

APPENDIX C

Laboratory Reports and Chains of Custody (on CD)

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

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February 26, 2013

Chip Goodhue, Project Manager
Aspect Consulting, LLC
350 Madison Ave. N.
Bainbridge Island, WA 98110-1810

Dear Mr. Goodhue:

Included are the results from the testing of material submitted on February 8, 2013 from the Ken's Texaco 120061, F&BI 302105 project. There are 36 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

We appreciate this opportunity to be of service to you and hope you will call if you have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.



Michael Erdahl
Project Manager

Enclosures

c: data@aspectconsulting.com, Parker Wittman, Bob Hanford
ASP0226R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on February 8, 2013 by Friedman & Bruya, Inc. from the Aspect Consulting, LLC Ken's Texaco 120061, F&BI 302105 project. Samples were logged in under the laboratory ID's listed below.

<u>Laboratory ID</u>	<u>Aspect Consulting, LLC</u>
302105 -01	MW-10-20
302105 -02	MW-10-25
302105 -03	MW-11-15
302105 -04	MW-11-23
302105 -05	MW-12-17.5
302105 -06	MW-12-23
302105 -07	MW-9-16
302105 -08	MW-7-16.5
302105 -09	MW-8-23

The 8260C calibration standard failed the acceptance criteria for chloroethane in samples MW-11-15 and MW-12-17.5. The data were flagged accordingly.

All other quality control requirements were acceptable.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 02/26/13

Date Received: 02/08/13

Project: Ken's Texaco 120061, F&BI 302105

Date Extracted: 02/11/13

Date Analyzed: 02/11/13 and 02/13/13

**RESULTS FROM THE ANALYSIS OF SOIL SAMPLES
FOR TOTAL PETROLEUM HYDROCARBONS AS GASOLINE
USING METHOD NWTPH-Gx**

Results Reported on a Dry Weight Basis

Results Reported as mg/kg (ppm)

<u>Sample ID</u> Laboratory ID	<u>Gasoline Range</u>	Surrogate (% Recovery) (Limit 58-139)
MW-10-20 302105-01	<2	100
MW-10-25 302105-02	<2	101
MW-11-15 302105-03 1/50	1,600	121
MW-11-23 302105-04	7.6	106
MW-12-17.5 302105-05	<2	102
MW-12-23 302105-06	<2	102
MW-9-16 302105-07	730	ip
MW-7-16.5 302105-08	<2	103
MW-8-23 302105-09	<2	102
Method Blank 03-0230 MB	<2	104

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 02/26/13

Date Received: 02/08/13

Project: Ken's Texaco 120061, F&BI 302105

Date Extracted: 02/08/13

Date Analyzed: 02/08/13

**RESULTS FROM THE ANALYSIS OF SOIL SAMPLES
FOR TOTAL PETROLEUM HYDROCARBONS AS
DIESEL AND MOTOR OIL
USING METHOD NWTPH-Dx**

Results Reported on a Dry Weight Basis

Results Reported as mg/kg (ppm)

<u>Sample ID</u> Laboratory ID	<u>Diesel Range</u> (C ₁₀ -C ₂₅)	<u>Motor Oil Range</u> (C ₂₅ -C ₃₆)	<u>Surrogate</u> <u>(% Recovery)</u> (Limit 53-144)
MW-10-20 302105-01	<50	<250	99
MW-10-25 302105-02	<50	<250	96
MW-11-15 302105-03	<50	<250	96
MW-11-23 302105-04	<50	<250	95
MW-12-17.5 302105-05	<50	<250	89
MW-12-23 302105-06	<50	<250	91
MW-9-16 302105-07	<50	<250	88
MW-7-16.5 302105-08	<50	<250	92
MW-8-23 302105-09	<50	<250	91
Method Blank 03-244 MB	<50	<250	99

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 200.8

Client ID:	MW-10-20	Client:	Aspect Consulting, LLC
Date Received:	02/08/13	Project:	Ken's Texaco 120061, F&BI 302105
Date Extracted:	02/14/13	Lab ID:	302105-01
Date Analyzed:	02/15/13	Data File:	302105-01.022
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Holmium	88	60	125

Analyte:	Concentration mg/kg (ppm)
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Lead	3.88
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FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 200.8

Client ID:	MW-10-25	Client:	Aspect Consulting, LLC
Date Received:	02/08/13	Project:	Ken's Texaco 120061, F&BI 302105
Date Extracted:	02/14/13	Lab ID:	302105-02
Date Analyzed:	02/15/13	Data File:	302105-02.023
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Holmium	88	60	125

Analyte:	Concentration mg/kg (ppm)
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Lead	2.27
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FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 200.8

Client ID:	MW-11-15	Client:	Aspect Consulting, LLC
Date Received:	02/08/13	Project:	Ken's Texaco 120061, F&BI 302105
Date Extracted:	02/19/13	Lab ID:	302105-03
Date Analyzed:	02/20/13	Data File:	302105-03.032
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	121	60	125
Indium	93	60	125
Holmium	91	60	125

Analyte:	Concentration mg/kg (ppm)
Chromium	11.1
Nickel	12.9
Zinc	28.6
Cadmium	<1
Lead	3.31

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 200.8

Client ID:	MW-12-17.5	Client:	Aspect Consulting, LLC
Date Received:	02/08/13	Project:	Ken's Texaco 120061, F&BI 302105
Date Extracted:	02/19/13	Lab ID:	302105-05
Date Analyzed:	02/20/13	Data File:	302105-05.033
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	116	60	125
Indium	91	60	125
Holmium	91	60	125

Analyte:	Concentration mg/kg (ppm)
Chromium	8.49
Nickel	8.58
Zinc	27.9
Cadmium	<1
Lead	2.77

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 200.8

Client ID:	MW-9-16	Client:	Aspect Consulting, LLC
Date Received:	02/08/13	Project:	Ken's Texaco 120061, F&BI 302105
Date Extracted:	02/14/13	Lab ID:	302105-07
Date Analyzed:	02/15/13	Data File:	302105-07.024
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Holmium	88	60	125

Analyte:	Concentration mg/kg (ppm)
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Lead	9.13
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FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 200.8

Client ID:	MW-7-16.5	Client:	Aspect Consulting, LLC
Date Received:	02/08/13	Project:	Ken's Texaco 120061, F&BI 302105
Date Extracted:	02/14/13	Lab ID:	302105-08
Date Analyzed:	02/15/13	Data File:	302105-08.019
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Holmium	88	60	125

Analyte:	Concentration mg/kg (ppm)
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Lead	5.52
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FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 200.8

Client ID:	MW-8-23	Client:	Aspect Consulting, LLC
Date Received:	02/08/13	Project:	Ken's Texaco 120061, F&BI 302105
Date Extracted:	02/14/13	Lab ID:	302105-09
Date Analyzed:	02/15/13	Data File:	302105-09.025
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Holmium	89	60	125

Analyte:	Concentration mg/kg (ppm)
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Lead	1.61
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FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 200.8

Client ID:	Method Blank	Client:	Aspect Consulting, LLC
Date Received:	NA	Project:	Ken's Texaco 120061, F&BI 302105
Date Extracted:	02/19/13	Lab ID:	I3-71 mb
Date Analyzed:	02/20/13	Data File:	I3-71 mb.027
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	100	60	125
Indium	93	60	125
Holmium	86	60	125

Analyte:	Concentration mg/kg (ppm)
Chromium	<1
Nickel	<1
Zinc	<1
Cadmium	<1
Lead	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 200.8

Client ID:	Method Blank	Client:	Aspect Consulting, LLC
Date Received:	NA	Project:	Ken's Texaco 120061, F&BI 302105
Date Extracted:	02/14/13	Lab ID:	I3-66 mb
Date Analyzed:	02/15/13	Data File:	I3-66 mb.017
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm)	Operator:	AP

Internal Standard:	% Recovery:	Lower	Upper
Holmium	88	Limit:	Limit:
		60	125

Analyte:	Concentration
	mg/kg (ppm)

Lead	<1
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FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW-10-20	Client:	Aspect Consulting, LLC
Date Received:	02/08/13	Project:	Ken's Texaco 120061, F&BI 302105
Date Extracted:	02/11/13	Lab ID:	302105-01
Date Analyzed:	02/11/13	Data File:	021108.D
Matrix:	Soil	Instrument:	GCMS9
Units:	mg/kg (ppm)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	101	50	150
Toluene-d8	98	50	150
4-Bromofluorobenzene	99	50	150

Compounds:	Concentration mg/kg (ppm)
Methyl t-butyl ether (MTBE)	<0.05
1,2-Dichloroethane (EDC)	<0.05
1,2-Dibromoethane (EDB)	<0.05
Benzene	<0.03
Toluene	<0.05
Ethylbenzene	<0.05
m,p-Xylene	<0.1
o-Xylene	<0.05
Naphthalene	<0.05

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW-10-25	Client:	Aspect Consulting, LLC
Date Received:	02/08/13	Project:	Ken's Texaco 120061, F&BI 302105
Date Extracted:	02/11/13	Lab ID:	302105-02
Date Analyzed:	02/11/13	Data File:	021109.D
Matrix:	Soil	Instrument:	GCMS9
Units:	mg/kg (ppm)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	102	50	150
Toluene-d8	99	50	150
4-Bromofluorobenzene	100	50	150

Compounds:	Concentration mg/kg (ppm)
Methyl t-butyl ether (MTBE)	<0.05
1,2-Dichloroethane (EDC)	<0.05
1,2-Dibromoethane (EDB)	<0.05
Benzene	<0.03
Toluene	<0.05
Ethylbenzene	<0.05
m,p-Xylene	<0.1
o-Xylene	<0.05
Naphthalene	<0.05

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW-11-15	Client:	Aspect Consulting, LLC
Date Received:	02/08/13	Project:	Ken's Texaco 120061, F&BI 302105
Date Extracted:	02/18/13	Lab ID:	302105-03
Date Analyzed:	02/18/13	Data File:	021834.D
Matrix:	Soil	Instrument:	GCMS9
Units:	mg/kg (ppm)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	111	50	150
Toluene-d8	128	50	150
4-Bromofluorobenzene	107	50	150

Compounds:	Concentration mg/kg (ppm)
Vinyl chloride	<0.05
Chloroethane	<0.5 ca
1,1-Dichloroethene	<0.05
Methylene chloride	<0.5
trans-1,2-Dichloroethene	<0.05
1,1-Dichloroethane	<0.05
cis-1,2-Dichloroethene	<0.05
1,2-Dichloroethane (EDC)	<0.05
1,1,1-Trichloroethane	<0.05
Trichloroethene	<0.03
Tetrachloroethene	<0.025

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW-11-15	Client:	Aspect Consulting, LLC
Date Received:	02/08/13	Project:	Ken's Texaco 120061, F&BI 302105
Date Extracted:	02/11/13	Lab ID:	302105-03
Date Analyzed:	02/13/13	Data File:	021307.D
Matrix:	Soil	Instrument:	GCMS9
Units:	mg/kg (ppm)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	101	50	150
Toluene-d8	101	50	150
4-Bromofluorobenzene	95	50	150

Compounds:	Concentration mg/kg (ppm)
Benzene	0.12
Toluene	0.11
Ethylbenzene	0.73
m,p-Xylene	1.3
o-Xylene	0.40
Naphthalene	0.33

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW-11-23	Client:	Aspect Consulting, LLC
Date Received:	02/08/13	Project:	Ken's Texaco 120061, F&BI 302105
Date Extracted:	02/11/13	Lab ID:	302105-04
Date Analyzed:	02/11/13	Data File:	021110.D
Matrix:	Soil	Instrument:	GCMS9
Units:	mg/kg (ppm)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	102	50	150
Toluene-d8	98	50	150
4-Bromofluorobenzene	101	50	150

Compounds:	Concentration mg/kg (ppm)
Benzene	<0.03
Toluene	<0.05
Ethylbenzene	<0.05
m,p-Xylene	<0.1
o-Xylene	<0.05
Naphthalene	<0.05

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW-12-17.5	Client:	Aspect Consulting, LLC
Date Received:	02/08/13	Project:	Ken's Texaco 120061, F&BI 302105
Date Extracted:	02/18/13	Lab ID:	302105-05
Date Analyzed:	02/18/13	Data File:	021835.D
Matrix:	Soil	Instrument:	GCMS9
Units:	mg/kg (ppm)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	106	50	150
Toluene-d8	101	50	150
4-Bromofluorobenzene	99	50	150

Compounds:	Concentration mg/kg (ppm)
Vinyl chloride	<0.05
Chloroethane	<0.5 ca
1,1-Dichloroethene	<0.05
Methylene chloride	<0.5
trans-1,2-Dichloroethene	<0.05
1,1-Dichloroethane	<0.05
cis-1,2-Dichloroethene	<0.05
1,2-Dichloroethane (EDC)	<0.05
1,1,1-Trichloroethane	<0.05
Trichloroethene	<0.03
Tetrachloroethene	<0.025

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW-12-17.5	Client:	Aspect Consulting, LLC
Date Received:	02/08/13	Project:	Ken's Texaco 120061, F&BI 302105
Date Extracted:	02/11/13	Lab ID:	302105-05
Date Analyzed:	02/11/13	Data File:	021111.D
Matrix:	Soil	Instrument:	GCMS9
Units:	mg/kg (ppm)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	100	50	150
Toluene-d8	98	50	150
4-Bromofluorobenzene	102	50	150

Compounds:	Concentration mg/kg (ppm)
Benzene	<0.03
Toluene	<0.05
Ethylbenzene	<0.05
m,p-Xylene	<0.1
o-Xylene	<0.05
Naphthalene	<0.05

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW-12-23	Client:	Aspect Consulting, LLC
Date Received:	02/08/13	Project:	Ken's Texaco 120061, F&BI 302105
Date Extracted:	02/11/13	Lab ID:	302105-06
Date Analyzed:	02/12/13	Data File:	021239.D
Matrix:	Soil	Instrument:	GCMS9
Units:	mg/kg (ppm)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	100	50	150
Toluene-d8	101	50	150
4-Bromofluorobenzene	96	50	150

Compounds:	Concentration mg/kg (ppm)
Benzene	<0.03
Toluene	<0.05
Ethylbenzene	<0.05
m,p-Xylene	<0.1
o-Xylene	<0.05
Naphthalene	<0.05

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW-9-16	Client:	Aspect Consulting, LLC
Date Received:	02/08/13	Project:	Ken's Texaco 120061, F&BI 302105
Date Extracted:	02/11/13	Lab ID:	302105-07
Date Analyzed:	02/13/13	Data File:	021243.D
Matrix:	Soil	Instrument:	GCMS9
Units:	mg/kg (ppm)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	99	50	150
Toluene-d8	101	50	150
4-Bromofluorobenzene	97	50	150

Compounds:	Concentration mg/kg (ppm)
Methyl t-butyl ether (MTBE)	<0.05
1,2-Dichloroethane (EDC)	<0.05
1,2-Dibromoethane (EDB)	<0.05
Benzene	0.19
Toluene	0.098
Ethylbenzene	2.1
m,p-Xylene	3.3
o-Xylene	0.19
Naphthalene	0.99

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW-7-16.5	Client:	Aspect Consulting, LLC
Date Received:	02/08/13	Project:	Ken's Texaco 120061, F&BI 302105
Date Extracted:	02/11/13	Lab ID:	302105-08
Date Analyzed:	02/12/13	Data File:	021240.D
Matrix:	Soil	Instrument:	GCMS9
Units:	mg/kg (ppm)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	101	50	150
Toluene-d8	101	50	150
4-Bromofluorobenzene	97	50	150

Compounds:	Concentration mg/kg (ppm)
Methyl t-butyl ether (MTBE)	<0.05
1,2-Dichloroethane (EDC)	<0.05
1,2-Dibromoethane (EDB)	<0.05
Benzene	<0.03
Toluene	<0.05
Ethylbenzene	<0.05
m,p-Xylene	<0.1
o-Xylene	<0.05
Naphthalene	<0.05

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW-8-23	Client:	Aspect Consulting, LLC
Date Received:	02/08/13	Project:	Ken's Texaco 120061, F&BI 302105
Date Extracted:	02/11/13	Lab ID:	302105-09
Date Analyzed:	02/12/13	Data File:	021241.D
Matrix:	Soil	Instrument:	GCMS9
Units:	mg/kg (ppm)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	96	50	150
Toluene-d8	98	50	150
4-Bromofluorobenzene	93	50	150

Compounds:	Concentration mg/kg (ppm)
Methyl t-butyl ether (MTBE)	<0.05
1,2-Dichloroethane (EDC)	<0.05
1,2-Dibromoethane (EDB)	<0.05
Benzene	<0.03
Toluene	<0.05
Ethylbenzene	<0.05
m,p-Xylene	<0.1
o-Xylene	<0.05
Naphthalene	<0.05

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	Method Blank	Client:	Aspect Consulting, LLC
Date Received:	NA	Project:	Ken's Texaco 120061, F&BI 302105
Date Extracted:	02/18/13	Lab ID:	03-0285 MB
Date Analyzed:	02/18/13	Data File:	021833.D
Matrix:	Soil	Instrument:	GCMS9
Units:	mg/kg (ppm)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	103	50	150
Toluene-d8	100	50	150
4-Bromofluorobenzene	100	50	150

Compounds:	Concentration mg/kg (ppm)
Vinyl chloride	<0.05
Chloroethane	<0.5 ca
1,1-Dichloroethene	<0.05
Methylene chloride	<0.5
trans-1,2-Dichloroethene	<0.05
1,1-Dichloroethane	<0.05
cis-1,2-Dichloroethene	<0.05
1,2-Dichloroethane (EDC)	<0.05
1,1,1-Trichloroethane	<0.05
Trichloroethene	<0.03
Tetrachloroethene	<0.025

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	Method Blank	Client:	Aspect Consulting, LLC
Date Received:	NA	Project:	Ken's Texaco 120061, F&BI 302105
Date Extracted:	02/11/13	Lab ID:	03-0132 mb
Date Analyzed:	02/11/13	Data File:	021107.D
Matrix:	Soil	Instrument:	GCMS9
Units:	mg/kg (ppm)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	100	50	150
Toluene-d8	99	50	150
4-Bromofluorobenzene	100	50	150

Compounds:	Concentration mg/kg (ppm)
Methyl t-butyl ether (MTBE)	<0.05
1,2-Dichloroethane (EDC)	<0.05
1,2-Dibromoethane (EDB)	<0.05
Benzene	<0.03
Toluene	<0.05
Ethylbenzene	<0.05
m,p-Xylene	<0.1
o-Xylene	<0.05
Naphthalene	<0.05

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Semivolatile Compounds By EPA Method 8270D SIM

Client Sample ID:	MW-11-15	Client:	Aspect Consulting, LLC
Date Received:	02/08/13	Project:	Ken's Texaco 120061, F&BI 302105
Date Extracted:	02/18/13	Lab ID:	302105-03 1/5
Date Analyzed:	02/18/13	Data File:	021827.D
Matrix:	Soil	Instrument:	GCMS6
Units:	mg/kg (ppm)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Anthracene-d10	93	50	150
Benzo(a)anthracene-d12	119	35	159

Compounds:	Concentration mg/kg (ppm)
Benz(a)anthracene	<0.01
Chrysene	<0.01
Benzo(a)pyrene	<0.01
Benzo(b)fluoranthene	<0.01
Benzo(k)fluoranthene	<0.01
Indeno(1,2,3-cd)pyrene	<0.01
Dibenz(a,h)anthracene	<0.01

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Semivolatile Compounds By EPA Method 8270D SIM

Client Sample ID:	MW-12-17.5	Client:	Aspect Consulting, LLC
Date Received:	02/08/13	Project:	Ken's Texaco 120061, F&BI 302105
Date Extracted:	02/18/13	Lab ID:	302105-05 1/5
Date Analyzed:	02/18/13	Data File:	021828.D
Matrix:	Soil	Instrument:	GCMS6
Units:	mg/kg (ppm)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Anthracene-d10	91	50	150
Benzo(a)anthracene-d12	119	35	159

Compounds:	Concentration mg/kg (ppm)
Benz(a)anthracene	<0.01
Chrysene	<0.01
Benzo(a)pyrene	<0.01
Benzo(b)fluoranthene	<0.01
Benzo(k)fluoranthene	<0.01
Indeno(1,2,3-cd)pyrene	<0.01
Dibenz(a,h)anthracene	<0.01

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Semivolatile Compounds By EPA Method 8270D SIM

Client Sample ID:	Method Blank	Client:	Aspect Consulting, LLC
Date Received:	NA	Project:	Ken's Texaco 120061, F&BI 302105
Date Extracted:	02/18/13	Lab ID:	03-0293 mb 1/5
Date Analyzed:	02/18/13	Data File:	021822.D
Matrix:	Soil	Instrument:	GCMS6
Units:	mg/kg (ppm)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Anthracene-d10	87	50	150
Benzo(a)anthracene-d12	97	35	159

Compounds:	Concentration mg/kg (ppm)
Benz(a)anthracene	<0.01
Chrysene	<0.01
Benzo(a)pyrene	<0.01
Benzo(b)fluoranthene	<0.01
Benzo(k)fluoranthene	<0.01
Indeno(1,2,3-cd)pyrene	<0.01
Dibenz(a,h)anthracene	<0.01

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 02/26/13

Date Received: 02/08/13

Project: Ken's Texaco 120061, F&BI 302105

**QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES
FOR TPH AS GASOLINE
USING METHOD NWTPH-Gx**

Laboratory Code: 302105-01 (Duplicate)

Analyte	Reporting Units	(Wet Wt) Sample Result	(Wet Wt) Duplicate Result	Relative Percent Difference (Limit 20)
Gasoline	mg/kg (ppm)	<2	<2	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Gasoline	mg/kg (ppm)	20	100	61-153

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 02/26/13

Date Received: 02/08/13

Project: Ken's Texaco 120061, F&BI 302105

**QUALITY ASSURANCE RESULTS FROM THE ANALYSIS OF SOIL
SAMPLES
FOR TOTAL PETROLEUM HYDROCARBONS AS
DIESEL EXTENDED USING METHOD NWTPH-Dx**

Laboratory Code: 302102-05 (Matrix Spike)

Analyte	Reporting Units	Spike Level	(Wet wt) Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	mg/kg (ppm)	5,000	<50	110	110	64-133	0

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Diesel Extended	mg/kg (ppm)	5,000	110	58-147

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 02/26/13

Date Received: 02/08/13

Project: Ken's Texaco 120061, F&BI 302105

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR TOTAL METALS USING EPA METHOD 200.8

Laboratory Code: 302157-02 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Chromium	mg/kg (ppm)	50	6.35	103	103	63-120	0
Nickel	mg/kg (ppm)	25	11.3	96 b	96 b	54-125	0 b
Zinc	mg/kg (ppm)	50	17.4	107 b	108 b	49-129	1 b
Cadmium	mg/kg (ppm)	10	<1	103	104	85-117	1
Lead	mg/kg (ppm)	50	2.83	103	103	64-139	0

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Chromium	mg/kg (ppm)	50	108	81-117
Nickel	mg/kg (ppm)	25	105	86-118
Zinc	mg/kg (ppm)	50	105	84-121
Cadmium	mg/kg (ppm)	10	103	88-114
Lead	mg/kg (ppm)	50	101	83-118

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 02/26/13

Date Received: 02/08/13

Project: Ken's Texaco 120061, F&BI 302105

**QUALITY ASSURANCE RESULTS
FOR THE ANALYSIS OF SOIL SAMPLES
FOR TOTAL METALS USING EPA METHOD 200.8**

Laboratory Code: 302105-08 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Lead	mg/kg (ppm)	50	5.52	97	96	64-139	1

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Lead	mg/kg (ppm)	50	102	83-118

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 02/26/13

Date Received: 02/08/13

Project: Ken's Texaco 120061, F&BI 302105

**QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES
FOR VOLATILES BY EPA METHOD 8260C**

Laboratory Code: 302105-08 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Acceptance Criteria
Methyl t-butyl ether (MTBE)	mg/kg (ppm)	2.5	<0.05	69	17-134
1,2-Dichloroethane (EDC)	mg/kg (ppm)	2.5	<0.05	72	22-124
1,2-Dibromoethane (EDB)	mg/kg (ppm)	2.5	<0.05	71	32-126
Benzene	mg/kg (ppm)	2.5	<0.03	69	26-114
Toluene	mg/kg (ppm)	2.5	<0.05	73	34-112
Ethylbenzene	mg/kg (ppm)	2.5	<0.05	75	38-111
m,p-Xylene	mg/kg (ppm)	5	<0.1	75	38-112
o-Xylene	mg/kg (ppm)	2.5	<0.05	75	38-113
Naphthalene	mg/kg (ppm)	2.5	<0.05	73	39-120

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Methyl t-butyl ether (MTBE)	mg/kg (ppm)	2.5	105	96	75-115	9
1,2-Dichloroethane (EDC)	mg/kg (ppm)	2.5	97	100	80-109	3
1,2-Dibromoethane (EDB)	mg/kg (ppm)	2.5	103	103	83-116	0
Benzene	mg/kg (ppm)	2.5	95	98	75-107	3
Toluene	mg/kg (ppm)	2.5	97	98	79-112	1
Ethylbenzene	mg/kg (ppm)	2.5	97	99	81-114	2
m,p-Xylene	mg/kg (ppm)	5	98	99	82-115	1
o-Xylene	mg/kg (ppm)	2.5	98	100	81-116	2
Naphthalene	mg/kg (ppm)	2.5	102	105	84-120	3

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 02/26/13

Date Received: 02/08/13

Project: Ken's Texaco 120061, F&BI 302105

**QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES
FOR VOLATILES BY EPA METHOD 8260C**

Laboratory Code: 302221-02 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Vinyl chloride	mg/kg (ppm)	2.5	<0.05	54	49	10-91	10
Chloroethane	mg/kg (ppm)	2.5	<0.5	60	60	10-101	0
1,1-Dichloroethene	mg/kg (ppm)	2.5	<0.05	75	74	11-103	1
Methylene chloride	mg/kg (ppm)	2.5	<0.5	90	86	14-128	5
trans-1,2-Dichloroethene	mg/kg (ppm)	2.5	<0.05	81	79	13-112	2
1,1-Dichloroethane	mg/kg (ppm)	2.5	<0.05	87	84	23-115	4
cis-1,2-Dichloroethene	mg/kg (ppm)	2.5	<0.05	88	85	25-120	3
1,2-Dichloroethane (EDC)	mg/kg (ppm)	2.5	<0.05	91	89	22-124	2
1,1,1-Trichloroethane	mg/kg (ppm)	2.5	<0.05	85	83	27-112	2
Trichloroethene	mg/kg (ppm)	2.5	<0.03	85	83	30-112	2
Tetrachloroethene	mg/kg (ppm)	2.5	<0.03	86	85	27-110	1

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Vinyl chloride	mg/kg (ppm)	2.5	78	42-107
Chloroethane	mg/kg (ppm)	2.5	73	47-115
1,1-Dichloroethene	mg/kg (ppm)	2.5	92	65-110
Methylene chloride	mg/kg (ppm)	2.5	103	62-119
trans-1,2-Dichloroethene	mg/kg (ppm)	2.5	95	71-113
1,1-Dichloroethane	mg/kg (ppm)	2.5	99	76-109
cis-1,2-Dichloroethene	mg/kg (ppm)	2.5	97	77-110
1,2-Dichloroethane (EDC)	mg/kg (ppm)	2.5	103	80-109
1,1,1-Trichloroethane	mg/kg (ppm)	2.5	97	72-116
Trichloroethene	mg/kg (ppm)	2.5	95	72-107
Tetrachloroethene	mg/kg (ppm)	2.5	95	77-110

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 02/26/13

Date Received: 02/08/13

Project: Ken's Texaco 120061, F&BI 302105

**QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL
SAMPLES FOR PNA'S BY EPA METHOD 8270D SIM**

Laboratory Code: 302148-02 1/25 and 1/250 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	Relative Percent Difference (Limit 20)
Benz(a)anthracene	mg/kg (ppm)	<0.05	<0.05	nm
Chrysene	mg/kg (ppm)	0.12	0.13	8
Benzo(b)fluoranthene	mg/kg (ppm)	<0.05	<0.05	nm
Benzo(k)fluoranthene	mg/kg (ppm)	<0.05	<0.05	nm
Benzo(a)pyrene	mg/kg (ppm)	<0.05	<0.05	nm
Indeno(1,2,3-cd)pyrene	mg/kg (ppm)	<0.05	<0.05	nm
Dibenz(a,h)anthracene	mg/kg (ppm)	<0.05	<0.05	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Benz(a)anthracene	mg/kg (ppm)	0.17	82	85	51-115	4
Chrysene	mg/kg (ppm)	0.17	90	90	55-129	0
Benzo(b)fluoranthene	mg/kg (ppm)	0.17	94	90	56-123	4
Benzo(k)fluoranthene	mg/kg (ppm)	0.17	94	97	54-131	3
Benzo(a)pyrene	mg/kg (ppm)	0.17	81	85	51-118	5
Indeno(1,2,3-cd)pyrene	mg/kg (ppm)	0.17	81	89	49-148	9
Dibenz(a,h)anthracene	mg/kg (ppm)	0.17	84	87	50-141	4

Data Qualifiers & Definitions

a - The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.

A1 - More than one compound of similar molecule structure was identified with equal probability.

b - The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be meaningful.

ca - The calibration results for this range fell outside of acceptance criteria. The value reported is an estimate.

c - The presence of the analyte indicated may be due to carryover from previous sample injections.

d - The sample was diluted. Detection limits may be raised due to dilution.

ds - The sample was diluted. Detection limits are raised due to dilution and surrogate recoveries may not be meaningful.

dv - Insufficient sample was available to achieve normal reporting limits and limits are raised accordingly.

fb - Analyte present in the blank and the sample.

fc - The compound is a common laboratory and field contaminant.

hr - The sample and duplicate were reextracted and reanalyzed. RPD results were still outside of control limits. The variability is attributed to sample inhomogeneity.

ht - Analysis performed outside the method or client-specified holding time requirement.

ip - Recovery fell outside of normal control limits. Compounds in the sample matrix interfered with the quantitation of the analyte.

j - The result is below normal reporting limits. The value reported is an estimate.

J - The internal standard associated with the analyte is out of control limits. The reported concentration is an estimate.

jl - The analyte result in the laboratory control sample is out of control limits. The reported concentration should be considered an estimate.

jr - The rpd result in laboratory control sample associated with the analyte is out of control limits. The reported concentration should be considered an estimate.

js - The surrogate associated with the analyte is out of control limits. The reported concentration should be considered an estimate.

lc - The presence of the compound indicated is likely due to laboratory contamination.

L - The reported concentration was generated from a library search.

nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.

pc - The sample was received in a container not approved by the method. The value reported should be considered an estimate.

pr - The sample was received with incorrect preservation. The value reported should be considered an estimate.

ve - Estimated concentration calculated for an analyte response above the valid instrument calibration range. A dilution is required to obtain an accurate quantification of the analyte.

vo - The value reported fell outside the control limits established for this analyte.

x - The sample chromatographic pattern does not resemble the fuel standard used for quantitation.

302105

SAMPLE CHAIN OF CUSTODY

ME 2/8/13 CF3/VSR

Send Report To Bob Hanford, Chip GoodhueCompany Aspect Consulting

Address _____

City, State, ZIP Bainbridge Island, WA

Phone # _____

Fax # _____

SAMPLERS (signature) PROJECT NAME/NO. Ken's TexacoPO# 1200001

REMARKS

call Bob Hanford for analyses

Page # _____ of _____

TURNAROUND TIME

☒ Standard (2 Weeks)☐ RUSH

Rush charges authorized by _____

SAMPLE DISPOSAL

☐ Dispose after 30 days☐ Return samples☐ Will call with instructions

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of containers	ANALYSES REQUESTED												Notes
						TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by 8260	SVOCs by 8270	HFS	HOH	Total Lead	Naphthalene	EDS, EDC, MTBE	Cpalls, HVOCs	Pb, Cd, Cr, Ni, Zn	
MW-10-20	01A	2/4/13	1040	SOIL	5	X	X	X				X	X	X	*			X-analyse as
MW-10-25	02A		1105		5	X	X	X				X	X	X				marked per Blt
MW-11-15	03A		1350		6	X	X	X				X		X		*	*	2/8/13
MW-11-23	04	↓	1430		6	X	X	X				X		X		*	*	Run Holtest for
MW-12-17.5	05	2/5/13	0840		6	X	X	X				X		X		*	*	Lead, cpalls, PCBs, HVCs, Cd, Cr, Ni, Zn
MW-12-23	06	↓	0900		6	X	X	X				X		X				Run Holtest for
MW-9-16	07	↓	1440		6	X	X	X				X	X	X	X			Pb, cpalls, PCBs, HVCs, Cd, Cr, Ni, Zn
MW-7-16.5	08	2/6/13	1340		6	X	X	X				X	X	X	X			3 oc 110726s
MW-8-23	09A	2/7/13	1100	↓	5	X	X	X				X	X	X	X			samples received at po RH 2/5/13



Friedman & Bruya, Inc.
3012 16th Avenue West

Seattle, WA 98119-2029

Ph. (206) 285-8282

Fax (206) 283-5044

FORMS\COC\COC.DOC

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by: 	Amy Tice	Aspect	2/8/13	1125
Received by: 	James Bruya	F&B	2/8/13	1125
Relinquished by: _____	_____	_____	_____	_____
Received by: _____	_____	_____	_____	_____

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Yelena Aravkina, M.S.
Bradley T. Benson, B.S.
Kurt Johnson, B.S.

3012 16th Avenue West
Seattle, WA 98119-2029
TEL: (206) 285-8282
e-mail: fbi@isomedia.com

February 26, 2013

Chip Goodhue, Project Manager
Aspect Consulting, LLC
350 Madison Ave. N.
Bainbridge Island, WA 98110-1810

Dear Mr. Goodhue:

Included are the results from the testing of material submitted on February 14, 2013 from the Ken's Texaco 120061, F&BI 302182 project. There are 37 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

We appreciate this opportunity to be of service to you and hope you will call if you have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.



Michael Erdahl
Project Manager

Enclosures

c: data@aspectconsulting.com, Parker Wittman, Bob Hanford
ASP0226R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on February 14, 2013 by Friedman & Bruya, Inc. from the Aspect Consulting, LLC Ken's Texaco 120061, F&BI 302182 project. Samples were logged in under the laboratory ID's listed below.

<u>Laboratory ID</u>	<u>Aspect Consulting, LLC</u>
302182 -01	MW-1-021313
302182 -02	MW-7-021313
302182 -03	MW-10-021313
302182 -04	MW-8-021313
302182 -05	MW-11-021313
302182 -06	MW-12-021313

All quality control requirements were acceptable.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 02/26/13

Date Received: 02/14/13

Project: Ken's Texaco 120061, F&BI 302182

Date Extracted: 02/15/13

Date Analyzed: 02/15/13

**RESULTS FROM THE ANALYSIS OF WATER SAMPLES
FOR TOTAL PETROLEUM HYDROCARBONS AS GASOLINE
USING METHOD NWTPH-Gx**
Results Reported as ug/L (ppb)

<u>Sample ID</u> Laboratory ID	<u>Gasoline Range</u>	Surrogate (% Recovery) (Limit 51-134)
MW-1-021313 302182-01	1,700	124
MW-7-021313 302182-02	990	102
MW-10-021313 302182-03 1/5	2,500	116
MW-8-021313 302182-04	510	114
MW-11-021313 302182-05 1/10	5,000	114
MW-12-021313 302182-06	<100	101
Method Blank 03-0266 MB	<100	98

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 02/26/13

Date Received: 02/14/13

Project: Ken's Texaco 120061, F&BI 302182

Date Extracted: 02/20/13

Date Analyzed: 02/20/13

**RESULTS FROM THE ANALYSIS OF WATER SAMPLES
FOR TOTAL PETROLEUM HYDROCARBONS AS
DIESEL AND MOTOR OIL
USING METHOD NWTPH-Dx**

Results Reported as ug/L (ppb)

<u>Sample ID</u> Laboratory ID	<u>Diesel Range</u> (C ₁₀ -C ₂₅)	<u>Motor Oil Range</u> (C ₂₅ -C ₃₆)	<u>Surrogate</u> (% Recovery) (Limit 47-140)
MW-1-021313 302182-01	400 x	<250	91
MW-7-021313 302182-02	240 x	<250	87
MW-10-021313 302182-03	430 x	<250	99
MW-8-021313 302182-04	230 x	<250	95
MW-11-021313 302182-05	1,400 x	280 x	93
MW-12-021313 302182-06	150 x	<250	104
Method Blank 03-302 MB	<50	<250	94

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 200.8

Client ID:	MW-1-021313	Client:	Aspect Consulting, LLC
Date Received:	02/14/13	Project:	Ken's Texaco 120061, F&BI 302182
Date Extracted:	02/15/13	Lab ID:	302182-01
Date Analyzed:	02/15/13	Data File:	302182-01.030
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	AP

Internal Standard:	% Recovery:	Lower	Upper
Holmium	84	Limit:	Limit:
		60	125

Analyte:	Concentration
	ug/L (ppb)

Lead	<1
------	----

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 200.8

Client ID:	MW-7-021313	Client:	Aspect Consulting, LLC
Date Received:	02/14/13	Project:	Ken's Texaco 120061, F&BI 302182
Date Extracted:	02/15/13	Lab ID:	302182-02
Date Analyzed:	02/15/13	Data File:	302182-02.031
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	AP

Internal Standard:	% Recovery:	Lower	Upper
Holmium	81	Limit:	Limit:
		60	125

Analyte:	Concentration
	ug/L (ppb)

Lead	<1
------	----

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 200.8

Client ID:	MW-10-021313	Client:	Aspect Consulting, LLC
Date Received:	02/14/13	Project:	Ken's Texaco 120061, F&BI 302182
Date Extracted:	02/15/13	Lab ID:	302182-03
Date Analyzed:	02/15/13	Data File:	302182-03.032
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	AP

Internal Standard:	% Recovery:	Lower	Upper
Holmium	82	Limit:	Limit:
		60	125

Analyte:	Concentration
	ug/L (ppb)

Lead	<1
------	----

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 200.8

Client ID:	MW-8-021313	Client:	Aspect Consulting, LLC
Date Received:	02/14/13	Project:	Ken's Texaco 120061, F&BI 302182
Date Extracted:	02/15/13	Lab ID:	302182-04
Date Analyzed:	02/15/13	Data File:	302182-04.033
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	80	60	125
Indium	81	60	125
Holmium	81	60	125

Analyte:	Concentration ug/L (ppb)
Chromium	1.28
Nickel	12.6
Zinc	<1
Cadmium	<1
Lead	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 200.8

Client ID:	MW-11-021313	Client:	Aspect Consulting, LLC
Date Received:	02/14/13	Project:	Ken's Texaco 120061, F&BI 302182
Date Extracted:	02/15/13	Lab ID:	302182-05
Date Analyzed:	02/15/13	Data File:	302182-05.034
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	75	60	125
Indium	75	60	125
Holmium	79	60	125

Analyte:	Concentration ug/L (ppb)
Chromium	1.67
Nickel	33.6
Zinc	3.50
Cadmium	<1
Lead	3.93

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 200.8

Client ID:	MW-12-021313	Client:	Aspect Consulting, LLC
Date Received:	02/14/13	Project:	Ken's Texaco 120061, F&BI 302182
Date Extracted:	02/15/13	Lab ID:	302182-06
Date Analyzed:	02/15/13	Data File:	302182-06.035
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	79	60	125
Indium	80	60	125
Holmium	82	60	125

Analyte:	Concentration ug/L (ppb)
Chromium	1.54
Nickel	8.40
Zinc	38.2
Cadmium	<1
Lead	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 200.8

Client ID:	Method Blank	Client:	Aspect Consulting, LLC
Date Received:	NA	Project:	Ken's Texaco 120061, F&BI 302182
Date Extracted:	02/14/13	Lab ID:	I3-65 mb
Date Analyzed:	02/15/13	Data File:	I3-65 mb.008
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	94	60	125
Indium	93	60	125
Holmium	92	60	125

Analyte:	Concentration ug/L (ppb)
Chromium	<1
Nickel	<1
Zinc	<1
Cadmium	<1
Lead	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW-1-021313	Client:	Aspect Consulting, LLC
Date Received:	02/14/13	Project:	Ken's Texaco 120061, F&BI 302182
Date Extracted:	02/15/13	Lab ID:	302182-01
Date Analyzed:	02/15/13	Data File:	021507.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	100	57	121
Toluene-d8	104	63	127
4-Bromofluorobenzene	101	60	133

Compounds:	Concentration ug/L (ppb)
Methyl t-butyl ether (MTBE)	<1
1,2-Dichloroethane (EDC)	<1
1,2-Dibromoethane (EDB)	<1
Benzene	0.35
Toluene	<1
Ethylbenzene	<1
m,p-Xylene	<2
o-Xylene	<1
Naphthalene	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW-7-021313	Client:	Aspect Consulting, LLC
Date Received:	02/14/13	Project:	Ken's Texaco 120061, F&BI 302182
Date Extracted:	02/14/13	Lab ID:	302182-02
Date Analyzed:	02/14/13	Data File:	021439.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	100	57	121
Toluene-d8	102	63	127
4-Bromofluorobenzene	100	60	133

Compounds:	Concentration ug/L (ppb)
Methyl t-butyl ether (MTBE)	<1
1,2-Dichloroethane (EDC)	<1
1,2-Dibromoethane (EDB)	<1
Benzene	<0.35
Toluene	<1
Ethylbenzene	<1
m,p-Xylene	<2
o-Xylene	<1
Naphthalene	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID: MW-10-021313	Client: Aspect Consulting, LLC
Date Received: 02/14/13	Project: Ken's Texaco 120061, F&BI 302182
Date Extracted: 02/14/13	Lab ID: 302182-03
Date Analyzed: 02/14/13	Data File: 021437.D
Matrix: Water	Instrument: GCMS4
Units: ug/L (ppb)	Operator: JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	99	57	121
Toluene-d8	101	63	127
4-Bromofluorobenzene	100	60	133

Compounds:	Concentration ug/L (ppb)
Methyl t-butyl ether (MTBE)	<1
1,2-Dichloroethane (EDC)	1.4
1,2-Dibromoethane (EDB)	<1
Benzene	56
Toluene	85
Ethylbenzene	100
m,p-Xylene	300
o-Xylene	110
Naphthalene	33

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW-8-021313	Client:	Aspect Consulting, LLC
Date Received:	02/14/13	Project:	Ken's Texaco 120061, F&BI 302182
Date Extracted:	02/14/13	Lab ID:	302182-04
Date Analyzed:	02/14/13	Data File:	021435.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	98	57	121
Toluene-d8	101	63	127
4-Bromofluorobenzene	100	60	133

Compounds:	Concentration ug/L (ppb)
Methyl t-butyl ether (MTBE)	<1
1,2-Dichloroethane (EDC)	<1
1,2-Dibromoethane (EDB)	<1
Benzene	20
Toluene	1.5
Ethylbenzene	3.4
m,p-Xylene	7.9
o-Xylene	3.8
Naphthalene	1.8
Vinyl chloride	<0.2
Chloroethane	<1
1,1-Dichloroethene	<1
Methylene chloride	<5
trans-1,2-Dichloroethene	<1
1,1-Dichloroethane	<1
cis-1,2-Dichloroethene	<1
1,1,1-Trichloroethane	<1
Trichloroethene	<1
Tetrachloroethene	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW-11-021313	Client:	Aspect Consulting, LLC
Date Received:	02/14/13	Project:	Ken's Texaco 120061, F&BI 302182
Date Extracted:	02/14/13	Lab ID:	302182-05
Date Analyzed:	02/14/13	Data File:	021440.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	99	57	121
Toluene-d8	102	63	127
4-Bromofluorobenzene	98	60	133

Compounds:	Concentration ug/L (ppb)
Methyl t-butyl ether (MTBE)	<1
1,2-Dichloroethane (EDC)	10
1,2-Dibromoethane (EDB)	<1
Benzene	410 ve
Toluene	71
Ethylbenzene	170 ve
m,p-Xylene	350 ve
o-Xylene	110
Vinyl chloride	<0.2
Chloroethane	<1
1,1-Dichloroethene	<1
Methylene chloride	<5
trans-1,2-Dichloroethene	<1
1,1-Dichloroethane	<1
cis-1,2-Dichloroethene	<1
1,1,1-Trichloroethane	<1
Trichloroethene	<1
Tetrachloroethene	<1
Naphthalene	56

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW-11-021313	Client:	Aspect Consulting, LLC
Date Received:	02/14/13	Project:	Ken's Texaco 120061, F&BI 302182
Date Extracted:	02/15/13	Lab ID:	302182-05 1/10
Date Analyzed:	02/15/13	Data File:	021529.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	102	57	121
Toluene-d8	102	63	127
4-Bromofluorobenzene	99	60	133

Compounds:	Concentration ug/L (ppb)
Methyl t-butyl ether (MTBE)	<10
1,2-Dichloroethane (EDC)	11
1,2-Dibromoethane (EDB)	<10
Benzene	430
Toluene	70
Ethylbenzene	160
m,p-Xylene	350
o-Xylene	110
Vinyl chloride	<2
Chloroethane	<10
1,1-Dichloroethene	<10
Methylene chloride	<50
trans-1,2-Dichloroethene	<10
1,1-Dichloroethane	<10
cis-1,2-Dichloroethene	<10
1,1,1-Trichloroethane	<10
Trichloroethene	<10
Tetrachloroethene	<10
Naphthalene	58

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW-12-021313	Client:	Aspect Consulting, LLC
Date Received:	02/14/13	Project:	Ken's Texaco 120061, F&BI 302182
Date Extracted:	02/14/13	Lab ID:	302182-06
Date Analyzed:	02/14/13	Data File:	021436.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	99	57	121
Toluene-d8	101	63	127
4-Bromofluorobenzene	100	60	133

Compounds:	Concentration ug/L (ppb)
Methyl t-butyl ether (MTBE)	<1
1,2-Dichloroethane (EDC)	<1
1,2-Dibromoethane (EDB)	<1
Benzene	<0.35
Toluene	<1
Ethylbenzene	<1
m,p-Xylene	<2
o-Xylene	<1
Naphthalene	<1
Vinyl chloride	<0.2
Chloroethane	<1
1,1-Dichloroethene	<1
Methylene chloride	<5
trans-1,2-Dichloroethene	<1
1,1-Dichloroethane	<1
cis-1,2-Dichloroethene	<1
1,1,1-Trichloroethane	<1
Trichloroethene	<1
Tetrachloroethene	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	Method Blank	Client:	Aspect Consulting, LLC
Date Received:	NA	Project:	Ken's Texaco 120061, F&BI 302182
Date Extracted:	02/14/13	Lab ID:	03-0137 MB
Date Analyzed:	02/14/13	Data File:	021406.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	103	57	121
Toluene-d8	102	63	127
4-Bromofluorobenzene	100	60	133

Compounds:	Concentration ug/L (ppb)
Methyl t-butyl ether (MTBE)	<1
1,2-Dichloroethane (EDC)	<1
1,2-Dibromoethane (EDB)	<1
Benzene	<0.35
Toluene	<1
Ethylbenzene	<1
m,p-Xylene	<2
o-Xylene	<1
Naphthalene	<1
Vinyl chloride	<0.2
Chloroethane	<1
1,1-Dichloroethene	<1
Methylene chloride	<5
trans-1,2-Dichloroethene	<1
1,1-Dichloroethane	<1
cis-1,2-Dichloroethene	<1
1,1,1-Trichloroethane	<1
Trichloroethene	<1
Tetrachloroethene	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	Method Blank	Client:	Aspect Consulting, LLC
Date Received:	NA	Project:	Ken's Texaco 120061, F&BI 302182
Date Extracted:	02/15/13	Lab ID:	03-0139 MB
Date Analyzed:	02/15/13	Data File:	021506.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	99	57	121
Toluene-d8	101	63	127
4-Bromofluorobenzene	100	60	133

Compounds:	Concentration ug/L (ppb)
Methyl t-butyl ether (MTBE)	<1
1,2-Dibromoethane (EDB)	<1
1,2-Dichloroethane (EDC)	<1
Benzene	<0.35
Toluene	<1
Ethylbenzene	<1
m,p-Xylene	<2
o-Xylene	<1
Vinyl chloride	<0.2
Chloroethane	<1
1,1-Dichloroethene	<1
Methylene chloride	<5
trans-1,2-Dichloroethene	<1
1,1-Dichloroethane	<1
cis-1,2-Dichloroethene	<1
1,1,1-Trichloroethane	<1
Trichloroethene	<1
Tetrachloroethene	<1
Naphthalene	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Semivolatile Compounds By EPA Method 8270D SIM

Client Sample ID:	MW-8-021313	Client:	Aspect Consulting, LLC
Date Received:	02/14/13	Project:	Ken's Texaco 120061, F&BI 302182
Date Extracted:	02/19/13	Lab ID:	302182-04 1/2
Date Analyzed:	02/20/13	Data File:	022007A.D
Matrix:	Water	Instrument:	GCMS6
Units:	ug/L (ppb)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Anthracene-d10	103	50	150
Benzo(a)anthracene-d12	123	50	129

Compounds:	Concentration ug/L (ppb)
Benz(a)anthracene	<0.1
Chrysene	<0.1
Benzo(a)pyrene	<0.1
Benzo(b)fluoranthene	<0.1
Benzo(k)fluoranthene	<0.1
Indeno(1,2,3-cd)pyrene	<0.1
Dibenz(a,h)anthracene	<0.1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Semivolatile Compounds By EPA Method 8270D SIM

Client Sample ID:	MW-11-021313	Client:	Aspect Consulting, LLC
Date Received:	02/14/13	Project:	Ken's Texaco 120061, F&BI 302182
Date Extracted:	02/19/13	Lab ID:	302182-05 1/2
Date Analyzed:	02/20/13	Data File:	022008.D
Matrix:	Water	Instrument:	GCMS6
Units:	ug/L (ppb)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Anthracene-d10	94	50	150
Benzo(a)anthracene-d12	116	50	129

Compounds:	Concentration ug/L (ppb)
Benz(a)anthracene	<0.1
Chrysene	<0.1
Benzo(a)pyrene	<0.1
Benzo(b)fluoranthene	<0.1
Benzo(k)fluoranthene	<0.1
Indeno(1,2,3-cd)pyrene	<0.1
Dibenz(a,h)anthracene	<0.1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Semivolatile Compounds By EPA Method 8270D SIM

Client Sample ID:	MW-12-021313	Client:	Aspect Consulting, LLC
Date Received:	02/14/13	Project:	Ken's Texaco 120061, F&BI 302182
Date Extracted:	02/19/13	Lab ID:	302182-06 1/2
Date Analyzed:	02/21/13	Data File:	022106.D
Matrix:	Water	Instrument:	GCMS6
Units:	ug/L (ppb)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Anthracene-d10	94	50	150
Benzo(a)anthracene-d12	121	50	129

Compounds:	Concentration ug/L (ppb)
Benz(a)anthracene	<0.1
Chrysene	<0.1
Benzo(a)pyrene	<0.1
Benzo(b)fluoranthene	<0.1
Benzo(k)fluoranthene	<0.1
Indeno(1,2,3-cd)pyrene	<0.1
Dibenz(a,h)anthracene	<0.1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Semivolatile Compounds By EPA Method 8270D SIM

Client Sample ID:	Method Blank	Client:	Aspect Consulting, LLC
Date Received:	NA	Project:	Ken's Texaco 120061, F&BI 302182
Date Extracted:	02/19/13	Lab ID:	03-0301 mb
Date Analyzed:	02/20/13	Data File:	022006.D
Matrix:	Water	Instrument:	GCMS6
Units:	ug/L (ppb)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Anthracene-d10	90	50	150
Benzo(a)anthracene-d12	98	50	129

Compounds:	Concentration ug/L (ppb)
Benz(a)anthracene	<0.1
Chrysene	<0.1
Benzo(a)pyrene	<0.1
Benzo(b)fluoranthene	<0.1
Benzo(k)fluoranthene	<0.1
Indeno(1,2,3-cd)pyrene	<0.1
Dibenz(a,h)anthracene	<0.1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For PCBs By EPA Method 8082

Client Sample ID:	MW-8-021313	Client:	Aspect Consulting, LLC
Date Received:	02/14/13	Project:	Ken's Texaco 120061, F&BI 302182
Date Extracted:	02/18/13	Lab ID:	302182-04
Date Analyzed:	02/18/13	Data File:	021818.D\ECD1A.CH
Matrix:	Water	Instrument:	GC7
Units:	ug/L (ppb)	Operator:	mwdl

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
TCMX	79	50	150

Compounds:	Concentration ug/L (ppb)
Aroclor 1221	<0.1
Aroclor 1232	<0.1
Aroclor 1016	<0.1
Aroclor 1242	<0.1
Aroclor 1248	<0.1
Aroclor 1254	<0.1
Aroclor 1260	<0.1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For PCBs By EPA Method 8082

Client Sample ID:	MW-11-021313	Client:	Aspect Consulting, LLC
Date Received:	02/14/13	Project:	Ken's Texaco 120061, F&BI 302182
Date Extracted:	02/18/13	Lab ID:	302182-05
Date Analyzed:	02/18/13	Data File:	021820.D\ECD1A.CH
Matrix:	Water	Instrument:	GC7
Units:	ug/L (ppb)	Operator:	mwdl

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
TCMX	64	50	150

Compounds:	Concentration ug/L (ppb)
Aroclor 1221	<0.1
Aroclor 1232	<0.1
Aroclor 1016	<0.1
Aroclor 1242	<0.1
Aroclor 1248	<0.1
Aroclor 1254	<0.1
Aroclor 1260	<0.1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For PCBs By EPA Method 8082

Client Sample ID:	MW-12-021313	Client:	Aspect Consulting, LLC
Date Received:	02/14/13	Project:	Ken's Texaco 120061, F&BI 302182
Date Extracted:	02/18/13	Lab ID:	302182-06
Date Analyzed:	02/18/13	Data File:	021822.D\ECD1A.CH
Matrix:	Water	Instrument:	GC7
Units:	ug/L (ppb)	Operator:	mwdl

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
TCMX	90	50	150

Compounds:	Concentration ug/L (ppb)
Aroclor 1221	<0.1
Aroclor 1232	<0.1
Aroclor 1016	<0.1
Aroclor 1242	<0.1
Aroclor 1248	<0.1
Aroclor 1254	<0.1
Aroclor 1260	<0.1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For PCBs By EPA Method 8082

Client Sample ID:	Method Blank	Client:	Aspect Consulting, LLC
Date Received:	NA	Project:	Ken's Texaco 120061, F&BI 302182
Date Extracted:	02/18/13	Lab ID:	03-297 mb
Date Analyzed:	02/18/13	Data File:	021816.D\ECD1A.CH
Matrix:	Water	Instrument:	GC7
Units:	ug/L (ppb)	Operator:	mwdl

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
TCMX	64	50	150

Compounds:	Concentration ug/L (ppb)
Aroclor 1221	<0.1
Aroclor 1232	<0.1
Aroclor 1016	<0.1
Aroclor 1242	<0.1
Aroclor 1248	<0.1
Aroclor 1254	<0.1
Aroclor 1260	<0.1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 02/26/13

Date Received: 02/14/13

Project: Ken's Texaco 120061, F&BI 302182

**QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER
SAMPLES FOR TPH AS GASOLINE
USING METHOD NWTPH-Gx**

Laboratory Code: 302167-01 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	Relative Percent Difference (Limit 20)
Gasoline	ug/L (ppb)	<100	<100	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Gasoline	ug/L (ppb)	1,000	96	69-134

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 02/26/13

Date Received: 02/14/13

Project: Ken's Texaco 120061, F&BI 302182

**QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER
SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS
DIESEL EXTENDED USING METHOD NWTPH-Dx**

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	ug/L (ppb)	2,500	89	96	61-133	8

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 02/26/13

Date Received: 02/14/13

Project: Ken's Texaco 120061, F&BI 302182

**QUALITY ASSURANCE RESULTS
FOR THE ANALYSIS OF WATER SAMPLES
FOR TOTAL METALS USING EPA METHOD 200.8**

Laboratory Code: 302160-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Chromium	ug/L (ppb)	20	53.1	93 b	70 b	71-130	28 b
Nickel	ug/L (ppb)	20	25.8	86 b	86 b	71-120	0 b
Zinc	ug/L (ppb)	50	1,740	46 b	78 b	51-142	52 b
Cadmium	ug/L (ppb)	5	<1	102	106	86-115	4
Lead	ug/L (ppb)	10	2.21	95 b	97 b	85-115	2 b

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Chromium	ug/L (ppb)	20	103	80-119
Nickel	ug/L (ppb)	20	104	83-119
Zinc	ug/L (ppb)	50	103	82-120
Cadmium	ug/L (ppb)	5	103	86-118
Lead	ug/L (ppb)	10	105	84-120

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 02/26/13

Date Received: 02/14/13

Project: Ken's Texaco 120061, F&BI 302182

**QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER
SAMPLES FOR VOLATILES BY EPA METHOD 8260C**

Laboratory Code: 302171-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Acceptance Criteria
Vinyl chloride	ug/L (ppb)	50	<0.2	104	36-166
Chloroethane	ug/L (ppb)	50	<1	106	46-160
1,1-Dichloroethene	ug/L (ppb)	50	<1	99	60-136
Methylene chloride	ug/L (ppb)	50	<5	93	67-132
trans-1,2-Dichloroethene	ug/L (ppb)	50	<1	97	72-129
1,1-Dichloroethane	ug/L (ppb)	50	<1	97	70-128
cis-1,2-Dichloroethene	ug/L (ppb)	50	<1	96	71-127
1,2-Dichloroethane (EDC)	ug/L (ppb)	50	<1	95	69-133
1,1,1-Trichloroethane	ug/L (ppb)	50	<1	96	60-146
Trichloroethene	ug/L (ppb)	50	<1	94	66-135
Tetrachloroethene	ug/L (ppb)	50	<1	93	73-129
Methyl t-butyl ether (MTBE)	ug/L (ppb)	50	<1	96	74-127
Benzene	ug/L (ppb)	50	<0.35	94	76-125
Toluene	ug/L (ppb)	50	<1	94	76-122
1,2-Dibromoethane (EDB)	ug/L (ppb)	50	<1	96	69-134
Ethylbenzene	ug/L (ppb)	50	<1	94	69-135
m,p-Xylene	ug/L (ppb)	100	<2	94	69-135
o-Xylene	ug/L (ppb)	50	<1	94	68-137
Naphthalene	ug/L (ppb)	50	<1	102	44-164

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 02/26/13

Date Received: 02/14/13

Project: Ken's Texaco 120061, F&BI 302182

**QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER
SAMPLES FOR VOLATILES BY EPA METHOD 8260C**

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Vinyl chloride	ug/L (ppb)	50	110	106	50-154	4
Chloroethane	ug/L (ppb)	50	112	101	58-146	10
1,1-Dichloroethene	ug/L (ppb)	50	94	96	67-136	2
Methylene chloride	ug/L (ppb)	50	87	93	39-148	7
Methyl t-butyl ether (MTBE)	ug/L (ppb)	50	99	97	64-147	2
trans-1,2-Dichloroethene	ug/L (ppb)	50	100	97	68-128	3
1,1-Dichloroethane	ug/L (ppb)	50	99	97	79-121	2
cis-1,2-Dichloroethene	ug/L (ppb)	50	100	97	80-123	3
1,2-Dichloroethane (EDC)	ug/L (ppb)	50	99	97	73-132	2
1,2-Dibromoethane (EDB)	ug/L (ppb)	50	98	97	82-125	1
1,1,1-Trichloroethane	ug/L (ppb)	50	99	96	83-130	3
Benzene	ug/L (ppb)	50	98	95	69-134	3
Trichloroethene	ug/L (ppb)	50	98	95	80-120	3
Toluene	ug/L (ppb)	50	98	95	72-122	3
Tetrachloroethene	ug/L (ppb)	50	96	94	76-121	2
Ethylbenzene	ug/L (ppb)	50	98	96	77-124	2
m,p-Xylene	ug/L (ppb)	100	98	95	83-125	3
o-Xylene	ug/L (ppb)	50	97	96	86-121	1
Naphthalene	ug/L (ppb)	50	102	97	64-133	5

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 02/26/13

Date Received: 02/14/13

Project: Ken's Texaco 120061, F&BI 302182

**QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER
SAMPLES FOR VOLATILES BY EPA METHOD 8260C**

Laboratory Code: 302212-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Acceptance Criteria
Vinyl chloride	ug/L (ppb)	50	<0.2	113	36-166
Chloroethane	ug/L (ppb)	50	<1	112	46-160
1,1-Dichloroethene	ug/L (ppb)	50	<1	97	60-136
Methylene chloride	ug/L (ppb)	50	<5	95	67-132
Methyl t-butyl ether (MTBE)	ug/L (ppb)	50	<1	101	74-127
trans-1,2-Dichloroethene	ug/L (ppb)	50	<1	101	72-129
1,1-Dichloroethane	ug/L (ppb)	50	<1	100	70-128
cis-1,2-Dichloroethene	ug/L (ppb)	50	<1	101	71-127
1,2-Dichloroethane (EDC)	ug/L (ppb)	50	<1	115	69-133
1,2-Dibromoethane (EDB)	ug/L (ppb)	50	<1	99	69-134
1,1,1-Trichloroethane	ug/L (ppb)	50	<1	101	60-146
Benzene	ug/L (ppb)	50	<0.35	98	76-125
Trichloroethene	ug/L (ppb)	50	<1	98	66-135
Toluene	ug/L (ppb)	50	<1	97	76-122
Tetrachloroethene	ug/L (ppb)	50	<1	96	73-129
Ethylbenzene	ug/L (ppb)	50	<1	97	69-135
m,p-Xylene	ug/L (ppb)	100	<2	97	69-135
o-Xylene	ug/L (ppb)	50	<1	98	68-137
Naphthalene	ug/L (ppb)	50	<1	96	44-164

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 02/26/13

Date Received: 02/14/13

Project: Ken's Texaco 120061, F&BI 302182

**QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER
SAMPLES FOR VOLATILES BY EPA METHOD 8260C**

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Vinyl chloride	ug/L (ppb)	50	110	106	50-154	4
Chloroethane	ug/L (ppb)	50	112	101	58-146	10
1,1-Dichloroethene	ug/L (ppb)	50	94	96	67-136	2
Methylene chloride	ug/L (ppb)	50	87	93	39-148	7
Methyl t-butyl ether (MTBE)	ug/L (ppb)	50	99	97	64-147	2
trans-1,2-Dichloroethene	ug/L (ppb)	50	100	97	68-128	3
1,1-Dichloroethane	ug/L (ppb)	50	99	97	79-121	2
cis-1,2-Dichloroethene	ug/L (ppb)	50	100	97	80-123	3
1,2-Dichloroethane (EDC)	ug/L (ppb)	50	99	97	73-132	2
1,2-Dibromoethane (EDB)	ug/L (ppb)	50	98	97	82-125	1
1,1,1-Trichloroethane	ug/L (ppb)	50	99	96	83-130	3
Benzene	ug/L (ppb)	50	98	95	69-134	3
Trichloroethene	ug/L (ppb)	50	98	95	80-120	3
Toluene	ug/L (ppb)	50	98	95	72-122	3
Tetrachloroethene	ug/L (ppb)	50	96	94	76-121	2
Ethylbenzene	ug/L (ppb)	50	98	96	77-124	2
m,p-Xylene	ug/L (ppb)	100	98	95	83-125	3
o-Xylene	ug/L (ppb)	50	97	96	86-121	1
Naphthalene	ug/L (ppb)	50	102	97	64-133	5

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 02/26/13

Date Received: 02/14/13

Project: Ken's Texaco 120061, F&BI 302182

**QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER
SAMPLES FOR PNA'S BY EPA METHOD 8270D SIM**

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Benz(a)anthracene	ug/L (ppb)	1	92	84	60-118	9
Chrysene	ug/L (ppb)	1	98	93	66-125	5
Benzo(b)fluoranthene	ug/L (ppb)	1	102	86	55-135	17
Benzo(k)fluoranthene	ug/L (ppb)	1	103	101	62-125	2
Benzo(a)pyrene	ug/L (ppb)	1	96	85	58-127	12
Indeno(1,2,3-cd)pyrene	ug/L (ppb)	1	89	80	36-142	11
Dibenz(a,h)anthracene	ug/L (ppb)	1	92	84	37-133	9
Benzo(g,h,i)perylene	ug/L (ppb)	1	91	87	34-135	4

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 02/26/13

Date Received: 02/14/13

Project: Ken's Texaco 120061, F&BI 302182

**QUALITY ASSURANCE RESULTS
FOR THE ANALYSIS OF WATER SAMPLES FOR POLYCHLORINATED
BIPHENYLS AS
AROCOR 1016/1260 BY EPA METHOD 8082A**

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	% Recovery LCS	% Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Aroclor 1016	ug/L (ppb)	1.0	90	94	70-130	4
Aroclor 1260	ug/L (ppb)	1.0	105	96	70-130	9

Data Qualifiers & Definitions

a - The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.

