

WORK ORDER Summary**Evergreen Analytical, Inc.****09-0874****Rpt To:** Ray Gorka**Email To:** rgorka@kpk.com

K.P.Kauffman

2/10/2009 3:33:02 PM

1675 Broadway, Suite 2800

Denver, CO 80202

(303) 825-4822

Client Project ID: State 14**QC Level:** Level I**Comments**

Sample ID	Client Sample ID	Matrix	Collection Date	Date Received	Test Code	Test Name	Hold	MS	Date Due	Hold Time
09-0874-01A	State 14-W Pit	Soil	2/09/09 1314	2/10/09	TEH_S *	8015: TEH-Diesel	<input type="checkbox"/>	<input type="checkbox"/>	2/13/09	2/23/09
09-0874-01B	State 14-W Pit	Soil	2/09/09 1314	2/10/09	TVH_S *	8015: TVH-Gasoline	<input type="checkbox"/>	<input type="checkbox"/>	2/13/09	2/23/09
09-0874-01C	State 14-W Pit	Soil	2/09/09 1314	2/10/09	6010_D *	6010: Dissolved Metals	<input type="checkbox"/>	<input type="checkbox"/>	2/24/09	8/08/09
09-0874-01C	State 14-W Pit	Soil	2/09/09 1314	2/10/09	COND_S	Specific Conductance @ 25°C	<input type="checkbox"/>	<input type="checkbox"/>	2/24/09	3/09/09
09-0874-01C	State 14-W Pit	Soil	2/09/09 1314	2/10/09	PH_S	9045C: pH	<input type="checkbox"/>	<input type="checkbox"/>	2/24/09	2/10/09
09-0874-01C	State 14-W Pit	Soil	2/09/09 1314	2/10/09	SAR_S	Sodium Adsorption Ratio, Soil Leachate	<input type="checkbox"/>	<input type="checkbox"/>	2/24/09	8/08/09

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.

NOTE: Identify Known Hazards Below

[illegible]

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

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

Relinquished by: (Signature) <i>Ray Sol</i>	Date/Time 2-10-09 3:16 PM	Received by: (Signature) <i>etal</i>	Date/Time 2/10/9 3:16 p	Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Date/Time
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Evergreen Analytical, Inc.

Date: 23-Feb-09

Lab Order: 09-0874

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 5.8°C.

Sample(s) were received in good condition and in the proper container.

Sample for pH was received outside of holding time.

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. JE

CLIENT SERVICES

There are no anomalies to report. JE

GENERAL CHEMISTRY

There are no anomalies to report. MM

METALS ANALYSIS

There are no anomalies to report. WKH

GAS CHROMATOGRAPHY

Method TEH_S: There are no anomalies to report. JM

Method TVH_S: The surrogate recovery for the batch Matrix Spike Duplicate (MSD) 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.

There are no other anomalies to report. JT

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

Lab Order: 09-0874
Client Project ID: State 14
Matrix: Soil

Date Received: 2/10/09
Date Prepared: 2/11/09
Prep Batch ID: 18083
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
09-0874-01A	State 14-W Pit	FID50211\020F2001	2/9/09	2/11/09	1	39%	20	14

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



Analyst



Approved

Qualifiers: B - Analyte detected in the associated Method Blank, value not subtracted from result
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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: 2/12/09

