



Laboratories

*formerly Evergreen Analytical, Inc.*

June 08, 2009

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

Lab Work Order: 09-3628  
Client Project ID: STATE 14

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

**WORK ORDER Summary****Evergreen Analytical, Inc.****09-3628****Rpt To:** Ray Gorka**Email To:** rgorka@kpk.com

K.P.Kauffman

1675 Broadway, Suite 2800

Denver, CO 80202

(303) 825-4822

5/22/2009 12:18:51 PM

**Client Project ID:** STATE 14**QC Level:** Level I**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>
09-3628-01A	State 14 East	Soil	5/22/09 0855	5/22/09	TVH_S *	8015: TVH-Gasoline	<input type="checkbox"/>	<input type="checkbox"/>	5/28/09	6/05/09
09-3628-01B	State 14 East	Soil	5/22/09 0855	5/22/09	PH_S	9045C: pH	<input type="checkbox"/>	<input type="checkbox"/>	6/08/09	5/23/09
09-3628-01B	State 14 East	Soil	5/22/09 0855	5/22/09	TEH_S *	8015: TEH-Diesel	<input type="checkbox"/>	<input type="checkbox"/>	5/28/09	6/05/09



Lab Order: 09-3628  
Client Project ID STATE 14

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 5.5°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. JD

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. JE

CLIENT SERVICES

There are no anomalies to report. SG

GENERAL CHEMISTRY

Method SW9045C: There are no anomalies to report. TP

GAS CHROMATOGRAPHY

Method TEH\_S: Matrix spike and matrix spike duplicate (MS/MSD; on the client's sample) recoveries are outside the QC limits. The recovery for the laboratory control spike (LCS) is within QC limits, proving the analysis is in control. There are no other anomalies to report. AS/JE

Method TVH\_S: The surrogate recovery for sample State 14 East (09-3628-01A) is above the QC limit due to coeluting interference. This does not affect the analysis of the target analytes, which elute before the interference. All quality control samples associated with this project are within QC limits. The surrogate recovery for the laboratory control spike (LCS) is above the QC limit; all spiked analyte recoveries are within QC limits, so the sample results are not affected. There are no other anomalies to report. JCC/JE

**Evergreen Analytical, Inc.**

4036 Youngfield Street, Wheat Ridge, Colorado 80033-3862  
(303) 425-6021

**Client Sample ID:** State 14 East  
**Client Project ID:** STATE 14  
**Date Collected:** 5/22/2009  
**Date Received:** 5/22/2009

