

**K.P. KAUFFMAN COMPANY, INC.**

WORLD TRADE CENTER  
1675 BROADWAY, 28<sup>TH</sup> FLOOR  
DENVER, COLORADO 80202-4628  
TELEPHONE (303) 825-4822  
FACSIMILE (303) 825-4825  
[www.kpk.com](http://www.kpk.com)



April 3, 2014

Mr. Chris Canfield  
Colorado Oil and Gas Conservation Commission  
1120 Lincoln Street, Suite 801  
Denver, CO 80203

Re: Remediation Summary and Request for No Further Action Status  
Project Number: 4451  
Facility #8 - John Henry Stoltz JR B #1 Historical Remediation Project

Dear Mr. Canfield:

K.P. Kauffman Inc. (KPK) is respectfully submitting a summary of the cleanup work performed due to a historical remediation project reported on February 27, 2009. Attached is a full report including soil sample analysis performed.

Due to attainment of soil cleanup standards at the Facility, KPK respectfully requests a No Further Action status for this Facility. All additional reclamation activities at the Facility will be compliant with COGCC rules.

Please do not hesitate contacting me if you require any further information at (303) 825-4822 or at [slaramesa@kpk.com](mailto:slaramesa@kpk.com)

Respectfully,

A handwritten signature in dark ink, appearing to read 'Susana', followed by a stylized flourish.

Susana Lara-Mesa  
VP of Engineering

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## **1. INTRODUCTION**

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While conducting line locate operations for an Aurora Water project, a load line was compromised while excavating a pot-hole. This line failure caused the release of 10 bbl of oil and 15 bbl of produced water into the pothole. A vacuum truck was called on location and the wells were shut-in immediately upon discovery since a KPK crew was on location as the line broke. All fluids released were recovered with the vacuum truck and the contaminated soil was excavated and disposed of at Waste Management's (WM) facility in Bennett, Colorado. The pit was left open until Aurora Water finished its work. An approximate area of 10 feet by 20 feet was excavated to a depth of 5 feet and a total of 240 cubic yards hauled off location and disposed of at WM. Although there are no copies available of the disposal manifests at KPK or WM given that it has been more than 5 years since the cleanup operations, KPK does have records of the number of hauls and the ticket numbers at WM. See Table 1.

Three composite samples were collected once the contaminated soil was hauled off location and line was repaired. The pit was backfilled once Aurora Water built the slurry wall near the spill site. An additional confirmation sample was collected on July 24, 2014 to verify that there was no remaining contamination at the site east of Weld County Road (CR) 23 and south of CR 8, near Wattenberg, Colorado. The approximate location was identified with a historical report created in 2009 and exact location to resample a few feet outside the historical spill site was determined with the help of current qualified personnel who was involved in the cleanup activities related to this spill in 2009.

| Date         | WM Ticket | Volume        |
|--------------|-----------|---------------|
| 4/10/2009    | 69386     | 10 cy         |
| 4/10/2009    | 69378     | 10 cy         |
| 4/10/2009    | 69375     | 10 cy         |
| 4/10/2009    | 69371     | 10 cy         |
| 4/21/2009    | 69521     | 10 cy         |
| 4/21/2009    | 69524     | 10 cy         |
| 4/22/2009    | 69528     | 10 cy         |
| 4/22/2009    | 69534     | 10 cy         |
| 4/22/2009    | 69536     | 10 cy         |
| 4/22/2009    | 69539     | 10 cy         |
| 4/23/2009    | 69550     | 10 cy         |
| 4/23/2009    | 69556     | 10 cy         |
| 4/23/2009    | 69558     | 10 cy         |
| 4/23/2009    | 16561     | 10 cy         |
| 4/24/2009    | 95484     | 10 cy         |
| 4/24/2009    | 69582     | 10 cy         |
| 4/24/2009    | 69591     | 10 cy         |
| 4/27/2009    | 69615     | 10 cy         |
| 4/27/2009    | 69616     | 10 cy         |
| 4/29/2009    | 95540     | 10 cy         |
| 4/29/2009    | 95553     | 10 cy         |
| 4/29/2009    | 95557     | 10 cy         |
| 4/29/2009    | 95552     | 10 cy         |
| 4/29/2009    | 95556     | 10 cy         |
| <b>TOTAL</b> |           | <b>240 cy</b> |

*Table 1: Soil Disposal Volumes*

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## 2. FIELD ACTIVITIES

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### a. Soil Sampling

Two composite soil samples were collected on April 30, 2009 from the excavation and were analyzed for TPH (DRO/GRO) and pH. Additionally, on July 24, 2014, one composite soil sample (D60112) was collected a few feet outside the historical excavation. This composite sample was analyzed for benzene, toluene, ethylbenzene, and total xylenes (BTEX), and Total Petroleum Hydrocarbons (TPH) – Diesel (DRO) and Gasoline Range Organics (GRO), Electrical Conductivity (EC), Specific Gravity (SG), Sodium Adsorption Ratio (SAR), and (pH). The samples were collected at depths of approximately five feet below ground surface (BGS). The soil sampling locations are illustrated in **Appendix A**. The soil samples were field screened for staining and/or discoloration. The sample did not exhibit any staining or discoloration.

Top soil was present in the excavation from the surface to a depth of 4.5 feet BGS. The top soil was underlain by sand and gravel. Groundwater was not encountered during the excavation or resampling process.

**b. Analytical Results**

The soil samples were handled with clean, new, nitrile gloves and placed in a laboratory supplied sample container and labeled. The samples were placed in a cooler and was delivered to the laboratory under chain-of-custody documentation attached to the analytical report (see **Appendix B**).

The laboratory results indicate the BTEX, EC, SG, SAR, and pH were not above the COGCC reporting limit in the soil sample collected from the excavation based on parameters established in Table 910-1. The laboratory analytical reports and chain-of-custody forms are also included in **Appendix B**.

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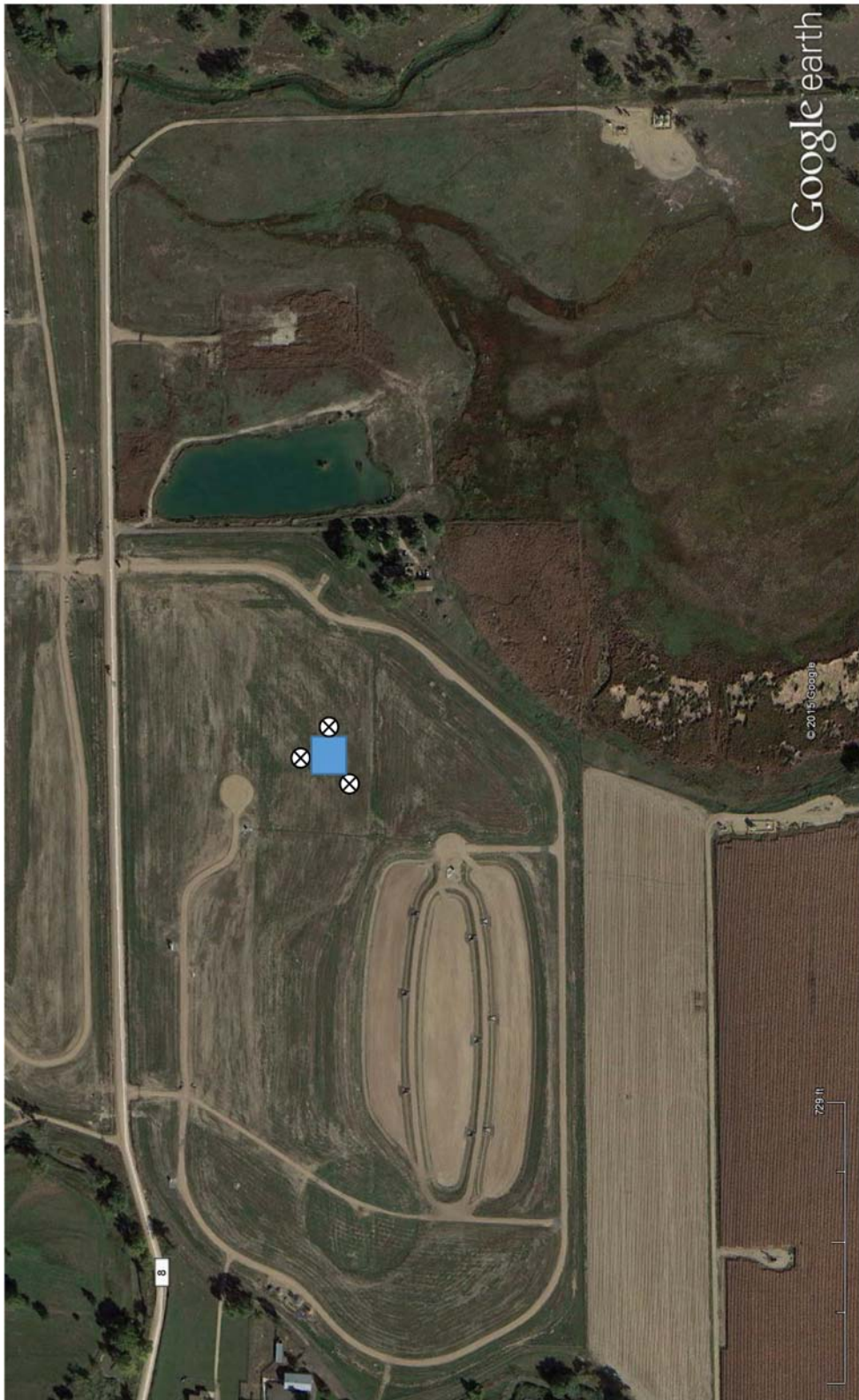
### **3. CONCLUSIONS AND RECOMMENDATIONS**

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Three composite soil samples were collected from the historical excavation, two of them were collected upon completion of the remediation, and one was collected in 2014 to verify the work performed. The composite soil samples were analyzed for BTEX, TPH (GRO and DRO), EC, SG, SAR, and pH. No staining or discoloration was observed in any of the soil or in the sample collected from the excavation. The confirmation laboratory results indicate that BTEX compounds were not detected in the soil sample collected in 2014. TPH (DRO and GRO) compounds were detected at lower concentrations than those established in COGCC cleanup standards specified in Table 910-1.

Based on the analytical results, additional work at the property is not warranted at this time.

## ***Appendix A: Spill and Sampling Locations***



# **JOHN HENRY STOLTZ JR B #1 – Location Drawing**

K.P. Kauffman Company, Inc.

Location Drawing

Lat: 40.038882° Long: -104.846113°

SWNW Sec 24 T1N R67WW

Weld County, Colorado

⊗ Sample Location

■ Spill Location

## Appendix B: Soil Analysis

**WORK ORDER Summary****Evergreen Analytical, Inc.****09-2990****Rpt To:** Ray Gorka**Email To:** rgorka@kpk.com

K.P.Kauffman

4/30/2009 3:02:00 PM

1675 Broadway, Suite 2800

**Client Project ID:** FAC. 8/Seitzer

Denver, CO 80202

**QC Level:** Level I

(303) 825-4822

**Comments**

| <b>Sample ID</b> | <b>Client Sample ID</b> | <b>Matrix</b> | <b>Collection Date</b> | <b>Date Received</b> | <b>Test Code</b> | <b>Test Name</b>   | <b>Hold</b>              | <b>MS</b>                | <b>Date Due</b> | <b>Hold Time</b> |
|------------------|-------------------------|---------------|------------------------|----------------------|------------------|--------------------|--------------------------|--------------------------|-----------------|------------------|
| 09-2990-01A      | A FAC 8                 | Soil          | 4/30/09 1003           | 4/30/09              | PH_S             | 9045C: pH          | <input type="checkbox"/> | <input type="checkbox"/> | 5/14/09         | 5/01/09          |
| 09-2990-01A      | A FAC 8                 | Soil          | 4/30/09 1003           | 4/30/09              | TEH_S *          | 8015: TEH-Diesel   | <input type="checkbox"/> | <input type="checkbox"/> | 5/05/09         | 5/14/09          |
| 09-2990-01B      | A FAC 8                 | Soil          | 4/30/09 1003           | 4/30/09              | TVH_S *          | 8015: TVH-Gasoline | <input type="checkbox"/> | <input type="checkbox"/> | 5/05/09         | 5/14/09          |
| 09-2990-02A      | B Seltzer               | Soil          | 4/30/09 1114           | 4/30/09              | PH_S             | 9045C: pH          | <input type="checkbox"/> | <input type="checkbox"/> | 5/14/09         | 5/01/09          |
| 09-2990-02A      | B Seltzer               | Soil          | 4/30/09 1114           | 4/30/09              | TEH_S *          | 8015: TEH-Diesel   | <input type="checkbox"/> | <input type="checkbox"/> | 5/05/09         | 5/14/09          |
| 09-2990-02B      | B Seltzer               | Soil          | 4/30/09 1114           | 4/30/09              | TVH_S *          | 8015: TVH-Gasoline | <input type="checkbox"/> | <input type="checkbox"/> | 5/05/09         | 5/14/09          |
| 09-2990-03A      | C State 26              | Soil          | 4/30/09 1310           | 4/30/09              | PH_S             | 9045C: pH          | <input type="checkbox"/> | <input type="checkbox"/> | 5/14/09         | 5/01/09          |
| 09-2990-03A      | C State 26              | Soil          | 4/30/09 1310           | 4/30/09              | TEH_S *          | 8015: TEH-Diesel   | <input type="checkbox"/> | <input type="checkbox"/> | 5/05/09         | 5/14/09          |
| 09-2990-03B      | C State 26              | Soil          | 4/30/09 1310           | 4/30/09              | TVH_S *          | 8015: TVH-Gasoline | <input type="checkbox"/> | <input type="checkbox"/> | 5/05/09         | 5/14/09          |



## 002ENT INFORMATION

**Evergreen Analytical Laboratory Inc.**

K.P.K

Tel # 318-251-4822 Fax # — E-mail rq

Tel # 318-251-4822 Fax # — E-mail ngorka@KPK.com

REPORT CHROMATOGRAMS ☐ NO

Mail Invoice to: Ray G. / KPK

Attn Sq Mgr

Address

City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_

Tel # \_\_\_\_\_ Fax # \_\_\_\_\_

Project ID# FAC.8 / SeIT2er/

P.O. \_\_\_\_\_ Quote \_\_\_\_\_

Sampler Ray G.

**NOTE:** Identify Known Hazards Below

| SAMPLE<br>IDENTIFICATION | DATE<br>SAMPLED | TIME |
|--------------------------|-----------------|------|
|--------------------------|-----------------|------|

**CONFIRMATION OF SAMPLE RECEIPT REQUIRED?** ☐ YES

4036 Youngfield St.  
Wheat Ridge, Colorado 80033  
(303) 425-6021  
FAX (303) 425-6854  
(877) 737-4521  
info@evergreenanalytical.com

Report Results by: \_\_\_\_\_ (Date)\*

Standard 2 working weeks ☐

UST Analyses per Fee Schedule ☐

\* Rush: ☐ less than 24 hrs, 150% ☐ 1 - 2 work days 100%

☐ 3 - 5 work days, 50%      ☐ 6 - 9 work days, 25%

\*Subject to surcharge & exceptions noted in fee schedule.