Data file : C:\HPCHEM\1\DATA\FID50211\020F2001.D

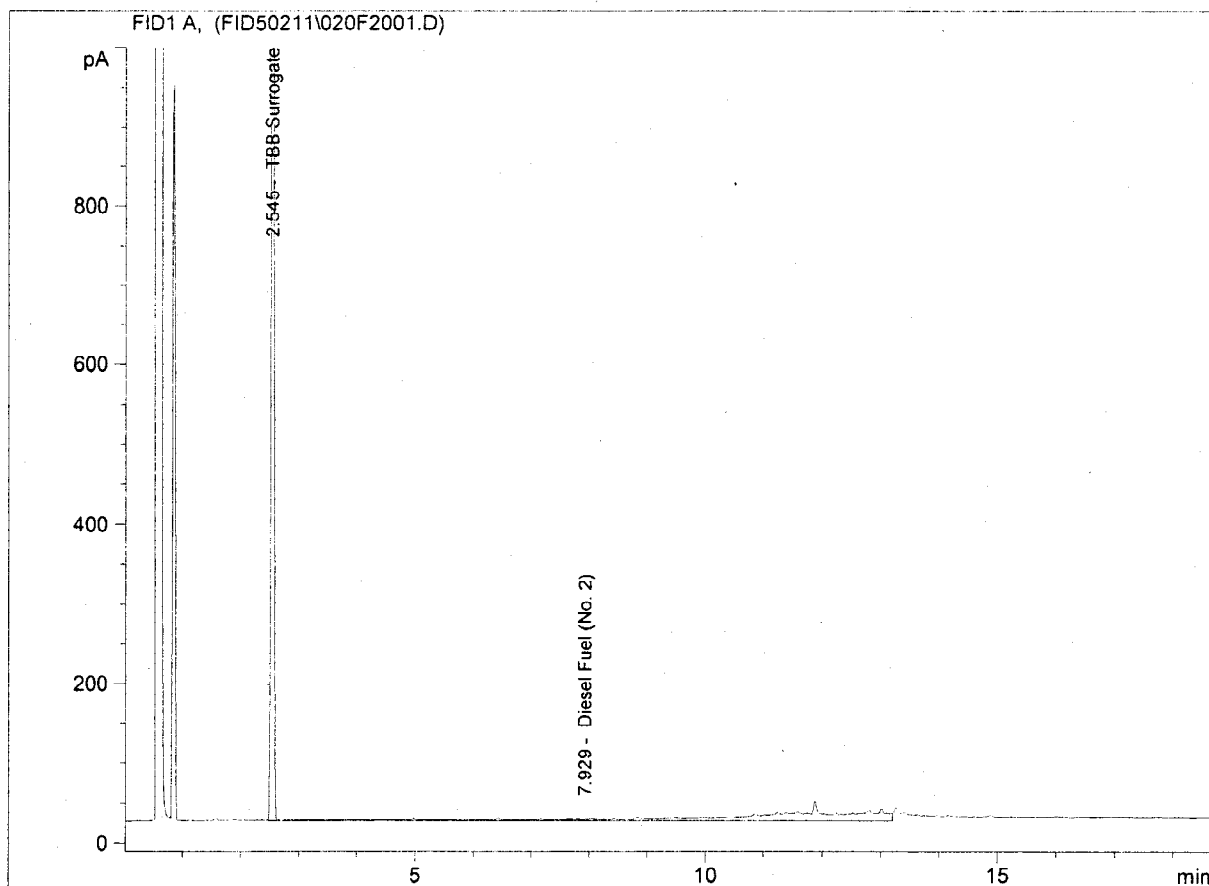
```

Injection Date   : 2/11/2009 6:51:58 PM
Sample Name     : 09-0874-01A
Acq. Operator  : JMelson
Acq. Method    : FRONTBASE.M
Analysis Method : C:\HPCHEM\1\METHODS\FID5F1212B.M
Last Changed   : 2/11/2009 01:02:19 pm
  
```

```

Location : Vial 20
Inj. No. : 1
Inj. Vol.: 2 µl
  
```

005



EAL External Standard Report

```

Calib. Data Mod. : 2/11/2009 01:02:21 pm
Multiplier       : 1.00
Multiplier #2    : 1.00
Sample Info      : SAMP TEH_S
                  DF=1
                  BATCH 18083
  
```

Exp. RT	RT [min]	Type	Area	Amount [mg/L]	Compound Name
2.585	2.545	VV	4809.292	✓ 287.771	TBB Surrogate
8.100	7.929	VBA+	2266.081	✓ 298.479	Diesel Fuel (No. 2)

Evergreen Analytical, Inc.
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Client Sample ID: State 14-W Pit
Client Project ID: State 14
Date Collected: 2/9/09
Date Received: 2/10/09

Lab Work Order 09-0874
Lab Sample ID: 09-0874-01B
Sample Matrix: Soil

TOTAL VOLATILE HYDROCARBONS

Method: SW8015B MOD

Prep Method: SW5035

Date Prepared: 2/11/09

Lab File ID: TVB20211\008F

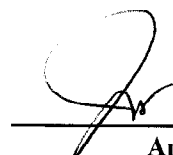
Dilution Factor: 5

Date Analyzed: 2/11/09

Method Blank: MB2021109

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	102	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.