**Lab Work Order:** 09-3628  
**Lab Sample ID:** 09-3628-01A  
**Sample Matrix:** Soil

**TOTAL VOLATILE HYDROCARBONS**

**Method:** SW8015B MOD

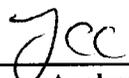
**Prep Method:** SW5035

**Date Prepared:** 5/26/2009  
**Date Analyzed:** 5/26/2009

**Lab File ID:** TVB40526\024F  
**Method Blank:** MB4052609

**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	144 S	<b>QC Limits:</b> 60-140	%REC

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

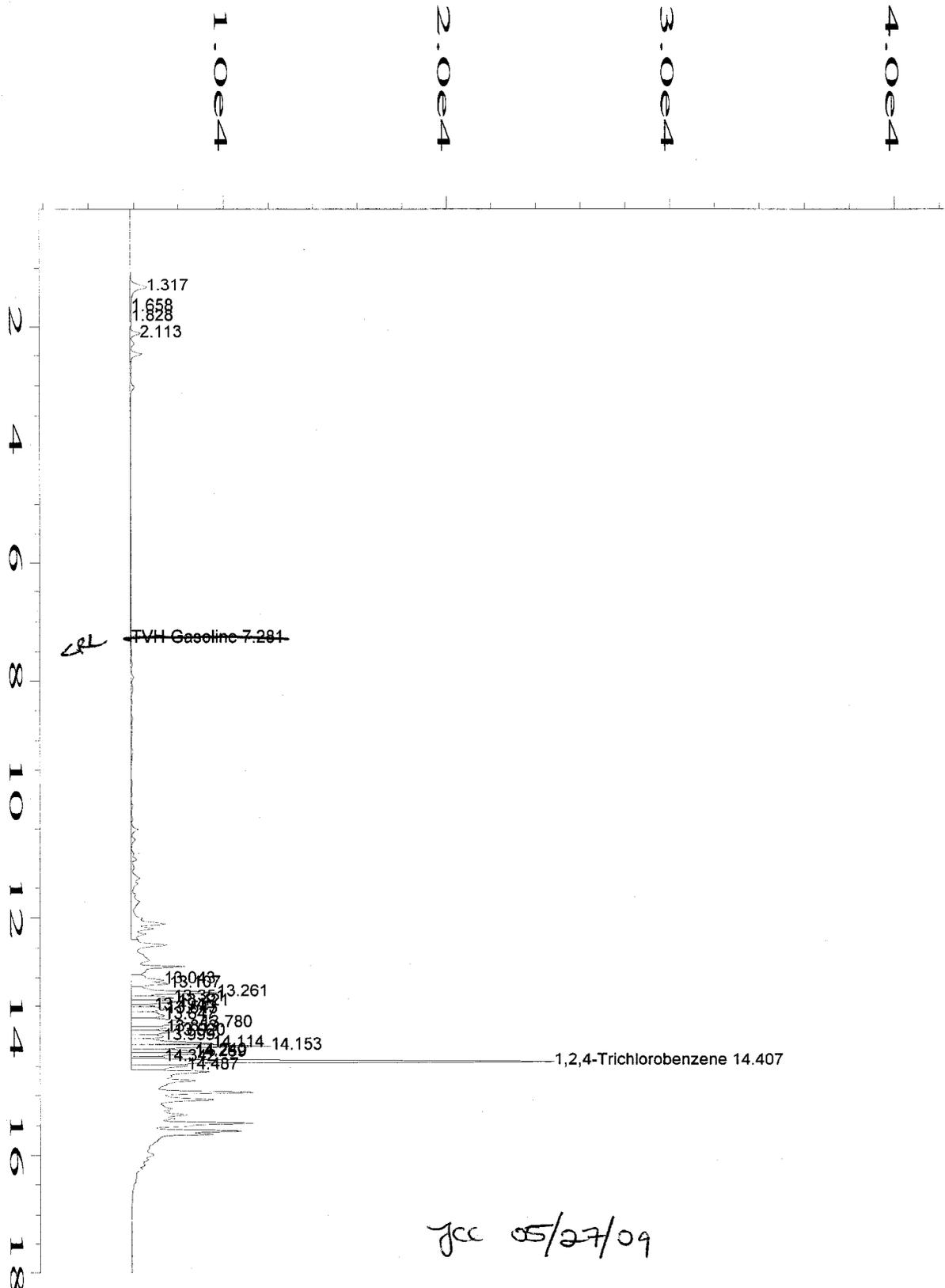
  
\_\_\_\_\_  
**Approved**

**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: 5/27/2009



Data File Name	: C:\HPCHEM\1\DATA\TVB40526\024F0101.D	Page Number	: 1
Operator	: Jennifer Chapin	Vial Number	: 24
Instrument	: TVHBTEX4	Injection Number	: 1
Sample Name	: 09-3628-01A	Sequence Line	: 1
Run Time Bar Code:		Instrument Method:	TS40515A.MTH
Acquired on	: 26 May 09 10:42 PM	Analysis Method	: TS40515A.MTH
Report Created on:	27 May 09 12:40 PM	Sample Amount	: 0
Last Recalib on	: 18 MAY 09 11:25 AM	ISTD Amount	:
Multiplier	: 1		
Sample Info	: SAMP		
	DF=5		