**For Laboratory  
Use Only**

W.O. # 89-2990

B.O.F. # 1

C/S (O)            /           

C/S (I)                     

Temp. °C 44 / Ice     Seals Present Y / ~~N~~ / ~~N~~

Samples Pres. Y / N / ☒

Headspace Y ~~NA~~ NA

By RD

[illegible]

**Instructions:**

**\*\* Important Note:** See reverse side for Terms and Conditions.

Anions: Bromide, Chloride, Nitrate, Nitrite, O-Phosphate, Sulfate (Circle)

Relinquished by: (Signature)

Date/Time  
4-25-09  
2:27

Received by: (Signature)  
ntal

Date/Time  
4/30/9  
2:29

Relinquished by: (Signature)

| Date/Time  | Location | Activity                  | Remarks                               |         |                           |                               |            |         |                         |                               |            |         |                           |                                     |            |         |                   |  |
|------------|----------|---------------------------|---------------------------------------|---------|---------------------------|-------------------------------|------------|---------|-------------------------|-------------------------------|------------|---------|---------------------------|-------------------------------------|------------|---------|-------------------|--|
| 10/10/2023 | 10:00 AM | Arrived at the site       | Weather: Clear, Temperature: 25°C     |         |                           |                               |            |         |                         |                               |            |         |                           |                                     |            |         |                   |  |
| 10/10/2023 | 10:15 AM | Started data collection   | Initial readings: pH 7.2, DO 8.5 mg/L |         |                           |                               |            |         |                         |                               |            |         |                           |                                     |            |         |                   |  |
| 10/10/2023 | 11:30 AM | Conducted water sampling  | Sample collected from Point A         |         |                           |                               |            |         |                         |                               |            |         |                           |                                     |            |         |                   |  |
| 10/10/2023 | 12:00 PM |                           | 10/10/2023                            | 1:00 PM | Continued data collection | Readings: pH 7.1, DO 8.3 mg/L | 10/10/2023 | 2:30 PM | Conducted soil sampling | Sample collected from Point B | 10/10/2023 | 3:00 PM | Completed data collection | Final readings: pH 7.3, DO 8.6 mg/L | 10/10/2023 | 3:30 PM | Departed the site |  |
| 10/10/2023 | 1:00 PM  | Continued data collection | Readings: pH 7.1, DO 8.3 mg/L         |         |                           |                               |            |         |                         |                               |            |         |                           |                                     |            |         |                   |  |
| 10/10/2023 | 2:30 PM  | Conducted soil sampling   | Sample collected from Point B         |         |                           |                               |            |         |                         |                               |            |         |                           |                                     |            |         |                   |  |
| 10/10/2023 | 3:00 PM  | Completed data collection | Final readings: pH 7.3, DO 8.6 mg/L   |         |                           |                               |            |         |                         |                               |            |         |                           |                                     |            |         |                   |  |
| 10/10/2023 | 3:30 PM  | Departed the site         |                                       |         |                           |                               |            |         |                         |                               |            |         |                           |                                     |            |         |                   |  |

Received by: (Signature)

|           |  |
|-----------|--|
| Date/Time |  |
|-----------|--|

**Evergreen Analytical, Inc.**

Date: 12-May-09

Lab Order: 09-2990

Client Project ID FAC. 8/Seitzer

**CASE NARRATIVE****SAMPLE RECEIVING**

Sample(s) were hand delivered to the laboratory by the client. Custody seals were not present.

The temperature of the sample(s) upon arrival was 4.4°C.

Sample(s) were received in good condition, in the proper container, and within holding times. VOC sample(s) were received with no headspace present. NJO

**QUALITY ASSURANCE (QA)**

Analyses performed on samples in this work order by EAL meet the requirements of the EAL Quality Assurance Program unless otherwise explained. Analyses of RCRA samples meet the requirements of NELAC and Utah Rule R444-14 unless otherwise explained. TP

**CLIENT SERVICES**

There are no anomalies to report. AE

**GENERAL CHEMISTRY**

Method SW9045C: There are no anomalies to report. MM

**GAS CHROMATOGRAPHY**

Method TVH\_S: There are no anomalies to report. JCC

Method TEH\_S: The reporting limit was raised (from 14mg/Kg to 35 mg/Kg) due to contamination introduced during prep, as seen in the method blank. There are no other anomalies to report. LC

## Evergreen Analytical, Inc.

4036 Youngfield Street, Wheat Ridge, Colorado 80033-3862

(303) 425-6021

Client Project ID FAC. 8/Seitzer

Lab Order: 09-2990

Units: pH Units

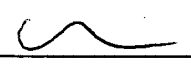
pH

Method: SW9045C

Prep Method: SW9045C

| Lab ID      | Client ID  | Matrix | Date Received | Collection Date | Date Prepared | Date Analyzed | Results | LQL  | DF |
|-------------|------------|--------|---------------|-----------------|---------------|---------------|---------|------|----|
| 09-2990-01A | A FAC 8    | Soil   | 4/30/09       | 4/30/09 1003    | 5/1/09        | 5/1/09 0800   | 7.01    | 1.00 | 1  |
| 09-2990-02A | B Seltzer  | Soil   | 4/30/09       | 4/30/09 1114    | 5/1/09        | 5/1/09 0800   | 9.49    | 1.00 | 1  |
| 09-2990-03A | C State 26 | Soil   | 4/30/09       | 4/30/09 1310    | 5/1/09        | 5/1/09 0800   | 9.49    | 1.00 | 1  |

Comments:

  
Analyst  
Approved

**Qualifiers:** J - Indicates an estimated value when the compound is detected, but is below the LQL  
H - Sample analysis exceeded analytical holding time  
U - Compound analyzed for but not detected  
X - See case narrative  
\*-Value exceeds Maximum Contamination Level(MCL), TCLP limit, or if compound is undetected, LQL exceeds MCL.

**Definitions:** DF - Dilution Factor  
LQL - Lower Quantitation Limit

Print Date: 5/11/2009

**Evergreen Analytical, Inc.**  
 4036 Youngfield Street, Wheat Ridge, Colorado 80033-3862  
 (303) 425-6021

**Lab Order:** 09-2990  
**Client Project ID:** FAC. 8/Seitzer  
**Matrix:** Soil

**Date Received:** 4/30/2009  
**Date Prepared:** 4/30/2009  
**Prep Batch ID:** 18957  
**Units:** mg/Kg


**Total Extractable Hydrocarbons**  
**Diesel Fuel (No. 2)**

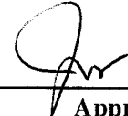
**Method: SW8015B Mod**

**Prep Method: SW3550B**

| Lab ID      | Client Sample ID | File ID        | Date Collected | Date Analyzed | DF | Surr REC | Sample Results | LQL |
|-------------|------------------|----------------|----------------|---------------|----|----------|----------------|-----|
| 09-2990-01A | A FAC 8          | 050409\FI047.D | 4/30/2009      | 5/5/2009      | 10 | 70%      | 1900           | 350 |
| 09-2990-02A | B Seltzer        | 050409\FI049.D | 4/30/2009      | 5/5/2009      | 5  | 72%      | 580            | 170 |
| 09-2990-03A | C State 26       | 050409\FI051.D | 4/30/2009      | 5/5/2009      | 1  | 63%      | 160            | 35  |

**Surrogate QC Limits:** 39-130 %REC      Surr: TBB

  
 \_\_\_\_\_  
 Analyst

  
 \_\_\_\_\_  
 Approved

**Qualifiers:** B - Analyte detected in the associated Method Blank, value not subtracted from result  
 E - Extrapolated value. Value exceeds calibration range  
 H - Sample analysis exceeded analytical holding time  
 J - Indicates an estimated value when the compound is detected, but is below the LQL  
 S - Spike Recovery outside accepted limits  
 U - Compound analyzed for but not detected  
 X - See case narrative  
 \* - Value exceeded the Maximum Contamination Level (MCL), TCLP limit, or if compound is undetected, LQL exceeds MCL.

**Definitions:** DF - Dilution Factor  
 LQL - Lower Quantitation Limit  
 Surr - Surrogate

Print Date: 5/5/2009

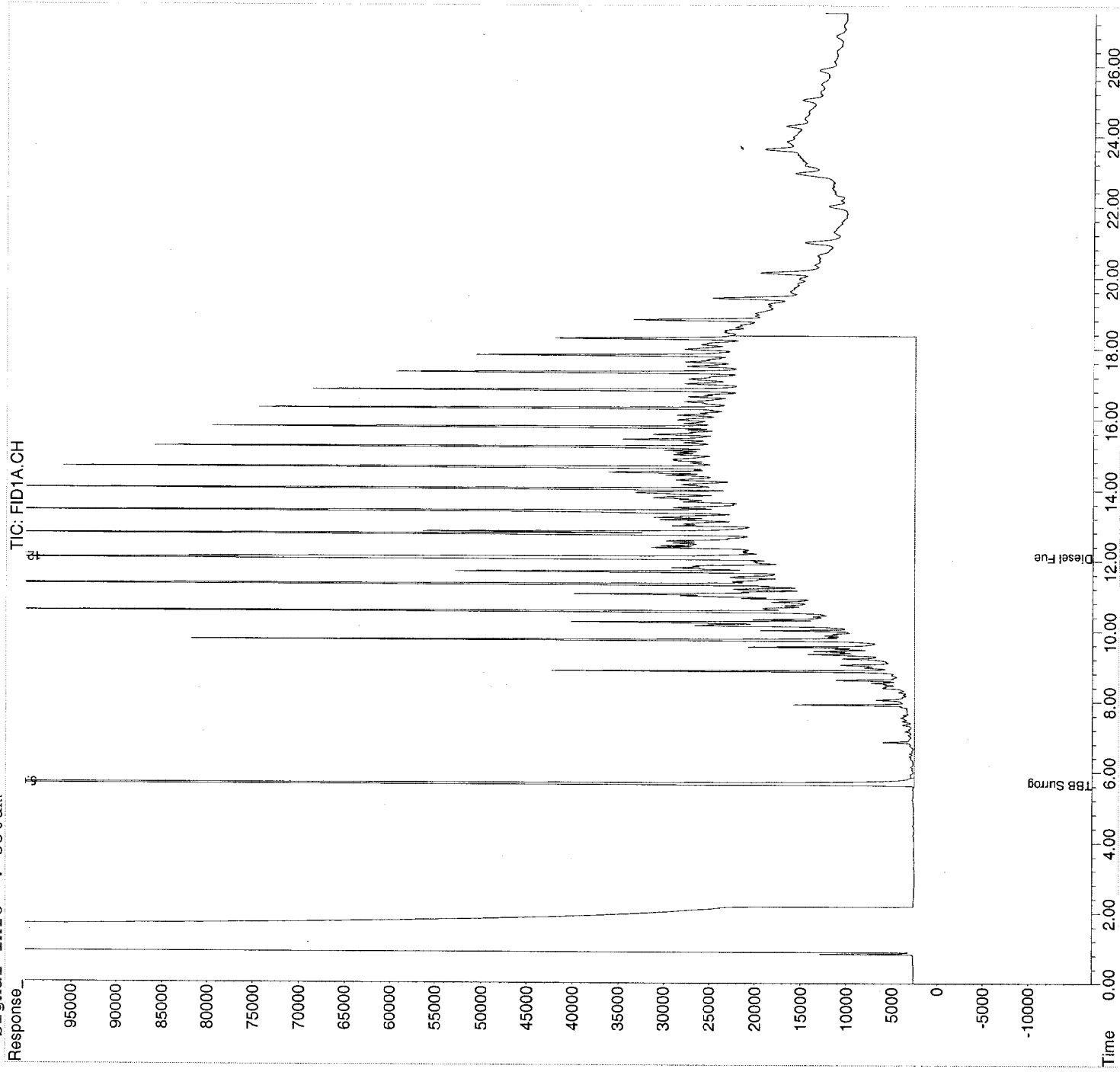
## Quantitation Report (Not Reviewed)

Data File : E:\DATA\050409\FI047.D  
Acq On : 5 May 2009 11:04 am  
Sample : 09-2990-01A  
Misc : ,SAMP,TEH\_S,10,BATCH 18957  
IntFile : DF050309.E  
Quant Time: May 5 11:35 2009 Quant Results File: DF050309.RES

Vial: 47  
Operator: LauraC  
Inst : FID6  
Multiplr: 1.00

Quant Method : C:\MSDCHEM\1\METHODS\DF050309.M (Chemstation Integrator)  
Title : 8015B TEH  
Last Update : Mon May 04 08:03:07 2009  
Response via : Multiple Level Calibration  
DataAcq Meth : FR\_BASE.M

Volume Inj. : 1ul  
Signal Phase : RTX-5  
Signal Info : 530um



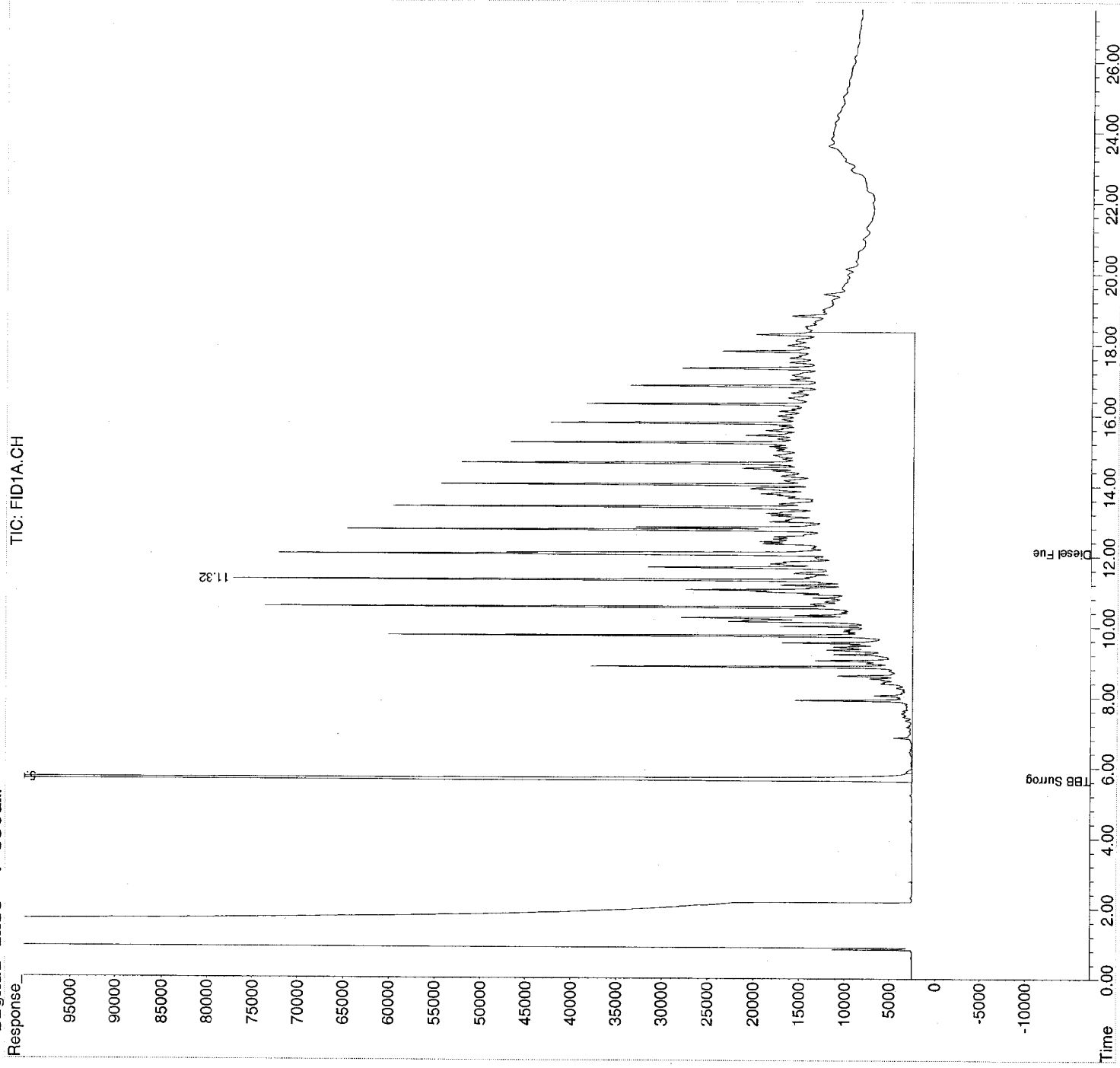
## Quantitation Report (Not Reviewed)