A1 - More than one compound of similar molecule structure was identified with equal probability.

b - The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be meaningful.

ca - The calibration results for this range fell outside of acceptance criteria. The value reported is an estimate.

c - The presence of the analyte indicated may be due to carryover from previous sample injections.

d - The sample was diluted. Detection limits may be raised due to dilution.

ds - The sample was diluted. Detection limits are raised due to dilution and surrogate recoveries may not be meaningful.

dv - Insufficient sample was available to achieve normal reporting limits and limits are raised accordingly.

fb - Analyte present in the blank and the sample.

fc - The compound is a common laboratory and field contaminant.

hr - The sample and duplicate were reextracted and reanalyzed. RPD results were still outside of control limits. The variability is attributed to sample inhomogeneity.

ht - Analysis performed outside the method or client-specified holding time requirement.

ip - Recovery fell outside of normal control limits. Compounds in the sample matrix interfered with the quantitation of the analyte.

j - The result is below normal reporting limits. The value reported is an estimate.

J - The internal standard associated with the analyte is out of control limits. The reported concentration is an estimate.

jl - The analyte result in the laboratory control sample is out of control limits. The reported concentration should be considered an estimate.

jr - The rpd result in laboratory control sample associated with the analyte is out of control limits. The reported concentration should be considered an estimate.

js - The surrogate associated with the analyte is out of control limits. The reported concentration should be considered an estimate.

lc - The presence of the compound indicated is likely due to laboratory contamination.

L - The reported concentration was generated from a library search.

nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.

pc - The sample was received in a container not approved by the method. The value reported should be considered an estimate.

pr - The sample was received with incorrect preservation. The value reported should be considered an estimate.

ve - Estimated concentration calculated for an analyte response above the valid instrument calibration range. A dilution is required to obtain an accurate quantification of the analyte.

vo - The value reported fell outside the control limits established for this analyte.

x - The sample chromatographic pattern does not resemble the fuel standard used for quantitation.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

302182 chip Goodhue and

Send Report To Bob Hanford

Company Aspect Consulting


Address

City, State, ZIP Bainbridge Island, WA

Phone # _____ Fax # _____

SAMPLE CHAIN OF CUSTODY

ME 02-13-13 14 (NO) AIG/ADS/V

SAMPLERS (signature) 		Page # <u>7495/</u> of <u>7495/</u>	
PROJECT NAME/NO. Ken's Texaco		PO# 120061	
REMARKS * 8260 B **halogenated VOCs *** metals: cadmium, chromium, nickel, zinc		TURNAROUND TIME <input checked="" type="checkbox"/> Standard (2 Weeks) <input type="checkbox"/> RUSH Rush charges authorized by _____	
		SAMPLE DISPOSAL <input type="checkbox"/> Dispose after 30 days <input type="checkbox"/> Return samples <input type="checkbox"/> Will call with instructions	

[illegible]



Friedman & Bruya, Inc.
3012 16th Avenue West

Seattle, WA 98119-2029

Ph. (206) 285-8282

Fax (206) 283-5044

FORMS\COC\COC.DOC

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by: 	Amy Tice	Aspect	2/14/13	
Received by: 	Nhan Phan	F&B E	2/14/13	1210
Relinquished by:				
Received by:				

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Yelena Aravkina, M.S.
Bradley T. Benson, B.S.
Kurt Johnson, B.S.

3012 16th Avenue West
Seattle, WA 98119-2029
TEL: (206) 285-8282
e-mail: fbi@isomedia.com

February 26, 2013

Chip Goodhue, Project Manager
Aspect Consulting, LLC
350 Madison Ave. N.
Bainbridge Island, WA 98110-1810

Dear Mr. Goodhue:

Included are the results from the testing of material submitted on February 14, 2013 from the Ken's Texaco 120061, F&BI 302182 project. There are 37 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

We appreciate this opportunity to be of service to you and hope you will call if you have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.



Michael Erdahl
Project Manager

Enclosures

c: data@aspectconsulting.com, Parker Wittman, Bob Hanford
ASP0226R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on February 14, 2013 by Friedman & Bruya, Inc. from the Aspect Consulting, LLC Ken's Texaco 120061, F&BI 302182 project. Samples were logged in under the laboratory ID's listed below.

<u>Laboratory ID</u>	<u>Aspect Consulting, LLC</u>
302182 -01	MW-1-021313
302182 -02	MW-7-021313
302182 -03	MW-10-021313
302182 -04	MW-8-021313
302182 -05	MW-11-021313
302182 -06	MW-12-021313

All quality control requirements were acceptable.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 02/26/13

Date Received: 02/14/13

Project: Ken's Texaco 120061, F&BI 302182

Date Extracted: 02/15/13

Date Analyzed: 02/15/13

**RESULTS FROM THE ANALYSIS OF WATER SAMPLES
FOR TOTAL PETROLEUM HYDROCARBONS AS GASOLINE
USING METHOD NWTPH-Gx**
Results Reported as ug/L (ppb)

<u>Sample ID</u> Laboratory ID	<u>Gasoline Range</u>	Surrogate (% Recovery) (Limit 51-134)
MW-1-021313 302182-01	1,700	124
MW-7-021313 302182-02	990	102
MW-10-021313 302182-03 1/5	2,500	116
MW-8-021313 302182-04	510	114
MW-11-021313 302182-05 1/10	5,000	114
MW-12-021313 302182-06	<100	101
Method Blank 03-0266 MB	<100	98

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 02/26/13

Date Received: 02/14/13

Project: Ken's Texaco 120061, F&BI 302182

Date Extracted: 02/20/13

Date Analyzed: 02/20/13

**RESULTS FROM THE ANALYSIS OF WATER SAMPLES
FOR TOTAL PETROLEUM HYDROCARBONS AS
DIESEL AND MOTOR OIL
USING METHOD NWTPH-Dx**

Results Reported as ug/L (ppb)

<u>Sample ID</u> Laboratory ID	<u>Diesel Range</u> (C ₁₀ -C ₂₅)	<u>Motor Oil Range</u> (C ₂₅ -C ₃₆)	<u>Surrogate</u> (% Recovery) (Limit 47-140)
MW-1-021313 302182-01	400 x	<250	91
MW-7-021313 302182-02	240 x	<250	87
MW-10-021313 302182-03	430 x	<250	99
MW-8-021313 302182-04	230 x	<250	95
MW-11-021313 302182-05	1,400 x	280 x	93
MW-12-021313 302182-06	150 x	<250	104
Method Blank 03-302 MB	<50	<250	94

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 200.8

Client ID:	MW-1-021313	Client:	Aspect Consulting, LLC
Date Received:	02/14/13	Project:	Ken's Texaco 120061, F&BI 302182
Date Extracted:	02/15/13	Lab ID:	302182-01
Date Analyzed:	02/15/13	Data File:	302182-01.030
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	AP

Internal Standard:	% Recovery:	Lower	Upper
Holmium	84	Limit:	Limit:
		60	125

Analyte:	Concentration
	ug/L (ppb)

Lead	<1
------	----

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 200.8

Client ID:	MW-7-021313	Client:	Aspect Consulting, LLC
Date Received:	02/14/13	Project:	Ken's Texaco 120061, F&BI 302182
Date Extracted:	02/15/13	Lab ID:	302182-02
Date Analyzed:	02/15/13	Data File:	302182-02.031
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	AP

Internal Standard:	% Recovery:	Lower	Upper
Holmium	81	Limit:	Limit:
		60	125

Analyte:	Concentration
	ug/L (ppb)

Lead	<1
------	----

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 200.8

Client ID:	MW-10-021313	Client:	Aspect Consulting, LLC
Date Received:	02/14/13	Project:	Ken's Texaco 120061, F&BI 302182
Date Extracted:	02/15/13	Lab ID:	302182-03
Date Analyzed:	02/15/13	Data File:	302182-03.032
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	AP

Internal Standard:	% Recovery:	Lower	Upper
Holmium	82	Limit:	Limit:
		60	125

Analyte:	Concentration
	ug/L (ppb)

Lead	<1
------	----

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 200.8

Client ID:	MW-8-021313	Client:	Aspect Consulting, LLC
Date Received:	02/14/13	Project:	Ken's Texaco 120061, F&BI 302182
Date Extracted:	02/15/13	Lab ID:	302182-04
Date Analyzed:	02/15/13	Data File:	302182-04.033
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	80	60	125
Indium	81	60	125
Holmium	81	60	125

Analyte:	Concentration ug/L (ppb)
Chromium	1.28
Nickel	12.6
Zinc	<1
Cadmium	<1
Lead	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 200.8

Client ID:	MW-11-021313	Client:	Aspect Consulting, LLC
Date Received:	02/14/13	Project:	Ken's Texaco 120061, F&BI 302182
Date Extracted:	02/15/13	Lab ID:	302182-05
Date Analyzed:	02/15/13	Data File:	302182-05.034
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	75	60	125
Indium	75	60	125
Holmium	79	60	125

Analyte:	Concentration ug/L (ppb)
Chromium	1.67
Nickel	33.6
Zinc	3.50
Cadmium	<1
Lead	3.93

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 200.8

Client ID:	MW-12-021313	Client:	Aspect Consulting, LLC
Date Received:	02/14/13	Project:	Ken's Texaco 120061, F&BI 302182
Date Extracted:	02/15/13	Lab ID:	302182-06
Date Analyzed:	02/15/13	Data File:	302182-06.035
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	79	60	125
Indium	80	60	125
Holmium	82	60	125

Analyte:	Concentration ug/L (ppb)
Chromium	1.54
Nickel	8.40
Zinc	38.2
Cadmium	<1
Lead	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 200.8

Client ID:	Method Blank	Client:	Aspect Consulting, LLC
Date Received:	NA	Project:	Ken's Texaco 120061, F&BI 302182
Date Extracted:	02/14/13	Lab ID:	I3-65 mb
Date Analyzed:	02/15/13	Data File:	I3-65 mb.008
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	94	60	125
Indium	93	60	125
Holmium	92	60	125

Analyte:	Concentration ug/L (ppb)
Chromium	<1
Nickel	<1
Zinc	<1
Cadmium	<1
Lead	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW-1-021313	Client:	Aspect Consulting, LLC
Date Received:	02/14/13	Project:	Ken's Texaco 120061, F&BI 302182
Date Extracted:	02/15/13	Lab ID:	302182-01
Date Analyzed:	02/15/13	Data File:	021507.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	100	57	121
Toluene-d8	104	63	127
4-Bromofluorobenzene	101	60	133

Compounds:	Concentration ug/L (ppb)
Methyl t-butyl ether (MTBE)	<1
1,2-Dichloroethane (EDC)	<1
1,2-Dibromoethane (EDB)	<1
Benzene	0.35
Toluene	<1
Ethylbenzene	<1
m,p-Xylene	<2
o-Xylene	<1
Naphthalene	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW-7-021313	Client:	Aspect Consulting, LLC
Date Received:	02/14/13	Project:	Ken's Texaco 120061, F&BI 302182
Date Extracted:	02/14/13	Lab ID:	302182-02
Date Analyzed:	02/14/13	Data File:	021439.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	100	57	121
Toluene-d8	102	63	127
4-Bromofluorobenzene	100	60	133

Compounds:	Concentration ug/L (ppb)
Methyl t-butyl ether (MTBE)	<1
1,2-Dichloroethane (EDC)	<1
1,2-Dibromoethane (EDB)	<1
Benzene	<0.35
Toluene	<1
Ethylbenzene	<1
m,p-Xylene	<2
o-Xylene	<1
Naphthalene	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW-10-021313	Client:	Aspect Consulting, LLC
Date Received:	02/14/13	Project:	Ken's Texaco 120061, F&BI 302182
Date Extracted:	02/14/13	Lab ID:	302182-03
Date Analyzed:	02/14/13	Data File:	021437.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	99	57	121
Toluene-d8	101	63	127
4-Bromofluorobenzene	100	60	133

Compounds:	Concentration ug/L (ppb)
Methyl t-butyl ether (MTBE)	<1
1,2-Dichloroethane (EDC)	1.4
1,2-Dibromoethane (EDB)	<1
Benzene	56
Toluene	85
Ethylbenzene	100
m,p-Xylene	300
o-Xylene	110
Naphthalene	33

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW-8-021313	Client:	Aspect Consulting, LLC
Date Received:	02/14/13	Project:	Ken's Texaco 120061, F&BI 302182
Date Extracted:	02/14/13	Lab ID:	302182-04
Date Analyzed:	02/14/13	Data File:	021435.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	98	57	121
Toluene-d8	101	63	127
4-Bromofluorobenzene	100	60	133

Compounds:	Concentration ug/L (ppb)
Methyl t-butyl ether (MTBE)	<1
1,2-Dichloroethane (EDC)	<1
1,2-Dibromoethane (EDB)	<1
Benzene	20
Toluene	1.5
Ethylbenzene	3.4
m,p-Xylene	7.9
o-Xylene	3.8
Naphthalene	1.8
Vinyl chloride	<0.2
Chloroethane	<1
1,1-Dichloroethene	<1
Methylene chloride	<5
trans-1,2-Dichloroethene	<1
1,1-Dichloroethane	<1
cis-1,2-Dichloroethene	<1
1,1,1-Trichloroethane	<1
Trichloroethene	<1
Tetrachloroethene	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID: MW-11-021313	Client: Aspect Consulting, LLC
Date Received: 02/14/13	Project: Ken's Texaco 120061, F&BI 302182
Date Extracted: 02/14/13	Lab ID: 302182-05
Date Analyzed: 02/14/13	Data File: 021440.D
Matrix: Water	Instrument: GCMS4
Units: ug/L (ppb)	Operator: JS

	% Recovery:	Lower Limit:	Upper Limit:
Surrogates:			
1,2-Dichloroethane-d4	99	57	121
Toluene-d8	102	63	127
4-Bromofluorobenzene	98	60	133

Compounds:	Concentration ug/L (ppb)
Methyl t-butyl ether (MTBE)	<1
1,2-Dichloroethane (EDC)	10
1,2-Dibromoethane (EDB)	<1
Benzene	410 ve
Toluene	71
Ethylbenzene	170 ve
m,p-Xylene	350 ve
o-Xylene	110
Vinyl chloride	<0.2
Chloroethane	<1
1,1-Dichloroethene	<1
Methylene chloride	<5
trans-1,2-Dichloroethene	<1
1,1-Dichloroethane	<1
cis-1,2-Dichloroethene	<1
1,1,1-Trichloroethane	<1
Trichloroethene	<1
Tetrachloroethene	<1
Naphthalene	56

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID: MW-11-021313	Client: Aspect Consulting, LLC
Date Received: 02/14/13	Project: Ken's Texaco 120061, F&BI 302182
Date Extracted: 02/15/13	Lab ID: 302182-05 1/10
Date Analyzed: 02/15/13	Data File: 021529.D
Matrix: Water	Instrument: GCMS4
Units: ug/L (ppb)	Operator: JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	102	57	121
Toluene-d8	102	63	127
4-Bromofluorobenzene	99	60	133

Compounds:	Concentration ug/L (ppb)
Methyl t-butyl ether (MTBE)	<10
1,2-Dichloroethane (EDC)	11
1,2-Dibromoethane (EDB)	<10
Benzene	430
Toluene	70
Ethylbenzene	160
m,p-Xylene	350
o-Xylene	110
Vinyl chloride	<2
Chloroethane	<10
1,1-Dichloroethene	<10
Methylene chloride	<50
trans-1,2-Dichloroethene	<10
1,1-Dichloroethane	<10
cis-1,2-Dichloroethene	<10
1,1,1-Trichloroethane	<10
Trichloroethene	<10
Tetrachloroethene	<10
Naphthalene	58

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID: MW-12-021313	Client: Aspect Consulting, LLC
Date Received: 02/14/13	Project: Ken's Texaco 120061, F&BI 302182
Date Extracted: 02/14/13	Lab ID: 302182-06
Date Analyzed: 02/14/13	Data File: 021436.D
Matrix: Water	Instrument: GCMS4
Units: ug/L (ppb)	Operator: JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	99	57	121
Toluene-d8	101	63	127
4-Bromofluorobenzene	100	60	133

Compounds:	Concentration ug/L (ppb)
Methyl t-butyl ether (MTBE)	<1
1,2-Dichloroethane (EDC)	<1
1,2-Dibromoethane (EDB)	<1
Benzene	<0.35
Toluene	<1
Ethylbenzene	<1
m,p-Xylene	<2
o-Xylene	<1
Naphthalene	<1
Vinyl chloride	<0.2
Chloroethane	<1
1,1-Dichloroethene	<1
Methylene chloride	<5
trans-1,2-Dichloroethene	<1
1,1-Dichloroethane	<1
cis-1,2-Dichloroethene	<1
1,1,1-Trichloroethane	<1
Trichloroethene	<1
Tetrachloroethene	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	Method Blank	Client:	Aspect Consulting, LLC
Date Received:	NA	Project:	Ken's Texaco 120061, F&BI 302182
Date Extracted:	02/14/13	Lab ID:	03-0137 MB
Date Analyzed:	02/14/13	Data File:	021406.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	103	57	121
Toluene-d8	102	63	127
4-Bromofluorobenzene	100	60	133

Compounds:	Concentration ug/L (ppb)
Methyl t-butyl ether (MTBE)	<1
1,2-Dichloroethane (EDC)	<1
1,2-Dibromoethane (EDB)	<1
Benzene	<0.35
Toluene	<1
Ethylbenzene	<1
m,p-Xylene	<2
o-Xylene	<1
Naphthalene	<1
Vinyl chloride	<0.2
Chloroethane	<1
1,1-Dichloroethene	<1
Methylene chloride	<5
trans-1,2-Dichloroethene	<1
1,1-Dichloroethane	<1
cis-1,2-Dichloroethene	<1
1,1,1-Trichloroethane	<1
Trichloroethene	<1
Tetrachloroethene	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	Method Blank	Client:	Aspect Consulting, LLC
Date Received:	NA	Project:	Ken's Texaco 120061, F&BI 302182
Date Extracted:	02/15/13	Lab ID:	03-0139 MB
Date Analyzed:	02/15/13	Data File:	021506.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	99	57	121
Toluene-d8	101	63	127
4-Bromofluorobenzene	100	60	133

Compounds:	Concentration ug/L (ppb)
Methyl t-butyl ether (MTBE)	<1
1,2-Dibromoethane (EDB)	<1
1,2-Dichloroethane (EDC)	<1
Benzene	<0.35
Toluene	<1
Ethylbenzene	<1
m,p-Xylene	<2
o-Xylene	<1
Vinyl chloride	<0.2
Chloroethane	<1
1,1-Dichloroethene	<1
Methylene chloride	<5
trans-1,2-Dichloroethene	<1
1,1-Dichloroethane	<1
cis-1,2-Dichloroethene	<1
1,1,1-Trichloroethane	<1
Trichloroethene	<1
Tetrachloroethene	<1
Naphthalene	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Semivolatile Compounds By EPA Method 8270D SIM

Client Sample ID:	MW-8-021313	Client:	Aspect Consulting, LLC
Date Received:	02/14/13	Project:	Ken's Texaco 120061, F&BI 302182
Date Extracted:	02/19/13	Lab ID:	302182-04 1/2
Date Analyzed:	02/20/13	Data File:	022007A.D
Matrix:	Water	Instrument:	GCMS6
Units:	ug/L (ppb)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Anthracene-d10	103	50	150
Benzo(a)anthracene-d12	123	50	129

Compounds:	Concentration ug/L (ppb)
Benz(a)anthracene	<0.1
Chrysene	<0.1
Benzo(a)pyrene	<0.1
Benzo(b)fluoranthene	<0.1
Benzo(k)fluoranthene	<0.1
Indeno(1,2,3-cd)pyrene	<0.1
Dibenz(a,h)anthracene	<0.1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Semivolatile Compounds By EPA Method 8270D SIM

Client Sample ID:	MW-11-021313	Client:	Aspect Consulting, LLC
Date Received:	02/14/13	Project:	Ken's Texaco 120061, F&BI 302182
Date Extracted:	02/19/13	Lab ID:	302182-05 1/2
Date Analyzed:	02/20/13	Data File:	022008.D
Matrix:	Water	Instrument:	GCMS6
Units:	ug/L (ppb)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Anthracene-d10	94	50	150
Benzo(a)anthracene-d12	116	50	129

Compounds:	Concentration ug/L (ppb)
Benz(a)anthracene	<0.1
Chrysene	<0.1
Benzo(a)pyrene	<0.1
Benzo(b)fluoranthene	<0.1
Benzo(k)fluoranthene	<0.1
Indeno(1,2,3-cd)pyrene	<0.1
Dibenz(a,h)anthracene	<0.1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Semivolatile Compounds By EPA Method 8270D SIM

Client Sample ID:	MW-12-021313	Client:	Aspect Consulting, LLC
Date Received:	02/14/13	Project:	Ken's Texaco 120061, F&BI 302182
Date Extracted:	02/19/13	Lab ID:	302182-06 1/2
Date Analyzed:	02/21/13	Data File:	022106.D
Matrix:	Water	Instrument:	GCMS6
Units:	ug/L (ppb)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Anthracene-d10	94	50	150
Benzo(a)anthracene-d12	121	50	129

Compounds:	Concentration ug/L (ppb)
Benz(a)anthracene	<0.1
Chrysene	<0.1
Benzo(a)pyrene	<0.1
Benzo(b)fluoranthene	<0.1
Benzo(k)fluoranthene	<0.1
Indeno(1,2,3-cd)pyrene	<0.1
Dibenz(a,h)anthracene	<0.1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Semivolatile Compounds By EPA Method 8270D SIM

Client Sample ID:	Method Blank	Client:	Aspect Consulting, LLC
Date Received:	NA	Project:	Ken's Texaco 120061, F&BI 302182
Date Extracted:	02/19/13	Lab ID:	03-0301 mb
Date Analyzed:	02/20/13	Data File:	022006.D
Matrix:	Water	Instrument:	GCMS6
Units:	ug/L (ppb)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Anthracene-d10	90	50	150
Benzo(a)anthracene-d12	98	50	129

Compounds:	Concentration ug/L (ppb)
Benz(a)anthracene	<0.1
Chrysene	<0.1
Benzo(a)pyrene	<0.1
Benzo(b)fluoranthene	<0.1
Benzo(k)fluoranthene	<0.1
Indeno(1,2,3-cd)pyrene	<0.1
Dibenz(a,h)anthracene	<0.1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For PCBs By EPA Method 8082

Client Sample ID:	MW-8-021313	Client:	Aspect Consulting, LLC
Date Received:	02/14/13	Project:	Ken's Texaco 120061, F&BI 302182
Date Extracted:	02/18/13	Lab ID:	302182-04
Date Analyzed:	02/18/13	Data File:	021818.D\ECD1A.CH
Matrix:	Water	Instrument:	GC7
Units:	ug/L (ppb)	Operator:	mwdl

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
TCMX	79	50	150

Compounds:	Concentration ug/L (ppb)
Aroclor 1221	<0.1
Aroclor 1232	<0.1
Aroclor 1016	<0.1
Aroclor 1242	<0.1
Aroclor 1248	<0.1
Aroclor 1254	<0.1
Aroclor 1260	<0.1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For PCBs By EPA Method 8082

Client Sample ID:	MW-11-021313	Client:	Aspect Consulting, LLC
Date Received:	02/14/13	Project:	Ken's Texaco 120061, F&BI 302182
Date Extracted:	02/18/13	Lab ID:	302182-05
Date Analyzed:	02/18/13	Data File:	021820.D\ECD1A.CH
Matrix:	Water	Instrument:	GC7
Units:	ug/L (ppb)	Operator:	mwdl

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
TCMX	64	50	150

Compounds:	Concentration ug/L (ppb)
Aroclor 1221	<0.1
Aroclor 1232	<0.1
Aroclor 1016	<0.1
Aroclor 1242	<0.1
Aroclor 1248	<0.1
Aroclor 1254	<0.1
Aroclor 1260	<0.1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For PCBs By EPA Method 8082

Client Sample ID:	MW-12-021313	Client:	Aspect Consulting, LLC
Date Received:	02/14/13	Project:	Ken's Texaco 120061, F&BI 302182
Date Extracted:	02/18/13	Lab ID:	302182-06
Date Analyzed:	02/18/13	Data File:	021822.D\ECD1A.CH
Matrix:	Water	Instrument:	GC7
Units:	ug/L (ppb)	Operator:	mwdl

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
TCMX	90	50	150

Compounds:	Concentration ug/L (ppb)
Aroclor 1221	<0.1
Aroclor 1232	<0.1
Aroclor 1016	<0.1
Aroclor 1242	<0.1
Aroclor 1248	<0.1
Aroclor 1254	<0.1
Aroclor 1260	<0.1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For PCBs By EPA Method 8082

Client Sample ID:	Method Blank	Client:	Aspect Consulting, LLC
Date Received:	NA	Project:	Ken's Texaco 120061, F&BI 302182
Date Extracted:	02/18/13	Lab ID:	03-297 mb
Date Analyzed:	02/18/13	Data File:	021816.D\ECD1A.CH
Matrix:	Water	Instrument:	GC7
Units:	ug/L (ppb)	Operator:	mwdl

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
TCMX	64	50	150

Compounds:	Concentration ug/L (ppb)
Aroclor 1221	<0.1
Aroclor 1232	<0.1
Aroclor 1016	<0.1
Aroclor 1242	<0.1
Aroclor 1248	<0.1
Aroclor 1254	<0.1
Aroclor 1260	<0.1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 02/26/13

Date Received: 02/14/13

Project: Ken's Texaco 120061, F&BI 302182

**QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER
SAMPLES FOR TPH AS GASOLINE
USING METHOD NWTPH-Gx**

Laboratory Code: 302167-01 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	Relative Percent Difference (Limit 20)
Gasoline	ug/L (ppb)	<100	<100	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Gasoline	ug/L (ppb)	1,000	96	69-134

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 02/26/13

Date Received: 02/14/13

Project: Ken's Texaco 120061, F&BI 302182

**QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER
SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS
DIESEL EXTENDED USING METHOD NWTPH-Dx**

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	ug/L (ppb)	2,500	89	96	61-133	8

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 02/26/13

Date Received: 02/14/13

Project: Ken's Texaco 120061, F&BI 302182

**QUALITY ASSURANCE RESULTS
FOR THE ANALYSIS OF WATER SAMPLES
FOR TOTAL METALS USING EPA METHOD 200.8**

Laboratory Code: 302160-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Chromium	ug/L (ppb)	20	53.1	93 b	70 b	71-130	28 b
Nickel	ug/L (ppb)	20	25.8	86 b	86 b	71-120	0 b
Zinc	ug/L (ppb)	50	1,740	46 b	78 b	51-142	52 b
Cadmium	ug/L (ppb)	5	<1	102	106	86-115	4
Lead	ug/L (ppb)	10	2.21	95 b	97 b	85-115	2 b

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Chromium	ug/L (ppb)	20	103	80-119
Nickel	ug/L (ppb)	20	104	83-119
Zinc	ug/L (ppb)	50	103	82-120
Cadmium	ug/L (ppb)	5	103	86-118
Lead	ug/L (ppb)	10	105	84-120

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 02/26/13

Date Received: 02/14/13

Project: Ken's Texaco 120061, F&BI 302182

**QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER
SAMPLES FOR VOLATILES BY EPA METHOD 8260C**

Laboratory Code: 302171-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Acceptance Criteria
Vinyl chloride	ug/L (ppb)	50	<0.2	104	36-166
Chloroethane	ug/L (ppb)	50	<1	106	46-160
1,1-Dichloroethene	ug/L (ppb)	50	<1	99	60-136
Methylene chloride	ug/L (ppb)	50	<5	93	67-132
trans-1,2-Dichloroethene	ug/L (ppb)	50	<1	97	72-129
1,1-Dichloroethane	ug/L (ppb)	50	<1	97	70-128
cis-1,2-Dichloroethene	ug/L (ppb)	50	<1	96	71-127
1,2-Dichloroethane (EDC)	ug/L (ppb)	50	<1	95	69-133
1,1,1-Trichloroethane	ug/L (ppb)	50	<1	96	60-146
Trichloroethene	ug/L (ppb)	50	<1	94	66-135
Tetrachloroethene	ug/L (ppb)	50	<1	93	73-129
Methyl t-butyl ether (MTBE)	ug/L (ppb)	50	<1	96	74-127
Benzene	ug/L (ppb)	50	<0.35	94	76-125
Toluene	ug/L (ppb)	50	<1	94	76-122
1,2-Dibromoethane (EDB)	ug/L (ppb)	50	<1	96	69-134
Ethylbenzene	ug/L (ppb)	50	<1	94	69-135
m,p-Xylene	ug/L (ppb)	100	<2	94	69-135
o-Xylene	ug/L (ppb)	50	<1	94	68-137
Naphthalene	ug/L (ppb)	50	<1	102	44-164

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 02/26/13

Date Received: 02/14/13

Project: Ken's Texaco 120061, F&BI 302182

**QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER
SAMPLES FOR VOLATILES BY EPA METHOD 8260C**

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Vinyl chloride	ug/L (ppb)	50	110	106	50-154	4
Chloroethane	ug/L (ppb)	50	112	101	58-146	10
1,1-Dichloroethene	ug/L (ppb)	50	94	96	67-136	2
Methylene chloride	ug/L (ppb)	50	87	93	39-148	7
Methyl t-butyl ether (MTBE)	ug/L (ppb)	50	99	97	64-147	2
trans-1,2-Dichloroethene	ug/L (ppb)	50	100	97	68-128	3
1,1-Dichloroethane	ug/L (ppb)	50	99	97	79-121	2
cis-1,2-Dichloroethene	ug/L (ppb)	50	100	97	80-123	3
1,2-Dichloroethane (EDC)	ug/L (ppb)	50	99	97	73-132	2
1,2-Dibromoethane (EDB)	ug/L (ppb)	50	98	97	82-125	1
1,1,1-Trichloroethane	ug/L (ppb)	50	99	96	83-130	3
Benzene	ug/L (ppb)	50	98	95	69-134	3
Trichloroethene	ug/L (ppb)	50	98	95	80-120	3
Toluene	ug/L (ppb)	50	98	95	72-122	3
Tetrachloroethene	ug/L (ppb)	50	96	94	76-121	2
Ethylbenzene	ug/L (ppb)	50	98	96	77-124	2
m,p-Xylene	ug/L (ppb)	100	98	95	83-125	3
o-Xylene	ug/L (ppb)	50	97	96	86-121	1
Naphthalene	ug/L (ppb)	50	102	97	64-133	5

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 02/26/13

Date Received: 02/14/13

Project: Ken's Texaco 120061, F&BI 302182

**QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER
SAMPLES FOR VOLATILES BY EPA METHOD 8260C**

Laboratory Code: 302212-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Acceptance Criteria
Vinyl chloride	ug/L (ppb)	50	<0.2	113	36-166
Chloroethane	ug/L (ppb)	50	<1	112	46-160
1,1-Dichloroethene	ug/L (ppb)	50	<1	97	60-136
Methylene chloride	ug/L (ppb)	50	<5	95	67-132
Methyl t-butyl ether (MTBE)	ug/L (ppb)	50	<1	101	74-127
trans-1,2-Dichloroethene	ug/L (ppb)	50	<1	101	72-129
1,1-Dichloroethane	ug/L (ppb)	50	<1	100	70-128
cis-1,2-Dichloroethene	ug/L (ppb)	50	<1	101	71-127
1,2-Dichloroethane (EDC)	ug/L (ppb)	50	<1	115	69-133
1,2-Dibromoethane (EDB)	ug/L (ppb)	50	<1	99	69-134
1,1,1-Trichloroethane	ug/L (ppb)	50	<1	101	60-146
Benzene	ug/L (ppb)	50	<0.35	98	76-125
Trichloroethene	ug/L (ppb)	50	<1	98	66-135
Toluene	ug/L (ppb)	50	<1	97	76-122
Tetrachloroethene	ug/L (ppb)	50	<1	96	73-129
Ethylbenzene	ug/L (ppb)	50	<1	97	69-135
m,p-Xylene	ug/L (ppb)	100	<2	97	69-135
o-Xylene	ug/L (ppb)	50	<1	98	68-137
Naphthalene	ug/L (ppb)	50	<1	96	44-164

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 02/26/13

Date Received: 02/14/13

Project: Ken's Texaco 120061, F&BI 302182

**QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER
SAMPLES FOR VOLATILES BY EPA METHOD 8260C**

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Vinyl chloride	ug/L (ppb)	50	110	106	50-154	4
Chloroethane	ug/L (ppb)	50	112	101	58-146	10
1,1-Dichloroethene	ug/L (ppb)	50	94	96	67-136	2
Methylene chloride	ug/L (ppb)	50	87	93	39-148	7
Methyl t-butyl ether (MTBE)	ug/L (ppb)	50	99	97	64-147	2
trans-1,2-Dichloroethene	ug/L (ppb)	50	100	97	68-128	3
1,1-Dichloroethane	ug/L (ppb)	50	99	97	79-121	2
cis-1,2-Dichloroethene	ug/L (ppb)	50	100	97	80-123	3
1,2-Dichloroethane (EDC)	ug/L (ppb)	50	99	97	73-132	2
1,2-Dibromoethane (EDB)	ug/L (ppb)	50	98	97	82-125	1
1,1,1-Trichloroethane	ug/L (ppb)	50	99	96	83-130	3
Benzene	ug/L (ppb)	50	98	95	69-134	3
Trichloroethene	ug/L (ppb)	50	98	95	80-120	3
Toluene	ug/L (ppb)	50	98	95	72-122	3
Tetrachloroethene	ug/L (ppb)	50	96	94	76-121	2
Ethylbenzene	ug/L (ppb)	50	98	96	77-124	2
m,p-Xylene	ug/L (ppb)	100	98	95	83-125	3
o-Xylene	ug/L (ppb)	50	97	96	86-121	1
Naphthalene	ug/L (ppb)	50	102	97	64-133	5

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 02/26/13

Date Received: 02/14/13

Project: Ken's Texaco 120061, F&BI 302182

**QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER
SAMPLES FOR PNA'S BY EPA METHOD 8270D SIM**

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Benz(a)anthracene	ug/L (ppb)	1	92	84	60-118	9
Chrysene	ug/L (ppb)	1	98	93	66-125	5
Benzo(b)fluoranthene	ug/L (ppb)	1	102	86	55-135	17
Benzo(k)fluoranthene	ug/L (ppb)	1	103	101	62-125	2
Benzo(a)pyrene	ug/L (ppb)	1	96	85	58-127	12
Indeno(1,2,3-cd)pyrene	ug/L (ppb)	1	89	80	36-142	11
Dibenz(a,h)anthracene	ug/L (ppb)	1	92	84	37-133	9
Benzo(g,h,i)perylene	ug/L (ppb)	1	91	87	34-135	4

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 02/26/13

Date Received: 02/14/13

Project: Ken's Texaco 120061, F&BI 302182

**QUALITY ASSURANCE RESULTS
FOR THE ANALYSIS OF WATER SAMPLES FOR POLYCHLORINATED
BIPHENYLS AS
AROCOR 1016/1260 BY EPA METHOD 8082A**

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	% Recovery LCS	% Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Aroclor 1016	ug/L (ppb)	1.0	90	94	70-130	4
Aroclor 1260	ug/L (ppb)	1.0	105	96	70-130	9

Data Qualifiers & Definitions

a - The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.

A1 - More than one compound of similar molecule structure was identified with equal probability.

b - The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be meaningful.

ca - The calibration results for this range fell outside of acceptance criteria. The value reported is an estimate.

c - The presence of the analyte indicated may be due to carryover from previous sample injections.

d - The sample was diluted. Detection limits may be raised due to dilution.

ds - The sample was diluted. Detection limits are raised due to dilution and surrogate recoveries may not be meaningful.

dv - Insufficient sample was available to achieve normal reporting limits and limits are raised accordingly.

fb - Analyte present in the blank and the sample.

fc - The compound is a common laboratory and field contaminant.

hr - The sample and duplicate were reextracted and reanalyzed. RPD results were still outside of control limits. The variability is attributed to sample inhomogeneity.

ht - Analysis performed outside the method or client-specified holding time requirement.

ip - Recovery fell outside of normal control limits. Compounds in the sample matrix interfered with the quantitation of the analyte.

j - The result is below normal reporting limits. The value reported is an estimate.

J - The internal standard associated with the analyte is out of control limits. The reported concentration is an estimate.

jl - The analyte result in the laboratory control sample is out of control limits. The reported concentration should be considered an estimate.

jr - The rpd result in laboratory control sample associated with the analyte is out of control limits. The reported concentration should be considered an estimate.

js - The surrogate associated with the analyte is out of control limits. The reported concentration should be considered an estimate.

lc - The presence of the compound indicated is likely due to laboratory contamination.

L - The reported concentration was generated from a library search.

nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.

pc - The sample was received in a container not approved by the method. The value reported should be considered an estimate.

pr - The sample was received with incorrect preservation. The value reported should be considered an estimate.

ve - Estimated concentration calculated for an analyte response above the valid instrument calibration range. A dilution is required to obtain an accurate quantification of the analyte.

vo - The value reported fell outside the control limits established for this analyte.

x - The sample chromatographic pattern does not resemble the fuel standard used for quantitation.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

302182 chip Goodhue and

Send Report To Bob Hanford

Company Aspect Consulting


Address

City, State, ZIP Bainbridge Island, WA

Phone # _____ Fax # _____

SAMPLE CHAIN OF CUSTODY

ME 02-13-13 14 (NO) AIG/ADS/V

SAMPLERS (signature) 		Page # <u>7495/</u> of <u>7495/</u>
PROJECT NAME/NO. Ken's Texaco	PO# 120061	TURNAROUND TIME <input checked="" type="checkbox"/> Standard (2 Weeks) <input type="checkbox"/> RUSH Rush charges authorized by _____
REMARKS * 8260 B **halogenated VOCs *** metals: cadmium, chromium, nickel, zinc		SAMPLE DISPOSAL <input type="checkbox"/> Dispose after 30 days <input type="checkbox"/> Return samples <input type="checkbox"/> Will call with instructions

[illegible]



Friedman & Bruya, Inc.
3012 16th Avenue West

Seattle, WA 98119-2029

Ph. (206) 285-8282

Fax (206) 283-5044

FORMS\COC\COC.DOC

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by: 	Amy Tice	Aspect	2/14/13	
Received by: 	Nhan Phan	F&B E	2/14/13	1210
Relinquished by:				
Received by:				

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Yelena Aravkina, M.S.
Michael Erdahl, B.S.
Kurt Johnson, B.S.
Eric Young, B.S.

3012 16th Avenue West
Seattle, WA 98119-2029
(206) 285-8282
fbi@isomedia.com
www.friedmanandbruya.com

May 30, 2013

Chip Goodhue, Project Manager
Aspect Consulting, LLC
350 Madison Ave. N.
Bainbridge Island, WA 98110-1810

Dear Mr. Goodhue:

Included are the results from the testing of material submitted on May 15, 2013 from the Ken's Texaco, PO 120061, F&BI 305286 project. There are 15 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

We appreciate this opportunity to be of service to you and hope you will call if you have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.



Michael Erdahl
Project Manager

Enclosures

c: data@aspectconsulting.com, Parker Wittman, Bob Hanford
ASP0523R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on May 15, 2013 by Friedman & Bruya, Inc. from the Aspect Consulting, LLC Ken's Texaco, PO 120061, F&BI 305286 project. Samples were logged in under the laboratory ID's listed below.

<u>Laboratory ID</u>	<u>Aspect Consulting, LLC</u>
305286-01	MW-1-051413
305286-02	MW-7-051413
305286-03	MW-10-051413
305286-04	MW-8-051413
305286-05	MW-11-051413
305286-06	MW-12-051413

All quality control requirements were acceptable.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 05/30/13

Date Received: 05/15/13

Project: Ken's Texaco, PO 120061, F&BI 305286

Date Extracted: 05/15/13

Date Analyzed: 05/15/13

**RESULTS FROM THE ANALYSIS OF WATER SAMPLES
FOR TOTAL PETROLEUM HYDROCARBONS AS GASOLINE
USING METHOD NWTPH-Gx**
Results Reported as ug/L (ppb)

<u>Sample ID</u> Laboratory ID	<u>Gasoline Range</u>	Surrogate (% Recovery) (Limit 51-134)
MW-1-051413 305286-01	2,400	100
MW-7-051413 305286-02	2,300	96
MW-10-051413 305286-03	1,300	98
MW-8-051413 305286-04	310	91
MW-11-051413 305286-05	1,900	87
MW-12-051413 305286-06	<100	84
Method Blank 03-0879 MB	<100	83

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 05/30/13

Date Received: 05/15/13

Project: Ken's Texaco, PO 120061, F&BI 305286

Date Extracted: 05/20/13

Date Analyzed: 05/20/13 and 05/21/13

**RESULTS FROM THE ANALYSIS OF WATER SAMPLES
FOR TOTAL PETROLEUM HYDROCARBONS AS
DIESEL AND MOTOR OIL
USING METHOD NWTPH-Dx**

Results Reported as ug/L (ppb)

<u>Sample ID</u> Laboratory ID	<u>Diesel Range</u> (C ₁₀ -C ₂₅)	<u>Motor Oil Range</u> (C ₂₅ -C ₃₆)	<u>Surrogate</u> (% Recovery) (Limit 47-140)
MW-1-051413 305286-01	480 x	<250	86
MW-7-051413 305286-02	450 x	<250	89
MW-10-051413 305286-03	320 x	<250	85
MW-8-051413 305286-04	100 x	<250	82
MW-11-051413 305286-05	420 x	<250	85
MW-12-051413 305286-06	<50	<250	88
Method Blank 03-940 MB	<50	<250	85

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW-1-051413	Client:	Aspect Consulting, LLC
Date Received:	05/15/13	Project:	Ken's Texaco, PO 120061, F&BI 305286
Date Extracted:	05/16/13	Lab ID:	305286-01
Date Analyzed:	05/16/13	Data File:	051614.D
Matrix:	Water	Instrument:	GCMS9
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	100	50	150
Toluene-d8	102	50	150
4-Bromofluorobenzene	97	50	150

Compounds:	Concentration ug/L (ppb)
Hexane	5.5
Methyl t-butyl ether (MTBE)	<1
1,2-Dibromoethane (EDB)	<1
1,2-Dichloroethane (EDC)	<1
Benzene	<0.35
Toluene	<1
Ethylbenzene	<1
m,p-Xylene	<2
o-Xylene	<1
Naphthalene	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW-7-051413	Client:	Aspect Consulting, LLC
Date Received:	05/15/13	Project:	Ken's Texaco, PO 120061, F&BI 305286
Date Extracted:	05/16/13	Lab ID:	305286-02
Date Analyzed:	05/16/13	Data File:	051615.D
Matrix:	Water	Instrument:	GCMS9
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	99	50	150
Toluene-d8	102	50	150
4-Bromofluorobenzene	97	50	150

Compounds:	Concentration ug/L (ppb)
Hexane	<1
Methyl t-butyl ether (MTBE)	<1
1,2-Dibromoethane (EDB)	<1
1,2-Dichloroethane (EDC)	<1
Benzene	<0.35
Toluene	<1
Ethylbenzene	<1
m,p-Xylene	<2
o-Xylene	<1
Naphthalene	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW-10-051413	Client:	Aspect Consulting, LLC
Date Received:	05/15/13	Project:	Ken's Texaco, PO 120061, F&BI 305286
Date Extracted:	05/16/13	Lab ID:	305286-03
Date Analyzed:	05/16/13	Data File:	051618.D
Matrix:	Water	Instrument:	GCMS9
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	101	50	150
Toluene-d8	101	50	150
4-Bromofluorobenzene	98	50	150

Compounds:	Concentration ug/L (ppb)
Hexane	11
Methyl t-butyl ether (MTBE)	<1
1,2-Dibromoethane (EDB)	<1
1,2-Dichloroethane (EDC)	1.1
Benzene	44
Toluene	4.2
Ethylbenzene	78
m,p-Xylene	61
o-Xylene	10
Naphthalene	28

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID: MW-8-051413	Client: Aspect Consulting, LLC
Date Received: 05/15/13	Project: Ken's Texaco, PO 120061, F&BI 305286
Date Extracted: 05/16/13	Lab ID: 305286-04
Date Analyzed: 05/16/13	Data File: 051616.D
Matrix: Water	Instrument: GCMS9
Units: ug/L (ppb)	Operator: JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	99	50	150
Toluene-d8	99	50	150
4-Bromofluorobenzene	98	50	150

Compounds:	Concentration ug/L (ppb)
Hexane	3.7
Methyl t-butyl ether (MTBE)	<1
1,2-Dibromoethane (EDB)	<1
1,2-Dichloroethane (EDC)	<1
Benzene	5.1
Toluene	1.2
Ethylbenzene	3.5
m,p-Xylene	4.6
o-Xylene	1.0
Naphthalene	3.1
Vinyl chloride	<0.2
Chloroethane	<1
1,1-Dichloroethene	<1
Methylene chloride	<5
trans-1,2-Dichloroethene	<1
1,1-Dichloroethane	<1
cis-1,2-Dichloroethene	<1
1,2-Dichloroethane (EDC)	<1
1,1,1-Trichloroethane	<1
Trichloroethene	<1
Tetrachloroethene	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID: MW-11-051413	Client: Aspect Consulting, LLC
Date Received: 05/15/13	Project: Ken's Texaco, PO 120061, F&BI 305286
Date Extracted: 05/16/13	Lab ID: 305286-05
Date Analyzed: 05/16/13	Data File: 051621.D
Matrix: Water	Instrument: GCMS9
Units: ug/L (ppb)	Operator: JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	99	50	150
Toluene-d8	100	50	150
4-Bromofluorobenzene	97	50	150

Compounds:	Concentration ug/L (ppb)
Hexane	40
Methyl t-butyl ether (MTBE)	<1
1,2-Dibromoethane (EDB)	<1
1,2-Dichloroethane (EDC)	2.6
Benzene	110
Toluene	7.7
Ethylbenzene	45
m,p-Xylene	65
o-Xylene	7.6
Naphthalene	15
Vinyl chloride	<0.2
Chloroethane	<1
1,1-Dichloroethene	<1
Methylene chloride	<5
trans-1,2-Dichloroethene	<1
1,1-Dichloroethane	<1
cis-1,2-Dichloroethene	<1
1,2-Dichloroethane (EDC)	2.6
1,1,1-Trichloroethane	<1
Trichloroethene	<1
Tetrachloroethene	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID: MW-12-051413	Client: Aspect Consulting, LLC
Date Received: 05/15/13	Project: Ken's Texaco, PO 120061, F&BI 305286
Date Extracted: 05/16/13	Lab ID: 305286-06
Date Analyzed: 05/16/13	Data File: 051617.D
Matrix: Water	Instrument: GCMS9
Units: ug/L (ppb)	Operator: JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	100	50	150
Toluene-d8	100	50	150
4-Bromofluorobenzene	98	50	150

Compounds:	Concentration ug/L (ppb)
Hexane	<1
Methyl t-butyl ether (MTBE)	<1
1,2-Dibromoethane (EDB)	<1
1,2-Dichloroethane (EDC)	<1
Benzene	<0.35
Toluene	<1
Ethylbenzene	<1
m,p-Xylene	<2
o-Xylene	<1
Naphthalene	<1
Vinyl chloride	<0.2
Chloroethane	<1
1,1-Dichloroethene	<1
Methylene chloride	<5
trans-1,2-Dichloroethene	<1
1,1-Dichloroethane	<1
cis-1,2-Dichloroethene	<1
1,2-Dichloroethane (EDC)	<1
1,1,1-Trichloroethane	<1
Trichloroethene	<1
Tetrachloroethene	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	Method Blank	Client:	Aspect Consulting, LLC
Date Received:	NA	Project:	Ken's Texaco, PO 120061, F&BI 305286
Date Extracted:	05/16/13	Lab ID:	03-0892 mb
Date Analyzed:	05/16/13	Data File:	051609.D
Matrix:	Water	Instrument:	GCMS9
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	99	50	150
Toluene-d8	98	50	150
4-Bromofluorobenzene	97	50	150

Compounds:	Concentration ug/L (ppb)
Hexane	<1
Methyl t-butyl ether (MTBE)	<1
1,2-Dibromoethane (EDB)	<1
1,2-Dichloroethane (EDC)	<1
Benzene	<0.35
Toluene	<1
Ethylbenzene	<1
m,p-Xylene	<2
o-Xylene	<1
Naphthalene	<1
Vinyl chloride	<0.2
Chloroethane	<1
1,1-Dichloroethene	<1
Methylene chloride	<5
trans-1,2-Dichloroethene	<1
1,1-Dichloroethane	<1
cis-1,2-Dichloroethene	<1
1,2-Dichloroethane (EDC)	<1
1,1,1-Trichloroethane	<1
Trichloroethene	<1
Tetrachloroethene	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 05/30/13

Date Received: 05/15/13

Project: Ken's Texaco, PO 120061, F&BI 305286

**QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER
SAMPLES FOR TPH AS GASOLINE
USING METHOD NWTPH-Gx**

Laboratory Code: 305286-06 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	RPD (Limit 20)
Gasoline	ug/L (ppb)	<100	<100	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Gasoline	ug/L (ppb)	1,000	99	69-134

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 05/30/13

Date Received: 05/15/13

Project: Ken's Texaco, PO 120061, F&BI 305286

**QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER
SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS
DIESEL EXTENDED USING METHOD NWTPH-Dx**

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	ug/L (ppb)	2,500	104	109	61-133	5

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 05/30/13

Date Received: 05/15/13

Project: Ken's Texaco, PO 120061, F&BI 305286

**QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER
SAMPLES FOR VOLATILES BY EPA METHOD 8260C**

Laboratory Code: 305286-06 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Acceptance Criteria
Hexane	ug/L (ppb)	50	<1	92	61-127
Methyl t-butyl ether (MTBE)	ug/L (ppb)	50	<1	98	68-125
1,2-Dichloroethane (EDC)	ug/L (ppb)	50	<1	95	78-113
Benzene	ug/L (ppb)	50	<0.35	92	79-109
Toluene	ug/L (ppb)	50	<1	96	73-117
1,2-Dibromoethane (EDB)	ug/L (ppb)	50	<1	95	83-114
Ethylbenzene	ug/L (ppb)	50	<1	95	71-120
m,p-Xylene	ug/L (ppb)	100	<2	95	63-128
o-Xylene	ug/L (ppb)	50	<1	95	64-129
Naphthalene	ug/L (ppb)	50	<1	94	63-136
Vinyl chloride	ug/L (ppb)	50	<0.2	93	61-139
Chloroethane	ug/L (ppb)	50	<1	121	68-126
1,1-Dichloroethene	ug/L (ppb)	50	<1	97	71-123
Methylene chloride	ug/L (ppb)	50	<5	95	61-126
trans-1,2-Dichloroethene	ug/L (ppb)	50	<1	95	72-122
1,1-Dichloroethane	ug/L (ppb)	50	<1	95	79-113
cis-1,2-Dichloroethene	ug/L (ppb)	50	<1	95	73-119
1,2-Dichloroethane (EDC)	ug/L (ppb)	50	<1	95	78-113
1,1,1-Trichloroethane	ug/L (ppb)	50	<1	98	79-116
Trichloroethene	ug/L (ppb)	50	<1	93	75-109
Tetrachloroethene	ug/L (ppb)	50	<1	95	72-113

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 05/30/13

Date Received: 05/15/13

Project: Ken's Texaco, PO 120061, F&BI 305286

**QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER
SAMPLES FOR VOLATILES BY EPA METHOD 8260C**

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Hexane	ug/L (ppb)	50	96	91	51-153	5
Methyl t-butyl ether (MTBE)	ug/L (ppb)	50	101	97	70-122	4
1,2-Dichloroethane (EDC)	ug/L (ppb)	50	97	94	79-109	3
Benzene	ug/L (ppb)	50	95	92	81-108	3
Toluene	ug/L (ppb)	50	99	95	83-108	4
1,2-Dibromoethane (EDB)	ug/L (ppb)	50	97	94	85-113	3
Ethylbenzene	ug/L (ppb)	50	97	94	84-110	3
m,p-Xylene	ug/L (ppb)	100	96	93	84-112	3
o-Xylene	ug/L (ppb)	50	97	94	82-113	3
Naphthalene	ug/L (ppb)	50	97	96	75-131	1
Vinyl chloride	ug/L (ppb)	50	91	91	73-132	0
Chloroethane	ug/L (ppb)	50	120	118	68-126	2
1,1-Dichloroethene	ug/L (ppb)	50	97	97	75-119	0
Methylene chloride	ug/L (ppb)	50	96	94	63-132	2
trans-1,2-Dichloroethene	ug/L (ppb)	50	97	95	76-118	2
1,1-Dichloroethane	ug/L (ppb)	50	98	96	80-116	2
cis-1,2-Dichloroethene	ug/L (ppb)	50	97	95	81-111	2
1,2-Dichloroethane (EDC)	ug/L (ppb)	50	97	94	79-109	3
1,1,1-Trichloroethane	ug/L (ppb)	50	101	97	80-116	4
Trichloroethene	ug/L (ppb)	50	95	92	77-108	3
Tetrachloroethene	ug/L (ppb)	50	97	94	78-109	3

Data Qualifiers & Definitions

a - The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.

A1 - More than one compound of similar molecule structure was identified with equal probability.

b - The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be meaningful.

ca - The calibration results for this range fell outside of acceptance criteria. The value reported is an estimate.

c - The presence of the analyte indicated may be due to carryover from previous sample injections.

d - The sample was diluted. Detection limits may be raised due to dilution.

ds - The sample was diluted. Detection limits are raised due to dilution and surrogate recoveries may not be meaningful.

dv - Insufficient sample was available to achieve normal reporting limits and limits are raised accordingly.

fb - Analyte present in the blank and the sample.

fc - The compound is a common laboratory and field contaminant.

hr - The sample and duplicate were reextracted and reanalyzed. RPD results were still outside of control limits. The variability is attributed to sample inhomogeneity.

ht - Analysis performed outside the method or client-specified holding time requirement.

ip - Recovery fell outside of normal control limits. Compounds in the sample matrix interfered with the quantitation of the analyte.

j - The result is below normal reporting limits. The value reported is an estimate.

J - The internal standard associated with the analyte is out of control limits. The reported concentration is an estimate.

jl - The analyte result in the laboratory control sample is out of control limits. The reported concentration should be considered an estimate.

jr - The rpd result in laboratory control sample associated with the analyte is out of control limits. The reported concentration should be considered an estimate.

js - The surrogate associated with the analyte is out of control limits. The reported concentration should be considered an estimate.

lc - The presence of the compound indicated is likely due to laboratory contamination.

L - The reported concentration was generated from a library search.

nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.

pc - The sample was received in a container not approved by the method. The value reported should be considered an estimate.

pr - The sample was received with incorrect preservation. The value reported should be considered an estimate.

ve - Estimated concentration calculated for an analyte response above the valid instrument calibration range. A dilution is required to obtain an accurate quantification of the analyte.

vo - The value reported fell outside the control limits established for this analyte.

x - The sample chromatographic pattern does not resemble the fuel standard used for quantitation.