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Definitions: LQL - Lower Quantitation Limit
 Surr - Surrogate

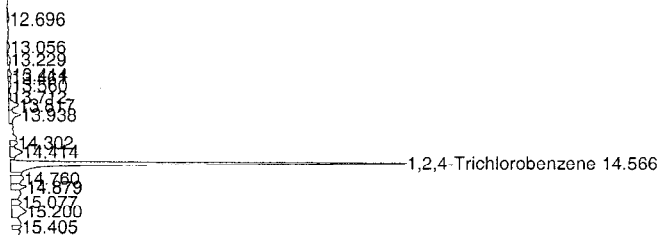
Print Date: 2/12/09

4.0e4

3.0e4

2.0e4

1.0e4

2
4
6
8
10
12
14
16
18

Data File Name	: C:\HPCHEM\2\DATA\TVB20211\008F0101.D	Page Number	: 1
Operator	: Jim Travis	Vial Number	: 8
Instrument	: TVHBTEX2	Injection Number	: 1
Sample Name	: 09-0874-01B	Sequence Line	: 1
Run Time Bar Code:		Instrument Method	: TW20127.MTH
Acquired on	: 11 Feb 09 01:26 PM	Analysis Method	: TW20127.MTH
Report Created on:	: 11 Feb 09 01:45 PM	Sample Amount	: 0
Last Recalib on	: 29 JAN 09 11:01 AM	ISTD Amount	:
Multiplier	: 1		
Sample Info	: SAMP		
	DF=5		
	T1=8021 S		

Evergreen Analytical, Inc.

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

Client Sample ID: State 14-W Pit
Client Project ID: State 14
Date Collected: 2/9/09
Date Received: 2/10/09

Lab Work Order 09-0874
Lab Sample ID: 09-0874-01
Sample Matrix: Soil

DISSOLVED METALS

Method: SW6010B

Prep Method: E200.7/SW3010A

Date Prepared: 2/16/09
Date Analyzed: 2/18/09

Lab File ID: 021809DY
Method Blank: MB-18147

Dilution Factor: 1
Lab Fraction ID: 09-0874-01C

Analytes	CAS Number	Result	LQL	Units
Calcium	7440-70-2	93	1.9	mg/L
Magnesium	7439-95-4	93	0.75	mg/L
Sodium	7440-23-5	910	2.0	mg/L

SODIUM ADSORPTION RATIO, SOIL

Method: USDA

Prep Method:

Date Prepared: 2/16/09
Date Analyzed: 2/18/09

Dilution Factor: 1
Lab Fraction ID: 09-0874-01C

Analytes	CAS Number	Result	LQL	Units
Sodium-Adsorption-Ratio		16	0.10	ratio


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X - See case narrative
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Definitions: NA - Not Applicable
LQL - Lower Quantitation Limit
Surr - Surrogate

Print Date: 2/23/2009

Evergreen Analytical, Inc.

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

Client Sample ID: State 14-W Pit
Client Project ID: State 14
Date Collected: 2/9/09 1314
Date Received: 2/10/09

Lab Work Order 09-0874
Lab Sample ID: 09-0874-01
Sample Matrix: Soil

SPECIFIC CONDUCTANCE @ 25°C

Method: Dept of Ag.