Data File : E:\DATA\050409\FI049.D  
Acq On : 5 May 2009 12:13 pm  
Sample : 09-2990-02A  
Misc : ,SAMP,TEH,S,5,BATCH 18957  
IntFile : DF050309.E  
Quant Time: May 5 12:59 2009 Quant Results File: DF050309.RES

Vial: 49  
Operator: LauraC  
Inst : FID6  
Multiplr: 1.00

Quant Method : C:\MSDCHEM\1\METHODS\DF050309.M (Chemstation Integrator)  
Title : 8015B TEH  
Last Update : Mon May 04 08:03:07 2009  
Response via : Multiple Level Calibration  
DataAcq Meth : FR\_BASE.M

Volume Inj. : 1ul  
Signal Phase : RTX-5  
Signal Info : 530um



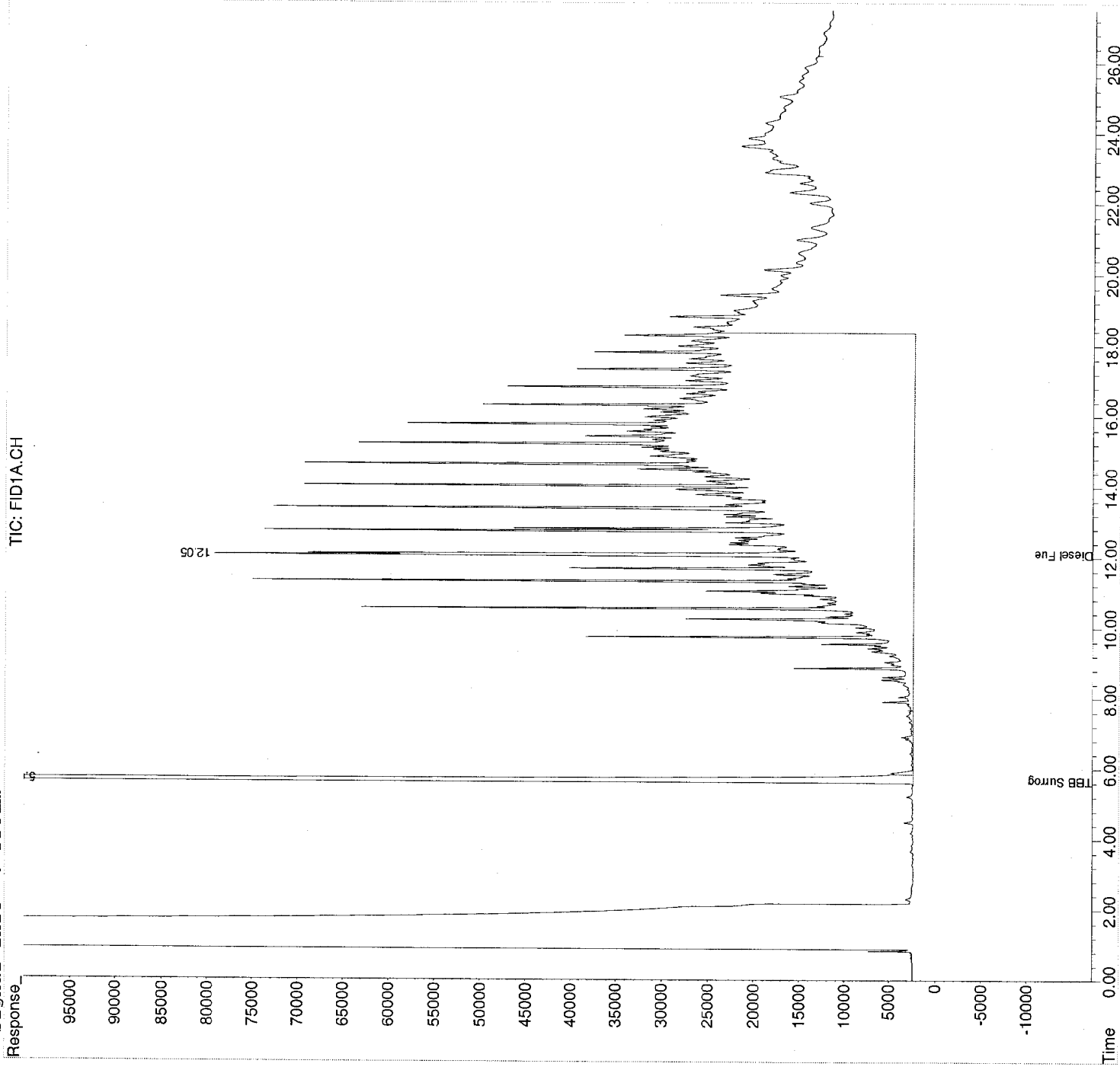
## Quantitation Report (Not Reviewed)

Data File : E:\DATA\050409\FI051.D  
Acq On : 5 May 2009 1:23 pm  
Sample : 09-2990-03A  
Misc : ,SAMP,TEH,S,1,BATCH 18957  
IntFile : DF050309.E  
Quant Time: May 5 13:52 2009 Quant Results File: DF050309.RES

Vial: 51  
Operator: LauraC  
Inst : FID6  
Multiplr: 1.00

Quant Method : C:\MSDCHEM\1\METHODS\DF050309.M (Chemstation Integrator)  
Title : 8015B TEH  
Last Update : Mon May 04 08:03:07 2009  
Response via : Multiple Level Calibration  
DataAcq Meth : FR\_BASE.M

Volume Inj. : 1ul  
Signal Phase : RTX-5  
Signal Info : 530um



**Evergreen Analytical, Inc.**  
4036 Youngfield Street, Wheat Ridge, Colorado 80033-3862  
(303) 425-6021

Client Sample ID: A FAC 8  
Client Project ID: FAC. 8/Seitzer  
Date Collected: 4/30/2009  
Date Received: 4/30/2009

Lab Work Order: 09-2990  
Lab Sample ID: 09-2990-01B  
Sample Matrix: Soil

**TOTAL VOLATILE HYDROCARBONS**

**Method: SW8015B MOD**

**Prep Method: SW5035**

Date Prepared: 5/1/2009  
Date Analyzed: 5/1/2009

Lab File ID: 050109\TA022  
Method Blank: MB2050109

Dilution Factor: 5

**Analytes**

| CAS Number                       | Result | LQL               | Units |
|----------------------------------|--------|-------------------|-------|
| 86290-81-5                       | U      | 1.0               | mg/Kg |
| Surr: 1,2,4-Trichlorobenzene (S) | 99     | QC Limits: 60-140 | %REC  |

Jcc  
Analyst

Jcc  
Approved

Notes: Total Xylenes consist of three isomers, two of which co-elute. The Xylene RL is for a single peak. Confirmation analysis was not performed.

**Qualifiers:** B - Analyte detected in the associated Method Blank, value not subtracted from result  
E - Extrapolated value. Value exceeds calibration range  
H - Sample analysis exceeded analytical holding time  
J - Indicates an estimated value when the compound is detected, but is below the LQL  
S - Spike Recovery outside accepted limits  
U - Compound analyzed for but not detected  
X - See case narrative

\* - Value exceeded the Maximum Contamination Level (MCL), TCLP limit, or if compound is undetected, LQL exceeds MCL.

**Definitions:** LQL - Lower Quantitation Limit  
Surr - Surrogate

Print Date: 5/4/2009



Signal #1 : E:\DATA\050109\TA022.D\FID1A.CH  
Signal #2 : E:\DATA\050109\TA022.D\FID2B.CH  
Acq On : 1 May 2009 11:46 am  
Sample : 09-2990-01B  
Misc : ,SAMP,8021\_S,TVH\_S,5,  
IntFile Signal #1: TVH1.E IntFile Signal #2: FB2.E  
Quant Time: May 1 12:05 2009 Quant Results File: TW20331.RES

Vial: 5

Operator: JENNC1  
Inst : TVHBTEX2  
Multiplr: 1.00

Quant Method : C:\MSDCHEM\1\METHODS\TW20331.M (Chemstation Integrator)  
Title : 8015B/8021B TVH/BTEX  
Last Update : Wed Apr 01 08:50:48 2009  
Response via : Multiple Level Calibration  
DataAcq Meth : TVB2.M

Volume Inj. :

Signal #1 Phase : DB-624

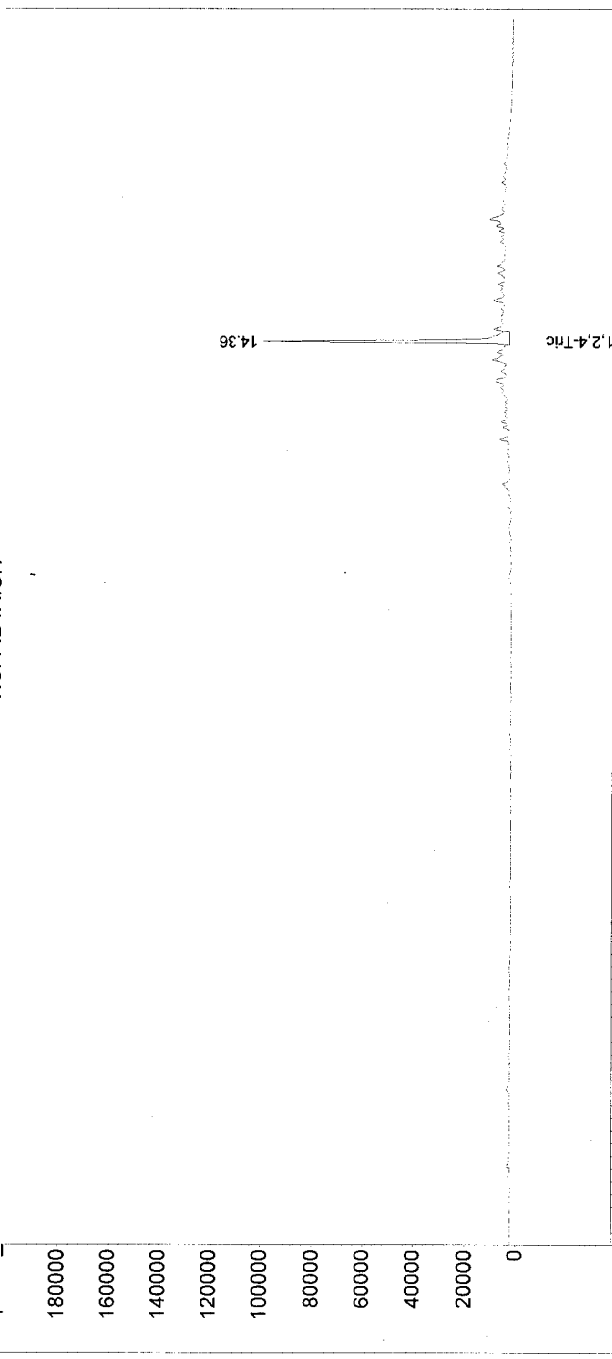
Signal #2 Phase: DB-624

Signal #1 Info : 0.53 mm

Signal #2 Info : 0.53 mm

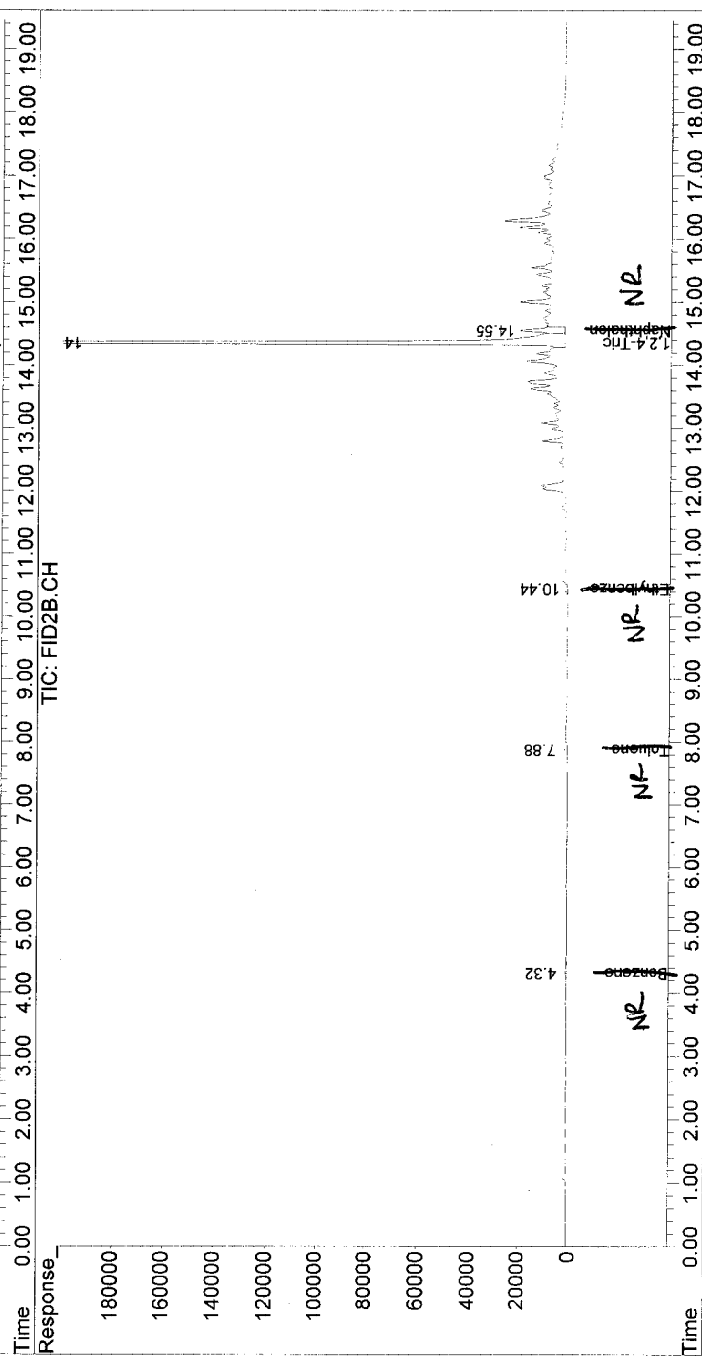
Response

TIC: FID1A.CH



Response

TIC: FID2B.CH



**Evergreen Analytical, Inc.**  
4036 Youngfield Street, Wheat Ridge, Colorado 80033-3862  
(303) 425-6021

Client Sample ID: B Seltzer  
Client Project ID: FAC. 8/Seitzer  
Date Collected: 4/30/2009  
Date Received: 4/30/2009

Lab Work Order: 09-2990  
Lab Sample ID: 09-2990-02B  
Sample Matrix: Soil

### TOTAL VOLATILE HYDROCARBONS

**Method: SW8015B MOD**

**Prep Method: SW5035**

Date Prepared: 5/1/2009  
Date Analyzed: 5/1/2009

Lab File ID: 050109\TA023  
Method Blank: MB2050109

Dilution Factor: 5

| Analytes                         | CAS Number | Result | LQL               | Units |
|----------------------------------|------------|--------|-------------------|-------|
| TVH-Gasoline                     | 86290-81-5 | U      | 1.0               | mg/Kg |
| Surr: 1,2,4-Trichlorobenzene (S) | 120-82-1   | 81     | QC Limits: 60-140 | %REC  |

*JCC*  
\_\_\_\_\_  
Analyst

*Jm*  
\_\_\_\_\_  
Approved

**Notes:** Total Xylenes consist of three isomers, two of which co-elute. The Xylene RL is for a single peak. Confirmation analysis was not performed.

