3R-415

Annual Groundwater Remediation Reports

Volume 1

January 2007

XTO ENERGY

RECEIVED

MAR 05 2007

Oil Conservation Division
Environmental Bureau

March 2, 2007

Mr. Glenn von Gonten
Hydrologist-Groundwater Remediation
New Mexico Oil Conservation Division
1220 South St. Francis Drive
Santa Fe, New Mexico 87505

RE: Annual Groundwater Remediation Reports

Dear Mr. von Gonten,

XTO Energy Inc. (XTO) is submitting the Annual Groundwater Remediation Reports in accordance with the NMOCD approved Groundwater Management Plan (GMP). Enclosed are summary reports with analytical data, summary tables, site maps, potentiometric surface diagrams and recommendations/proposed actions for:

- Baca Gas Com A #1A 3R0104
- Bruington Gas Com #1 3R0106
- Carson Gas Com #1E 3R415
- EJ Johnson C #1E 3R0385
- Federal Gas Com #H1 3R0110
- Frost, Jack B #2 3R416
- Garcia Gas Com B #1 3R0111
- Haney Gas Com B #1E 3R0113
- Hare Gas Com B #1 3R413
- Hare Gas Com B #1E 3R0384
- Hare Gas Com I #1 3R412
- Masden Gas Com #1E 3R0120
- McDaniel Gas Com B #1E 3R0121
- OH Randel #7 3R0386
- PO Pipken #3E 3R409
- Romero Gas Com A #1 3R0123
- Rowland Gas Com #1 3R124
- Snyder Gas Com #1A 3R0126
- Stedje Gas Com #1 3R0128
- Sullivan Frame A #1A
- Sullivan Gas Com D #1 3R0131
- Valdez A #1E 3R0134

We have also enclosed an Annual Report for one site that meets the closure requirements outlined in the GMP. XTO respectfully requests closure of:

- Abrams J #1 3R0100

In previously submitted reports three sites met the closure requirements outlined in the GMP and XTO requested closure on those sites in January 2006. Per your request reports for the below listed sites are being submitted again.

- Armenta Gas Com #1E 3R0394
- Bergin Gas Com #1E 3R0105
- State Gas Com BS #1 3R0127

Thank you for your review of the reports. XTO looks forward to hearing from you regarding closure requests and proposed remediation actions. If you have any questions please do not hesitate to contact me at (505) 566-7942.

Respectfully,

Lisa Winn
Environmental Coordinator
San Juan Division

cc: Mr. Brandon Powell, Environmental, NMOCD District III Office, Aztec, NM
Mr. Martin Nee, Lodestar Services Inc.
File- San Juan Groundwater

CARSON GC #1E

XTO ENERGY INC.

ANNUAL GROUNDWATER REPORT

2006

CARSON GAS COM #1E
(F) SECTION 32 – T30N – R12W, NMPM
SAN JUAN COUNTY, NEW MEXICO

PREPARED FOR:
MR. GLENN VON GONTEN
NEW MEXICO OIL CONSERVATION DIVISION

January 2007

TABLE OF CONTENTS

2006 XTO GROUNDWATER REPORT

CARSON GAS COM #1E

SITE DETAILS

Legals - Twn: 30N **Rng:** 12W **Sec:** 32
Unit: F
NMOCD Hazard Ranking: 30 **Land Type:** FEE

PREVIOUS ACTIVITIES

Excavation: Feb-04 (400 CY) **Monitor Wells:** Feb/Mar-04
Quarterly Sampling Initiated: Feb-04 **Sampling Re-initiated:** Aug-06

SITE MAP

A site map is presented as Figure 1.

SUMMARY TABLES

The groundwater laboratory results from 2004 through 2006 are summarized in Table 1. Copies of the laboratory data sheets and associated quality assurance/quality control data are presented as Attachment 1.

POTENTIOMETRIC SURFACE DIAGRAMS

Site monitoring from 2004 indicates a groundwater gradient that trends towards the southwest. Figures 2-4 illustrate the estimated groundwater gradient for three quarters in 2004. Monitoring well MW-3 will be replaced in 2007 and groundwater gradients will be confirmed.

2006 ACTIVITIES

Groundwater Monitoring – An assessment of this site was conducted in December 2006. Monitor well MW-3 could not be located and is scheduled for replacement in 2007. Groundwater samples were collected from existing monitor wells MW-1 and MW-2. Laboratory results indicate no detectable levels of benzene, toluene, ethyl benzene, and total xylene (BTEX) constituents.

GEOLOGIC LOGS AND WELL COMPLETION DIAGRAMS

Bore/Test Hole Reports were not generated at the time of drilling and therefore are not presented.

DISPOSITION OF GENERATED WASTES

Waste generated (groundwater) during monitor well sampling and development was placed in the produced water separator tank located on the well site.

CONCLUSIONS

January 1998 XTO Energy Inc. (XTO) acquired the Carson Gas Com #1E from Amoco Production Company. In 2004 a historical dehydrator pit was discovered. The former pit was closed (Attachment 2) and three groundwater monitor wells were installed to delineate the extent of hydrocarbon impact to groundwater. Monitor well number MW-2 was installed near the center of the source area, (closed and backfilled earthen dehy pit). Monitor well number MW-3 was placed down gradient of MW-2. BTEX constituents were

not detected above the laboratory equipment detection limits (0.2 ug/L) in either of the monitoring wells.

Groundwater analytical data from MW-1 and MW-2 for one sampling event in 2006 have demonstrated no detectable levels of BTEX constituents. The quarterly sampling will continue until four (4) consecutive quarters have been analyzed for BTEX constituents.

RECOMMENDATIONS

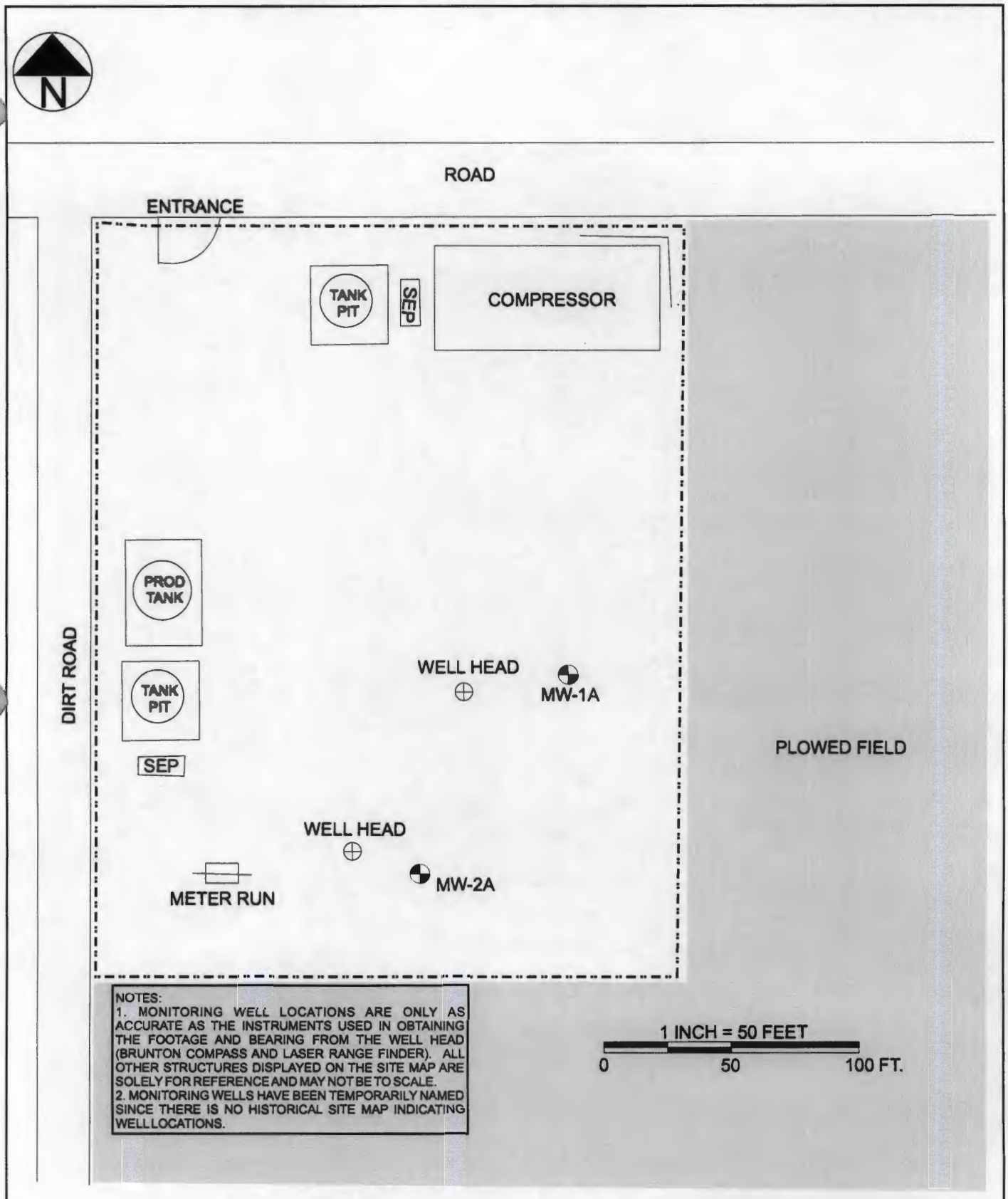
- Replace MW-3 during first quarter of 2007.
- Quarterly sampling will continue at all monitor wells until analytical results show hydrocarbon constituents are below New Mexico groundwater standards for four (4) consecutive quarters.
- Following OCD approval for closure, all monitor well locations will be abandoned in accordance with the monitoring well abandonment plan.

