATER	10-Aug-11	13:01
106061-H	1108152-8		WATER	10-Aug-11	13:03
106061-I	1108152-9		WATER	10-Aug-11	13:04
106061-J	1108152-10		WATER	10-Aug-11	13:05



# ALS Laboratory Group

225 Commerce Drive, Fort Collins, Colorado 80524  
TF: (800) 443-1511 PH: (970) 490-1511 FX: (970) 490-1522

# Chain-of-Custody

Form 20278

PROJECT NAME	KATB-BFF-3QU	SAMPLER	55B	DATE	8/10/11	WORKORDER #	1108152
PROJECT NO.		SITE ID	KATB-106661	TURNAROUND	NORMAL	PAGE	1 of 1
COMPANY NAME	NH ED	EDD FORMAT				DISPOSAL	
SEND REPORT TO	SID BRANDWEIN	PURCHASE ORDER					
ADDRESS	510 BRANDWEIN	BILL TO COMPANY	NH ED/HWB				
CITY/STATE/ZIP	5500 SAN ANTONIO DR	INVOICE ATTN TO	DAVE COBRAIN				
PHONE	ALBQ, NH 87109	OR NE ADDRESS	2905 RODEO PARK DR				
FAX	505-222-9504	CITY/STATE/ZIP	SANTA FE, NH 8505				
E-MAIL	510.brandwein@state.nm.us	PHONE	505-476-6055				
		FAX					
		E-MAIL					

Lab ID	Field ID	Matrix	Sample Date	Sample Time	# Bottles	Pres.	OC	RELINQUISHED BY	SIGNATURE	PRINTED NAME	DATE	TIME
1	106061-A	W	8/10/11	12:32	3	HCl				S. ADAMS	8/10/11	13:25
2	106061-B	W		12:38	3	HCl				Lauren Schmitz	8/10/11	10:10
3	106061-C	W		12:43	3	HCl						
4	106061-D	W		12:54	1	-						
5	106061-E	W		12:57	1	H2SO4						
6	106061-F	W		12:59	1	-						
7	106061-G	W		13:01	1	H2SO4						
8	106061-H	W		13:03	1	ZnCl2						
9	106061-I	W		13:04	1	NO3						
10	106061-J	W	8/10/11	13:05	1	NO3						

For metals or anions, please detail analytes below.

Comments: TOT NET - TAL 6010  
Diss. MET. - Fe, Mn only 6010

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Preservation Key: 1-HCl 2-HNO3 3-H2SO4 4-NaOH 5-NaHSO4 6-Other 7-Other 8-4 degrees C 9-5035



CONDITION OF SAMPLE UPON RECEIPT FORM

Client: NMED

Workorder No: 1108152

Project Manager: LRS

Initials: LAS Date: 8/11/11

1. Does this project require any <b>special handling</b> in addition to standard Paragon procedures?		YES	<input checked="" type="radio"/> NO
2. Are custody seals on <b>shipping containers</b> intact?	NONE	<input checked="" type="radio"/> YES	NO
3. Are Custody seals on <b>sample containers</b> intact?	<input checked="" type="radio"/> NONE	YES	NO
4. Is there a <b>COC (Chain-of-Custody)</b> present or other representative documents?		<input checked="" type="radio"/> YES	NO
5. Are the <b>COC and bottle labels complete and legible</b> ?		<input checked="" type="radio"/> YES	NO
6. Is the <b>COC in agreement</b> with samples received? (IDs, dates, times, no. of samples, no. of containers, matrix, requested analyses, etc.)		<input checked="" type="radio"/> YES	NO
7. Were <b>airbills / shipping documents</b> present and/or removable?	DROP OFF	<input checked="" type="radio"/> YES	NO
8. Are all <b>aqueous samples requiring preservation preserved correctly?</b> (excluding volatiles)	N/A	<input checked="" type="radio"/> YES	NO
9. Are all aqueous <b>non-preserved samples pH 4-9?</b>	N/A	<input checked="" type="radio"/> YES	NO
10. Is there <b>sufficient sample</b> for the requested analyses?		<input checked="" type="radio"/> YES	NO
11. Were all samples placed in the <b>proper containers</b> for the requested analyses?		<input checked="" type="radio"/> YES	NO
12. Are all samples within <b>holding times</b> for the requested analyses?		<input checked="" type="radio"/> YES	NO
13. Were all sample containers received <b>intact?</b> (not broken or leaking, etc.)		<input checked="" type="radio"/> YES	NO
14. Are all samples requiring <b>no headspace (VOC, GRO, RSK/MEE, Rx CN/S, radon)</b> headspace free? <b>Size of bubble:</b> <input checked="" type="checkbox"/> < green pea <input type="checkbox"/> > green pea	N/A	YES	<input checked="" type="radio"/> NO
15. Do perchlorate LCMS-MS samples <b>have headspace?</b> (at least 1/3 of container required)	<input checked="" type="radio"/> N/A	YES	NO
16. Were samples checked for and free from the presence of <b>residual chlorine?</b> (Applicable when PM has indicated samples are from a chlorinated water source; note if field preservation with sodium thiosulfate was not observed.)	<input checked="" type="radio"/> N/A	YES	NO
17. Were the samples <b>shipped on ice?</b>		<input checked="" type="radio"/> YES	NO
18. Were cooler temperatures measured at 0.1-6.0°C? IR gun used*: <input checked="" type="radio"/> #2 #4		RAD ONLY	<input checked="" type="radio"/> YES
Cooler #: <u>1</u>			
Temperature (°C): <u>1.4</u>			
No. of custody seals on cooler: <u>2</u>			
External µR/hr reading: <u>14</u>			
Background µR/hr reading: <u>12</u>			
Were external µR/hr readings ≤ two times background and within DOT acceptance criteria? <input checked="" type="radio"/> YES / NO / NA (If no, see Form 008.)			