**Qualifiers:** B - Analyte detected in the associated Method Blank, value not subtracted from result  
E - Extrapolated value. Value exceeds calibration range  
H - Sample analysis exceeded analytical holding time  
J - Indicates an estimated value when the compound is detected, but is below the LQL  
S - Spike Recovery outside accepted limits  
U - Compound analyzed for but not detected  
X - See case narrative  
\* - Value exceeded the Maximum Contamination Level (MCL), TCLP limit, or if compound is undetected, LQL exceeds MCL.

**Definitions:** LQL - Lower Quantitation Limit  
Surr - Surrogate

Print Date: 5/4/2009

Signal #1 : E:\DATA\050109\TA023.D\FID1A.CH Vial: 6  
Signal #2 : E:\DATA\050109\TA023.D\FID2B.CH  
Acq On : 1 May 2009 12:20 pm  
Sample : 09-2990-02B  
Misc : ,SAMP,8021\_S,TVH\_S,5, Operator: JENNC1  
IntFile Signal #1: TVH1.E Inst : TVHBTEX2  
IntFile Signal #2: FB2.E Multiplr: 1.00  
Quant Time: May 1 12:40 2009 Quant Results File: TW20331.RES

Quant Method : C:\MSDCHEM\1\METHODS\TW20331.M (Chemstation Integrator)  
Title : 8015B/8021B TVH/BTEX  
Last Update : Wed Apr 01 08:50:48 2009  
Response via : Multiple Level Calibration  
DataAcq Meth : TVB2.M

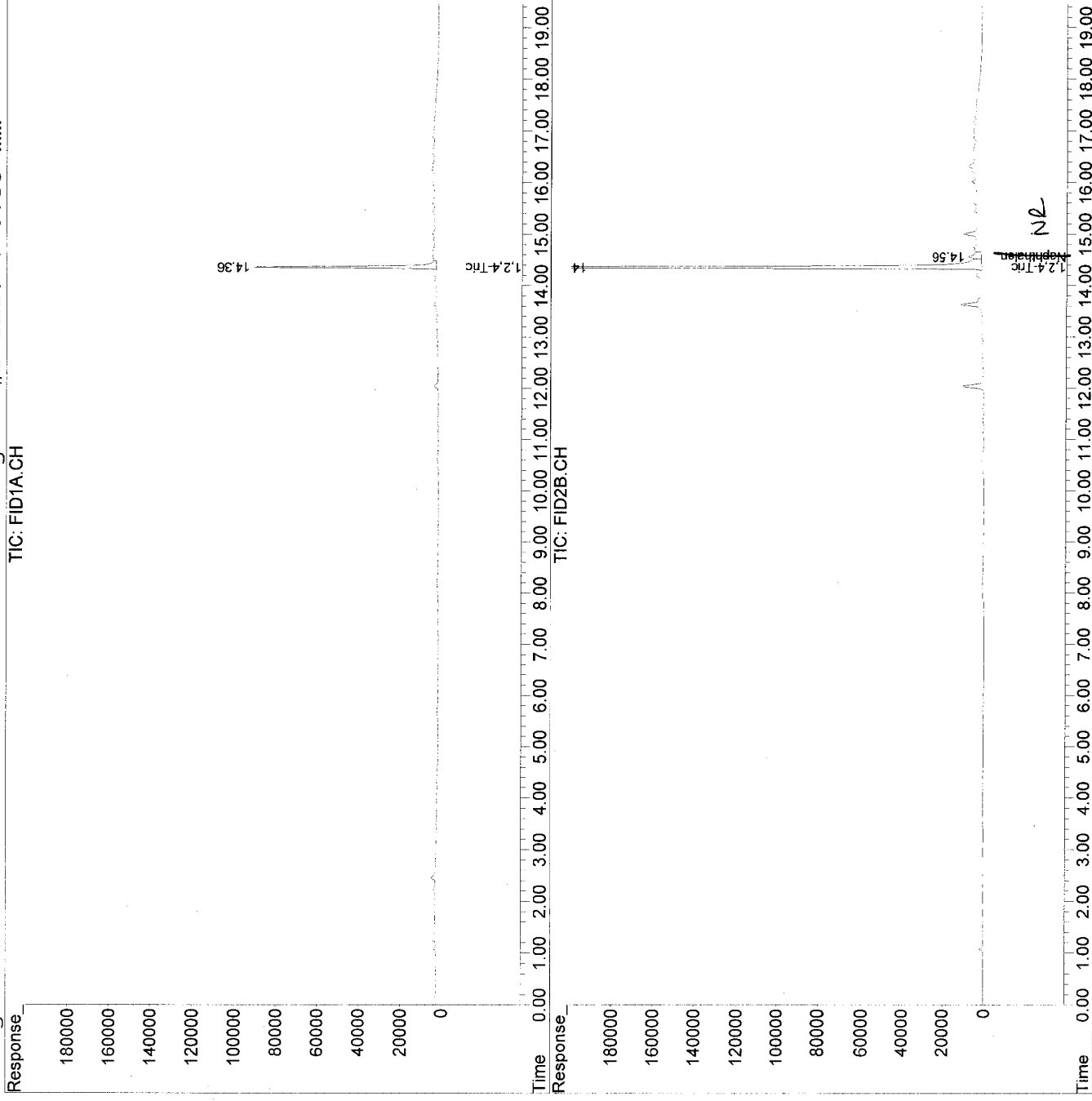
Volume Inj. :

Signal #1 Phase : DB-624

Signal #2 Phase: DB-624

Signal #1 Info : 0.53 mm

Signal #2 Info : 0.53 mm



**Evergreen Analytical, Inc.**  
4036 Youngfield Street, Wheat Ridge, Colorado 80033-3862  
(303) 425-6021

Client Sample ID: C State 26  
Client Project ID: FAC. 8/Seitzer  
Date Collected: 4/30/2009  
Date Received: 4/30/2009

Lab Work Order: 09-2990  
Lab Sample ID: 09-2990-03B  
Sample Matrix: Soil

### TOTAL VOLATILE HYDROCARBONS

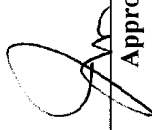
**Method: SW8015B MOD**

**Prep Method: SW5035**

Date Prepared: 5/1/2009      Lab File ID: 050109\TA024      Dilution Factor: 5  
Date Analyzed: 5/1/2009      Method Blank: MB2050109

| Analytes                         | CAS Number | Result | LQL               | Units |
|----------------------------------|------------|--------|-------------------|-------|
| TVH-Gasoline                     | 86290-81-5 | U      | 1.0               | mg/Kg |
| Surr: 1,2,4-Trichlorobenzene (S) | 120-82-1   | 118    | QC Limits: 60-140 | %REC  |

  
\_\_\_\_\_  
Analyst

  
\_\_\_\_\_  
Approved

**Notes:** Total Xylenes consist of three isomers, two of which co-elute. The Xylene RL is for a single peak. Confirmation analysis was not performed.

**Qualifiers:** B - Analyte detected in the associated Method Blank, value not subtracted from result  
E - Extrapolated value. Value exceeds calibration range  
H - Sample analysis exceeded analytical holding time  
J - Indicates an estimated value when the compound is detected, but is below the LQL  
S - Spike Recovery outside accepted limits  
U - Compound analyzed for but not detected  
X - See case narrative  
\* - Value exceeded the Maximum Contamination Level (MCL), TCLP limit, or if compound is undetected, LQL exceeds MCL.

**Definitions:** LQL - Lower Quantitation Limit  
Surr - Surrogate

Print Date: 5/4/2009

Signal #1 : E:\DATA\050109\TA024.D\FID1A.CH Vial: 7  
Signal #2 : E:\DATA\050109\TA024.D\FID2B.CH  
Acq On : 1 May 2009 12:55 pm  
Sample : 09-2990-03B  
Misc : ,SAMP,8021 S,TVH S,5, Operator: JENNC1  
IntFile Signal #1: TVH1.E Inst : TVHBTEX2  
IntFile Signal #2: FB2.E Multiplr: 1.00  
Quant Time: May 1 13:15 2009 Quant Results File: TW20331.RES

Quant Method : C:\MSDCHEM\1\METHODS\TW20331.M (Chemstation Integrator)  
Title : 8015B/8021B TVH/BTEX  
Last Update : Wed Apr 01 08:50:48 2009  
Response via : Multiple Level Calibration  
DataAcq Meth : TVB2.M

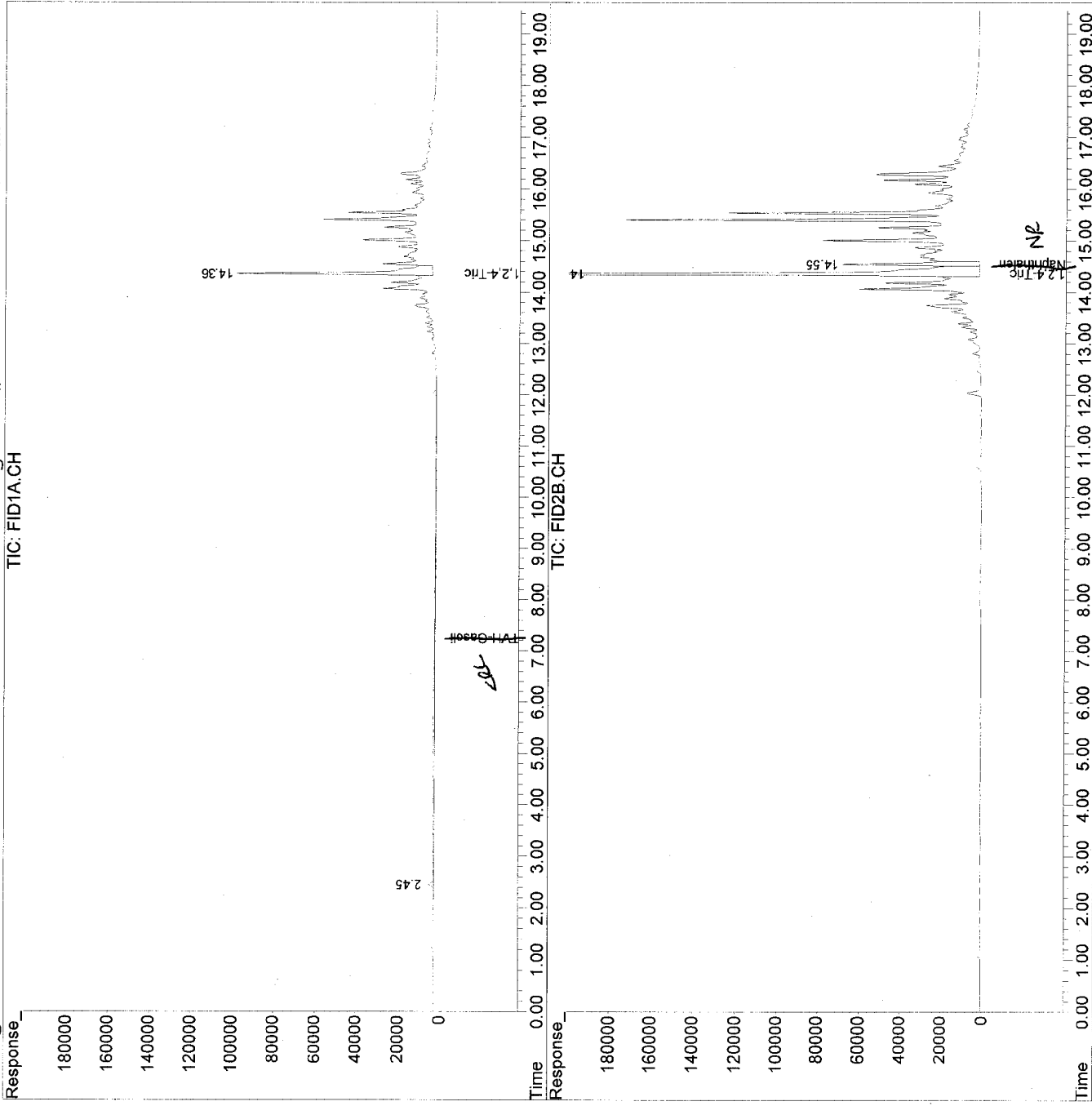
Volume Inj. :

Signal #1 Phase : DB-624

Signal #2 Phase: DB-624

Signal #1 Info : 0.53 mm

Signal #2 Info : 0.53 mm



## **QUALITY ASSURANCE REPORTS**

**METHOD BLANKS (MB)**

**LABORATORY CONTROL SPIKES (LCS)**

**MATRIX SPIKES (MS/MSD)\***

**DUPLICATES (DUP)\***

- ♦ **For Metals or Wet Chemistry analyses: only included if requested.**

Work Order: 09-2990

Client Project ID FAC. 8/Seitzer

## ANALYTICAL QC SUMMARY REPORT

TestCode: PH\_S

|                              |                         |                        |                           |                                |                        |          |           |             |      |          |      |
|------------------------------|-------------------------|------------------------|---------------------------|--------------------------------|------------------------|----------|-----------|-------------|------|----------|------|
| Sample ID: <b>LCS-R46858</b> | SampType: <b>LCS</b>    | TestCode: <b>PH_S</b>  | Run ID: <b>PH_090501A</b> | Prep Date: <b>5/1/2009</b>     | Units: <b>pH Units</b> |          |           |             |      |          |      |
|                              | Batch ID: <b>R46858</b> | TestNo: <b>SW9045C</b> | FileID:                   | Analysis Date: <b>5/1/2009</b> | SeqNo: <b>832420</b>   |          |           |             |      |          |      |
| Analyte                      | Result                  | LQL                    | SPK value                 | SPK Ref Val                    | %REC                   | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |

|    |   |      |   |   |     |      |       |   |   |  |  |
|----|---|------|---|---|-----|------|-------|---|---|--|--|
| pH | 8 | 1.00 | 8 | 0 | 100 | 99.3 | 100.7 | 0 | 0 |  |  |
|----|---|------|---|---|-----|------|-------|---|---|--|--|

|                              |                         |                        |                           |                                |                        |          |           |             |      |          |      |
|------------------------------|-------------------------|------------------------|---------------------------|--------------------------------|------------------------|----------|-----------|-------------|------|----------|------|
| Sample ID: <b>LCS-R46858</b> | SampType: <b>LCS</b>    | TestCode: <b>PH_S</b>  | Run ID: <b>PH_090501A</b> | Prep Date: <b>5/1/2009</b>     | Units: <b>pH Units</b> |          |           |             |      |          |      |
|                              | Batch ID: <b>R46858</b> | TestNo: <b>SW9045C</b> | FileID:                   | Analysis Date: <b>5/1/2009</b> | SeqNo: <b>832615</b>   |          |           |             |      |          |      |
| Analyte                      | Result                  | LQL                    | SPK value                 | SPK Ref Val                    | %REC                   | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |

|    |   |      |   |   |     |      |       |   |   |  |  |
|----|---|------|---|---|-----|------|-------|---|---|--|--|
| pH | 8 | 1.00 | 8 | 0 | 100 | 99.3 | 100.7 | 0 | 0 |  |  |
|----|---|------|---|---|-----|------|-------|---|---|--|--|

## Qualifiers:

U - Not detected at or above the Reporting Limit  
J - Analyte detected below quantitation limits  
S - Spike Recovery outside acceptance limits  
E - Extrapolated value, value exceeds calibration range.