TABLE 1
XTO ENERGY INC. GROUNDWATER LAB RESULTS

CARSON GC #1E- DEHY PIT
UNIT F, SEC. 32, T30N, R12W

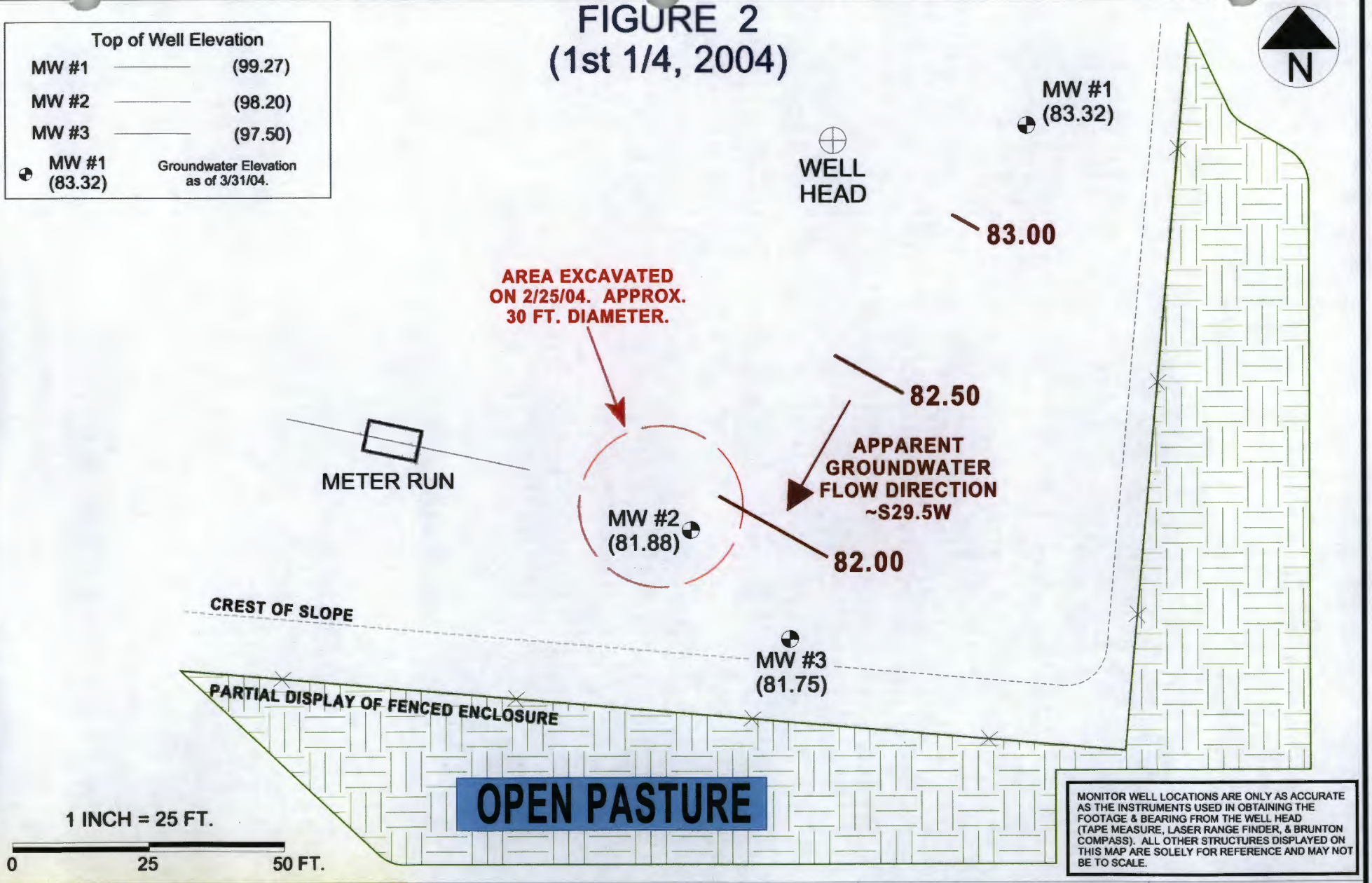
Revised Date: January 31, 2007

Sample Date	Monitor Well No.	DTW (ft)	TD (ft)	Product (ft)	Benzene ug/L	Toluene ug/L	Ethyl Benzene ug/L	Total Xylene ug/L
6-Dec-06	MW #1				ND	ND	ND	ND
29-Feb-04	MW #2				ND	42	110	1100
21-Jun-04					ND	ND	ND	ND
27-Sep-04					ND	ND	0.88	ND
29-Dec-04					ND	ND	0.97	0.54
27-Jun-05					ND	ND	ND	0.96
6-Dec-06					ND	ND	ND	ND
31-Mar-04	MW #3				ND	ND	ND	ND
21-Jun-04					ND	ND	ND	ND
6-Dec-06					MONITOR WELL MISSING			
MWQCC GROUNDWATER STANDARD					10	750	750	620



Lodestar Services, Inc PO Box 3861 Farmington, NM 87499	CARSON GAS COM 1E SE/4 MW/4 SEC. 32, T30N, R12W SAN JUAN COUNTY, NEW MEXICO	PROJECT: XTO GROUND WATER DRAWN BY: ALA REVISED: 01/24/07	FIGURE 1 SITE MAP

FIGURE 2
(1st 1/4, 2004)



XTO ENERGY INC.

CARSON GC #1E

SW/4 NW/4 SEC. 32, T30N, R12W

SAN JUAN COUNTY, NEW MEXICO

BLAGG ENGINEERING, INC.

CONSULTING PETROLEUM / RECLAMATION SERVICES

P.O. BOX 87

BLOOMFIELD, NEW MEXICO 87413

PHONE: (505) 632-1199

PROJECT: MW SAMP.

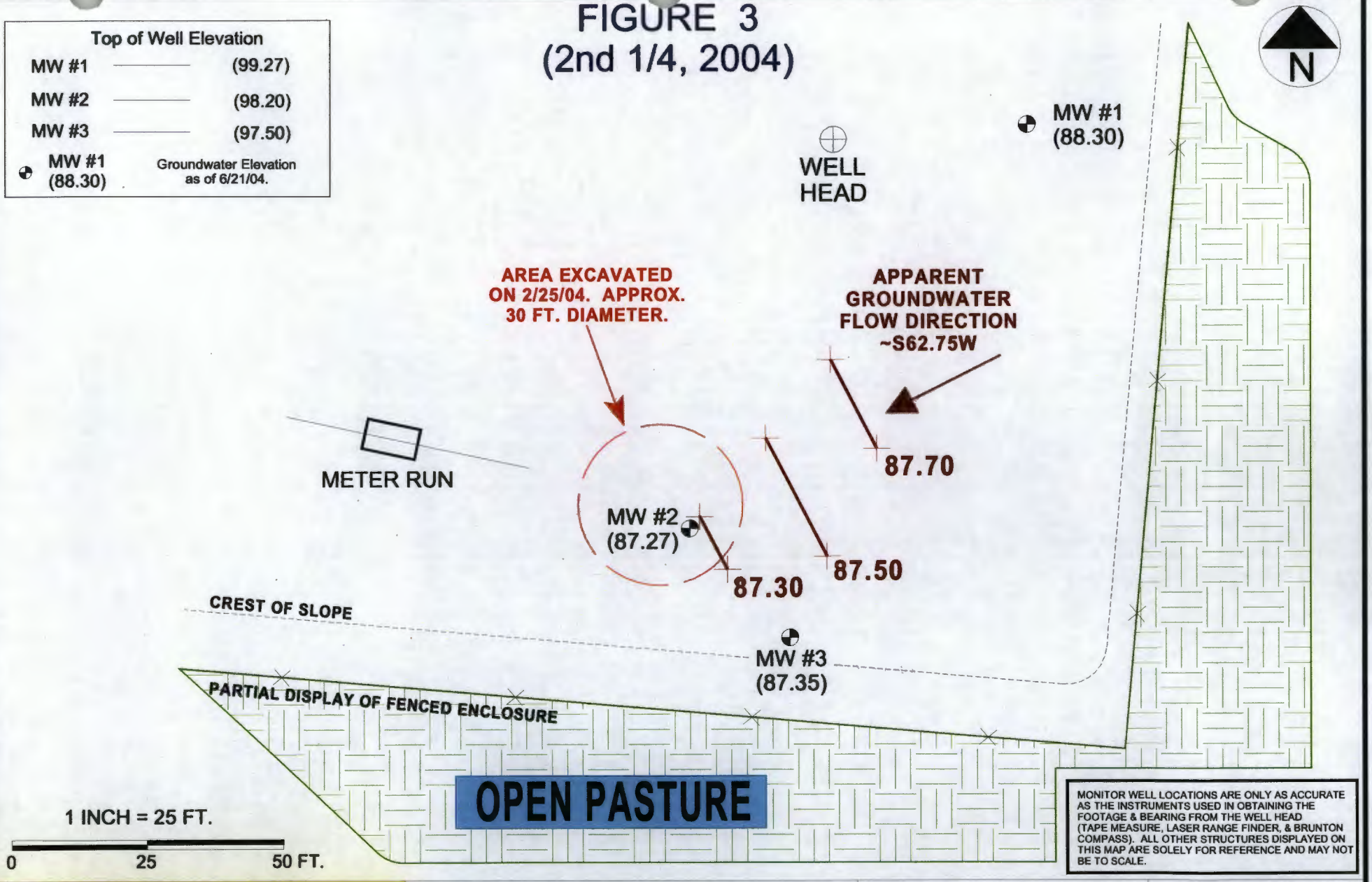
DRAWN BY: NJV

FILENAME: 03-31-04-GW.SKF

GROUNDWATER CONTOUR MAP

03/04

FIGURE 3
(2nd 1/4, 2004)



XTO ENERGY INC.