# Evergreen Analytical, Inc.

4036 Youngfield Street, Wheat Ridge, Colorado 80033-3862  
(303) 425-6021

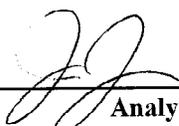
<b>Client Sample ID</b>	State 14 East	<b>Lab Work Order</b>	09-3628
<b>Client Project ID</b>	STATE 14	<b>Lab Sample ID:</b>	09-3628-01
<b>Date Collected:</b>	5/22/09 0855	<b>Sample Matrix:</b>	Soil
<b>Date Received:</b>	5/22/09		

## PH

<b>Method:</b> SW9045C	<b>Prep Method:</b>
------------------------	---------------------

<b>Date Prepared:</b> 5/22/09	<b>Dilution Factor:</b> 1
<b>Date Analyzed:</b> 5/22/09 1420	<b>Lab Fraction ID:</b> 09-3628-01B

Analytes	CAS Number	Result	LQL	Units
pH		9.95	1.00	pH Units

  
\_\_\_\_\_  
**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:** NA - Not Applicable  
 LQL - Lower Quantitation Limit  
 Surr - Surrogate

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

Lab Order: 09-3628  
Client Project ID: STATE 14  
Matrix: Soil

Date Received: 5/22/2009  
Date Prepared: 5/26/2009  
Prep Batch ID: 19246  
Units: mg/Kg

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

Method: SW8015B Mod

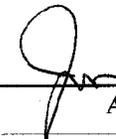
Prep Method: SW3550B

Lab ID	Client Sample ID	File ID	Date Collected	Date Analyzed	DF	Surr REC	Sample Results	LQL
09-3628-01B	State 14 East	EM2\DATA\GFD24\	5/22/2009	5/27/2009	1	60%	180	14

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

AS

\_\_\_\_\_  
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

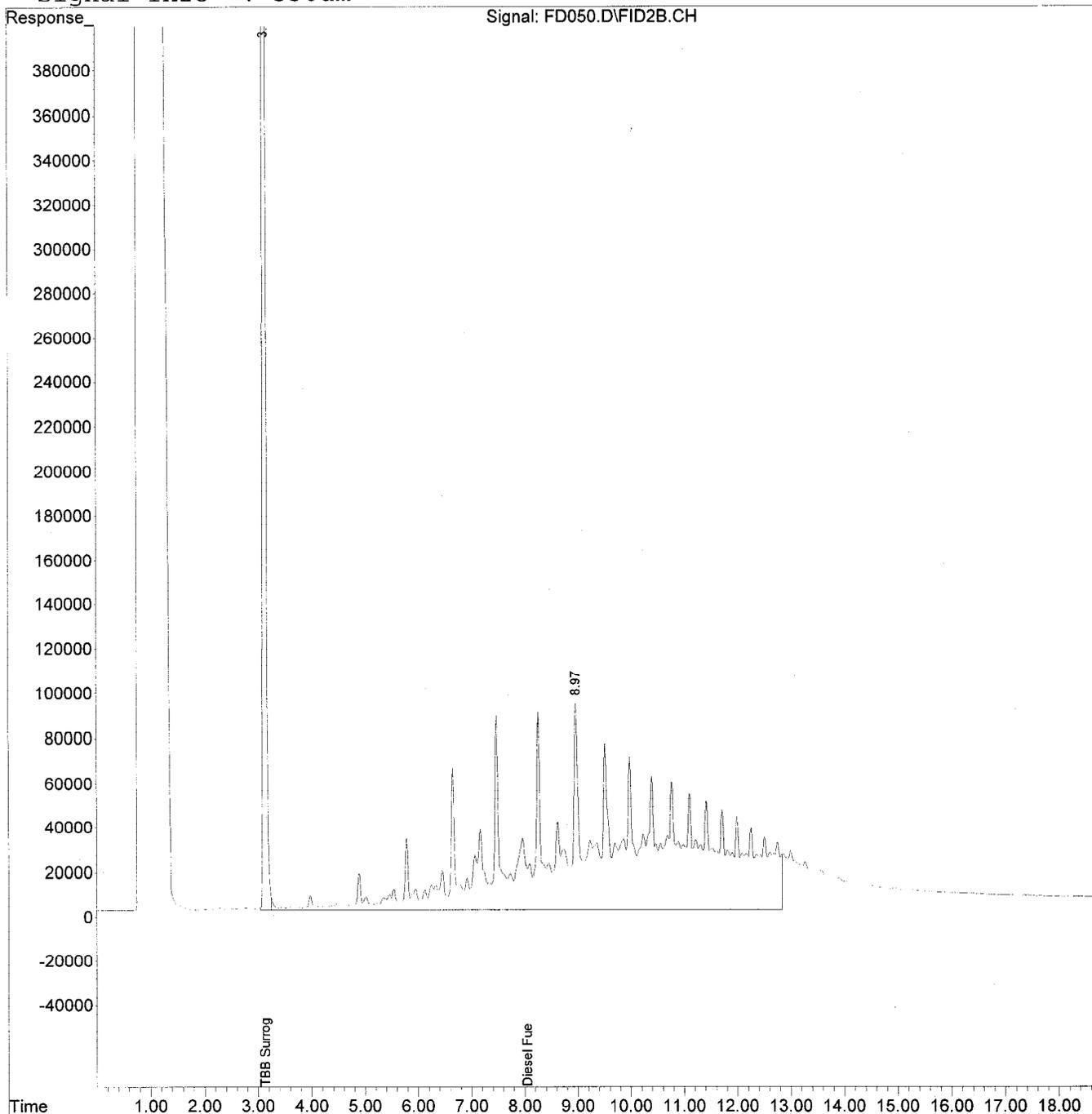
Data File : C:\MSDCHEM\2\DATA\GFD24\FD050.D  
 Acq On : 5-27-2009 07:46:46 AM  
 Sample : 09-3628-01B  
 Misc : ,SAMP,TEH\_S,1,BATCH 19246  
 IntFile : DR-GFD20.E  
 Quant Time: May 27 9:19 2009