Additional Information: PROVIDE DETAILS BELOW FOR A NO RESPONSE TO ANY QUESTION ABOVE, EXCEPT #1 AND #16.

8/11/11 \* 1108152-2-1 (106061-B) for GRO has headspace < pea size  
Can still run OK.

If applicable, was the client contacted?  YES / NO / NA Contact: Syd Brandum Date/Time: 8/12

Project Manager Signature / Date: [Signature] 8/12/11

\*IR Gun #2: Oakton, SN 29922500201-0066 \*IR Gun #4: Oakton, SN 2372220101-0002 Form 201r22.xls (6/1/09)



# Gasoline Range Organics

Method SW8015B

Method Blank

Lab Name: ALS Environmental -- FC

Work Order Number: 1108152

Client Name: NMED Hazardous Waste Bureau

ClientProject ID: KAFB - BFF 3Q11

Lab ID: HCG110812-1MB

Sample Matrix: WATER

% Moisture: N/A

Date Collected: N/A

Date Extracted: 12-Aug-11

Date Analyzed: 12-Aug-11

Prep Batch: HCG110812-1

QCBatchID: HCG110812-1-1

Run ID: HCG110812-1A

Cleanup: NONE

Basis: N/A

File Name: 05062.dat

Sample Aliquot: 5 ml

Final Volume: 5 ml

Result Units: MG/L

Clean DF: 1

CASNO	Target Analyte	DF	Result	Reporting Limit	MDL	Result Qualifier	EPA Qualifier
8006-61-9	GASOLINE RANGE ORGANICS	1	0.1	0.1	0.0079	U	

## Surrogate Recovery

CASNO	Surrogate Analyte	Result	Flag	Spike Amount	Percent Recovery	Control Limits
193533-92-5	2,3,4-TRIFLUOROTOLUENE	0.0907		0.1	91	74 - 129

Data Package ID: HCG1108152-1

Date Printed: Tuesday, September 06, 2011

ALS Environmental -- FC

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LIMS Version: 6.525

# Gasoline Range Organics

Method SW8015B

Sample Results

Lab Name: ALS Environmental -- FC

Work Order Number: 1108152

Client Name: NMED Hazardous Waste Bureau

ClientProject ID: KAFB - BFF 3Q11

Field ID:	106061-B
Lab ID:	1108152-2

Sample Matrix: WATER

% Moisture: N/A

Date Collected: 10-Aug-11

Date Extracted: 12-Aug-11

Date Analyzed: 12-Aug-11

Prep Method: SW5030 Rev C

Prep Batch: HCG110812-1

QC Batch ID: HCG110812-1-1

Run ID: HCG110812-1A

Cleanup: NONE

Basis: As Received

File Name: 05065.dat

Sample Aliquot: 5 ml

Final Volume: 5 ml

Result Units: MG/L

Clean DF: 1

Analysis ReqCode: 162

CASNO	Target Analyte	Dilution Factor	Result	Reporting Limit	MDL	Result Qualifier	EPA Qualifier
8006-61-9	GASOLINE RANGE ORGANICS	1	0.1	0.1	0.0079	U	

## Surrogate Recovery

CASNO	Surrogate Analyte	Result	Flag	Spike Amount	Percent Recovery	Control Limits
193533-92-5	2,3,4-TRIFLUOROTOLUENE	0.0904		0.1	90	74 - 129

Data Package ID: HCG1108152-1

Date Printed: Tuesday, September 06, 2011

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# Gasoline Range Organics

## Method SW8015B

### Laboratory Control Sample and Laboratory Control Sample Duplicate

Lab Name: ALS Environmental -- FC

Work Order Number: 1108152

Client Name: NMED Hazardous Waste Bureau

ClientProject ID: KAFB - BFF 3Q11

Lab ID: HCG110812-1LCS	Sample Matrix: WATER % Moisture: N/A Date Collected: N/A Date Extracted: 08/12/2011 Date Analyzed: 08/12/2011 Prep Method: SW5030C	Prep Batch: HCG110812-1 QCBatchID: HCG110812-1-1 Run ID: HCG110812-1A Cleanup: NONE Basis: N/A File Name: 05061.dat	Sample Aliquot: 5 ml Final Volume: 5 ml Result Units: MG/L Clean DF: 1
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CASNO	Target Analyte	Spike Added	LCS Result	Reporting Limit	Result Qualifier	LCS % Rec.	Control Limits
8006-61-9	GASOLINE RANGE ORGANICS	1	1.09	0.1		109	79 - 118%

Lab ID: HCG110812-1LCSD	Sample Matrix: WATER % Moisture: N/A Date Collected: N/A Date Extracted: 08/12/2011 Date Analyzed: 08/12/2011 Prep Method: SW5030C	Prep Batch: HCG110812-1 QCBatchID: HCG110812-1-1 Run ID: HCG110812-1A Cleanup: NONE Basis: N/A File Name: 05070.dat	Sample Aliquot: 5 ml Final Volume: 5 ml Result Units: MG/L Clean DF: 1
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CASNO	Target Analyte	Spike Added	LCSD Result	Reporting Limit	Result Qualifier	LCSD % Rec.	RPD Limit	RPD
8006-61-9	GASOLINE RANGE ORGANICS	1	1.08	0.1		108	20	0

### Surrogate Recovery LCS/LCSD

CASNO	Target Analyte	Spike Added	LCS % Rec.	LCS Flag	LCSD % Rec.	LCSD Flag	Control Limits
193533-92-5	2,3,4-TRIFLUOROTOLUENE	0.1	95		97		74 - 129

Data Package ID: HCG1108152-1