CARSON GC #1E

SW/4 NW/4 SEC. 32, T30N, R12W

SAN JUAN COUNTY, NEW MEXICO

BLAGG ENGINEERING, INC.

CONSULTING PETROLEUM / RECLAMATION SERVICES

P.O. BOX 87

BLOOMFIELD, NEW MEXICO 87413

PHONE: (505) 632-1199

PROJECT: MW SAMP.

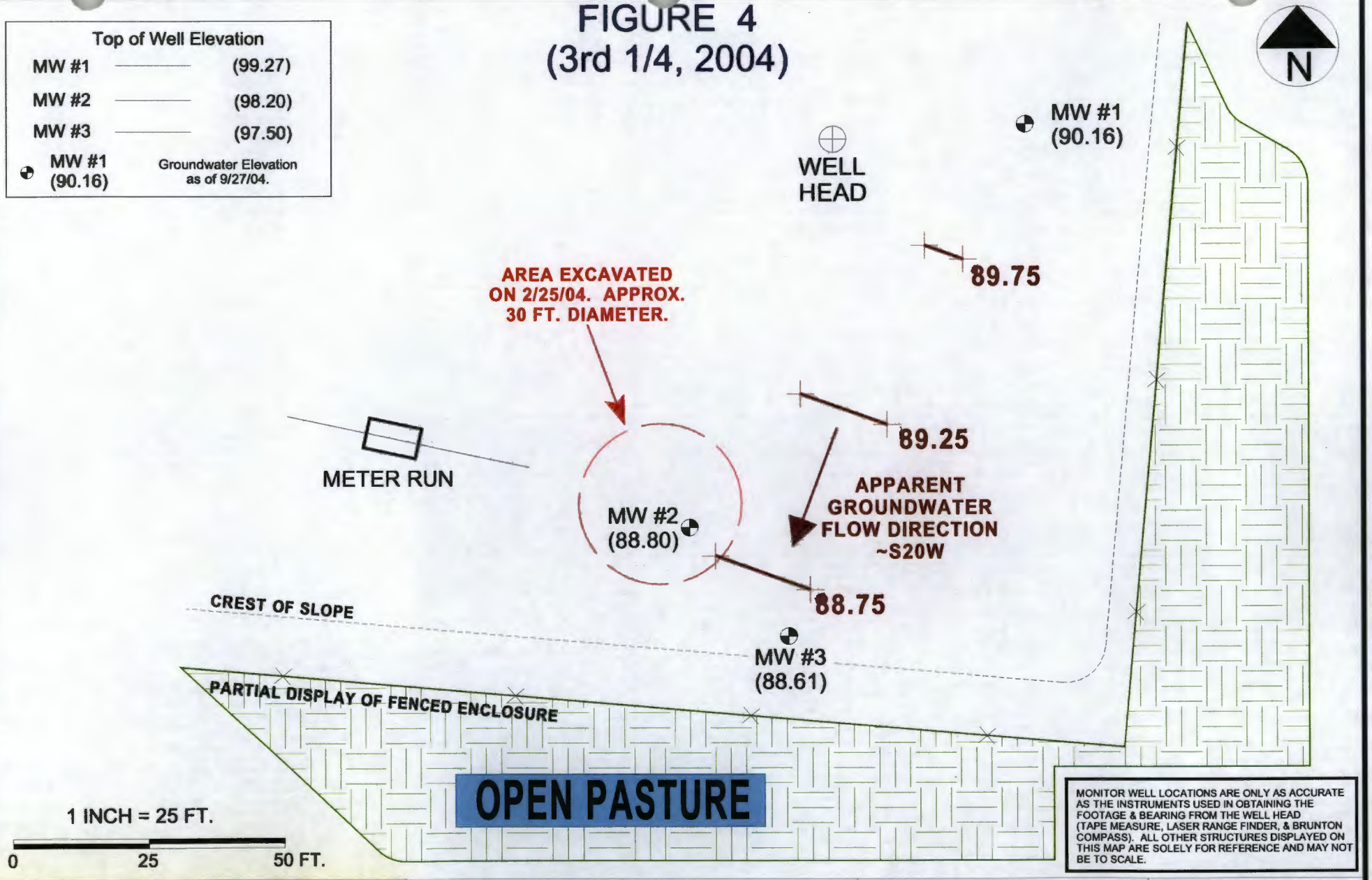
DRAWN BY: NJV

FILENAME: 06-21-04-GW.SKF

GROUNDWATER CONTOUR MAP

06/04

FIGURE 4
(3rd 1/4, 2004)



XTO ENERGY INC.

CARSON GC #1E

SW/4 NW/4 SEC. 32, T30N, R12W

SAN JUAN COUNTY, NEW MEXICO

BLAGG ENGINEERING, INC.

CONSULTING PETROLEUM / RECLAMATION SERVICES

P.O. BOX 87

BLOOMFIELD, NEW MEXICO 87413

PHONE: (505) 632-1199

PROJECT: MW SAMP.

DRAWN BY: NJV

FILENAME: 09-27-04-GW.SKF

GROUNDWATER CONTOUR MAP

09/04

Hall Environmental Analysis Laboratory

Date: *08-Mar-04*

CLIENT:	Blagg Engineering	**Client Sample ID:**	MW #2
Lab Order:	0403014	**Collection Date:**	2/29/2004 2:51:00 PM
Project:	Carson GC#1E		
Lab ID:	0403014-01	**Matrix:**	AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	ND	10		µg/L	20	3/8/2004 12:28:18 PM
Toluene	42	10		µg/L	20	3/8/2004 12:28:18 PM
Ethylbenzene	110	10		µg/L	20	3/8/2004 12:28:18 PM
Xylenes, Total	1100	10		µg/L	20	3/8/2004 12:28:18 PM
Surr: 4-Bromofluorobenzene	109	74-118		%REC	20	3/8/2004 12:28:18 PM

Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: *08-Mar-04*

CLIENT: Blagg Engineering
Work Order: 0403014
Project: Carson GC#1E

QC SUMMARY REPORT
Method Blank

Sample ID Reagent Blank 5m **Batch ID:** R11229 **Test Code:** SW8021 **Units:** µg/L **Analysis Date** 3/8/2004 7:49:46 AM **Prep Date**

Client ID: **Run ID:** PIDFID_040308A **SeqNo:** 257194

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	ND	0.50									
Toluene	ND	0.50									
Ethylbenzene	ND	0.50									
Xylenes, Total	ND	0.50									
Surr: 4-Bromofluorobenzene	20.53	0	20	0	103	74	118	0			

2 / 4

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

1

Hall Environmental Analysis Laboratory

Date: *08-Mar-04*

CLIENT: Blagg Engineering
Work Order: 0403014
Project: Carson GC#1E

QC SUMMARY REPORT
Laboratory Control Spike - generic

Sample ID BTEX STD 100ng Batch ID: R11229 Test Code: SW8021 Units: µg/L Analysis Date 3/8/2004 8:50:24 AM Prep Date
Client ID: Run ID: PIDFID_040308A SeqNo: 257196

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	21.43	0.50	20	0	107	81.3	121	0			
Toluene	20.35	0.50	20	0	102	84.9	118	0			
Ethylbenzene	20.23	0.50	20	0	101	53.8	149	0			
Xylenes, Total	60.37	0.50	60	0	101	83.1	122	0			

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Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank
J

Hall Environmental Analysis Laboratory

Sample Receipt Checklist

Client Name BLAGG | Date and Time Received: 3/1/2004

Work Order Number 0403014 | Received by AT

Checklist completed by _____ 3/1/04
Signature | Date

Matrix | Carrier name Greyhound

Shipping container/cooler in good condition?	Yes	☑	No	☐	Not Present	☐	
Custody seals intact on shipping container/cooler?	Yes	☐	No	☐	Not Present	☑	Not Shipped ☐
Custody seals intact on sample bottles?	Yes	☐	No	☐	N/A	☑	
Chain of custody present?	Yes	☑	No	☐			
Chain of custody signed when relinquished and received?	Yes	☑	No	☐			
Chain of custody agrees with sample labels?	Yes	☑	No	☐			
Samples in proper container/bottle?	Yes	☑	No	☐			
Sample containers intact?	Yes	☑	No	☐			
Sufficient sample volume for indicated test?	Yes	☑	No	☐			
All samples received within holding time?	Yes	☑	No	☐			
Water - VOA vials have zero headspace?	No VOA vials submitted	☐	Yes	☑	No	☐	
Water - pH acceptable upon receipt?	Yes	☐	No	☐	N/A	☑	

Container/Temp Blank temperature? 5° 4° C ± 2 *Acceptable*
If given sufficient time to cool.

COMMENTS:

Client contacted _____ Date contacted: _____ Person contacted _____

Contacted by: _____ Regarding _____

Comments: _____

_____

_____

_____

_____

Corrective Action _____

_____

_____

CHAIN-OF-CUSTODY RECORD

Accreditation Applied: NELAC ☐ USACE ☐ Other: _____

Client: BLAGG ENGR. / XTO ENERGY

Project Name: CARSON GC #1E

Address: P.O. BOX 87
BLOOMFIELD, NM 87413

Project #:

Project Manager: NJV

Phone #: 505-632-1199

Sampler: NJV

Fax #: 505-632-3903

Sample Temperature: 5

Date	Time	Matrix	Sample I.D. No.	Number/Volume	Preservative $HgCl_2$	Preservative HNO_3	Preservative	HEAL No.
2/29/04	1451	WATER	MW # 2	2 - 40ml	✓			0403514-1

HALL ENVIRONMENTAL ANALYSIS LABORATORY
4901 Hawkins NE, Suite D
Albuquerque, New Mexico 87109
Tel. 505.345.3975 Fax 505.345.4107
www.hallenvironmental.com

ANALYSIS REQUEST

(BTEX + MTBE + TMB's (8021B))	BTEX + MTBE + TPH (Gasoline Only)	TPH Method 8015B (Gas/Diesel)	TPH (Method 418.1)	EDB (Method 504.1)	EDC (Method 8021)	8310 (PNA or PAH)	RCRA 8 Metals	Anions (F, Cl, NO_3, NO_2, PO_4, SO_4)	8081 Pesticides / PCB's (8082)	8260B (VOA)	8270 (Semi-VOA)					Air Bubbles or Headspace (Y or N)
✓																

Date	Time	Relinquished By: (Signature)	Received By: (Signature)
3/1/04	0730		3/1/04 1645
Date:	Time:	Relinquished By: (Signature)	Received By: (Signature)

Remarks:

Hall Environmental Analysis Laboratory Date: *07-Jul-04*

CLIENT: Blagg Engineering
Project: Carson GC #1E
Lab Order: 0406215

CASE NARRATIVE

Sample MW-2 analyzed at a dilution due to the odor from the sample.