Vial: 50  
 Operator: ADAMS  
 Inst : FID5  
 Multiplr: 1.00

Quant Results File: DR-GFD20.RES

Quant Method : C:\MSDCHEM\2\METHODS\DR-GFD20.M (Chemstation Integrator)  
 Title : 8015B TEH  
 Last Update : Wed May 20 08:55:05 2009  
 Response via : Multiple Level Calibration  
 DataAcq Meth : RR\_BASE.M

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



# **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.**

Evergreen Analytical, Inc.

Date: 27-May-09

Work Order: 09-3628

Client Project ID: STATE 14

## ANALYTICAL QC SUMMARY REPORT

BatchID: R47443

Sample ID: MB4052609	SampType: MBLK	TestCode: TVH_S	Run ID: TVHBTEX4_090526B	Prep Date: 5/26/2009	Units: mg/Kg						
	Batch ID: R47443	TestNo: SW8015B Mo	FileID: TVB40526\003F	Analysis Date: 5/26/2009	SeqNo: 845098						
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)	608.1	0	500	0	122	60	140	0	0		

Sample ID: LCS4052609	SampType: LCS	TestCode: TVH_S	Run ID: TVHBTEX4_090526B	Prep Date: 5/26/2009	Units: mg/Kg						
	Batch ID: R47443	TestNo: SW8015B Mo	FileID: TVB40526\004F	Analysis Date: 5/26/2009	SeqNo: 845099						
Analyte	Result	LQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

TVH-Gasoline	10.12	1.0	11	0	92	70	130	0	0		
Surr: 1,2,4-Trichlorobenzene (S)	713.6	0	500	0	143	60	140	0	0		S

Sample ID: 09-3653-01AMS	SampType: MS	TestCode: TVH_S	Run ID: TVHBTEX4_090526B	Prep Date: 5/26/2009	Units: mg/Kg						
	Batch ID: R47443	TestNo: SW8015B Mo	FileID: TVB40526\008F	Analysis Date: 5/26/2009	SeqNo: 845103						
Analyte	Result	LQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