305 286 Chip Goodhue and

Send Report To Bob Hartford

Company Aspect Consulting

Address _____

City, State, ZIP Bainbridge Island, WA

Phone # _____ Fax # _____

SAMPLE CHAIN OF CUSTODY

ME 05-15-13

13/E04/AT4
Page # 1 of 1

SAMPLERS (signature) <u>[Signature]</u>	
PROJECT NAME/NO. <u>Ken's Texaco</u>	PO# <u>120061</u>
REMARKS *8260B **halogenated VOCs ***Metals: cadmium, chromium, nickel, zinc	

TURNAROUND TIME	
<input checked="" type="checkbox"/> Standard (2 Weeks)	
<input type="checkbox"/> RUSH	
Rush charges authorized by _____	
SAMPLE DISPOSAL	
<input type="checkbox"/> Dispose after 30 days	
<input type="checkbox"/> Return samples	
<input type="checkbox"/> Will call with instructions	

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of containers	ANALYSES REQUESTED												Notes
						TPH-Diesel	TPH-Gasoline	BTEX by GC/MS	HVOCs by 8260	SVOCs by 8270	PCBs by GC/MS	Naphthalene	MTBE	ethylene dibromide	ethylene dichloride	lead (6020)	metals	
MW-1-051413	01H	5/14/13	1430	water	8	X	X	X				X	X	X	X	X		DO NOT ANALYZE 5/21/13 ANALYSIS BY CONFIRMED BY Bob H. Chip G. or Jared B.
MW-7-051413	02T		1340		8	X	X	X				X	X	X	X	X		
MW-10-051413	03		1210		8	X	X	X				X	X	X	X	X		
MW-8-051413	04H		1110		14	X	X	X	X	X	X	X	X	X	X	X	X	
MW-11-051413	05T		1310		14	X	X	X	X	X	X	X	X	X	X	X	X	
MW-12-051413	06		1450		14	X	X	X	X	X	X	X	X	X	X	X	X	

Friedman & Bruya, Inc.
3012 16th Avenue West
Seattle, WA 98119-2029
Ph. (206) 285-8282
Fax (206) 283-5044

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by: <u>[Signature]</u>	<u>JARED BEAN</u>	<u>Aspect</u>	<u>5/14/13</u>	<u>1845</u>
Received by: <u>[Signature]</u>	<u>Nhan Phan</u>	<u>FEBI</u>	<u>5/15/13</u>	<u>10:35</u>
Relinquished by: _____				
Received by: _____				
Samples received at <u>4</u> °C				

305 286 Chip Goodhue and

Send Report To Bob Hartford

Company Aspect Consulting

Address _____

City, State, ZIP Bainbridge Island, WA

Phone # _____ Fax # _____

SAMPLE CHAIN OF CUSTODY

ME 05-15-13

13/E04/AT4
Page # 1 of 1

SAMPLERS (signature) <u>[Signature]</u>	
PROJECT NAME/NO. <u>Ken's Texaco</u>	PO# <u>120061</u>
REMARKS *8260B **halogenated VOCs ***Metals: cadmium, chromium, nickel, zinc	

TURNAROUND TIME	
<input checked="" type="checkbox"/> Standard (2 Weeks)	
<input type="checkbox"/> RUSH	
Rush charges authorized by _____	
SAMPLE DISPOSAL	
<input type="checkbox"/> Dispose after 30 days	
<input type="checkbox"/> Return samples	
<input type="checkbox"/> Will call with instructions	

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of containers	ANALYSES REQUESTED												Notes
						TPH-Diesel	TPH-Gasoline	BTEX by GC/MS	HVOCs by 8260	SVOCs by 8270	PCBs by GC/MS	Naphthalene	MTBE	ethylene dibromide	ethylene dichloride	lead (6020)	metals	
MW-1-051413	01H	5/14/13	1430	water	8	X	X	X				X	X	X	X	X		DO NOT ANALYZE 5/21/13 ANALYSIS BY CONFIDENTIAL Bob H. Chip G. or Jared B.
MW-7-051413	02T		1340		8	X	X	X				X	X	X	X	X		
MW-10-051413	03		1210		8	X	X	X				X	X	X	X	X		
MW-8-051413	04H		1110		14	X	X	X	X	X	X	X	X	X	X	X	X	
MW-11-051413	05T		1310		14	X	X	X	X	X	X	X	X	X	X	X	X	
MW-12-051413	06		1450		14	X	X	X	X	X	X	X	X	X	X	X	X	

Friedman & Bruya, Inc.
3012 16th Avenue West
Seattle, WA 98119-2029
Ph. (206) 285-8282
Fax (206) 283-5044

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by: <u>[Signature]</u>	<u>JARED BEAN</u>	<u>Aspect</u>	<u>5/14/13</u>	<u>1845</u>
Received by: <u>[Signature]</u>	<u>Nhan Phan</u>	<u>FEBI</u>	<u>5/15/13</u>	<u>10:35</u>
Relinquished by: _____				
Received by: _____				
Samples received at <u>4</u> °C				

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Yelena Aravkina, M.S.
Michael Erdahl, B.S.
Kurt Johnson, B.S.
Eric Young, B.S.

3012 16th Avenue West
Seattle, WA 98119-2029
(206) 285-8282
fbi@isomedia.com
www.friedmanandbruya.com

August 23, 2013

Bob Hanford, Project Manager
Aspect Consulting, LLC
350 Madison Ave. N.
Bainbridge Island, WA 98110-1810

Dear Mr. Hanford:

Included are the results from the testing of material submitted on August 16, 2013 from the Ken's Texaco 120061, F&BI 308260 project. There are 17 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

We appreciate this opportunity to be of service to you and hope you will call if you have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.



Michael Erdahl
Project Manager

Enclosures

c: data@aspectconsulting.com, Parker Wittman
ASP0823R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on August 16, 2013 by Friedman & Bruya, Inc. from the Aspect Consulting, LLC Ken's Texaco 120061, F&BI 308260 project. Samples were logged in under the laboratory ID's listed below.

<u>Laboratory ID</u>	<u>Aspect Consulting, LLC</u>
308260 -01	MW-1-081513
308260 -02	MW-8-081513
308260 -03	MW-7-081513
308260 -04	MW-10-081513
308260 -05	MW-12-081513
308260 -06	MW-11-081513

All quality control requirements were acceptable.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 08/23/13

Date Received: 08/16/13

Project: Ken's Texaco 120061, F&BI 308260

Date Extracted: 08/19/13

Date Analyzed: 08/19/13

**RESULTS FROM THE ANALYSIS OF WATER SAMPLES
FOR TOTAL PETROLEUM HYDROCARBONS AS GASOLINE
USING METHOD NWTPH-Gx**

Results Reported as ug/L (ppb)

<u>Sample ID</u> Laboratory ID	<u>Gasoline Range</u>	Surrogate (% Recovery) (Limit 50-150)
MW-1-081513 308260-01	2,900	126
MW-8-081513 308260-02	380	101
MW-7-081513 308260-03	1,900	115
MW-10-081513 308260-04	3,900	101
MW-12-081513 308260-05	<100	96
MW-11-081513 308260-06	2,600	101
Method Blank 03-1607 MB	<100	95

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 08/23/13

Date Received: 08/16/13

Project: Ken's Texaco 120061, F&BI 308260

Date Extracted: 08/16/13

Date Analyzed: 08/16/13

**RESULTS FROM THE ANALYSIS OF WATER SAMPLES
FOR TOTAL PETROLEUM HYDROCARBONS AS
DIESEL AND MOTOR OIL
USING METHOD NWTPH-Dx**
Results Reported as ug/L (ppb)

<u>Sample ID</u> Laboratory ID	<u>Diesel Range</u> (C ₁₀ -C ₂₅)	<u>Motor Oil Range</u> (C ₂₅ -C ₃₆)	<u>Surrogate</u> <u>(% Recovery)</u> (Limit 47-140)
MW-1-081513 308260-01	570 x	<250	68
MW-8-081513 308260-02	200 x	<250	67
MW-7-081513 308260-03	460 x	<250	65
MW-10-081513 308260-04	850 x	<250	65
MW-12-081513 308260-05	80 x	<250	66
MW-11-081513 308260-06	820 x	320 x	63
Method Blank 03-1612 MB	<50	<250	61

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW-1-081513	Client:	Aspect Consulting, LLC
Date Received:	08/16/13	Project:	Ken's Texaco 120061, F&BI 308260
Date Extracted:	08/16/13	Lab ID:	308260-01
Date Analyzed:	08/16/13	Data File:	081611.D
Matrix:	Water	Instrument:	GCMS9
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	102	50	150
Toluene-d8	108	50	150
4-Bromofluorobenzene	109	50	150

Compounds:	Concentration ug/L (ppb)
Methyl t-butyl ether (MTBE)	<1
1,2-Dichloroethane (EDC)	<1
1,2-Dibromoethane (EDB)	<1
Benzene	<0.35
Toluene	<1
Ethylbenzene	<1
m,p-Xylene	<2
o-Xylene	<1
Naphthalene	<1
Hexane	8.5

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID: MW-8-081513	Client: Aspect Consulting, LLC
Date Received: 08/16/13	Project: Ken's Texaco 120061, F&BI 308260
Date Extracted: 08/16/13	Lab ID: 308260-02
Date Analyzed: 08/16/13	Data File: 081612.D
Matrix: Water	Instrument: GCMS9
Units: ug/L (ppb)	Operator: JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	101	50	150
Toluene-d8	102	50	150
4-Bromofluorobenzene	105	50	150

Compounds:	Concentration ug/L (ppb)
Methyl t-butyl ether (MTBE)	<1
1,2-Dichloroethane (EDC)	<1
1,2-Dibromoethane (EDB)	<1
Benzene	9.7
Toluene	2.9
Ethylbenzene	18
m,p-Xylene	6.9
o-Xylene	1.1
Naphthalene	5.5
Hexane	8.0
Vinyl chloride	<0.2
Chloroethane	<1
1,1-Dichloroethene	<1
Methylene chloride	<5
trans-1,2-Dichloroethene	<1
1,1-Dichloroethane	<1
cis-1,2-Dichloroethene	<1
1,1,1-Trichloroethane	<1
Trichloroethene	<1
Tetrachloroethene	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW-7-081513	Client:	Aspect Consulting, LLC
Date Received:	08/16/13	Project:	Ken's Texaco 120061, F&BI 308260
Date Extracted:	08/16/13	Lab ID:	308260-03
Date Analyzed:	08/16/13	Data File:	081613.D
Matrix:	Water	Instrument:	GCMS9
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	104	50	150
Toluene-d8	106	50	150
4-Bromofluorobenzene	106	50	150

Compounds:	Concentration ug/L (ppb)
Methyl t-butyl ether (MTBE)	<1
1,2-Dichloroethane (EDC)	<1
1,2-Dibromoethane (EDB)	<1
Benzene	<0.35
Toluene	<1
Ethylbenzene	<1
m,p-Xylene	<2
o-Xylene	<1
Naphthalene	<1
Hexane	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW-10-081513	Client:	Aspect Consulting, LLC
Date Received:	08/16/13	Project:	Ken's Texaco 120061, F&BI 308260
Date Extracted:	08/16/13	Lab ID:	308260-04
Date Analyzed:	08/16/13	Data File:	081614.D
Matrix:	Water	Instrument:	GCMS9
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	99	50	150
Toluene-d8	102	50	150
4-Bromofluorobenzene	105	50	150

Compounds:	Concentration ug/L (ppb)
Methyl t-butyl ether (MTBE)	<1
1,2-Dichloroethane (EDC)	2.1
1,2-Dibromoethane (EDB)	<1
Benzene	89
Toluene	45
Ethylbenzene	260 ve
m,p-Xylene	490 ve
o-Xylene	160 ve
Naphthalene	70
Hexane	28

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW-10-081513	Client:	Aspect Consulting, LLC
Date Received:	08/16/13	Project:	Ken's Texaco 120061, F&BI 308260
Date Extracted:	08/16/13	Lab ID:	308260-04 1/10
Date Analyzed:	08/19/13	Data File:	081906.D
Matrix:	Water	Instrument:	GCMS9
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	102	50	150
Toluene-d8	100	50	150
4-Bromofluorobenzene	102	50	150

Compounds:	Concentration ug/L (ppb)
Methyl t-butyl ether (MTBE)	<10
1,2-Dichloroethane (EDC)	<10
1,2-Dibromoethane (EDB)	<10
Benzene	85
Toluene	40
Ethylbenzene	170
m,p-Xylene	420
o-Xylene	140
Naphthalene	62
Hexane	21

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID: MW-12-081513	Client: Aspect Consulting, LLC
Date Received: 08/16/13	Project: Ken's Texaco 120061, F&BI 308260
Date Extracted: 08/16/13	Lab ID: 308260-05
Date Analyzed: 08/16/13	Data File: 081615.D
Matrix: Water	Instrument: GCMS9
Units: ug/L (ppb)	Operator: JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	98	50	150
Toluene-d8	101	50	150
4-Bromofluorobenzene	105	50	150

Compounds:	Concentration ug/L (ppb)
Methyl t-butyl ether (MTBE)	<1
1,2-Dichloroethane (EDC)	<1
1,2-Dibromoethane (EDB)	<1
Benzene	<0.35
Toluene	<1
Ethylbenzene	<1
m,p-Xylene	<2
o-Xylene	<1
Naphthalene	<1
Hexane	<1
Vinyl chloride	<0.2
Chloroethane	<1
1,1-Dichloroethene	<1
Methylene chloride	<5
trans-1,2-Dichloroethene	<1
1,1-Dichloroethane	<1
cis-1,2-Dichloroethene	<1
1,1,1-Trichloroethane	<1
Trichloroethene	<1
Tetrachloroethene	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID: MW-11-081513	Client: Aspect Consulting, LLC
Date Received: 08/16/13	Project: Ken's Texaco 120061, F&BI 308260
Date Extracted: 08/16/13	Lab ID: 308260-06
Date Analyzed: 08/16/13	Data File: 081616.D
Matrix: Water	Instrument: GCMS9
Units: ug/L (ppb)	Operator: JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	100	50	150
Toluene-d8	105	50	150
4-Bromofluorobenzene	105	50	150

Compounds:	Concentration ug/L (ppb)
Methyl t-butyl ether (MTBE)	<1
1,2-Dichloroethane (EDC)	5.8
1,2-Dibromoethane (EDB)	<1
Benzene	250 ve
Toluene	24
Ethylbenzene	84
m,p-Xylene	110
o-Xylene	13
Naphthalene	26
Hexane	46
Vinyl chloride	<0.2
Chloroethane	<1
1,1-Dichloroethene	<1
Methylene chloride	<5
trans-1,2-Dichloroethene	<1
1,1-Dichloroethane	<1
cis-1,2-Dichloroethene	<1
1,1,1-Trichloroethane	<1
Trichloroethene	<1
Tetrachloroethene	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW-11-081513	Client:	Aspect Consulting, LLC
Date Received:	08/16/13	Project:	Ken's Texaco 120061, F&BI 308260
Date Extracted:	08/16/13	Lab ID:	308260-06 1/10
Date Analyzed:	08/19/13	Data File:	081907.D
Matrix:	Water	Instrument:	GCMS9
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	103	50	150
Toluene-d8	100	50	150
4-Bromofluorobenzene	100	50	150

Compounds:	Concentration ug/L (ppb)
Methyl t-butyl ether (MTBE)	<10
1,2-Dichloroethane (EDC)	<10
1,2-Dibromoethane (EDB)	<10
Benzene	260
Toluene	25
Ethylbenzene	82
m,p-Xylene	110
o-Xylene	13
Naphthalene	25
Hexane	42
Vinyl chloride	<2
Chloroethane	<10
1,1-Dichloroethene	<10
Methylene chloride	<50
trans-1,2-Dichloroethene	<10
1,1-Dichloroethane	<10
cis-1,2-Dichloroethene	<10
1,1,1-Trichloroethane	<10
Trichloroethene	<10
Tetrachloroethene	<10

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	Method Blank	Client:	Aspect Consulting, LLC
Date Received:	NA	Project:	Ken's Texaco 120061, F&BI 308260
Date Extracted:	08/16/13	Lab ID:	03-1555 mb
Date Analyzed:	08/16/13	Data File:	081610.D
Matrix:	Water	Instrument:	GCMS9
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	100	50	150
Toluene-d8	99	50	150
4-Bromofluorobenzene	100	50	150

Compounds:	Concentration ug/L (ppb)
Methyl t-butyl ether (MTBE)	<1
1,2-Dichloroethane (EDC)	<1
1,2-Dibromoethane (EDB)	<1
Benzene	<0.35
Toluene	<1
Ethylbenzene	<1
m,p-Xylene	<2
o-Xylene	<1
Naphthalene	<1
Hexane	<1
Vinyl chloride	<0.2
Chloroethane	<1
1,1-Dichloroethene	<1
Methylene chloride	<5
trans-1,2-Dichloroethene	<1
1,1-Dichloroethane	<1
cis-1,2-Dichloroethene	<1
1,1,1-Trichloroethane	<1
Trichloroethene	<1
Tetrachloroethene	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 08/23/13

Date Received: 08/16/13

Project: Ken's Texaco 120061, F&BI 308260

**QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER
SAMPLES FOR TPH AS GASOLINE
USING METHOD NWTPH-Gx**

Laboratory Code: 308260-02 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	RPD (Limit 20)
Gasoline	ug/L (ppb)	380	430	12

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Gasoline	ug/L (ppb)	1,000	93	70-119

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 08/23/13

Date Received: 08/16/13

Project: Ken's Texaco 120061, F&BI 308260

**QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER
SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS
DIESEL EXTENDED USING METHOD NWTPH-Dx**

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	ug/L (ppb)	2,500	91	91	61-133	0

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 08/23/13

Date Received: 08/16/13

Project: Ken's Texaco 120061, F&BI 308260

**QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER
SAMPLES FOR VOLATILES BY EPA METHOD 8260C**

Laboratory Code: 308260-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Acceptance Criteria
Methyl t-butyl ether (MTBE)	ug/L (ppb)	50	<1	93	68-125
1,2-Dichloroethane (EDC)	ug/L (ppb)	50	<1	94	78-113
Benzene	ug/L (ppb)	50	<0.35	97	79-109
Toluene	ug/L (ppb)	50	<1	95	73-117
1,2-Dibromoethane (EDB)	ug/L (ppb)	50	<1	96	83-114
Ethylbenzene	ug/L (ppb)	50	<1	95	71-120
m,p-Xylene	ug/L (ppb)	100	<2	97	63-128
o-Xylene	ug/L (ppb)	50	<1	97	64-129
Naphthalene	ug/L (ppb)	50	<1	104	63-136
Hexane	ug/L (ppb)	50	8.5	94	61-127
Vinyl chloride	ug/L (ppb)	50	<0.2	96	61-139
Chloroethane	ug/L (ppb)	50	<1	87	68-126
1,1-Dichloroethene	ug/L (ppb)	50	<1	96	71-123
Methylene chloride	ug/L (ppb)	50	<5	99	61-126
trans-1,2-Dichloroethene	ug/L (ppb)	50	<1	99	72-122
1,1-Dichloroethane	ug/L (ppb)	50	<1	98	79-113
cis-1,2-Dichloroethene	ug/L (ppb)	50	<1	100	73-119
1,1,1-Trichloroethane	ug/L (ppb)	50	<1	95	79-116
Trichloroethene	ug/L (ppb)	50	<1	97	75-109
Tetrachloroethene	ug/L (ppb)	50	<1	87	72-113

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 08/23/13

Date Received: 08/16/13

Project: Ken's Texaco 120061, F&BI 308260

**QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER
SAMPLES FOR VOLATILES BY EPA METHOD 8260C**

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Methyl t-butyl ether (MTBE)	ug/L (ppb)	50	98	97	70-122	1
1,2-Dichloroethane (EDC)	ug/L (ppb)	50	100	97	79-109	3
Benzene	ug/L (ppb)	50	102	99	81-108	3
Toluene	ug/L (ppb)	50	100	100	83-108	0
1,2-Dibromoethane (EDB)	ug/L (ppb)	50	106	101	85-113	5
Ethylbenzene	ug/L (ppb)	50	99	98	84-110	1
m,p-Xylene	ug/L (ppb)	100	103	101	84-112	2
o-Xylene	ug/L (ppb)	50	99	101	82-113	2
Naphthalene	ug/L (ppb)	50	93	98	75-131	5
Hexane	ug/L (ppb)	50	98	98	51-153	0
Vinyl chloride	ug/L (ppb)	50	98	99	73-132	1
Chloroethane	ug/L (ppb)	50	90	90	68-126	0
1,1-Dichloroethene	ug/L (ppb)	50	100	98	75-119	2
Methylene chloride	ug/L (ppb)	50	100	100	63-132	0
trans-1,2-Dichloroethene	ug/L (ppb)	50	102	102	76-118	0
1,1-Dichloroethane	ug/L (ppb)	50	103	102	80-116	1
cis-1,2-Dichloroethene	ug/L (ppb)	50	103	102	81-111	1
1,1,1-Trichloroethane	ug/L (ppb)	50	102	103	80-116	1
Trichloroethene	ug/L (ppb)	50	100	100	77-108	0
Tetrachloroethene	ug/L (ppb)	50	92	90	78-109	2

Data Qualifiers & Definitions

a - The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.

A1 - More than one compound of similar molecule structure was identified with equal probability.

b - The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be meaningful.

ca - The calibration results for this range fell outside of acceptance criteria. The value reported is an estimate.

c - The presence of the analyte indicated may be due to carryover from previous sample injections.

d - The sample was diluted. Detection limits may be raised due to dilution.

ds - The sample was diluted. Detection limits are raised due to dilution and surrogate recoveries may not be meaningful.

dv - Insufficient sample was available to achieve normal reporting limits and limits are raised accordingly.

fb - Analyte present in the blank and the sample.

fc - The compound is a common laboratory and field contaminant.

hr - The sample and duplicate were reextracted and reanalyzed. RPD results were still outside of control limits. The variability is attributed to sample inhomogeneity.

ht - Analysis performed outside the method or client-specified holding time requirement.

ip - Recovery fell outside of normal control limits. Compounds in the sample matrix interfered with the quantitation of the analyte.

j - The result is below normal reporting limits. The value reported is an estimate.

J - The internal standard associated with the analyte is out of control limits. The reported concentration is an estimate.

jl - The analyte result in the laboratory control sample is out of control limits. The reported concentration should be considered an estimate.

jr - The rpd result in laboratory control sample associated with the analyte is out of control limits. The reported concentration should be considered an estimate.

js - The surrogate associated with the analyte is out of control limits. The reported concentration should be considered an estimate.

lc - The presence of the compound indicated is likely due to laboratory contamination.

L - The reported concentration was generated from a library search.

nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.

pc - The sample was received in a container not approved by the method. The value reported should be considered an estimate.

pr - The sample was received with incorrect preservation. The value reported should be considered an estimate.

ve - Estimated concentration calculated for an analyte response above the valid instrument calibration range. A dilution is required to obtain an accurate quantification of the analyte.

vo - The value reported fell outside the control limits established for this analyte.

x - The sample chromatographic pattern does not resemble the fuel standard used for quantitation.

DL
308 ~~260~~ 308260
Send Report To Bob Hanford
Company Aspect Consulting
Address 350 Madison Ave N.
City, State, ZIP Banbridge Island, WA
Phone # _____ Fax # _____

SAMPLE CHAIN OF CUSTODY

ME 08-16-13

D04/V2

SAMPLERS (*signature*)

PROJECT NAME/NO.

PO#

Ken's Texaco

120061

REMARKS

TURNAROUND TIME

☒ Standard (2 Weeks)

☐ RUSH

Rush charges authorized by

SAMPLE DISPOSAL



☐ Dispose after 30 days

- ☐ Return samples

☐ Will call with instructions

[illegible]

Friedman & Bruya, Inc.
3012 16th Avenue West
Seattle, WA 98119-2029
Ph. (206) 285-8282
Fax (206) 283-5044

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by: 	Aaron Pruitt	Aspect	8/16/13	10:00
Received by: 	Nhan Phan	Fx BI	8/16/13	11:20
Relinquished by:				
Received by:				

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Yelena Aravkina, M.S.
Michael Erdahl, B.S.
Kurt Johnson, B.S.
Eric Young, B.S.

3012 16th Avenue West
Seattle, WA 98119-2029
(206) 285-8282
fbi@isomedia.com
www.friedmanandbruya.com

January 24, 2014

Bob Hanford, Project Manager
Aspect Consulting, LLC
350 Madison Ave. N.
Bainbridge Island, WA 98110-1810

Dear Mr. Hanford:

Included are the results from the testing of material submitted on January 17, 2014 from the Ken's Texaco 120061, F&BI 401201 project. There are 16 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

We appreciate this opportunity to be of service to you and hope you will call if you have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.



Michael Erdahl
Project Manager

Enclosures

c: data@aspectconsulting.com, Parker Wittman
ASP0124R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on January 17, 2014 by Friedman & Bruya, Inc. from the Aspect Consulting, LLC Ken's Texaco 120061, F&BI 401201 project. Samples were logged in under the laboratory ID's listed below.

<u>Laboratory ID</u>	<u>Aspect Consulting, LLC</u>
401201 -01	MW-1-011614
401201 -02	MW-7-011614
401201 -03	MW-8-011614
401201 -04	MW-10-011614
401201 -05	MW-11-011614
401201 -06	MW-12-011614

All quality control requirements were acceptable.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 01/24/14

Date Received: 01/17/14

Project: Ken's Texaco 120061, F&BI 401201

Date Extracted: 01/20/14

Date Analyzed: 01/20/14

**RESULTS FROM THE ANALYSIS OF WATER SAMPLES
FOR TOTAL PETROLEUM HYDROCARBONS AS GASOLINE
USING METHOD NWTPH-Gx**

Results Reported as ug/L (ppb)

<u>Sample ID</u> Laboratory ID	<u>Gasoline Range</u>	Surrogate <u>(% Recovery)</u> (Limit 51-134)
MW-1-011614 401201-01	2,800	120
MW-7-011614 401201-02	770	119
MW-8-011614 401201-03	230	93
MW-10-011614 401201-04	1,100	109
MW-11-011614 401201-05	1,800	117
MW-12-011614 401201-06	<100	93
Method Blank 04-0117 MB	<100	94

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 01/24/14

Date Received: 01/17/14

Project: Ken's Texaco 120061, F&BI 401201

Date Extracted: 01/20/14

Date Analyzed: 01/21/14

**RESULTS FROM THE ANALYSIS OF WATER SAMPLES
FOR TOTAL PETROLEUM HYDROCARBONS AS
DIESEL AND MOTOR OIL
USING METHOD NWTPH-Dx**
Results Reported as ug/L (ppb)

<u>Sample ID</u> Laboratory ID	<u>Diesel Range</u> (C ₁₀ -C ₂₅)	<u>Motor Oil Range</u> (C ₂₅ -C ₃₆)	<u>Surrogate</u> <u>(% Recovery)</u> (Limit 51-134)
MW-1-011614 401201-01	550 x	<250	96
MW-7-011614 401201-02	220 x	<250	101
MW-8-011614 401201-03	110 x	<250	110
MW-10-011614 401201-04	160 x	<250	103
MW-11-011614 401201-05	490 x	<250	99
MW-12-011614 401201-06	<50	<250	109
Method Blank 04-134 MB	<50	<250	103

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW-1-011614	Client:	Aspect Consulting, LLC
Date Received:	01/17/14	Project:	Ken's Texaco 120061, F&BI 401201
Date Extracted:	01/21/14	Lab ID:	401201-01
Date Analyzed:	01/21/14	Data File:	012107.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	104	57	121
Toluene-d8	95	63	127
4-Bromofluorobenzene	96	60	133

Compounds:	Concentration ug/L (ppb)
Benzene	<0.35
Toluene	<1
Ethylbenzene	<1
m,p-Xylene	<2
o-Xylene	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW-7-011614	Client:	Aspect Consulting, LLC
Date Received:	01/17/14	Project:	Ken's Texaco 120061, F&BI 401201
Date Extracted:	01/21/14	Lab ID:	401201-02
Date Analyzed:	01/21/14	Data File:	012108.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	102	57	121
Toluene-d8	95	63	127
4-Bromofluorobenzene	98	60	133

Compounds:	Concentration ug/L (ppb)
Benzene	<0.35
Toluene	<1
Ethylbenzene	<1
m,p-Xylene	<2
o-Xylene	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID: MW-8-011614	Client: Aspect Consulting, LLC
Date Received: 01/17/14	Project: Ken's Texaco 120061, F&BI 401201
Date Extracted: 01/17/14	Lab ID: 401201-03
Date Analyzed: 01/17/14	Data File: 011727.D
Matrix: Water	Instrument: GCMS4
Units: ug/L (ppb)	Operator: SP

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	100	57	121
Toluene-d8	93	63	127
4-Bromofluorobenzene	95	60	133

Compounds:	Concentration ug/L (ppb)
Benzene	3.6
Toluene	<1
Ethylbenzene	5.3
m,p-Xylene	<2
o-Xylene	<1
Vinyl chloride	<0.2
Chloroethane	<1
1,1-Dichloroethene	<1
Methylene chloride	<5
trans-1,2-Dichloroethene	<1
1,1-Dichloroethane	<1
cis-1,2-Dichloroethene	<1
1,2-Dichloroethane (EDC)	<1
1,1,1-Trichloroethane	<1
Trichloroethene	<1
Tetrachloroethene	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW-10-011614	Client:	Aspect Consulting, LLC
Date Received:	01/17/14	Project:	Ken's Texaco 120061, F&BI 401201
Date Extracted:	01/21/14	Lab ID:	401201-04
Date Analyzed:	01/21/14	Data File:	012109.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	101	57	121
Toluene-d8	95	63	127
4-Bromofluorobenzene	96	60	133

Compounds:	Concentration ug/L (ppb)
Benzene	13
Toluene	5.4
Ethylbenzene	46
m,p-Xylene	92
o-Xylene	15

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID: MW-11-011614	Client: Aspect Consulting, LLC
Date Received: 01/17/14	Project: Ken's Texaco 120061, F&BI 401201
Date Extracted: 01/17/14	Lab ID: 401201-05
Date Analyzed: 01/17/14	Data File: 011728.D
Matrix: Water	Instrument: GCMS4
Units: ug/L (ppb)	Operator: SP

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	100	57	121
Toluene-d8	94	63	127
4-Bromofluorobenzene	97	60	133

Compounds:	Concentration ug/L (ppb)
Benzene	54
Toluene	5.8
Ethylbenzene	65
m,p-Xylene	54
o-Xylene	4.1
Vinyl chloride	<0.2
Chloroethane	<1
1,1-Dichloroethene	<1
Methylene chloride	<5
trans-1,2-Dichloroethene	<1
1,1-Dichloroethane	<1
cis-1,2-Dichloroethene	<1
1,2-Dichloroethane (EDC)	<1
1,1,1-Trichloroethane	<1
Trichloroethene	<1
Tetrachloroethene	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW-12-011614	Client:	Aspect Consulting, LLC
Date Received:	01/17/14	Project:	Ken's Texaco 120061, F&BI 401201
Date Extracted:	01/17/14	Lab ID:	401201-06
Date Analyzed:	01/17/14	Data File:	011729.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	SP

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	102	57	121
Toluene-d8	93	63	127
4-Bromofluorobenzene	95	60	133

Compounds:	Concentration ug/L (ppb)
Benzene	<0.35
Toluene	<1
Ethylbenzene	<1
m,p-Xylene	<2
o-Xylene	<1
Vinyl chloride	<0.2
Chloroethane	<1
1,1-Dichloroethene	<1
Methylene chloride	<5
trans-1,2-Dichloroethene	<1
1,1-Dichloroethane	<1
cis-1,2-Dichloroethene	<1
1,2-Dichloroethane (EDC)	<1
1,1,1-Trichloroethane	<1
Trichloroethene	<1
Tetrachloroethene	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	Method Blank	Client:	Aspect Consulting, LLC
Date Received:	NA	Project:	Ken's Texaco 120061, F&BI 401201
Date Extracted:	01/17/14	Lab ID:	04-0048 mb
Date Analyzed:	01/17/14	Data File:	011714.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	SP

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	100	57	121
Toluene-d8	95	63	127
4-Bromofluorobenzene	98	60	133

Compounds:	Concentration ug/L (ppb)
Benzene	<0.35
Toluene	<1
Ethylbenzene	<1
m,p-Xylene	<2
o-Xylene	<1
Vinyl chloride	<0.2
Chloroethane	<1
1,1-Dichloroethene	<1
Methylene chloride	<5
trans-1,2-Dichloroethene	<1
1,1-Dichloroethane	<1
cis-1,2-Dichloroethene	<1
1,2-Dichloroethane (EDC)	<1
1,1,1-Trichloroethane	<1
Trichloroethene	<1
Tetrachloroethene	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	Method Blank	Client:	Aspect Consulting, LLC
Date Received:	NA	Project:	Ken's Texaco 120061, F&BI 401201
Date Extracted:	01/21/14	Lab ID:	04-0052 mb
Date Analyzed:	01/21/14	Data File:	012105.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	104	57	121
Toluene-d8	93	63	127
4-Bromofluorobenzene	95	60	133

Compounds:	Concentration ug/L (ppb)
Benzene	<0.35
Toluene	<1
Ethylbenzene	<1
m,p-Xylene	<2
o-Xylene	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 01/24/14

Date Received: 01/17/14

Project: Ken's Texaco 120061, F&BI 401201

**QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER
SAMPLES FOR TPH AS GASOLINE
USING METHOD NWTPH-Gx**

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Gasoline	ug/L (ppb)	1,000	99	99	69-134	0

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 01/24/14

Date Received: 01/17/14

Project: Ken's Texaco 120061, F&BI 401201

**QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER
SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS
DIESEL EXTENDED USING METHOD NWTPH-Dx**

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	ug/L (ppb)	2,500	111	105	58-134	6

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 01/24/14

Date Received: 01/17/14

Project: Ken's Texaco 120061, F&BI 401201

**QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER
SAMPLES FOR VOLATILES BY EPA METHOD 8260C**

Laboratory Code: 401202-11 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Acceptance Criteria
Vinyl chloride	ug/L (ppb)	50	<0.2	94	36-166
Chloroethane	ug/L (ppb)	50	<1	143	46-160
1,1-Dichloroethene	ug/L (ppb)	50	<1	99	60-136
Methylene chloride	ug/L (ppb)	50	<5	101	67-132
trans-1,2-Dichloroethene	ug/L (ppb)	50	<1	97	72-129
1,1-Dichloroethane	ug/L (ppb)	50	<1	98	70-128
cis-1,2-Dichloroethene	ug/L (ppb)	50	<1	99	71-127
1,2-Dichloroethane (EDC)	ug/L (ppb)	50	<1	97	69-133
1,1,1-Trichloroethane	ug/L (ppb)	50	<1	104	60-146
Benzene	ug/L (ppb)	50	<0.35	94	76-125
Trichloroethene	ug/L (ppb)	50	<1	96	66-135
Toluene	ug/L (ppb)	50	<1	98	76-122
Tetrachloroethene	ug/L (ppb)	50	<1	99	10-226
Ethylbenzene	ug/L (ppb)	50	<1	100	69-135
m,p-Xylene	ug/L (ppb)	100	<2	99	69-135
o-Xylene	ug/L (ppb)	50	<1	102	60-140

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Vinyl chloride	ug/L (ppb)	50	91	92	50-154	1
Chloroethane	ug/L (ppb)	50	134	137	58-146	2
1,1-Dichloroethene	ug/L (ppb)	50	95	95	67-136	0
Methylene chloride	ug/L (ppb)	50	91	93	39-148	2
trans-1,2-Dichloroethene	ug/L (ppb)	50	94	95	68-128	1
1,1-Dichloroethane	ug/L (ppb)	50	94	96	79-121	2
cis-1,2-Dichloroethene	ug/L (ppb)	50	94	97	80-123	3
1,2-Dichloroethane (EDC)	ug/L (ppb)	50	95	95	73-132	0
1,1,1-Trichloroethane	ug/L (ppb)	50	100	101	83-130	1
Benzene	ug/L (ppb)	50	91	91	69-134	0
Trichloroethene	ug/L (ppb)	50	93	96	80-120	3
Toluene	ug/L (ppb)	50	95	96	72-122	1
Tetrachloroethene	ug/L (ppb)	50	98	98	76-121	0
Ethylbenzene	ug/L (ppb)	50	98	98	77-124	0
m,p-Xylene	ug/L (ppb)	100	98	99	83-125	1
o-Xylene	ug/L (ppb)	50	100	102	81-121	2

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 01/24/14

Date Received: 01/17/14

Project: Ken's Texaco 120061, F&BI 401201

**QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER
SAMPLES FOR VOLATILES BY EPA METHOD 8260C**

Laboratory Code: 401225-03 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Acceptance Criteria
Benzene	ug/L (ppb)	50	<0.35	82	76-125
Toluene	ug/L (ppb)	50	<1	84	76-122
Ethylbenzene	ug/L (ppb)	50	<1	87	69-135
m,p-Xylene	ug/L (ppb)	100	<2	87	69-135
o-Xylene	ug/L (ppb)	50	<1	91	60-140

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Benzene	ug/L (ppb)	50	92	90	69-134	2
Toluene	ug/L (ppb)	50	94	92	72-122	2
Ethylbenzene	ug/L (ppb)	50	97	95	77-124	2
m,p-Xylene	ug/L (ppb)	100	98	95	83-125	3
o-Xylene	ug/L (ppb)	50	100	98	81-121	2

Data Qualifiers & Definitions

a - The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.

A1 - More than one compound of similar molecule structure was identified with equal probability.

b - The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be meaningful.

ca - The calibration results for this range fell outside of acceptance criteria. The value reported is an estimate.

c - The presence of the analyte indicated may be due to carryover from previous sample injections.

d - The sample was diluted. Detection limits may be raised due to dilution.

ds - The sample was diluted. Detection limits are raised due to dilution and surrogate recoveries may not be meaningful.

dv - Insufficient sample was available to achieve normal reporting limits and limits are raised accordingly.

fb - Analyte present in the blank and the sample.

fc - The compound is a common laboratory and field contaminant.

hr - The sample and duplicate were reextracted and reanalyzed. RPD results were still outside of control limits. The variability is attributed to sample inhomogeneity.

ht - Analysis performed outside the method or client-specified holding time requirement.

ip - Recovery fell outside of normal control limits. Compounds in the sample matrix interfered with the quantitation of the analyte.

j - The result is below normal reporting limits. The value reported is an estimate.

J - The internal standard associated with the analyte is out of control limits. The reported concentration is an estimate.

jl - The analyte result in the laboratory control sample is out of control limits. The reported concentration should be considered an estimate.

jr - The rpd result in laboratory control sample associated with the analyte is out of control limits. The reported concentration should be considered an estimate.

js - The surrogate associated with the analyte is out of control limits. The reported concentration should be considered an estimate.

lc - The presence of the compound indicated is likely due to laboratory contamination.

L - The reported concentration was generated from a library search.

nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.

pc - The sample was received in a container not approved by the method. The value reported should be considered an estimate.

pr - The sample was received with incorrect preservation. The value reported should be considered an estimate.

ve - Estimated concentration calculated for an analyte response above the valid instrument calibration range. A dilution is required to obtain an accurate quantification of the analyte.

vo - The value reported fell outside the control limits established for this analyte.

x - The sample chromatographic pattern does not resemble the fuel standard used for quantitation.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Yelena Aravkina, M.S.
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May 16, 2014

Bob Hanford, Project Manager
Aspect Consulting, LLC
350 Madison Ave. N.
Bainbridge Island, WA 98110-1810

Dear Mr. Hanford:

Included are the results from the testing of material submitted on May 9, 2014 from the Ken's Texaco, PO 120061, F&BI 405168 project. There are 16 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

We appreciate this opportunity to be of service to you and hope you will call if you have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.



Michael Erdahl
Project Manager

Enclosures

c: data@aspectconsulting.com, Parker Wittman
ASP0516R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on May 9, 2014 by Friedman & Bruya, Inc. from the Aspect Consulting, LLC Ken's Texaco, PO 120061, F&BI 405168 project. Samples were logged in under the laboratory ID's listed below.

<u>Laboratory ID</u>	<u>Aspect Consulting, LLC</u>
405168 -01	MW-1-050814
405168 -02	MW-7-050814
405168 -03	MW-8-050814
405168 -04	MW-10-050814
405168 -05	MW-11-050814
405168 -06	MW-12-050814

The 8260C surrogate toluene-d8 exceeded the acceptance criteria for sample MW-1-050814. No analytes were detected in the sample, therefore the data were acceptable.

Chloroethane in the 8260C matrix spike, laboratory control sample and laboratory control sample duplicate exceeded the acceptance criteria. The analyte was not detected in the sample, therefore the data were acceptable.

All other quality control requirements were acceptable.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 05/16/14

Date Received: 05/09/14

Project: Ken's Texaco, PO 120061, F&BI 405168

Date Extracted: 05/09/14

Date Analyzed: 05/09/14

**RESULTS FROM THE ANALYSIS OF WATER SAMPLES
FOR TOTAL PETROLEUM HYDROCARBONS AS GASOLINE
USING METHOD NWTPH-Gx**

Results Reported as ug/L (ppb)

<u>Sample ID</u> Laboratory ID	<u>Gasoline Range</u>	Surrogate <u>(% Recovery)</u> (Limit 51-134)
MW-1-050814 405168-01	2,700	98
MW-7-050814 405168-02	470	93
MW-8-050814 405168-03	750	85
MW-10-050814 405168-04	950	94
MW-11-050814 405168-05	2,700	82
MW-12-050814 405168-06	<100	75
Method Blank 04-0882 MB	<100	79

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 05/16/14

Date Received: 05/09/14

Project: Ken's Texaco, PO 120061, F&BI 405168

Date Extracted: 05/12/14

Date Analyzed: 05/12/14

**RESULTS FROM THE ANALYSIS OF WATER SAMPLES
FOR TOTAL PETROLEUM HYDROCARBONS AS
DIESEL AND MOTOR OIL
USING METHOD NWTPH-Dx**
Results Reported as ug/L (ppb)

<u>Sample ID</u> Laboratory ID	<u>Diesel Range</u> (C ₁₀ -C ₂₅)	<u>Motor Oil Range</u> (C ₂₅ -C ₃₆)	<u>Surrogate</u> <u>(% Recovery)</u> (Limit 47-140)
MW-1-050814 405168-01	570 x	<250	86
MW-7-050814 405168-02	160 x	<250	84
MW-8-050814 405168-03	200 x	<250	82
MW-10-050814 405168-04	300 x	<250	84
MW-11-050814 405168-05	920 x	<250	89
MW-12-050814 405168-06	<50	<250	87
Method Blank 04-957 MB	<50	<250	84

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW-1-050814	Client:	Aspect Consulting, LLC
Date Received:	05/09/14	Project:	Ken's Texaco, PO 120061, F&BI 405168
Date Extracted:	05/09/14	Lab ID:	405168-01
Date Analyzed:	05/09/14	Data File:	050911.D
Matrix:	Water	Instrument:	GCMS7
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	101	94	108
Toluene-d8	110 vo	91	107
4-Bromofluorobenzene	106	91	110

Compounds:	Concentration ug/L (ppb)
Benzene	<0.35
Toluene	<1
Ethylbenzene	<1
m,p-Xylene	<2
o-Xylene	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW-7-050814	Client:	Aspect Consulting, LLC
Date Received:	05/09/14	Project:	Ken's Texaco, PO 120061, F&BI 405168
Date Extracted:	05/09/14	Lab ID:	405168-02
Date Analyzed:	05/09/14	Data File:	050912.D
Matrix:	Water	Instrument:	GCMS7
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	97	94	108
Toluene-d8	104	91	107
4-Bromofluorobenzene	105	91	110

Compounds:	Concentration ug/L (ppb)
Benzene	<0.35
Toluene	<1
Ethylbenzene	<1
m,p-Xylene	<2
o-Xylene	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW-8-050814	Client:	Aspect Consulting, LLC
Date Received:	05/09/14	Project:	Ken's Texaco, PO 120061, F&BI 405168
Date Extracted:	05/12/14	Lab ID:	405168-03
Date Analyzed:	05/12/14	Data File:	051217.D
Matrix:	Water	Instrument:	GCMS9
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	101	85	117
Toluene-d8	102	93	107
4-Bromofluorobenzene	99	76	126

Compounds:	Concentration ug/L (ppb)
Benzene	14
Toluene	4.1
Ethylbenzene	11
m,p-Xylene	12
o-Xylene	2.3
Vinyl chloride	<0.2
Chloroethane	<1
1,1-Dichloroethene	<1
Methylene chloride	<5
trans-1,2-Dichloroethene	<1
1,1-Dichloroethane	<1
cis-1,2-Dichloroethene	<1
1,2-Dichloroethane (EDC)	<1
1,1,1-Trichloroethane	<1
Trichloroethene	<1
Tetrachloroethene	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW-10-050814	Client:	Aspect Consulting, LLC
Date Received:	05/09/14	Project:	Ken's Texaco, PO 120061, F&BI 405168
Date Extracted:	05/09/14	Lab ID:	405168-04
Date Analyzed:	05/09/14	Data File:	050915.D
Matrix:	Water	Instrument:	GCMS7
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	99	94	108
Toluene-d8	101	91	107
4-Bromofluorobenzene	103	91	110

Compounds:	Concentration ug/L (ppb)
Benzene	32
Toluene	4.3
Ethylbenzene	63
m,p-Xylene	23
o-Xylene	5.2
Vinyl chloride	<0.2
Chloroethane	<1
1,1-Dichloroethene	<1
Methylene chloride	<5
trans-1,2-Dichloroethene	<1
1,1-Dichloroethane	<1
cis-1,2-Dichloroethene	<1
1,2-Dichloroethane (EDC)	<1
1,1,1-Trichloroethane	<1
Trichloroethene	<1
Tetrachloroethene	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW-11-050814	Client:	Aspect Consulting, LLC
Date Received:	05/09/14	Project:	Ken's Texaco, PO 120061, F&BI 405168
Date Extracted:	05/12/14	Lab ID:	405168-05
Date Analyzed:	05/12/14	Data File:	051218.D
Matrix:	Water	Instrument:	GCMS9
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	101	85	117
Toluene-d8	103	93	107
4-Bromofluorobenzene	99	76	126

Compounds:	Concentration ug/L (ppb)
Benzene	70
Toluene	7.3
Ethylbenzene	74
m,p-Xylene	71
o-Xylene	5.9
Vinyl chloride	<0.2
Chloroethane	<1
1,1-Dichloroethene	<1
Methylene chloride	<5
trans-1,2-Dichloroethene	<1
1,1-Dichloroethane	<1
cis-1,2-Dichloroethene	<1
1,2-Dichloroethane (EDC)	<1
1,1,1-Trichloroethane	<1
Trichloroethene	<1
Tetrachloroethene	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW-12-050814	Client:	Aspect Consulting, LLC
Date Received:	05/09/14	Project:	Ken's Texaco, PO 120061, F&BI 405168
Date Extracted:	05/09/14	Lab ID:	405168-06
Date Analyzed:	05/09/14	Data File:	050914.D
Matrix:	Water	Instrument:	GCMS7
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	105	94	108
Toluene-d8	103	91	107
4-Bromofluorobenzene	102	91	110

Compounds:	Concentration ug/L (ppb)
Benzene	<0.35
Toluene	<1
Ethylbenzene	<1
m,p-Xylene	<2
o-Xylene	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	Method Blank	Client:	Aspect Consulting, LLC
Date Received:	Not Applicable	Project:	Ken's Texaco, PO 120061, F&BI 405168
Date Extracted:	05/09/14	Lab ID:	04-0923 mb
Date Analyzed:	05/09/14	Data File:	050910.D
Matrix:	Water	Instrument:	GCMS7
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	102	94	108
Toluene-d8	104	91	107
4-Bromofluorobenzene	101	91	110

Compounds:	Concentration ug/L (ppb)
Benzene	<0.35
Toluene	<1
Ethylbenzene	<1
m,p-Xylene	<2
o-Xylene	<1
Vinyl chloride	<0.2
Chloroethane	<1
1,1-Dichloroethene	<1
Methylene chloride	<5
trans-1,2-Dichloroethene	<1
1,1-Dichloroethane	<1
cis-1,2-Dichloroethene	<1
1,2-Dichloroethane (EDC)	<1
1,1,1-Trichloroethane	<1
Trichloroethene	<1
Tetrachloroethene	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	Method Blank	Client:	Aspect Consulting, LLC
Date Received:	Not Applicable	Project:	Ken's Texaco, PO 120061, F&BI 405168
Date Extracted:	05/12/14	Lab ID:	04-0925 mb
Date Analyzed:	05/12/14	Data File:	051216.D
Matrix:	Water	Instrument:	GCMS9
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	102	85	117
Toluene-d8	102	93	107
4-Bromofluorobenzene	98	76	126

Compounds:	Concentration ug/L (ppb)
Benzene	<0.35
Toluene	<1
Ethylbenzene	<1
m,p-Xylene	<2
o-Xylene	<1
Vinyl chloride	<0.2
Chloroethane	<1
1,1-Dichloroethene	<1
Methylene chloride	<5
trans-1,2-Dichloroethene	<1
1,1-Dichloroethane	<1
cis-1,2-Dichloroethene	<1
1,2-Dichloroethane (EDC)	<1
1,1,1-Trichloroethane	<1
Trichloroethene	<1
Tetrachloroethene	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 05/16/14

Date Received: 05/09/14

Project: Ken's Texaco, PO 120061, F&BI 405168

**QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER
SAMPLES FOR TPH AS GASOLINE
USING METHOD NWTPH-Gx**

Laboratory Code: 405140-05 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	RPD (Limit 20)
Gasoline	ug/L (ppb)	140	<100	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Gasoline	ug/L (ppb)	1,000	94	69-134

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 05/16/14

Date Received: 05/09/14

Project: Ken's Texaco, PO 120061, F&BI 405168

**QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER
SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS
DIESEL EXTENDED USING METHOD NWTPH-Dx**

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	ug/L (ppb)	2,500	121	122	61-133	1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 05/16/14

Date Received: 05/09/14

Project: Ken's Texaco, PO 120061, F&BI 405168

**QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER
SAMPLES FOR VOLATILES BY EPA METHOD 8260C**

Laboratory Code: 405168-03 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Acceptance Criteria
Vinyl chloride	ug/L (ppb)	50	<0.2	97	58-136
Chloroethane	ug/L (ppb)	50	<1	112	61-138
1,1-Dichloroethene	ug/L (ppb)	50	<1	94	75-118
Methylene chloride	ug/L (ppb)	50	<5	103	73-118
trans-1,2-Dichloroethene	ug/L (ppb)	50	<1	98	82-111
1,1-Dichloroethane	ug/L (ppb)	50	<1	95	85-110
cis-1,2-Dichloroethene	ug/L (ppb)	50	<1	99	84-112
1,2-Dichloroethane (EDC)	ug/L (ppb)	50	<1	91	81-114
1,1,1-Trichloroethane	ug/L (ppb)	50	<1	94	83-115
Benzene	ug/L (ppb)	50	16	91 b	85-109
Trichloroethene	ug/L (ppb)	50	<1	88	84-105
Toluene	ug/L (ppb)	50	5.0	93	86-111
Tetrachloroethene	ug/L (ppb)	50	<1	88	72-121
Ethylbenzene	ug/L (ppb)	50	41	105 b	86-115
m,p-Xylene	ug/L (ppb)	100	15	90	78-125
o-Xylene	ug/L (ppb)	50	2.4	99	84-119

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Vinyl chloride	ug/L (ppb)	50	107	107	72-124	0
Chloroethane	ug/L (ppb)	50	112	109	69-133	3
1,1-Dichloroethene	ug/L (ppb)	50	99	97	78-119	2
Methylene chloride	ug/L (ppb)	50	105	105	71-119	0
trans-1,2-Dichloroethene	ug/L (ppb)	50	104	102	82-116	2
1,1-Dichloroethane	ug/L (ppb)	50	102	101	81-116	1
cis-1,2-Dichloroethene	ug/L (ppb)	50	102	102	82-116	0
1,2-Dichloroethane (EDC)	ug/L (ppb)	50	99	99	81-113	0
1,1,1-Trichloroethane	ug/L (ppb)	50	100	99	84-117	1
Benzene	ug/L (ppb)	50	97	97	81-113	0
Trichloroethene	ug/L (ppb)	50	91	92	82-110	1
Toluene	ug/L (ppb)	50	94	94	85-112	0
Tetrachloroethene	ug/L (ppb)	50	93	93	78-117	0
Ethylbenzene	ug/L (ppb)	50	98	99	85-116	1
m,p-Xylene	ug/L (ppb)	100	99	99	84-119	0
o-Xylene	ug/L (ppb)	50	105	105	85-118	0

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 05/16/14

Date Received: 05/09/14

Project: Ken's Texaco, PO 120061, F&BI 405168

**QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER
SAMPLES FOR VOLATILES BY EPA METHOD 8260C**

Laboratory Code: 405168-05 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Acceptance Criteria
Vinyl chloride	ug/L (ppb)	50	<0.2	87	61-139
Chloroethane	ug/L (ppb)	50	<1	143 vo	68-126
1,1-Dichloroethene	ug/L (ppb)	50	<1	99	71-123
Methylene chloride	ug/L (ppb)	50	<5	87	61-126
trans-1,2-Dichloroethene	ug/L (ppb)	50	<1	86	72-122
1,1-Dichloroethane	ug/L (ppb)	50	<1	86	79-113
cis-1,2-Dichloroethene	ug/L (ppb)	50	<1	90	73-119
1,2-Dichloroethane (EDC)	ug/L (ppb)	50	1.9	89	78-113
1,1,1-Trichloroethane	ug/L (ppb)	50	<1	89	79-116
Benzene	ug/L (ppb)	50	70	88 b	79-109
Trichloroethene	ug/L (ppb)	50	<1	92	75-109
Toluene	ug/L (ppb)	50	7.3	89	73-117
Tetrachloroethene	ug/L (ppb)	50	<1	86	72-113
Ethylbenzene	ug/L (ppb)	50	74	91 b	71-120
m,p-Xylene	ug/L (ppb)	100	71	89 b	63-128
o-Xylene	ug/L (ppb)	50	5.9	88	64-129

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Vinyl chloride	ug/L (ppb)	50	89	90	73-132	1
Chloroethane	ug/L (ppb)	50	136 vo	147 vo	68-126	8
1,1-Dichloroethene	ug/L (ppb)	50	99	103	75-119	4
Methylene chloride	ug/L (ppb)	50	89	91	63-132	2
trans-1,2-Dichloroethene	ug/L (ppb)	50	88	91	76-118	3
1,1-Dichloroethane	ug/L (ppb)	50	89	91	80-116	2
cis-1,2-Dichloroethene	ug/L (ppb)	50	93	95	81-111	2
1,2-Dichloroethane (EDC)	ug/L (ppb)	50	89	92	79-109	3
1,1,1-Trichloroethane	ug/L (ppb)	50	93	94	80-116	1
Benzene	ug/L (ppb)	50	89	91	81-108	2
Trichloroethene	ug/L (ppb)	50	94	96	77-108	2
Toluene	ug/L (ppb)	50	90	91	83-108	1
Tetrachloroethene	ug/L (ppb)	50	88	90	78-109	2
Ethylbenzene	ug/L (ppb)	50	89	92	84-110	3
m,p-Xylene	ug/L (ppb)	100	92	94	84-112	2
o-Xylene	ug/L (ppb)	50	92	94	82-113	2

Data Qualifiers & Definitions

a - The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.

A1 - More than one compound of similar molecule structure was identified with equal probability.

b - The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be meaningful.

ca - The calibration results for this range fell outside of acceptance criteria. The value reported is an estimate.

c - The presence of the analyte indicated may be due to carryover from previous sample injections.

d - The sample was diluted. Detection limits may be raised due to dilution.

ds - The sample was diluted. Detection limits are raised due to dilution and surrogate recoveries may not be meaningful.

dv - Insufficient sample was available to achieve normal reporting limits and limits are raised accordingly.

fb - Analyte present in the blank and the sample.

fc - The compound is a common laboratory and field contaminant.

hr - The sample and duplicate were reextracted and reanalyzed. RPD results were still outside of control limits. The variability is attributed to sample inhomogeneity.

ht - Analysis performed outside the method or client-specified holding time requirement.

ip - Recovery fell outside of normal control limits. Compounds in the sample matrix interfered with the quantitation of the analyte.

j - The result is below normal reporting limits. The value reported is an estimate.

J - The internal standard associated with the analyte is out of control limits. The reported concentration is an estimate.

jl - The analyte result in the laboratory control sample is out of control limits. The reported concentration should be considered an estimate.

jr - The rpd result in laboratory control sample associated with the analyte is out of control limits. The reported concentration should be considered an estimate.

js - The surrogate associated with the analyte is out of control limits. The reported concentration should be considered an estimate.

lc - The presence of the compound indicated is likely due to laboratory contamination.

L - The reported concentration was generated from a library search.

nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.

pc - The sample was received in a container not approved by the method. The value reported should be considered an estimate.

pr - The sample was received with incorrect preservation. The value reported should be considered an estimate.

ve - Estimated concentration calculated for an analyte response above the valid instrument calibration range. A dilution is required to obtain an accurate quantification of the analyte.

vo - The value reported fell outside the control limits established for this analyte.

x - The sample chromatographic pattern does not resemble the fuel standard used for quantitation.

405168

SAMPLE CHAIN OF CUSTODY

ME 05-09-14

D03 1/12/1

Send Report To BOB HANFORDCompany Aspect ConsultingAddress 350 Madison Ave. N.City, State, ZIP Bainbridge Island, WA

Phone # _____ Fax # _____

SAMPLERS (signature)

PROJECT NAME/NO.

PO#

Ken's Texaco120061

REMARKS

Page # _____ of _____

TURNAROUND TIME

☒ Standard (2 Weeks)☐ RUSH

Rush charges authorized by _____

SAMPLE DISPOSAL

☐ Dispose after 30 days☐ Return samples☐ Will call with instructions

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of containers	ANALYSES REQUESTED										Notes
						TPH-Diesel	TPH-Gasoline	BTEX by 8210C	HVOCs by 8260	SVOCs by 8270	HFS					
MW-1-050814	01A-D	5/8/14	1154	Water	4	X	X	X								
MW-7-050814	02T		1235		4	X	X	X								
MW-8-050814	03A-H		1409		8	X	X	X	X							
MW-10-050814	04T		1319		8	X	X	X	X							
MW-11-050814	05		1503		8	X	X	X	X							
MW-12-050814	06A-D	✓	1547	✓	4	X	X	X								
Empty bottle					1											Amber glass (500 ml)
Empty bottles					6											(40 ml) w/ HCL preservative.

Friedman & Bruya, Inc.
3012 16th Avenue West

Seattle, WA 98119-2029

Ph. (206) 285-8282

Fax (206) 283-5044

FORMS\COC\COC.DOC

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by: <u>Breean Zimmerman</u>	<u>Breean Zimmerman</u>	<u>Aspect</u>	<u>5/8/14</u>	<u>1645</u>
Received by: <u>[Signature]</u>	<u>DO UD</u>	<u>F&B</u>	<u>5-9-14</u>	<u>1800</u>
Relinquished by:				
Received by:		Samples received at	<u>0</u> °C	

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Yelena Aravkina, M.S.
Michael Erdahl, B.S.
Arina Podnozova, B.S.
Eric Young, B.S.

3012 16th Avenue West
Seattle, WA 98119-2029
(206) 285-8282
fbi@isomedia.com
www.friedmanandbruya.com

October 3, 2014

Kirsi Longley, Project Manager
Aspect Consulting, LLC
401 2nd Ave S, Suite 201
Seattle, WA 98104

Dear Ms. Longley:

Included are the results from the testing of material submitted on September 23, 2014 from the Ken's Texaco 120061, F&BI 409405 project. There are 19 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

We appreciate this opportunity to be of service to you and hope you will call if you have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.



Michael Erdahl
Project Manager

Enclosures

c: data@aspectconsulting.com, Parker Wittman
ASP1003R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on September 23, 2014 by Friedman & Bruya, Inc. from the Aspect Consulting, LLC Ken's Texaco 120061, F&BI 409405 project. Samples were logged in under the laboratory ID's listed below.