Hall Environmental Analysis Laboratory

Date: *07-Jul-04*

CLIENT: Blagg Engineering
Project: Carson GC #1E
Lab Order: 0406215

Lab ID: 0406215-01
Collection Date: 6/21/2004 2:55:00 PM
Client Sample ID: MW #2
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	ND	10		µg/L	20	7/2/2004 2:25:34 PM
Toluene	ND	10		µg/L	20	7/2/2004 2:25:34 PM
Ethylbenzene	ND	10		µg/L	20	7/2/2004 2:25:34 PM
Xylenes, Total	ND	10		µg/L	20	7/2/2004 2:25:34 PM
Surr: 4-Bromofluorobenzene	102	74-118		%REC	20	7/2/2004 2:25:34 PM

Lab ID: 0406215-02
Collection Date: 6/21/2004 2:50:00 PM
Client Sample ID: MW #3
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	ND	0.50		µg/L	1	7/2/2004 2:57:07 PM
Toluene	ND	0.50		µg/L	1	7/2/2004 2:57:07 PM
Ethylbenzene	ND	0.50		µg/L	1	7/2/2004 2:57:07 PM
Xylenes, Total	ND	0.50		µg/L	1	7/2/2004 2:57:07 PM
Surr: 4-Bromofluorobenzene	100	74-118		%REC	1	7/2/2004 2:57:07 PM

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: *07-Jul-04*

CLIENT: Blagg Engineering
Work Order: 0406215
Project: Carson GC #1E

QC SUMMARY REPORT
Method Blank

Sample ID Reagent Blank 5m Batch ID: R12337 Test Code: SW8021 Units: µg/L Analysis Date 7/2/2004 10:11:05 AM Prep Date

Client ID: Run ID: PIDFID_040702A SeqNo: 283891

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	ND	0.5									
Toluene	ND	0.5									
Ethylbenzene	ND	0.5									
Xylenes, Total	ND	0.5									
Surr: 4-Bromofluorobenzene	19.72	0	20	0	98.6	74	118	0			

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Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

I

Hall Environmental Analysis Laboratory

Date: *07-Jul-04*

CLIENT: Blagg Engineering
Work Order: 0406215
Project: Carson GC #1E

QC SUMMARY REPORT
Laboratory Control Spike - generic

Sample ID BTEX std 100ng **Batch ID:** R12337 **Test Code:** SW8021 **Units:** µg/L **Analysis Date** 7/2/2004 11:11:40 AM **Prep Date**
Client ID: **Run ID:** PIDFID_040702A **SeqNo:** 283917

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	20.22	0.5	20	0	101	81.3	121	0			
Toluene	19.3	0.5	20	0	96.5	84.9	118	0			
Ethylbenzene	18.75	0.5	20	0	93.8	53.8	149	0			
Xylenes, Total	55.59	0.5	60	0	92.7	83.1	122	0			

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Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

/

Hall Environmental Analysis Laboratory

Sample Receipt Checklist

Client Name BLAGG | Date and Time Received: 6/22/2004

Work Order Number 0406215 | Received by GT

Checklist completed by _____ 6/22/04
Signature | Date

Matrix | Carrier name Greyhound

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐	
Custody seals intact on shipping container/cooler?	Yes ☐	No ☐	Not Present ☑	Not Shipped ☐
Custody seals intact on sample bottles?	Yes ☐	No ☐	N/A ☑	
Chain of custody present?	Yes ☑	No ☐		
Chain of custody signed when relinquished and received?	Yes ☑	No ☐		
Chain of custody agrees with sample labels?	Yes ☑	No ☐		
Samples in proper container/bottle?	Yes ☑	No ☐		
Sample containers intact?	Yes ☑	No ☐		
Sufficient sample volume for indicated test?	Yes ☑	No ☐		
All samples received within holding time?	Yes ☑	No ☐		
Water - VOA vials have zero headspace?	No VOA vials submitted ☐	Yes ☑	No ☐	
Water - pH acceptable upon receipt?	Yes ☐	No ☐	N/A ☑	

Container/Temp Blank temperature? 1° *4° C ± 2 Acceptable* If given sufficient time to cool.

COMMENTS:

Client contacted _____ Date contacted: _____ Person contacted _____

Contacted by: _____ Regarding _____

Comments: _____

Corrective Action _____

CHAIN-OF-CUSTODY RECORD

Accreditation Applied: NELAC ☐ USACE ☐ Other: _____

HALL ENVIRONMENTAL ANALYSIS LABORATORY
4901 Hawkins NE, Suite D
Albuquerque, New Mexico 87109
Tel. 505.345.3975 Fax 505.345.4107
www.hallenvironmental.com

Client: BLAGG / XTO

Project Name: CARSON GC #1E

Address: P.O. BOX 87
BLFD., NM 87413

Project #: NV

Project Manager: NJV

Phone #: 505-632-1199

Sampler: NJV

Fax #: 505-632-3903

Sample Temperature: 10°

Date	Time	Matrix	Sample I.D. No.	Number/Volume	Preservative $HgCl_2$	Preservative HNO_3	HEAL No.
6/21/04	1455	WATER	MW #2	2-40 ml	✓		0406215-1
6/21/04	1450	WATER	MW #3	2-40 ml	✓		-2

ANALYSIS REQUEST

(BTEX + ~~MTBE~~ + ~~TMB's~~ (8021B)	BTEX + MTBE + TPH (Gasoline Only)	TPH Method 8015B (Gas/Diesel)	TPH (Method 418.1)	EDB (Method 504.1)	EDC (Method 8021)	8310 (PNA or PAH)	RCRA 8 Metals	Anions ($F, Cl, NO_3, NO_2, PO_4, SO_4$)	8081 Pesticides / PCB's (8082)	8260B (VOA)	8270 (Semi-VOA)					Air Bubbles or Headspace (Y or N)
✓																
✓																

Date:	Time:	Relinquished By: (Signature)	Received By: (Signature)
6/22/04	0915	Nelson Velez	6/22 16:10
Date:	Time:	Relinquished By: (Signature)	Received By: (Signature)

Remarks:

Hall Environmental Analysis Laboratory

Date: *01-Oct-04*

CLIENT:	Blagg Engineering	**Client Sample ID:**	MW#2
Lab Order:	0409287	**Collection Date:**	9/27/2004 3:55:00 PM
Project:	Carson GC #1E		
Lab ID:	0409287-01	**Matrix:**	AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	ND	0.50		µg/L	1	9/30/2004 5:23:55 PM
Toluene	ND	0.50		µg/L	1	9/30/2004 5:23:55 PM
Ethylbenzene	0.88	0.50		µg/L	1	9/30/2004 5:23:55 PM
Xylenes, Total	ND	0.50		µg/L	1	9/30/2004 5:23:55 PM
Surr: 4-Bromofluorobenzene	107	74-118		%REC	1	9/30/2004 5:23:55 PM

Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: *01-Oct-04*

CLIENT: Blagg Engineering
Work Order: 0409287
Project: Carson GC #1E

QC SUMMARY REPORT
Method Blank

Sample ID Reagent Blank 5m	Batch ID: R13281	Test Code: SW8021	Units: µg/L	Analysis Date 9/30/2004 4:52:49 AM	Prep Date
Client ID:		Run ID: PIDFID_040929B		SeqNo: 308677	

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	ND	0.5									
Toluene	ND	0.5									
Ethylbenzene	ND	0.5									
Xylenes, Total	ND	0.5									
Surr: 4-Bromofluorobenzene	20.12	0	20	0	101	74	118	0			

Sample ID Reagent Blank 5m	Batch ID: R13300	Test Code: SW8021	Units: µg/L	Analysis Date 9/30/2004 8:38:19 AM	Prep Date
Client ID:		Run ID: PIDFID_040930A		SeqNo: 309022	

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	ND	0.5									
Toluene	ND	0.5									
Ethylbenzene	ND	0.5									
Xylenes, Total	ND	0.5									
Surr: 4-Bromofluorobenzene	19.68	0	20	0	98.4	74	118	0			

2 / 4

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

Hall Environmental Analysis Laboratory

Date: *01-Oct-04*

CLIENT: Blagg Engineering
Work Order: 0409287
Project: Carson GC #1E

QC SUMMARY REPORT
Laboratory Control Spike - generic

Sample ID BTEX std 100ng Batch ID: R13281 Test Code: SW8021 Units: µg/L Analysis Date 9/29/2004 8:26:30 PM Prep Date
Client ID: Run ID: PIDFID_040929B SeqNo: 308687

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	19.04	0.5	20	0	95.2	81.3	121	0			
Toluene	19.21	0.5	20	0	96.0	84.9	118	0			
Ethylbenzene	19.51	0.5	20	0	97.6	53.8	149	0			
Xylenes, Total	58.2	0.5	60	0	97.0	83.1	122	0			