Prep Method:

Comments: Method: US Dept. of Ag, Handbook #60, p89

Date Prepared: 2/12/09

Lab File ID: 89

Dilution Factor: 1

Date Analyzed: 2/17/09

Lab Fraction ID: 09-0874-01C

Analytes	CAS Number	Result	LQL	Units
Specific Conductance		5520	1.00	µmhos/cm

PH

Method: SW9045C

Prep Method:

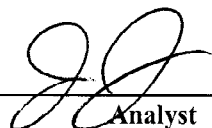
Date Prepared: 2/10/09

Dilution Factor: - 1

Date Analyzed: 2/10/09 1600

Lab Fraction ID: 09-0874-01C

Analytes	CAS Number	Result	LQL	Units
pH		9.62 H	1.00	pH Units


Analyst


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S - Spike Recovery outside accepted limits
U - Compound analyzed for but not detected
X - See case narrative
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Definitions: NA - Not Applicable
LQL - Lower Quantitation Limit
Surr - Surrogate

Print Date: 2/18/2009

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: 12-Feb-09

Work Order: 09-0874

Client Project ID: State 14

ANALYTICAL QC SUMMARY REPORT

BatchID: 18083

Sample ID: MB-18083		SampType: MBLK	TestCode: TEH_S		Run ID: FID5_090211A		Prep Date: 2/11/09		Units: mg/Kg		
		Batch ID: 18083	TestNo: SW8015B Mo		FileID: FID50211\004F0401		Analysis Date: 2/11/09		SeqNo: 798948		
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	31.34	0	66.67	0	47	39	130	0	0		

Sample ID: LCS-18083		SampType: LCS	TestCode: TEH_S		Run ID: FID5_090211A		Prep Date: 2/11/09		Units: mg/Kg		
		Batch ID: 18083	TestNo: SW8015B Mo		FileID: FID50211\005F0501		Analysis Date: 2/11/09		SeqNo: 798949		
Analyte	Result	LQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel Fuel (No. 2)	585.4	14	666.7	0	87.8	70	130	0	0		
Surr: TBB	38.88	0	66.67	0	58.3	42	130	0	0		

Sample ID: 09-0875-06BMS		SampType: MS	TestCode: TEH_S		Run ID: FID5_090211A		Prep Date: 2/11/09		Units: mg/Kg		
		Batch ID: 18083	TestNo: SW8015B Mo		FileID: A\FID50211\007F07		Analysis Date: 2/11/09		SeqNo: 798961		
Analyte	Result	LQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel Fuel (No. 2)	674.7	14	664.2	106.8	85.5	70	130	0	0		
Surr: TBB	43.92	0	66.42	0	66.1	39	130	0	0		

Sample ID: 09-0875-06BMSD		SampType: MSD	TestCode: TEH_S		Run ID: FID5_090211A		Prep Date: 2/11/09		Units: mg/Kg		
		Batch ID: 18083	TestNo: SW8015B Mo		FileID: A\FID50211\008F08		Analysis Date: 2/11/09		SeqNo: 798962		
Analyte	Result	LQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel Fuel (No. 2)	610.4	14	665.3	106.8	75.7	70	130	674.7	10.0	30	
Surr: TBB	43.46	0	66.53	0	65.3	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

Work Order: 09-0874

Client Project ID: State 14

ANALYTICAL QC SUMMARY REPORT

BatchID: R45176

Sample ID: MB2021109	SampType: MBLK	TestCode: TVH_S	Run ID: TVHBTEX2_090211B	Prep Date: 2/11/09	Units: mg/Kg						
	Batch ID: R45176	TestNo: SW8015B Mo	FileID: TVB202111003F	Analysis Date: 2/11/09	SeqNo: 799315						
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)	539	0	500	0	108	60	140	0	0		

Sample ID: LCS2021109	SampType: LCS	TestCode: TVH_S	Run ID: TVHBTEX2_090211B	Prep Date: 2/11/09	Units: mg/Kg						
	Batch ID: R45176	TestNo: SW8015B Mo	FileID: TVB202111004F	Analysis Date: 2/11/09	SeqNo: 799316						
Analyte	Result	LQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TVH-Gasoline	9.9	1.0	11	0	90	70	130	0	0		
Surr: 1,2,4-Trichlorobenzene (S)	695.7	0	500	0	139	60	140	0	0		

Sample ID: 09-0848-01AMS	SampType: MS	TestCode: TVH_S	Run ID: TVHBTEX2_090211B	Prep Date: 2/11/09	Units: mg/Kg						
	Batch ID: R45176	TestNo: SW8015B Mo	FileID: TVB202111013F	Analysis Date: 2/11/09	SeqNo: 799323						
Analyte	Result	LQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TVH-Gasoline	10.72	1.0	11	0	97.5	62	130	0	0		
Surr: 1,2,4-Trichlorobenzene (S)	624.4	0	500	0	125	60	140	0	0		