<u>Laboratory ID</u>	<u>Aspect Consulting, LLC</u>
409405 -01	MW-1-092214
409405 -02	MW-7-092214
409405 -03	MW-8-092214
409405 -04	MW-11-092214
409405 -05	MW-12-092214

Samples MW-11-092214 and MW-12-092214 were sent to Fremont for alkalinity, chloride, sulfate, nitrate and nitrite analyses. Review of the enclosed report indicates that all quality assurance were acceptable

All quality control requirements were acceptable.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 10/03/14

Date Received: 09/23/14

Project: Ken's Texaco 120061, F&BI 409405

Date Extracted: 09/24/14

Date Analyzed: 09/24/14

**RESULTS FROM THE ANALYSIS OF WATER SAMPLES
FOR TOTAL PETROLEUM HYDROCARBONS AS GASOLINE
USING METHOD NWTPH-Gx**

Results Reported as ug/L (ppb)

<u>Sample ID</u> Laboratory ID	<u>Gasoline Range</u>	Surrogate <u>(% Recovery)</u> (Limit 51-134)
MW-1-092214 409405-01	2,700	112
MW-7-092214 409405-02	890	123
MW-8-092214 409405-03	920	102
MW-11-092214 409405-04	1,300	109
MW-12-092214 409405-05	<100	84
Method Blank 04-1913 MB	<100	91

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 10/03/14

Date Received: 09/23/14

Project: Ken's Texaco 120061, F&BI 409405

Date Extracted: 09/24/14

Date Analyzed: 09/24/14

**RESULTS FROM THE ANALYSIS OF WATER SAMPLES
FOR TOTAL PETROLEUM HYDROCARBONS AS
DIESEL AND MOTOR OIL
USING METHOD NWTPH-Dx**
Results Reported as ug/L (ppb)

<u>Sample ID</u> Laboratory ID	<u>Diesel Range</u> (C ₁₀ -C ₂₅)	<u>Motor Oil Range</u> (C ₂₅ -C ₃₆)	<u>Surrogate</u> <u>(% Recovery)</u> (Limit 51-134)
MW-1-092214 409405-01	560 x	<250	104
MW-7-092214 409405-02	250 x	<250	101
MW-8-092214 409405-03	170 x	<250	99
MW-11-092214 409405-04	260 x	<250	97
MW-12-092214 409405-05	<50	<250	96
Method Blank 04-1938 MB2	<50	<250	101

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Dissolved Metals By EPA Method 200.8

Client ID:	MW-11-092214	Client:	Aspect Consulting, LLC
Date Received:	09/23/14	Project:	Ken's Texaco 120061, F&BI 409405
Date Extracted:	09/23/14	Lab ID:	409405-04
Date Analyzed:	09/23/14	Data File:	409405-04.051
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	93	60	125
Holmium	89	60	125

Analyte:	Concentration ug/L (ppb)
Lead	<1
Manganese	8,690
Iron	3,120 ve

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Dissolved Metals By EPA Method 200.8

Client ID:	MW-11-092214	Client:	Aspect Consulting, LLC
Date Received:	09/23/14	Project:	Ken's Texaco 120061, F&BI 409405
Date Extracted:	09/23/14	Lab ID:	409405-04 x10
Date Analyzed:	09/23/14	Data File:	409405-04 x10.053
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	95	60	125
Holmium	95	60	125

Analyte:	Concentration ug/L (ppb)
Lead	<10
Manganese	7,920
Iron	3,060

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Dissolved Metals By EPA Method 200.8

Client ID:	MW-12-092214	Client:	Aspect Consulting, LLC
Date Received:	09/23/14	Project:	Ken's Texaco 120061, F&BI 409405
Date Extracted:	09/23/14	Lab ID:	409405-05
Date Analyzed:	09/23/14	Data File:	409405-05.052
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	95	60	125
Holmium	94	60	125

Analyte:	Concentration ug/L (ppb)
Lead	<1
Manganese	46.3
Iron	136

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Dissolved Metals By EPA Method 200.8

Client ID:	Method Blank	Client:	Aspect Consulting, LLC
Date Received:	NA	Project:	Ken's Texaco 120061, F&BI 409405
Date Extracted:	09/23/14	Lab ID:	I4-596 mb
Date Analyzed:	09/23/14	Data File:	I4-596 mb.028
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	96	60	125
Holmium	96	60	125

Analyte:	Concentration ug/L (ppb)
Lead	<1
Manganese	<1
Iron	<50

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW-11-092214	Client:	Aspect Consulting, LLC
Date Received:	09/23/14	Project:	Ken's Texaco 120061, F&BI 409405
Date Extracted:	09/23/14	Lab ID:	409405-04
Date Analyzed:	09/24/14	Data File:	092341.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	101	57	121
Toluene-d8	100	63	127
4-Bromofluorobenzene	99	60	133

Compounds:	Concentration ug/L (ppb)
1,2-Dichloroethane (EDC)	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW-12-092214	Client:	Aspect Consulting, LLC
Date Received:	09/23/14	Project:	Ken's Texaco 120061, F&BI 409405
Date Extracted:	09/23/14	Lab ID:	409405-05
Date Analyzed:	09/24/14	Data File:	092342.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	102	57	121
Toluene-d8	102	63	127
4-Bromofluorobenzene	102	60	133

Compounds:	Concentration ug/L (ppb)
1,2-Dichloroethane (EDC)	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	Method Blank	Client:	Aspect Consulting, LLC
Date Received:	Not Applicable	Project:	Ken's Texaco 120061, F&BI 409405
Date Extracted:	09/23/14	Lab ID:	04-1896 mb
Date Analyzed:	09/23/14	Data File:	092325.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	104	57	121
Toluene-d8	103	63	127
4-Bromofluorobenzene	104	60	133

Compounds:	Concentration ug/L (ppb)
1,2-Dichloroethane (EDC)	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Dissolved Gasses By RSK 175

Client Sample ID:	MW-11-092214	Client:	Aspect Consulting, LLC
Date Received:	09/23/14	Project:	Ken's Texaco 120061, F&BI 409405
Date Extracted:	09/24/14	Lab ID:	409405-04
Date Analyzed:	09/24/14	Data File:	006F0601.D
Matrix:	Water	Instrument:	GC8
Units:	ug/L (ppb)	Operator:	JS

Compounds:	Concentration ug/L (ppb)
Methane	230

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Dissolved Gasses By RSK 175

Client Sample ID:	MW-12-092214	Client:	Aspect Consulting, LLC
Date Received:	09/23/14	Project:	Ken's Texaco 120061, F&BI 409405
Date Extracted:	09/24/14	Lab ID:	409405-05
Date Analyzed:	09/24/14	Data File:	008F0801.D
Matrix:	Water	Instrument:	GC8
Units:	ug/L (ppb)	Operator:	JS

Compounds:	Concentration ug/L (ppb)
Methane	<5

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Dissolved Gasses By RSK 175

Client Sample ID:	Method Blank	Client:	Aspect Consulting, LLC
Date Received:	Not Applicable	Project:	Ken's Texaco 120061, F&BI 409405
Date Extracted:	09/24/14	Lab ID:	04-1897 mb
Date Analyzed:	09/24/14	Data File:	005F0501.D
Matrix:	Water	Instrument:	GC8
Units:	ug/L (ppb)	Operator:	JS

Compounds:	Concentration ug/L (ppb)
Methane	<5

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 10/03/14

Date Received: 09/23/14

Project: Ken's Texaco 120061, F&BI 409405

**QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER
SAMPLES FOR TPH AS GASOLINE
USING METHOD NWTPH-Gx**

Laboratory Code: 409405-05 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	RPD (Limit 20)
Gasoline	ug/L (ppb)	<100	<100	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Gasoline	ug/L (ppb)	1,000	99	69-134

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 10/03/14

Date Received: 09/23/14

Project: Ken's Texaco 120061, F&BI 409405

**QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER
SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS
DIESEL EXTENDED USING METHOD NWTPH-Dx**

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	ug/L (ppb)	2,500	111	108	63-142	3

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 10/03/14

Date Received: 09/23/14

Project: Ken's Texaco 120061, F&BI 409405

**QUALITY ASSURANCE RESULTS
FOR THE ANALYSIS OF WATER SAMPLES
FOR DISSOLVED METALS USING EPA METHOD 200.8**

Laboratory Code: 409353-03 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Lead	ug/L (ppb)	10	<1	103	103	79-121	0
Manganese	ug/L (ppb)	20	1,480	255 b	333 b	47-155	27 b
Iron	ug/L (ppb)	100	235	116 b	113 b	50-150	3 b

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Lead	ug/L (ppb)	10	103	83-115
Manganese	ug/L (ppb)	20	108	76-120
Iron	ug/L (ppb)	100	107	70-130

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 10/03/14

Date Received: 09/23/14

Project: Ken's Texaco 120061, F&BI 409405

**QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER
SAMPLES FOR VOLATILES BY EPA METHOD 8260C**

Laboratory Code: 409405-04 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Acceptance Criteria
1,2-Dichloroethane (EDC)	ug/L (ppb)	50	<1	102	69-133

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
1,2-Dichloroethane (EDC)	ug/L (ppb)	50	102	104	73-132	2

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 10/03/14

Date Received: 09/23/14

Project: Ken's Texaco 120061, F&BI 409405

**QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF
WATER SAMPLES FOR DISSOLVED GASES
USING METHOD RSK 175**

Laboratory Code: 409405-04 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	Relative Percent Difference (Limit 20)
Methane	ug/L (ppb)	230	220	4

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Methane	ug/L (ppb)	500	66	65	50-150	2

Data Qualifiers & Definitions

a - The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.

b - The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be meaningful.

ca - The calibration results for the analyte were outside of acceptance criteria. The value reported is an estimate.

c - The presence of the analyte may be due to carryover from previous sample injections.

cf - The sample was centrifuged prior to analysis.

d - The sample was diluted. Detection limits were raised and surrogate recoveries may not be meaningful.

dv - Insufficient sample volume was available to achieve normal reporting limits.

f - The sample was laboratory filtered prior to analysis.

fb - The analyte was detected in the method blank.

fc - The compound is a common laboratory and field contaminant.

hr - The sample and duplicate were reextracted and reanalyzed. RPD results were still outside of control limits. Variability is attributed to sample inhomogeneity.

hs - Headspace was present in the container used for analysis.

ht - The analysis was performed outside the method or client-specified holding time requirement.

ip - Recovery fell outside of control limits. Compounds in the sample matrix interfered with the quantitation of the analyte.

j - The analyte concentration is reported below the lowest calibration standard. The value reported is an estimate.

J - The internal standard associated with the analyte is out of control limits. The reported concentration is an estimate.

jl - The laboratory control sample(s) percent recovery and/or RPD were out of control limits. The reported concentration should be considered an estimate.

js - The surrogate associated with the analyte is out of control limits. The reported concentration should be considered an estimate.

lc - The presence of the analyte is likely due to laboratory contamination.

L - The reported concentration was generated from a library search.

nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.

pc - The sample was received with incorrect preservation or in a container not approved by the method. The value reported should be considered an estimate.

ve - The analyte response exceeded the valid instrument calibration range. The value reported is an estimate.

vo - The value reported fell outside the control limits established for this analyte.

x - The sample chromatographic pattern does not resemble the fuel standard used for quantitation.



3600 Fremont Ave. N.
Seattle, WA 98103
T: (206) 352-3790
F: (206) 352-7178
info@fremontanalytical.com

Friedman & Bruya
Michael Erdahl
3012 16th Ave. W.
Seattle, WA 98119

RE: 409405
Lab ID: 1409245

September 30, 2014

Attention Michael Erdahl:

Fremont Analytical, Inc. received 2 sample(s) on 9/23/2014 for the analyses presented in the following report.

Ferrous Iron by SM3500-Fe B
Ion Chromatography by EPA Method 300.0
Total Alkalinity by SM 2320B

This report consists of the following:

- Case Narrative
- Analytical Results
- Applicable Quality Control Summary Reports
- Chain of Custody

All analyses were performed consistent with the Quality Assurance program of Fremont Analytical, Inc. Please contact the laboratory if you should have any questions about the results.

Thank you for using Fremont Analytical.

Sincerely,

Mike Ridgeway
President



Date: 09/30/2014

CLIENT: Friedman & Bruya
Project: 409405
Lab Order: 1409245

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Date/Time Collected	Date/Time Received
1409245-001	MW-11-092214	09/22/2014 1:27 PM	09/23/2014 11:48 AM
1409245-002	MW-12-092214	09/22/2014 2:29 PM	09/23/2014 11:48 AM

Note: If no "Time Collected" is supplied, a default of 12:00AM is assigned

CLIENT: Friedman & Bruya**Project:** 409405

I. SAMPLE RECEIPT:

Samples receipt information is recorded on the attached Sample Receipt Checklist.

II. GENERAL REPORTING COMMENTS:

Results are reported on a wet weight basis unless dry-weight correction is denoted in the units field on the analytical report ("mg/kg-dry" or "ug/kg-dry").

Matrix Spike (MS) and MS Duplicate (MSD) samples are tested from an analytical batch of "like" matrix to check for possible matrix effect. The MS and MSD will provide site specific matrix data only for those samples which are spiked by the laboratory. The sample chosen for spike purposes may or may not have been a sample submitted in this sample delivery group. The validity of the analytical procedures for which data is reported in this analytical report is determined by the Laboratory Control Sample (LCS) and the Method Blank (MB). The LCS and the MB are processed with the samples and the MS/MSD to ensure method criteria are achieved throughout the entire analytical process.

III. ANALYSES AND EXCEPTIONS:

Exceptions associated with this report will be footnoted in the analytical results page(s) or the quality control summary page(s) and/or noted below.



Analytical Report

WO#: 1409245

Date Reported: 9/30/2014

Client: Friedman & Bruya

Collection Date: 9/22/2014 1:27:00 PM

Project: 409405

Lab ID: 1409245-001

Matrix: Water

Client Sample ID: MW-11-092214

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
----------	--------	----	------	-------	----	---------------

Ion Chromatography by EPA Method 300.0

Batch ID: R16959 Analyst: KT

Chloride	18.7	0.500	D	mg/L	5	9/23/2014 4:29:00 PM
Nitrite	ND	0.100		mg/L	1	9/23/2014 3:30:00 PM
Nitrate	0.426	0.100		mg/L	1	9/23/2014 3:30:00 PM
Sulfate	5.36	0.300		mg/L	1	9/23/2014 3:30:00 PM

Total Alkalinity by SM 2320B

Batch ID: R17115 Analyst: KT

Alkalinity, Total (As CaCO ₃)	372	5.00		mg/L	1	9/30/2014 12:25:00 PM
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Ferrous Iron by SM3500-Fe B

Batch ID: R16929 Analyst: KT

Ferrous Iron	1.52	0.0300		mg/L	1	9/23/2014 1:22:00 PM
--------------	------	--------	--	------	---	----------------------

Qualifiers: B Analyte detected in the associated Method Blank
E Value above quantitation range
J Analyte detected below quantitation limits
RL Reporting Limit

D Dilution was required
H Holding times for preparation or analysis exceeded
ND Not detected at the Reporting Limit
S Spike recovery outside accepted recovery limits



Analytical Report

WO#: 1409245

Date Reported: 9/30/2014

Client: Friedman & Bruya

Collection Date: 9/22/2014 2:29:00 PM

Project: 409405

Lab ID: 1409245-002

Matrix: Water

Client Sample ID: MW-12-092214

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
----------	--------	----	------	-------	----	---------------

Ion Chromatography by EPA Method 300.0

Batch ID: R16959 Analyst: KT

Chloride	6.23	0.200	D	mg/L	2	9/23/2014 4:39:00 PM
Nitrite	ND	0.100		mg/L	1	9/23/2014 3:40:00 PM
Nitrate	0.489	0.100		mg/L	1	9/23/2014 3:40:00 PM
Sulfate	3.66	0.300		mg/L	1	9/23/2014 3:40:00 PM

Total Alkalinity by SM 2320B

Batch ID: R17115 Analyst: KT

Alkalinity, Total (As CaCO ₃)	133	5.00		mg/L	1	9/30/2014 12:35:00 PM
---	-----	------	--	------	---	-----------------------

Ferrous Iron by SM3500-Fe B

Batch ID: R16929 Analyst: KT

Ferrous Iron	ND	0.0300		mg/L	1	9/23/2014 1:23:00 PM
--------------	----	--------	--	------	---	----------------------

Qualifiers: B Analyte detected in the associated Method Blank
E Value above quantitation range
J Analyte detected below quantitation limits
RL Reporting Limit

D Dilution was required
H Holding times for preparation or analysis exceeded
ND Not detected at the Reporting Limit
S Spike recovery outside accepted recovery limits



Date: 9/30/2014

Work Order: 1409245
CLIENT: Friedman & Bruya
Project: 409405

QC SUMMARY REPORT
Total Alkalinity by SM 2320B

Sample ID: MB-R17115	SampType: MBLK	Units: mg/L		Prep Date: 9/30/2014	RunNo: 17115
Client ID: MBLKW	Batch ID: R17115	Analysis Date: 9/30/2014		SeqNo: 342771	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Alkalinity, Total (As CaCO3) ND 5.00

Sample ID: LCS-R17115	SampType: LCS	Units: mg/L		Prep Date: 9/30/2014	RunNo: 17115
Client ID: LCSW	Batch ID: R17115	Analysis Date: 9/30/2014		SeqNo: 342772	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Alkalinity, Total (As CaCO3) 95.0 5.00 100.0 0 95.0 80 120

Sample ID: 1409245-001BDUP	SampType: DUP	Units: mg/L		Prep Date: 9/30/2014	RunNo: 17115
Client ID: MW-11-092214	Batch ID: R17115	Analysis Date: 9/30/2014		SeqNo: 342774	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Alkalinity, Total (As CaCO3) 355 5.00 372.5 4.81 20

Qualifiers:

B	Analyte detected in the associated Method Blank	D	Dilution was required	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	RL	Reporting Limit	S	Spike recovery outside accepted recovery limits



Date: 9/30/2014

Work Order: 1409245
CLIENT: Friedman & Bruya
Project: 409405

QC SUMMARY REPORT

Ferrous Iron by SM3500-Fe B

Sample ID: MB-R16929		SampType: MBLK			Units: mg/L		Prep Date: 9/23/2014			RunNo: 16929		
Client ID: MBLKW		Batch ID: R16929						Analysis Date: 9/23/2014			SeqNo: 339866	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	

Ferrous Iron	ND	0.0300									
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Sample ID: LCS-R16929		SampType: LCS			Units: mg/L		Prep Date: 9/23/2014			RunNo: 16929		
Client ID: LCSW		Batch ID: R16929			Analysis Date: 9/23/2014			SeqNo: 339867				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	

Ferrous Iron	0.960	0.0300	1.000	0	96.0	90	110				
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Sample ID: 1409245-002ADUP	SampType: DUP	Units: mg/L			Prep Date: 9/23/2014			RunNo: 16929			
Client ID: MW-12-092214	Batch ID: R16929				Analysis Date: 9/23/2014			SeqNo: 339870			
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Ferrous Iron	0.0300	0.0300						0	200	20	
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NOTES:

RPDs calculated on results at or near the reporting limit may not be statistically valid.

Sample ID: 1409245-002AMS		SampType: MS		Units: mg/L		Prep Date: 9/23/2014			RunNo: 16929			
Client ID: MW-12-092214		Batch ID: R16929					Analysis Date: 9/23/2014			SeqNo: 339871		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	

Ferrous Iron	0.970	0.0300	1.000	0	97.0	85	115				
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Sample ID: 1409245-002AMSD	SampType: MSD	Units: mg/L			Prep Date: 9/23/2014			RunNo: 16929			
Client ID: MW-12-092214	Batch ID: R16929	Analysis Date: 9/23/2014						SeqNo: 339872			
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Ferrous Iron	0.980	0.0300	1.000	0	98.0	85	115	0.9700	1.03	20	
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Qualifiers:	B	Analyte detected in the associated Method Blank	D	Dilution was required	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	RL	Reporting Limit	S	Spike recovery outside accepted recovery limits



Date: 9/30/2014

Work Order: 1409245
CLIENT: Friedman & Bruya
Project: 409405

QC SUMMARY REPORT

Ferrous Iron by SM3500-Fe B

Sample ID: 1409245-002AMSD	SampType: MSD	Units: mg/L	Prep Date: 9/23/2014	RunNo: 16929							
Client ID: MW-12-092214	Batch ID: R16929	Analysis Date: 9/23/2014	SeqNo: 339872								
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Qualifiers:	B	Analyte detected in the associated Method Blank	D	Dilution was required	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	RL	Reporting Limit	S	Spike recovery outside accepted recovery limits



Date: 9/30/2014

Work Order: 1409245
CLIENT: Friedman & Bruya
Project: 409405

QC SUMMARY REPORT
Ion Chromatography by EPA Method 300.0

Sample ID: MB-R16959	SampType: MBLK	Units: mg/L			Prep Date: 9/23/2014			RunNo: 16959			
Client ID: MBLKW	Batch ID: R16959				Analysis Date: 9/23/2014			SeqNo: 340478			
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	ND	0.100									
Nitrite	ND	0.100									
Nitrate	ND	0.100									
Sulfate	ND	0.300									

Sample ID: LCS-R16959	SampType: LCS	Units: mg/L				Prep Date: 9/23/2014			RunNo: 16959		
Client ID: LCSW	Batch ID: R16959					Analysis Date: 9/23/2014			SeqNo: 340479		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	3.08	0.100	3.000	0	103	85	115				
Nitrite	2.89	0.100	3.000	0	96.4	85	115				
Nitrate	3.13	0.100	3.000	0	104	85	115				
Sulfate	16.5	0.300	15.00	0	110	85	115				

Sample ID: 1409250-001ADUP	SampType: DUP	Units: mg/L				Prep Date: 9/23/2014			RunNo: 16959		
Client ID: BATCH	Batch ID: R16959					Analysis Date: 9/23/2014			SeqNo: 340481		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	7.34	0.100						7.415	0.999	20	E
Nitrite	ND	0.100						0		20	
Nitrate	0.113	0.100						0.1116	1.16	20	
Sulfate	5.71	0.300						5.704	0.0508	20	

Qualifiers:

B	Analyte detected in the associated Method Blank	D	Dilution was required	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	RL	Reporting Limit	S	Spike recovery outside accepted recovery limits



Date: 9/30/2014

Work Order: 1409245
CLIENT: Friedman & Bruya
Project: 409405

QC SUMMARY REPORT
Ion Chromatography by EPA Method 300.0

Sample ID: 1409250-001AMS	SampType: MS	Units: mg/L				Prep Date: 9/23/2014			RunNo: 16959		
Client ID: BATCH	Batch ID: R16959					Analysis Date: 9/23/2014			SeqNo: 340482		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	10.8	0.100	3.000	7.415	114	80	120				E
Nitrite	2.99	0.100	3.000	0	99.6	80	120				
Nitrate	3.18	0.100	3.000	0.1116	102	80	120				
Sulfate	23.4	0.300	15.00	5.704	118	80	120				E

Sample ID: 1409250-001AMSD		SampType: MSD		Units: mg/L		Prep Date: 9/23/2014			RunNo: 16959		
Client ID: BATCH		Batch ID: R16959					Analysis Date: 9/23/2014			SeqNo: 340483	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	10.8	0.100	3.000	7.415	111	80	120	10.83	0.725	20	E
Nitrite	2.99	0.100	3.000	0	99.8	80	120	2.989	0.175	20	
Nitrate	3.17	0.100	3.000	0.1116	102	80	120	3.184	0.358	20	
Sulfate	23.7	0.300	15.00	5.704	120	80	120	23.39	1.51	20	E

Qualifiers:

B	Analyte detected in the associated Method Blank	D	Dilution was required	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	RL	Reporting Limit	S	Spike recovery outside accepted recovery limits

Client Name: **FB**
 Logged by: **Erica Silva**

Work Order Number: **1409245**
 Date Received: **9/23/2014 11:48:00 AM**

Chain of Custody

1. Is Chain of Custody complete? Yes ☒ No ☐ Not Present ☐
 2. How was the sample delivered? Client

Log In

3. Coolers are present? Yes ☒ No ☐ NA ☐
 4. Shipping container/cooler in good condition? Yes ☒ No ☐
 5. Custody seals intact on shipping container/cooler? Yes ☐ No ☐ Not Required ☒
 6. Was an attempt made to cool the samples? Yes ☒ No ☐ NA ☐
 7. Were all coolers received at a temperature of >0°C to 10.0°C? Yes ☒ No ☐ NA ☐
 8. Sample(s) in proper container(s)? Yes ☒ No ☐
 9. Sufficient sample volume for indicated test(s)? Yes ☒ No ☐
 10. Are samples properly preserved? Yes ☒ No ☐
 11. Was preservative added to bottles? Yes ☐ No ☒ NA ☐
 12. Is the headspace in the VOA vials? Yes ☐ No ☐ NA ☒
 13. Did all samples containers arrive in good condition(unbroken)? Yes ☒ No ☐
 14. Does paperwork match bottle labels? Yes ☒ No ☐
 15. Are matrices correctly identified on Chain of Custody? Yes ☒ No ☐
 16. Is it clear what analyses were requested? Yes ☒ No ☐
 17. Were all holding times able to be met? Yes ☒ No ☐

Special Handling (if applicable)

18. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☒

Person Notified: Date:
 By Whom: Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person
 Regarding:
 Client Instructions:

19. Additional remarks:

Item Information

Item #	Temp °C	Condition
Cooler	13.8	
Sample	10.0	Good

SUBCONTRACT SAMPLE CHAIN OF CUSTODY

1701293

Send Report To Michael Erdahl

Company Friedman and Bruya, Inc.

Address 3012 16th Ave W

City, State, ZIP Seattle, WA 98119

Phone # (206) 285-8282 Fax # (206) 283-5044

SUBCONTRACTOR <u>Fremont</u>	
PROJECT NAME/NO. <u>409405</u>	PO # <u>D-208</u>
REMARKS Please Email Results	

Page # 1 of 1

TURNAROUND TIME

- ☒ Standard (2 Weeks)
☐ RUSH
 Rush charges authorized by: _____

SAMPLE DISPOSAL

- ☐ Dispose after 30 days
☐ Return samples
☐ Will call with instructions

Sample ID	Lab ID	Date Sampled	Time Sampled	Matrix	# of jars	Dioxins and Furans by 8290	EPH	VPH	Nitrate	Sulfate	Alkalinity	Chloride	Dissolved Metals Iron	Notes
MW-11-092214		9/22/14	1327	water					X	X	X	X	X	
MW-12-092214		↓	1429	↓					X	X	X	X	X	

Friedman & Bruya, Inc.
 3012 16th Avenue West
 Seattle, WA 98119-2029
 Ph. (206) 285-8282
 Fax (206) 283-5044

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by: <u>[Signature]</u>	Michael Erdahl	Friedman & Bruya	9/23/14	1130
Received by: <u>[Signature]</u>	Enia Silva	FAI	9/23/14	11:48
Relinquished by:				
Received by:				

409405

SAMPLE CHAIN OF CUSTODY

ME 09/23/14 BE3/E03/1311

Send Report To Kirsi Longley
 Company Aspect Consulting
 Address 401 2nd Ave S
 City, State, ZIP Seattle, WA 98104
 Phone (206) 812 4746 Fax # _____

SAMPLERS (signature) Brean Zimmerman
 PROJECT NAME/NO. Ken's Texaco-120061 PO# _____
 REMARKS _____

TURNAROUND TIME
☐ Standard (2 Weeks)
☐ RUSH
 Rush charges authorized by _____
 SAMPLE DISPOSAL
☐ Dispose after 30 days
☐ Return samples
☐ Will call with instructions

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of containers	ANALYSIS REQUESTED											Notes	
						TPH-Diesel	TPH-Gasoline	BTEX by 8021B	epc only VOCs by 8260	SVOCs by 8270	HFS	Alkalinity, pH, Hardness, Sulfide, Chloride, Nitrate, Nitrite, Silica, Fluoride	Methane	Dissolved Mn	Dissolved Pb	Dissolved Fe		
MW-1-092214	01A-D	9/22/14	1124	H ₂ O	4	X	X											
MW-7-092214	02T	↓	1209	↓	4	↓	↓											
MW-8-092214	03I	↓	1249	↓	4	↓	↓											
MW-11-092214	04A-N	↓	1327	↓	14	↓	↓			X			X	X	X	X	X	
MW-12-092214	05A-M	↓	1429	↓	13	↓	↓			X			X	X	X	X	X	

Sample collected at 4:02

Sample received at 4°C

Friedman & Bruya, Inc.
 3012 16th Avenue West
 Seattle, WA 98119-2029
 Ph. (206) 285-8282
 Fax (206) 283-5044

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by: <u>[Signature]</u>	<u>Brean Zimmerman</u>	<u>Aspect Consulting</u>	<u>9/22/14</u>	<u>3:05</u>
Received by: <u>[Signature]</u>	<u>Nhan Phan</u>	<u>F&BI</u>	<u>9/23/14</u>	<u>10:00</u>
Relinquished by: _____				
Received by: _____				

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Yelena Aravkina, M.S.
Michael Erdahl, B.S.
Arina Podnozova, B.S.
Eric Young, B.S.

3012 16th Avenue West
Seattle, WA 98119-2029
(206) 285-8282
fbi@isomedia.com
www.friedmanandbruya.com

October 6, 2014

Kirsi Longley, Project Manager
Aspect Consulting, LLC
401 2nd Ave S, Suite 201
Seattle, WA 98104

Dear Ms. Longley:

Included are the results from the testing of material submitted on September 17, 2014 from the Ken's Texaco, PO 120061, F&BI 409282 project. There are 31 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

We appreciate this opportunity to be of service to you and hope you will call if you have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.



Michael Erdahl
Project Manager

Enclosures

c: data@aspectconsulting.com, Parker Wittman
ASP1006R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on September 17, 2014 by Friedman & Bruya, Inc. from the Aspect Consulting, LLC Ken's Texaco, PO 120061, F&BI 409282 project. Samples were logged in under the laboratory ID's listed below.

<u>Laboratory ID</u>	<u>Aspect Consulting, LLC</u>
409282 -01	MW-14-7
409282 -02	MW-14-12
409282 -03	MW-14-18
409282 -04	MW-14-30
409282 -05	MW-13-5.5
409282 -06	MW-13-14
409282 -07	MW-13-21
409282 -08	MW-13-30
409282 -09	B-1-9
409282 -10	B-1-12
409282 -11	B-1-18
409282 -12	B-1-30
409282 -13	B-2-9.5
409282 -14	B-2-13
409282 -15	B-2-20
409282 -16	B-2-30
409282 -17	B-3-14
409282 -18	B-3-11.5
409282 -19	B-3-20
409282 -20	B-3-30

Samples MW-14-12, MW-13-14, B-1-12, B-2-13, and B-3-11.5 were sent to Fremont for EPH/VPH and total organic carbon analyses. In addition, samples MW-14-12, MW-14-18, MW-13-14, B-1-12, B-1-18, B-2-9.5, B-2-13, B-3-14 and B-3-11.5 were sent to Fremont for iron analysis. The report generated by Fremont Analytical will be forwarded to your office upon receipt.

Several compounds in the 8260C direct sparge analysis of samples B-3-14 and B-3-11.5 exceeded the calibration range of the instrument. The data were qualified accordingly.

All other quality control requirements were acceptable.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 10/06/14

Date Received: 09/17/14

Project: Ken's Texaco, PO 120061, F&BI 409282

Date Extracted: 09/17/14

Date Analyzed: 09/17/14

**RESULTS FROM THE ANALYSIS OF SOIL SAMPLES
FOR TOTAL PETROLEUM HYDROCARBONS AS GASOLINE
USING METHOD NWTPH-Gx**

Results Reported on a Dry Weight Basis

Results Reported as mg/kg (ppm)

<u>Sample ID</u> Laboratory ID	<u>Gasoline Range</u>	Surrogate (% Recovery) (Limit 50-150)
MW-14-12 409282-02	<2	92
MW-14-18 409282-03	<2	92
MW-13-14 409282-06	<2	92
B-1-12 409282-10	3.5	94
B-1-18 409282-11	<2	86
B-2-9.5 409282-13	12	96
B-2-13 409282-14	<2	94
B-3-14 409282-17 1/10	72	94
B-3-11.5 409282-18 1/20	400	101
Method Blank 04-1845 MB	<2	93

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 10/06/14

Date Received: 09/17/14

Project: Ken's Texaco, PO 120061, F&BI 409282

Date Extracted: 09/18/14

Date Analyzed: 09/18/14

**RESULTS FROM THE ANALYSIS OF SOIL SAMPLES
FOR BENZENE, TOLUENE, ETHYLBENZENE,
XYLENES AND TPH AS GASOLINE
USING METHODS 8021B AND NWTPH-Gx**

Results Reported on a Dry Weight Basis

Results Reported as mg/kg (ppm)

<u>Sample ID</u> Laboratory ID	<u>Benzene</u>	<u>Toluene</u>	<u>Ethyl Benzene</u>	<u>Total Xylenes</u>	<u>Gasoline Range</u>	<u>Surrogate (% Recovery)</u> (Limit 50-132)
B-1-30 409282-12	<0.02	<0.02	<0.02	<0.06	<2	92
B-2-30 409282-16	<0.02	<0.02	<0.02	<0.06	<2	93
B-3-30 409282-20	<0.02	<0.02	<0.02	<0.06	<2	94
Method Blank 04-1845 MB	<0.02	<0.02	<0.02	<0.06	<2	88

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260C Direct Sparge

Client Sample ID:	MW-14-12	Client:	Aspect Consulting, LLC
Date Received:	09/17/14	Project:	Ken's Texaco, PO 120061
Date Extracted:	09/17/14	Lab ID:	409282-02
Date Analyzed:	09/17/14	Data File:	091717.D
Matrix:	Soil	Instrument:	GCMS7
Units:	mg/kg (ppm) Dry Weight	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	108	50	150
Toluene-d8	101	50	150
4-Bromofluorobenzene	99	50	150

Compounds:	Concentration mg/kg (ppm)
Hexane	<0.025
Methyl t-butyl ether (MTBE)	<0.005
1,2-Dibromoethane (EDB)	<0.005
1,2-Dichloroethane (EDC)	<0.005
Benzene	<0.003
Toluene	<0.005
Ethylbenzene	<0.005
m,p-Xylene	<0.01
o-Xylene	<0.005
Naphthalene	<0.005

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260C Direct Sparge

Client Sample ID:	MW-14-18	Client:	Aspect Consulting, LLC
Date Received:	09/17/14	Project:	Ken's Texaco, PO 120061
Date Extracted:	09/17/14	Lab ID:	409282-03
Date Analyzed:	09/17/14	Data File:	091718.D
Matrix:	Soil	Instrument:	GCMS7
Units:	mg/kg (ppm) Dry Weight	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	101	50	150
Toluene-d8	98	50	150
4-Bromofluorobenzene	95	50	150

Compounds:	Concentration mg/kg (ppm)
Hexane	<0.025
Methyl t-butyl ether (MTBE)	<0.005
1,2-Dibromoethane (EDB)	<0.005
1,2-Dichloroethane (EDC)	<0.005
Benzene	<0.003
Toluene	<0.005
Ethylbenzene	<0.005
m,p-Xylene	<0.01
o-Xylene	<0.005
Naphthalene	<0.005

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260C Direct Sparge

Client Sample ID:	MW-13-14	Client:	Aspect Consulting, LLC
Date Received:	09/17/14	Project:	Ken's Texaco, PO 120061
Date Extracted:	09/17/14	Lab ID:	409282-06
Date Analyzed:	09/18/14	Data File:	091808.D
Matrix:	Soil	Instrument:	GCMS7
Units:	mg/kg (ppm) Dry Weight	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	114	50	150
Toluene-d8	101	50	150
4-Bromofluorobenzene	98	50	150

Compounds:	Concentration mg/kg (ppm)
Hexane	<0.025
Methyl t-butyl ether (MTBE)	<0.005
1,2-Dibromoethane (EDB)	<0.005
1,2-Dichloroethane (EDC)	<0.005
Benzene	<0.003
Toluene	<0.005
Ethylbenzene	<0.005
m,p-Xylene	<0.01
o-Xylene	<0.005
Naphthalene	<0.005

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260C Direct Sparge

Client Sample ID:	B-1-12	Client:	Aspect Consulting, LLC
Date Received:	09/17/14	Project:	Ken's Texaco, PO 120061
Date Extracted:	09/17/14	Lab ID:	409282-10
Date Analyzed:	09/17/14	Data File:	091720.D
Matrix:	Soil	Instrument:	GCMS7
Units:	mg/kg (ppm) Dry Weight	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	103	50	150
Toluene-d8	102	50	150
4-Bromofluorobenzene	104	50	150

Compounds:	Concentration mg/kg (ppm)
Hexane	<0.025
Methyl t-butyl ether (MTBE)	<0.005
1,2-Dibromoethane (EDB)	<0.005
1,2-Dichloroethane (EDC)	<0.005
Benzene	<0.003
Toluene	<0.005
Ethylbenzene	<0.005
m,p-Xylene	<0.01
o-Xylene	<0.005
Naphthalene	<0.005

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260C Direct Sparge

Client Sample ID:	B-1-18	Client:	Aspect Consulting, LLC
Date Received:	09/17/14	Project:	Ken's Texaco, PO 120061
Date Extracted:	09/17/14	Lab ID:	409282-11
Date Analyzed:	09/17/14	Data File:	091722.D
Matrix:	Soil	Instrument:	GCMS7
Units:	mg/kg (ppm) Dry Weight	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	107	50	150
Toluene-d8	100	50	150
4-Bromofluorobenzene	95	50	150

Compounds:	Concentration mg/kg (ppm)
Hexane	<0.025
Methyl t-butyl ether (MTBE)	<0.005
1,2-Dibromoethane (EDB)	<0.005
1,2-Dichloroethane (EDC)	<0.005
Benzene	<0.003
Toluene	<0.005
Ethylbenzene	<0.005
m,p-Xylene	<0.01
o-Xylene	<0.005
Naphthalene	<0.005

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260C Direct Sparge

Client Sample ID:	B-2-9.5	Client:	Aspect Consulting, LLC
Date Received:	09/17/14	Project:	Ken's Texaco, PO 120061
Date Extracted:	09/17/14	Lab ID:	409282-13
Date Analyzed:	09/17/14	Data File:	091723.D
Matrix:	Soil	Instrument:	GCMS7
Units:	mg/kg (ppm) Dry Weight	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	109	50	150
Toluene-d8	104	50	150
4-Bromofluorobenzene	105	50	150

Compounds:	Concentration mg/kg (ppm)
Hexane	<0.025
Methyl t-butyl ether (MTBE)	<0.005
1,2-Dibromoethane (EDB)	<0.005
1,2-Dichloroethane (EDC)	<0.005
Benzene	<0.003
Toluene	<0.005
Ethylbenzene	<0.005
m,p-Xylene	<0.01
o-Xylene	<0.005
Naphthalene	<0.005

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260C Direct Sparge

Client Sample ID:	B-2-13	Client:	Aspect Consulting, LLC
Date Received:	09/17/14	Project:	Ken's Texaco, PO 120061
Date Extracted:	09/17/14	Lab ID:	409282-14
Date Analyzed:	09/17/14	Data File:	091724.D
Matrix:	Soil	Instrument:	GCMS7
Units:	mg/kg (ppm) Dry Weight	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	105	50	150
Toluene-d8	107	50	150
4-Bromofluorobenzene	98	50	150

Compounds:	Concentration mg/kg (ppm)
Hexane	<0.025
Methyl t-butyl ether (MTBE)	<0.005
1,2-Dibromoethane (EDB)	<0.005
1,2-Dichloroethane (EDC)	<0.005
Benzene	<0.003
Toluene	<0.005
Ethylbenzene	<0.005
m,p-Xylene	<0.01
o-Xylene	<0.005
Naphthalene	<0.005

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260C Direct Sparge

Client Sample ID:	B-3-14	Client:	Aspect Consulting, LLC
Date Received:	09/17/14	Project:	Ken's Texaco, PO 120061
Date Extracted:	09/17/14	Lab ID:	409282-17
Date Analyzed:	09/17/14	Data File:	091725.D
Matrix:	Soil	Instrument:	GCMS7
Units:	mg/kg (ppm) Dry Weight	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	107	50	150
Toluene-d8	181 ip	50	150
4-Bromofluorobenzene	116	50	150

Compounds:	Concentration mg/kg (ppm)
Hexane	2.3 ve
Methyl t-butyl ether (MTBE)	<0.005
1,2-Dibromoethane (EDB)	<0.005
1,2-Dichloroethane (EDC)	<0.005
Benzene	<0.003
Toluene	<0.005
Ethylbenzene	0.86 ve
m,p-Xylene	0.12
o-Xylene	<0.005
Naphthalene	0.063

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260C Direct Sparge

Client Sample ID:	B-3-11.5	Client:	Aspect Consulting, LLC
Date Received:	09/17/14	Project:	Ken's Texaco, PO 120061
Date Extracted:	09/17/14	Lab ID:	409282-18
Date Analyzed:	09/17/14	Data File:	091726.D
Matrix:	Soil	Instrument:	GCMS7
Units:	mg/kg (ppm) Dry Weight	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	103	50	150
Toluene-d8	220 ip	50	150
4-Bromofluorobenzene	112	50	150

Compounds:	Concentration mg/kg (ppm)
Hexane	3.4 ve
Methyl t-butyl ether (MTBE)	<0.005
1,2-Dibromoethane (EDB)	<0.005
1,2-Dichloroethane (EDC)	<0.005
Benzene	0.0039
Toluene	<0.005
Ethylbenzene	1.5 ve
m,p-Xylene	2.4 ve
o-Xylene	0.013
Naphthalene	0.36 ve

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260C Direct Sparge

Client Sample ID:	Method Blank	Client:	Aspect Consulting, LLC
Date Received:	Not Applicable	Project:	Ken's Texaco, PO 120061
Date Extracted:	09/17/14	Lab ID:	04-1876 mb
Date Analyzed:	09/17/14	Data File:	091712.D
Matrix:	Soil	Instrument:	GCMS7
Units:	mg/kg (ppm) Dry Weight	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	105	50	150
Toluene-d8	97	50	150
4-Bromofluorobenzene	95	50	150

Compounds:	Concentration mg/kg (ppm)
Hexane	<0.025
Methyl t-butyl ether (MTBE)	<0.005
1,2-Dibromoethane (EDB)	<0.005
1,2-Dichloroethane (EDC)	<0.005
Benzene	<0.003
Toluene	<0.005
Ethylbenzene	<0.005
m,p-Xylene	<0.01
o-Xylene	<0.005
Naphthalene	<0.005

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 10/06/14

Date Received: 09/17/14

Project: Ken's Texaco, PO 120061, F&BI 409282

Date Extracted: 09/17/14

Date Analyzed: 09/17/14

**RESULTS FROM THE ANALYSIS OF SOIL SAMPLES
FOR TOTAL PETROLEUM HYDROCARBONS AS
DIESEL AND MOTOR OIL
USING METHOD NWTPH-Dx**

Results Reported on a Dry Weight Basis

Results Reported as mg/kg (ppm)

<u>Sample ID</u> Laboratory ID	<u>Diesel Range</u> (C ₁₀ -C ₂₅)	<u>Motor Oil Range</u> (C ₂₅ -C ₃₆)	<u>Surrogate</u> <u>(% Recovery)</u> (Limit 56-165)
MW-14-12 409282-02	<50	<250	96
MW-14-18 409282-03	<50	<250	94
MW-13-14 409282-06	<50	<250	96
B-1-12 409282-10	<50	<250	98
B-1-18 409282-11	<50	<250	98
B-2-9.5 409282-13	<50	<250	98
B-2-13 409282-14	<50	<250	97
B-3-14 409282-17	<50	<250	97
B-3-11.5 409282-18	<50	<250	98
Method Blank 04-1885 MB	<50	<250	95

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 200.8

Client ID:	MW-14-12	Client:	Aspect Consulting, LLC
Date Received:	09/17/14	Project:	Ken's Texaco, PO 120061
Date Extracted:	09/24/14	Lab ID:	409282-02
Date Analyzed:	09/24/14	Data File:	409282-02.051
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm) Dry Weight	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	105	60	125
Indium	85	60	125
Holmium	92	60	125

Analyte:	Concentration mg/kg (ppm)
Chromium	8.66
Nickel	9.83
Zinc	34.5
Cadmium	<1
Lead	4.62
Manganese	1,240

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 200.8

Client ID:	MW-14-18	Client:	Aspect Consulting, LLC
Date Received:	09/17/14	Project:	Ken's Texaco, PO 120061
Date Extracted:	09/24/14	Lab ID:	409282-03
Date Analyzed:	09/24/14	Data File:	409282-03.052
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm) Dry Weight	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	106	60	125
Indium	86	60	125
Holmium	92	60	125

Analyte:	Concentration mg/kg (ppm)
Chromium	11.4
Nickel	18.0
Zinc	26.9
Cadmium	<1
Lead	2.28
Manganese	642

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 200.8

Client ID:	MW-13-14	Client:	Aspect Consulting, LLC
Date Received:	09/17/14	Project:	Ken's Texaco, PO 120061
Date Extracted:	09/24/14	Lab ID:	409282-06
Date Analyzed:	09/24/14	Data File:	409282-06.054
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm) Dry Weight	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	107	60	125
Indium	86	60	125
Holmium	92	60	125

Analyte:	Concentration mg/kg (ppm)
Chromium	6.25
Nickel	9.58
Zinc	21.4
Cadmium	<1
Lead	2.47
Manganese	703

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 200.8

Client ID:	B-1-12	Client:	Aspect Consulting, LLC
Date Received:	09/17/14	Project:	Ken's Texaco, PO 120061
Date Extracted:	09/24/14	Lab ID:	409282-10
Date Analyzed:	09/24/14	Data File:	409282-10.055
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm) Dry Weight	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	118	60	125
Indium	87	60	125
Holmium	95	60	125

Analyte:	Concentration mg/kg (ppm)
Chromium	6.07
Nickel	5.05
Zinc	28.4
Cadmium	<1
Lead	3.37
Manganese	775

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 200.8

Client ID:	B-1-18	Client:	Aspect Consulting, LLC
Date Received:	09/17/14	Project:	Ken's Texaco, PO 120061
Date Extracted:	09/24/14	Lab ID:	409282-11
Date Analyzed:	09/24/14	Data File:	409282-11.056
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm) Dry Weight	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	107	60	125
Indium	85	60	125
Holmium	91	60	125

Analyte:	Concentration mg/kg (ppm)
Chromium	5.52
Nickel	5.91
Zinc	19.9
Cadmium	<1
Lead	2.24
Manganese	368

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 200.8

Client ID:	B-2-9.5	Client:	Aspect Consulting, LLC
Date Received:	09/17/14	Project:	Ken's Texaco, PO 120061
Date Extracted:	09/24/14	Lab ID:	409282-13
Date Analyzed:	09/24/14	Data File:	409282-13.057
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm) Dry Weight	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	95	60	125
Indium	74	60	125
Holmium	78	60	125

Analyte:	Concentration mg/kg (ppm)
Chromium	5.63
Nickel	9.99
Zinc	22.5
Cadmium	<1
Lead	4.15
Manganese	418

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 200.8

Client ID:	B-2-13	Client:	Aspect Consulting, LLC
Date Received:	09/17/14	Project:	Ken's Texaco, PO 120061
Date Extracted:	09/24/14	Lab ID:	409282-14
Date Analyzed:	09/24/14	Data File:	409282-14.058
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm) Dry Weight	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	106	60	125
Indium	84	60	125
Holmium	89	60	125

Analyte:	Concentration mg/kg (ppm)
Chromium	7.81
Nickel	6.15
Zinc	29.5
Cadmium	<1
Lead	3.60
Manganese	694

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 200.8

Client ID:	B-3-14	Client:	Aspect Consulting, LLC
Date Received:	09/17/14	Project:	Ken's Texaco, PO 120061
Date Extracted:	09/24/14	Lab ID:	409282-17
Date Analyzed:	09/24/14	Data File:	409282-17.059
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm) Dry Weight	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	104	60	125
Indium	83	60	125
Holmium	89	60	125

Analyte:	Concentration mg/kg (ppm)
Chromium	6.65
Nickel	8.35
Zinc	33.4
Cadmium	<1
Lead	3.51
Manganese	598

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 200.8

Client ID:	B-3-11.5	Client:	Aspect Consulting, LLC
Date Received:	09/17/14	Project:	Ken's Texaco, PO 120061
Date Extracted:	09/24/14	Lab ID:	409282-18
Date Analyzed:	09/24/14	Data File:	409282-18.060
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm) Dry Weight	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	108	60	125
Indium	84	60	125
Holmium	90	60	125

Analyte:	Concentration mg/kg (ppm)
Chromium	7.56
Nickel	9.18
Zinc	33.8
Cadmium	<1
Lead	10.4
Manganese	1,460

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 200.8

Client ID:	Method Blank	Client:	Aspect Consulting, LLC
Date Received:	Not Applicable	Project:	Ken's Texaco, PO 120061
Date Extracted:	09/24/14	Lab ID:	I4-599 mb
Date Analyzed:	09/24/14	Data File:	I4-599 mb.032
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm) Dry Weight	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	93	60	125
Indium	89	60	125
Holmium	95	60	125

Analyte:	Concentration mg/kg (ppm)
Chromium	<1
Nickel	<1
Zinc	<5
Cadmium	<1
Lead	<1
Manganese	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 10/06/14

Date Received: 09/17/14

Project: Ken's Texaco, PO 120061, F&BI 409282

**QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES
FOR TPH AS GASOLINE
USING METHOD NWTPH-Gx**

Laboratory Code: 409267-03 (Duplicate)

Analyte	Reporting Units	Sample Result (Wet Wt)	Duplicate Result (Wet Wt)	RPD (Limit 20)
Gasoline	mg/kg (ppm)	<2	<2	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Gasoline	mg/kg (ppm)	20	95	71-131

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 10/06/14

Date Received: 09/17/14

Project: Ken's Texaco, PO 120061, F&BI 409282

**QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES
FOR BENZENE, TOLUENE, ETHYLBENZENE,
XYLENES, AND TPH AS GASOLINE
USING EPA METHOD 8021B AND NWTPH-Gx**

Laboratory Code: 409267-03 (Duplicate)

Analyte	Reporting Units	Sample Result (Wet Wt)	Duplicate Result (Wet Wt)	RPD (Limit 20)
Benzene	mg/kg (ppm)	<0.02	<0.02	nm
Toluene	mg/kg (ppm)	<0.02	<0.02	nm
Ethylbenzene	mg/kg (ppm)	<0.02	<0.02	nm
Xylenes	mg/kg (ppm)	<0.06	<0.06	nm
Gasoline	mg/kg (ppm)	<2	<2	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Benzene	mg/kg (ppm)	0.5	90	69-120
Toluene	mg/kg (ppm)	0.5	91	70-117
Ethylbenzene	mg/kg (ppm)	0.5	91	65-123
Xylenes	mg/kg (ppm)	1.5	89	66-120
Gasoline	mg/kg (ppm)	20	95	71-131

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 10/06/14

Date Received: 09/17/14

Project: Ken's Texaco, PO 120061, F&BI 409282

**QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES
FOR VOLATILES BY EPA METHOD 8260C DIRECT SPARGE**

Laboratory Code: 409282-10 (Duplicate)

Analyte	Reporting Units	Sample Result (Wet wt)	Duplicate Result (Wet wt)	RPD (Limit 20)
Hexane	mg/kg (ppm)	<0.025	<0.025	nm
Methyl t-butyl ether (MTBE)	mg/kg (ppm)	<0.005	<0.005	nm
1,2-Dibromoethane (EDB)	mg/kg (ppm)	<0.005	<0.005	nm
1,2-Dichloroethane (EDC)	mg/kg (ppm)	<0.005	<0.005	nm
Benzene	mg/kg (ppm)	<0.003	<0.003	nm
Toluene	mg/kg (ppm)	<0.005	<0.005	nm
Ethylbenzene	mg/kg (ppm)	<0.005	<0.005	nm
m,p-Xylene	mg/kg (ppm)	<0.01	<0.01	nm
o-Xylene	mg/kg (ppm)	<0.005	<0.005	nm
Naphthalene	mg/kg (ppm)	<0.005	<0.005	nm

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 10/06/14

Date Received: 09/17/14

Project: Ken's Texaco, PO 120061, F&BI 409282

**QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES
FOR VOLATILES BY EPA METHOD 8260C DIRECT SPARGE**

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Hexane	mg/kg (ppm)	0.05	109	106	70-130	3
Methyl t-butyl ether (MTBE)	mg/kg (ppm)	0.05	101	107	70-130	6
1,2-Dibromoethane (EDB)	mg/kg (ppm)	0.05	97	98	70-130	1
1,2-Dichloroethane (EDC)	mg/kg (ppm)	0.05	104	107	70-130	3
Benzene	mg/kg (ppm)	0.05	96	98	70-130	2
Toluene	mg/kg (ppm)	0.05	93	93	70-130	0
Ethylbenzene	mg/kg (ppm)	0.05	98	99	70-130	1
m,p-Xylene	mg/kg (ppm)	0.1	98	100	70-130	2
o-Xylene	mg/kg (ppm)	0.05	100	102	70-130	2
Naphthalene	mg/kg (ppm)	0.05	95	104	70-130	9

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 10/06/14

Date Received: 09/17/14

Project: Ken's Texaco, PO 120061, F&BI 409282

**QUALITY ASSURANCE RESULTS FROM THE ANALYSIS OF SOIL
SAMPLES
FOR TOTAL PETROLEUM HYDROCARBONS AS
DIESEL EXTENDED USING METHOD NWTPH-Dx**

Laboratory Code: 409283-06 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result (Wet Wt)	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	mg/kg (ppm)	5,000	<50	95	95	63-146	0

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Diesel Extended	mg/kg (ppm)	5,000	93	79-144

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 10/06/14

Date Received: 09/17/14

Project: Ken's Texaco, PO 120061, F&BI 409282

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR TOTAL METALS USING EPA METHOD 200.8

Laboratory Code: 409392-16 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result (Wet wt)	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Chromium	mg/kg (ppm)	50	7.02	95	94	57-128	1
Nickel	mg/kg (ppm)	25	6.55	91 b	90 b	69-112	1 b
Zinc	mg/kg (ppm)	50	10.2	103 b	99 b	55-129	4 b
Cadmium	mg/kg (ppm)	10	<1	104	106	83-116	2
Lead	mg/kg (ppm)	50	<1	107	106	59-148	1
Manganese	mg/kg (ppm)	20	32.9	83 b	74 b	15-180	11 b

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Chromium	mg/kg (ppm)	50	106	78-121
Nickel	mg/kg (ppm)	25	103	82-122
Zinc	mg/kg (ppm)	50	111	81-120
Cadmium	mg/kg (ppm)	10	106	54-114
Lead	mg/kg (ppm)	50	106	80-120
Manganese	mg/kg (ppm)	20	113	72-125

Data Qualifiers & Definitions

a - The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.

b - The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be meaningful.

ca - The calibration results for the analyte were outside of acceptance criteria. The value reported is an estimate.

c - The presence of the analyte may be due to carryover from previous sample injections.

cf - The sample was centrifuged prior to analysis.

d - The sample was diluted. Detection limits were raised and surrogate recoveries may not be meaningful.

dv - Insufficient sample volume was available to achieve normal reporting limits.

f - The sample was laboratory filtered prior to analysis.

fb - The analyte was detected in the method blank.

fc - The compound is a common laboratory and field contaminant.

hr - The sample and duplicate were reextracted and reanalyzed. RPD results were still outside of control limits. Variability is attributed to sample inhomogeneity.

hs - Headspace was present in the container used for analysis.

ht - The analysis was performed outside the method or client-specified holding time requirement.

ip - Recovery fell outside of control limits. Compounds in the sample matrix interfered with the quantitation of the analyte.

j - The analyte concentration is reported below the lowest calibration standard. The value reported is an estimate.

J - The internal standard associated with the analyte is out of control limits. The reported concentration is an estimate.

jl - The laboratory control sample(s) percent recovery and/or RPD were out of control limits. The reported concentration should be considered an estimate.

js - The surrogate associated with the analyte is out of control limits. The reported concentration should be considered an estimate.

lc - The presence of the analyte is likely due to laboratory contamination.

L - The reported concentration was generated from a library search.

nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.

pc - The sample was received with incorrect preservation or in a container not approved by the method. The value reported should be considered an estimate.

ve - The analyte response exceeded the valid instrument calibration range. The value reported is an estimate.

vo - The value reported fell outside the control limits established for this analyte.

x - The sample chromatographic pattern does not resemble the fuel standard used for quantitation.

409282

SAMPLE CHAIN OF CUSTODY

ME 09-17-14

VS4/BI

Send Report To Kirsi LongleyCompany AspectAddress 401 2nd Ave S. Suite 201City, State, ZIP Seattle, WA 98104

Phone # _____ Fax # _____

SAMPLERS (signature) [Signature]PROJECT NAME/NO [Signature]

PO#

Ken's Texaco120061

REMARKS

fuel additives = hexane, MTBE, naphthalene,
EDB, EDC
metals = lead, cadmium, chromium, nickel, zinc
iron, manganese

TURNAROUND TIME

☒ Standard (2 Weeks)☐ RUSH

Rush charges authorized by _____

SAMPLE DISPOSAL

☐ Dispose after 30 days☐ Return samples☐ Will call with instructions

						ANALYSES REQUESTED												
Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of containers	TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by 8260	SVOCs by 8270	HFS	Fuel Additives	metals	EDH/VPH	TOC	HOLD	Notes	
MW-14-7	01 ^{A-} E	9/15/14	1420	SOIL	5												X	
MW-14-12	02 ^{A-} F	↓	1440	↓	6	X	X	X				X	X	X	X			
MW-14-18	03 ^{A-} E	↓	1450	↓	5	X	X	X				X	X					
MW-14-30	04 ^{A-} F	↓	1500	↓	5												X	
MW-13-5.5	05 ^{A-} F	9/16/14	0745	↓	5												X	
MW-13-14	06 ^{A-} F	↓	0810	↓	6	X	X	X				X	X	X	X			
MW-13-21	07 ^{A-} E	↓	0830	↓	5												X	
MW-13-30	08 ^{A-} F	↓	0840	↓	5												X	
B-1-9	09 ^{A-} F	↓	1130	↓	5												X	
B-1-12	10 ^{A-} F	↓	1140	↓	6	X	X	X				X	X	X	X			

Friedman & Bruya, Inc.
3012 16th Avenue West

Seattle, WA 98119-2029

Ph. (206) 285-8282

Fax (206) 283-5044

FORMS\COC\COC.DOC

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by: <u>[Signature]</u>	AMY TICE	ASPECT	9/16/14	1530
Received by: <u>[Signature]</u>	DAVID	FEBI	9-17-14	9:30
Relinquished by: _____				
Received by: _____				
samples received at <u>4</u> °C				

409282

SAMPLE CHAIN OF CUSTODY ME 09-17-14

US4/212

Send Report To Firsi LingleyCompany ASPECTAddress 401 2nd Ave S, suite 201City, State, ZIP Seattle, WA 98104

Phone # _____ Fax # _____

SAMPLERS (signature) UTPage # 2 of 2

PROJECT NAME/NO.

Ken's Texaco

PO#

120061REMARKS fuel additives = hexane, MTBE,
naphthalene, EDB, EDC
metals = lead, cadmium, chromium, nickel
zinc, iron, manganese

TURNAROUND TIME

☒ Standard (2 Weeks)☐ RUSH

Rush charges authorized by _____

SAMPLE DISPOSAL

☐ Dispose after 30 days☐ Return samples☐ Will call with instructions

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of containers	ANALYSES REQUESTED											Notes	
						TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by 8260	SVOCs by 8270	HFS	Fuel additives	metals	EDH/VPH	TOC	HOLD		
B-1-18	11 ^{A-} E	9/16/14	1150	SOIL	5	X	X	X				X	X					✓ - per KL
B-1-30	12 ^{A-} F		1200		5		✓	✓								X		09/17/14 @
B-2-9.5	13 ^{A-} F		1320		5	X	X	X				X	X					
B-2-13	14 ^{A-} F		1340		6	X	X	X				X	X	X	X			
B-2-20	15 ^{A-} G		1350		5											X		
B-2-30	16		1400		5		✓	✓								X		
B-3-14	17 ^{A-} F		1430		5	X	X	X				X	X					
B-3-11.5	18 ^{A-} F		1420		6	X	X	X				X	X	X	X			
B-3-20	19 ^{A-} G		1440		5												X	
B-3-30	20 ^{A-} F	✓	1450	✓	5		✓	✓									X	

Friedman & Bruya, Inc.
3012 16th Avenue West

Seattle, WA 98119-2029

Ph. (206) 285-8282

Fax (206) 283-5044

FORMS\COC\COC.DOC

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by: <u>UT</u>	<u>AMY TIL</u>	<u>ASPECT</u>	<u>9/16/14</u>	<u>1530</u>
Received by: <u>[Signature]</u>	<u>DD VO</u>	<u>F&BZ</u>	<u>9.17.14</u>	<u>9:38</u>
Relinquished by: _____				
Received by: _____				
Samples received at <u>4</u> °C				

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Yelena Aravkina, M.S.
Michael Erdahl, B.S.
Arina Podnozova, B.S.
Eric Young, B.S.