R - RPD outside acceptance limits  
B - Analyte detected in the associated Method Blank  
H - Prep or analytical holding time exceeded  
X - See case narrative

Work Order: 09-2990

Client Project ID: FAC. 8/Seitzer

## ANALYTICAL QC SUMMARY REPORT

TestCode: TEH\_S

|                     |                 |                    |                        |                         |               |          |           |             |      |          |      |
|---------------------|-----------------|--------------------|------------------------|-------------------------|---------------|----------|-----------|-------------|------|----------|------|
| Sample ID: MB-18957 | SampType: MBLK  | TestCode: TEH_S    | Run ID: FID6_090504A   | Prep Date: 4/30/2009    | Units: mg/Kg  |          |           |             |      |          |      |
|                     | Batch ID: 18957 | TestNo: SW8015B Mo | FileID: 050409\FI003.D | Analysis Date: 5/4/2009 | SeqNo: 833810 |          |           |             |      |          |      |
| Analyte             | Result          | LQL                | SPK value              | SPK Ref Val             | %REC          | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |

Diesel Fuel (No. 2)

U

35

Surr: TBB

44.82

0

66.67

0

67.2

39

130

0

0

|                      |                 |                    |                        |                         |               |          |           |             |      |          |      |
|----------------------|-----------------|--------------------|------------------------|-------------------------|---------------|----------|-----------|-------------|------|----------|------|
| Sample ID: LCS-18957 | SampType: LCS   | TestCode: TEH_S    | Run ID: FID6_090504A   | Prep Date: 4/30/2009    | Units: mg/Kg  |          |           |             |      |          |      |
|                      | Batch ID: 18957 | TestNo: SW8015B Mo | FileID: 050409\FI006.D | Analysis Date: 5/4/2009 | SeqNo: 833813 |          |           |             |      |          |      |
| Analyte              | Result          | LQL                | SPK value              | SPK Ref Val             | %REC          | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |

Diesel Fuel (No. 2)

623.1

35

666.7

0

93.5

70

130

0

0

Surr: TBB

49.75

0

66.67

0

74.6

42

130

0

0

|                          |                 |                    |                        |                         |               |          |           |             |      |          |      |
|--------------------------|-----------------|--------------------|------------------------|-------------------------|---------------|----------|-----------|-------------|------|----------|------|
| Sample ID: 09-2962-01BMS | SampType: MS    | TestCode: TEH_S    | Run ID: FID6_090504A   | Prep Date: 4/30/2009    | Units: mg/Kg  |          |           |             |      |          |      |
|                          | Batch ID: 18957 | TestNo: SW8015B Mo | FileID: 050409\FI015.D | Analysis Date: 5/4/2009 | SeqNo: 833921 |          |           |             |      |          |      |
| Analyte                  | Result          | LQL                | SPK value              | SPK Ref Val             | %REC          | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |

Diesel Fuel (No. 2)

630.6

35

664.7

0

94.9

70

130

0

0

Surr: TBB

49.35

0

66.47

0

74.2

39

130

0

0

|                           |                 |                    |                        |                         |               |          |           |             |      |          |      |
|---------------------------|-----------------|--------------------|------------------------|-------------------------|---------------|----------|-----------|-------------|------|----------|------|
| Sample ID: 09-2962-01BMSD | SampType: MSD   | TestCode: TEH_S    | Run ID: FID6_090504A   | Prep Date: 4/30/2009    | Units: mg/Kg  |          |           |             |      |          |      |
|                           | Batch ID: 18957 | TestNo: SW8015B Mo | FileID: 050409\FI016.D | Analysis Date: 5/4/2009 | SeqNo: 833922 |          |           |             |      |          |      |
| Analyte                   | Result          | LQL                | SPK value              | SPK Ref Val             | %REC          | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |

Diesel Fuel (No. 2)

560.3

35

665.6

0

84.2

70

130

630.6

11.8

30

Surr: TBB

44.41

0

66.56

0

66.7

39

130

0

0

0

## Qualifiers:

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 S - Spike Recovery outside acceptance limits  
 E - Extrapolated value, value exceeds calibration range.

R - RPD outside acceptance limits  
 B - Analyte detected in the associated Method Blank  
 H - Prep or analytical holding time exceeded  
 X - See case narrative



Evergreen Analytical, Inc.

Date: 04-May-09

Work Order: 09-2990

Client Project ID: FAC. 8/Seitzer

## ANALYTICAL QC SUMMARY REPORT

BatchID: R46899

|                      |                  |                    |                          |                         |               |          |           |             |      |          |      |
|----------------------|------------------|--------------------|--------------------------|-------------------------|---------------|----------|-----------|-------------|------|----------|------|
| Sample ID: MB2050109 | SampType: MBLK   | TestCode: TVH_S    | Run ID: TVHBTEX2_090501B | Prep Date: 5/1/2009     | Units: mg/Kg  |          |           |             |      |          |      |
|                      | Batch ID: R46899 | TestNo: SW8015B Mo | FileID: 050109\TA020     | Analysis Date: 5/1/2009 | SeqNo: 833200 |          |           |             |      |          |      |
| Analyte              | Result           | LQL                | SPK value                | SPK Ref Val             | %REC          | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |

|                                  |       |     |     |   |      |    |     |   |   |  |  |
|----------------------------------|-------|-----|-----|---|------|----|-----|---|---|--|--|
| TVH-Gasoline                     | U     | 1.0 |     |   |      |    |     |   |   |  |  |
| Surr: 1,2,4-Trichlorobenzene (S) | 428.7 | 0   | 500 | 0 | 85.7 | 60 | 140 | 0 | 0 |  |  |

|                       |                  |                    |                          |                         |               |          |           |             |      |          |      |
|-----------------------|------------------|--------------------|--------------------------|-------------------------|---------------|----------|-----------|-------------|------|----------|------|
| Sample ID: LCS2050109 | SampType: LCS    | TestCode: TVH_S    | Run ID: TVHBTEX2_090501B | Prep Date: 5/1/2009     | Units: mg/Kg  |          |           |             |      |          |      |
|                       | Batch ID: R46899 | TestNo: SW8015B Mo | FileID: 050109\TA021     | Analysis Date: 5/1/2009 | SeqNo: 833201 |          |           |             |      |          |      |
| Analyte               | Result           | LQL                | SPK value                | SPK Ref Val             | %REC          | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |

|                                  |       |     |     |   |      |    |     |   |   |  |  |
|----------------------------------|-------|-----|-----|---|------|----|-----|---|---|--|--|
| TVH-Gasoline                     | 10.77 | 1.0 | 11  | 0 | 97.9 | 70 | 130 | 0 | 0 |  |  |
| Surr: 1,2,4-Trichlorobenzene (S) | 586.6 | 0   | 500 | 0 | 117  | 60 | 140 | 0 | 0 |  |  |

|                          |                  |                    |                          |                         |               |          |           |             |      |          |      |
|--------------------------|------------------|--------------------|--------------------------|-------------------------|---------------|----------|-----------|-------------|------|----------|------|
| Sample ID: 09-2990-01BMS | SampType: MS     | TestCode: TVH_S    | Run ID: TVHBTEX2_090501B | Prep Date: 5/1/2009     | Units: mg/Kg  |          |           |             |      |          |      |
| Client ID: A FAC 8       | Batch ID: R46899 | TestNo: SW8015B Mo | FileID: 050109\TA025     | Analysis Date: 5/1/2009 | SeqNo: 833205 |          |           |             |      |          |      |
| Analyte                  | Result           | LQL                | SPK value                | SPK Ref Val             | %REC          | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |

|                                  |       |     |     |   |      |    |     |   |   |  |  |
|----------------------------------|-------|-----|-----|---|------|----|-----|---|---|--|--|
| TVH-Gasoline                     | 10.91 | 1.0 | 11  | 0 | 99.1 | 62 | 130 | 0 | 0 |  |  |
| Surr: 1,2,4-Trichlorobenzene (S) | 490.1 | 0   | 500 | 0 | 98   | 60 | 140 | 0 | 0 |  |  |

|                           |                  |                    |                          |                         |               |          |           |             |      |          |      |
|---------------------------|------------------|--------------------|--------------------------|-------------------------|---------------|----------|-----------|-------------|------|----------|------|
| Sample ID: 09-2990-01BMSD | SampType: MSD    | TestCode: TVH_S    | Run ID: TVHBTEX2_090501B | Prep Date: 5/1/2009     | Units: mg/Kg  |          |           |             |      |          |      |
| Client ID: A FAC 8        | Batch ID: R46899 | TestNo: SW8015B Mo | FileID: 050109\TA026     | Analysis Date: 5/1/2009 | SeqNo: 833206 |          |           |             |      |          |      |
| Analyte                   | Result           | LQL                | SPK value                | SPK Ref Val             | %REC          | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |

|                                  |       |     |     |   |      |    |     |       |       |    |  |
|----------------------------------|-------|-----|-----|---|------|----|-----|-------|-------|----|--|
| TVH-Gasoline                     | 10.88 | 1.0 | 11  | 0 | 98.9 | 62 | 130 | 10.91 | 0.230 | 30 |  |
| Surr: 1,2,4-Trichlorobenzene (S) | 622.6 | 0   | 500 | 0 | 125  | 60 | 140 | 0     | 0     | 0  |  |

## Qualifiers:

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 J - Analyte detected below quantitation limits  
 S - Spike Recovery outside acceptance limits  
 E - Extrapolated value, value exceeds calibration range.

R - RPD outside acceptance limits  
 B - Analyte detected in the associated Method Blank  
 H - Prep or analytical holding time exceeded  
 X - See case narrative



*formerly Evergreen Analytical, Inc.*

May 12, 2009

Ray Gorka  
K.P. Kauffman  
1675 Broadway, Suite 2800  
Denver, CO 80202

Lab Work Order: 09-2990  
Client Project ID: FAC. 8/Seitzer

Dear Ray Gorka:

Enclosed are the analytical results for the samples shown in the Laboratory Work Order Summary.

The invoice will be mailed from our New Jersey office under separate cover.

The enclosed data for testing performed at Accutest Laboratory (formerly Evergreen Analytical) have been reviewed for quality assurance. A case narrative is included to describe any anomalies associated with the samples or data.

Accutest will dispose of all samples 44 days from the sample receipt date. If you want samples returned, please advise us by mail or fax as soon as possible.

A copy of this project report and supporting data will be retained for a period of five years unless we are otherwise advised by you. A document retrieval charge will apply.

Thank you for using the services of Accutest Laboratories. If you have any questions concerning the analytical data, please contact me. Please direct other questions to Client Services.

Sincerely,

Joseph J Egry IV/ Tiffany Pham  
Quality Assurance



07/30/14

## Technical Report for

**K.P. Kauffman Company, Inc.**

**Soil Sampling**

**07/24/2014**

**Accutest Job Number: D60112**

**Sampling Date: 07/24/14**

### Report to:

**K.P. Kauffman Company, Inc.**  
**1675 Broadway Suite 2800**  
**Denver, CO 80202-4628**  
**slaramesa@kpk.com**

**ATTN: Susana Lara-Mesa**

**Total number of pages in report: 40**



Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Program and/or state specific certification programs as applicable.

A handwritten signature in black ink, appearing to read "Scott Heideman".

**Scott Heideman**  
**Laboratory Director**

**Client Service contact: Renea Jackson 303-425-6021**

Certifications: CO (CO00049), ID, NE (CO00049), ND (R-027), NJ (CO 0007), OK (D9942), UT (NELAP CO00049), TX (T104704511)

This report shall not be reproduced, except in its entirety, without the written approval of Accutest Laboratories.  
Test results relate only to samples analyzed.

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## Sample Summary

K.P. Kauffman Company, Inc.

**Job No:** D60112

Soil Sampling

Project No: 07/24/2014

| Sample<br>Number | Collected |       | Time By | Received | Matrix |      | Client<br>Sample ID      |
|------------------|-----------|-------|---------|----------|--------|------|--------------------------|
|                  | Date      |       |         |          | Code   | Type |                          |
| D60112-1         | 07/24/14  | 10:45 | RP      | 07/24/14 | SO     | Soil | JOHN HENRY STOLTZ JR B-1 |
| D60112-1A        | 07/24/14  | 10:45 | RP      | 07/24/14 | SO     | Soil | JOHN HENRY STOLTZ JR B-1 |

---

Soil samples reported on a dry weight basis unless otherwise indicated on result page.



## CASE NARRATIVE / CONFORMANCE SUMMARY

**Client:** K.P. Kauffman Company, Inc.

**Job No** D60112

**Site:** Soil Sampling

**Report Date** 7/30/2014 3:21:07 PM

On 07/24/2014, 1 sample(s), 0 Trip Blank(s), and 0 Field Blank(s) were received at Accutest Mountain States (AMS) at a temperature of 29.8 °C. The samples were intact and properly preserved, unless noted below. An AMS Job Number of D60112 was assigned to the project. The lab sample ID, client sample ID, and date of sample collection are detailed in the report's Results Summary.

Specified quality control criteria were achieved for this job except as noted below. For more information, please refer to the analytical results and QC summary pages.

### Volatiles by GCMS By Method SW846 8260B

|                  |                          |
|------------------|--------------------------|
| <b>Matrix</b> SO | <b>Batch ID:</b> V3V1852 |
|------------------|--------------------------|

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) D60124-2MS, D60124-2MSD were used as the QC samples indicated.

### Volatiles by GC By Method SW846 8015B

|                  |                          |
|------------------|--------------------------|
| <b>Matrix</b> SO | <b>Batch ID:</b> GGA1271 |
|------------------|--------------------------|

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) D60133-1MS, D60133-1MSD were used as the QC samples indicated.

### Extractables by GC By Method SW846-8015B

|                  |                          |
|------------------|--------------------------|
| <b>Matrix</b> SO | <b>Batch ID:</b> OP10309 |
|------------------|--------------------------|

- All samples were extracted and analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) D60078-1MS, D60078-1MSD were used as the QC samples indicated.

### Metals By Method SW846 6010C

|                  |                          |
|------------------|--------------------------|
| <b>Matrix</b> AQ | <b>Batch ID:</b> MP13556 |
|------------------|--------------------------|

- All samples were digested and analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) D60154-1AMS, D60154-1AMSD, D60154-1ASDL were used as the QC samples for the metals analysis.