Sample ID BTEX std 100ng Batch ID: R13300 Test Code: SW8021 Units: µg/L Analysis Date 9/30/2004 8:22:18 PM Prep Date
Client ID: Run ID: PIDFID_040930A SeqNo: 309070

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	19.52	0.5	20	0	97.6	81.3	121	0			
Toluene	19.6	0.5	20	0	98.0	84.9	118	0			
Ethylbenzene	19.22	0.5	20	0	96.1	53.8	149	0			
Xylenes, Total	57.96	0.5	60	0	96.6	83.1	122	0			

3 / 4

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

Hall Environmental Analysis Laboratory

Sample Receipt Checklist

Client Name BLAGG — Date and Time Received:

Work Order Number 0409287 — Received by AMG

Checklist completed by A Gonzales 09/28/04
Signature — Date

Matrix — Carrier name Greyhound

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐	
Custody seals intact on shipping container/cooler?	Yes ☐	No ☐	Not Present ☑	Not Shipped ☐
Custody seals intact on sample bottles?	Yes ☐	No ☐	N/A ☑	
Chain of custody present?	Yes ☑	No ☐		
Chain of custody signed when relinquished and received?	Yes ☑	No ☐		
Chain of custody agrees with sample labels?	Yes ☑	No ☐		
Samples in proper container/bottle?	Yes ☑	No ☐		
Sample containers intact?	Yes ☑	No ☐		
Sufficient sample volume for indicated test?	Yes ☑	No ☐		
All samples received within holding time?	Yes ☑	No ☐		
Water - VOA vials have zero headspace?	No VOA vials submitted ☐	Yes ☑	No ☐	
Water - pH acceptable upon receipt?	Yes ☐	No ☐	N/A ☑	

Container/Temp Blank temperature? 5° — *4° C ± 2 Acceptable* If given sufficient time to cool.

COMMENTS:

Client contacted _____ Date contacted: _____ Person contacted _____

Contacted by: _____ Regarding _____

Comments: _____

Corrective Action _____

CHAIN-OF-CUSTODY RECORD

Accreditation Applied: NELAC ☐ USACE ☐ Other: _____

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www.hallenvironmental.com

Client: BLAGG ENER. / XTO ENERGY
Address: P.O. BOX 87, BLFD., NM 87413
Phone #: 505-632-1199
Fax #: 505-632-3903

Project Name: CARSON GC #1E
Project #: 91V
Project Manager: NJV
Sampler: NJV
Sample Temperature: 5°

ANALYSIS REQUEST

Date	Time	Matrix	Sample I.D. No.	Number/Volume	Preservative $HgCl_2$	Preservative HNO_3	Preservative HCl	HEAL No.	BTEX + MTBE + TMB's (8021B)	BTEX + MTBE + TPH (Gasoline Only)	TPH Method 8015B (Gas/Diesel)	TPH (Method 418.1)	EDB (Method 504.1)	EDC (Method 8021)	8310 (PNA or PAH)	RCRA 8 Metals	Anions (F, Cl, NO_3, NO_2, PO_4, SO_4)	8081 Pesticides / PCB's (8082)	8260B (VOA)	8270 (Semi-VOA)	Air Bubbles or Headspace (Y or N)
9/27/04	1555	WATER	MW #2	2-40ml			✓	0409287-1	✓												

Date: 9/28/04 Time: 0830 Relinquished By: (Signature) — Received By: (Signature)
Date: Time: Relinquished By: (Signature) — Received By: (Signature) 1457

Remarks:

Hall Environmental Analysis Laboratory

Date: *05-Jan-05*

CLIENT:	Blagg Engineering	**Client Sample ID:**	MW #2
Lab Order:	0501006	**Collection Date:**	12/29/2004 2:30:00 PM
Project:	Carson GC #1E		
Lab ID:	0501006-01	**Matrix:**	AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	ND	0.50		µg/L	1	1/4/2005 1:43:09 PM
Toluene	ND	0.50		µg/L	1	1/4/2005 1:43:09 PM
Ethylbenzene	0.97	0.50		µg/L	1	1/4/2005 1:43:09 PM
Xylenes, Total	0.54	0.50		µg/L	1	1/4/2005 1:43:09 PM
Surr: 4-Bromofluorobenzene	106	83.3-121		%REC	1	1/4/2005 1:43:09 PM

Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: *05-Jan-05*

CLIENT: Blagg Engineering
Work Order: 0501006
Project: Carson GC #1E

QC SUMMARY REPORT
Method Blank

Sample ID Reagent Blank 5m Batch ID: R14206 Test Code: SW8021 Units: µg/L Analysis Date 1/4/2005 8:43:42 AM Prep Date

Client ID: Run ID: PIDFID_050104A SeqNo: 330470

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	ND	0.5									
Toluene	ND	0.5									
Ethylbenzene	ND	0.5									
Xylenes, Total	ND	0.5									
Surr: 4-Bromofluorobenzene	19.97	0	20	0	99.9	83.3	121	0			

2 / 4

Qualifiers: ND - Not Detected at the Reporting Limit; J - Analyte detected below quantitation limits; S - Spike Recovery outside accepted recovery limits; R - RPD outside accepted recovery limits; B - Analyte detected in the associated Method Blank

J

Hall Environmental Analysis Laboratory

Date: *05-Jan-05*

CLIENT: Blagg Engineering
Work Order: 0501006
Project: Carson GC #1E

QC SUMMARY REPORT
Laboratory Control Spike - generic

Sample ID BTEX std 100ng Batch ID: R14206 Test Code: SW8021 Units: µg/L Analysis Date 1/4/2005 7:42:37 PM Prep Date

Client ID: Run ID: PIDFID_050104A SeqNo: 330511

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	20.16	0.5	20	0	101	88.7	114	0			
Toluene	19.44	0.5	20	0	97.2	89.3	112	0			
Ethylbenzene	20.19	0.5	20	0	101	88.6	113	0			
Xylenes, Total	59.17	0.5	60	0	98.6	89.4	112	0			

3 / 4

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

1

Hall Environmental Analysis Laboratory

Sample Receipt Checklist

Client Name BLAGG | Date and Time Received: 1/3/2005

Work Order Number 0501006 | Received by AT

Checklist completed by _____ 1/3/05
Signature | Date

Matrix | Carrier name Greyhound

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐	
Custody seals intact on shipping container/cooler?	Yes ☐	No ☐	Not Present ☑	Not Shipped ☐
Custody seals intact on sample bottles?	Yes ☐	No ☑	N/A ☐	
Chain of custody present?	Yes ☑	No ☐		
Chain of custody signed when relinquished and received?	Yes ☑	No ☐		
Chain of custody agrees with sample labels?	Yes ☑	No ☐		
Samples in proper container/bottle?	Yes ☑	No ☐		
Sample containers intact?	Yes ☑	No ☐		
Sufficient sample volume for indicated test?	Yes ☑	No ☐		
All samples received within holding time?	Yes ☑	No ☐		
Water - VOA vials have zero headspace?	No VOA vials submitted ☐	Yes ☑	No ☐	
Water - pH acceptable upon receipt?	Yes ☐	No ☐	N/A ☑	

Container/Temp Blank temperature? 2° *4° C ± 2 Acceptable* If given sufficient time to cool.

COMMENTS:

Client contacted _____ Date contacted: _____ Person contacted _____

Contacted by: _____ Regarding _____

Comments: _____

_____

_____

_____

_____

Corrective Action _____

_____

_____

CHAIN-OF-CUSTODY RECORD

Accreditation Applied: NELAC ☐ USACE ☐ Other: _____

Client: BLAGG ENGR. / XTO ENERGY

Project Name: CARSON GC #1E

Address: P.O. BOX 87, BLFD. NM 87413

Project #: 97V

Project Manager: NJV

Phone #: 505-632-1199

Sampler: NJV

Fax #: 505-632-3903

Sample Temperature: 2°

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www.hallenvironmental.com

ANALYSIS REQUEST

Date	Time	Matrix	Sample I.D. No.	Number/Volume	Preservative $HgCl_2$	Preservative HNO_3	Preservative	HEAL No.	(BTEX + MTBE + TMB's (8021B))	BTEX + MTBE + TPH (Gasoline Only)	TPH Method 8015B (Gas/Diesel)	TPH (Method 418.1)	EDB (Method 504.1)	EDC (Method 8021)	8310 (PNA or PAH)	RCRA 8 Metals	Anions (F, Cl, NO_3, NO_2, PO_4, SO_4)	8081 Pesticides / PCB's (8082)	8260B (VOA)	8270 (Semi-VOA)					Air Bubbles or Headspace (Y or N)
12/29/04	1430	WATER	MW #2	2-40ml	✓			0501006-1	✓																

Date: 12/30/04 Time: 1555 Relinquished By: (Signature) _____ Received By: (Signature) 12/31/05 0950

Date: Time: Relinquished By: (Signature) Received By: (Signature)

Remarks:

Hall Environmental Analysis Laboratory

Date: *01-Jul-05*

CLIENT:	Blagg Engineering	**Client Sample ID:**	MW #2
Lab Order:	0506270	**Collection Date:**	6/27/2005 3:50:00 PM
Project:	Carson GC #1E		
Lab ID:	0506270-01	**Matrix:**	AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES						Analyst: KTM
Benzene	ND	0.50		µg/L	1	6/30/2005 12:33:17 AM
Toluene	ND	0.50		µg/L	1	6/30/2005 12:33:17 AM
Ethylbenzene	ND	0.50		µg/L	1	6/30/2005 12:33:17 AM
Xylenes, Total	0.96	0.50		µg/L	1	6/30/2005 12:33:17 AM
Surr: 4-Bromofluorobenzene	95.9	83.3-121		%REC	1	6/30/2005 12:33:17 AM

Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

*: Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: *01-Jul-05*

CLIENT: Blagg Engineering
Work Order: 0506270
Project: Carson GC #1E

QC SUMMARY REPORT
Method Blank

Sample ID Reagent Blank 5m **Batch ID:** R15847 **Test Code:** SW8021 **Units:** µg/L **Analysis Date** 6/29/2005 10:41:34 AM **Prep Date**
Client ID: **Run ID:** PIDFID_050629A **SeqNo:** 375749

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	ND	0.5									
Toluene	ND	0.5									
Ethylbenzene	ND	0.5									
Xylenes, Total	ND	0.5									
Surr: 4-Bromofluorobenzene	18.31	0	20	0	91.6	83.3	121	0			

Qualifiers: ND - Not Detected at the Reporting Limit; J - Analyte detected below quantitation limits; S - Spike Recovery outside accepted recovery limits; R - RPD outside accepted recovery limits; B - Analyte detected in the associated Method Blank

Hall Environmental Analysis Laboratory

Date: *01-Jul-05*

CLIENT: Blagg Engineering
Work Order: 0506270
Project: Carson GC #1E

QC SUMMARY REPORT
Sample Matrix Spike

Sample ID 0506270-01a ms	Batch ID: R15847	Test Code: SW8021	Units: µg/L	Analysis Date 6/30/2005 1:03:53 AM	Prep Date
Client ID: MW #2		Run ID: PIDFID_050629A		SeqNo: 375789	

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	18.74	0.5	20	0	93.7	88.7	114	0			
Toluene	20.55	0.5	20	0	103	89.3	112	0			
Ethylbenzene	19.99	0.5	20	0	99.9	88.6	113	0			
Xylenes, Total	58.44	0.5	60	0.9634	95.8	89.4	112	0			
Surr: 4-Bromofluorobenzene	23.5	0	24	0	97.9	83.3	121	0			

Sample ID 0506270-01a msd	Batch ID: R15847	Test Code: SW8021	Units: µg/L	Analysis Date 6/30/2005 1:34:39 AM	Prep Date
Client ID: MW #2		Run ID: PIDFID_050629A		SeqNo: 375790	

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	19.1	0.5	20	0	95.5	88.7	114	18.74	1.89	27	
Toluene	20.91	0.5	20	0	105	89.3	112	20.55	1.75	19	
Ethylbenzene	19.81	0.5	20	0	99.0	88.6	113	19.99	0.906	10	
Xylenes, Total	59.3	0.5	60	0.9634	97.2	89.4	112	58.44	1.46	13	
Surr: 4-Bromofluorobenzene	24.58	0	24	0	102	83.3	121	23.5	4.47	0	

3 / 5

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

1

CLIENT: Blagg Engineering
Work Order: 0506270
Project: Carson GC #1E

QC SUMMARY REPORT

Laboratory Control Spike - generic

Sample ID BTEX LCS 100ng Batch ID: R15847 Test Code: SW8021 Units: µg/L Analysis Date 6/29/2005 1:30:53 PM Prep Date

Client ID: Run ID: PIDFID_050629A SeqNo: 375788

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	19.22	0.5	20	0	96.1	88.7	114	0			
Toluene	19.77	0.5	20	0	98.9	89.3	112	0			
Ethylbenzene	19.48	0.5	20	0	97.4	88.6	113	0			
Xylenes, Total	59.2	0.5	60	0	98.7	89.4	112	0			

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

Hall Environmental Analysis Laboratory

Sample Receipt Checklist

Client Name BLAGG | Date and Time Received: 6/29/2005

Work Order Number 0506270 | Received by AMG

Checklist completed by [signature] Signature | 6/29/05 Date

Matrix | Carrier name Greyhound

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐	
Custody seals intact on shipping container/cooler?	Yes ☐	No ☐	Not Present ☑	Not Shipped ☐
Custody seals intact on sample bottles?	Yes ☐	No ☐	N/A ☑	
Chain of custody present?	Yes ☑	No ☐		
Chain of custody signed when relinquished and received?	Yes ☑	No ☐		
Chain of custody agrees with sample labels?	Yes ☑	No ☐		
Samples in proper container/bottle?	Yes ☑	No ☐		
Sample containers intact?	Yes ☑	No ☐		
Sufficient sample volume for indicated test?	Yes ☑	No ☐		
All samples received within holding time?	Yes ☑	No ☐		
Water - VOA vials have zero headspace?	No VOA vials submitted ☐	Yes ☑	No ☐	
Water - pH acceptable upon receipt?	Yes ☐	No ☐	N/A ☑	

Container/Temp Blank temperature? 6° *4° C ± 2 Acceptable* If given sufficient time to cool.

COMMENTS:

Client contacted _____ Date contacted: _____ Person contacted _____

Contacted by: _____ Regarding _____

Comments: _____

Corrective Action _____

CHAIN-OF-CUSTODY RECORD

Accreditation Applied: NELAC ☐ USACE ☐ Other: _____

HALL ENVIRONMENTAL ANALYSIS LABORATORY
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www.hallenvironmental.com

Client: BLAGG ENGR. / XTO ENERGY

Project Name: CARSON GC #1E

Address: P.O. BOX 87 BLFD., NM 87413

Project #: NV

Project Manager: NV

Phone #: (505) 632-1199

Sampler: NV

Fax #: (505) 632-3903

Sample Temperature: 6.0

Date	Time	Matrix	Sample I.D. No.	Number/Volume	Preservative $HgCl_2$	Preservative HNO_3	Preservative	HEAL No.
6/27/05	1550	WATER	MW #2	2-40ml	✓			0506270-1

ANALYSIS REQUEST

BTEX + ~~MTBE + TMB's~~ (8021B)	BTEX + MTBE + TPH (Gasoline Only)	TPH Method 8015B (Gas/Diesel)	TPH (Method 418.1)	EDB (Method 504.1)	EDC (Method 8021)	8310 (PNA or PAH)	RCRA 8 Metals	Anions (F, Cl, NO_3, NO_2, PO_4, SO_4)	8081 Pesticides / PCB's (8082)	8260B (VOA)	8270 (Semi-VOA)					Air Bubbles or Headspace (Y or N)
✓																

Date:	Time:	Relinquished By: (Signature)	Received By: (Signature)	
6/28/05	0700	Melvin Vig		6/28/05 5:00
Date:	Time:	Relinquished By: (Signature)	Received By: (Signature)	

Remarks:

Hall Environmental Analysis Laboratory, Inc.

Date: *15-Dec-06*

CLIENT: XTO Energy
Project: Ground Water
Lab Order: 0612121

Lab ID: 0612121-07 **Collection Date:** 12/6/2006 1:49:00 PM
Client Sample ID: Carson Gas Com 1E MW-1A **Matrix:** AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	ND	1.0		µg/L	1	12/13/2006 3:02:54 PM
Toluene	ND	1.0		µg/L	1	12/13/2006 3:02:54 PM
Ethylbenzene	ND	1.0		µg/L	1	12/13/2006 3:02:54 PM
Xylenes, Total	ND	3.0		µg/L	1	12/13/2006 3:02:54 PM
Surr: 4-Bromofluorobenzene	80.0	70.2-105		%REC	1	12/13/2006 3:02:54 PM

Lab ID: 0612121-08 **Collection Date:** 12/6/2006 2:42:00 PM
Client Sample ID: Carson Gas Com 1E MW-2A **Matrix:** AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	ND	1.0		µg/L	1	12/13/2006 6:03:15 PM
Toluene	ND	1.0		µg/L	1	12/13/2006 6:03:15 PM
Ethylbenzene	ND	1.0		µg/L	1	12/13/2006 6:03:15 PM
Xylenes, Total	ND	3.0		µg/L	1	12/13/2006 6:03:15 PM
Surr: 4-Bromofluorobenzene	79.9	70.2-105		%REC	1	12/13/2006 6:03:15 PM

Lab ID: 0612121-09 **Collection Date:** 12/6/2006 4:16:00 PM
~~**Client Sample ID:** Federal Gas Com H1 MW-3~~ **Matrix:** AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	ND	1.0		µg/L	1	12/13/2006 6:33:32 PM
Toluene	ND	1.0		µg/L	1	12/13/2006 6:33:32 PM
Ethylbenzene	ND	1.0		µg/L	1	12/13/2006 6:33:32 PM
Xylenes, Total	ND	3.0		µg/L	1	12/13/2006 6:33:32 PM
Surr: 4-Bromofluorobenzene	82.0	70.2-105		%REC	1	12/13/2006 6:33:32 PM

Qualifiers:

*	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	MCL	Maximum Contaminant Level
ND	Not Detected at the Reporting Limit	RL	Reporting Limit
S	Spike recovery outside accepted recovery limits		

QA/QC SUMMARY REPORT

Client: XTO Energy
Project: Ground Water
Work Order: 0612121

Analyte	Result	Units	PQL	%Rec	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Method: SW8021									
Sample ID: 0612121-01A MSD		*MSD*			Batch ID: R21800		Analysis Date:	12/13/2006 5:33:06 PM	
Benzene	18.11	µg/L	1.0	90.6	85.9	113	2.89	27	
Toluene	18.24	µg/L	1.0	91.2	86.4	113	1.16	19	
Ethylbenzene	17.68	µg/L	1.0	88.4	83.5	118	1.39	10	
Xylenes, Total	53.06	µg/L	3.0	88.4	83.4	122	0.923	13	
Sample ID: 5ML REAGENT BLA		*MBLK*			Batch ID: R21800		Analysis Date:	12/13/2006 5:26:25 AM	
Benzene	ND	µg/L	1.0						
Toluene	ND	µg/L	1.0						
Ethylbenzene	ND	µg/L	1.0						
Xylenes, Total	ND	µg/L	3.0						
Sample ID: 100NG BTEX LCS		*LCS*			Batch ID: R21800		Analysis Date:	12/13/2006 4:33:03 PM	
Benzene	18.09	µg/L	1.0	90.4	85.9	113			
Toluene	17.99	µg/L	1.0	89.9	86.4	113			
Ethylbenzene	17.55	µg/L	1.0	87.7	83.5	118			
Xylenes, Total	52.58	µg/L	3.0	87.6	83.4	122			
Sample ID: 0612121-01A MS		*MS*			Batch ID: R21800		Analysis Date:	12/13/2006 5:03:05 PM	
Benzene	18.65	µg/L	1.0	93.2	85.9	113			
Toluene	18.45	µg/L	1.0	92.2	86.4	113			
Ethylbenzene	17.93	µg/L	1.0	89.6	83.5	118			
Xylenes, Total	53.56	µg/L	3.0	89.3	83.4	122			

Qualifiers:

- E Value above quantitation range
- H Holding times for preparation or analysis exceeded
- J Analyte detected below quantitation limits
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S ~~~ recovery outside accepted recovery limits

Hall Environmental Analysis Laboratory, Inc.