3012 16th Avenue West
Seattle, WA 98119-2029
(206) 285-8282
fbi@isomedia.com
www.friedmanandbruya.com

October 6, 2014

Kirsi Longley, Project Manager
Aspect Consulting, LLC
401 2nd Ave S, Suite 201
Seattle, WA 98104

Dear Ms. Longley:

Included are the results from the testing of material submitted on September 16, 2014 from the Ken's Texaco 120061, F&BI 409267 project. There are 21 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

We appreciate this opportunity to be of service to you and hope you will call if you have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.



Michael Erdahl
Project Manager

Enclosures

c: data@aspectconsulting.com, Parker Wittman
ASP1006R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on September 16, 2014 by Friedman & Bruya, Inc. from the Aspect Consulting, LLC Ken's Texaco 120061, F&BI 409267 project. Samples were logged in under the laboratory ID's listed below.

<u>Laboratory ID</u>	<u>Aspect Consulting, LLC</u>
409267 -01	MW-15-10
409267 -02	MW-15-12.5
409267 -03	MW-15-16
409267 -04	MW-15-29
409267 -05	MW-16-8
409267 -06	MW-16-14
409267 -07	MW-16-17.5
409267 -08	MW-16-30

Samples MW-15-12.5 and MW-16-14 were sent to Fremont for EPH/VPH and total organic carbon analyses. In addition, samples MW-15-12.5, MW-15-16, MW-16-14, MW-16-17.5 were sent to Fremont for iron analysis. The report generated by Fremont Analytical will be forwarded to your office upon receipt.

The 8260C direct sparge hexane concentrations reported in samples MW-16-14 and MW-16-17.5 exceeded the calibration range of the instrument. The data were qualified accordingly.

All other quality control requirements were acceptable.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 10/06/14

Date Received: 09/16/14

Project: Ken's Texaco 120061, F&BI 409267

Date Extracted: 09/17/14

Date Analyzed: 09/17/14

**RESULTS FROM THE ANALYSIS OF SOIL SAMPLES
FOR TOTAL PETROLEUM HYDROCARBONS AS GASOLINE
USING METHOD NWTPH-Gx**

Results Reported on a Dry Weight Basis

Results Reported as mg/kg (ppm)

<u>Sample ID</u> Laboratory ID	<u>Gasoline Range</u>	Surrogate (% Recovery) (Limit 50-150)
MW-15-12.5 409267-02 1/10	66	96
MW-15-16 409267-03	<2	94
MW-16-14 409267-06 1/20	1,500	86
MW-16-17.5 409267-07 1/2	18	94
Method Blank 04-1845 MB	<2	93

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 10/06/14

Date Received: 09/16/14

Project: Ken's Texaco 120061, F&BI 409267

Date Extracted: 09/18/14

Date Analyzed: 09/18/14

**RESULTS FROM THE ANALYSIS OF SOIL SAMPLES
FOR BENZENE, TOLUENE, ETHYLBENZENE,
XYLENES AND TPH AS GASOLINE
USING METHODS 8021B AND NWTPH-Gx**

Results Reported on a Dry Weight Basis

Results Reported as mg/kg (ppm)

<u>Sample ID</u> Laboratory ID	<u>Benzene</u>	<u>Toluene</u>	<u>Ethyl Benzene</u>	<u>Total Xylenes</u>	<u>Gasoline Range</u>	<u>Surrogate (% Recovery)</u> (Limit 50-132)
MW-15-29 409267-04	<0.02	<0.02	<0.02	<0.06	<2	92
MW-16-30 409267-08	<0.02	<0.02	<0.02	<0.06	<2	92
Method Blank 04-1845 MB	<0.02	<0.02	<0.02	<0.06	<2	88

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260C Direct Sparge

Client Sample ID:	MW-15-12.5	Client:	Aspect Consulting, LLC
Date Received:	09/16/14	Project:	Ken's Texaco 120061, F&BI 409267
Date Extracted:	09/17/14	Lab ID:	409267-02
Date Analyzed:	09/17/14	Data File:	091713.D
Matrix:	Soil	Instrument:	GCMS7
Units:	mg/kg (ppm) Dry Weight	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	105	50	150
Toluene-d8	117	50	150
4-Bromofluorobenzene	109	50	150

Compounds:	Concentration mg/kg (ppm)
Hexane	<0.025
Methyl t-butyl ether (MTBE)	<0.005
1,2-Dibromoethane (EDB)	<0.005
1,2-Dichloroethane (EDC)	<0.005
Benzene	<0.003
Toluene	<0.005
Ethylbenzene	<0.005
m,p-Xylene	<0.01
o-Xylene	<0.005
Naphthalene	<0.005

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260C Direct Sparge

Client Sample ID:	MW-15-16	Client:	Aspect Consulting, LLC
Date Received:	09/16/14	Project:	Ken's Texaco 120061, F&BI 409267
Date Extracted:	09/17/14	Lab ID:	409267-03
Date Analyzed:	09/17/14	Data File:	091714.D
Matrix:	Soil	Instrument:	GCMS7
Units:	mg/kg (ppm) Dry Weight	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	108	50	150
Toluene-d8	99	50	150
4-Bromofluorobenzene	97	50	150

Compounds:	Concentration mg/kg (ppm)
Hexane	<0.025
Methyl t-butyl ether (MTBE)	<0.005
1,2-Dibromoethane (EDB)	<0.005
1,2-Dichloroethane (EDC)	<0.005
Benzene	<0.003
Toluene	<0.005
Ethylbenzene	<0.005
m,p-Xylene	<0.01
o-Xylene	<0.005
Naphthalene	<0.005

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260C Direct Sparge

Client Sample ID:	MW-16-14	Client:	Aspect Consulting, LLC
Date Received:	09/16/14	Project:	Ken's Texaco 120061, F&BI 409267
Date Extracted:	09/17/14	Lab ID:	409267-06
Date Analyzed:	09/17/14	Data File:	091715.D
Matrix:	Soil	Instrument:	GCMS7
Units:	mg/kg (ppm) Dry Weight	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	112	50	150
Toluene-d8	298 ip	50	150
4-Bromofluorobenzene	121	50	150

Compounds:	Concentration mg/kg (ppm)
Hexane	1.3 ve
Methyl t-butyl ether (MTBE)	<0.005
1,2-Dibromoethane (EDB)	<0.005
1,2-Dichloroethane (EDC)	<0.005
Benzene	<0.003
Toluene	<0.005
Ethylbenzene	0.040
m,p-Xylene	0.030
o-Xylene	<0.005
Naphthalene	0.033

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260C Direct Sparge

Client Sample ID:	MW-16-17.5	Client:	Aspect Consulting, LLC
Date Received:	09/16/14	Project:	Ken's Texaco 120061, F&BI 409267
Date Extracted:	09/17/14	Lab ID:	409267-07
Date Analyzed:	09/18/14	Data File:	091806.D
Matrix:	Soil	Instrument:	GCMS7
Units:	mg/kg (ppm) Dry Weight	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	108	50	150
Toluene-d8	150 ip	50	150
4-Bromofluorobenzene	112	50	150

Compounds:	Concentration mg/kg (ppm)
Hexane	0.19 ve
Methyl t-butyl ether (MTBE)	<0.005
1,2-Dibromoethane (EDB)	<0.005
1,2-Dichloroethane (EDC)	<0.005
Benzene	<0.003
Toluene	<0.005
Ethylbenzene	0.0055
m,p-Xylene	<0.01
o-Xylene	<0.005
Naphthalene	<0.005

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260C Direct Sparge

Client Sample ID:	Method Blank	Client:	Aspect Consulting, LLC
Date Received:	Not Applicable	Project:	Ken's Texaco 120061, F&BI 409267
Date Extracted:	09/17/14	Lab ID:	04-1876 mb
Date Analyzed:	09/17/14	Data File:	091712.D
Matrix:	Soil	Instrument:	GCMS7
Units:	mg/kg (ppm) Dry Weight	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	105	50	150
Toluene-d8	97	50	150
4-Bromofluorobenzene	95	50	150

Compounds:	Concentration mg/kg (ppm)
Hexane	<0.025
Methyl t-butyl ether (MTBE)	<0.005
1,2-Dibromoethane (EDB)	<0.005
1,2-Dichloroethane (EDC)	<0.005
Benzene	<0.003
Toluene	<0.005
Ethylbenzene	<0.005
m,p-Xylene	<0.01
o-Xylene	<0.005
Naphthalene	<0.005

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 10/06/14

Date Received: 09/16/14

Project: Ken's Texaco 120061, F&BI 409267

Date Extracted: 09/17/14

Date Analyzed: 09/17/14

**RESULTS FROM THE ANALYSIS OF SOIL SAMPLES
FOR TOTAL PETROLEUM HYDROCARBONS AS
DIESEL AND MOTOR OIL
USING METHOD NWTPH-Dx**

Results Reported on a Dry Weight Basis

Results Reported as mg/kg (ppm)

<u>Sample ID</u> Laboratory ID	<u>Diesel Range</u> (C ₁₀ -C ₂₅)	<u>Motor Oil Range</u> (C ₂₅ -C ₃₆)	<u>Surrogate</u> <u>(% Recovery)</u> (Limit 53-144)
MW-15-12.5 409267-02	<50	<250	97
MW-15-16 409267-03	<50	<250	97
MW-16-14 409267-06	<50	<250	94
MW-16-17.5 409267-07	<50	<250	87
Method Blank 04-1881 MB	<50	<250	87

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 200.8

Client ID:	MW-15-12.5	Client:	Aspect Consulting, LLC
Date Received:	09/16/14	Project:	Ken's Texaco 120061, F&BI 409267
Date Extracted:	09/18/14	Lab ID:	409267-02
Date Analyzed:	09/18/14	Data File:	409267-02.014
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm) Dry Weight	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	108	60	125
Indium	90	60	125
Holmium	100	60	125

Analyte:	Concentration mg/kg (ppm)
Chromium	6.94
Nickel	8.30
Zinc	34.7
Cadmium	<1
Lead	4.19
Manganese	1,160

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 200.8

Client ID:	MW-15-16	Client:	Aspect Consulting, LLC
Date Received:	09/16/14	Project:	Ken's Texaco 120061, F&BI 409267
Date Extracted:	09/18/14	Lab ID:	409267-03
Date Analyzed:	09/18/14	Data File:	409267-03.015
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm) Dry Weight	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	102	60	125
Indium	91	60	125
Holmium	99	60	125

Analyte:	Concentration mg/kg (ppm)
Chromium	11.9
Nickel	12.0
Zinc	50.7
Cadmium	<1
Lead	5.06
Manganese	292

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 200.8

Client ID:	MW-16-14	Client:	Aspect Consulting, LLC
Date Received:	09/16/14	Project:	Ken's Texaco 120061, F&BI 409267
Date Extracted:	09/18/14	Lab ID:	409267-06
Date Analyzed:	09/18/14	Data File:	409267-06.016
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm) Dry Weight	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	106	60	125
Indium	90	60	125
Holmium	98	60	125

Analyte:	Concentration mg/kg (ppm)
Chromium	8.74
Nickel	10.7
Zinc	37.7
Cadmium	<1
Lead	6.44
Manganese	1,040

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 200.8

Client ID:	MW-16-17.5	Client:	Aspect Consulting, LLC
Date Received:	09/16/14	Project:	Ken's Texaco 120061, F&BI 409267
Date Extracted:	09/18/14	Lab ID:	409267-07
Date Analyzed:	09/18/14	Data File:	409267-07.017
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm) Dry Weight	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	101	60	125
Indium	90	60	125
Holmium	99	60	125

Analyte:	Concentration mg/kg (ppm)
Chromium	11.7
Nickel	12.1
Zinc	37.2
Cadmium	<1
Lead	4.11
Manganese	302

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 200.8

Client ID:	Method Blank	Client:	Aspect Consulting, LLC
Date Received:	Not Applicable	Project:	Ken's Texaco 120061, F&BI 409267
Date Extracted:	09/18/14	Lab ID:	I4-587 mb
Date Analyzed:	09/18/14	Data File:	I4-587 mb.008
Matrix:	Soil	Instrument:	ICPMS1
Units:	mg/kg (ppm) Dry Weight	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	91	60	125
Indium	89	60	125
Holmium	91	60	125

Analyte:	Concentration mg/kg (ppm)
Chromium	<1
Nickel	<1
Zinc	<5
Cadmium	<1
Lead	<1
Manganese	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 10/06/14

Date Received: 09/16/14

Project: Ken's Texaco 120061, F&BI 409267

**QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES
FOR TPH AS GASOLINE
USING METHOD NWTPH-Gx**

Laboratory Code: 409267-03 (Duplicate)

Analyte	Reporting Units	Sample Result (Wet Wt)	Duplicate Result (Wet Wt)	RPD (Limit 20)
Gasoline	mg/kg (ppm)	<2	<2	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Gasoline	mg/kg (ppm)	20	95	71-131

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 10/06/14

Date Received: 09/16/14

Project: Ken's Texaco 120061, F&BI 409267

**QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES
FOR BENZENE, TOLUENE, ETHYLBENZENE,
XYLENES, AND TPH AS GASOLINE
USING EPA METHOD 8021B AND NWTPH-Gx**

Laboratory Code: 409267-03 (Duplicate)

Analyte	Reporting Units	Sample Result (Wet Wt)	Duplicate Result (Wet Wt)	RPD (Limit 20)
Benzene	mg/kg (ppm)	<0.02	<0.02	nm
Toluene	mg/kg (ppm)	<0.02	<0.02	nm
Ethylbenzene	mg/kg (ppm)	<0.02	<0.02	nm
Xylenes	mg/kg (ppm)	<0.06	<0.06	nm
Gasoline	mg/kg (ppm)	<2	<2	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Benzene	mg/kg (ppm)	0.5	90	69-120
Toluene	mg/kg (ppm)	0.5	91	70-117
Ethylbenzene	mg/kg (ppm)	0.5	91	65-123
Xylenes	mg/kg (ppm)	1.5	89	66-120
Gasoline	mg/kg (ppm)	20	95	71-131

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 10/06/14

Date Received: 09/16/14

Project: Ken's Texaco 120061, F&BI 409267

**QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES
FOR VOLATILES BY EPA METHOD 8260C DIRECT SPARGE**

Laboratory Code: 409282-10 (Duplicate)

Analyte	Reporting Units	Sample Result (Wet wt)	Duplicate Result (Wet wt)	RPD (Limit 20)
Hexane	mg/kg (ppm)	<0.025	<0.025	nm
Methyl t-butyl ether (MTBE)	mg/kg (ppm)	<0.005	<0.005	nm
1,2-Dibromoethane (EDB)	mg/kg (ppm)	<0.005	<0.005	nm
1,2-Dichloroethane (EDC)	mg/kg (ppm)	<0.005	<0.005	nm
Benzene	mg/kg (ppm)	<0.003	<0.003	nm
Toluene	mg/kg (ppm)	<0.005	<0.005	nm
Ethylbenzene	mg/kg (ppm)	<0.005	<0.005	nm
m,p-Xylene	mg/kg (ppm)	<0.01	<0.01	nm
o-Xylene	mg/kg (ppm)	<0.005	<0.005	nm
Naphthalene	mg/kg (ppm)	<0.005	<0.005	nm

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 10/06/14

Date Received: 09/16/14

Project: Ken's Texaco 120061, F&BI 409267

**QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES
FOR VOLATILES BY EPA METHOD 8260C DIRECT SPARGE**

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Hexane	mg/kg (ppm)	0.05	109	106	70-130	3
Methyl t-butyl ether (MTBE)	mg/kg (ppm)	0.05	101	107	70-130	6
1,2-Dibromoethane (EDB)	mg/kg (ppm)	0.05	97	98	70-130	1
1,2-Dichloroethane (EDC)	mg/kg (ppm)	0.05	104	107	70-130	3
Benzene	mg/kg (ppm)	0.05	96	98	70-130	2
Toluene	mg/kg (ppm)	0.05	93	93	70-130	0
Ethylbenzene	mg/kg (ppm)	0.05	98	99	70-130	1
m,p-Xylene	mg/kg (ppm)	0.1	98	100	70-130	2
o-Xylene	mg/kg (ppm)	0.05	100	102	70-130	2
Naphthalene	mg/kg (ppm)	0.05	95	104	70-130	9

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 10/06/14

Date Received: 09/16/14

Project: Ken's Texaco 120061, F&BI 409267

**QUALITY ASSURANCE RESULTS FROM THE ANALYSIS OF SOIL
SAMPLES
FOR TOTAL PETROLEUM HYDROCARBONS AS
DIESEL EXTENDED USING METHOD NWTPH-Dx**

Laboratory Code: 409274-04 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result (Wet Wt)	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	mg/kg (ppm)	5,000	<50	117	111	64-133	5

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Diesel Extended	mg/kg (ppm)	5,000	114	58-147

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 10/06/14

Date Received: 09/16/14

Project: Ken's Texaco 120061, F&BI 409267

**QUALITY ASSURANCE RESULTS
FOR THE ANALYSIS OF SOIL SAMPLES
FOR TOTAL METALS USING EPA METHOD 200.8**

Laboratory Code: 409287-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result (Wet wt)	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Chromium	mg/kg (ppm)	50	10.7	92 b	89 b	57-128	3 b
Nickel	mg/kg (ppm)	25	12.8	93 b	85 b	69-112	9 b
Zinc	mg/kg (ppm)	50	113	115 b	127 b	55-129	10 b
Cadmium	mg/kg (ppm)	10	<1	106	105	83-116	1
Lead	mg/kg (ppm)	50	53.6	108 b	101 b	59-148	7 b
Manganese	mg/kg (ppm)	20	106	88 b	117 b	15-180	28 b

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Chromium	mg/kg (ppm)	50	99	78-121
Nickel	mg/kg (ppm)	25	99	82-122
Zinc	mg/kg (ppm)	50	103	81-120
Cadmium	mg/kg (ppm)	10	103	54-114
Lead	mg/kg (ppm)	50	109	80-120
Manganese	mg/kg (ppm)	20	112	72-125

Data Qualifiers & Definitions

a - The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.

b - The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be meaningful.

ca - The calibration results for the analyte were outside of acceptance criteria. The value reported is an estimate.

c - The presence of the analyte may be due to carryover from previous sample injections.

cf - The sample was centrifuged prior to analysis.

d - The sample was diluted. Detection limits were raised and surrogate recoveries may not be meaningful.

dv - Insufficient sample volume was available to achieve normal reporting limits.

f - The sample was laboratory filtered prior to analysis.

fb - The analyte was detected in the method blank.

fc - The compound is a common laboratory and field contaminant.

hr - The sample and duplicate were reextracted and reanalyzed. RPD results were still outside of control limits. Variability is attributed to sample inhomogeneity.

hs - Headspace was present in the container used for analysis.

ht - The analysis was performed outside the method or client-specified holding time requirement.

ip - Recovery fell outside of control limits. Compounds in the sample matrix interfered with the quantitation of the analyte.

j - The analyte concentration is reported below the lowest calibration standard. The value reported is an estimate.

J - The internal standard associated with the analyte is out of control limits. The reported concentration is an estimate.

jl - The laboratory control sample(s) percent recovery and/or RPD were out of control limits. The reported concentration should be considered an estimate.

js - The surrogate associated with the analyte is out of control limits. The reported concentration should be considered an estimate.

lc - The presence of the analyte is likely due to laboratory contamination.

L - The reported concentration was generated from a library search.

nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.

pc - The sample was received with incorrect preservation or in a container not approved by the method. The value reported should be considered an estimate.

ve - The analyte response exceeded the valid instrument calibration range. The value reported is an estimate.

vo - The value reported fell outside the control limits established for this analyte.

x - The sample chromatographic pattern does not resemble the fuel standard used for quantitation.

409267

SAMPLE CHAIN OF CUSTODY

ME 09-16-14

BI2/VS2

Send Report To ELVIS LongleyCompany AspectAddress 401 2nd Ave S, Suite 201City, State, ZIP Seattle, WA

Phone # _____ Fax # _____

SAMPLERS (signature) [Signature]

PROJECT NAME/NO.

Ken's TEXACO

PO#

120061

REMARKS

fuel additives: hexano, MTBE, naphthalene,
EDB, EDC
metals: lead, cadmium, chromium, nickel, zinc,
iron, manganesePage # 1 of 1

TURNAROUND TIME

☒ Standard (2 Weeks)☐ RUSH

Rush charges authorized by _____

SAMPLE DISPOSAL

☐ Dispose after 30 days☐ Return samples☐ Will call with instructions

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of containers	ANALYSES REQUESTED											Notes
						TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by 8260	SVOCs by 8270	HFS	fuel additives	metals	EPH/VPH	TOC	HOLD	
MW-15-10	01A-E	9/15/14	1030	SOIL	5											X	✓ - per KL
MW-15-12.5	02A-F		1045		6	X	X	X				X	X	X	X		09/17/14 @
MW-15-16	03A-E		1100		5	X	X	X				X	X				
MW-15-29	04T		1110		5		✓	✓								X	
MW-16-8	05T		1245		5											X	
MW-16-14	06A-F		1300		6	X	X	X				X	X	X	X		
MW-16-17.5	07A-E		1310		5	X	X	X				X	X				
MW-16-30	08T		1320		5		✓	✓								X	

Samples received at 2Friedman & Bruya, Inc.
3012 16th Avenue West

Seattle, WA 98119-2029

Ph. (206) 285-8282

Fax (206) 283-5044

FORMS\COC\COC.DOC

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by: <u>[Signature]</u>	<u>Amy Tie</u>	<u>ASPECT</u>	<u>9/15/14</u>	
Received by: <u>[Signature]</u>	<u>D d vo</u>	<u>F&BI</u>	<u>9-16-14</u>	<u>14:00</u>
Relinquished by:				
Received by:				

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Yelena Aravkina, M.S.
Michael Erdahl, B.S.
Arina Podnozova, B.S.
Eric Young, B.S.

3012 16th Avenue West
Seattle, WA 98119-2029
(206) 285-8282
fbi@isomedia.com
www.friedmanandbruya.com

October 6, 2014

Kirsi Longley, Project Manager
Aspect Consulting, LLC
401 2nd Ave S, Suite 201
Seattle, WA 98104

Dear Ms. Longley:

Included are the results from the testing of material submitted on September 24, 2014 from the Ken's Texaco 120061, F&BI 409436 project. There are 22 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

We appreciate this opportunity to be of service to you and hope you will call if you have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.



Michael Erdahl
Project Manager

Enclosures

c: data@aspectconsulting.com, Parker Wittman
ASP1006R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on September 24, 2014 by Friedman & Bruya, Inc. from the Aspect Consulting, LLC Ken's Texaco 120061, F&BI 409436 project. Samples were logged in under the laboratory ID's listed below.

<u>Laboratory ID</u>	<u>Aspect Consulting, LLC</u>
409436 -01	MW-10-092314
409436 -02	MW-13-092314
409436 -03	MW-14-092314
409436 -04	MW-15-092314
409436 -05	MW-16-092314
409436 -06	MW-50-092314

Samples MW-15-092314 and MW-16-092314 were sent to Fremont for alkalinity, chloride, sulfate, nitrate and nitrite analyses. Review of the enclosed report indicates that all quality assurance were acceptable.

All quality control requirements were acceptable.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 10/06/14

Date Received: 09/24/14

Project: Ken's Texaco 120061, F&BI 409436

Date Extracted: 09/24/14

Date Analyzed: 09/25/14

**RESULTS FROM THE ANALYSIS OF WATER SAMPLES
FOR TOTAL PETROLEUM HYDROCARBONS AS GASOLINE
USING METHOD NWTPH-Gx**

Results Reported as ug/L (ppb)

<u>Sample ID</u> Laboratory ID	<u>Gasoline Range</u>	Surrogate <u>(% Recovery)</u> (Limit 51-134)
MW-10-092314 409436-01	<100	90
MW-13-092314 409436-02	<100	89
MW-14-092314 409436-03	<100	88
MW-15-092314 409436-04	<100	90
MW-16-092314 409436-05	2,400	93
Method Blank 04-1913 MB	<100	91

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 10/06/14

Date Received: 09/24/14

Project: Ken's Texaco 120061, F&BI 409436

Date Extracted: 09/25/14

Date Analyzed: 09/26/14

**RESULTS FROM THE ANALYSIS OF WATER SAMPLES
FOR TOTAL PETROLEUM HYDROCARBONS AS
DIESEL AND MOTOR OIL
USING METHOD NWTPH-Dx**
Results Reported as ug/L (ppb)

<u>Sample ID</u> Laboratory ID	<u>Diesel Range</u> (C ₁₀ -C ₂₅)	<u>Motor Oil Range</u> (C ₂₅ -C ₃₆)	<u>Surrogate</u> <u>(% Recovery)</u> (Limit 47-140)
MW-10-092314 409436-01	<50	<250	97
MW-13-092314 409436-02	<50	<250	99
MW-14-092314 409436-03	<50	<250	99
MW-15-092314 409436-04	<50	<250	91
MW-16-092314 409436-05	670 x	<250	97
Method Blank 04-1958 MB	<50	<250	91

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Dissolved Metals By EPA Method 200.8

Client ID:	MW-15-092314	Client:	Aspect Consulting, LLC
Date Received:	09/24/14	Project:	Ken's Texaco 120061, F&BI 409436
Date Extracted:	10/01/14	Lab ID:	409436-04
Date Analyzed:	10/02/14	Data File:	409436-04.046
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	86	60	125
Holmium	94	60	125

Analyte:	Concentration ug/L (ppb)
Lead	<1
Manganese	581
Iron	51.3

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Dissolved Metals By EPA Method 200.8

Client ID:	MW-16-092314	Client:	Aspect Consulting, LLC
Date Received:	09/24/14	Project:	Ken's Texaco 120061, F&BI 409436
Date Extracted:	10/01/14	Lab ID:	409436-05
Date Analyzed:	10/02/14	Data File:	409436-05.049
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	87	60	125
Holmium	97	60	125

Analyte:	Concentration ug/L (ppb)
Lead	<1
Manganese	2,450
Iron	132

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Dissolved Metals By EPA Method 200.8

Client ID:	Method Blank	Client:	Aspect Consulting, LLC
Date Received:	NA	Project:	Ken's Texaco 120061, F&BI 409436
Date Extracted:	10/01/14	Lab ID:	I4-616 mb
Date Analyzed:	10/02/14	Data File:	I4-616 mb.044
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	88	60	125
Holmium	94	60	125

Analyte:	Concentration ug/L (ppb)
Lead	<1
Manganese	<1
Iron	<50

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID: MW-13-092314	Client: Aspect Consulting, LLC
Date Received: 09/24/14	Project: Ken's Texaco 120061, F&BI 409436
Date Extracted: 09/25/14	Lab ID: 409436-02
Date Analyzed: 09/25/14	Data File: 092508.D
Matrix: Water	Instrument: GCMS9
Units: ug/L (ppb)	Operator: JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	103	85	117
Toluene-d8	99	93	107
4-Bromofluorobenzene	97	76	126

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Dichlorodifluoromethane	<1	1,3-Dichloropropane	<1
Chloromethane	<10	Tetrachloroethene	<1
Vinyl chloride	<0.2	Dibromochloromethane	<1
Bromomethane	<1	1,2-Dibromoethane (EDB)	<1
Chloroethane	<1	Chlorobenzene	<1
Trichlorofluoromethane	<1	Ethylbenzene	<1
Acetone	<10	1,1,1,2-Tetrachloroethane	<1
1,1-Dichloroethene	<1	m,p-Xylene	<2
Methylene chloride	<5	o-Xylene	<1
Methyl t-butyl ether (MTBE)	<1	Styrene	<1
trans-1,2-Dichloroethene	<1	Isopropylbenzene	<1
1,1-Dichloroethane	<1	Bromoform	<1
2,2-Dichloropropane	<1	n-Propylbenzene	<1
cis-1,2-Dichloroethene	<1	Bromobenzene	<1
Chloroform	<1	1,3,5-Trimethylbenzene	<1
2-Butanone (MEK)	<10	1,1,2,2-Tetrachloroethane	<1
1,2-Dichloroethane (EDC)	<1	1,2,3-Trichloropropane	<1
1,1,1-Trichloroethane	<1	2-Chlorotoluene	<1
1,1-Dichloropropene	<1	4-Chlorotoluene	<1
Carbon tetrachloride	<1	tert-Butylbenzene	<1
Benzene	<0.35	1,2,4-Trimethylbenzene	<1
Trichloroethene	<1	sec-Butylbenzene	<1
1,2-Dichloropropane	<1	p-Isopropyltoluene	<1
Bromodichloromethane	<1	1,3-Dichlorobenzene	<1
Dibromomethane	<1	1,4-Dichlorobenzene	<1
4-Methyl-2-pentanone	<10	1,2-Dichlorobenzene	<1
cis-1,3-Dichloropropene	<1	1,2-Dibromo-3-chloropropane	<10
Toluene	<1	1,2,4-Trichlorobenzene	<1
trans-1,3-Dichloropropene	<1	Hexachlorobutadiene	<1
1,1,2-Trichloroethane	<1	Naphthalene	<1
2-Hexanone	<10	1,2,3-Trichlorobenzene	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID: MW-14-092314	Client: Aspect Consulting, LLC
Date Received: 09/24/14	Project: Ken's Texaco 120061, F&BI 409436
Date Extracted: 09/25/14	Lab ID: 409436-03
Date Analyzed: 09/25/14	Data File: 092509.D
Matrix: Water	Instrument: GCMS9
Units: ug/L (ppb)	Operator: JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	104	85	117
Toluene-d8	99	93	107
4-Bromofluorobenzene	100	76	126

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Dichlorodifluoromethane	<1	1,3-Dichloropropane	<1
Chloromethane	<10	Tetrachloroethene	<1
Vinyl chloride	<0.2	Dibromochloromethane	<1
Bromomethane	<1	1,2-Dibromoethane (EDB)	<1
Chloroethane	<1	Chlorobenzene	<1
Trichlorofluoromethane	<1	Ethylbenzene	<1
Acetone	<10	1,1,1,2-Tetrachloroethane	<1
1,1-Dichloroethene	<1	m,p-Xylene	<2
Methylene chloride	<5	o-Xylene	<1
Methyl t-butyl ether (MTBE)	<1	Styrene	<1
trans-1,2-Dichloroethene	<1	Isopropylbenzene	<1
1,1-Dichloroethane	<1	Bromoform	<1
2,2-Dichloropropane	<1	n-Propylbenzene	<1
cis-1,2-Dichloroethene	<1	Bromobenzene	<1
Chloroform	<1	1,3,5-Trimethylbenzene	<1
2-Butanone (MEK)	<10	1,1,2,2-Tetrachloroethane	<1
1,2-Dichloroethane (EDC)	<1	1,2,3-Trichloropropane	<1
1,1,1-Trichloroethane	<1	2-Chlorotoluene	<1
1,1-Dichloropropene	<1	4-Chlorotoluene	<1
Carbon tetrachloride	<1	tert-Butylbenzene	<1
Benzene	<0.35	1,2,4-Trimethylbenzene	<1
Trichloroethene	<1	sec-Butylbenzene	<1
1,2-Dichloropropane	<1	p-Isopropyltoluene	<1
Bromodichloromethane	<1	1,3-Dichlorobenzene	<1
Dibromomethane	<1	1,4-Dichlorobenzene	<1
4-Methyl-2-pentanone	<10	1,2-Dichlorobenzene	<1
cis-1,3-Dichloropropene	<1	1,2-Dibromo-3-chloropropane	<10
Toluene	<1	1,2,4-Trichlorobenzene	<1
trans-1,3-Dichloropropene	<1	Hexachlorobutadiene	<1
1,1,2-Trichloroethane	<1	Naphthalene	<1
2-Hexanone	<10	1,2,3-Trichlorobenzene	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID: MW-15-092314	Client: Aspect Consulting, LLC
Date Received: 09/24/14	Project: Ken's Texaco 120061, F&BI 409436
Date Extracted: 09/25/14	Lab ID: 409436-04
Date Analyzed: 09/25/14	Data File: 092510.D
Matrix: Water	Instrument: GCMS9
Units: ug/L (ppb)	Operator: JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	102	85	117
Toluene-d8	99	93	107
4-Bromofluorobenzene	98	76	126

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Dichlorodifluoromethane	<1	1,3-Dichloropropane	<1
Chloromethane	<10	Tetrachloroethene	<1
Vinyl chloride	<0.2	Dibromochloromethane	<1
Bromomethane	<1	1,2-Dibromoethane (EDB)	<1
Chloroethane	<1	Chlorobenzene	<1
Trichlorofluoromethane	<1	Ethylbenzene	<1
Acetone	<10	1,1,1,2-Tetrachloroethane	<1
1,1-Dichloroethene	<1	m,p-Xylene	<2
Methylene chloride	<5	o-Xylene	<1
Methyl t-butyl ether (MTBE)	<1	Styrene	<1
trans-1,2-Dichloroethene	<1	Isopropylbenzene	<1
1,1-Dichloroethane	<1	Bromoform	<1
2,2-Dichloropropane	<1	n-Propylbenzene	<1
cis-1,2-Dichloroethene	<1	Bromobenzene	<1
Chloroform	<1	1,3,5-Trimethylbenzene	<1
2-Butanone (MEK)	<10	1,1,2,2-Tetrachloroethane	<1
1,2-Dichloroethane (EDC)	<1	1,2,3-Trichloropropane	<1
1,1,1-Trichloroethane	<1	2-Chlorotoluene	<1
1,1-Dichloropropene	<1	4-Chlorotoluene	<1
Carbon tetrachloride	<1	tert-Butylbenzene	<1
Benzene	<0.35	1,2,4-Trimethylbenzene	<1
Trichloroethene	<1	sec-Butylbenzene	<1
1,2-Dichloropropane	<1	p-Isopropyltoluene	<1
Bromodichloromethane	<1	1,3-Dichlorobenzene	<1
Dibromomethane	<1	1,4-Dichlorobenzene	<1
4-Methyl-2-pentanone	<10	1,2-Dichlorobenzene	<1
cis-1,3-Dichloropropene	<1	1,2-Dibromo-3-chloropropane	<10
Toluene	<1	1,2,4-Trichlorobenzene	<1
trans-1,3-Dichloropropene	<1	Hexachlorobutadiene	<1
1,1,2-Trichloroethane	<1	Naphthalene	<1
2-Hexanone	<10	1,2,3-Trichlorobenzene	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID: MW-16-092314	Client: Aspect Consulting, LLC
Date Received: 09/24/14	Project: Ken's Texaco 120061, F&BI 409436
Date Extracted: 09/25/14	Lab ID: 409436-05
Date Analyzed: 09/25/14	Data File: 092511.D
Matrix: Water	Instrument: GCMS9
Units: ug/L (ppb)	Operator: JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	100	85	117
Toluene-d8	102	93	107
4-Bromofluorobenzene	99	76	126

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Dichlorodifluoromethane	<1	1,3-Dichloropropane	<1
Chloromethane	<10	Tetrachloroethene	<1
Vinyl chloride	<0.2	Dibromochloromethane	<1
Bromomethane	<1	1,2-Dibromoethane (EDB)	<1
Chloroethane	<1	Chlorobenzene	<1
Trichlorofluoromethane	<1	Ethylbenzene	25
Acetone	<10	1,1,1,2-Tetrachloroethane	<1
1,1-Dichloroethene	<1	m,p-Xylene	15
Methylene chloride	<5	o-Xylene	<1
Methyl t-butyl ether (MTBE)	<1	Styrene	<1
trans-1,2-Dichloroethene	<1	Isopropylbenzene	17
1,1-Dichloroethane	<1	Bromoform	<1
2,2-Dichloropropane	<1	n-Propylbenzene	24
cis-1,2-Dichloroethene	<1	Bromobenzene	<1
Chloroform	<1	1,3,5-Trimethylbenzene	4.4
2-Butanone (MEK)	<10	1,1,2,2-Tetrachloroethane	<1
1,2-Dichloroethane (EDC)	<1	1,2,3-Trichloropropane	<1
1,1,1-Trichloroethane	<1	2-Chlorotoluene	<1
1,1-Dichloropropene	<1	4-Chlorotoluene	<1
Carbon tetrachloride	<1	tert-Butylbenzene	<1
Benzene	<0.35	1,2,4-Trimethylbenzene	6.3
Trichloroethene	<1	sec-Butylbenzene	12
1,2-Dichloropropane	<1	p-Isopropyltoluene	3.7
Bromodichloromethane	<1	1,3-Dichlorobenzene	<1
Dibromomethane	<1	1,4-Dichlorobenzene	<1
4-Methyl-2-pentanone	<10	1,2-Dichlorobenzene	<1
cis-1,3-Dichloropropene	<1	1,2-Dibromo-3-chloropropane	<10
Toluene	<1	1,2,4-Trichlorobenzene	<1
trans-1,3-Dichloropropene	<1	Hexachlorobutadiene	<1
1,1,2-Trichloroethane	<1	Naphthalene	29
2-Hexanone	<10	1,2,3-Trichlorobenzene	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID: MW-50-092314	Client: Aspect Consulting, LLC
Date Received: 09/24/14	Project: Ken's Texaco 120061, F&BI 409436
Date Extracted: 09/25/14	Lab ID: 409436-06
Date Analyzed: 09/25/14	Data File: 092512.D
Matrix: Water	Instrument: GCMS9
Units: ug/L (ppb)	Operator: JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	100	85	117
Toluene-d8	101	93	107
4-Bromofluorobenzene	99	76	126

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Dichlorodifluoromethane	<1	1,3-Dichloropropane	<1
Chloromethane	<10	Tetrachloroethene	<1
Vinyl chloride	<0.2	Dibromochloromethane	<1
Bromomethane	<1	1,2-Dibromoethane (EDB)	<1
Chloroethane	<1	Chlorobenzene	<1
Trichlorofluoromethane	<1	Ethylbenzene	25
Acetone	<10	1,1,1,2-Tetrachloroethane	<1
1,1-Dichloroethene	<1	m,p-Xylene	15
Methylene chloride	<5	o-Xylene	<1
Methyl t-butyl ether (MTBE)	<1	Styrene	<1
trans-1,2-Dichloroethene	<1	Isopropylbenzene	17
1,1-Dichloroethane	<1	Bromoform	<1
2,2-Dichloropropane	<1	n-Propylbenzene	24
cis-1,2-Dichloroethene	<1	Bromobenzene	<1
Chloroform	<1	1,3,5-Trimethylbenzene	4.5
2-Butanone (MEK)	<10	1,1,2,2-Tetrachloroethane	<1
1,2-Dichloroethane (EDC)	<1	1,2,3-Trichloropropane	<1
1,1,1-Trichloroethane	<1	2-Chlorotoluene	<1
1,1-Dichloropropene	<1	4-Chlorotoluene	<1
Carbon tetrachloride	<1	tert-Butylbenzene	<1
Benzene	<0.35	1,2,4-Trimethylbenzene	6.6
Trichloroethene	<1	sec-Butylbenzene	12
1,2-Dichloropropane	<1	p-Isopropyltoluene	3.8
Bromodichloromethane	<1	1,3-Dichlorobenzene	<1
Dibromomethane	<1	1,4-Dichlorobenzene	<1
4-Methyl-2-pentanone	<10	1,2-Dichlorobenzene	<1
cis-1,3-Dichloropropene	<1	1,2-Dibromo-3-chloropropane	<10
Toluene	<1	1,2,4-Trichlorobenzene	<1
trans-1,3-Dichloropropene	<1	Hexachlorobutadiene	<1
1,1,2-Trichloroethane	<1	Naphthalene	30
2-Hexanone	<10	1,2,3-Trichlorobenzene	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	Method Blank	Client:	Aspect Consulting, LLC
Date Received:	Not Applicable	Project:	Ken's Texaco 120061, F&BI 409436
Date Extracted:	09/25/14	Lab ID:	04-1903 mb
Date Analyzed:	09/25/14	Data File:	092507.D
Matrix:	Water	Instrument:	GCMS9
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	103	85	117
Toluene-d8	98	93	107
4-Bromofluorobenzene	98	76	126

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Dichlorodifluoromethane	<1	1,3-Dichloropropane	<1
Chloromethane	<10	Tetrachloroethene	<1
Vinyl chloride	<0.2	Dibromochloromethane	<1
Bromomethane	<1	1,2-Dibromoethane (EDB)	<1
Chloroethane	<1	Chlorobenzene	<1
Trichlorofluoromethane	<1	Ethylbenzene	<1
Acetone	<10	1,1,1,2-Tetrachloroethane	<1
1,1-Dichloroethene	<1	m,p-Xylene	<2
Methylene chloride	<5	o-Xylene	<1
Methyl t-butyl ether (MTBE)	<1	Styrene	<1
trans-1,2-Dichloroethene	<1	Isopropylbenzene	<1
1,1-Dichloroethane	<1	Bromoform	<1
2,2-Dichloropropane	<1	n-Propylbenzene	<1
cis-1,2-Dichloroethene	<1	Bromobenzene	<1
Chloroform	<1	1,3,5-Trimethylbenzene	<1
2-Butanone (MEK)	<10	1,1,2,2-Tetrachloroethane	<1
1,2-Dichloroethane (EDC)	<1	1,2,3-Trichloropropane	<1
1,1,1-Trichloroethane	<1	2-Chlorotoluene	<1
1,1-Dichloropropene	<1	4-Chlorotoluene	<1
Carbon tetrachloride	<1	tert-Butylbenzene	<1
Benzene	<0.35	1,2,4-Trimethylbenzene	<1
Trichloroethene	<1	sec-Butylbenzene	<1
1,2-Dichloropropane	<1	p-Isopropyltoluene	<1
Bromodichloromethane	<1	1,3-Dichlorobenzene	<1
Dibromomethane	<1	1,4-Dichlorobenzene	<1
4-Methyl-2-pentanone	<10	1,2-Dichlorobenzene	<1
cis-1,3-Dichloropropene	<1	1,2-Dibromo-3-chloropropane	<10
Toluene	<1	1,2,4-Trichlorobenzene	<1
trans-1,3-Dichloropropene	<1	Hexachlorobutadiene	<1
1,1,2-Trichloroethane	<1	Naphthalene	<1
2-Hexanone	<10	1,2,3-Trichlorobenzene	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Dissolved Gasses By RSK 175

Client Sample ID:	MW-15-092314	Client:	Aspect Consulting, LLC
Date Received:	09/24/14	Project:	Ken's Texaco 120061, F&BI 409436
Date Extracted:	09/24/14	Lab ID:	409436-04
Date Analyzed:	09/24/14	Data File:	010F1001.D
Matrix:	Water	Instrument:	GC8
Units:	ug/L (ppb)	Operator:	JS

Compounds:	Concentration ug/L (ppb)
Methane	<5

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Dissolved Gasses By RSK 175

Client Sample ID:	MW-16-092314	Client:	Aspect Consulting, LLC
Date Received:	09/24/14	Project:	Ken's Texaco 120061, F&BI 409436
Date Extracted:	09/24/14	Lab ID:	409436-05
Date Analyzed:	09/24/14	Data File:	011F1101.D
Matrix:	Water	Instrument:	GC8
Units:	ug/L (ppb)	Operator:	JS

Compounds:	Concentration ug/L (ppb)
Methane	300

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Dissolved Gasses By RSK 175

Client Sample ID:	Method Blank	Client:	Aspect Consulting, LLC
Date Received:	Not Applicable	Project:	Ken's Texaco 120061, F&BI 409436
Date Extracted:	09/24/14	Lab ID:	04-1897 mb
Date Analyzed:	09/24/14	Data File:	005F0501.D
Matrix:	Water	Instrument:	GC8
Units:	ug/L (ppb)	Operator:	JS

Compounds:	Concentration ug/L (ppb)
Methane	<5

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 10/06/14

Date Received: 09/24/14

Project: Ken's Texaco 120061, F&BI 409436

**QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER
SAMPLES FOR TPH AS GASOLINE
USING METHOD NWTPH-Gx**

Laboratory Code: 409405-05 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	RPD (Limit 20)
Gasoline	ug/L (ppb)	<100	<100	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Gasoline	ug/L (ppb)	1,000	99	69-134

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 10/06/14

Date Received: 09/24/14

Project: Ken's Texaco 120061, F&BI 409436

**QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER
SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS
DIESEL EXTENDED USING METHOD NWTPH-Dx**

Laboratory Code: 409452-03 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	ug/L (ppb)	2,500	620	101	93	64-141	8

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	ug/L (ppb)	2,500	94	96	61-133	2

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 10/06/14

Date Received: 09/24/14

Project: Ken's Texaco 120061, F&BI 409436

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR DISSOLVED METALS USING EPA METHOD 200.8

Laboratory Code: 409436-04 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Lead	ug/L (ppb)	10	<1	100	111	79-121	10
Manganese	ug/L (ppb)	20	581	0 b	131 b	47-155	200 b
Iron	ug/L (ppb)	100	51.3	100 b	112 b	50-150	11 b

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Lead	ug/L (ppb)	10	102	83-115
Manganese	ug/L (ppb)	20	109	76-120
Iron	ug/L (ppb)	100	107	70-130

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 10/06/14

Date Received: 09/24/14

Project: Ken's Texaco 120061, F&BI 409436

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR VOLATILES BY EPA METHOD 8260C

Laboratory Code: 409450-42 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Acceptance Criteria
Dichlorodifluoromethane	ug/L (ppb)	50	<1	80	55-144
Chloromethane	ug/L (ppb)	50	<10	77	67-131
Vinyl chloride	ug/L (ppb)	50	<0.2	86	61-139
Bromomethane	ug/L (ppb)	50	<1	107	66-129
Chloroethane	ug/L (ppb)	50	<1	95	68-126
Trichlorofluoromethane	ug/L (ppb)	50	<1	93	71-128
Acetone	ug/L (ppb)	250	<10	94	48-149
1,1-Dichloroethene	ug/L (ppb)	50	<1	92	71-123
Methylene chloride	ug/L (ppb)	50	<5	101	61-126
Methyl t-butyl ether (MTBE)	ug/L (ppb)	50	<1	98	68-125
trans-1,2-Dichloroethene	ug/L (ppb)	50	<1	94	72-122
1,1-Dichloroethane	ug/L (ppb)	50	<1	95	79-113
2,2-Dichloropropane	ug/L (ppb)	50	<1	102	58-132
cis-1,2-Dichloroethene	ug/L (ppb)	50	<1	101	73-119
Chloroform	ug/L (ppb)	50	<1	98	80-112
2-Butanone (MEK)	ug/L (ppb)	250	<10	96	69-123
1,2-Dichloroethane (EDC)	ug/L (ppb)	50	<1	93	78-113
1,1,1-Trichloroethane	ug/L (ppb)	50	<1	99	79-116
1,1-Dichloropropene	ug/L (ppb)	50	<1	96	67-121
Carbon tetrachloride	ug/L (ppb)	50	<1	98	72-123
Benzene	ug/L (ppb)	50	<0.35	93	79-109
Trichloroethene	ug/L (ppb)	50	<1	96	75-109
1,2-Dichloropropane	ug/L (ppb)	50	<1	96	80-111
Bromodichloromethane	ug/L (ppb)	50	<1	99	78-117
Dibromomethane	ug/L (ppb)	50	<1	98	80-112
4-Methyl-2-pentanone	ug/L (ppb)	250	<10	111	79-123
cis-1,3-Dichloropropene	ug/L (ppb)	50	<1	102	76-120
Toluene	ug/L (ppb)	50	<1	99	73-117
trans-1,3-Dichloropropene	ug/L (ppb)	50	<1	105	75-122
1,1,2-Trichloroethane	ug/L (ppb)	50	<1	103	81-111
2-Hexanone	ug/L (ppb)	250	<10	102	75-126
1,3-Dichloropropane	ug/L (ppb)	50	<1	100	81-111
Tetrachloroethene	ug/L (ppb)	50	<1	102	72-113
Dibromochloromethane	ug/L (ppb)	50	<1	108	69-129
1,2-Dibromoethane (EDB)	ug/L (ppb)	50	<1	104	83-114
Chlorobenzene	ug/L (ppb)	50	<1	100	75-115
Ethylbenzene	ug/L (ppb)	50	<1	103	71-120
1,1,1,2-Tetrachloroethane	ug/L (ppb)	50	<1	106	78-122
m,p-Xylene	ug/L (ppb)	100	<2	107	63-128
o-Xylene	ug/L (ppb)	50	<1	109	64-129
Styrene	ug/L (ppb)	50	<1	110	70-122
Isopropylbenzene	ug/L (ppb)	50	<1	109	76-118
Bromoform	ug/L (ppb)	50	<1	108	49-138
n-Propylbenzene	ug/L (ppb)	50	<1	106	74-117
Bromobenzene	ug/L (ppb)	50	<1	103	70-121
1,3,5-Trimethylbenzene	ug/L (ppb)	50	<1	112	81-112
1,1,2,2-Tetrachloroethane	ug/L (ppb)	50	<1	103	79-120
1,2,3-Trichloropropane	ug/L (ppb)	50	<1	99	72-119
2-Chlorotoluene	ug/L (ppb)	50	<1	105	77-114
4-Chlorotoluene	ug/L (ppb)	50	<1	105	81-109
tert-Butylbenzene	ug/L (ppb)	50	<1	115	81-116
1,2,4-Trimethylbenzene	ug/L (ppb)	50	<1	114	74-118
sec-Butylbenzene	ug/L (ppb)	50	<1	112	77-118
p-Isopropyltoluene	ug/L (ppb)	50	<1	113	64-132
1,3-Dichlorobenzene	ug/L (ppb)	50	<1	103	81-111
1,4-Dichlorobenzene	ug/L (ppb)	50	<1	100	78-110
1,2-Dichlorobenzene	ug/L (ppb)	50	<1	102	81-111
1,2-Dibromo-3-chloropropane	ug/L (ppb)	50	<10	111	69-129
1,2,4-Trichlorobenzene	ug/L (ppb)	50	<1	108	74-115
Hexachlorobutadiene	ug/L (ppb)	50	<1	97	67-120
Naphthalene	ug/L (ppb)	50	<1	119	63-136
1,2,3-Trichlorobenzene	ug/L (ppb)	50	<1	107	79-115

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 10/06/14

Date Received: 09/24/14

Project: Ken's Texaco 120061, F&BI 409436

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR VOLATILES BY EPA METHOD 8260C

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Dichlorodifluoromethane	ug/L (ppb)	50	103	105	54-149	2
Chloromethane	ug/L (ppb)	50	93	94	67-133	1
Vinyl chloride	ug/L (ppb)	50	99	101	73-132	2
Bromomethane	ug/L (ppb)	50	117	115	69-123	2
Chloroethane	ug/L (ppb)	50	106	105	68-126	1
Trichlorofluoromethane	ug/L (ppb)	50	103	103	70-132	0
Acetone	ug/L (ppb)	250	104	104	44-145	0
1,1-Dichloroethene	ug/L (ppb)	50	98	99	75-119	1
Methylene chloride	ug/L (ppb)	50	106	106	63-132	0
Methyl t-butyl ether (MTBE)	ug/L (ppb)	50	101	101	70-122	0
trans-1,2-Dichloroethene	ug/L (ppb)	50	98	98	76-118	0
1,1-Dichloroethane	ug/L (ppb)	50	99	99	80-116	0
2,2-Dichloropropane	ug/L (ppb)	50	104	104	62-141	0
cis-1,2-Dichloroethene	ug/L (ppb)	50	103	103	81-111	0
Chloroform	ug/L (ppb)	50	102	102	81-109	0
2-Butanone (MEK)	ug/L (ppb)	250	96	99	53-140	3
1,2-Dichloroethane (EDC)	ug/L (ppb)	50	96	97	79-109	1
1,1,1-Trichloroethane	ug/L (ppb)	50	102	103	80-116	1
1,1-Dichloropropene	ug/L (ppb)	50	99	100	78-112	1
Carbon tetrachloride	ug/L (ppb)	50	102	104	72-128	2
Benzene	ug/L (ppb)	50	96	97	81-108	1
Trichloroethene	ug/L (ppb)	50	98	99	77-108	1
1,2-Dichloropropane	ug/L (ppb)	50	99	99	82-109	0
Bromodichloromethane	ug/L (ppb)	50	103	105	76-120	2
Dibromomethane	ug/L (ppb)	50	102	102	80-110	0
4-Methyl-2-pentanone	ug/L (ppb)	250	110	109	59-142	1
cis-1,3-Dichloropropene	ug/L (ppb)	50	106	107	76-128	1
Toluene	ug/L (ppb)	50	99	99	83-108	0
trans-1,3-Dichloropropene	ug/L (ppb)	50	106	107	76-128	1
1,1,2-Trichloroethane	ug/L (ppb)	50	102	104	82-110	2
2-Hexanone	ug/L (ppb)	250	104	104	53-145	0
1,3-Dichloropropane	ug/L (ppb)	50	102	101	83-110	1
Tetrachloroethene	ug/L (ppb)	50	102	103	78-109	1
Dibromochloromethane	ug/L (ppb)	50	109	110	63-140	1
1,2-Dibromoethane (EDB)	ug/L (ppb)	50	105	108	85-113	3
Chlorobenzene	ug/L (ppb)	50	99	100	84-108	1
Ethylbenzene	ug/L (ppb)	50	103	103	84-110	0
1,1,1,2-Tetrachloroethane	ug/L (ppb)	50	107	107	76-125	0
m,p-Xylene	ug/L (ppb)	100	107	107	84-112	0
o-Xylene	ug/L (ppb)	50	108	109	82-113	1
Styrene	ug/L (ppb)	50	111	111	84-116	0
Isopropylbenzene	ug/L (ppb)	50	108	110	81-122	2
Bromoform	ug/L (ppb)	50	109	111	40-161	2
n-Propylbenzene	ug/L (ppb)	50	103	105	81-115	2
Bromobenzene	ug/L (ppb)	50	100	102	80-113	2
1,3,5-Trimethylbenzene	ug/L (ppb)	50	111	111	83-117	0
1,1,2,2-Tetrachloroethane	ug/L (ppb)	50	101	102	79-118	1
1,2,3-Trichloropropane	ug/L (ppb)	50	98	99	74-116	1
2-Chlorotoluene	ug/L (ppb)	50	103	103	79-112	0
4-Chlorotoluene	ug/L (ppb)	50	104	104	81-113	0
tert-Butylbenzene	ug/L (ppb)	50	110	113	81-119	3
1,2,4-Trimethylbenzene	ug/L (ppb)	50	111	112	83-116	1
sec-Butylbenzene	ug/L (ppb)	50	110	110	83-116	0
p-Isopropyltoluene	ug/L (ppb)	50	111	112	82-119	1
1,3-Dichlorobenzene	ug/L (ppb)	50	100	101	83-111	1
1,4-Dichlorobenzene	ug/L (ppb)	50	97	98	82-109	1
1,2-Dichlorobenzene	ug/L (ppb)	50	100	101	83-111	1
1,2-Dibromo-3-chloropropane	ug/L (ppb)	50	109	110	62-133	1
1,2,4-Trichlorobenzene	ug/L (ppb)	50	104	104	77-117	0
Hexachlorobutadiene	ug/L (ppb)	50	96	97	74-118	1
Naphthalene	ug/L (ppb)	50	115	117	75-131	2
1,2,3-Trichlorobenzene	ug/L (ppb)	50	105	107	82-115	2

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 10/06/14

Date Received: 09/24/14

Project: Ken's Texaco 120061, F&BI 409436

**QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF
WATER SAMPLES FOR DISSOLVED GASES
USING METHOD RSK 175**

Laboratory Code: 409405-04 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	Relative Percent Difference (Limit 20)
Methane	ug/L (ppb)	230	220	4

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Methane	ug/L (ppb)	500	66	65	50-150	2

Data Qualifiers & Definitions

a - The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.

b - The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be meaningful.

ca - The calibration results for the analyte were outside of acceptance criteria. The value reported is an estimate.

c - The presence of the analyte may be due to carryover from previous sample injections.

cf - The sample was centrifuged prior to analysis.

d - The sample was diluted. Detection limits were raised and surrogate recoveries may not be meaningful.

dv - Insufficient sample volume was available to achieve normal reporting limits.

f - The sample was laboratory filtered prior to analysis.

fb - The analyte was detected in the method blank.

fc - The compound is a common laboratory and field contaminant.

hr - The sample and duplicate were reextracted and reanalyzed. RPD results were still outside of control limits. Variability is attributed to sample inhomogeneity.

hs - Headspace was present in the container used for analysis.

ht - The analysis was performed outside the method or client-specified holding time requirement.

ip - Recovery fell outside of control limits. Compounds in the sample matrix interfered with the quantitation of the analyte.

j - The analyte concentration is reported below the lowest calibration standard. The value reported is an estimate.

J - The internal standard associated with the analyte is out of control limits. The reported concentration is an estimate.

jl - The laboratory control sample(s) percent recovery and/or RPD were out of control limits. The reported concentration should be considered an estimate.

js - The surrogate associated with the analyte is out of control limits. The reported concentration should be considered an estimate.

lc - The presence of the analyte is likely due to laboratory contamination.

L - The reported concentration was generated from a library search.

nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.

pc - The sample was received with incorrect preservation or in a container not approved by the method. The value reported should be considered an estimate.

ve - The analyte response exceeded the valid instrument calibration range. The value reported is an estimate.

vo - The value reported fell outside the control limits established for this analyte.

x - The sample chromatographic pattern does not resemble the fuel standard used for quantitation.



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Friedman & Bruya
Michael Erdahl
3012 16th Ave. W.
Seattle, WA 98119

RE: 409436
Lab ID: 1409268

October 01, 2014

Attention Michael Erdahl:

Fremont Analytical, Inc. received 2 sample(s) on 9/24/2014 for the analyses presented in the following report.

Ferrous Iron by SM3500-Fe B
Ion Chromatography by EPA Method 300.0
Total Alkalinity by SM 2320B

This report consists of the following:

- Case Narrative
- Analytical Results
- Applicable Quality Control Summary Reports
- Chain of Custody

All analyses were performed consistent with the Quality Assurance program of Fremont Analytical, Inc. Please contact the laboratory if you should have any questions about the results.

Thank you for using Fremont Analytical.

Sincerely,

Mike Ridgeway
President



Date: 10/01/2014

CLIENT: Friedman & Bruya
Project: 409436
Lab Order: 1409268

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Date/Time Collected	Date/Time Received
1409268-001	MW-15-092314	09/23/2014 1:11 PM	09/24/2014 11:44 AM
1409268-002	MW-16-092314	09/23/2014 1:20 AM	09/24/2014 11:44 AM

Note: If no "Time Collected" is supplied, a default of 12:00AM is assigned

CLIENT: Friedman & Bruya**Project:** 409436

I. SAMPLE RECEIPT:

Samples receipt information is recorded on the attached Sample Receipt Checklist.

II. GENERAL REPORTING COMMENTS:

Results are reported on a wet weight basis unless dry-weight correction is denoted in the units field on the analytical report ("mg/kg-dry" or "ug/kg-dry").

Matrix Spike (MS) and MS Duplicate (MSD) samples are tested from an analytical batch of "like" matrix to check for possible matrix effect. The MS and MSD will provide site specific matrix data only for those samples which are spiked by the laboratory. The sample chosen for spike purposes may or may not have been a sample submitted in this sample delivery group. The validity of the analytical procedures for which data is reported in this analytical report is determined by the Laboratory Control Sample (LCS) and the Method Blank (MB). The LCS and the MB are processed with the samples and the MS/MSD to ensure method criteria are achieved throughout the entire analytical process.

III. ANALYSES AND EXCEPTIONS:

Exceptions associated with this report will be footnoted in the analytical results page(s) or the quality control summary page(s) and/or noted below.