### Wet Chemistry By Method SM2540G-2011 M

|                  |                          |
|------------------|--------------------------|
| <b>Matrix</b> SO | <b>Batch ID:</b> GN25729 |
|------------------|--------------------------|

- The data for SM2540G-2011 M meets quality control requirements.

### Wet Chemistry By Method USDA HANDBOOK 60

|                  |                          |
|------------------|--------------------------|
| <b>Matrix</b> SO | <b>Batch ID:</b> MP13556 |
|------------------|--------------------------|

- D60112-1A for Sodium Adsorption Ratio: Calculated as:  $(\text{Na meq/L}) / \sqrt{[(\text{Ca meq/L}) + (\text{Mg meq/L})/2]}$

AMS certifies that data reported for samples received, listed on the associated custody chain or analytical task order, were produced to specifications meeting AMS's Quality System precision, accuracy and completeness objectives except as noted.

Estimated non-standard method measurement uncertainty data is available on request, based on quality control bias and implicit for standard methods. Acceptable uncertainty requires tested parameter quality control data to meet method criteria.

AMS is not responsible for data quality assumptions if partial reports are used and recommends that this report be used in its entirety. This report is authorized by AMS indicated via signature on the report cover.

## Summary of Hits

Page 1 of 1

**Job Number:** D60112  
**Account:** K.P. Kauffman Company, Inc.  
**Project:** Soil Sampling  
**Collected:** 07/24/14



| Lab Sample ID | Client Sample ID | Result/<br>Qual | RL | MDL | Units | Method |
|---------------|------------------|-----------------|----|-----|-------|--------|
|---------------|------------------|-----------------|----|-----|-------|--------|

### D60112-1 JOHN HENRY STOLTZ JR B-1

|                       |      |     |     |          |                   |
|-----------------------|------|-----|-----|----------|-------------------|
| TPH-GRO (C6-C10)      | 17.4 | 11  | 5.7 | mg/kg    | SW846 8015B       |
| TPH-DRO (C10-C28)     | 36.4 | 7.1 | 5.3 | mg/kg    | SW846-8015B       |
| Specific Conductivity | 411  | 1.0 |     | umhos/cm | SM 2510B-2011 MOD |
| pH                    | 7.88 |     |     | su       | SW846 9045D       |

### D60112-1A JOHN HENRY STOLTZ JR B-1

|                                      |      |     |  |       |                  |
|--------------------------------------|------|-----|--|-------|------------------|
| Calcium                              | 21.2 | 2.0 |  | mg/l  | SW846 6010C      |
| Magnesium                            | 4.57 | 1.0 |  | mg/l  | SW846 6010C      |
| Sodium                               | 53.6 | 2.0 |  | mg/l  | SW846 6010C      |
| Sodium Adsorption Ratio <sup>a</sup> | 2.75 |     |  | ratio | USDA HANDBOOK 60 |

(a) Calculated as:  $(\text{Na meq/L}) / \sqrt{[(\text{Ca meq/L}) + (\text{Mg meq/L})/2]}$



Sample Results

Report of Analysis

## Report of Analysis

|                          |                          |                        |          |
|--------------------------|--------------------------|------------------------|----------|
| <b>Client Sample ID:</b> | JOHN HENRY STOLTZ JR B-1 | <b>Date Sampled:</b>   | 07/24/14 |
| <b>Lab Sample ID:</b>    | D60112-1                 | <b>Date Received:</b>  | 07/24/14 |
| <b>Matrix:</b>           | SO - Soil                | <b>Percent Solids:</b> | 93.0     |
| <b>Method:</b>           | SW846 8260B              |                        |          |
| <b>Project:</b>          | Soil Sampling            |                        |          |

|        | File ID   | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|--------|-----------|----|----------|----|-----------|------------|------------------|
| Run #1 | 3V31676.D | 1  | 07/25/14 | JL | n/a       | n/a        | V3V1852          |
| Run #2 |           |    |          |    |           |            |                  |

|        | Initial Weight | Final Volume | Methanol Aliquot |
|--------|----------------|--------------|------------------|
| Run #1 | 5.05 g         | 5.0 ml       | 100 ul           |
| Run #2 |                |              |                  |

## Purgeable Aromatics

| CAS No.   | Compound       | Result | RL  | MDL | Units | Q |
|-----------|----------------|--------|-----|-----|-------|---|
| 71-43-2   | Benzene        | ND     | 57  | 22  | ug/kg |   |
| 108-88-3  | Toluene        | ND     | 110 | 57  | ug/kg |   |
| 100-41-4  | Ethylbenzene   | ND     | 110 | 22  | ug/kg |   |
| 1330-20-7 | Xylene (total) | ND     | 230 | 110 | ug/kg |   |

| CAS No.    | Surrogate Recoveries  | Run# 1 | Run# 2 | Limits  |
|------------|-----------------------|--------|--------|---------|
| 2037-26-5  | Toluene-D8            | 89%    |        | 64-130% |
| 460-00-4   | 4-Bromofluorobenzene  | 96%    |        | 62-131% |
| 17060-07-0 | 1,2-Dichloroethane-D4 | 101%   |        | 70-130% |

ND = Not detected MDL = Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

## Report of Analysis

Page 1 of 1

|                          |                          |  |  |                        |          |
|--------------------------|--------------------------|--|--|------------------------|----------|
| <b>Client Sample ID:</b> | JOHN HENRY STOLTZ JR B-1 |  |  | <b>Date Sampled:</b>   | 07/24/14 |
| <b>Lab Sample ID:</b>    | D60112-1                 |  |  | <b>Date Received:</b>  | 07/24/14 |
| <b>Matrix:</b>           | SO - Soil                |  |  | <b>Percent Solids:</b> | 93.0     |
| <b>Method:</b>           | SW846 8015B              |  |  |                        |          |
| <b>Project:</b>          | Soil Sampling            |  |  |                        |          |

|        | File ID   | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|--------|-----------|----|----------|----|-----------|------------|------------------|
| Run #1 | GA22754.D | 1  | 07/29/14 | BR | n/a       | n/a        | GGA1271          |
| Run #2 |           |    |          |    |           |            |                  |

|        | Initial Weight | Final Volume | Methanol Aliquot |
|--------|----------------|--------------|------------------|
| Run #1 | 5.0 g          | 5.0 ml       | 100 ul           |
| Run #2 |                |              |                  |

| CAS No. | Compound         | Result | RL | MDL | Units | Q |
|---------|------------------|--------|----|-----|-------|---|
|         | TPH-GRO (C6-C10) | 17.4   | 11 | 5.7 | mg/kg |   |

| CAS No.  | Surrogate Recoveries   | Run# 1 | Run# 2 | Limits  |
|----------|------------------------|--------|--------|---------|
| 120-82-1 | 1,2,4-Trichlorobenzene | 91%    |        | 60-140% |

ND = Not detected      MDL = Method Detection Limit  
RL = Reporting Limit  
E = Indicates value exceeds calibration range

J = Indicates an estimated value  
B = Indicates analyte found in associated method blank  
N = Indicates presumptive evidence of a compound

## Report of Analysis

Page 1 of 1

|                          |                          |  |  |                        |          |
|--------------------------|--------------------------|--|--|------------------------|----------|
| <b>Client Sample ID:</b> | JOHN HENRY STOLTZ JR B-1 |  |  | <b>Date Sampled:</b>   | 07/24/14 |
| <b>Lab Sample ID:</b>    | D60112-1                 |  |  | <b>Date Received:</b>  | 07/24/14 |
| <b>Matrix:</b>           | SO - Soil                |  |  | <b>Percent Solids:</b> | 93.0     |
| <b>Method:</b>           | SW846-8015B SW846 3546   |  |  |                        |          |
| <b>Project:</b>          | Soil Sampling            |  |  |                        |          |

|        | File ID   | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|--------|-----------|----|----------|----|-----------|------------|------------------|
| Run #1 | FI14597.D | 1  | 07/25/14 | JS | 07/25/14  | OP10309    | GFI878           |
| Run #2 |           |    |          |    |           |            |                  |

|        | Initial Weight | Final Volume |
|--------|----------------|--------------|
| Run #1 | 30.2 g         | 1.0 ml       |
| Run #2 |                |              |

| CAS No. | Compound             | Result | RL     | MDL     | Units | Q |
|---------|----------------------|--------|--------|---------|-------|---|
|         | TPH-DRO (C10-C28)    | 36.4   | 7.1    | 5.3     | mg/kg |   |
| CAS No. | Surrogate Recoveries | Run# 1 | Run# 2 | Limits  |       |   |
| 84-15-1 | o-Terphenyl          | 72%    |        | 20-130% |       |   |

ND = Not detected      MDL = Method Detection Limit  
RL = Reporting Limit  
E = Indicates value exceeds calibration range

J = Indicates an estimated value  
B = Indicates analyte found in associated method blank  
N = Indicates presumptive evidence of a compound

Report of Analysis

|                          |                          |                        |          |
|--------------------------|--------------------------|------------------------|----------|
| <b>Client Sample ID:</b> | JOHN HENRY STOLTZ JR B-1 | <b>Date Sampled:</b>   | 07/24/14 |
| <b>Lab Sample ID:</b>    | D60112-1                 | <b>Date Received:</b>  | 07/24/14 |
| <b>Matrix:</b>           | SO - Soil                | <b>Percent Solids:</b> | 93.0     |
| <b>Project:</b>          | Soil Sampling            |                        |          |

General Chemistry

| Analyte                   | Result | RL  | Units    | DF | Analyzed       | By  | Method            |
|---------------------------|--------|-----|----------|----|----------------|-----|-------------------|
| %solids                   |        |     |          |    |                |     |                   |
| Solids, Percent           | 93     |     | %        | 1  | 07/25/14       | SWT | SM2540G-2011 M    |
| prep: DEPT.OF AG, BOOK N9 |        |     |          |    |                |     |                   |
| Specific Conductivity     | 411    | 1.0 | umhos/cm | 1  | 07/30/14       | JD  | SM 2510B-2011 MOD |
| pH                        | 7.88   |     | su       | 1  | 07/25/14 11:15 | JB  | SW846 9045D       |

RL = Reporting Limit

Report of Analysis

|                          |                          |                        |          |
|--------------------------|--------------------------|------------------------|----------|
| <b>Client Sample ID:</b> | JOHN HENRY STOLTZ JR B-1 | <b>Date Sampled:</b>   | 07/24/14 |
| <b>Lab Sample ID:</b>    | D60112-1A                | <b>Date Received:</b>  | 07/24/14 |
| <b>Matrix:</b>           | SO - Soil                | <b>Percent Solids:</b> | 93.0     |
| <b>Project:</b>          | Soil Sampling            |                        |          |

SAR Metals Analysis

| Analyte   | Result | RL  | Units | DF | Prep     | Analyzed By | Method                   | Prep Method              |
|-----------|--------|-----|-------|----|----------|-------------|--------------------------|--------------------------|
| Calcium   | 21.2   | 2.0 | mg/l  | 1  | 07/30/14 | 07/30/14 KV | SW846 6010C <sup>1</sup> | SW846 3010A <sup>2</sup> |
| Magnesium | 4.57   | 1.0 | mg/l  | 1  | 07/30/14 | 07/30/14 KV | SW846 6010C <sup>1</sup> | SW846 3010A <sup>2</sup> |
| Sodium    | 53.6   | 2.0 | mg/l  | 1  | 07/30/14 | 07/30/14 KV | SW846 6010C <sup>1</sup> | SW846 3010A <sup>2</sup> |

(1) Instrument QC Batch: MA5039  
(2) Prep QC Batch: MP13556

RL = Reporting Limit

Report of Analysis

|                          |                          |                        |          |
|--------------------------|--------------------------|------------------------|----------|
| <b>Client Sample ID:</b> | JOHN HENRY STOLTZ JR B-1 | <b>Date Sampled:</b>   | 07/24/14 |
| <b>Lab Sample ID:</b>    | D60112-1A                | <b>Date Received:</b>  | 07/24/14 |
| <b>Matrix:</b>           | SO - Soil                | <b>Percent Solids:</b> | 93.0     |
| <b>Project:</b>          | Soil Sampling            |                        |          |

General Chemistry

| Analyte                              | Result | RL | Units | DF | Analyzed       | By | Method           |
|--------------------------------------|--------|----|-------|----|----------------|----|------------------|
| Sodium Adsorption Ratio <sup>a</sup> | 2.75   |    | ratio | 1  | 07/30/14 11:22 | KV | USDA HANDBOOK 60 |

(a) Calculated as: (Na meq/L) / sqrt [(Ca meq/L)+ (Mg meq/L)/2]

RL = Reporting Limit

## Misc. Forms

5

### Custody Documents and Other Forms

---

Includes the following where applicable:

- Chain of Custody





## CHAIN OF CUSTODY

PAGE \_\_\_\_ OF \_\_\_\_

4036 Youngfield Street, Wheat Ridge, CO 80033  
TEL: 303-425-6021 FAX: 303-425-6834  
www.accutest.com

|  |  |   |  |
|--|--|---|--|
| FED-EX Tracking #  |  | Bottle Order Control #  |  |
| Accutest Quote #   |  | Accutest Job # <b>D60112</b>  |  |
| Client / Reporting Information   |  | Project Information   |  |
| Company Name<br><b>K.P. KAUFFMAN COMPANY, INC.</b>   |  | Project Name<br><b>SOIL SAMPLING W/OUT SOIL Sampling-07/24/2014</b>   |  |
| Street Address<br><b>1675 BROADWAY, STE. 2800</b>  |  | Street  |  |
| City<br><b>DENVER, CO 80202</b>  |  | City State  |  |
| Project Contact<br><b>Siaramesa@kpk.com</b>  |  | Billing Information (if different from Report to)<br>Company Name   |  |
| Phone #<br><b>303-825-4822</b>   |  | Project #   |  |
| Sample(s) Name(s)<br><b>Ronnie Prado</b>   |  | Client Purchase Order #   |  |
|  |  | Street Address  |  |
|  |  | City  |  |
|  |  | Attention:  |  |
| Field ID / Point of Collection   |  | Collection  |  |
| MEQ/HD Vial #  |  | Time  |  |
| THOMAS F. QUINN B #1   |  | 7/24/14 10:30am   |  |
| JOHN HENRY STOLTZ JR B-1   |  | 7/24/14 10:45am   |  |
| CHARLES C. BELL #1   |  | 7/24/14 11:15am   |  |
| BOXER  |  | 7/24/14 11:50am   |  |
| MARGARET TWOMBLE B-1   |  | 7/24/14 12:30pm   |  |
| FACILITY #1  |  | 7/24/14 12:30pm   |  |
| DOVERSBERGER, EUGENE #2  |  | 7/24/14 12:30pm   |  |
| KAMMERZEL #1-9   |  | 7/24/14 10:30am   |  |
| STATE #32-26   |  | 7/24/14 2:30pm  |  |
| Turnaround Time (Business days)  |  | Date Deliverable Information  |  |
| <input type="checkbox"/> 7 Business Day Turn<br><input type="checkbox"/> 5 Business Day Turn<br><input type="checkbox"/> 4 Day Emergency<br><input type="checkbox"/> 3 Day Emergency<br><input type="checkbox"/> 2 Day Emergency<br><input type="checkbox"/> 1 Day Emergency<br><input type="checkbox"/> Emergency & Rush T/A data available VIA Lablink |  | Approved By (Accutest PM): / Date:<br>5-7 Day Std. turn approved by JGM   |  |
|  |  | <input type="checkbox"/> Commercial "A" (Level 1)<br><input type="checkbox"/> Commercial "B" (Level 2)<br><input type="checkbox"/> COMMEN<br><input type="checkbox"/> COMMEN+<br><input type="checkbox"/> Commercial "A" = Results Only<br><input type="checkbox"/> Commercial "B" = Results + QC Summary<br><input type="checkbox"/> Commercial EN = Results/QC/Analytical (+/- chromatograms) |  |
|  |  | <input type="checkbox"/> State Forms Required<br><input type="checkbox"/> Send Forms to State<br><input type="checkbox"/> Report by Fax<br><input type="checkbox"/> Report by PDF<br><input type="checkbox"/> EDD Format  |  |
|  |  | Please generate separate reports for each location.   |  |
| Sample Custody must be documented below each time samples change possession, including courier delivery.   |  | Comments / Special Instructions   |  |
| 1 Relinquished by: <b>KDP</b>  |  | Date Time: <b>7/24/14 14:45</b>   |  |
| 2 Relinquished by: <b>HD</b>   |  | Date Time: <b>7/24/14 14:45</b>   |  |
| 3 Relinquished by: <b>HD</b>   |  | Date Time: <b>7/24/14 14:45</b>   |  |
| 4 Relinquished by: <b>HD</b>   |  | Date Time: <b>7/24/14 14:45</b>   |  |
| 5 Relinquished by: <b>HD</b>   |  | Date Time: <b>7/24/14 14:45</b>   |  |
| Custody Seal # <b>HD</b>   |  | Intact <input type="checkbox"/> Not Intact <input type="checkbox"/>   |  |
| Preserved where applicable <input type="checkbox"/>  |  | On ice <input type="checkbox"/>   |  |
| Cooler Temp. <b>29.8</b>   |  | <b>D60</b>  |  |