Sample ID: 09-0848-01AMSD	SampType: MSD	TestCode: TVH_S	Run ID: TVHBTEX2_090211B	Prep Date: 2/11/09	Units: mg/Kg						
	Batch ID: R45176	TestNo: SW8015B Mo	FileID: TVB202111014F	Analysis Date: 2/11/09	SeqNo: 799324						
Analyte	Result	LQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TVH-Gasoline	10.63	1.0	11	0	96.6	62	130	10.72	0.890	30	
Surr: 1,2,4-Trichlorobenzene (S)	734.2	0	500	0	147	60	140	0	0	0	S

Qualifiers:

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 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: 09-0874

Client Project ID: State 14

ANALYTICAL QC SUMMARY REPORT

BatchID: 18147

Sample ID: MB-18147	SampType: MBLK	TestCode: 200.7_T	Run ID: ICP-OPTIMA 5300 DV_090218A	Prep Date: 2/16/2009	Units: mg/L						
	Batch ID: 18147	TestNo: E200.7, Rev.	FileID: 021809DY	Analysis Date: 2/18/2009	SeqNo: 802292						
Analyte	Result	LQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Calcium	U	0.387									
Magnesium	U	0.150									
Sodium	U	0.400									

Sample ID: LCS-18147	SampType: LCS	TestCode: 200.7_T	Run ID: ICP-OPTIMA 5300 DV_090218A				Prep Date: 2/16/2009	Units: mg/L			
	Batch ID: 18147	TestNo: E200.7, Rev.	FileID: 021809DY				Analysis Date: 2/18/2009	SeqNo: 802293			
Analyte	Result	LQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Calcium	9.978	0.387	10	0.3249	99.8	85	115	0	0		
Magnesium	9.814	0.150	10	0.04059	98.1	85	115	0	0		
Sodium	10.19	0.400	10	0.3488	102	85	115	0	0		

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B - Analyte detected in the associated Method Blank
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Evergreen Analytical, Inc.

Date: 18-Feb-09

Work Order: 09-0874

Client Project ID: State 14

ANALYTICAL QC SUMMARY REPORT

TestCode: COND_S

Sample ID	LCS	SampType: LCS	TestCode: COND_S	Run ID: COND_090217B	Prep Date: 2/17/2009	Units: µmhos/cm					
		Batch ID: R45259	TestNo: Dept of Ag.	FileID: 87	Analysis Date: 2/17/2009	SeqNo: 801334					
Analyte	Result	LQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Specific Conductance	10080	1.00	10050	0	100	90	110	0	0		

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Work Order: 09-0874

Client Project ID: State 14

ANALYTICAL QC SUMMARY REPORT

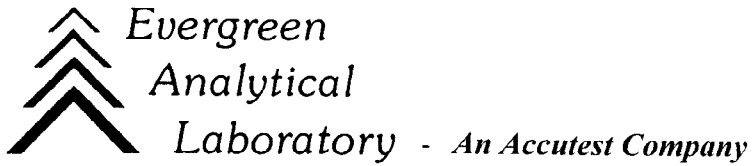
TestCode: PH_S

Sample ID	LCS-R45106	SampType: LCS	TestCode: PH_S	Run ID: PH_090210B	Prep Date: 2/10/2009				Units: pH Units			
		Batch ID: R45106	TestNo: SW9045C	FileID:	Analysis Date: 2/10/2009				SeqNo: 798035			
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		

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



February 24, 2009

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

Lab Work Order: 09-0874
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 is included with this report or has been mailed to another party as indicated on the chain of custody.

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

EAL 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 Evergreen Analytical. If you have any questions concerning the analytical data, please contact me. Please direct other questions to Client Services.

Sincerely,

A handwritten signature in cursive script, appearing to read "Carl Smits".

Joseph J Egry IV/ Carl Smits
Quality Assurance