Analytical Report

WO#: 1409268

Date Reported: 10/1/2014

CLIENT: Friedman & Bruya

Project: 409436

Lab ID: 1409268-001

Collection Date: 9/23/2014 1:11:00 PM

Client Sample ID: MW-15-092314

Matrix: Water

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Ion Chromatography by EPA Method 300.0

Batch ID: R17009 Analyst: KT

Chloride	2.30	0.100		mg/L	1	9/24/2014 3:54:00 PM
Nitrite	ND	0.100		mg/L	1	9/24/2014 3:54:00 PM
Nitrate	ND	0.100		mg/L	1	9/24/2014 3:54:00 PM
Sulfate	2.08	0.300		mg/L	1	9/24/2014 3:54:00 PM

Total Alkalinity by SM 2320B

Batch ID: R17041 Analyst: KT

Alkalinity, Total (As CaCO ₃)	70.0	5.00		mg/L	1	9/25/2014 4:41:00 PM
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Ferrous Iron by SM3500-Fe B

Batch ID: R16987 Analyst: KT

Ferrous Iron	ND	0.0300		mg/L	1	9/24/2014 1:05:00 PM
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Qualifiers:

B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
RL	Reporting Limit

D	Dilution was required
H	Holding times for preparation or analysis exceeded
ND	Not detected at the Reporting Limit
S	Spike recovery outside accepted recovery limits



Analytical Report

WO#: 1409268

Date Reported: 10/1/2014

CLIENT: Friedman & Bruya

Project: 409436

Lab ID: 1409268-002

Collection Date: 9/23/2014 1:20:00 AM

Client Sample ID: MW-16-092314

Matrix: Water

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Ion Chromatography by EPA Method 300.0

Batch ID: R17009 Analyst: KT

Chloride	3.62	0.100		mg/L	1	9/24/2014 4:33:00 PM
Nitrite	ND	0.100		mg/L	1	9/24/2014 4:33:00 PM
Nitrate	ND	0.100		mg/L	1	9/24/2014 4:33:00 PM
Sulfate	0.944	0.300		mg/L	1	9/24/2014 4:33:00 PM

Total Alkalinity by SM 2320B

Batch ID: R17041 Analyst: KT

Alkalinity, Total (As CaCO ₃)	118	5.00		mg/L	1	9/25/2014 4:44:00 PM
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Ferrous Iron by SM3500-Fe B

Batch ID: R16987 Analyst: KT

Ferrous Iron	ND	0.0300		mg/L	1	9/24/2014 1:05:00 PM
--------------	----	--------	--	------	---	----------------------

Qualifiers:

B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
RL	Reporting Limit

D	Dilution was required
H	Holding times for preparation or analysis exceeded
ND	Not detected at the Reporting Limit
S	Spike recovery outside accepted recovery limits



Date: 10/1/2014

Work Order: 1409268
CLIENT: Friedman & Bruya
Project: 409436

QC SUMMARY REPORT

Total Alkalinity by SM 2320B

Sample ID: MB-R17041		SampType: MBLK		Units: mg/L		Prep Date: 9/25/2014			RunNo: 17041			
Client ID: MBLKW		Batch ID: R17041					Analysis Date: 9/25/2014			SeqNo: 341477		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	

Alkalinity, Total (As CaCO3) ND 5.00

Sample ID: LCS-R17041		SampType: LCS		Units: mg/L		Prep Date: 9/25/2014			RunNo: 17041			
Client ID: LCSW		Batch ID: R17041					Analysis Date: 9/25/2014			SeqNo: 341478		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	

Alkalinity, Total (As CaCO3) 100 5.00 100.0 0 100 80 120

Sample ID: 1409268-002ADUP	SampType: DUP	Units: mg/L			Prep Date: 9/25/2014			RunNo: 17041			
Client ID: MW-16-092314	Batch ID: R17041	Analysis Date: 9/25/2014						SeqNo: 341491			
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Alkalinity, Total (As CaCO3) 115 5.00 117.5 2.15 20

Qualifiers:

B	Analyte detected in the associated Method Blank	D	Dilution was required	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	RL	Reporting Limit	S	Spike recovery outside accepted recovery limits



Date: 10/1/2014

Work Order: 1409268
CLIENT: Friedman & Bruya
Project: 409436

QC SUMMARY REPORT

Ferrous Iron by SM3500-Fe B

Sample ID: MB-R16987		SampType: MBLK			Units: mg/L		Prep Date: 9/24/2014			RunNo: 16987		
Client ID: MBLKW		Batch ID: R16987			Analysis Date: 9/24/2014			SeqNo: 340640				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	

Ferrous Iron ND 0.0300

Sample ID: LCS-R16987		SampType: LCS		Units: mg/L		Prep Date: 9/24/2014			RunNo: 16987		
Client ID: LCSW		Batch ID: R16987					Analysis Date: 9/24/2014			SeqNo: 340641	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Ferrous Iron 0.950 0.0300 1.000 0 95.0 90 110

Sample ID: 1409268-001BDUP		SampType: DUP			Units: mg/L		Prep Date: 9/24/2014			RunNo: 16987		
Client ID: MW-15-092314		Batch ID: R16987						Analysis Date: 9/24/2014			SeqNo: 340644	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	

Ferrous Iron ND 0.0300 0 20

Sample ID: 1409268-001BMS		SampType: MS		Units: mg/L		Prep Date: 9/24/2014			RunNo: 16987			
Client ID: MW-15-092314		Batch ID: R16987					Analysis Date: 9/24/2014			SeqNo: 340645		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	

Ferrous Iron 1.00 0.0300 1.000 0 100 85 115

Sample ID: 1409268-001BMSD		SampType: MSD		Units: mg/L		Prep Date: 9/24/2014			RunNo: 16987		
Client ID: MW-15-092314		Batch ID: R16987					Analysis Date: 9/24/2014			SeqNo: 340646	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Ferrous Iron 1.02 0.0300 1.000 0 102 85 115 1.000 1.98 20

Qualifiers:

B	Analyte detected in the associated Method Blank	D	Dilution was required	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	RL	Reporting Limit	S	Spike recovery outside accepted recovery limits



Date: 10/1/2014

Work Order: 1409268
CLIENT: Friedman & Bruya
Project: 409436

QC SUMMARY REPORT
Ion Chromatography by EPA Method 300.0

Sample ID: MB-R17009	SampType: MBLK	Units: mg/L			Prep Date: 9/24/2014			RunNo: 17009			
Client ID: MBLKW	Batch ID: R17009				Analysis Date: 9/24/2014			SeqNo: 341014			
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	ND	0.100									
Nitrite	ND	0.100									
Nitrate	ND	0.100									
Sulfate	ND	0.300									

Sample ID: LCS-R17009	SampType: LCS	Units: mg/L				Prep Date: 9/24/2014			RunNo: 17009		
Client ID: LCSW	Batch ID: R17009					Analysis Date: 9/24/2014			SeqNo: 341015		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	2.90	0.100	3.000	0	96.8	90	110				
Nitrite	2.79	0.100	3.000	0	92.9	90	110				
Nitrate	3.03	0.100	3.000	0	101	90	110				
Sulfate	15.7	0.300	15.00	0	105	90	110				

Sample ID: 1409268-001ADUP	SampType: DUP	Units: mg/L				Prep Date: 9/24/2014			RunNo: 17009		
Client ID: MW-15-092314	Batch ID: R17009					Analysis Date: 9/24/2014			SeqNo: 341017		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	2.34	0.100						2.304	1.39	20	
Nitrite	ND	0.100						0		20	
Nitrate	ND	0.100						0		20	
Sulfate	2.10	0.300						2.082	0.894	20	

Qualifiers:

B	Analyte detected in the associated Method Blank	D	Dilution was required	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	RL	Reporting Limit	S	Spike recovery outside accepted recovery limits



Date: 10/1/2014

Work Order: 1409268
CLIENT: Friedman & Bruya
Project: 409436

QC SUMMARY REPORT
Ion Chromatography by EPA Method 300.0

Sample ID: 1409268-001AMS		SampType: MS		Units: mg/L		Prep Date: 9/24/2014		RunNo: 17009			
Client ID: MW-15-092314		Batch ID: R17009				Analysis Date: 9/24/2014		SeqNo: 341018			
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chloride	5.23	0.100	3.000	2.304	97.5	80	120				
Nitrite	2.76	0.100	3.000	0	91.8	80	120				
Nitrate	3.07	0.100	3.000	0	102	80	120				
Sulfate	17.9	0.300	15.00	2.082	106	80	120				

Sample ID: 1409268-001AMSD		SampType: MSD			Units: mg/L		Prep Date: 9/24/2014			RunNo: 17009		
Client ID: MW-15-092314		Batch ID: R17009			Analysis Date: 9/24/2014					SeqNo: 341019		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	

Chloride	5.26	0.100	3.000	2.304	98.6	80	120	5.229	0.649	20	
Nitrite	2.81	0.100	3.000	0	93.5	80	120	2.755	1.80	20	
Nitrate	3.08	0.100	3.000	0	103	80	120	3.075	0.302	20	
Sulfate	18.0	0.300	15.00	2.082	106	80	120	17.92	0.255	20	

Qualifiers:	B	Analyte detected in the associated Method Blank	D	Dilution was required	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	RL	Reporting Limit	S	Spike recovery outside accepted recovery limits

Client Name: **FB**
 Logged by: **Erica Silva**

Work Order Number: **1409268**
 Date Received: **9/24/2014 11:44:00 AM**

Chain of Custody

1. Is Chain of Custody complete? Yes ☒ No ☐ Not Present ☐
 2. How was the sample delivered? Client

Log In

3. Coolers are present? Yes ☒ No ☐ NA ☐
 4. Shipping container/cooler in good condition? Yes ☒ No ☐
 5. Custody seals intact on shipping container/cooler? Yes ☐ No ☐ Not Required ☒
 6. Was an attempt made to cool the samples? Yes ☒ No ☐ NA ☐
 7. Were all coolers received at a temperature of >0°C to 10.0°C? Yes ☒ No ☐ NA ☐
 8. Sample(s) in proper container(s)? Yes ☒ No ☐
 9. Sufficient sample volume for indicated test(s)? Yes ☒ No ☐
 10. Are samples properly preserved? Yes ☒ No ☐
 11. Was preservative added to bottles? Yes ☐ No ☒ NA ☐
 12. Is the headspace in the VOA vials? Yes ☐ No ☐ NA ☒
 13. Did all samples containers arrive in good condition(unbroken)? Yes ☒ No ☐
 14. Does paperwork match bottle labels? Yes ☒ No ☐
 15. Are matrices correctly identified on Chain of Custody? Yes ☒ No ☐
 16. Is it clear what analyses were requested? Yes ☒ No ☐
 17. Were all holding times able to be met? Yes ☒ No ☐

Special Handling (if applicable)

18. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☒

Person Notified: Date:
 By Whom: Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person
 Regarding:
 Client Instructions:

19. Additional remarks:

Item Information

Item #	Temp °C	Condition
Cooler	7.3	Good
Sample	5.4	Good

SUBCONTRACT SAMPLE CHAIN OF CUSTODY

1409268

Send Report To Michael Erdahl
 Company Friedman and Bruva, Inc.
 Address 3012 16th Ave W
 City, State, ZIP Seattle, WA 98119
 Phone # (206) 285-8282 Fax # (206) 283-5044

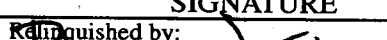
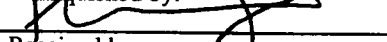
SUBCONTRACTOR <u>Fremont</u>	
PROJECT NAME/NO. <u>409436</u>	PO # <u>D-216</u>
REMARKS <u>Please Email Results</u>	

Page # <u>1</u> of <u>1</u>
TURNAROUND TIME <input checked="" type="checkbox"/> Standard (2 Weeks) <input type="checkbox"/> RUSH Rush charges authorized by: _____
SAMPLE DISPOSAL <input type="checkbox"/> Dispose after 30 days <input type="checkbox"/> Return samples <input type="checkbox"/> Will call with instructions

Sample ID	Lab ID	Date Sampled	Time Sampled	Matrix	# of jars	Dioxins and Furans by 8290	EPH	chloride XpH	Nitrate	Sulfate	Alkalinity	Dissolved Heavy Iron	Notes
<u>15</u> <u>MW-16-092314</u>		<u>9/23/14</u>	<u>1311</u>	<u>water</u>	<u>3</u>			<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>	
<u>16</u> <u>MW-20-092314</u>		<u>↓</u>	<u>1320</u>	<u>↓</u>	<u>3</u>			<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>	

Friedman & Bruva, Inc.
 3012 16th Avenue West
 Seattle, WA 98119-2029
 Ph. (206) 285-8282
 Fax (206) 283-5044

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
<u>Michael Erdahl</u>	<u>Michael Erdahl</u>	<u>Friedman & Bruva</u>	<u>9/24/14</u>	<u>11:10 AM</u>
<u>Clare Griggs</u>	<u>Clare Griggs</u>	<u>FBI</u>	<u>9/24</u>	<u>11:44</u>
Received by:				
Relinquished by:				
Received by:				

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by: 	Breann Zimmerman	Aspect Consulting	9/23/14	3:15pm
Received by: 	DOJ	FBI	9-24-14	10:00
Relinquished by:				
Received by:				



3600 Fremont Ave. N.
Seattle, WA 98103
T: (206) 352-3790
F: (206) 352-7178
info@fremontanalytical.com

Friedman & Bruya
Michael Erdahl
3012 16th Ave. W.
Seattle, WA 98119

RE: 409267
Lab ID: 1409178

October 06, 2014

Attention Michael Erdahl:

Fremont Analytical, Inc. received 4 sample(s) on 9/17/2014 for the analyses presented in the following report.

Extractable Petroleum Hydrocarbons by NWEPH
Sample Moisture (Percent Moisture)
Total Metals by EPA Method 6020
Total Organic Carbon by EPA Method 9060
Volatile Petroleum Hydrocarbons by NWVPH

This report consists of the following:

- Case Narrative
- Analytical Results
- Applicable Quality Control Summary Reports
- Chain of Custody

All analyses were performed consistent with the Quality Assurance program of Fremont Analytical, Inc. Please contact the laboratory if you should have any questions about the results.

Thank you for using Fremont Analytical.

Sincerely,

Mike Ridgeway
President



Date: 10/06/2014

CLIENT: Friedman & Bruya
Project: 409267
Lab Order: 1409178

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Date/Time Collected	Date/Time Received
1409178-001	MW-15-12.5	09/15/2014 10:45 AM	09/17/2014 3:13 PM
1409178-002	MW-15-16	09/15/2014 11:00 AM	09/17/2014 3:13 PM
1409178-003	MW-16-14	09/15/2014 1:00 PM	09/17/2014 3:13 PM
1409178-004	MW-16-17.5	09/15/2014 1:10 PM	09/17/2014 3:13 PM

Note: If no "Time Collected" is supplied, a default of 12:00AM is assigned

CLIENT: Friedman & Bruya**Project:** 409267

I. SAMPLE RECEIPT:

Samples receipt information is recorded on the attached Sample Receipt Checklist.

II. GENERAL REPORTING COMMENTS:

Results are reported on a wet weight basis unless dry-weight correction is denoted in the units field on the analytical report ("mg/kg-dry" or "ug/kg-dry").

Matrix Spike (MS) and MS Duplicate (MSD) samples are tested from an analytical batch of "like" matrix to check for possible matrix effect. The MS and MSD will provide site specific matrix data only for those samples which are spiked by the laboratory. The sample chosen for spike purposes may or may not have been a sample submitted in this sample delivery group. The validity of the analytical procedures for which data is reported in this analytical report is determined by the Laboratory Control Sample (LCS) and the Method Blank (MB). The LCS and the MB are processed with the samples and the MS/MSD to ensure method criteria are achieved throughout the entire analytical process.

III. ANALYSES AND EXCEPTIONS:

Exceptions associated with this report will be footnoted in the analytical results page(s) or the quality control summary page(s) and/or noted below.



Analytical Report

WO#: 1409178

Date Reported: 10/6/2014

Client: Friedman & Bruya

Collection Date: 9/15/2014 10:45:00 AM

Project: 409267

Lab ID: 1409178-001

Matrix: Soil

Client Sample ID: MW-15-12.5

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Extractable Petroleum Hydrocarbons by NWEPH

Batch ID: 8759

Analyst: EC

Aliphatic Hydrocarbon (C8-C10)	11.5	5.61		mg/Kg-dry	1	10/4/2014 6:41:00 PM
Aliphatic Hydrocarbon (C10-C12)	ND	5.61		mg/Kg-dry	1	10/4/2014 6:41:00 PM
Aliphatic Hydrocarbon (C12-C16)	ND	5.61		mg/Kg-dry	1	10/4/2014 6:41:00 PM
Aliphatic Hydrocarbon (C16-C21)	ND	5.61		mg/Kg-dry	1	10/4/2014 6:41:00 PM
Aliphatic Hydrocarbon (C21-C34)	10.5	5.61		mg/Kg-dry	1	10/4/2014 6:41:00 PM
Aromatic Hydrocarbon (C8-C10)	ND	5.61		mg/Kg-dry	1	10/5/2014 7:02:00 AM
Aromatic Hydrocarbon (C10-C12)	ND	5.61		mg/Kg-dry	1	10/5/2014 7:02:00 AM
Aromatic Hydrocarbon (C12-C16)	ND	5.61		mg/Kg-dry	1	10/5/2014 7:02:00 AM
Aromatic Hydrocarbon (C16-C21)	ND	5.61		mg/Kg-dry	1	10/5/2014 7:02:00 AM
Aromatic Hydrocarbon (C21-C34)	8.86	5.61	B	mg/Kg-dry	1	10/5/2014 7:02:00 AM
Surr: 1-Chlorooctadecane	94.1	65-140		%REC	1	10/4/2014 6:41:00 PM
Surr: o-Terphenyl	101	65-140		%REC	1	10/5/2014 7:02:00 AM

Volatile Petroleum Hydrocarbons by NWVPH

Batch ID: 8761

Analyst: EM

Aliphatic Hydrocarbon (C5-C6)	ND	1.54		mg/Kg-dry	1	9/25/2014 7:40:00 AM
Aliphatic Hydrocarbon (C6-C8)	15.9	1.54		mg/Kg-dry	1	9/25/2014 7:40:00 AM
Aliphatic Hydrocarbon (C8-C10)	22.9	1.54		mg/Kg-dry	1	9/25/2014 7:40:00 AM
Aliphatic Hydrocarbon (C10-C12)	26.3	15.4	D	mg/Kg-dry	10	9/25/2014 8:03:00 PM
Aromatic Hydrocarbon (C8-C10)	22.4	1.54		mg/Kg-dry	1	9/25/2014 7:40:00 AM
Aromatic Hydrocarbon (C10-C12)	59.7	15.4	D	mg/Kg-dry	10	9/25/2014 8:03:00 PM
Aromatic Hydrocarbon (C12-C13)	19.8	1.54		mg/Kg-dry	1	9/25/2014 7:40:00 AM
Benzene	ND	0.386		mg/Kg-dry	1	9/25/2014 7:40:00 AM
Toluene	ND	0.386		mg/Kg-dry	1	9/25/2014 7:40:00 AM
Ethylbenzene	ND	0.386		mg/Kg-dry	1	9/25/2014 7:40:00 AM
m,p-Xylene	ND	0.386		mg/Kg-dry	1	9/25/2014 7:40:00 AM
o-Xylene	ND	0.386		mg/Kg-dry	1	9/25/2014 7:40:00 AM
Naphthalene	ND	0.386		mg/Kg-dry	1	9/25/2014 7:40:00 AM
Methyl tert-butyl ether (MTBE)	ND	0.386		mg/Kg-dry	1	9/25/2014 7:40:00 AM
Surr: 1,4-Difluorobenzene	101	65-140		%REC	1	9/25/2014 7:40:00 AM
Surr: Bromofluorobenzene	113	65-140		%REC	1	9/25/2014 7:40:00 AM

Total Metals by EPA Method 6020

Batch ID: 8775

Analyst: TN

Iron	35,300	5.03		mg/Kg-dry	1	9/22/2014 2:39:53 PM
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Qualifiers: B Analyte detected in the associated Method Blank
E Value above quantitation range
J Analyte detected below quantitation limits
RL Reporting Limit

D Dilution was required
H Holding times for preparation or analysis exceeded
ND Not detected at the Reporting Limit
S Spike recovery outside accepted recovery limits



Analytical Report

WO#: 1409178

Date Reported: 10/6/2014

Client: Friedman & Bruya

Collection Date: 9/15/2014 10:45:00 AM

Project: 409267

Lab ID: 1409178-001

Matrix: Soil

Client Sample ID: MW-15-12.5

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Sample Moisture (Percent Moisture)

Batch ID: R16889 Analyst: KZ

Percent Moisture	11.1			wt%	1	9/22/2014 9:11:43 AM
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Total Organic Carbon by EPA Method 9060

Batch ID: 8819 Analyst: KT

Total Organic Carbon	ND	0.0500		%-dry	1	9/22/2014 12:43:51 PM
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Qualifiers:

B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
RL	Reporting Limit

D	Dilution was required
H	Holding times for preparation or analysis exceeded
ND	Not detected at the Reporting Limit
S	Spike recovery outside accepted recovery limits



Analytical Report

WO#: 1409178

Date Reported: 10/6/2014

Client: Friedman & Bruya

Collection Date: 9/15/2014 11:00:00 AM

Project: 409267

Lab ID: 1409178-002

Matrix: Soil

Client Sample ID: MW-15-16

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Total Metals by EPA Method 6020

Batch ID: 8775

Analyst: TN

Iron	31,500	6.32		mg/Kg-dry	1	9/22/2014 3:03:52 PM
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Sample Moisture (Percent Moisture)

Batch ID: R16889

Analyst: KZ

Percent Moisture	29.3			wt%	1	9/22/2014 9:11:43 AM
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Qualifiers: B Analyte detected in the associated Method Blank
E Value above quantitation range
J Analyte detected below quantitation limits
RL Reporting Limit

D Dilution was required
H Holding times for preparation or analysis exceeded
ND Not detected at the Reporting Limit
S Spike recovery outside accepted recovery limits



Analytical Report

WO#: 1409178

Date Reported: 10/6/2014

Client: Friedman & Bruya

Collection Date: 9/15/2014 1:00:00 PM

Project: 409267

Lab ID: 1409178-003

Matrix: Soil

Client Sample ID: MW-16-14

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Extractable Petroleum Hydrocarbons by NWEPH

Batch ID: 8759

Analyst: EC

Aliphatic Hydrocarbon (C8-C10)	17.2	5.94		mg/Kg-dry	1	10/4/2014 7:25:00 PM
Aliphatic Hydrocarbon (C10-C12)	11.3	5.94		mg/Kg-dry	1	10/4/2014 7:25:00 PM
Aliphatic Hydrocarbon (C12-C16)	ND	5.94		mg/Kg-dry	1	10/4/2014 7:25:00 PM
Aliphatic Hydrocarbon (C16-C21)	ND	5.94		mg/Kg-dry	1	10/4/2014 7:25:00 PM
Aliphatic Hydrocarbon (C21-C34)	10.9	5.94		mg/Kg-dry	1	10/4/2014 7:25:00 PM
Aromatic Hydrocarbon (C8-C10)	6.24	5.94		mg/Kg-dry	1	10/5/2014 7:45:00 AM
Aromatic Hydrocarbon (C10-C12)	ND	5.94		mg/Kg-dry	1	10/5/2014 7:45:00 AM
Aromatic Hydrocarbon (C12-C16)	6.90	5.94		mg/Kg-dry	1	10/5/2014 7:45:00 AM
Aromatic Hydrocarbon (C16-C21)	12.8	5.94		mg/Kg-dry	1	10/5/2014 7:45:00 AM
Aromatic Hydrocarbon (C21-C34)	22.0	5.94	B	mg/Kg-dry	1	10/5/2014 7:45:00 AM
Surr: 1-Chlorooctadecane	101	65-140		%REC	1	10/4/2014 7:25:00 PM
Surr: o-Terphenyl	97.9	65-140		%REC	1	10/5/2014 7:45:00 AM

Volatile Petroleum Hydrocarbons by NWVPH

Batch ID: 8761

Analyst: EM

Aliphatic Hydrocarbon (C5-C6)	17.7	1.74		mg/Kg-dry	1	9/25/2014 8:48:00 AM
Aliphatic Hydrocarbon (C6-C8)	46.1	17.4	D	mg/Kg-dry	10	9/29/2014 2:58:00 PM
Aliphatic Hydrocarbon (C8-C10)	18.2	1.74		mg/Kg-dry	1	9/25/2014 8:48:00 AM
Aliphatic Hydrocarbon (C10-C12)	21.6	1.74		mg/Kg-dry	1	9/25/2014 8:48:00 AM
Aromatic Hydrocarbon (C8-C10)	23.6	1.74		mg/Kg-dry	1	9/25/2014 8:48:00 AM
Aromatic Hydrocarbon (C10-C12)	57.2	17.4	D	mg/Kg-dry	10	9/29/2014 2:58:00 PM
Aromatic Hydrocarbon (C12-C13)	15.3	1.74		mg/Kg-dry	1	9/25/2014 8:48:00 AM
Benzene	ND	0.436		mg/Kg-dry	1	9/25/2014 8:48:00 AM
Toluene	0.915	0.436		mg/Kg-dry	1	9/25/2014 8:48:00 AM
Ethylbenzene	ND	0.436		mg/Kg-dry	1	9/25/2014 8:48:00 AM
m,p-Xylene	ND	0.436		mg/Kg-dry	1	9/25/2014 8:48:00 AM
o-Xylene	ND	0.436		mg/Kg-dry	1	9/25/2014 8:48:00 AM
Naphthalene	ND	0.436		mg/Kg-dry	1	9/25/2014 8:48:00 AM
Methyl tert-butyl ether (MTBE)	0.560	0.436		mg/Kg-dry	1	9/25/2014 8:48:00 AM
Surr: 1,4-Difluorobenzene	82.1	65-140		%REC	1	9/25/2014 8:48:00 AM
Surr: Bromofluorobenzene	108	65-140		%REC	1	9/25/2014 8:48:00 AM

Total Metals by EPA Method 6020

Batch ID: 8775

Analyst: TN

Iron	37,400	5.39		mg/Kg-dry	1	9/22/2014 3:14:11 PM
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Qualifiers: B Analyte detected in the associated Method Blank
E Value above quantitation range
J Analyte detected below quantitation limits
RL Reporting Limit

D Dilution was required
H Holding times for preparation or analysis exceeded
ND Not detected at the Reporting Limit
S Spike recovery outside accepted recovery limits



Analytical Report

WO#: 1409178

Date Reported: 10/6/2014

Client: Friedman & Bruya

Collection Date: 9/15/2014 1:00:00 PM

Project: 409267

Lab ID: 1409178-003

Matrix: Soil

Client Sample ID: MW-16-14

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Sample Moisture (Percent Moisture)

Batch ID: R16889 Analyst: KZ

Percent Moisture	18.4			wt%	1	9/22/2014 9:11:43 AM
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Total Organic Carbon by EPA Method 9060

Batch ID: 8819 Analyst: KT

Total Organic Carbon	ND	0.0500		%-dry	1	9/22/2014 12:43:51 PM
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Qualifiers:

B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
RL	Reporting Limit

D	Dilution was required
H	Holding times for preparation or analysis exceeded
ND	Not detected at the Reporting Limit
S	Spike recovery outside accepted recovery limits



Analytical Report

WO#: 1409178

Date Reported: 10/6/2014

Client: Friedman & Bruya

Collection Date: 9/15/2014 1:10:00 PM

Project: 409267

Lab ID: 1409178-004

Matrix: Soil

Client Sample ID: MW-16-17.5

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Total Metals by EPA Method 6020

Batch ID: 8775

Analyst: TN

Iron	27,600	4.82		mg/Kg-dry	1	9/22/2014 3:17:37 PM
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Sample Moisture (Percent Moisture)

Batch ID: R16889

Analyst: KZ

Percent Moisture	16.1			wt%	1	9/22/2014 9:11:43 AM
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Qualifiers: B Analyte detected in the associated Method Blank
E Value above quantitation range
J Analyte detected below quantitation limits
RL Reporting Limit

D Dilution was required
H Holding times for preparation or analysis exceeded
ND Not detected at the Reporting Limit
S Spike recovery outside accepted recovery limits



Date: 10/6/2014

Work Order: 1409178
CLIENT: Friedman & Bruya
Project: 409267

QC SUMMARY REPORT
Total Organic Carbon by EPA Method 9060

Sample ID: MB-8819		SampType: MBLK		Units: %-dry		Prep Date: 9/22/2014			RunNo: 16924		
Client ID: MBLKS		Batch ID: 8819					Analysis Date: 9/22/2014			SeqNo: 339802	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Total Organic Carbon	ND	0.0500									
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Sample ID: LCS-8819		SampType: LCS		Units: %-dry		Prep Date: 9/22/2014			RunNo: 16924		
Client ID: LCSS		Batch ID: 8819					Analysis Date: 9/22/2014			SeqNo: 339803	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Total Organic Carbon	0.645	0.0500	0.6510	0	99.1	41.1	157				
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Sample ID: 1409178-001ADUP		SampType: DUP		Units: %-dry		Prep Date: 9/22/2014			RunNo: 16924		
Client ID: MW-15-12.5		Batch ID: 8819					Analysis Date: 9/22/2014			SeqNo: 339810	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Total Organic Carbon	ND	0.0500						0		30	
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Sample ID: 1409178-001AMS		SampType: MS		Units: %-dry		Prep Date: 9/22/2014			RunNo: 16924		
Client ID: MW-15-12.5		Batch ID: 8819					Analysis Date: 9/22/2014			SeqNo: 339811	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Total Organic Carbon	0.859	0.0500	1.000	0	85.9	50.2	118				
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Sample ID: 1409178-001AMSD	SampType: MSD	Units: %-dry				Prep Date: 9/22/2014				RunNo: 16924		
Client ID: MW-15-12.5	Batch ID: 8819					Analysis Date: 9/22/2014				SeqNo: 339812		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	

Total Organic Carbon	0.841	0.0500	1.000	0	84.1	50.2	118	0.8586	2.04	20	
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Qualifiers:	B	Analyte detected in the associated Method Blank	D	Dilution was required	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	RL	Reporting Limit	S	Spike recovery outside accepted recovery limits



Date: 10/6/2014

Work Order: 1409178
CLIENT: Friedman & Bruya
Project: 409267

QC SUMMARY REPORT

Total Metals by EPA Method 6020

Sample ID: MB-8775		SampType: MBLK		Units: mg/Kg		Prep Date: 9/19/2014			RunNo: 16909		
Client ID: MBLKS		Batch ID: 8775					Analysis Date: 9/22/2014			SeqNo: 339544	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Iron	ND	5.50									
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Sample ID: LCS-8775		SampType: LCS		Units: mg/Kg		Prep Date: 9/19/2014			RunNo: 16909		
Client ID: LCSS		Batch ID: 8775					Analysis Date: 9/22/2014			SeqNo: 339545	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Iron	5,260	5.50	5,180	0	102	10.2	220.1				
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Sample ID: 1409178-001ADUP		SampType: DUP		Units: mg/Kg-dry		Prep Date: 9/19/2014			RunNo: 16909			
Client ID: MW-15-12.5		Batch ID: 8775					Analysis Date: 9/22/2014			SeqNo: 339547		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	

Iron	34,400	4.99						35,270	2.54	30	
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Sample ID: 1409178-001AMS		SampType: MS		Units: mg/Kg-dry		Prep Date: 9/19/2014			RunNo: 16909			
Client ID: MW-15-12.5		Batch ID: 8775					Analysis Date: 9/22/2014			SeqNo: 339549		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	

Iron	32,700	4.99	453.6	35,270	-565	75	125				S
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NOTES:

S - Analyte concentration was too high for accurate spike recovery.

Sample ID: 1409178-001AMSD		SampType: MSD		Units: mg/Kg-dry		Prep Date: 9/19/2014			RunNo: 16909		
Client ID: MW-15-12.5		Batch ID: 8775					Analysis Date: 9/22/2014			SeqNo: 339550	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Iron	32,900	4.95	449.9	35,270	-530	75	125	32,700	0.556	30	S
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Qualifiers:

B	Analyte detected in the associated Method Blank	D	Dilution was required	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	RL	Reporting Limit	S	Spike recovery outside accepted recovery limits



Date: 10/6/2014

Work Order: 1409178
CLIENT: Friedman & Bruya
Project: 409267

QC SUMMARY REPORT

Total Metals by EPA Method 6020

Sample ID: 1409178-001AMSD	SampType: MSD	Units: mg/Kg-dry				Prep Date: 9/19/2014			RunNo: 16909		
Client ID: MW-15-12.5	Batch ID: 8775	Analysis Date: 9/22/2014						SeqNo: 339550			
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

NOTES:

S - Analyte concentration was too high for accurate spike recovery.

Sample ID: 1409178-001APDS		SampType: PDS		Units: mg/Kg-dry		Prep Date: 9/19/2014			RunNo: 16909			
Client ID: MW-15-12.5		Batch ID: 8775					Analysis Date: 9/22/2014			SeqNo: 339551		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	

Iron	76,800	5.03	500	77,100	-36.8	75	125				S
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NOTES:

S - Analyte concentration was too high for accurate spike recovery(ies).

Qualifiers:	B	Analyte detected in the associated Method Blank	D	Dilution was required	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	RL	Reporting Limit	S	Spike recovery outside accepted recovery limits



Date: 10/6/2014

Work Order: 1409178
CLIENT: Friedman & Bruya
Project: 409267

QC SUMMARY REPORT

Extractable Petroleum Hydrocarbons by NWEPH

Sample ID: 1409176-001ADUP	SampType: DUP	Units: mg/Kg-dry				Prep Date: 9/17/2014			RunNo: 17230		
Client ID: BATCH	Batch ID: 8759	Analysis Date: 10/4/2014							SeqNo: 344956		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aliphatic Hydrocarbon (C8-C10)	ND	5.51						0		30	
Aliphatic Hydrocarbon (C10-C12)	ND	5.51						0		30	
Aliphatic Hydrocarbon (C12-C16)	ND	5.51						0		30	
Aliphatic Hydrocarbon (C16-C21)	7.79	5.51						8.584	9.72	30	
Aliphatic Hydrocarbon (C21-C34)	46.8	5.51						42.99	8.49	30	
Surr: 1-Chlorooctadecane	4.38		4.407		99.3	65	140		0		

Sample ID: LCS-8759	SampType: LCS	Units: mg/Kg				Prep Date: 9/17/2014			RunNo: 17230		
Client ID: LCSS	Batch ID: 8759	Analysis Date: 10/4/2014						SeqNo: 344959			
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aliphatic Hydrocarbon (C8-C10)	19.1	5.00	20.00	0	95.4	70	130				
Aliphatic Hydrocarbon (C10-C12)	9.85	5.00	10.00	0	98.5	70	130				
Aliphatic Hydrocarbon (C12-C16)	9.44	5.00	10.00	0	94.4	70	130				
Aliphatic Hydrocarbon (C16-C21)	11.3	5.00	10.00	0	113	70	130				
Aliphatic Hydrocarbon (C21-C34)	10.4	5.00	10.00	0	104	70	130				
Surr: 1-Chlorooctadecane	3.71		4.000		92.7	65	140				

Sample ID: MB-8759	SampType: MBLK	Units: mg/Kg				Prep Date: 9/17/2014			RunNo: 17230		
Client ID: MBLKS	Batch ID: 8759	Analysis Date: 10/4/2014						SeqNo: 344960			
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aliphatic Hydrocarbon (C8-C10)	ND	5.00									
Aliphatic Hydrocarbon (C10-C12)	ND	5.00									
Aliphatic Hydrocarbon (C12-C16)	ND	5.00									
Aliphatic Hydrocarbon (C16-C21)	ND	5.00									
Aliphatic Hydrocarbon (C21-C34)	ND	5.00									
Surr: 1-Chlorooctadecane	4.03		4.000		101	65	140				

Qualifiers:	B	Analyte detected in the associated Method Blank	D	Dilution was required	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	RL	Reporting Limit	S	Spike recovery outside accepted recovery limits



Date: 10/6/2014

Work Order: 1409178
CLIENT: Friedman & Bruya
Project: 409267

QC SUMMARY REPORT
Extractable Petroleum Hydrocarbons by NWEPH

Sample ID: MB-8759	SampType: MBLK	Units: mg/Kg			Prep Date: 9/17/2014			RunNo: 17230			
Client ID: MBLKS	Batch ID: 8759				Analysis Date: 10/4/2014			SeqNo: 344960			
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Sample ID: 1409176-001ADUP	SampType: DUP	Units: mg/Kg-dry				Prep Date: 9/17/2014			RunNo: 17230		
Client ID: BATCH	Batch ID: 8759	Analysis Date: 10/5/2014							SeqNo: 344973		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aromatic Hydrocarbon (C8-C10)	ND	5.51						0		30	
Aromatic Hydrocarbon (C10-C12)	ND	5.51						0		30	
Aromatic Hydrocarbon (C12-C16)	ND	5.51						0		30	
Aromatic Hydrocarbon (C16-C21)	ND	5.51						0		30	
Aromatic Hydrocarbon (C21-C34)	82.0	5.51						82.01	0	30	B
Surr: o-Terphenyl	4.06		4.407		92.0	65	140		0		

Sample ID: LCS-8759	SampType: LCS	Units: mg/Kg				Prep Date: 9/17/2014			RunNo: 17230		
Client ID: LCSS	Batch ID: 8759	Analysis Date: 10/5/2014							SeqNo: 344987		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aromatic Hydrocarbon (C8-C10)	9.17	5.00	10.00	0	91.7	70	130				
Aromatic Hydrocarbon (C10-C12)	10.1	5.00	10.00	0	101	70	130				
Aromatic Hydrocarbon (C12-C16)	10.4	5.00	10.00	0	104	70	130				
Aromatic Hydrocarbon (C16-C21)	10.6	5.00	10.00	0	106	70	130				
Aromatic Hydrocarbon (C21-C34)	10.3	5.00	10.00	0	103	70	130				B
Surr: o-Terphenyl	3.94		4.000		98.6	65	140				

Qualifiers:

B	Analyte detected in the associated Method Blank	D	Dilution was required	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	RL	Reporting Limit	S	Spike recovery outside accepted recovery limits

Work Order: 1409178
CLIENT: Friedman & Bruya
Project: 409267

QC SUMMARY REPORT

Extractable Petroleum Hydrocarbons by NWEPH

Sample ID: MB-8759		SampType: MBLK		Units: mg/Kg		Prep Date: 9/17/2014			RunNo: 17230		
Client ID: MBLKS		Batch ID: 8759					Analysis Date: 10/5/2014			SeqNo: 344988	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aromatic Hydrocarbon (C8-C10)	ND	5.00									
Aromatic Hydrocarbon (C10-C12)	ND	5.00									
Aromatic Hydrocarbon (C12-C16)	ND	5.00									
Aromatic Hydrocarbon (C16-C21)	ND	5.00									
Aromatic Hydrocarbon (C21-C34)	17.3	5.00									
Surr: o-Terphenyl	3.71		4.000		92.8	65	140				

Qualifiers:	B	Analyte detected in the associated Method Blank	D	Dilution was required	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	RL	Reporting Limit	S	Spike recovery outside accepted recovery limits



Date: 10/6/2014

Work Order: 1409178
CLIENT: Friedman & Bruya
Project: 409267

QC SUMMARY REPORT
Volatile Petroleum Hydrocarbons by NWVPH

Sample ID: 1409178-001BDUP	SampType: DUP	Units: mg/Kg-dry				Prep Date: 9/17/2014			RunNo: 17100		
Client ID: MW-15-12.5	Batch ID: 8761					Analysis Date: 9/25/2014			SeqNo: 342530		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aliphatic Hydrocarbon (C5-C6)	ND	1.54		0	0			0		25	
Aliphatic Hydrocarbon (C6-C8)	17.1	1.54		0	0			15.92	7.05	25	
Aliphatic Hydrocarbon (C8-C10)	22.1	1.54		0	0			22.92	3.77	25	E
Aliphatic Hydrocarbon (C10-C12)	19.5	1.54		0	0			23.99	20.8	25	
Aromatic Hydrocarbon (C8-C10)	22.9	1.54		0	0			22.36	2.43	25	
Aromatic Hydrocarbon (C10-C12)	57.9	1.54		0	0			44.86	25.3	25	RE
Aromatic Hydrocarbon (C12-C13)	19.1	1.54		0	0			19.78	3.41	25	
Benzene	ND	0.386		0	0			0		25	
Toluene	ND	0.386		0	0			0		25	
Ethylbenzene	ND	0.386		0	0			0		25	
m,p-Xylene	ND	0.386		0	0			0		25	
o-Xylene	ND	0.386		0	0			0		25	
Naphthalene	ND	0.386		0	0			0		25	
Methyl tert-butyl ether (MTBE)	ND	0.386		0	0			0		25	
Surr: 1,4-Difluorobenzene	2.04		1.929		106	65	140		0		
Surr: Bromofluorobenzene	2.27		1.929		118	65	140		0		

NOTES:

E - Estimated value. The amount exceeds the linear working range of the instrument.

R - High RPD. The method is in control as indicated by the laboratory control sample (LCS).

Sample ID: 1409179-001BMS	SampType: MS	Units: mg/Kg-dry				Prep Date: 9/17/2014			RunNo: 17100		
Client ID: BATCH	Batch ID: 8761					Analysis Date: 9/25/2014			SeqNo: 342534		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aliphatic Hydrocarbon (C5-C6)	23.3	1.78	26.77	0	87.2	70	130				
Aliphatic Hydrocarbon (C6-C8)	6.04	1.78	8.922	0	67.7	70	130				S
Aliphatic Hydrocarbon (C8-C10)	7.48	1.78	8.922	0	83.9	70	130				
Aliphatic Hydrocarbon (C10-C12)	9.37	1.78	8.922	0	105	70	130				
Aromatic Hydrocarbon (C8-C10)	25.9	1.78	35.69	0	72.5	70	130				

Qualifiers:

B	Analyte detected in the associated Method Blank	D	Dilution was required	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	RL	Reporting Limit	S	Spike recovery outside accepted recovery limits

Work Order: 1409178
CLIENT: Friedman & Bruya
Project: 409267

QC SUMMARY REPORT

Volatile Petroleum Hydrocarbons by NWVPH

Sample ID: 1409179-001BMS	SampType: MS	Units: mg/Kg-dry				Prep Date: 9/17/2014		RunNo: 17100			
Client ID: BATCH	Batch ID: 8761					Analysis Date: 9/25/2014		SeqNo: 342534			
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aromatic Hydrocarbon (C10-C12)	7.38	1.78	8.922	0	82.7	70	130				
Aromatic Hydrocarbon (C12-C13)	8.14	1.78	8.922	0	91.2	70	130				
Benzene	7.11	0.446	8.922	0	79.7	70	130				
Toluene	6.94	0.446	8.922	0	77.8	70	130				
Ethylbenzene	6.52	0.446	8.922	0	73.0	70	130				
m,p-Xylene	13.5	0.446	17.84	0	75.8	70	130				
o-Xylene	6.68	0.446	8.922	0	74.9	70	130				
Naphthalene	6.00	0.446	8.922	0	67.2	70	130				S
Methyl tert-butyl ether (MTBE)	7.87	0.446	8.922	0	88.2	70	130				
Surr: 1,4-Difluorobenzene	2.15		2.230		96.5	65	140				
Surr: Bromofluorobenzene	2.25		2.230		101	65	140				

NOTES:

S - Outlying QC recoveries were observed. The method is in control as indicated by the LCS.

Sample ID: LCS-8761	SampType: LCS	Units: mg/Kg				Prep Date: 9/17/2014			RunNo: 17100		
Client ID: LCSS	Batch ID: 8761					Analysis Date: 9/25/2014			SeqNo: 342542		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aliphatic Hydrocarbon (C5-C6)	29.8	2.00	30.00	0	99.3	70	130				
Aliphatic Hydrocarbon (C6-C8)	7.81	2.00	10.00	0	78.1	70	130				
Aliphatic Hydrocarbon (C8-C10)	10.2	2.00	10.00	0	102	70	130				
Aliphatic Hydrocarbon (C10-C12)	8.46	2.00	10.00	0	84.6	70	130				
Aromatic Hydrocarbon (C8-C10)	44.2	2.00	40.00	0	110	70	130				
Aromatic Hydrocarbon (C10-C12)	8.28	2.00	10.00	0	82.8	70	130				
Aromatic Hydrocarbon (C12-C13)	9.27	2.00	10.00	0	92.7	70	130				
Benzene	9.52	0.500	10.00	0	95.2	70	130				
Toluene	10.1	0.500	10.00	0	101	70	130				
Ethylbenzene	10.1	0.500	10.00	0	101	70	130				
m,p-Xylene	20.1	0.500	20.00	0	101	70	130				

Qualifiers:	B	Analyte detected in the associated Method Blank	D	Dilution was required	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	RL	Reporting Limit	S	Spike recovery outside accepted recovery limits



Date: 10/6/2014

Work Order: 1409178
CLIENT: Friedman & Bruya
Project: 409267

QC SUMMARY REPORT
Volatile Petroleum Hydrocarbons by NWVPH

Sample ID: LCS-8761	SampType: LCS	Units: mg/Kg				Prep Date: 9/17/2014			RunNo: 17100		
Client ID: LCSS	Batch ID: 8761					Analysis Date: 9/25/2014			SeqNo: 342542		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
o-Xylene	10.3	0.500	10.00	0	103	70	130				
Naphthalene	8.98	0.500	10.00	0	89.8	70	130				
Methyl tert-butyl ether (MTBE)	9.75	0.500	10.00	0	97.5	70	130				
Surr: 1,4-Difluorobenzene	2.53		2.500		101	65	140				
Surr: Bromofluorobenzene	2.69		2.500		107	65	140				

Sample ID: MB-8761	SampType: MBLK	Units: mg/Kg				Prep Date: 9/17/2014			RunNo: 17100		
Client ID: MBLKS	Batch ID: 8761					Analysis Date: 9/25/2014			SeqNo: 342543		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aliphatic Hydrocarbon (C5-C6)	ND	2.00		0	0						
Aliphatic Hydrocarbon (C6-C8)	ND	2.00		0	0						
Aliphatic Hydrocarbon (C8-C10)	ND	2.00		0	0						
Aliphatic Hydrocarbon (C10-C12)	ND	2.00		0	0						
Aromatic Hydrocarbon (C8-C10)	ND	2.00		0	0						
Aromatic Hydrocarbon (C10-C12)	ND	2.00		0	0						
Aromatic Hydrocarbon (C12-C13)	ND	2.00		0	0						
Benzene	ND	0.500		0	0						
Toluene	ND	0.500		0	0						
Ethylbenzene	ND	0.500		0	0						
m,p-Xylene	ND	0.500		0	0						
o-Xylene	ND	0.500		0	0						
Naphthalene	ND	0.500		0	0						
Methyl tert-butyl ether (MTBE)	ND	0.500		0	0						
Surr: 1,4-Difluorobenzene	2.45		2.500		97.9	65	140				
Surr: Bromofluorobenzene	2.45		2.500		98.1	65	140				

Qualifiers:

B	Analyte detected in the associated Method Blank	D	Dilution was required	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	RL	Reporting Limit	S	Spike recovery outside accepted recovery limits

Sample Log-In Check List

Client Name: **FB**
 Logged by: **Erica Silva**

Work Order Number: **1409178**
 Date Received: **9/17/2014 3:13:00 PM**

Chain of Custody

1. Is Chain of Custody complete? Yes ☒ No ☐ Not Present ☐
 2. How was the sample delivered? Courier

Log In

3. Coolers are present? Yes ☐ No ☒ NA ☐

Samples received at appropriate temperature

4. Shipping container/cooler in good condition? Yes ☒ No ☐
 5. Custody seals intact on shipping container/cooler? Yes ☐ No ☐ Not Required ☒
 6. Was an attempt made to cool the samples? Yes ☒ No ☐ NA ☐
 7. Were all coolers received at a temperature of >0°C to 10.0°C? Yes ☒ No ☐ NA ☐
 8. Sample(s) in proper container(s)? Yes ☒ No ☐
 9. Sufficient sample volume for indicated test(s)? Yes ☒ No ☐
 10. Are samples properly preserved? Yes ☒ No ☐
 11. Was preservative added to bottles? Yes ☐ No ☒ NA ☐
 12. Is the headspace in the VOA vials? Yes ☐ No ☐ NA ☒
 13. Did all samples containers arrive in good condition(unbroken)? Yes ☒ No ☐
 14. Does paperwork match bottle labels? Yes ☒ No ☐
 15. Are matrices correctly identified on Chain of Custody? Yes ☒ No ☐
 16. Is it clear what analyses were requested? Yes ☒ No ☐
 17. Were all holding times able to be met? Yes ☒ No ☐

Special Handling (if applicable)

18. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☒

Person Notified: Date:
 By Whom: Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person
 Regarding:
 Client Instructions:

19. Additional remarks:

Item Information

Item #	Temp °C	Condition
Sample	8.2	Good

CHAIN SUBCONTRACT SAMPLE CHAIN OF CUSTODY

19071110

Send Report To Michael Erdahl
 Company Friedman and Bruya, Inc.
 Address 3012 16th Ave W
 City, State, ZIP Seattle, WA 98119
 Phone # (206) 285-8282 Fax # (206) 283-5044

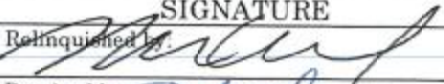

SUBCONTRACTOR <u>Fremont</u>	
PROJECT NAME/NO. <u>409267</u>	PO # <u>D-208</u>
REMARKS <u>Please Email Results</u>	

Page # 1 of 1

TURNAROUND TIME	
<input checked="" type="checkbox"/> Standard (2 Weeks)	
<input type="checkbox"/> RUSH	
Rush charges authorized by: _____	
SAMPLE DISPOSAL	
<input type="checkbox"/> Dispose after 30 days	
<input type="checkbox"/> Return samples	
<input type="checkbox"/> Will call with instructions	

Sample ID	Lab ID	Date Sampled	Time Sampled	Matrix	# of jars	Dioxins and Furans by 8290	EPH	VPH	Nitrate	Sulfate	Alkalinity	TaC	Iron		Notes
MW-15-12.5		9/15/14	1045	Soil	2		X	X				X	X		
MW-15-16			1100		1								X		
MW-16-14			1300		2		X	X				X	X		
MW-16-17.5			1310		1								X		

Friedman & Bruya, Inc.
 3012 16th Avenue West
 Seattle, WA 98119-2029
 Ph. (206) 285-8282
 Fax (206) 283-5044

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by: 	Michael Erdahl	Friedman & Bruya	9/17/14	9:45AM
Received by: 	Erica Silva	FAI	9/17/14	15:13
Relinquished by:				
Received by:				



3600 Fremont Ave. N.
Seattle, WA 98103
T: (206) 352-3790
F: (206) 352-7178
info@fremontanalytical.com

Friedman & Bruya
Michael Erdahl
3012 16th Ave. W.
Seattle, WA 98119

RE: 409282
Lab ID: 1409179

October 06, 2014

Attention Michael Erdahl:

Fremont Analytical, Inc. received 9 sample(s) on 9/17/2014 for the analyses presented in the following report.

Extractable Petroleum Hydrocarbons by NWEPH
Sample Moisture (Percent Moisture)
Total Metals by EPA Method 6020
Total Organic Carbon by EPA Method 9060
Volatile Petroleum Hydrocarbons by NWVPH

This report consists of the following:

- Case Narrative
- Analytical Results
- Applicable Quality Control Summary Reports
- Chain of Custody

All analyses were performed consistent with the Quality Assurance program of Fremont Analytical, Inc. Please contact the laboratory if you should have any questions about the results.

Thank you for using Fremont Analytical.

Sincerely,

Mike Ridgeway
President

CLIENT: Friedman & Bruya
Project: 409282
Lab Order: 1409179

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Date/Time Collected	Date/Time Received
1409179-001	MW-14-12	09/15/2014 2:40 PM	09/17/2014 3:13 PM
1409179-002	MW-14-18	09/15/2014 2:50 PM	09/17/2014 3:13 PM
1409179-003	MW-13-14	09/16/2014 8:10 AM	09/17/2014 3:13 PM
1409179-004	B-1-12	09/16/2014 11:40 AM	09/17/2014 3:13 PM
1409179-005	B-1-18	09/16/2014 11:50 AM	09/17/2014 3:13 PM
1409179-006	B-2-9.5	09/16/2014 1:20 PM	09/17/2014 3:13 PM
1409179-007	B-2-13	09/16/2014 1:40 PM	09/17/2014 3:13 PM
1409179-008	B-3-14	09/16/2014 2:30 PM	09/17/2014 3:13 PM
1409179-009	B-3-11.5	09/16/2014 2:20 PM	09/17/2014 3:13 PM

CLIENT: Friedman & Bruya
Project: 409282

I. SAMPLE RECEIPT:

Samples receipt information is recorded on the attached Sample Receipt Checklist.

II. GENERAL REPORTING COMMENTS:

Results are reported on a wet weight basis unless dry-weight correction is denoted in the units field on the analytical report ("mg/kg-dry" or "ug/kg-dry").

Matrix Spike (MS) and MS Duplicate (MSD) samples are tested from an analytical batch of "like" matrix to check for possible matrix effect. The MS and MSD will provide site specific matrix data only for those samples which are spiked by the laboratory. The sample chosen for spike purposes may or may not have been a sample submitted in this sample delivery group. The validity of the analytical procedures for which data is reported in this analytical report is determined by the Laboratory Control Sample (LCS) and the Method Blank (MB). The LCS and the MB are processed with the samples and the MS/MSD to ensure method criteria are achieved throughout the entire analytical process.

III. ANALYSES AND EXCEPTIONS:

Exceptions associated with this report will be footnoted in the analytical results page(s) or the quality control summary page(s) and/or noted below.