D60112: Chain of Custody

Page 1 of 1

## GC/MS Volatiles

### QC Data Summaries

---

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

## Method Blank Summary

Page 1 of 1

**Job Number:** D60112  
**Account:** KPKCOD K.P. Kauffman Company, Inc.  
**Project:** Soil Sampling

| Sample     | File ID   | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|------------|-----------|----|----------|----|-----------|------------|------------------|
| V3V1852-MB | 3V31670.D | 1  | 07/25/14 | JL | n/a       | n/a        | V3V1852          |

The QC reported here applies to the following samples:

Method: SW846 8260B

D60112-1

| CAS No.   | Compound       | Result | RL  | MDL | Units | Q |
|-----------|----------------|--------|-----|-----|-------|---|
| 71-43-2   | Benzene        | ND     | 50  | 19  | ug/kg |   |
| 100-41-4  | Ethylbenzene   | ND     | 100 | 19  | ug/kg |   |
| 108-88-3  | Toluene        | ND     | 100 | 50  | ug/kg |   |
| 1330-20-7 | Xylene (total) | ND     | 200 | 100 | ug/kg |   |

| CAS No.    | Surrogate Recoveries  | Limits      |
|------------|-----------------------|-------------|
| 2037-26-5  | Toluene-D8            | 89% 64-130% |
| 460-00-4   | 4-Bromofluorobenzene  | 97% 62-131% |
| 17060-07-0 | 1,2-Dichloroethane-D4 | 98% 70-130% |

## Blank Spike Summary

Page 1 of 1

**Job Number:** D60112

**Account:** KPKCOD K.P. Kauffman Company, Inc.

**Project:** Soil Sampling

| Sample     | File ID   | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|------------|-----------|----|----------|----|-----------|------------|------------------|
| V3V1852-BS | 3V31671.D | 1  | 07/25/14 | JL | n/a       | n/a        | V3V1852          |

The QC reported here applies to the following samples:

Method: SW846 8260B

D60112-1

| CAS No.   | Compound       | Spike<br>ug/kg | BSP<br>ug/kg | BSP<br>% | Limits |
|-----------|----------------|----------------|--------------|----------|--------|
| 71-43-2   | Benzene        | 2490           | 2460         | 99       | 70-130 |
| 100-41-4  | Ethylbenzene   | 2490           | 2480         | 100      | 70-130 |
| 108-88-3  | Toluene        | 2490           | 2420         | 97       | 70-130 |
| 1330-20-7 | Xylene (total) | 7470           | 7350         | 98       | 70-130 |

| CAS No.    | Surrogate Recoveries  | BSP  | Limits  |
|------------|-----------------------|------|---------|
| 2037-26-5  | Toluene-D8            | 100% | 64-130% |
| 460-00-4   | 4-Bromofluorobenzene  | 94%  | 62-131% |
| 17060-07-0 | 1,2-Dichloroethane-D4 | 103% | 70-130% |

\* = Outside of Control Limits.

# Matrix Spike/Matrix Spike Duplicate Summary

Page 1 of 1

**Job Number:** D60112  
**Account:** KPKCOD K.P. Kauffman Company, Inc.  
**Project:** Soil Sampling

| Sample      | File ID   | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|-------------|-----------|----|----------|----|-----------|------------|------------------|
| D60124-2MS  | 3V31683.D | 1  | 07/25/14 | JL | n/a       | n/a        | V3V1852          |
| D60124-2MSD | 3V31684.D | 1  | 07/25/14 | JL | n/a       | n/a        | V3V1852          |
| D60124-2    | 3V31682.D | 1  | 07/25/14 | JL | n/a       | n/a        | V3V1852          |

The QC reported here applies to the following samples:

Method: SW846 8260B

D60112-1

| CAS No.   | Compound       | D60124-2<br>ug/kg | Q | Spike<br>ug/kg | MS<br>ug/kg | MS<br>% | Spike<br>ug/kg | MSD<br>ug/kg | MSD<br>% | RPD | Limits<br>Rec/RPD |
|-----------|----------------|-------------------|---|----------------|-------------|---------|----------------|--------------|----------|-----|-------------------|
| 71-43-2   | Benzene        | ND                |   | 2930           | 2530        | 86      | 2930           | 2710         | 93       | 7   | 64-139/30         |
| 100-41-4  | Ethylbenzene   | ND                |   | 2930           | 2660        | 91      | 2930           | 2870         | 98       | 8   | 68-136/30         |
| 108-88-3  | Toluene        | ND                |   | 2930           | 2400        | 82      | 2930           | 2580         | 88       | 7   | 60-130/30         |
| 1330-20-7 | Xylene (total) | ND                |   | 8780           | 8100        | 92      | 8780           | 8580         | 98       | 6   | 58-142/30         |

| CAS No.    | Surrogate Recoveries  | MS   | MSD  | D60124-2 | Limits  |
|------------|-----------------------|------|------|----------|---------|
| 2037-26-5  | Toluene-D8            | 91%  | 92%  | 90%      | 64-130% |
| 460-00-4   | 4-Bromofluorobenzene  | 98%  | 97%  | 95%      | 62-131% |
| 17060-07-0 | 1,2-Dichloroethane-D4 | 100% | 110% | 104%     | 70-130% |

\* = Outside of Control Limits.

## GC Volatiles

## QC Data Summaries

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Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

Method Blank Summary

Job Number: D60112  
Account: KPCCOD K.P. Kauffman Company, Inc.  
Project: Soil Sampling

| Sample     | File ID   | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|------------|-----------|----|----------|----|-----------|------------|------------------|
| GGA1271-MB | GA22745.D | 1  | 07/28/14 | BR | n/a       | n/a        | GGA1271          |

The QC reported here applies to the following samples: Method: SW846 8015B

D60112-1

| CAS No. | Compound         | Result | RL | MDL | Units | Q |
|---------|------------------|--------|----|-----|-------|---|
|         | TPH-GRO (C6-C10) | ND     | 10 | 5.0 | mg/kg |   |

| CAS No.  | Surrogate Recoveries   | Limits      |
|----------|------------------------|-------------|
| 120-82-1 | 1,2,4-Trichlorobenzene | 94% 60-140% |

## Blank Spike Summary

Page 1 of 1

**Job Number:** D60112  
**Account:** KPKCOD K.P. Kauffman Company, Inc.  
**Project:** Soil Sampling

| Sample     | File ID   | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|------------|-----------|----|----------|----|-----------|------------|------------------|
| GGA1271-BS | GA22746.D | 1  | 07/28/14 | BR | n/a       | n/a        | GGA1271          |

The QC reported here applies to the following samples:

Method: SW846 8015B

D60112-1

| CAS No. | Compound         | Spike<br>mg/kg | BSP<br>mg/kg | BSP<br>% | Limits |
|---------|------------------|----------------|--------------|----------|--------|
|         | TPH-GRO (C6-C10) | 110            | 111          | 101      | 70-130 |

| CAS No.  | Surrogate Recoveries   | BSP  | Limits  |
|----------|------------------------|------|---------|
| 120-82-1 | 1,2,4-Trichlorobenzene | 102% | 60-140% |

\* = Outside of Control Limits.



# Matrix Spike/Matrix Spike Duplicate Summary

Page 1 of 1

**Job Number:** D60112  
**Account:** KPKCOD K.P. Kauffman Company, Inc.  
**Project:** Soil Sampling

| Sample      | File ID   | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|-------------|-----------|----|----------|----|-----------|------------|------------------|
| D60133-1MS  | GA22748.D | 1  | 07/28/14 | BR | n/a       | n/a        | GGA1271          |
| D60133-1MSD | GA22749.D | 1  | 07/28/14 | BR | n/a       | n/a        | GGA1271          |
| D60133-1    | GA22747.D | 1  | 07/28/14 | BR | n/a       | n/a        | GGA1271          |

The QC reported here applies to the following samples:

Method: SW846 8015B

D60112-1

| CAS No. | Compound         | D60133-1<br>mg/kg | Q | Spike<br>mg/kg | MS<br>mg/kg | MS<br>% | Spike<br>mg/kg | MSD<br>mg/kg | MSD<br>% | RPD | Limits<br>Rec/RPD |
|---------|------------------|-------------------|---|----------------|-------------|---------|----------------|--------------|----------|-----|-------------------|
|         | TPH-GRO (C6-C10) | ND                |   | 139            | 141         | 101     | 139            | 140          | 100      | 1   | 70-130/30         |

| CAS No.  | Surrogate Recoveries   | MS   | MSD  | D60133-1 | Limits  |
|----------|------------------------|------|------|----------|---------|
| 120-82-1 | 1,2,4-Trichlorobenzene | 102% | 102% | 95%      | 60-140% |

\* = Outside of Control Limits.

## GC Semi-volatiles

### QC Data Summaries

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Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

Method Blank Summary

Job Number: D60112  
Account: KPKCOD K.P. Kauffman Company, Inc.  
Project: Soil Sampling

| Sample     | File ID   | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|------------|-----------|----|----------|----|-----------|------------|------------------|
| OP10309-MB | FI14581.D | 1  | 07/25/14 | JS | 07/25/14  | OP10309    | GFI878           |

The QC reported here applies to the following samples: Method: SW846-8015B

D60112-1

| CAS No. | Compound          | Result | RL  | MDL | Units | Q |
|---------|-------------------|--------|-----|-----|-------|---|
|         | TPH-DRO (C10-C28) | ND     | 6.7 | 5.0 | mg/kg |   |

| CAS No. | Surrogate Recoveries | Limits      |
|---------|----------------------|-------------|
| 84-15-1 | o-Terphenyl          | 81% 20-130% |

## Blank Spike Summary

Page 1 of 1

**Job Number:** D60112  
**Account:** KPKCOD K.P. Kauffman Company, Inc.  
**Project:** Soil Sampling

| Sample     | File ID   | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|------------|-----------|----|----------|----|-----------|------------|------------------|
| OP10309-BS | FI14583.D | 1  | 07/25/14 | JS | 07/25/14  | OP10309    | GFI878           |

The QC reported here applies to the following samples:

Method: SW846-8015B

D60112-1

| CAS No. | Compound          | Spike<br>mg/kg | BSP<br>mg/kg | BSP<br>% | Limits |
|---------|-------------------|----------------|--------------|----------|--------|
|         | TPH-DRO (C10-C28) | 167            | 98.3         | 59       | 42-130 |

| CAS No. | Surrogate Recoveries | BSP | Limits  |
|---------|----------------------|-----|---------|
| 84-15-1 | o-Terphenyl          | 80% | 20-130% |

\* = Outside of Control Limits.

# Matrix Spike/Matrix Spike Duplicate Summary

Page 1 of 1

**Job Number:** D60112  
**Account:** KPKCOD K.P. Kauffman Company, Inc.  
**Project:** Soil Sampling

| Sample      | File ID   | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|-------------|-----------|----|----------|----|-----------|------------|------------------|
| OP10309-MS  | FI14585.D | 1  | 07/25/14 | JS | 07/25/14  | OP10309    | GFI878           |
| OP10309-MSD | FI14587.D | 1  | 07/25/14 | JS | 07/25/14  | OP10309    | GFI878           |
| D60078-1    | FI14589.D | 1  | 07/25/14 | JS | 07/25/14  | OP10309    | GFI878           |

The QC reported here applies to the following samples:

Method: SW846-8015B

D60112-1

| CAS No. | Compound          | D60078-1<br>mg/kg | Q | Spike<br>mg/kg | MS<br>mg/kg | MS<br>% | Spike<br>mg/kg | MSD<br>mg/kg | MSD<br>% | RPD | Limits<br>Rec/RPD |
|---------|-------------------|-------------------|---|----------------|-------------|---------|----------------|--------------|----------|-----|-------------------|
|         | TPH-DRO (C10-C28) | ND                |   | 194            | 132         | 68      | 193            | 101          | 52       | 27  | 20-150/30         |

| CAS No. | Surrogate Recoveries | MS  | MSD | D60078-1 | Limits  |
|---------|----------------------|-----|-----|----------|---------|
| 84-15-1 | o-Terphenyl          | 67% | 55% | 71%      | 20-130% |

\* = Outside of Control Limits.