Sample Receipt Checklist

Client Name XTO ENERGY | Date and Time Received: 12/8/2006

Work Order Number 0812121 | Received by TLS

Checklist completed by Jennifer Thomas (Signature) Dec 8, 06 (Date)

Matrix | Carrier name Greyhound

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐	
Custody seals intact on shipping container/cooler?	Yes ☑	No ☐	Not Present ☐	Not Shipped ☐
Custody seals intact on sample bottles?	Yes ☐	No ☐	N/A ☑	
Chain of custody present?	Yes ☑	No ☐		
Chain of custody signed when relinquished and received?	Yes ☑	No ☐		
Chain of custody agrees with sample labels?	Yes ☑	No ☐		
Samples in proper container/bottle?	Yes ☑	No ☐		
Sample containers intact?	Yes ☑	No ☐		
Sufficient sample volume for indicated test?	Yes ☑	No ☐		
All samples received within holding time?	Yes ☑	No ☐		
Water - VOA vials have zero headspace?	No VOA vials submitted ☐	Yes ☑	No ☐	
Water - pH acceptable upon receipt?	Yes ☐	No ☐	N/A ☑	
Container/Temp Blank temperature?	2°	4° C ± 2 *Acceptable* If given sufficient time to cool.		

COMMENTS:

Client contacted _____ Date contacted: _____ Person contacted _____

Contacted by: _____ Regarding _____

Comments: _____

Corrective Action _____

CHAIN-OF-CUSTODY RECORD

QA / QC Package: Std ☒ Level 4 ☐
Other:

Client: XTO Energy
Kim Champlin

Address: 2700 Farmington Ave
Bldg I, St. K
Farmington, NM

Phone #: 505 566 7954
Fax #:

Project Name:

Project #: Ground Water

Project Manager: Lisa Winn

Sampler: Ashley Ager

Sample Temperature: 0°

HALL ENVIRONMENTAL ANALYSIS LABORATORY
4901 Hawkins NE, Suite D
Albuquerque, New Mexico 87109
Tel. 505.345.3975 Fax 505.345.4107
www.hallenvironmental.com

ANALYSIS REQUEST

Date	Time	Matrix	Sample I.D. No.	Number/Volume	Preservative $HgCl_2$	Preservative HNO_3	Preservative	HEAL No. 0612121	BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gasoline Only)	TPH Method 8015B (Gas/Diesel)	TPH (Method 418.1)	EDB (Method 504.1)	EDC (Method 8021)	8310 (PNA or PAH)	RCRA 8 Metals	Anions (F, Cl, NO_3, NO_2, PO_4, SO_4)	8081 Pesticides / PCB's (8082)	8260B (VOA)	8270 (Semi-VOA)	8021 BTEX				Air Bubbles or Headspace (Y or N)
12-6-07	0900	GW	Haney Gas Com 1E	MW-1R	✓			1													✓				
12-6-07	0950	GW	Haney Gas Com 1E	MW-2	✓			2													✓				
12-6-07	0944	GW	Haney Gas Com 1E	MW-4	✓			3													✓				
12-6-07	1232	GW	Stedje Gas Com	1 MW-3R	✓			4													✓				
12-6-07	1222	GW	Stedje Gas Com	1 MW-2R	✓			5													✓				
12-6-07	1257	GW	Stedje Gas Com	1 MW-1	✓			6													✓				
12-6-07	1349	GW	Carson Gas Com	1E MW-1A	✓			7													✓				
12-6-07	1442	GW	Carson Gas Com	1E MW-2A	✓	2 was 3		8													✓				
12-6-07	1616	GW	Federal Gas Com	H1 MW-3	✓			9													✓				

Date:	Time:	Relinquished By: (Signature)	Received By: (Signature)	
12-7-06	1500	Ashley L. Ager		12/5/07 930
Date:	Time:	Relinquished By: (Signature)	Received By: (Signature)	

Remarks:
* copy results to ala@gladestarservices.com
only 2 sample bottles for Carson Gas Com 1E MW2A

VUL 3004525508

CLIENT: XTO	**BLAGG ENGINEERING, INC.** **P.O. BOX 87, BLOOMFIELD, NM 87413** **(505) 632-1199**	LOCATION NO: COCR NO: HALL

FIELD REPORT: PIT CLOSURE VERIFICATION

PAGE No: 1 of 1

LOCATION: NAME: CARSON GC WELL #: 1E TYPE: DEHY.
QUAD/UNIT: F SEC: 32 TWP: 30N RNG: 12W PM: NM CNTY: SJ ST: NM
QTR/FOOTAGE: 1470'N / 1460'W SE/NW CONTRACTOR: HOI (HEBER)

DATE STARTED: 2/18/03
DATE FINISHED:
ENVIRONMENTAL SPECIALIST: NV

EXCAVATION APPROX. 30 FT. x 30 FT. x 20 FT. DEEP. CUBIC YARDAGE: 400
DISPOSAL FACILITY: I.E.I. (CROUCH MESA) REMEDIATION METHOD: LANDFARM (?)
LAND USE: RANGE LEASE: FEE FORMATION: DK

FIELD NOTES & REMARKS: PIT LOCATED APPROXIMATELY 75 FT. S25W FROM WELLHEAD.
DEPTH TO GROUNDWATER: 450' NEAREST WATER SOURCE: >1000' NEAREST SURFACE WATER: <1000'
NMOCD RANKING SCORE: 30 NMOCD TPH CLOSURE STD: 100 PPM

SOIL AND EXCAVATION DESCRIPTION:

OVM CALIB. READ. = 50.1 ppm CHECK
OVM CALIB. GAS = 100 ppm RF = 0.52
TIME: 3:40 am/pm DATE: 2/23/04

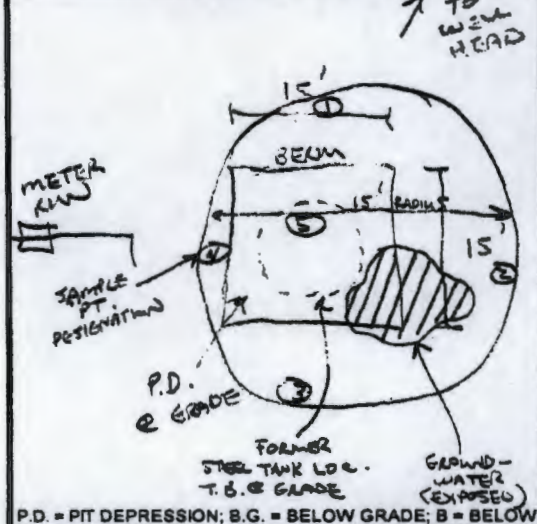
SOIL TYPE: SAND / SILTY SAND / SILT / SILTY CLAY / CLAY / GRAVEL / OTHER
SOIL COLOR: DK. YELL. ORANGE (0'-5') LT. GRAY TO BLACK (5'-20')
COHESION (ALL OTHERS): NON COHESIVE / SLIGHTLY COHESIVE / COHESIVE / HIGHLY COHESIVE
CONSISTENCY (NON COHESIVE SOILS): LOOSE / FIRM / DENSE / VERY DENSE
~~PLASTICITY (CLAYS)~~: NON PLASTIC / SLIGHTLY PLASTIC / COHESIVE / MEDIUM PLASTIC / HIGHLY PLASTIC
~~DENSITY (COHESIVE CLAYS & SILTS)~~: SOFT / FIRM / STIFF / VERY STIFF / HARD
MOISTURE: DRY / SLIGHTLY MOIST / MOIST / WET / SATURATED / SUPER SATURATED
DISCOLORATION/STAINING OBSERVED: YES / NO EXPLANATION -
HC ODOR DETECTED: YES / NO EXPLANATION -
SAMPLE TYPE: GRAB / COMPOSITE - # OF PTS. —
ADDITIONAL COMMENTS:
GROUNDWATER IMPACTED

FIELD 418.1 CALCULATIONS

SAMP. TIME	SAMP. ID	LAB NO.	WEIGHT (g)	mL FREON	DILUTION	READING	CALC. (ppm)

SCALE 0 FT

PIT PERIMETER



P.D. = PIT DEPRESSION; B.G. = BELOW GRADE; B = BELOW
T.H. = TEST HOLE; ~ = APPROX.; T.B. = TANK BOTTOM

OVM READING

SAMPLE ID	FIELD HEADSPACE (ppm)
1 @ 8'	147
2 @ 8'	29.9
3 @ 12'	60.1
4 @ 10'	253
5 @ 19'	232

LAB SAMPLES

SAMPLE ID	ANALYSIS	TIME
④ @ 10'	TPH (8015B)	1535
"	BTEX (8021B)	"

PIT PROFILE

TRAVEL NOTES: CALLOUT: 2/18/04 - MORN. ONSITE: 2/18/04 - AFTER.