Analytical Report

WO#: 1409179

Date Reported: 10/6/2014

Client: Friedman & Bruya

Collection Date: 9/15/2014 2:40:00 PM

Project: 409282

Lab ID: 1409179-001

Matrix: Soil

Client Sample ID: MW-14-12

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Extractable Petroleum Hydrocarbons by NWEPH

Batch ID: 8759

Analyst: EC

Aliphatic Hydrocarbon (C8-C10)	ND	5.83		mg/Kg-dry	1	10/4/2014 8:08:00 PM
Aliphatic Hydrocarbon (C10-C12)	ND	5.83		mg/Kg-dry	1	10/4/2014 8:08:00 PM
Aliphatic Hydrocarbon (C12-C16)	ND	5.83		mg/Kg-dry	1	10/4/2014 8:08:00 PM
Aliphatic Hydrocarbon (C16-C21)	10.9	5.83		mg/Kg-dry	1	10/4/2014 8:08:00 PM
Aliphatic Hydrocarbon (C21-C34)	10.3	5.83		mg/Kg-dry	1	10/4/2014 8:08:00 PM
Aromatic Hydrocarbon (C8-C10)	ND	5.83		mg/Kg-dry	1	10/5/2014 8:29:00 AM
Aromatic Hydrocarbon (C10-C12)	ND	5.83		mg/Kg-dry	1	10/5/2014 8:29:00 AM
Aromatic Hydrocarbon (C12-C16)	ND	5.83		mg/Kg-dry	1	10/5/2014 8:29:00 AM
Aromatic Hydrocarbon (C16-C21)	14.4	5.83		mg/Kg-dry	1	10/5/2014 8:29:00 AM
Aromatic Hydrocarbon (C21-C34)	17.4	5.83	B	mg/Kg-dry	1	10/5/2014 8:29:00 AM
Surr: 1-Chlorooctadecane	95.8	65-140		%REC	1	10/4/2014 8:08:00 PM
Surr: o-Terphenyl	91.5	65-140		%REC	1	10/5/2014 8:29:00 AM

Volatile Petroleum Hydrocarbons by NWVPH

Batch ID: 8761

Analyst: EM

Aliphatic Hydrocarbon (C5-C6)	ND	1.78		mg/Kg-dry	1	9/25/2014 11:02:00 AM
Aliphatic Hydrocarbon (C6-C8)	ND	1.78		mg/Kg-dry	1	9/25/2014 11:02:00 AM
Aliphatic Hydrocarbon (C8-C10)	ND	1.78		mg/Kg-dry	1	9/25/2014 11:02:00 AM
Aliphatic Hydrocarbon (C10-C12)	ND	1.78		mg/Kg-dry	1	9/25/2014 11:02:00 AM
Aromatic Hydrocarbon (C8-C10)	ND	1.78		mg/Kg-dry	1	9/25/2014 11:02:00 AM
Aromatic Hydrocarbon (C10-C12)	ND	1.78		mg/Kg-dry	1	9/25/2014 11:02:00 AM
Aromatic Hydrocarbon (C12-C13)	ND	1.78		mg/Kg-dry	1	9/25/2014 11:02:00 AM
Benzene	ND	0.446		mg/Kg-dry	1	9/25/2014 11:02:00 AM
Toluene	ND	0.446		mg/Kg-dry	1	9/25/2014 11:02:00 AM
Ethylbenzene	ND	0.446		mg/Kg-dry	1	9/25/2014 11:02:00 AM
m,p-Xylene	ND	0.446		mg/Kg-dry	1	9/25/2014 11:02:00 AM
o-Xylene	ND	0.446		mg/Kg-dry	1	9/25/2014 11:02:00 AM
Naphthalene	ND	0.446		mg/Kg-dry	1	9/25/2014 11:02:00 AM
Methyl tert-butyl ether (MTBE)	ND	0.446		mg/Kg-dry	1	9/25/2014 11:02:00 AM
Surr: 1,4-Difluorobenzene	98.1	65-140		%REC	1	9/25/2014 11:02:00 AM
Surr: Bromofluorobenzene	103	65-140		%REC	1	9/25/2014 11:02:00 AM

Total Metals by EPA Method 6020

Batch ID: 8775

Analyst: TN

Iron	32,100	5.19		mg/Kg-dry	1	9/22/2014 3:21:02 PM
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Qualifiers: B Analyte detected in the associated Method Blank
E Value above quantitation range
J Analyte detected below quantitation limits
RL Reporting Limit

D Dilution was required
H Holding times for preparation or analysis exceeded
ND Not detected at the Reporting Limit
S Spike recovery outside accepted recovery limits



Analytical Report

WO#: 1409179

Date Reported: 10/6/2014

Client: Friedman & Bruya

Collection Date: 9/15/2014 2:40:00 PM

Project: 409282

Lab ID: 1409179-001

Matrix: Soil

Client Sample ID: MW-14-12

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Sample Moisture (Percent Moisture)

Batch ID: R16889 Analyst: KZ

Percent Moisture	19.7			wt%	1	9/22/2014 9:11:43 AM
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Total Organic Carbon by EPA Method 9060

Batch ID: 8819 Analyst: KT

Total Organic Carbon	ND	0.0500		%-dry	1	9/22/2014 12:43:51 PM
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Qualifiers:

B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
RL	Reporting Limit

D	Dilution was required
H	Holding times for preparation or analysis exceeded
ND	Not detected at the Reporting Limit
S	Spike recovery outside accepted recovery limits



Analytical Report

WO#: 1409179

Date Reported: 10/6/2014

Client: Friedman & Bruya

Collection Date: 9/15/2014 2:50:00 PM

Project: 409282

Lab ID: 1409179-002

Matrix: Soil

Client Sample ID: MW-14-18

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Total Metals by EPA Method 6020

Batch ID: 8775

Analyst: TN

Iron	32,600	4.95		mg/Kg-dry	1	9/22/2014 3:24:28 PM
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Sample Moisture (Percent Moisture)

Batch ID: R16889

Analyst: KZ

Percent Moisture	11.1			wt%	1	9/22/2014 9:11:43 AM
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Qualifiers:

B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
RL	Reporting Limit

D	Dilution was required
H	Holding times for preparation or analysis exceeded
ND	Not detected at the Reporting Limit
S	Spike recovery outside accepted recovery limits



Analytical Report

WO#: 1409179

Date Reported: 10/6/2014

Client: Friedman & Bruya

Collection Date: 9/16/2014 8:10:00 AM

Project: 409282

Lab ID: 1409179-003

Matrix: Soil

Client Sample ID: MW-13-14

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Extractable Petroleum Hydrocarbons by NWEPH

Batch ID: 8759

Analyst: EC

Aliphatic Hydrocarbon (C8-C10)	ND	5.44		mg/Kg-dry	1	10/4/2014 8:52:00 PM
Aliphatic Hydrocarbon (C10-C12)	ND	5.44		mg/Kg-dry	1	10/4/2014 8:52:00 PM
Aliphatic Hydrocarbon (C12-C16)	ND	5.44		mg/Kg-dry	1	10/4/2014 8:52:00 PM
Aliphatic Hydrocarbon (C16-C21)	ND	5.44		mg/Kg-dry	1	10/4/2014 8:52:00 PM
Aliphatic Hydrocarbon (C21-C34)	10.6	5.44		mg/Kg-dry	1	10/4/2014 8:52:00 PM
Aromatic Hydrocarbon (C8-C10)	ND	5.44		mg/Kg-dry	1	10/5/2014 9:13:00 AM
Aromatic Hydrocarbon (C10-C12)	ND	5.44		mg/Kg-dry	1	10/5/2014 9:13:00 AM
Aromatic Hydrocarbon (C12-C16)	ND	5.44		mg/Kg-dry	1	10/5/2014 9:13:00 AM
Aromatic Hydrocarbon (C16-C21)	10.9	5.44		mg/Kg-dry	1	10/5/2014 9:13:00 AM
Aromatic Hydrocarbon (C21-C34)	17.5	5.44	B	mg/Kg-dry	1	10/5/2014 9:13:00 AM
Surr: 1-Chlorooctadecane	97.3	65-140		%REC	1	10/4/2014 8:52:00 PM
Surr: o-Terphenyl	91.6	65-140		%REC	1	10/5/2014 9:13:00 AM

Volatile Petroleum Hydrocarbons by NWVPH

Batch ID: 8761

Analyst: EM

Aliphatic Hydrocarbon (C5-C6)	ND	1.63		mg/Kg-dry	1	9/25/2014 1:17:00 PM
Aliphatic Hydrocarbon (C6-C8)	ND	1.63		mg/Kg-dry	1	9/25/2014 1:17:00 PM
Aliphatic Hydrocarbon (C8-C10)	ND	1.63		mg/Kg-dry	1	9/25/2014 1:17:00 PM
Aliphatic Hydrocarbon (C10-C12)	ND	1.63		mg/Kg-dry	1	9/25/2014 1:17:00 PM
Aromatic Hydrocarbon (C8-C10)	ND	1.63		mg/Kg-dry	1	9/25/2014 1:17:00 PM
Aromatic Hydrocarbon (C10-C12)	ND	1.63		mg/Kg-dry	1	9/25/2014 1:17:00 PM
Aromatic Hydrocarbon (C12-C13)	ND	1.63		mg/Kg-dry	1	9/25/2014 1:17:00 PM
Benzene	ND	0.408		mg/Kg-dry	1	9/25/2014 1:17:00 PM
Toluene	ND	0.408		mg/Kg-dry	1	9/25/2014 1:17:00 PM
Ethylbenzene	ND	0.408		mg/Kg-dry	1	9/25/2014 1:17:00 PM
m,p-Xylene	ND	0.408		mg/Kg-dry	1	9/25/2014 1:17:00 PM
o-Xylene	ND	0.408		mg/Kg-dry	1	9/25/2014 1:17:00 PM
Naphthalene	ND	0.408		mg/Kg-dry	1	9/25/2014 1:17:00 PM
Methyl tert-butyl ether (MTBE)	ND	0.408		mg/Kg-dry	1	9/25/2014 1:17:00 PM
Surr: 1,4-Difluorobenzene	97.9	65-140		%REC	1	9/25/2014 1:17:00 PM
Surr: Bromofluorobenzene	102	65-140		%REC	1	9/25/2014 1:17:00 PM

Total Metals by EPA Method 6020

Batch ID: 8775

Analyst: TN

Iron	34,800	5.06		mg/Kg-dry	1	9/22/2014 3:27:54 PM
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Qualifiers: B Analyte detected in the associated Method Blank
E Value above quantitation range
J Analyte detected below quantitation limits
RL Reporting Limit

D Dilution was required
H Holding times for preparation or analysis exceeded
ND Not detected at the Reporting Limit
S Spike recovery outside accepted recovery limits



Analytical Report

WO#: 1409179

Date Reported: 10/6/2014

Client: Friedman & Bruya

Collection Date: 9/16/2014 8:10:00 AM

Project: 409282

Lab ID: 1409179-003

Matrix: Soil

Client Sample ID: MW-13-14

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Sample Moisture (Percent Moisture)

Batch ID: R16889 Analyst: KZ

Percent Moisture	16.3			wt%	1	9/22/2014 9:11:43 AM
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Total Organic Carbon by EPA Method 9060

Batch ID: 8819 Analyst: KT

Total Organic Carbon	ND	0.0500		%-dry	1	9/22/2014 12:43:51 PM
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Qualifiers:

B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
RL	Reporting Limit

D	Dilution was required
H	Holding times for preparation or analysis exceeded
ND	Not detected at the Reporting Limit
S	Spike recovery outside accepted recovery limits



Analytical Report

WO#: 1409179

Date Reported: 10/6/2014

Client: Friedman & Bruya

Collection Date: 9/16/2014 11:40:00 AM

Project: 409282

Lab ID: 1409179-004

Matrix: Soil

Client Sample ID: B-1-12

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Extractable Petroleum Hydrocarbons by NWEPH

Batch ID: 8759

Analyst: EC

Aliphatic Hydrocarbon (C8-C10)	ND	5.70		mg/Kg-dry	1	10/4/2014 9:35:00 PM
Aliphatic Hydrocarbon (C10-C12)	ND	5.70		mg/Kg-dry	1	10/4/2014 9:35:00 PM
Aliphatic Hydrocarbon (C12-C16)	ND	5.70		mg/Kg-dry	1	10/4/2014 9:35:00 PM
Aliphatic Hydrocarbon (C16-C21)	ND	5.70		mg/Kg-dry	1	10/4/2014 9:35:00 PM
Aliphatic Hydrocarbon (C21-C34)	10.2	5.70		mg/Kg-dry	1	10/4/2014 9:35:00 PM
Aromatic Hydrocarbon (C8-C10)	ND	5.70		mg/Kg-dry	1	10/5/2014 9:57:00 AM
Aromatic Hydrocarbon (C10-C12)	ND	5.70		mg/Kg-dry	1	10/5/2014 9:57:00 AM
Aromatic Hydrocarbon (C12-C16)	ND	5.70		mg/Kg-dry	1	10/5/2014 9:57:00 AM
Aromatic Hydrocarbon (C16-C21)	11.1	5.70		mg/Kg-dry	1	10/5/2014 9:57:00 AM
Aromatic Hydrocarbon (C21-C34)	23.2	5.70	B	mg/Kg-dry	1	10/5/2014 9:57:00 AM
Surr: 1-Chlorooctadecane	93.2	65-140		%REC	1	10/4/2014 9:35:00 PM
Surr: o-Terphenyl	90.6	65-140		%REC	1	10/5/2014 9:57:00 AM

Volatile Petroleum Hydrocarbons by NWVPH

Batch ID: 8761

Analyst: EM

Aliphatic Hydrocarbon (C5-C6)	ND	2.11		mg/Kg-dry	1	9/25/2014 1:51:00 PM
Aliphatic Hydrocarbon (C6-C8)	ND	2.11		mg/Kg-dry	1	9/25/2014 1:51:00 PM
Aliphatic Hydrocarbon (C8-C10)	ND	2.11		mg/Kg-dry	1	9/25/2014 1:51:00 PM
Aliphatic Hydrocarbon (C10-C12)	ND	2.11		mg/Kg-dry	1	9/25/2014 1:51:00 PM
Aromatic Hydrocarbon (C8-C10)	ND	2.11		mg/Kg-dry	1	9/25/2014 1:51:00 PM
Aromatic Hydrocarbon (C10-C12)	2.24	2.11		mg/Kg-dry	1	9/25/2014 1:51:00 PM
Aromatic Hydrocarbon (C12-C13)	ND	2.11		mg/Kg-dry	1	9/25/2014 1:51:00 PM
Benzene	ND	0.526		mg/Kg-dry	1	9/25/2014 1:51:00 PM
Toluene	ND	0.526		mg/Kg-dry	1	9/25/2014 1:51:00 PM
Ethylbenzene	ND	0.526		mg/Kg-dry	1	9/25/2014 1:51:00 PM
m,p-Xylene	ND	0.526		mg/Kg-dry	1	9/25/2014 1:51:00 PM
o-Xylene	ND	0.526		mg/Kg-dry	1	9/25/2014 1:51:00 PM
Naphthalene	ND	0.526		mg/Kg-dry	1	9/25/2014 1:51:00 PM
Methyl tert-butyl ether (MTBE)	ND	0.526		mg/Kg-dry	1	9/25/2014 1:51:00 PM
Surr: 1,4-Difluorobenzene	91.6	65-140		%REC	1	9/25/2014 1:51:00 PM
Surr: Bromofluorobenzene	106	65-140		%REC	1	9/25/2014 1:51:00 PM

Total Metals by EPA Method 6020

Batch ID: 8775

Analyst: TN

Iron	42,400	243	D	mg/Kg-dry	50	9/25/2014 5:01:38 PM
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Qualifiers: B Analyte detected in the associated Method Blank
E Value above quantitation range
J Analyte detected below quantitation limits
RL Reporting Limit

D Dilution was required
H Holding times for preparation or analysis exceeded
ND Not detected at the Reporting Limit
S Spike recovery outside accepted recovery limits



Analytical Report

WO#: 1409179

Date Reported: 10/6/2014

Client: Friedman & Bruya

Collection Date: 9/16/2014 11:40:00 AM

Project: 409282

Lab ID: 1409179-004

Matrix: Soil

Client Sample ID: B-1-12

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Sample Moisture (Percent Moisture)

Batch ID: R16889 Analyst: KZ

Percent Moisture	14.1			wt%	1	9/22/2014 9:11:43 AM
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Total Organic Carbon by EPA Method 9060

Batch ID: 8819 Analyst: KT

Total Organic Carbon	ND	0.0500		%-dry	1	9/22/2014 12:43:51 PM
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Qualifiers:

B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
RL	Reporting Limit

D	Dilution was required
H	Holding times for preparation or analysis exceeded
ND	Not detected at the Reporting Limit
S	Spike recovery outside accepted recovery limits



Client: Friedman & Bruya

Collection Date: 9/16/2014 11:50:00 AM

Project: 409282

Lab ID: 1409179-005

Matrix: Soil

Client Sample ID: B-1-18

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Total Metals by EPA Method 6020

Batch ID: 8775

Analyst: TN

Iron	27,600	4.98		mg/Kg-dry	1	9/22/2014 3:34:45 PM
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Sample Moisture (Percent Moisture)

Batch ID: R16889

Analyst: KZ

Percent Moisture	11.7			wt%	1	9/22/2014 9:11:43 AM
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Qualifiers: B Analyte detected in the associated Method Blank
E Value above quantitation range
J Analyte detected below quantitation limits
RL Reporting Limit

D Dilution was required
H Holding times for preparation or analysis exceeded
ND Not detected at the Reporting Limit
S Spike recovery outside accepted recovery limits



Analytical Report

WO#: 1409179

Date Reported: 10/6/2014

Client: Friedman & Bruya

Collection Date: 9/16/2014 1:20:00 PM

Project: 409282

Lab ID: 1409179-006

Matrix: Soil

Client Sample ID: B-2-9.5

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Total Metals by EPA Method 6020

Batch ID: 8775

Analyst: TN

Iron	33,700	5.21		mg/Kg-dry	1	9/22/2014 3:38:10 PM
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Sample Moisture (Percent Moisture)

Batch ID: R16889

Analyst: KZ

Percent Moisture	17.5			wt%	1	9/22/2014 9:11:43 AM
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Qualifiers: B Analyte detected in the associated Method Blank
E Value above quantitation range
J Analyte detected below quantitation limits
RL Reporting Limit

D Dilution was required
H Holding times for preparation or analysis exceeded
ND Not detected at the Reporting Limit
S Spike recovery outside accepted recovery limits



Analytical Report

WO#: 1409179

Date Reported: 10/6/2014

Client: Friedman & Bruya

Collection Date: 9/16/2014 1:40:00 PM

Project: 409282

Lab ID: 1409179-007

Matrix: Soil

Client Sample ID: B-2-13

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Extractable Petroleum Hydrocarbons by NWEPH				Batch ID: 8759		Analyst: EC
Aliphatic Hydrocarbon (C8-C10)	ND	6.29		mg/Kg-dry	1	10/4/2014 10:18:00 PM
Aliphatic Hydrocarbon (C10-C12)	ND	6.29		mg/Kg-dry	1	10/4/2014 10:18:00 PM
Aliphatic Hydrocarbon (C12-C16)	ND	6.29		mg/Kg-dry	1	10/4/2014 10:18:00 PM
Aliphatic Hydrocarbon (C16-C21)	ND	6.29		mg/Kg-dry	1	10/4/2014 10:18:00 PM
Aliphatic Hydrocarbon (C21-C34)	11.7	6.29		mg/Kg-dry	1	10/4/2014 10:18:00 PM
Aromatic Hydrocarbon (C8-C10)	ND	6.29		mg/Kg-dry	1	10/5/2014 10:40:00 AM
Aromatic Hydrocarbon (C10-C12)	ND	6.29		mg/Kg-dry	1	10/5/2014 10:40:00 AM
Aromatic Hydrocarbon (C12-C16)	ND	6.29		mg/Kg-dry	1	10/5/2014 10:40:00 AM
Aromatic Hydrocarbon (C16-C21)	8.37	6.29		mg/Kg-dry	1	10/5/2014 10:40:00 AM
Aromatic Hydrocarbon (C21-C34)	16.9	6.29	B	mg/Kg-dry	1	10/5/2014 10:40:00 AM
Surr: 1-Chlorooctadecane	103	65-140		%REC	1	10/4/2014 10:18:00 PM
Surr: o-Terphenyl	95.5	65-140		%REC	1	10/5/2014 10:40:00 AM

Volatile Petroleum Hydrocarbons by NWVPH				Batch ID: 8761		Analyst: EM
Aliphatic Hydrocarbon (C5-C6)	ND	1.92		mg/Kg-dry	1	9/25/2014 2:25:00 PM
Aliphatic Hydrocarbon (C6-C8)	ND	1.92		mg/Kg-dry	1	9/25/2014 2:25:00 PM
Aliphatic Hydrocarbon (C8-C10)	ND	1.92		mg/Kg-dry	1	9/25/2014 2:25:00 PM
Aliphatic Hydrocarbon (C10-C12)	ND	1.92		mg/Kg-dry	1	9/25/2014 2:25:00 PM
Aromatic Hydrocarbon (C8-C10)	ND	1.92		mg/Kg-dry	1	9/25/2014 2:25:00 PM
Aromatic Hydrocarbon (C10-C12)	ND	1.92		mg/Kg-dry	1	9/25/2014 2:25:00 PM
Aromatic Hydrocarbon (C12-C13)	ND	1.92		mg/Kg-dry	1	9/25/2014 2:25:00 PM
Benzene	ND	0.479		mg/Kg-dry	1	9/25/2014 2:25:00 PM
Toluene	ND	0.479		mg/Kg-dry	1	9/25/2014 2:25:00 PM
Ethylbenzene	ND	0.479		mg/Kg-dry	1	9/25/2014 2:25:00 PM
m,p-Xylene	ND	0.479		mg/Kg-dry	1	9/25/2014 2:25:00 PM
o-Xylene	ND	0.479		mg/Kg-dry	1	9/25/2014 2:25:00 PM
Naphthalene	ND	0.479		mg/Kg-dry	1	9/25/2014 2:25:00 PM
Methyl tert-butyl ether (MTBE)	ND	0.479		mg/Kg-dry	1	9/25/2014 2:25:00 PM
Surr: 1,4-Difluorobenzene	96.0	65-140		%REC	1	9/25/2014 2:25:00 PM
Surr: Bromofluorobenzene	102	65-140		%REC	1	9/25/2014 2:25:00 PM

Total Metals by EPA Method 6020				Batch ID: 8775		Analyst: TN
Iron	33,100	5.66		mg/Kg-dry	1	9/22/2014 3:41:36 PM

Qualifiers:	B	Analyte detected in the associated Method Blank	D	Dilution was required
	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
	RL	Reporting Limit	S	Spike recovery outside accepted recovery limits



Analytical Report

WO#: 1409179

Date Reported: 10/6/2014

Client: Friedman & Bruya

Collection Date: 9/16/2014 1:40:00 PM

Project: 409282

Lab ID: 1409179-007

Matrix: Soil

Client Sample ID: B-2-13

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Sample Moisture (Percent Moisture)

Batch ID: R16889 Analyst: KZ

Percent Moisture	22.2			wt%	1	9/22/2014 9:11:43 AM
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Total Organic Carbon by EPA Method 9060

Batch ID: 8819 Analyst: KT

Total Organic Carbon	ND	0.0500		%-dry	1	9/22/2014 12:43:51 PM
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Qualifiers: B Analyte detected in the associated Method Blank
E Value above quantitation range
J Analyte detected below quantitation limits
RL Reporting Limit

D Dilution was required
H Holding times for preparation or analysis exceeded
ND Not detected at the Reporting Limit
S Spike recovery outside accepted recovery limits



Analytical Report

WO#: 1409179

Date Reported: 10/6/2014

Client: Friedman & Bruya

Collection Date: 9/16/2014 2:30:00 PM

Project: 409282

Lab ID: 1409179-008

Matrix: Soil

Client Sample ID: B-3-14

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Total Metals by EPA Method 6020

Batch ID: 8775

Analyst: TN

Iron	29,300	5.56		mg/Kg-dry	1	9/22/2014 3:45:01 PM
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Sample Moisture (Percent Moisture)

Batch ID: R16889

Analyst: KZ

Percent Moisture	22.1			wt%	1	9/22/2014 9:11:43 AM
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Qualifiers: B Analyte detected in the associated Method Blank
E Value above quantitation range
J Analyte detected below quantitation limits
RL Reporting Limit

D Dilution was required
H Holding times for preparation or analysis exceeded
ND Not detected at the Reporting Limit
S Spike recovery outside accepted recovery limits



Analytical Report

WO#: 1409179

Date Reported: 10/6/2014

Client: Friedman & Bruya

Collection Date: 9/16/2014 2:20:00 PM

Project: 409282

Lab ID: 1409179-009

Matrix: Soil

Client Sample ID: B-3-11.5

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Extractable Petroleum Hydrocarbons by NWEPH				Batch ID: 8759		Analyst: EC
Aliphatic Hydrocarbon (C8-C10)	18.5	5.99		mg/Kg-dry	1	10/4/2014 11:02:00 PM
Aliphatic Hydrocarbon (C10-C12)	11.2	5.99		mg/Kg-dry	1	10/4/2014 11:02:00 PM
Aliphatic Hydrocarbon (C12-C16)	ND	5.99		mg/Kg-dry	1	10/4/2014 11:02:00 PM
Aliphatic Hydrocarbon (C16-C21)	ND	5.99		mg/Kg-dry	1	10/4/2014 11:02:00 PM
Aliphatic Hydrocarbon (C21-C34)	10.9	5.99		mg/Kg-dry	1	10/4/2014 11:02:00 PM
Aromatic Hydrocarbon (C8-C10)	7.80	5.99		mg/Kg-dry	1	10/5/2014 11:23:00 AM
Aromatic Hydrocarbon (C10-C12)	6.98	5.99		mg/Kg-dry	1	10/5/2014 11:23:00 AM
Aromatic Hydrocarbon (C12-C16)	ND	5.99		mg/Kg-dry	1	10/5/2014 11:23:00 AM
Aromatic Hydrocarbon (C16-C21)	7.01	5.99		mg/Kg-dry	1	10/5/2014 11:23:00 AM
Aromatic Hydrocarbon (C21-C34)	19.8	5.99	B	mg/Kg-dry	1	10/5/2014 11:23:00 AM
Surr: 1-Chlorooctadecane	92.5	65-140		%REC	1	10/4/2014 11:02:00 PM
Surr: o-Terphenyl	96.3	65-140		%REC	1	10/5/2014 11:23:00 AM

Volatile Petroleum Hydrocarbons by NWVPH				Batch ID: 8761		Analyst: EM
Aliphatic Hydrocarbon (C5-C6)	11.5	1.09		mg/Kg-dry	1	9/25/2014 2:59:00 PM
Aliphatic Hydrocarbon (C6-C8)	50.2	10.9	D	mg/Kg-dry	10	9/25/2014 9:10:00 PM
Aliphatic Hydrocarbon (C8-C10)	21.5	10.9	D	mg/Kg-dry	10	9/25/2014 9:10:00 PM
Aliphatic Hydrocarbon (C10-C12)	41.1	10.9	D	mg/Kg-dry	10	9/25/2014 9:10:00 PM
Aromatic Hydrocarbon (C8-C10)	44.8	1.09		mg/Kg-dry	1	9/25/2014 2:59:00 PM
Aromatic Hydrocarbon (C10-C12)	122	10.9	D	mg/Kg-dry	10	9/25/2014 9:10:00 PM
Aromatic Hydrocarbon (C12-C13)	15.3	1.09		mg/Kg-dry	1	9/25/2014 2:59:00 PM
Benzene	ND	0.273		mg/Kg-dry	1	9/25/2014 2:59:00 PM
Toluene	0.625	0.273		mg/Kg-dry	1	9/25/2014 2:59:00 PM
Ethylbenzene	6.92	0.273		mg/Kg-dry	1	9/25/2014 2:59:00 PM
m,p-Xylene	5.25	0.273		mg/Kg-dry	1	9/25/2014 2:59:00 PM
o-Xylene	0.341	0.273		mg/Kg-dry	1	9/25/2014 2:59:00 PM
Naphthalene	1.61	0.273		mg/Kg-dry	1	9/25/2014 2:59:00 PM
Methyl tert-butyl ether (MTBE)	ND	0.273		mg/Kg-dry	1	9/25/2014 2:59:00 PM
Surr: 1,4-Difluorobenzene	87.2	65-140		%REC	1	9/25/2014 2:59:00 PM
Surr: Bromofluorobenzene	93.6	65-140		%REC	1	9/25/2014 2:59:00 PM

Total Metals by EPA Method 6020				Batch ID: 8775		Analyst: TN
Iron	36,700	5.25		mg/Kg-dry	1	9/22/2014 3:55:21 PM

Qualifiers:	B	Analyte detected in the associated Method Blank	D	Dilution was required
	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
	RL	Reporting Limit	S	Spike recovery outside accepted recovery limits



Analytical Report

WO#: 1409179

Date Reported: 10/6/2014

Client: Friedman & Bruya

Collection Date: 9/16/2014 2:20:00 PM

Project: 409282

Lab ID: 1409179-009

Matrix: Soil

Client Sample ID: B-3-11.5

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Sample Moisture (Percent Moisture)

Batch ID: R16889 Analyst: KZ

Percent Moisture	18.7			wt%	1	9/22/2014 9:11:43 AM
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Total Organic Carbon by EPA Method 9060

Batch ID: 8819 Analyst: KT

Total Organic Carbon	ND	0.0500		%-dry	1	9/22/2014 12:43:51 PM
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Qualifiers: B Analyte detected in the associated Method Blank
E Value above quantitation range
J Analyte detected below quantitation limits
RL Reporting Limit

D Dilution was required
H Holding times for preparation or analysis exceeded
ND Not detected at the Reporting Limit
S Spike recovery outside accepted recovery limits



Date: 10/6/2014

Work Order: 1409179
CLIENT: Friedman & Bruya
Project: 409282

QC SUMMARY REPORT

Total Organic Carbon by EPA Method 9060

Sample ID: MB-8819	SampType: MBLK	Units: %-dry			Prep Date: 9/22/2014			RunNo: 16924			
Client ID: MBLKS	Batch ID: 8819				Analysis Date: 9/22/2014			SeqNo: 339802			
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Total Organic Carbon ND 0.0500

Sample ID: LCS-8819		SampType: LCS		Units: %-dry		Prep Date: 9/22/2014			RunNo: 16924		
Client ID: LCSS		Batch ID: 8819					Analysis Date: 9/22/2014			SeqNo: 339803	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Total Organic Carbon 0.645 0.0500 0.6510 0 99.1 41.1 157

Sample ID: 1409178-001ADUP	SampType: DUP	Units: %-dry				Prep Date: 9/22/2014				RunNo: 16924		
Client ID: BATCH	Batch ID: 8819					Analysis Date: 9/22/2014				SeqNo: 339810		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	

Total Organic Carbon ND 0.0500 0 30

Sample ID: 1409178-001AMS		SampType: MS			Units: %-dry		Prep Date: 9/22/2014			RunNo: 16924		
Client ID: BATCH		Batch ID: 8819						Analysis Date: 9/22/2014			SeqNo: 339811	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	

Total Organic Carbon 0.859 0.0500 1.000 0 85.9 50.2 118

Sample ID: 1409178-001AMSD	SampType: MSD	Units: %-dry			Prep Date: 9/22/2014			RunNo: 16924			
Client ID: BATCH	Batch ID: 8819				Analysis Date: 9/22/2014			SeqNo: 339812			
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Total Organic Carbon 0.841 0.0500 1.000 0 84.1 50.2 118 0.8586 2.04 20

Qualifiers:

B	Analyte detected in the associated Method Blank	D	Dilution was required	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	RL	Reporting Limit	S	Spike recovery outside accepted recovery limits



Date: 10/6/2014

Work Order: 1409179
CLIENT: Friedman & Bruya
Project: 409282

QC SUMMARY REPORT

Total Metals by EPA Method 6020

Sample ID: MB-8775		SampType: MBLK		Units: mg/Kg		Prep Date: 9/19/2014			RunNo: 16909		
Client ID: MBLKS		Batch ID: 8775					Analysis Date: 9/22/2014			SeqNo: 339544	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Iron	ND	5.50									
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Sample ID: LCS-8775		SampType: LCS		Units: mg/Kg		Prep Date: 9/19/2014			RunNo: 16909		
Client ID: LCSS		Batch ID: 8775					Analysis Date: 9/22/2014			SeqNo: 339545	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Iron	5,260	5.50	5,180	0	102	10.2	220.1				
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Sample ID: 1409178-001ADUP		SampType: DUP		Units: mg/Kg-dry		Prep Date: 9/19/2014			RunNo: 16909		
Client ID: BATCH		Batch ID: 8775					Analysis Date: 9/22/2014			SeqNo: 339547	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Iron	34,400	4.99						35,270	2.54	30	
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Sample ID: 1409178-001AMS		SampType: MS		Units: mg/Kg-dry		Prep Date: 9/19/2014			RunNo: 16909		
Client ID: BATCH		Batch ID: 8775					Analysis Date: 9/22/2014			SeqNo: 339549	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Iron	32,700	4.99	453.6	35,270	-565	75	125				S
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NOTES:

S - Analyte concentration was too high for accurate spike recovery.

Sample ID: 1409178-001AMSD	SampType: MSD	Units: mg/Kg-dry				Prep Date: 9/19/2014			RunNo: 16909		
Client ID: BATCH	Batch ID: 8775					Analysis Date: 9/22/2014			SeqNo: 339550		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Iron	32,900	4.95	449.9	35,270	-530	75	125	32,700	0.556	30	S
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Qualifiers:

B	Analyte detected in the associated Method Blank	D	Dilution was required	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	RL	Reporting Limit	S	Spike recovery outside accepted recovery limits



Date: 10/6/2014

Work Order: 1409179
CLIENT: Friedman & Bruya
Project: 409282

QC SUMMARY REPORT

Total Metals by EPA Method 6020

Sample ID: 1409178-001AMSD	SampType: MSD	Units: mg/Kg-dry	Prep Date: 9/19/2014	RunNo: 16909							
Client ID: BATCH	Batch ID: 8775	Analysis Date: 9/22/2014	SeqNo: 339550								
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

NOTES:

S - Analyte concentration was too high for accurate spike recovery.

Sample ID: 1409178-001APDS	SampType: PDS	Units: mg/Kg-dry	Prep Date: 9/19/2014	RunNo: 16909							
Client ID: BATCH	Batch ID: 8775	Analysis Date: 9/22/2014	SeqNo: 339551								
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Iron	35,100	5.03	457	35,300	-36.8	75	125				S
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NOTES:

S - Analyte concentration was too high for accurate spike recovery(ies).

Sample ID: CCV-8775D		SampType: CCV		Units: µg/L		Prep Date: 9/25/2014			RunNo: 16909		
Client ID: CCV		Batch ID: 8775					Analysis Date: 9/25/2014			SeqNo: 341364	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Iron	1,570	55.0	1,500	0	105	90	110				
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Sample ID: CCV-8775E	SampType: CCV	Units: µg/L	Prep Date: 9/25/2014	RunNo: 16909							
Client ID: CCV	Batch ID: 8775	Analysis Date: 9/25/2014	SeqNo: 341367								
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Iron	1,560	55.0	1,500	0	104	90	110				
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Qualifiers:	B	Analyte detected in the associated Method Blank	D	Dilution was required	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	RL	Reporting Limit	S	Spike recovery outside accepted recovery limits



Date: 10/6/2014

Work Order: 1409179
CLIENT: Friedman & Bruya
Project: 409282

QC SUMMARY REPORT

Extractable Petroleum Hydrocarbons by NWEPH

Sample ID: 1409176-001ADUP	SampType: DUP	Units: mg/Kg-dry				Prep Date: 9/17/2014			RunNo: 17230		
Client ID: BATCH	Batch ID: 8759	Analysis Date: 10/4/2014							SeqNo: 344956		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aliphatic Hydrocarbon (C8-C10)	ND	5.51						0		30	
Aliphatic Hydrocarbon (C10-C12)	ND	5.51						0		30	
Aliphatic Hydrocarbon (C12-C16)	ND	5.51						0		30	
Aliphatic Hydrocarbon (C16-C21)	7.79	5.51						8.584	9.72	30	
Aliphatic Hydrocarbon (C21-C34)	46.8	5.51						42.99	8.49	30	
Surr: 1-Chlorooctadecane	4.38		4.407		99.3	65	140		0		

Sample ID: LCS-8759	SampType: LCS	Units: mg/Kg				Prep Date: 9/17/2014			RunNo: 17230		
Client ID: LCSS	Batch ID: 8759	Analysis Date: 10/4/2014						SeqNo: 344959			
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aliphatic Hydrocarbon (C8-C10)	19.1	5.00	20.00	0	95.4	70	130				
Aliphatic Hydrocarbon (C10-C12)	9.85	5.00	10.00	0	98.5	70	130				
Aliphatic Hydrocarbon (C12-C16)	9.44	5.00	10.00	0	94.4	70	130				
Aliphatic Hydrocarbon (C16-C21)	11.3	5.00	10.00	0	113	70	130				
Aliphatic Hydrocarbon (C21-C34)	10.4	5.00	10.00	0	104	70	130				
Surr: 1-Chlorooctadecane	3.71		4.000		92.7	65	140				

Sample ID: MB-8759	SampType: MBLK	Units: mg/Kg				Prep Date: 9/17/2014			RunNo: 17230		
Client ID: MBLKS	Batch ID: 8759	Analysis Date: 10/4/2014						SeqNo: 344960			
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aliphatic Hydrocarbon (C8-C10)	ND	5.00									
Aliphatic Hydrocarbon (C10-C12)	ND	5.00									
Aliphatic Hydrocarbon (C12-C16)	ND	5.00									
Aliphatic Hydrocarbon (C16-C21)	ND	5.00									
Aliphatic Hydrocarbon (C21-C34)	ND	5.00									
Surr: 1-Chlorooctadecane	4.03		4.000		101	65	140				

Qualifiers:

B	Analyte detected in the associated Method Blank	D	Dilution was required	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	RL	Reporting Limit	S	Spike recovery outside accepted recovery limits



Date: 10/6/2014

Work Order: 1409179
CLIENT: Friedman & Bruya
Project: 409282

QC SUMMARY REPORT
Extractable Petroleum Hydrocarbons by NWEPH

Sample ID: MB-8759	SampType: MBLK	Units: mg/Kg	Prep Date: 9/17/2014	RunNo: 17230							
Client ID: MBLKS	Batch ID: 8759		Analysis Date: 10/4/2014	SeqNo: 344960							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Sample ID: 1409176-001ADUP		SampType: DUP		Units: mg/Kg-dry		Prep Date: 9/17/2014			RunNo: 17230		
Client ID: BATCH		Batch ID: 8759					Analysis Date: 10/5/2014			SeqNo: 344973	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Aromatic Hydrocarbon (C8-C10)	ND	5.51						0		30	
Aromatic Hydrocarbon (C10-C12)	ND	5.51						0		30	
Aromatic Hydrocarbon (C12-C16)	ND	5.51						0		30	
Aromatic Hydrocarbon (C16-C21)	ND	5.51						0		30	
Aromatic Hydrocarbon (C21-C34)	82.0	5.51						82.01	0	30	B
Surr: o-Terphenyl	4.06		4.407		92.0	65	140		0		

Sample ID: LCS-8759	SampType: LCS	Units: mg/Kg			Prep Date: 9/17/2014			RunNo: 17230			
Client ID: LCSS	Batch ID: 8759				Analysis Date: 10/5/2014			SeqNo: 344987			
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Aromatic Hydrocarbon (C8-C10)	9.17	5.00	10.00	0	91.7	70	130				
Aromatic Hydrocarbon (C10-C12)	10.1	5.00	10.00	0	101	70	130				
Aromatic Hydrocarbon (C12-C16)	10.4	5.00	10.00	0	104	70	130				
Aromatic Hydrocarbon (C16-C21)	10.6	5.00	10.00	0	106	70	130				
Aromatic Hydrocarbon (C21-C34)	10.3	5.00	10.00	0	103	70	130				B
Surr: o-Terphenyl	3.94		4.000		98.6	65	140				

Qualifiers:

B	Analyte detected in the associated Method Blank	D	Dilution was required	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	RL	Reporting Limit	S	Spike recovery outside accepted recovery limits

Work Order: 1409179
CLIENT: Friedman & Bruya
Project: 409282

QC SUMMARY REPORT

Extractable Petroleum Hydrocarbons by NWEPH

Sample ID: MB-8759	SampType: MBLK	Units: mg/Kg			Prep Date: 9/17/2014			RunNo: 17230			
Client ID: MBLKS	Batch ID: 8759	Analysis Date: 10/5/2014						SeqNo: 344988			
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aromatic Hydrocarbon (C8-C10)	ND	5.00									
Aromatic Hydrocarbon (C10-C12)	ND	5.00									
Aromatic Hydrocarbon (C12-C16)	ND	5.00									
Aromatic Hydrocarbon (C16-C21)	ND	5.00									
Aromatic Hydrocarbon (C21-C34)	17.3	5.00									
Surr: o-Terphenyl	3.71		4.000		92.8	65	140				

Qualifiers:	B	Analyte detected in the associated Method Blank	D	Dilution was required	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	RL	Reporting Limit	S	Spike recovery outside accepted recovery limits



Date: 10/6/2014

Work Order: 1409179
CLIENT: Friedman & Bruya
Project: 409282

QC SUMMARY REPORT

Volatile Petroleum Hydrocarbons by NWVPH

Sample ID: 1409178-001BDUP	SampType: DUP	Units: mg/Kg-dry				Prep Date: 9/17/2014			RunNo: 17100		
Client ID: BATCH	Batch ID: 8761	Analysis Date: 9/25/2014							SeqNo: 342530		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aliphatic Hydrocarbon (C5-C6)	ND	1.54		0	0			0		25	
Aliphatic Hydrocarbon (C6-C8)	17.1	1.54		0	0			15.92	7.05	25	
Aliphatic Hydrocarbon (C8-C10)	22.1	1.54		0	0			22.92	3.77	25	E
Aliphatic Hydrocarbon (C10-C12)	19.5	1.54		0	0			23.99	20.8	25	
Aromatic Hydrocarbon (C8-C10)	22.9	1.54		0	0			22.36	2.43	25	
Aromatic Hydrocarbon (C10-C12)	57.9	1.54		0	0			44.86	25.3	25	RE
Aromatic Hydrocarbon (C12-C13)	19.1	1.54		0	0			19.78	3.41	25	
Benzene	ND	0.386		0	0			0		25	
Toluene	ND	0.386		0	0			0		25	
Ethylbenzene	ND	0.386		0	0			0		25	
m,p-Xylene	ND	0.386		0	0			0		25	
o-Xylene	ND	0.386		0	0			0		25	
Naphthalene	ND	0.386		0	0			0		25	
Methyl tert-butyl ether (MTBE)	ND	0.386		0	0			0		25	
Surr: 1,4-Difluorobenzene	2.04		1.929		106	65	140		0		
Surr: Bromofluorobenzene	2.27		1.929		118	65	140		0		

NOTES:

E - Estimated value. The amount exceeds the linear working range of the instrument.

R - High RPD. The method is in control as indicated by the laboratory control sample (LCS).

Sample ID: 1409179-001BMS	SampType: MS	Units: mg/Kg-dry				Prep Date: 9/17/2014			RunNo: 17100		
Client ID: MW-14-12	Batch ID: 8761					Analysis Date: 9/25/2014			SeqNo: 342534		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aliphatic Hydrocarbon (C5-C6)	23.3	1.78	26.77	0	87.2	70	130				
Aliphatic Hydrocarbon (C6-C8)	6.04	1.78	8.922	0	67.7	70	130				S
Aliphatic Hydrocarbon (C8-C10)	7.48	1.78	8.922	0	83.9	70	130				
Aliphatic Hydrocarbon (C10-C12)	9.37	1.78	8.922	0	105	70	130				
Aromatic Hydrocarbon (C8-C10)	25.9	1.78	35.69	0	72.5	70	130				

Qualifiers:

B	Analyte detected in the associated Method Blank	D	Dilution was required	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	RL	Reporting Limit	S	Spike recovery outside accepted recovery limits



Date: 10/6/2014

Work Order: 1409179
CLIENT: Friedman & Bruya
Project: 409282

QC SUMMARY REPORT
Volatile Petroleum Hydrocarbons by NWVPH

Sample ID: 1409179-001BMS	SampType: MS	Units: mg/Kg-dry				Prep Date: 9/17/2014			RunNo: 17100		
Client ID: MW-14-12	Batch ID: 8761					Analysis Date: 9/25/2014			SeqNo: 342534		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aromatic Hydrocarbon (C10-C12)	7.38	1.78	8.922	0	82.7	70	130				
Aromatic Hydrocarbon (C12-C13)	8.14	1.78	8.922	0	91.2	70	130				
Benzene	7.11	0.446	8.922	0	79.7	70	130				
Toluene	6.94	0.446	8.922	0	77.8	70	130				
Ethylbenzene	6.52	0.446	8.922	0	73.0	70	130				
m,p-Xylene	13.5	0.446	17.84	0	75.8	70	130				
o-Xylene	6.68	0.446	8.922	0	74.9	70	130				
Naphthalene	6.00	0.446	8.922	0	67.2	70	130				S
Methyl tert-butyl ether (MTBE)	7.87	0.446	8.922	0	88.2	70	130				
Surr: 1,4-Difluorobenzene	2.15		2.230		96.5	65	140				
Surr: Bromofluorobenzene	2.25		2.230		101	65	140				

NOTES:

S - Outlying QC recoveries were observed. The method is in control as indicated by the LCS.

Sample ID: LCS-8761	SampType: LCS	Units: mg/Kg				Prep Date: 9/17/2014			RunNo: 17100		
Client ID: LCSS	Batch ID: 8761					Analysis Date: 9/25/2014			SeqNo: 342542		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aliphatic Hydrocarbon (C5-C6)	29.8	2.00	30.00	0	99.3	70	130				
Aliphatic Hydrocarbon (C6-C8)	7.81	2.00	10.00	0	78.1	70	130				
Aliphatic Hydrocarbon (C8-C10)	10.2	2.00	10.00	0	102	70	130				
Aliphatic Hydrocarbon (C10-C12)	8.46	2.00	10.00	0	84.6	70	130				
Aromatic Hydrocarbon (C8-C10)	44.2	2.00	40.00	0	110	70	130				
Aromatic Hydrocarbon (C10-C12)	8.28	2.00	10.00	0	82.8	70	130				
Aromatic Hydrocarbon (C12-C13)	9.27	2.00	10.00	0	92.7	70	130				
Benzene	9.52	0.500	10.00	0	95.2	70	130				
Toluene	10.1	0.500	10.00	0	101	70	130				
Ethylbenzene	10.1	0.500	10.00	0	101	70	130				
m,p-Xylene	20.1	0.500	20.00	0	101	70	130				

Qualifiers:	B	Analyte detected in the associated Method Blank	D	Dilution was required	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	RL	Reporting Limit	S	Spike recovery outside accepted recovery limits



Date: 10/6/2014

Work Order: 1409179
CLIENT: Friedman & Bruya
Project: 409282

QC SUMMARY REPORT
Volatile Petroleum Hydrocarbons by NWVPH

Sample ID: LCS-8761	SampType: LCS	Units: mg/Kg				Prep Date: 9/17/2014			RunNo: 17100		
Client ID: LCSS	Batch ID: 8761					Analysis Date: 9/25/2014			SeqNo: 342542		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
o-Xylene	10.3	0.500	10.00	0	103	70	130				
Naphthalene	8.98	0.500	10.00	0	89.8	70	130				
Methyl tert-butyl ether (MTBE)	9.75	0.500	10.00	0	97.5	70	130				
Surr: 1,4-Difluorobenzene	2.53		2.500		101	65	140				
Surr: Bromofluorobenzene	2.69		2.500		107	65	140				

Sample ID: MB-8761	SampType: MBLK	Units: mg/Kg				Prep Date: 9/17/2014			RunNo: 17100		
Client ID: MBLKS	Batch ID: 8761					Analysis Date: 9/25/2014			SeqNo: 342543		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aliphatic Hydrocarbon (C5-C6)	ND	2.00		0	0						
Aliphatic Hydrocarbon (C6-C8)	ND	2.00		0	0						
Aliphatic Hydrocarbon (C8-C10)	ND	2.00		0	0						
Aliphatic Hydrocarbon (C10-C12)	ND	2.00		0	0						
Aromatic Hydrocarbon (C8-C10)	ND	2.00		0	0						
Aromatic Hydrocarbon (C10-C12)	ND	2.00		0	0						
Aromatic Hydrocarbon (C12-C13)	ND	2.00		0	0						
Benzene	ND	0.500		0	0						
Toluene	ND	0.500		0	0						
Ethylbenzene	ND	0.500		0	0						
m,p-Xylene	ND	0.500		0	0						
o-Xylene	ND	0.500		0	0						
Naphthalene	ND	0.500		0	0						
Methyl tert-butyl ether (MTBE)	ND	0.500		0	0						
Surr: 1,4-Difluorobenzene	2.45		2.500		97.9	65	140				
Surr: Bromofluorobenzene	2.45		2.500		98.1	65	140				

Qualifiers:

B	Analyte detected in the associated Method Blank	D	Dilution was required	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	RL	Reporting Limit	S	Spike recovery outside accepted recovery limits

Sample Log-In Check List

Client Name: **FB**
 Logged by: **Erica Silva**

Work Order Number: **1409179**
 Date Received: **9/17/2014 3:13:00 PM**

Chain of Custody

1. Is Chain of Custody complete? Yes ☒ No ☐ Not Present ☐
 2. How was the sample delivered? Courier

Log In

3. Coolers are present? Yes ☐ No ☒ NA ☐

Samples received at appropriate temperature

4. Shipping container/cooler in good condition? Yes ☒ No ☐
 5. Custody seals intact on shipping container/cooler? Yes ☐ No ☐ Not Required ☒
 6. Was an attempt made to cool the samples? Yes ☒ No ☐ NA ☐
 7. Were all coolers received at a temperature of >0°C to 10.0°C? Yes ☒ No ☐ NA ☐
 8. Sample(s) in proper container(s)? Yes ☒ No ☐
 9. Sufficient sample volume for indicated test(s)? Yes ☒ No ☐
 10. Are samples properly preserved? Yes ☒ No ☐
 11. Was preservative added to bottles? Yes ☐ No ☒ NA ☐
 12. Is the headspace in the VOA vials? Yes ☐ No ☐ NA ☒
 13. Did all samples containers arrive in good condition(unbroken)? Yes ☒ No ☐
 14. Does paperwork match bottle labels? Yes ☒ No ☐
 15. Are matrices correctly identified on Chain of Custody? Yes ☒ No ☐
 16. Is it clear what analyses were requested? Yes ☒ No ☐
 17. Were all holding times able to be met? Yes ☒ No ☐

Special Handling (if applicable)

18. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☒

Person Notified: Date:
 By Whom: Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person
 Regarding:
 Client Instructions:

19. Additional remarks:

Item Information

Item #	Temp °C	Condition
Sample	8.2	Good

SUBCONTRACT SAMPLE CHAIN OF CUSTODY

1407117

Page # 1 of 1



Send Report To Michael Erdahl
 Company Friedman and Bruya, Inc.
 Address 3012 16th Ave W
 City, State, ZIP Seattle, WA 98119
 Phone # (206) 285-8282 Fax # (206) 283-5044

SUBCONTRACTOR <u>Fremont</u>	
PROJECT NAME/NO. <u>409282</u>	PO # <u>D-208</u>
REMARKS <u>Please Email Results</u>	

TURNAROUND TIME	
<input checked="" type="checkbox"/> Standard (2 Weeks)	
<input type="checkbox"/> RUSH	
Rush charges authorized by:	
SAMPLE DISPOSAL	
<input type="checkbox"/> Dispose after 30 days	
<input type="checkbox"/> Return samples	
<input type="checkbox"/> Will call with instructions	

Sample ID	Lab ID	Date Sampled	Time Sampled	Matrix	# of jars	Dioxins and Furans by 8290	EPH	VPH	Nitrate	Sulfate	Alkalinity	Ion	TOC	Notes
MW-14-12		9/15/14	1440	Soil	2		X	X				X	X	
MW-14-18		↓	1450		1							X		
MW-13-14		9/16/14	0810		2		X	X				X	X	
B-1-12		9/16/14	1140		2		X	X				X	X	
B-1-18			1150		1							X		
B-2-9.5			1320		1							X		
B-2-13			1340		2		X	X				X	X	
B-3-14			1430		1							X		
B-3-11.5		↓	1420	↓	2		X	X				X	X	

Friedman & Bruya, Inc.
 3012 16th Avenue West
 Seattle, WA 98119-2029
 Ph. (206) 285-8282
 Fax (206) 283-5044

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by: 	Michael Erdahl	Friedman & Bruya	9/17/14	11:23
Received by: 	Erica Silva	FAI	9/17/14	15:13
Relinquished by:				
Received by:				

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Yelena Aravkina, M.S.
Michael Erdahl, B.S.
Arina Podnozova, B.S.
Eric Young, B.S.

3012 16th Avenue West
Seattle, WA 98119-2029
(206) 285-8282
fbi@isomedia.com
www.friedmanandbruya.com

October 15, 2014

Kirsi Longley, Project Manager
Aspect Consulting, LLC
401 2nd Ave S, Suite 201
Seattle, WA 98104

Dear Ms. Longley:

Included is the amended report from the testing of material submitted on September 23, 2014 from the Ken's Texaco 120061, F&BI 409405 project. Per your request, BTEX was added to the gasoline results.

We appreciate this opportunity to be of service to you and hope you will call if you have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.



Michael Erdahl
Project Manager

Enclosures

c: data@aspectconsulting.com, Parker Wittman
ASP1003R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Yelena Aravkina, M.S.
Michael Erdahl, B.S.
Arina Podnozova, B.S.
Eric Young, B.S.

3012 16th Avenue West
Seattle, WA 98119-2029
(206) 285-8282
fbi@isomedia.com
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October 3, 2014

Kirsi Longley, Project Manager
Aspect Consulting, LLC
401 2nd Ave S, Suite 201
Seattle, WA 98104

Dear Ms. Longley:

Included are the results from the testing of material submitted on September 23, 2014 from the Ken's Texaco 120061, F&BI 409405 project. There are 19 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

We appreciate this opportunity to be of service to you and hope you will call if you have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.



Michael Erdahl
Project Manager

Enclosures

c: data@aspectconsulting.com, Parker Wittman
ASP1003R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on September 23, 2014 by Friedman & Bruya, Inc. from the Aspect Consulting, LLC Ken's Texaco 120061, F&BI 409405 project. Samples were logged in under the laboratory ID's listed below.

<u>Laboratory ID</u>	<u>Aspect Consulting, LLC</u>
409405 -01	MW-1-092214
409405 -02	MW-7-092214
409405 -03	MW-8-092214
409405 -04	MW-11-092214
409405 -05	MW-12-092214

Samples MW-11-092214 and MW-12-092214 were sent to Fremont for alkalinity, chloride, sulfate, nitrate and nitrite analyses. Review of the enclosed report indicates that all quality assurance were acceptable

All quality control requirements were acceptable.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 10/03/14

Date Received: 09/23/14

Project: Ken's Texaco 120061, F&BI 409405

Date Extracted: 09/24/14

Date Analyzed: 09/24/14

**RESULTS FROM THE ANALYSIS OF WATER SAMPLES
FOR BENZENE, TOLUENE, ETHYLBENZENE,
XYLENES AND TPH AS GASOLINE
USING METHODS 8021B AND NWTPH-Gx**

Results Reported as ug/L (ppb)

<u>Sample ID</u> Laboratory ID	<u>Benzene</u>	<u>Toluene</u>	<u>Ethyl Benzene</u>	<u>Total Xylenes</u>	<u>Gasoline Range</u>	<u>Surrogate (% Recovery)</u> (Limit 52-124)
MW-1-092214 409405-01	<1	16	7.6	20	2,700	122
MW-7-092214 409405-02	2.2	<1	3.6	11	890	100
MW-8-092214 409405-03	36	14	63	44	920	95
MW-11-092214 409405-04	34	8.2	41	38	1,300	97
MW-12-092214 409405-05	<1	<1	<1	<3	<100	82
Method Blank 04-1913 MB	<1	<1	<1	<3	<100	86

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 10/03/14

Date Received: 09/23/14

Project: Ken's Texaco 120061, F&BI 409405

Date Extracted: 09/24/14

Date Analyzed: 09/24/14

**RESULTS FROM THE ANALYSIS OF WATER SAMPLES
FOR TOTAL PETROLEUM HYDROCARBONS AS
DIESEL AND MOTOR OIL
USING METHOD NWTPH-Dx**
Results Reported as ug/L (ppb)

<u>Sample ID</u> Laboratory ID	<u>Diesel Range</u> (C ₁₀ -C ₂₅)	<u>Motor Oil Range</u> (C ₂₅ -C ₃₆)	<u>Surrogate</u> <u>(% Recovery)</u> (Limit 51-134)
MW-1-092214 409405-01	560 x	<250	104
MW-7-092214 409405-02	250 x	<250	101
MW-8-092214 409405-03	170 x	<250	99
MW-11-092214 409405-04	260 x	<250	97
MW-12-092214 409405-05	<50	<250	96
Method Blank 04-1938 MB2	<50	<250	101

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Dissolved Metals By EPA Method 200.8

Client ID:	MW-11-092214	Client:	Aspect Consulting, LLC
Date Received:	09/23/14	Project:	Ken's Texaco 120061, F&BI 409405
Date Extracted:	09/23/14	Lab ID:	409405-04
Date Analyzed:	09/23/14	Data File:	409405-04.051
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	93	60	125
Holmium	89	60	125

Analyte:	Concentration ug/L (ppb)
Lead	<1
Manganese	8,690
Iron	3,120 ve

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Dissolved Metals By EPA Method 200.8

Client ID:	MW-11-092214	Client:	Aspect Consulting, LLC
Date Received:	09/23/14	Project:	Ken's Texaco 120061, F&BI 409405
Date Extracted:	09/23/14	Lab ID:	409405-04 x10
Date Analyzed:	09/23/14	Data File:	409405-04 x10.053
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	95	60	125
Holmium	95	60	125

Analyte:	Concentration ug/L (ppb)
Lead	<10
Manganese	7,920
Iron	3,060

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Dissolved Metals By EPA Method 200.8

Client ID:	MW-12-092214	Client:	Aspect Consulting, LLC
Date Received:	09/23/14	Project:	Ken's Texaco 120061, F&BI 409405
Date Extracted:	09/23/14	Lab ID:	409405-05
Date Analyzed:	09/23/14	Data File:	409405-05.052
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	95	60	125
Holmium	94	60	125

Analyte:	Concentration ug/L (ppb)
Lead	<1
Manganese	46.3
Iron	136

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Dissolved Metals By EPA Method 200.8

Client ID:	Method Blank	Client:	Aspect Consulting, LLC
Date Received:	NA	Project:	Ken's Texaco 120061, F&BI 409405
Date Extracted:	09/23/14	Lab ID:	I4-596 mb
Date Analyzed:	09/23/14	Data File:	I4-596 mb.028
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	96	60	125
Holmium	96	60	125

Analyte:	Concentration ug/L (ppb)
Lead	<1
Manganese	<1
Iron	<50

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW-11-092214	Client:	Aspect Consulting, LLC
Date Received:	09/23/14	Project:	Ken's Texaco 120061, F&BI 409405
Date Extracted:	09/23/14	Lab ID:	409405-04
Date Analyzed:	09/24/14	Data File:	092341.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	101	57	121
Toluene-d8	100	63	127
4-Bromofluorobenzene	99	60	133

Compounds:	Concentration ug/L (ppb)
1,2-Dichloroethane (EDC)	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW-12-092214	Client:	Aspect Consulting, LLC
Date Received:	09/23/14	Project:	Ken's Texaco 120061, F&BI 409405
Date Extracted:	09/23/14	Lab ID:	409405-05
Date Analyzed:	09/24/14	Data File:	092342.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	102	57	121
Toluene-d8	102	63	127
4-Bromofluorobenzene	102	60	133

Compounds:	Concentration ug/L (ppb)
1,2-Dichloroethane (EDC)	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	Method Blank	Client:	Aspect Consulting, LLC
Date Received:	Not Applicable	Project:	Ken's Texaco 120061, F&BI 409405
Date Extracted:	09/23/14	Lab ID:	04-1896 mb
Date Analyzed:	09/23/14	Data File:	092325.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	104	57	121
Toluene-d8	103	63	127
4-Bromofluorobenzene	104	60	133

Compounds:	Concentration ug/L (ppb)
1,2-Dichloroethane (EDC)	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Dissolved Gasses By RSK 175

Client Sample ID:	MW-11-092214	Client:	Aspect Consulting, LLC
Date Received:	09/23/14	Project:	Ken's Texaco 120061, F&BI 409405
Date Extracted:	09/24/14	Lab ID:	409405-04
Date Analyzed:	09/24/14	Data File:	006F0601.D
Matrix:	Water	Instrument:	GC8
Units:	ug/L (ppb)	Operator:	JS

Compounds:	Concentration ug/L (ppb)
Methane	230

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Dissolved Gasses By RSK 175

Client Sample ID:	MW-12-092214	Client:	Aspect Consulting, LLC
Date Received:	09/23/14	Project:	Ken's Texaco 120061, F&BI 409405
Date Extracted:	09/24/14	Lab ID:	409405-05
Date Analyzed:	09/24/14	Data File:	008F0801.D
Matrix:	Water	Instrument:	GC8
Units:	ug/L (ppb)	Operator:	JS

Compounds:	Concentration ug/L (ppb)
Methane	<5

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Dissolved Gasses By RSK 175

Client Sample ID:	Method Blank	Client:	Aspect Consulting, LLC
Date Received:	Not Applicable	Project:	Ken's Texaco 120061, F&BI 409405
Date Extracted:	09/24/14	Lab ID:	04-1897 mb
Date Analyzed:	09/24/14	Data File:	005F0501.D
Matrix:	Water	Instrument:	GC8
Units:	ug/L (ppb)	Operator:	JS

Compounds:	Concentration ug/L (ppb)
Methane	<5

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 10/03/14

Date Received: 09/23/14

Project: Ken's Texaco 120061, F&BI 409405

**QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER
SAMPLES FOR BENZENE, TOLUENE, ETHYLBENZENE,
XYLENES, AND TPH AS GASOLINE
USING EPA METHOD 8021B AND NWTPH-Gx**

Laboratory Code: 409405-05 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	RPD (Limit 20)
Benzene	ug/L (ppb)	<1	<1	nm
Toluene	ug/L (ppb)	<1	<1	nm
Ethylbenzene	ug/L (ppb)	<1	<1	nm
Xylenes	ug/L (ppb)	<3	<3	nm
Gasoline	ug/L (ppb)	<100	<100	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Benzene	ug/L (ppb)	50	88	65-118
Toluene	ug/L (ppb)	50	92	72-122
Ethylbenzene	ug/L (ppb)	50	93	73-126
Xylenes	ug/L (ppb)	150	92	74-118
Gasoline	ug/L (ppb)	1,000	99	69-134

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 10/03/14

Date Received: 09/23/14

Project: Ken's Texaco 120061, F&BI 409405

**QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER
SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS
DIESEL EXTENDED USING METHOD NWTPH-Dx**

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	ug/L (ppb)	2,500	111	108	63-142	3

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 10/03/14

Date Received: 09/23/14

Project: Ken's Texaco 120061, F&BI 409405

**QUALITY ASSURANCE RESULTS
FOR THE ANALYSIS OF WATER SAMPLES
FOR DISSOLVED METALS USING EPA METHOD 200.8**

Laboratory Code: 409353-03 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Lead	ug/L (ppb)	10	<1	103	103	79-121	0
Manganese	ug/L (ppb)	20	1,480	255 b	333 b	47-155	27 b
Iron	ug/L (ppb)	100	235	116 b	113 b	50-150	3 b

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Lead	ug/L (ppb)	10	103	83-115
Manganese	ug/L (ppb)	20	108	76-120
Iron	ug/L (ppb)	100	107	70-130

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 10/03/14

Date Received: 09/23/14

Project: Ken's Texaco 120061, F&BI 409405

**QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER
SAMPLES FOR VOLATILES BY EPA METHOD 8260C**

Laboratory Code: 409405-04 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Acceptance Criteria
1,2-Dichloroethane (EDC)	ug/L (ppb)	50	<1	102	69-133

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
1,2-Dichloroethane (EDC)	ug/L (ppb)	50	102	104	73-132	2

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 10/03/14

Date Received: 09/23/14

Project: Ken's Texaco 120061, F&BI 409405

**QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF
WATER SAMPLES FOR DISSOLVED GASES
USING METHOD RSK 175**

Laboratory Code: 409405-04 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	Relative Percent Difference (Limit 20)
Methane	ug/L (ppb)	230	220	4

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Methane	ug/L (ppb)	500	66	65	50-150	2

Data Qualifiers & Definitions

a - The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.

b - The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be meaningful.

ca - The calibration results for the analyte were outside of acceptance criteria. The value reported is an estimate.

c - The presence of the analyte may be due to carryover from previous sample injections.

cf - The sample was centrifuged prior to analysis.

d - The sample was diluted. Detection limits were raised and surrogate recoveries may not be meaningful.

dv - Insufficient sample volume was available to achieve normal reporting limits.

f - The sample was laboratory filtered prior to analysis.

fb - The analyte was detected in the method blank.

fc - The compound is a common laboratory and field contaminant.

hr - The sample and duplicate were reextracted and reanalyzed. RPD results were still outside of control limits. Variability is attributed to sample inhomogeneity.

hs - Headspace was present in the container used for analysis.

ht - The analysis was performed outside the method or client-specified holding time requirement.

ip - Recovery fell outside of control limits. Compounds in the sample matrix interfered with the quantitation of the analyte.

j - The analyte concentration is reported below the lowest calibration standard. The value reported is an estimate.

J - The internal standard associated with the analyte is out of control limits. The reported concentration is an estimate.

jl - The laboratory control sample(s) percent recovery and/or RPD were out of control limits. The reported concentration should be considered an estimate.

js - The surrogate associated with the analyte is out of control limits. The reported concentration should be considered an estimate.

lc - The presence of the analyte is likely due to laboratory contamination.

L - The reported concentration was generated from a library search.

nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.

pc - The sample was received with incorrect preservation or in a container not approved by the method. The value reported should be considered an estimate.

ve - The analyte response exceeded the valid instrument calibration range. The value reported is an estimate.

vo - The value reported fell outside the control limits established for this analyte.

x - The sample chromatographic pattern does not resemble the fuel standard used for quantitation.



3600 Fremont Ave. N.
Seattle, WA 98103
T: (206) 352-3790
F: (206) 352-7178
info@fremontanalytical.com

Friedman & Bruya
Michael Erdahl
3012 16th Ave. W.
Seattle, WA 98119

RE: 409405
Lab ID: 1409245

September 30, 2014

Attention Michael Erdahl:

Fremont Analytical, Inc. received 2 sample(s) on 9/23/2014 for the analyses presented in the following report.

Ferrous Iron by SM3500-Fe B
Ion Chromatography by EPA Method 300.0
Total Alkalinity by SM 2320B

This report consists of the following:

- Case Narrative
- Analytical Results
- Applicable Quality Control Summary Reports
- Chain of Custody

All analyses were performed consistent with the Quality Assurance program of Fremont Analytical, Inc. Please contact the laboratory if you should have any questions about the results.