## Metals Analysis

### QC Data Summaries

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Includes the following where applicable:

- Method Blank Summaries
- Matrix Spike and Duplicate Summaries
- Blank Spike and Lab Control Sample Summaries
- Serial Dilution Summaries

BLANK RESULTS SUMMARY  
Part 2 - Method Blanks

Login Number: D60112  
Account: KPKCOD - K.P. Kauffman Company, Inc.  
Project: Soil Sampling

QC Batch ID: MP13556  
Matrix Type: AQUEOUS

Methods: SW846 6010C, USDA HANDBOOK 60  
Units: ug/l

Prep Date: 07/30/14

| Metal      | RL   | IDL | MDL  | MB<br>raw | final |
|------------|------|-----|------|-----------|-------|
| Aluminum   | 500  | 43  | 210  |           |       |
| Antimony   | 150  | 16  | 95   |           |       |
| Arsenic    | 130  | 26  | 28   |           |       |
| Barium     | 50   | 7   | 7    |           |       |
| Beryllium  | 50   | 4   | 6    |           |       |
| Boron      | 250  | 34  | 33   |           |       |
| Cadmium    | 50   | 2   | 1.8  |           |       |
| Calcium    | 2000 | 11  | 210  | 3.5       | <2000 |
| Chromium   | 50   | 2   | 2    |           |       |
| Cobalt     | 25   | 2   | 2.9  |           |       |
| Copper     | 50   | 6   | 9.5  |           |       |
| Iron       | 350  | 11  | 48   |           |       |
| Lead       | 250  | 18  | 110  |           |       |
| Lithium    | 25   | 9.5 | 14   |           |       |
| Magnesium  | 1000 | 70  | 95   | -54       | <1000 |
| Manganese  | 25   | .05 | 2.3  |           |       |
| Molybdenum | 50   | 4   | 4.2  |           |       |
| Nickel     | 150  | 4.5 | 4.4  |           |       |
| Phosphorus | 500  | 75  | 100  |           |       |
| Potassium  | 5000 | 650 | 1400 |           |       |
| Selenium   | 250  | 44  | 55   |           |       |
| Silicon    | 250  | 26  | 26   |           |       |
| Silver     | 150  | 2   | 3    |           |       |
| Sodium     | 2000 | 25  | 850  | 107       | <2000 |
| Strontium  | 25   | .05 | .6   |           |       |
| Thallium   | 50   | 15  | 20   |           |       |
| Tin        | 250  | 65  | 80   |           |       |
| Titanium   | 50   | .75 | 11   |           |       |
| Uranium    | 250  | 19  | 28   |           |       |
| Vanadium   | 50   | 2   | 2    |           |       |
| Zinc       | 150  | 3   | 16   |           |       |

Associated samples MP13556: D60112-1A

Results < IDL are shown as zero for calculation purposes  
(\*) Outside of QC limits

BLANK RESULTS SUMMARY  
Part 2 - Method Blanks

Login Number: D60112  
Account: KPKCOD - K.P. Kauffman Company, Inc.  
Project: Soil Sampling

QC Batch ID: MP13556  
Matrix Type: AQUEOUS

Methods: SW846 6010C, USDA HANDBOOK 60  
Units: ug/l

Prep Date: 07/30/14

| Metal | RL | IDL | MDL | MB<br>raw | final |
|-------|----|-----|-----|-----------|-------|
|-------|----|-----|-----|-----------|-------|

(anr) Analyte not requested



MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: D60112  
 Account: KPKCOD - K.P. Kauffman Company, Inc.  
 Project: Soil Sampling

QC Batch ID: MP13556  
 Matrix Type: AQUEOUS

Methods: SW846 6010C, USDA HANDBOOK 60  
 Units: ug/l

Prep Date: 07/30/14

| Metal      | D60154-1A<br>Original MS |        | Spikelot<br>ICPAL2 | % Rec | QC<br>Limits |
|------------|--------------------------|--------|--------------------|-------|--------------|
| Aluminum   |                          |        |                    |       |              |
| Antimony   |                          |        |                    |       |              |
| Arsenic    |                          |        |                    |       |              |
| Barium     |                          |        |                    |       |              |
| Beryllium  |                          |        |                    |       |              |
| Boron      |                          |        |                    |       |              |
| Cadmium    |                          |        |                    |       |              |
| Calcium    | 588000                   | 714000 | 125000             | 100.8 | 75-125       |
| Chromium   |                          |        |                    |       |              |
| Cobalt     |                          |        |                    |       |              |
| Copper     |                          |        |                    |       |              |
| Iron       |                          |        |                    |       |              |
| Lead       |                          |        |                    |       |              |
| Lithium    |                          |        |                    |       |              |
| Magnesium  | 665000                   | 814000 | 125000             | 119.2 | 75-125       |
| Manganese  |                          |        |                    |       |              |
| Molybdenum |                          |        |                    |       |              |
| Nickel     |                          |        |                    |       |              |
| Phosphorus |                          |        |                    |       |              |
| Potassium  |                          |        |                    |       |              |
| Selenium   |                          |        |                    |       |              |
| Silicon    |                          |        |                    |       |              |
| Silver     |                          |        |                    |       |              |
| Sodium     | 690000                   | 837000 | 125000             | 117.6 | 75-125       |
| Strontium  |                          |        |                    |       |              |
| Thallium   |                          |        |                    |       |              |
| Tin        |                          |        |                    |       |              |
| Titanium   |                          |        |                    |       |              |
| Uranium    |                          |        |                    |       |              |
| Vanadium   |                          |        |                    |       |              |
| Zinc       |                          |        |                    |       |              |

Associated samples MP13556: D60112-1A

Results < IDL are shown as zero for calculation purposes  
 (\*) Outside of QC limits

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: D60112  
 Account: KPKCOD - K.P. Kauffman Company, Inc.  
 Project: Soil Sampling

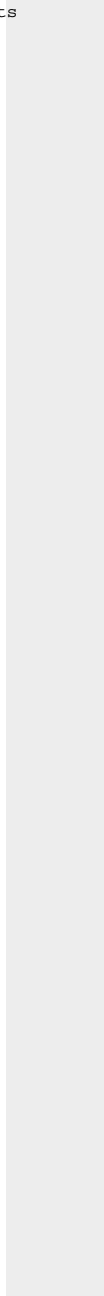
QC Batch ID: MP13556  
 Matrix Type: AQUEOUS

Methods: SW846 6010C, USDA HANDBOOK 60  
 Units: ug/l

Prep Date: 07/30/14

| Metal | D60154-1A<br>Original MS | SpikeLot<br>ICPALL2 | % Rec | QC<br>Limits |
|-------|--------------------------|---------------------|-------|--------------|
|-------|--------------------------|---------------------|-------|--------------|

(N) Matrix Spike Rec. outside of QC limits  
 (anr) Analyte not requested



MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: D60112  
 Account: KPKCOD - K.P. Kauffman Company, Inc.  
 Project: Soil Sampling

QC Batch ID: MP13556  
 Matrix Type: AQUEOUS

Methods: SW846 6010C, USDA HANDBOOK 60  
 Units: ug/l

Prep Date: 07/30/14

| Metal      | D60154-1A<br>Original | MSD    | SpikeLot<br>ICPALL2 | % Rec    | MSD<br>RPD | QC<br>Limit |
|------------|-----------------------|--------|---------------------|----------|------------|-------------|
| Aluminum   |                       |        |                     |          |            |             |
| Antimony   |                       |        |                     |          |            |             |
| Arsenic    |                       |        |                     |          |            |             |
| Barium     |                       |        |                     |          |            |             |
| Beryllium  |                       |        |                     |          |            |             |
| Boron      |                       |        |                     |          |            |             |
| Cadmium    |                       |        |                     |          |            |             |
| Calcium    | 588000                | 746000 | 125000              | 126.4(a) | 4.4        | 20          |
| Chromium   |                       |        |                     |          |            |             |
| Cobalt     |                       |        |                     |          |            |             |
| Copper     |                       |        |                     |          |            |             |
| Iron       |                       |        |                     |          |            |             |
| Lead       |                       |        |                     |          |            |             |
| Lithium    |                       |        |                     |          |            |             |
| Magnesium  | 665000                | 823000 | 125000              | 126.4(a) | 1.1        | 20          |
| Manganese  |                       |        |                     |          |            |             |
| Molybdenum |                       |        |                     |          |            |             |
| Nickel     |                       |        |                     |          |            |             |
| Phosphorus |                       |        |                     |          |            |             |
| Potassium  |                       |        |                     |          |            |             |
| Selenium   |                       |        |                     |          |            |             |
| Silicon    |                       |        |                     |          |            |             |
| Silver     |                       |        |                     |          |            |             |
| Sodium     | 690000                | 846000 | 125000              | 124.8    | 1.1        | 20          |
| Strontium  |                       |        |                     |          |            |             |
| Thallium   |                       |        |                     |          |            |             |
| Tin        |                       |        |                     |          |            |             |
| Titanium   |                       |        |                     |          |            |             |
| Uranium    |                       |        |                     |          |            |             |
| Vanadium   |                       |        |                     |          |            |             |
| Zinc       |                       |        |                     |          |            |             |

Associated samples MP13556: D60112-1A

Results < IDL are shown as zero for calculation purposes  
 (\*) Outside of QC limits

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: D60112  
 Account: KPKCOD - K.P. Kauffman Company, Inc.  
 Project: Soil Sampling

QC Batch ID: MP13556  
 Matrix Type: AQUEOUS

Methods: SW846 6010C, USDA HANDBOOK 60  
 Units: ug/l

Prep Date: 07/30/14

| Metal | D60154-1A<br>Original MSD | SpikeLot<br>ICPALL2 % Rec | MSD<br>RPD | QC<br>Limit |
|-------|---------------------------|---------------------------|------------|-------------|
|-------|---------------------------|---------------------------|------------|-------------|

(N) Matrix Spike Rec. outside of QC limits

(anr) Analyte not requested

(a) Spike amount low relative to the sample amount. Refer to lab control or spike blank for recovery information.

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: D60112  
 Account: KPKCOD - K.P. Kauffman Company, Inc.  
 Project: Soil Sampling

QC Batch ID: MP13556  
 Matrix Type: AQUEOUS

Methods: SW846 6010C, USDA HANDBOOK 60  
 Units: ug/l

Prep Date: 07/30/14

| Metal      | BSP<br>Result | Spikelot<br>ICPALL2 | % Rec | QC<br>Limits |
|------------|---------------|---------------------|-------|--------------|
| Aluminum   |               |                     |       |              |
| Antimony   |               |                     |       |              |
| Arsenic    |               |                     |       |              |
| Barium     |               |                     |       |              |
| Beryllium  |               |                     |       |              |
| Boron      |               |                     |       |              |
| Cadmium    |               |                     |       |              |
| Calcium    | 130000        | 125000              | 104.0 | 80-120       |
| Chromium   |               |                     |       |              |
| Cobalt     |               |                     |       |              |
| Copper     |               |                     |       |              |
| Iron       |               |                     |       |              |
| Lead       |               |                     |       |              |
| Lithium    |               |                     |       |              |
| Magnesium  | 131000        | 125000              | 104.8 | 80-120       |
| Manganese  |               |                     |       |              |
| Molybdenum |               |                     |       |              |
| Nickel     |               |                     |       |              |
| Phosphorus |               |                     |       |              |
| Potassium  |               |                     |       |              |
| Selenium   |               |                     |       |              |
| Silicon    |               |                     |       |              |
| Silver     |               |                     |       |              |
| Sodium     | 130000        | 125000              | 104.0 | 80-120       |
| Strontium  |               |                     |       |              |
| Thallium   |               |                     |       |              |
| Tin        |               |                     |       |              |
| Titanium   |               |                     |       |              |
| Uranium    |               |                     |       |              |
| Vanadium   |               |                     |       |              |
| Zinc       |               |                     |       |              |

Associated samples MP13556: D60112-1A

Results < IDL are shown as zero for calculation purposes  
 (\*) Outside of QC limits

Login Number: D60112  
Account: KPKCOD - K.P. Kauffman Company, Inc.  
Project: Soil Sampling

Methods: SW846 6010C, USDA HANDBOOK 60  
Units: ug/l

Prep Date: 07/30/14

| Metal | BSP<br>Result | Spikelot<br>ICPALL2 % Rec | QC<br>Limits |
|-------|---------------|---------------------------|--------------|
|-------|---------------|---------------------------|--------------|

(anr) Analyte not requested

# SERIAL DILUTION RESULTS SUMMARY

Login Number: D60112  
 Account: KPKCOD - K.P. Kauffman Company, Inc.  
 Project: Soil Sampling

QC Batch ID: MP13556  
 Matrix Type: AQUEOUS

Methods: SW846 6010C, USDA HANDBOOK 60  
 Units: ug/l

Prep Date: 07/30/14

| Metal      | D60154-1A<br>Original SDL 1:5 |        | %DIF | QC<br>Limits |
|------------|-------------------------------|--------|------|--------------|
| Aluminum   |                               |        |      |              |
| Antimony   |                               |        |      |              |
| Arsenic    |                               |        |      |              |
| Barium     |                               |        |      |              |
| Beryllium  |                               |        |      |              |
| Boron      |                               |        |      |              |
| Cadmium    |                               |        |      |              |
| Calcium    | 118000                        | 119000 | 1.4  | 0-10         |
| Chromium   |                               |        |      |              |
| Cobalt     |                               |        |      |              |
| Copper     |                               |        |      |              |
| Iron       |                               |        |      |              |
| Lead       |                               |        |      |              |
| Lithium    |                               |        |      |              |
| Magnesium  | 133000                        | 130000 | 2.5  | 0-10         |
| Manganese  |                               |        |      |              |
| Molybdenum |                               |        |      |              |
| Nickel     |                               |        |      |              |
| Phosphorus |                               |        |      |              |
| Potassium  |                               |        |      |              |
| Selenium   |                               |        |      |              |
| Silicon    |                               |        |      |              |
| Silver     |                               |        |      |              |
| Sodium     | 138000                        | 135000 | 2.1  | 0-10         |
| Strontium  |                               |        |      |              |
| Thallium   |                               |        |      |              |
| Tin        |                               |        |      |              |
| Titanium   |                               |        |      |              |
| Uranium    |                               |        |      |              |
| Vanadium   |                               |        |      |              |
| Zinc       |                               |        |      |              |

Associated samples MP13556: D60112-1A

Results < IDL are shown as zero for calculation purposes  
 (\*) Outside of QC limits

SERIAL DILUTION RESULTS SUMMARY

Login Number: D60112  
Account: KPKCOD - K.P. Kauffman Company, Inc.  
Project: Soil Sampling

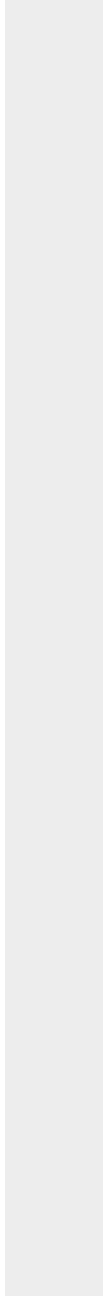
QC Batch ID: MP13556  
Matrix Type: AQUEOUS

Methods: SW846 6010C, USDA HANDBOOK 60  
Units: ug/l

Prep Date: 07/30/14

|       |                       |        |
|-------|-----------------------|--------|
| Metal | D60154-1A             | QC     |
|       | Original SDL 1:5 %DIF | Limits |

(anr) Analyte not requested





## General Chemistry

### QC Data Summaries

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Includes the following where applicable:

- Method Blank and Blank Spike Summaries
- Duplicate Summaries
- Matrix Spike Summaries

METHOD BLANK AND SPIKE RESULTS SUMMARY  
GENERAL CHEMISTRY

Login Number: D60112  
Account: KPKCOD - K.P. Kauffman Company, Inc.  
Project: Soil Sampling

| Analyte               | Batch ID        | RL | MB<br>Result | Units    | Spike<br>Amount | BSP<br>Result | BSP<br>%Recov | QC<br>Limits |
|-----------------------|-----------------|----|--------------|----------|-----------------|---------------|---------------|--------------|
| Specific Conductivity | GP13160/GN25772 |    |              | umhos/cm | 10000           | 9940          | 99.4          | 90-110%      |
| pH                    | GN25735         |    |              | su       | 8.00            | 8.00          | 100.0         | 99.1-100.9%  |

Associated Samples:  
Batch GN25735: D60112-1  
Batch GP13160: D60112-1  
(\*) Outside of QC limits