NEW MEXICO ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT

GARY E. JOHNSON
Governor
Betty Rivera
Cabinet Secretary

Lori Wrotenbery
Director
Oil Conservation Division

CERTIFICATE OF WASTE STATUS

1. Generator Name and Address	2. Destination Name:
XTO ENERGY INC 2700 FARMINGTON AVE. SUITE K FARMINGTON, NM 87401	J.F.J. Landfarm C/o Industrial Ecosystems Inc. 420 CR 3100 Aztec, NM 87410
3. Originating Site (name): CARSON GC #1E attach list of originating sites as appropriate	Location of the Waste (Street address &/or ULSTR): F-32-30-12
4. Source and Description of Waste DEHYDRATOR PIT FROM WELL SITE WASTE ~~SPECIFIED AS~~ PRODUCED WATER, GYLCOL BY PRODUCT (MOST LIKELY NM)	

I, NELSON VELEZ representative for :
Print Name

XTO ENERGY INC. do hereby certify that, according to the Resource Conservation and Recovery Act (RCRA) and Environmental Protection Agency's July,1988, regulatory determination, the above described waste is: (Check appropriate classification) NM

X **EXEMPT** oilfield waste

X **NON-EXEMPT** oilfield waste which is non-hazardous by characteristic analysis or by product identification

and that nothing has been added to the exempt or non-exempt non –hazardous waste defined above.

For **NON-EXEMPT** waste the following documentation is attached (check appropriate items):

- X MSDS Information
- ___ RCRA Hazardous Waste Analysis
- ___ Chain of Custody
- ___ Other (description

This waste is in compliance with Regulated Levels of Naturally Occurring Radioactive Material (NORM) pursuant to 20 NMAC 3.1 subpart 1403.C and D.

Name (Original Signature): Nelson Velez

Title: STAFF GEOLOGIST

Date: 2/23/04

Hall Environmental Analysis Laboratory

Date: *01-Mar-04*

CLIENT:	Blagg Engineering	**Client Sample ID:**	4 @10'
Lab Order:	0402187	**Collection Date:**	2/23/2004 3:35:00 PM
Project:	Carson GC#1E		
Lab ID:	0402187-01	**Matrix:**	SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE						Analyst: **JMP**
Diesel Range Organics (DRO)	8.1	5.0		mg/Kg	1	2/28/2004 11:18:14 AM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	2/28/2004 11:18:14 AM
Surr: DNOP	102	60-124		%REC	1	2/28/2004 11:18:14 AM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: **NSB**
Gasoline Range Organics (GRO)	5.2	5.0		mg/Kg	1	2/26/2004 5:41:00 PM
Surr: BFB	107	74-118		%REC	1	2/26/2004 5:41:00 PM
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Benzene	ND	0.025		mg/Kg	1	2/26/2004 5:41:00 PM
Toluene	ND	0.025		mg/Kg	1	2/26/2004 5:41:00 PM
Ethylbenzene	ND	0.025		mg/Kg	1	2/26/2004 5:41:00 PM
Xylenes, Total	0.034	0.025		mg/Kg	1	2/26/2004 5:41:00 PM
Surr: 4-Bromofluorobenzene	100	74-118		%REC	1	2/26/2004 5:41:00 PM

Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

CHAIN-OF-CUSTODY RECORD

Accreditation Applied: NELAC ☐ USACE ☐ Other: _____

Client: BLAGG ENGR. / XTO ENERGY

Project Name: CARSON GC #1E

Address: P.O. BOX 87 BLOOMFIELD, NM 87413

Project #: nr

Project Manager: NJV

Phone #: 505-632-1199

Sampler: NJV

Fax #: 505-632-3903

Sample Temperature: 2.0

HALL ENVIRONMENTAL ANALYSIS LABORATORY
4901 Hawkins NE, Suite D
Albuquerque, New Mexico 87109
Tel. 505.345.3975 Fax 505.345.4107
www.hallenvironmental.com

ANALYSIS REQUEST

Date	Time	Matrix	Sample I.D. No.	Number/Volume	Preservative $HgCl_2$	Preservative HNO_3	Preservative	HEAL No. 040187	(BTEX) + ~~MTBE + TMB's~~ (8021B)	BTEX + MTBE + TPH (Gasoline Only)	TPH Method 8015B (Gas/Diesel)	TPH (Method 418.1)	EDB (Method 504.1)	EDC (Method 8021)	8310 (PNA or PAH)	RCRA 8 Metals	Anions (F, Cl, NO_3, NO_2, PO_4, SO_4)	8081 Pesticides / PCB's (8082)	8260B (VOA)	8270 (Semi-VOA)					Air Bubbles or Headspace (Y or N)
2/23/04	1535	SOIL	④ @ 10'	1-4oz.				1	✓		✓														

Date	Time	Relinquished By: (Signature)	Received By: (Signature)
2/24/04	0700	Nelson VJ	Gonzales 02/24/04 1631
Date:	Time:	Relinquished By: (Signature)	Received By: (Signature)

Remarks:

Hall Environmental Analysis Laboratory

Date: *01-Mar-04*

CLIENT: Blagg Engineering
Work Order: 0402187
Project: Carson GC#1E

QC SUMMARY REPORT
Method Blank

Sample ID MB-5303	Batch ID: 5303	Test Code: SW8015	Units: mg/Kg	Analysis Date 2/26/2004 9:47:23 AM	Prep Date 2/27/2004
Client ID:		Run ID: FID(17A) 2_040226A		SeqNo: 255398	

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	5.0									
Motor Oil Range Organics (MRO)	ND	50									
Surr: DNOP	10.79	0	10	0	108	60	124	0			

Sample ID MB-5284	Batch ID: 5284	Test Code: SW8015	Units: mg/Kg	Analysis Date 2/26/2004 9:38:17 AM	Prep Date 2/25/2004
Client ID:		Run ID: PIDFID_040226A		SeqNo: 254818	

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0									
Surr: BFB	938.5	0	1000	0	93.9	74	118	0			

Sample ID MB-5284	Batch ID: 5284	Test Code: SW8021	Units: mg/Kg	Analysis Date 2/26/2004 9:38:17 AM	Prep Date 2/25/2004
Client ID:		Run ID: PIDFID_040226A		SeqNo: 254784	

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	ND	0.025									
Toluene	ND	0.025									
Ethylbenzene	ND	0.025									
Xylenes, Total	ND	0.025									
Surr: 4-Bromofluorobenzene	0.956	0	1	0	95.6	74	118	0			

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

Hall Environmental Analysis Laboratory

Date: *01-Mar-04*

CLIENT: Blagg Engineering
Work Order: 0402187
Project: Carson GC#1E

QC SUMMARY REPORT
Laboratory Control Spike - generic

Sample ID LCS-5303	Batch ID: 5303	Test Code: SW8015	Units: mg/Kg	Analysis Date 2/28/2004 10:17:31 AM	Prep Date 2/27/2004
Client ID:		Run ID: FID(17A) 2_040228A		SeqNo: 255399	

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	50.07	5.0	50	0	100	67.4	117	0			

Sample ID LCSD-5303	Batch ID: 5303	Test Code: SW8015	Units: mg/Kg	Analysis Date 2/28/2004 10:48:02 AM	Prep Date 2/27/2004
Client ID:		Run ID: FID(17A) 2_040228A		SeqNo: 255400	

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	41.88	5.0	50	0	83.8	67.4	117	50.07	17.8	17.4	R

Sample ID GRO STD 2.5ug	Batch ID: 5284	Test Code: SW8015	Units: mg/Kg	Analysis Date 2/28/2004 2:30:31 PM	Prep Date
Client ID:		Run ID: PIDFID_040226A		SeqNo: 254820	

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	23.6	5.0	25	0	94.4	85.6	111	0			

Sample ID BTEX STD 100ng	Batch ID: 5284	Test Code: SW8021	Units: mg/Kg	Analysis Date 2/28/2004 3:09:48 PM	Prep Date
Client ID:		Run ID: PIDFID_040226A		SeqNo: 254799	

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	1.034	0.025	1	0	103	77	122	0			
Toluene	1.034	0.025	1	0	103	81	115	0			
Ethylbenzene	1.03	0.025	1	0	103	84	117	0			
Xylenes, Total	3.077	0.025	3	0	103	84	116	0			

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

3 / 4

1

Hall Environmental Analysis Laboratory

Sample Receipt Checklist

Client Name BLAGG | Date and Time Received:

Work Order Number 0402187 | Received by AMG

Checklist completed by A Gonzales 02/24/04
Signature | Date

Matrix | Carrier name Greyhound

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐	
Custody seals intact on shipping container/cooler?	Yes ☐	No ☐	Not Present ☐	Not Shipped ☑
Custody seals intact on sample bottles?	Yes ☐	No ☐	N/A ☑	
Chain of custody present?	Yes ☑	No ☐		
Chain of custody signed when relinquished and received?	Yes ☑	No ☐		
Chain of custody agrees with sample labels?	Yes ☑	No ☐		
Samples in proper container/bottle?	Yes ☑	No ☐		
Sample containers intact?	Yes ☑	No ☐		
Sufficient sample volume for indicated test?	Yes ☑	No ☐		
All samples received within holding time?	Yes ☑	No ☐		
Water - VOA vials have zero headspace?	No VOA vials submitted ☑	Yes ☐	No ☐	
Water - pH acceptable upon receipt?	Yes ☐	No ☐	N/A ☑	

Container/Temp Blank temperature? 2° *4° C ± 2 Acceptable* If given sufficient time to cool.

COMMENTS:

Client contacted _____ Date contacted: _____ Person contacted _____

Contacted by: _____ Regarding _____

Comments: _____

Corrective Action _____