TVH-Gasoline	10.28	1.0	11	0	93.5	62	130	0	0		
Surr: 1,2,4-Trichlorobenzene (S)	678.2	0	500	0	136	60	140	0	0		

Sample ID: 09-3653-01AMSD	SampType: MSD	TestCode: TVH_S	Run ID: TVHBTEX4_090526B	Prep Date: 5/26/2009	Units: mg/Kg						
	Batch ID: R47443	TestNo: SW8015B Mo	FileID: TVB40526\009F	Analysis Date: 5/26/2009	SeqNo: 845104						
Analyte	Result	LQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

TVH-Gasoline	10.03	1.0	11	0	91.1	62	130	10.28	2.51	30	
Surr: 1,2,4-Trichlorobenzene (S)	667.1	0	500	0	133	60	140	0	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

Evergreen Analytical, Inc.

Date: 29-May-09

Work Order: 09-3628  
 Client Project ID STATE 14

## ANALYTICAL QC SUMMARY REPORT

TestCode: PH\_S

Sample ID: <b>LCS-R47370</b>	SampType: <b>LCS</b>	TestCode: <b>PH_S</b>	Run ID: <b>PH_090522F</b>	Prep Date: <b>5/22/2009</b>	Units: <b>pH Units</b>						
	Batch ID: <b>R47370</b>	TestNo: <b>SW9045C</b>	FileID:	Analysis Date: <b>5/22/2009</b>	SeqNo: <b>843505</b>						
Analyte	Result	LQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
pH	7.98	1.00	8	0	99.8	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

Evergreen Analytical, Inc.

Date: 27-May-09

Work Order: 09-3628

Client Project ID: STATE 14

## ANALYTICAL QC SUMMARY REPORT

TestCode: TEH\_S

Sample ID: MB-19246	SampType: MBLK	TestCode: TEH_S	Run ID: FID5_090526A	Prep Date: 5/26/2009	Units: mg/Kg						
Batch ID: 19246	TestNo: SW8015B Mo	FileID: EM2\DATA\GFD24\	Analysis Date: 5/27/2009	SeqNo: 844838							
Analyte	Result	LQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel Fuel (No. 2)	U	14									
Surr: TBB	43.37	0	66.67	0	65.1	39	130	0	0		

Sample ID: LCS-19246	SampType: LCS	TestCode: TEH_S	Run ID: FID5_090526A	Prep Date: 5/26/2009	Units: mg/Kg						
Batch ID: 19246	TestNo: SW8015B Mo	FileID: EM2\DATA\GFD24\	Analysis Date: 5/27/2009	SeqNo: 844839							
Analyte	Result	LQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel Fuel (No. 2)	654.7	14	666.7	0	98.2	70	130	0	0		
Surr: TBB	50.6	0	66.67	0	75.9	42	130	0	0		

Sample ID: 09-3628-01BMS	SampType: MS	TestCode: TEH_S	Run ID: FID5_090526A	Prep Date: 5/26/2009	Units: mg/Kg						
Client ID: State 14 East	Batch ID: 19246	TestNo: SW8015B Mo	FileID: EM2\DATA\GFD24\	Analysis Date: 5/27/2009	SeqNo: 844853						
Analyte	Result	LQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel Fuel (No. 2)	1451	14	666	177.2	191	70	130	0	0		S
Surr: TBB	49.9	0	66.6	0	74.9	39	130	0	0		

Sample ID: 09-3628-01BMSD	SampType: MSD	TestCode: TEH_S	Run ID: FID5_090526A	Prep Date: 5/26/2009	Units: mg/Kg						
Client ID: State 14 East	Batch ID: 19246	TestNo: SW8015B Mo	FileID: EM2\DATA\GFD24\	Analysis Date: 5/27/2009	SeqNo: 844855						
Analyte	Result	LQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel Fuel (No. 2)	1604	14	666.2	177.2	214	70	130	1451	10.0	30	S
Surr: TBB	48.91	0	66.62	0	73.4	39	130	0	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