Thank you for using Fremont Analytical.

Sincerely,

Mike Ridgeway
President



Date: 09/30/2014

CLIENT: Friedman & Bruya
Project: 409405
Lab Order: 1409245

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Date/Time Collected	Date/Time Received
1409245-001	MW-11-092214	09/22/2014 1:27 PM	09/23/2014 11:48 AM
1409245-002	MW-12-092214	09/22/2014 2:29 PM	09/23/2014 11:48 AM

Note: If no "Time Collected" is supplied, a default of 12:00AM is assigned

CLIENT: Friedman & Bruya**Project:** 409405

I. SAMPLE RECEIPT:

Samples receipt information is recorded on the attached Sample Receipt Checklist.

II. GENERAL REPORTING COMMENTS:

Results are reported on a wet weight basis unless dry-weight correction is denoted in the units field on the analytical report ("mg/kg-dry" or "ug/kg-dry").

Matrix Spike (MS) and MS Duplicate (MSD) samples are tested from an analytical batch of "like" matrix to check for possible matrix effect. The MS and MSD will provide site specific matrix data only for those samples which are spiked by the laboratory. The sample chosen for spike purposes may or may not have been a sample submitted in this sample delivery group. The validity of the analytical procedures for which data is reported in this analytical report is determined by the Laboratory Control Sample (LCS) and the Method Blank (MB). The LCS and the MB are processed with the samples and the MS/MSD to ensure method criteria are achieved throughout the entire analytical process.

III. ANALYSES AND EXCEPTIONS:

Exceptions associated with this report will be footnoted in the analytical results page(s) or the quality control summary page(s) and/or noted below.



Analytical Report

WO#: 1409245

Date Reported: 9/30/2014

Client: Friedman & Bruya

Collection Date: 9/22/2014 1:27:00 PM

Project: 409405

Lab ID: 1409245-001

Matrix: Water

Client Sample ID: MW-11-092214

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Ion Chromatography by EPA Method 300.0

Batch ID: R16959 Analyst: KT

Chloride	18.7	0.500	D	mg/L	5	9/23/2014 4:29:00 PM
Nitrite	ND	0.100		mg/L	1	9/23/2014 3:30:00 PM
Nitrate	0.426	0.100		mg/L	1	9/23/2014 3:30:00 PM
Sulfate	5.36	0.300		mg/L	1	9/23/2014 3:30:00 PM

Total Alkalinity by SM 2320B

Batch ID: R17115 Analyst: KT

Alkalinity, Total (As CaCO ₃)	372	5.00		mg/L	1	9/30/2014 12:25:00 PM
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Ferrous Iron by SM3500-Fe B

Batch ID: R16929 Analyst: KT

Ferrous Iron	1.52	0.0300		mg/L	1	9/23/2014 1:22:00 PM
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Qualifiers: B Analyte detected in the associated Method Blank
E Value above quantitation range
J Analyte detected below quantitation limits
RL Reporting Limit

D Dilution was required
H Holding times for preparation or analysis exceeded
ND Not detected at the Reporting Limit
S Spike recovery outside accepted recovery limits



Analytical Report

WO#: 1409245

Date Reported: 9/30/2014

Client: Friedman & Bruya

Collection Date: 9/22/2014 2:29:00 PM

Project: 409405

Lab ID: 1409245-002

Matrix: Water

Client Sample ID: MW-12-092214

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Ion Chromatography by EPA Method 300.0

Batch ID: R16959 Analyst: KT

Chloride	6.23	0.200	D	mg/L	2	9/23/2014 4:39:00 PM
Nitrite	ND	0.100		mg/L	1	9/23/2014 3:40:00 PM
Nitrate	0.489	0.100		mg/L	1	9/23/2014 3:40:00 PM
Sulfate	3.66	0.300		mg/L	1	9/23/2014 3:40:00 PM

Total Alkalinity by SM 2320B

Batch ID: R17115 Analyst: KT

Alkalinity, Total (As CaCO ₃)	133	5.00		mg/L	1	9/30/2014 12:35:00 PM
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Ferrous Iron by SM3500-Fe B

Batch ID: R16929 Analyst: KT

Ferrous Iron	ND	0.0300		mg/L	1	9/23/2014 1:23:00 PM
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Qualifiers: B Analyte detected in the associated Method Blank
E Value above quantitation range
J Analyte detected below quantitation limits
RL Reporting Limit

D Dilution was required
H Holding times for preparation or analysis exceeded
ND Not detected at the Reporting Limit
S Spike recovery outside accepted recovery limits



Date: 9/30/2014

Work Order: 1409245
CLIENT: Friedman & Bruya
Project: 409405

QC SUMMARY REPORT
Total Alkalinity by SM 2320B

Sample ID: MB-R17115	SampType: MBLK	Units: mg/L		Prep Date: 9/30/2014	RunNo: 17115
Client ID: MBLKW	Batch ID: R17115	Analysis Date: 9/30/2014		SeqNo: 342771	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Alkalinity, Total (As CaCO3)	ND	5.00									
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Sample ID: LCS-R17115	SampType: LCS	Units: mg/L		Prep Date: 9/30/2014	RunNo: 17115
Client ID: LCSW	Batch ID: R17115	Analysis Date: 9/30/2014		SeqNo: 342772	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Alkalinity, Total (As CaCO3)	95.0	5.00	100.0	0	95.0	80	120				
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Sample ID: 1409245-001BDUP	SampType: DUP	Units: mg/L		Prep Date: 9/30/2014	RunNo: 17115
Client ID: MW-11-092214	Batch ID: R17115	Analysis Date: 9/30/2014		SeqNo: 342774	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Alkalinity, Total (As CaCO3)	355	5.00						372.5	4.81	20	
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Qualifiers:

B	Analyte detected in the associated Method Blank	D	Dilution was required	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	RL	Reporting Limit	S	Spike recovery outside accepted recovery limits



Date: 9/30/2014

Work Order: 1409245
CLIENT: Friedman & Bruya
Project: 409405

QC SUMMARY REPORT

Ferrous Iron by SM3500-Fe B

Sample ID: MB-R16929		SampType: MBLK		Units: mg/L		Prep Date: 9/23/2014			RunNo: 16929			
Client ID: MBLKW		Batch ID: R16929					Analysis Date: 9/23/2014			SeqNo: 339866		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	
Ferrous Iron	ND	0.0300										

Sample ID: LCS-R16929		SampType: LCS		Units: mg/L		Prep Date: 9/23/2014		RunNo: 16929			
Client ID: LCSW		Batch ID: R16929				Analysis Date: 9/23/2014		SeqNo: 339867			
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Ferrous Iron	0.960	0.0300	1.000	0	96.0	90	110				

Sample ID: 1409245-002ADUP		SampType: DUP		Units: mg/L		Prep Date: 9/23/2014			RunNo: 16929			
Client ID: MW-12-092214		Batch ID: R16929					Analysis Date: 9/23/2014			SeqNo: 339870		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	
Ferrous Iron	0.0300	0.0300						0	200	20		

NOTES:

RPDs calculated on results at or near the reporting limit may not be statistically valid.

Sample ID: 1409245-002AMS	SampType: MS	Units: mg/L				Prep Date: 9/23/2014				RunNo: 16929		
Client ID: MW-12-092214	Batch ID: R16929					Analysis Date: 9/23/2014				SeqNo: 339871		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	
Ferrous Iron	0.970	0.0300	1.000	0	97.0	85	115					

Sample ID: 1409245-002AMSD	SampType: MSD	Units: mg/L				Prep Date: 9/23/2014			RunNo: 16929		
Client ID: MW-12-092214	Batch ID: R16929					Analysis Date: 9/23/2014			SeqNo: 339872		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Ferrous Iron	0.980	0.0300	1.000	0	98.0	85	115	0.9700	1.03	20	

Qualifiers:

B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
R RPD outside accepted recovery limits

D Dilution was required
J Analyte detected below quantitation limits
RL Reporting Limit

E Value above quantitation range
ND Not detected at the Reporting Limit
S Spike recovery outside accepted recovery limits



Date: 9/30/2014

Work Order: 1409245
CLIENT: Friedman & Bruya
Project: 409405

QC SUMMARY REPORT
Ferrous Iron by SM3500-Fe B

Sample ID: 1409245-002AMSD	SampType: MSD	Units: mg/L				Prep Date: 9/23/2014				RunNo: 16929		
Client ID: MW-12-092214	Batch ID: R16929					Analysis Date: 9/23/2014				SeqNo: 339872		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	

Qualifiers:	B	Analyte detected in the associated Method Blank	D	Dilution was required	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	RL	Reporting Limit	S	Spike recovery outside accepted recovery limits



Date: 9/30/2014

Work Order: 1409245
CLIENT: Friedman & Bruya
Project: 409405

QC SUMMARY REPORT
Ion Chromatography by EPA Method 300.0

Sample ID: MB-R16959	SampType: MBLK	Units: mg/L			Prep Date: 9/23/2014			RunNo: 16959			
Client ID: MBLKW	Batch ID: R16959				Analysis Date: 9/23/2014			SeqNo: 340478			
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	ND	0.100									
Nitrite	ND	0.100									
Nitrate	ND	0.100									
Sulfate	ND	0.300									

Sample ID: LCS-R16959	SampType: LCS	Units: mg/L				Prep Date: 9/23/2014			RunNo: 16959		
Client ID: LCSW	Batch ID: R16959					Analysis Date: 9/23/2014			SeqNo: 340479		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	3.08	0.100	3.000	0	103	85	115				
Nitrite	2.89	0.100	3.000	0	96.4	85	115				
Nitrate	3.13	0.100	3.000	0	104	85	115				
Sulfate	16.5	0.300	15.00	0	110	85	115				

Sample ID: 1409250-001ADUP	SampType: DUP	Units: mg/L				Prep Date: 9/23/2014			RunNo: 16959		
Client ID: BATCH	Batch ID: R16959					Analysis Date: 9/23/2014			SeqNo: 340481		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	7.34	0.100						7.415	0.999	20	E
Nitrite	ND	0.100						0		20	
Nitrate	0.113	0.100						0.1116	1.16	20	
Sulfate	5.71	0.300						5.704	0.0508	20	

Qualifiers:

B	Analyte detected in the associated Method Blank	D	Dilution was required	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	RL	Reporting Limit	S	Spike recovery outside accepted recovery limits



Date: 9/30/2014

Work Order: 1409245
CLIENT: Friedman & Bruya
Project: 409405

QC SUMMARY REPORT
Ion Chromatography by EPA Method 300.0

Sample ID: 1409250-001AMS	SampType: MS	Units: mg/L				Prep Date: 9/23/2014			RunNo: 16959		
Client ID: BATCH	Batch ID: R16959					Analysis Date: 9/23/2014			SeqNo: 340482		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	10.8	0.100	3.000	7.415	114	80	120				E
Nitrite	2.99	0.100	3.000	0	99.6	80	120				
Nitrate	3.18	0.100	3.000	0.1116	102	80	120				
Sulfate	23.4	0.300	15.00	5.704	118	80	120				E

Sample ID: 1409250-001AMSD		SampType: MSD		Units: mg/L		Prep Date: 9/23/2014			RunNo: 16959		
Client ID: BATCH		Batch ID: R16959					Analysis Date: 9/23/2014			SeqNo: 340483	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	10.8	0.100	3.000	7.415	111	80	120	10.83	0.725	20	E
Nitrite	2.99	0.100	3.000	0	99.8	80	120	2.989	0.175	20	
Nitrate	3.17	0.100	3.000	0.1116	102	80	120	3.184	0.358	20	
Sulfate	23.7	0.300	15.00	5.704	120	80	120	23.39	1.51	20	E

Qualifiers:

B	Analyte detected in the associated Method Blank	D	Dilution was required	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	RL	Reporting Limit	S	Spike recovery outside accepted recovery limits

Client Name: **FB**
 Logged by: **Erica Silva**

Work Order Number: **1409245**
 Date Received: **9/23/2014 11:48:00 AM**

Chain of Custody

1. Is Chain of Custody complete? Yes ☒ No ☐ Not Present ☐
 2. How was the sample delivered? Client

Log In

3. Coolers are present? Yes ☒ No ☐ NA ☐
 4. Shipping container/cooler in good condition? Yes ☒ No ☐
 5. Custody seals intact on shipping container/cooler? Yes ☐ No ☐ Not Required ☒
 6. Was an attempt made to cool the samples? Yes ☒ No ☐ NA ☐
 7. Were all coolers received at a temperature of >0°C to 10.0°C? Yes ☒ No ☐ NA ☐
 8. Sample(s) in proper container(s)? Yes ☒ No ☐
 9. Sufficient sample volume for indicated test(s)? Yes ☒ No ☐
 10. Are samples properly preserved? Yes ☒ No ☐
 11. Was preservative added to bottles? Yes ☐ No ☒ NA ☐
 12. Is the headspace in the VOA vials? Yes ☐ No ☐ NA ☒
 13. Did all samples containers arrive in good condition(unbroken)? Yes ☒ No ☐
 14. Does paperwork match bottle labels? Yes ☒ No ☐
 15. Are matrices correctly identified on Chain of Custody? Yes ☒ No ☐
 16. Is it clear what analyses were requested? Yes ☒ No ☐
 17. Were all holding times able to be met? Yes ☒ No ☐

Special Handling (if applicable)

18. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☒

Person Notified: Date:
 By Whom: Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person
 Regarding:
 Client Instructions:

19. Additional remarks:

Item Information

Item #	Temp °C	Condition
Cooler	13.8	
Sample	10.0	Good

SUBCONTRACT SAMPLE CHAIN OF CUSTODY

1701293

Send Report To Michael Erdahl

Company Friedman and Bruya, Inc.

Address 3012 16th Ave W

City, State, ZIP Seattle, WA 98119

Phone # (206) 285-8282 Fax # (206) 283-5044

SUBCONTRACTOR <u>Fremont</u>	
PROJECT NAME/NO. <u>409405</u>	PO # <u>D-208</u>
REMARKS Please Email Results	

Page # 1 of 1

TURNAROUND TIME

- ☒ Standard (2 Weeks)
☐ RUSH
 Rush charges authorized by: _____

SAMPLE DISPOSAL

- ☐ Dispose after 30 days
☐ Return samples
☐ Will call with instructions

Sample ID	Lab ID	Date Sampled	Time Sampled	Matrix	# of jars	Dioxins and Furans by 8290	EPH	VPH	Nitrate	Sulfate	Alkalinity	Chloride	Dissolved Metals Iron	Notes
MW-11-092214		9/22/14	1327	water					X	X	X	X	X	
MW-12-092214		↓	1429	↓					X	X	X	X	X	

Friedman & Bruya, Inc.
 3012 16th Avenue West
 Seattle, WA 98119-2029
 Ph. (206) 285-8282
 Fax (206) 283-5044

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by: <u>[Signature]</u>	Michael Erdahl	Friedman & Bruya	9/23/14	1130
Received by: <u>[Signature]</u>	Enia Silva	FAI	9/23/14	11:48
Relinquished by:				
Received by:				

409405

Send Report To Kirsi Longley

Company Aspect Consulting

Address 401 2nd Ave S

City, State, ZIP Seattle, WA 98104

Phone (206) 812 4746 Fax # _____



SAMPLE CHAIN OF CUSTODY

ME 09/23/14 BIE/E03
[redacted] of 231/

SAMPLERS (signature) <i>Breen Zimmerman</i>		Page <u>1</u> of <u>311</u>
PROJECT NAME/NO. <i>Ken's Texaco - 120061</i>	PO#	TURNAROUND TIME <input type="checkbox"/> Standard (2 Weeks) <input type="checkbox"/> RUSH _____ Rush charges authorized by _____
REMARKS <div style="text-align: right;"><i>46,</i></div>		SAMPLE DISPOSAL <input type="checkbox"/> Dispose after 30 days <input type="checkbox"/> Return samples <input type="checkbox"/> Will call with instructions

[illegible]

Friedman & Bruya, Inc.
3012 16th Avenue West
Seattle, WA 98119-2029
Ph. (206) 285-8282
Fax (206) 283-5044

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by: 	Brecca Zimmerman	Aspect Consulting	9/22/14	3:05
Received by: 	Nhan Phan	FBI	9/23/14	10:00
Relinquished by:				
Received by:				

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Yelena Aravkina, M.S.
Michael Erdahl, B.S.
Arina Podnozova, B.S.
Eric Young, B.S.

3012 16th Avenue West
Seattle, WA 98119-2029
(206) 285-8282
fbi@isomedia.com
www.friedmanandbruya.com

October 15, 2014

Kirsi Longley, Project Manager
Aspect Consulting, LLC
401 2nd Ave S, Suite 201
Seattle, WA 98104

Dear Ms. Longley:

Included is the amended report from the testing of material submitted on September 24, 2014 from the Ken's Texaco 120061, F&BI 409436 project. Per your request, sample MW-10-092314 has had BTEX added to the gasoline analysis.

We appreciate this opportunity to be of service to you and hope you will call if you have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.



Michael Erdahl
Project Manager

Enclosures

c: data@aspectconsulting.com, Parker Wittman
ASP1006R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Yelena Aravkina, M.S.
Michael Erdahl, B.S.
Arina Podnozova, B.S.
Eric Young, B.S.

3012 16th Avenue West
Seattle, WA 98119-2029
(206) 285-8282
fbi@isomedia.com
www.friedmanandbruya.com

October 6, 2014

Kirsi Longley, Project Manager
Aspect Consulting, LLC
401 2nd Ave S, Suite 201
Seattle, WA 98104

Dear Ms. Longley:

Included are the results from the testing of material submitted on September 24, 2014 from the Ken's Texaco 120061, F&BI 409436 project. There are 23 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

We appreciate this opportunity to be of service to you and hope you will call if you have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.



Michael Erdahl
Project Manager

Enclosures

c: data@aspectconsulting.com, Parker Wittman
ASP1006R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on September 24, 2014 by Friedman & Bruya, Inc. from the Aspect Consulting, LLC Ken's Texaco 120061, F&BI 409436 project. Samples were logged in under the laboratory ID's listed below.

<u>Laboratory ID</u>	<u>Aspect Consulting, LLC</u>
409436 -01	MW-10-092314
409436 -02	MW-13-092314
409436 -03	MW-14-092314
409436 -04	MW-15-092314
409436 -05	MW-16-092314
409436 -06	MW-50-092314

Samples MW-15-092314 and MW-16-092314 were sent to Fremont for alkalinity, chloride, sulfate, nitrate and nitrite analyses. Review of the enclosed report indicates that all quality assurance were acceptable.

All quality control requirements were acceptable.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 10/06/14

Date Received: 09/24/14

Project: Ken's Texaco 120061, F&BI 409436

Date Extracted: 09/24/14

Date Analyzed: 09/25/14

**RESULTS FROM THE ANALYSIS OF WATER SAMPLES
FOR BENZENE, TOLUENE, ETHYLBENZENE,
XYLENES AND TPH AS GASOLINE
USING METHODS 8021B AND NWTPH-Gx**

Results Reported as ug/L (ppb)

<u>Sample ID</u> Laboratory ID	<u>Benzene</u>	<u>Toluene</u>	<u>Ethyl Benzene</u>	<u>Total Xylenes</u>	<u>Gasoline Range</u>	<u>Surrogate (% Recovery)</u> (Limit 52-124)
MW-10-092314 409436-01	<1	<1	<1	<3	<100	85
Method Blank 04-1913 MB	<1	<1	<1	<3	<100	86

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 10/06/14

Date Received: 09/24/14

Project: Ken's Texaco 120061, F&BI 409436

Date Extracted: 09/24/14

Date Analyzed: 09/25/14

**RESULTS FROM THE ANALYSIS OF WATER SAMPLES
FOR TOTAL PETROLEUM HYDROCARBONS AS GASOLINE
USING METHOD NWTPH-Gx**

Results Reported as ug/L (ppb)

<u>Sample ID</u> Laboratory ID	<u>Gasoline Range</u>	Surrogate <u>(% Recovery)</u> (Limit 51-134)
MW-13-092314 409436-02	<100	89
MW-14-092314 409436-03	<100	88
MW-15-092314 409436-04	<100	90
MW-16-092314 409436-05	2,400	93
Method Blank 04-1913 MB	<100	91

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 10/06/14

Date Received: 09/24/14

Project: Ken's Texaco 120061, F&BI 409436

Date Extracted: 09/25/14

Date Analyzed: 09/26/14

**RESULTS FROM THE ANALYSIS OF WATER SAMPLES
FOR TOTAL PETROLEUM HYDROCARBONS AS
DIESEL AND MOTOR OIL
USING METHOD NWTPH-Dx**
Results Reported as ug/L (ppb)

<u>Sample ID</u> Laboratory ID	<u>Diesel Range</u> (C ₁₀ -C ₂₅)	<u>Motor Oil Range</u> (C ₂₅ -C ₃₆)	<u>Surrogate</u> <u>(% Recovery)</u> (Limit 47-140)
MW-10-092314 409436-01	<50	<250	97
MW-13-092314 409436-02	<50	<250	99
MW-14-092314 409436-03	<50	<250	99
MW-15-092314 409436-04	<50	<250	91
MW-16-092314 409436-05	670 x	<250	97
Method Blank 04-1958 MB	<50	<250	91

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Dissolved Metals By EPA Method 200.8

Client ID:	MW-15-092314	Client:	Aspect Consulting, LLC
Date Received:	09/24/14	Project:	Ken's Texaco 120061, F&BI 409436
Date Extracted:	10/01/14	Lab ID:	409436-04
Date Analyzed:	10/02/14	Data File:	409436-04.046
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	86	60	125
Holmium	94	60	125

Analyte:	Concentration ug/L (ppb)
Lead	<1
Manganese	581
Iron	51.3

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Dissolved Metals By EPA Method 200.8

Client ID:	MW-16-092314	Client:	Aspect Consulting, LLC
Date Received:	09/24/14	Project:	Ken's Texaco 120061, F&BI 409436
Date Extracted:	10/01/14	Lab ID:	409436-05
Date Analyzed:	10/02/14	Data File:	409436-05.049
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	87	60	125
Holmium	97	60	125

Analyte:	Concentration ug/L (ppb)
Lead	<1
Manganese	2,450
Iron	132

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Dissolved Metals By EPA Method 200.8

Client ID:	Method Blank	Client:	Aspect Consulting, LLC
Date Received:	NA	Project:	Ken's Texaco 120061, F&BI 409436
Date Extracted:	10/01/14	Lab ID:	I4-616 mb
Date Analyzed:	10/02/14	Data File:	I4-616 mb.044
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Germanium	88	60	125
Holmium	94	60	125

Analyte:	Concentration ug/L (ppb)
Lead	<1
Manganese	<1
Iron	<50

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID: MW-13-092314	Client: Aspect Consulting, LLC
Date Received: 09/24/14	Project: Ken's Texaco 120061, F&BI 409436
Date Extracted: 09/25/14	Lab ID: 409436-02
Date Analyzed: 09/25/14	Data File: 092508.D
Matrix: Water	Instrument: GCMS9
Units: ug/L (ppb)	Operator: JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	103	85	117
Toluene-d8	99	93	107
4-Bromofluorobenzene	97	76	126

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Dichlorodifluoromethane	<1	1,3-Dichloropropane	<1
Chloromethane	<10	Tetrachloroethene	<1
Vinyl chloride	<0.2	Dibromochloromethane	<1
Bromomethane	<1	1,2-Dibromoethane (EDB)	<1
Chloroethane	<1	Chlorobenzene	<1
Trichlorofluoromethane	<1	Ethylbenzene	<1
Acetone	<10	1,1,1,2-Tetrachloroethane	<1
1,1-Dichloroethene	<1	m,p-Xylene	<2
Methylene chloride	<5	o-Xylene	<1
Methyl t-butyl ether (MTBE)	<1	Styrene	<1
trans-1,2-Dichloroethene	<1	Isopropylbenzene	<1
1,1-Dichloroethane	<1	Bromoform	<1
2,2-Dichloropropane	<1	n-Propylbenzene	<1
cis-1,2-Dichloroethene	<1	Bromobenzene	<1
Chloroform	<1	1,3,5-Trimethylbenzene	<1
2-Butanone (MEK)	<10	1,1,2,2-Tetrachloroethane	<1
1,2-Dichloroethane (EDC)	<1	1,2,3-Trichloropropane	<1
1,1,1-Trichloroethane	<1	2-Chlorotoluene	<1
1,1-Dichloropropene	<1	4-Chlorotoluene	<1
Carbon tetrachloride	<1	tert-Butylbenzene	<1
Benzene	<0.35	1,2,4-Trimethylbenzene	<1
Trichloroethene	<1	sec-Butylbenzene	<1
1,2-Dichloropropane	<1	p-Isopropyltoluene	<1
Bromodichloromethane	<1	1,3-Dichlorobenzene	<1
Dibromomethane	<1	1,4-Dichlorobenzene	<1
4-Methyl-2-pentanone	<10	1,2-Dichlorobenzene	<1
cis-1,3-Dichloropropene	<1	1,2-Dibromo-3-chloropropane	<10
Toluene	<1	1,2,4-Trichlorobenzene	<1
trans-1,3-Dichloropropene	<1	Hexachlorobutadiene	<1
1,1,2-Trichloroethane	<1	Naphthalene	<1
2-Hexanone	<10	1,2,3-Trichlorobenzene	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID: MW-14-092314	Client: Aspect Consulting, LLC
Date Received: 09/24/14	Project: Ken's Texaco 120061, F&BI 409436
Date Extracted: 09/25/14	Lab ID: 409436-03
Date Analyzed: 09/25/14	Data File: 092509.D
Matrix: Water	Instrument: GCMS9
Units: ug/L (ppb)	Operator: JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	104	85	117
Toluene-d8	99	93	107
4-Bromofluorobenzene	100	76	126

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Dichlorodifluoromethane	<1	1,3-Dichloropropane	<1
Chloromethane	<10	Tetrachloroethene	<1
Vinyl chloride	<0.2	Dibromochloromethane	<1
Bromomethane	<1	1,2-Dibromoethane (EDB)	<1
Chloroethane	<1	Chlorobenzene	<1
Trichlorofluoromethane	<1	Ethylbenzene	<1
Acetone	<10	1,1,1,2-Tetrachloroethane	<1
1,1-Dichloroethene	<1	m,p-Xylene	<2
Methylene chloride	<5	o-Xylene	<1
Methyl t-butyl ether (MTBE)	<1	Styrene	<1
trans-1,2-Dichloroethene	<1	Isopropylbenzene	<1
1,1-Dichloroethane	<1	Bromoform	<1
2,2-Dichloropropane	<1	n-Propylbenzene	<1
cis-1,2-Dichloroethene	<1	Bromobenzene	<1
Chloroform	<1	1,3,5-Trimethylbenzene	<1
2-Butanone (MEK)	<10	1,1,2,2-Tetrachloroethane	<1
1,2-Dichloroethane (EDC)	<1	1,2,3-Trichloropropane	<1
1,1,1-Trichloroethane	<1	2-Chlorotoluene	<1
1,1-Dichloropropene	<1	4-Chlorotoluene	<1
Carbon tetrachloride	<1	tert-Butylbenzene	<1
Benzene	<0.35	1,2,4-Trimethylbenzene	<1
Trichloroethene	<1	sec-Butylbenzene	<1
1,2-Dichloropropane	<1	p-Isopropyltoluene	<1
Bromodichloromethane	<1	1,3-Dichlorobenzene	<1
Dibromomethane	<1	1,4-Dichlorobenzene	<1
4-Methyl-2-pentanone	<10	1,2-Dichlorobenzene	<1
cis-1,3-Dichloropropene	<1	1,2-Dibromo-3-chloropropane	<10
Toluene	<1	1,2,4-Trichlorobenzene	<1
trans-1,3-Dichloropropene	<1	Hexachlorobutadiene	<1
1,1,2-Trichloroethane	<1	Naphthalene	<1
2-Hexanone	<10	1,2,3-Trichlorobenzene	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID: MW-15-092314	Client: Aspect Consulting, LLC
Date Received: 09/24/14	Project: Ken's Texaco 120061, F&BI 409436
Date Extracted: 09/25/14	Lab ID: 409436-04
Date Analyzed: 09/25/14	Data File: 092510.D
Matrix: Water	Instrument: GCMS9
Units: ug/L (ppb)	Operator: JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	102	85	117
Toluene-d8	99	93	107
4-Bromofluorobenzene	98	76	126

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Dichlorodifluoromethane	<1	1,3-Dichloropropane	<1
Chloromethane	<10	Tetrachloroethene	<1
Vinyl chloride	<0.2	Dibromochloromethane	<1
Bromomethane	<1	1,2-Dibromoethane (EDB)	<1
Chloroethane	<1	Chlorobenzene	<1
Trichlorofluoromethane	<1	Ethylbenzene	<1
Acetone	<10	1,1,1,2-Tetrachloroethane	<1
1,1-Dichloroethene	<1	m,p-Xylene	<2
Methylene chloride	<5	o-Xylene	<1
Methyl t-butyl ether (MTBE)	<1	Styrene	<1
trans-1,2-Dichloroethene	<1	Isopropylbenzene	<1
1,1-Dichloroethane	<1	Bromoform	<1
2,2-Dichloropropane	<1	n-Propylbenzene	<1
cis-1,2-Dichloroethene	<1	Bromobenzene	<1
Chloroform	<1	1,3,5-Trimethylbenzene	<1
2-Butanone (MEK)	<10	1,1,2,2-Tetrachloroethane	<1
1,2-Dichloroethane (EDC)	<1	1,2,3-Trichloropropane	<1
1,1,1-Trichloroethane	<1	2-Chlorotoluene	<1
1,1-Dichloropropene	<1	4-Chlorotoluene	<1
Carbon tetrachloride	<1	tert-Butylbenzene	<1
Benzene	<0.35	1,2,4-Trimethylbenzene	<1
Trichloroethene	<1	sec-Butylbenzene	<1
1,2-Dichloropropane	<1	p-Isopropyltoluene	<1
Bromodichloromethane	<1	1,3-Dichlorobenzene	<1
Dibromomethane	<1	1,4-Dichlorobenzene	<1
4-Methyl-2-pentanone	<10	1,2-Dichlorobenzene	<1
cis-1,3-Dichloropropene	<1	1,2-Dibromo-3-chloropropane	<10
Toluene	<1	1,2,4-Trichlorobenzene	<1
trans-1,3-Dichloropropene	<1	Hexachlorobutadiene	<1
1,1,2-Trichloroethane	<1	Naphthalene	<1
2-Hexanone	<10	1,2,3-Trichlorobenzene	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID: MW-16-092314	Client: Aspect Consulting, LLC
Date Received: 09/24/14	Project: Ken's Texaco 120061, F&BI 409436
Date Extracted: 09/25/14	Lab ID: 409436-05
Date Analyzed: 09/25/14	Data File: 092511.D
Matrix: Water	Instrument: GCMS9
Units: ug/L (ppb)	Operator: JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	100	85	117
Toluene-d8	102	93	107
4-Bromofluorobenzene	99	76	126

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Dichlorodifluoromethane	<1	1,3-Dichloropropane	<1
Chloromethane	<10	Tetrachloroethene	<1
Vinyl chloride	<0.2	Dibromochloromethane	<1
Bromomethane	<1	1,2-Dibromoethane (EDB)	<1
Chloroethane	<1	Chlorobenzene	<1
Trichlorofluoromethane	<1	Ethylbenzene	25
Acetone	<10	1,1,1,2-Tetrachloroethane	<1
1,1-Dichloroethene	<1	m,p-Xylene	15
Methylene chloride	<5	o-Xylene	<1
Methyl t-butyl ether (MTBE)	<1	Styrene	<1
trans-1,2-Dichloroethene	<1	Isopropylbenzene	17
1,1-Dichloroethane	<1	Bromoform	<1
2,2-Dichloropropane	<1	n-Propylbenzene	24
cis-1,2-Dichloroethene	<1	Bromobenzene	<1
Chloroform	<1	1,3,5-Trimethylbenzene	4.4
2-Butanone (MEK)	<10	1,1,2,2-Tetrachloroethane	<1
1,2-Dichloroethane (EDC)	<1	1,2,3-Trichloropropane	<1
1,1,1-Trichloroethane	<1	2-Chlorotoluene	<1
1,1-Dichloropropene	<1	4-Chlorotoluene	<1
Carbon tetrachloride	<1	tert-Butylbenzene	<1
Benzene	<0.35	1,2,4-Trimethylbenzene	6.3
Trichloroethene	<1	sec-Butylbenzene	12
1,2-Dichloropropane	<1	p-Isopropyltoluene	3.7
Bromodichloromethane	<1	1,3-Dichlorobenzene	<1
Dibromomethane	<1	1,4-Dichlorobenzene	<1
4-Methyl-2-pentanone	<10	1,2-Dichlorobenzene	<1
cis-1,3-Dichloropropene	<1	1,2-Dibromo-3-chloropropane	<10
Toluene	<1	1,2,4-Trichlorobenzene	<1
trans-1,3-Dichloropropene	<1	Hexachlorobutadiene	<1
1,1,2-Trichloroethane	<1	Naphthalene	29
2-Hexanone	<10	1,2,3-Trichlorobenzene	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID: MW-50-092314	Client: Aspect Consulting, LLC
Date Received: 09/24/14	Project: Ken's Texaco 120061, F&BI 409436
Date Extracted: 09/25/14	Lab ID: 409436-06
Date Analyzed: 09/25/14	Data File: 092512.D
Matrix: Water	Instrument: GCMS9
Units: ug/L (ppb)	Operator: JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	100	85	117
Toluene-d8	101	93	107
4-Bromofluorobenzene	99	76	126

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Dichlorodifluoromethane	<1	1,3-Dichloropropane	<1
Chloromethane	<10	Tetrachloroethene	<1
Vinyl chloride	<0.2	Dibromochloromethane	<1
Bromomethane	<1	1,2-Dibromoethane (EDB)	<1
Chloroethane	<1	Chlorobenzene	<1
Trichlorofluoromethane	<1	Ethylbenzene	25
Acetone	<10	1,1,1,2-Tetrachloroethane	<1
1,1-Dichloroethene	<1	m,p-Xylene	15
Methylene chloride	<5	o-Xylene	<1
Methyl t-butyl ether (MTBE)	<1	Styrene	<1
trans-1,2-Dichloroethene	<1	Isopropylbenzene	17
1,1-Dichloroethane	<1	Bromoform	<1
2,2-Dichloropropane	<1	n-Propylbenzene	24
cis-1,2-Dichloroethene	<1	Bromobenzene	<1
Chloroform	<1	1,3,5-Trimethylbenzene	4.5
2-Butanone (MEK)	<10	1,1,2,2-Tetrachloroethane	<1
1,2-Dichloroethane (EDC)	<1	1,2,3-Trichloropropane	<1
1,1,1-Trichloroethane	<1	2-Chlorotoluene	<1
1,1-Dichloropropene	<1	4-Chlorotoluene	<1
Carbon tetrachloride	<1	tert-Butylbenzene	<1
Benzene	<0.35	1,2,4-Trimethylbenzene	6.6
Trichloroethene	<1	sec-Butylbenzene	12
1,2-Dichloropropane	<1	p-Isopropyltoluene	3.8
Bromodichloromethane	<1	1,3-Dichlorobenzene	<1
Dibromomethane	<1	1,4-Dichlorobenzene	<1
4-Methyl-2-pentanone	<10	1,2-Dichlorobenzene	<1
cis-1,3-Dichloropropene	<1	1,2-Dibromo-3-chloropropane	<10
Toluene	<1	1,2,4-Trichlorobenzene	<1
trans-1,3-Dichloropropene	<1	Hexachlorobutadiene	<1
1,1,2-Trichloroethane	<1	Naphthalene	30
2-Hexanone	<10	1,2,3-Trichlorobenzene	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	Method Blank	Client:	Aspect Consulting, LLC
Date Received:	Not Applicable	Project:	Ken's Texaco 120061, F&BI 409436
Date Extracted:	09/25/14	Lab ID:	04-1903 mb
Date Analyzed:	09/25/14	Data File:	092507.D
Matrix:	Water	Instrument:	GCMS9
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	103	85	117
Toluene-d8	98	93	107
4-Bromofluorobenzene	98	76	126

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Dichlorodifluoromethane	<1	1,3-Dichloropropane	<1
Chloromethane	<10	Tetrachloroethene	<1
Vinyl chloride	<0.2	Dibromochloromethane	<1
Bromomethane	<1	1,2-Dibromoethane (EDB)	<1
Chloroethane	<1	Chlorobenzene	<1
Trichlorofluoromethane	<1	Ethylbenzene	<1
Acetone	<10	1,1,1,2-Tetrachloroethane	<1
1,1-Dichloroethene	<1	m,p-Xylene	<2
Methylene chloride	<5	o-Xylene	<1
Methyl t-butyl ether (MTBE)	<1	Styrene	<1
trans-1,2-Dichloroethene	<1	Isopropylbenzene	<1
1,1-Dichloroethane	<1	Bromoform	<1
2,2-Dichloropropane	<1	n-Propylbenzene	<1
cis-1,2-Dichloroethene	<1	Bromobenzene	<1
Chloroform	<1	1,3,5-Trimethylbenzene	<1
2-Butanone (MEK)	<10	1,1,2,2-Tetrachloroethane	<1
1,2-Dichloroethane (EDC)	<1	1,2,3-Trichloropropane	<1
1,1,1-Trichloroethane	<1	2-Chlorotoluene	<1
1,1-Dichloropropene	<1	4-Chlorotoluene	<1
Carbon tetrachloride	<1	tert-Butylbenzene	<1
Benzene	<0.35	1,2,4-Trimethylbenzene	<1
Trichloroethene	<1	sec-Butylbenzene	<1
1,2-Dichloropropane	<1	p-Isopropyltoluene	<1
Bromodichloromethane	<1	1,3-Dichlorobenzene	<1
Dibromomethane	<1	1,4-Dichlorobenzene	<1
4-Methyl-2-pentanone	<10	1,2-Dichlorobenzene	<1
cis-1,3-Dichloropropene	<1	1,2-Dibromo-3-chloropropane	<10
Toluene	<1	1,2,4-Trichlorobenzene	<1
trans-1,3-Dichloropropene	<1	Hexachlorobutadiene	<1
1,1,2-Trichloroethane	<1	Naphthalene	<1
2-Hexanone	<10	1,2,3-Trichlorobenzene	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Dissolved Gasses By RSK 175

Client Sample ID:	MW-15-092314	Client:	Aspect Consulting, LLC
Date Received:	09/24/14	Project:	Ken's Texaco 120061, F&BI 409436
Date Extracted:	09/24/14	Lab ID:	409436-04
Date Analyzed:	09/24/14	Data File:	010F1001.D
Matrix:	Water	Instrument:	GC8
Units:	ug/L (ppb)	Operator:	JS

Compounds:	Concentration ug/L (ppb)
Methane	<5

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Dissolved Gasses By RSK 175

Client Sample ID:	MW-16-092314	Client:	Aspect Consulting, LLC
Date Received:	09/24/14	Project:	Ken's Texaco 120061, F&BI 409436
Date Extracted:	09/24/14	Lab ID:	409436-05
Date Analyzed:	09/24/14	Data File:	011F1101.D
Matrix:	Water	Instrument:	GC8
Units:	ug/L (ppb)	Operator:	JS

Compounds:	Concentration ug/L (ppb)
Methane	300

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Dissolved Gasses By RSK 175

Client Sample ID:	Method Blank	Client:	Aspect Consulting, LLC
Date Received:	Not Applicable	Project:	Ken's Texaco 120061, F&BI 409436
Date Extracted:	09/24/14	Lab ID:	04-1897 mb
Date Analyzed:	09/24/14	Data File:	005F0501.D
Matrix:	Water	Instrument:	GC8
Units:	ug/L (ppb)	Operator:	JS

Compounds:	Concentration ug/L (ppb)
Methane	<5

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 10/06/14

Date Received: 09/24/14

Project: Ken's Texaco 120061, F&BI 409436

**QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER
SAMPLES FOR BENZENE, TOLUENE, ETHYLBENZENE,
XYLENES, AND TPH AS GASOLINE
USING EPA METHOD 8021B AND NWTPH-Gx**

Laboratory Code: 409405-05 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	RPD (Limit 20)
Benzene	ug/L (ppb)	<1	<1	nm
Toluene	ug/L (ppb)	<1	<1	nm
Ethylbenzene	ug/L (ppb)	<1	<1	nm
Xylenes	ug/L (ppb)	<3	<3	nm
Gasoline	ug/L (ppb)	<100	<100	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Benzene	ug/L (ppb)	50	88	65-118
Toluene	ug/L (ppb)	50	92	72-122
Ethylbenzene	ug/L (ppb)	50	93	73-126
Xylenes	ug/L (ppb)	150	92	74-118
Gasoline	ug/L (ppb)	1,000	99	69-134

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 10/06/14

Date Received: 09/24/14

Project: Ken's Texaco 120061, F&BI 409436

**QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER
SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS
DIESEL EXTENDED USING METHOD NWTPH-Dx**

Laboratory Code: 409452-03 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	ug/L (ppb)	2,500	620	101	93	64-141	8

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	ug/L (ppb)	2,500	94	96	61-133	2

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 10/06/14

Date Received: 09/24/14

Project: Ken's Texaco 120061, F&BI 409436

**QUALITY ASSURANCE RESULTS
FOR THE ANALYSIS OF WATER SAMPLES
FOR DISSOLVED METALS USING EPA METHOD 200.8**

Laboratory Code: 409436-04 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Lead	ug/L (ppb)	10	<1	100	111	79-121	10
Manganese	ug/L (ppb)	20	581	0 b	131 b	47-155	200 b
Iron	ug/L (ppb)	100	51.3	100 b	112 b	50-150	11 b

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Lead	ug/L (ppb)	10	102	83-115
Manganese	ug/L (ppb)	20	109	76-120
Iron	ug/L (ppb)	100	107	70-130

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 10/06/14

Date Received: 09/24/14

Project: Ken's Texaco 120061, F&BI 409436

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR VOLATILES BY EPA METHOD 8260C

Laboratory Code: 409450-42 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Acceptance Criteria
Dichlorodifluoromethane	ug/L (ppb)	50	<1	80	55-144
Chloromethane	ug/L (ppb)	50	<10	77	67-131
Vinyl chloride	ug/L (ppb)	50	<0.2	86	61-139
Bromomethane	ug/L (ppb)	50	<1	107	66-129
Chloroethane	ug/L (ppb)	50	<1	95	68-126
Trichlorofluoromethane	ug/L (ppb)	50	<1	93	71-128
Acetone	ug/L (ppb)	250	<10	94	48-149
1,1-Dichloroethene	ug/L (ppb)	50	<1	92	71-123
Methylene chloride	ug/L (ppb)	50	<5	101	61-126
Methyl t-butyl ether (MTBE)	ug/L (ppb)	50	<1	98	68-125
trans-1,2-Dichloroethene	ug/L (ppb)	50	<1	94	72-122
1,1-Dichloroethane	ug/L (ppb)	50	<1	95	79-113
2,2-Dichloropropane	ug/L (ppb)	50	<1	102	58-132
cis-1,2-Dichloroethene	ug/L (ppb)	50	<1	101	73-119
Chloroform	ug/L (ppb)	50	<1	98	80-112
2-Butanone (MEK)	ug/L (ppb)	250	<10	96	69-123
1,2-Dichloroethane (EDC)	ug/L (ppb)	50	<1	93	78-113
1,1,1-Trichloroethane	ug/L (ppb)	50	<1	99	79-116
1,1-Dichloropropene	ug/L (ppb)	50	<1	96	67-121
Carbon tetrachloride	ug/L (ppb)	50	<1	98	72-123
Benzene	ug/L (ppb)	50	<0.35	93	79-109
Trichloroethene	ug/L (ppb)	50	<1	96	75-109
1,2-Dichloropropane	ug/L (ppb)	50	<1	96	80-111
Bromodichloromethane	ug/L (ppb)	50	<1	99	78-117
Dibromomethane	ug/L (ppb)	50	<1	98	80-112
4-Methyl-2-pentanone	ug/L (ppb)	250	<10	111	79-123
cis-1,3-Dichloropropene	ug/L (ppb)	50	<1	102	76-120
Toluene	ug/L (ppb)	50	<1	99	73-117
trans-1,3-Dichloropropene	ug/L (ppb)	50	<1	105	75-122
1,1,2-Trichloroethane	ug/L (ppb)	50	<1	103	81-111
2-Hexanone	ug/L (ppb)	250	<10	102	75-126
1,3-Dichloropropane	ug/L (ppb)	50	<1	100	81-111
Tetrachloroethene	ug/L (ppb)	50	<1	102	72-113
Dibromochloromethane	ug/L (ppb)	50	<1	108	69-129
1,2-Dibromoethane (EDB)	ug/L (ppb)	50	<1	104	83-114
Chlorobenzene	ug/L (ppb)	50	<1	100	75-115
Ethylbenzene	ug/L (ppb)	50	<1	103	71-120
1,1,1,2-Tetrachloroethane	ug/L (ppb)	50	<1	106	78-122
m,p-Xylene	ug/L (ppb)	100	<2	107	63-128
o-Xylene	ug/L (ppb)	50	<1	109	64-129
Styrene	ug/L (ppb)	50	<1	110	70-122
Isopropylbenzene	ug/L (ppb)	50	<1	109	76-118
Bromoform	ug/L (ppb)	50	<1	108	49-138
n-Propylbenzene	ug/L (ppb)	50	<1	106	74-117
Bromobenzene	ug/L (ppb)	50	<1	103	70-121
1,3,5-Trimethylbenzene	ug/L (ppb)	50	<1	112	81-112
1,1,2,2-Tetrachloroethane	ug/L (ppb)	50	<1	103	79-120
1,2,3-Trichloropropane	ug/L (ppb)	50	<1	99	72-119
2-Chlorotoluene	ug/L (ppb)	50	<1	105	77-114
4-Chlorotoluene	ug/L (ppb)	50	<1	105	81-109
tert-Butylbenzene	ug/L (ppb)	50	<1	115	81-116
1,2,4-Trimethylbenzene	ug/L (ppb)	50	<1	114	74-118
sec-Butylbenzene	ug/L (ppb)	50	<1	112	77-118
p-Isopropyltoluene	ug/L (ppb)	50	<1	113	64-132
1,3-Dichlorobenzene	ug/L (ppb)	50	<1	103	81-111
1,4-Dichlorobenzene	ug/L (ppb)	50	<1	100	78-110
1,2-Dichlorobenzene	ug/L (ppb)	50	<1	102	81-111
1,2-Dibromo-3-chloropropane	ug/L (ppb)	50	<10	111	69-129
1,2,4-Trichlorobenzene	ug/L (ppb)	50	<1	108	74-115
Hexachlorobutadiene	ug/L (ppb)	50	<1	97	67-120
Naphthalene	ug/L (ppb)	50	<1	119	63-136
1,2,3-Trichlorobenzene	ug/L (ppb)	50	<1	107	79-115

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 10/06/14

Date Received: 09/24/14

Project: Ken's Texaco 120061, F&BI 409436

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR VOLATILES BY EPA METHOD 8260C

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Dichlorodifluoromethane	ug/L (ppb)	50	103	105	54-149	2
Chloromethane	ug/L (ppb)	50	93	94	67-133	1
Vinyl chloride	ug/L (ppb)	50	99	101	73-132	2
Bromomethane	ug/L (ppb)	50	117	115	69-123	2
Chloroethane	ug/L (ppb)	50	106	105	68-126	1
Trichlorofluoromethane	ug/L (ppb)	50	103	103	70-132	0
Acetone	ug/L (ppb)	250	104	104	44-145	0
1,1-Dichloroethene	ug/L (ppb)	50	98	99	75-119	1
Methylene chloride	ug/L (ppb)	50	106	106	63-132	0
Methyl t-butyl ether (MTBE)	ug/L (ppb)	50	101	101	70-122	0
trans-1,2-Dichloroethene	ug/L (ppb)	50	98	98	76-118	0
1,1-Dichloroethane	ug/L (ppb)	50	99	99	80-116	0
2,2-Dichloropropane	ug/L (ppb)	50	104	104	62-141	0
cis-1,2-Dichloroethene	ug/L (ppb)	50	103	103	81-111	0
Chloroform	ug/L (ppb)	50	102	102	81-109	0
2-Butanone (MEK)	ug/L (ppb)	250	96	99	53-140	3
1,2-Dichloroethane (EDC)	ug/L (ppb)	50	96	97	79-109	1
1,1,1-Trichloroethane	ug/L (ppb)	50	102	103	80-116	1
1,1-Dichloropropene	ug/L (ppb)	50	99	100	78-112	1
Carbon tetrachloride	ug/L (ppb)	50	102	104	72-128	2
Benzene	ug/L (ppb)	50	96	97	81-108	1
Trichloroethene	ug/L (ppb)	50	98	99	77-108	1
1,2-Dichloropropane	ug/L (ppb)	50	99	99	82-109	0
Bromodichloromethane	ug/L (ppb)	50	103	105	76-120	2
Dibromomethane	ug/L (ppb)	50	102	102	80-110	0
4-Methyl-2-pentanone	ug/L (ppb)	250	110	109	59-142	1
cis-1,3-Dichloropropene	ug/L (ppb)	50	106	107	76-128	1
Toluene	ug/L (ppb)	50	99	99	83-108	0
trans-1,3-Dichloropropene	ug/L (ppb)	50	106	107	76-128	1
1,1,2-Trichloroethane	ug/L (ppb)	50	102	104	82-110	2
2-Hexanone	ug/L (ppb)	250	104	104	53-145	0
1,3-Dichloropropane	ug/L (ppb)	50	102	101	83-110	1
Tetrachloroethene	ug/L (ppb)	50	102	103	78-109	1
Dibromochloromethane	ug/L (ppb)	50	109	110	63-140	1
1,2-Dibromoethane (EDB)	ug/L (ppb)	50	105	108	85-113	3
Chlorobenzene	ug/L (ppb)	50	99	100	84-108	1
Ethylbenzene	ug/L (ppb)	50	103	103	84-110	0
1,1,1,2-Tetrachloroethane	ug/L (ppb)	50	107	107	76-125	0
m,p-Xylene	ug/L (ppb)	100	107	107	84-112	0
o-Xylene	ug/L (ppb)	50	108	109	82-113	1
Styrene	ug/L (ppb)	50	111	111	84-116	0
Isopropylbenzene	ug/L (ppb)	50	108	110	81-122	2
Bromoform	ug/L (ppb)	50	109	111	40-161	2
n-Propylbenzene	ug/L (ppb)	50	103	105	81-115	2
Bromobenzene	ug/L (ppb)	50	100	102	80-113	2
1,3,5-Trimethylbenzene	ug/L (ppb)	50	111	111	83-117	0
1,1,2,2-Tetrachloroethane	ug/L (ppb)	50	101	102	79-118	1
1,2,3-Trichloropropane	ug/L (ppb)	50	98	99	74-116	1
2-Chlorotoluene	ug/L (ppb)	50	103	103	79-112	0
4-Chlorotoluene	ug/L (ppb)	50	104	104	81-113	0
tert-Butylbenzene	ug/L (ppb)	50	110	113	81-119	3
1,2,4-Trimethylbenzene	ug/L (ppb)	50	111	112	83-116	1
sec-Butylbenzene	ug/L (ppb)	50	110	110	83-116	0
p-Isopropyltoluene	ug/L (ppb)	50	111	112	82-119	1
1,3-Dichlorobenzene	ug/L (ppb)	50	100	101	83-111	1
1,4-Dichlorobenzene	ug/L (ppb)	50	97	98	82-109	1
1,2-Dichlorobenzene	ug/L (ppb)	50	100	101	83-111	1
1,2-Dibromo-3-chloropropane	ug/L (ppb)	50	109	110	62-133	1
1,2,4-Trichlorobenzene	ug/L (ppb)	50	104	104	77-117	0
Hexachlorobutadiene	ug/L (ppb)	50	96	97	74-118	1
Naphthalene	ug/L (ppb)	50	115	117	75-131	2
1,2,3-Trichlorobenzene	ug/L (ppb)	50	105	107	82-115	2

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 10/06/14

Date Received: 09/24/14

Project: Ken's Texaco 120061, F&BI 409436

**QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF
WATER SAMPLES FOR DISSOLVED GASES
USING METHOD RSK 175**

Laboratory Code: 409405-04 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	Relative Percent Difference (Limit 20)
Methane	ug/L (ppb)	230	220	4

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Methane	ug/L (ppb)	500	66	65	50-150	2

Data Qualifiers & Definitions

a - The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.

b - The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be meaningful.

ca - The calibration results for the analyte were outside of acceptance criteria. The value reported is an estimate.

c - The presence of the analyte may be due to carryover from previous sample injections.

cf - The sample was centrifuged prior to analysis.

d - The sample was diluted. Detection limits were raised and surrogate recoveries may not be meaningful.

dv - Insufficient sample volume was available to achieve normal reporting limits.

f - The sample was laboratory filtered prior to analysis.

fb - The analyte was detected in the method blank.

fc - The compound is a common laboratory and field contaminant.

hr - The sample and duplicate were reextracted and reanalyzed. RPD results were still outside of control limits. Variability is attributed to sample inhomogeneity.

hs - Headspace was present in the container used for analysis.

ht - The analysis was performed outside the method or client-specified holding time requirement.

ip - Recovery fell outside of control limits. Compounds in the sample matrix interfered with the quantitation of the analyte.

j - The analyte concentration is reported below the lowest calibration standard. The value reported is an estimate.

J - The internal standard associated with the analyte is out of control limits. The reported concentration is an estimate.

jl - The laboratory control sample(s) percent recovery and/or RPD were out of control limits. The reported concentration should be considered an estimate.

js - The surrogate associated with the analyte is out of control limits. The reported concentration should be considered an estimate.

lc - The presence of the analyte is likely due to laboratory contamination.

L - The reported concentration was generated from a library search.

nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.

pc - The sample was received with incorrect preservation or in a container not approved by the method. The value reported should be considered an estimate.

ve - The analyte response exceeded the valid instrument calibration range. The value reported is an estimate.

vo - The value reported fell outside the control limits established for this analyte.

x - The sample chromatographic pattern does not resemble the fuel standard used for quantitation.



3600 Fremont Ave. N.
Seattle, WA 98103
T: (206) 352-3790
F: (206) 352-7178
info@fremontanalytical.com

Friedman & Bruya
Michael Erdahl
3012 16th Ave. W.
Seattle, WA 98119

RE: 409436
Lab ID: 1409268

October 01, 2014

Attention Michael Erdahl:

Fremont Analytical, Inc. received 2 sample(s) on 9/24/2014 for the analyses presented in the following report.

Ferrous Iron by SM3500-Fe B
Ion Chromatography by EPA Method 300.0
Total Alkalinity by SM 2320B

This report consists of the following:

- Case Narrative
- Analytical Results
- Applicable Quality Control Summary Reports
- Chain of Custody

All analyses were performed consistent with the Quality Assurance program of Fremont Analytical, Inc. Please contact the laboratory if you should have any questions about the results.

Thank you for using Fremont Analytical.

Sincerely,

Mike Ridgeway
President



Date: 10/01/2014

CLIENT: Friedman & Bruya
Project: 409436
Lab Order: 1409268

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Date/Time Collected	Date/Time Received
1409268-001	MW-15-092314	09/23/2014 1:11 PM	09/24/2014 11:44 AM
1409268-002	MW-16-092314	09/23/2014 1:20 AM	09/24/2014 11:44 AM

Note: If no "Time Collected" is supplied, a default of 12:00AM is assigned

CLIENT: Friedman & Bruya**Project:** 409436

I. SAMPLE RECEIPT:

Samples receipt information is recorded on the attached Sample Receipt Checklist.

II. GENERAL REPORTING COMMENTS:

Results are reported on a wet weight basis unless dry-weight correction is denoted in the units field on the analytical report ("mg/kg-dry" or "ug/kg-dry").

Matrix Spike (MS) and MS Duplicate (MSD) samples are tested from an analytical batch of "like" matrix to check for possible matrix effect. The MS and MSD will provide site specific matrix data only for those samples which are spiked by the laboratory. The sample chosen for spike purposes may or may not have been a sample submitted in this sample delivery group. The validity of the analytical procedures for which data is reported in this analytical report is determined by the Laboratory Control Sample (LCS) and the Method Blank (MB). The LCS and the MB are processed with the samples and the MS/MSD to ensure method criteria are achieved throughout the entire analytical process.

III. ANALYSES AND EXCEPTIONS:

Exceptions associated with this report will be footnoted in the analytical results page(s) or the quality control summary page(s) and/or noted below.



Analytical Report

WO#: 1409268

Date Reported: 10/1/2014

CLIENT: Friedman & Bruya

Project: 409436

Lab ID: 1409268-001

Collection Date: 9/23/2014 1:11:00 PM

Client Sample ID: MW-15-092314

Matrix: Water

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Ion Chromatography by EPA Method 300.0

Batch ID: R17009 Analyst: KT

Chloride	2.30	0.100		mg/L	1	9/24/2014 3:54:00 PM
Nitrite	ND	0.100		mg/L	1	9/24/2014 3:54:00 PM
Nitrate	ND	0.100		mg/L	1	9/24/2014 3:54:00 PM
Sulfate	2.08	0.300		mg/L	1	9/24/2014 3:54:00 PM

Total Alkalinity by SM 2320B

Batch ID: R17041 Analyst: KT

Alkalinity, Total (As CaCO ₃)	70.0	5.00		mg/L	1	9/25/2014 4:41:00 PM
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Ferrous Iron by SM3500-Fe B

Batch ID: R16987 Analyst: KT

Ferrous Iron	ND	0.0300		mg/L	1	9/24/2014 1:05:00 PM
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Qualifiers:

B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
RL	Reporting Limit

D	Dilution was required
H	Holding times for preparation or analysis exceeded
ND	Not detected at the Reporting Limit
S	Spike recovery outside accepted recovery limits



Analytical Report

WO#: 1409268

Date Reported: 10/1/2014

CLIENT: Friedman & Bruya

Project: 409436

Lab ID: 1409268-002

Collection Date: 9/23/2014 1:20:00 AM

Client Sample ID: MW-16-092314

Matrix: Water

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Ion Chromatography by EPA Method 300.0

Batch ID: R17009 Analyst: KT

Chloride	3.62	0.100		mg/L	1	9/24/2014 4:33:00 PM
Nitrite	ND	0.100		mg/L	1	9/24/2014 4:33:00 PM
Nitrate	ND	0.100		mg/L	1	9/24/2014 4:33:00 PM
Sulfate	0.944	0.300		mg/L	1	9/24/2014 4:33:00 PM

Total Alkalinity by SM 2320B

Batch ID: R17041 Analyst: KT

Alkalinity, Total (As CaCO ₃)	118	5.00		mg/L	1	9/25/2014 4:44:00 PM
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Ferrous Iron by SM3500-Fe B

Batch ID: R16987 Analyst: KT

Ferrous Iron	ND	0.0300		mg/L	1	9/24/2014 1:05:00 PM
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Qualifiers:

B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
RL	Reporting Limit

D	Dilution was required
H	Holding times for preparation or analysis exceeded
ND	Not detected at the Reporting Limit
S	Spike recovery outside accepted recovery limits



Date: 10/1/2014

Work Order: 1409268
CLIENT: Friedman & Bruya
Project: 409436

QC SUMMARY REPORT

Total Alkalinity by SM 2320B

Sample ID: MB-R17041	SampType: MBLK	Units: mg/L		Prep Date: 9/25/2014	RunNo: 17041
Client ID: MBLKW	Batch ID: R17041	Analysis Date: 9/25/2014		SeqNo: 341477	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Alkalinity, Total (As CaCO₃) ND 5.00

Sample ID: LCS-R17041	SampType: LCS	Units: mg/L		Prep Date: 9/25/2014	RunNo: 17041
Client ID: LCSW	Batch ID: R17041	Analysis Date: 9/25/2014		SeqNo: 341478	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Alkalinity, Total (As CaCO₃) 100 5.00 100.0 0 100 80 120

Sample ID: 1409268-002ADUP	SampType: DUP	Units: mg/L		Prep Date: 9/25/2014	RunNo: 17041
Client ID: MW-16-092314	Batch ID: R17041	Analysis Date: 9/25/2014		SeqNo: 341491	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Alkalinity, Total (As CaCO₃) 115 5.00 117.5 2.15 20

Qualifiers:

B	Analyte detected in the associated Method Blank	D	Dilution was required	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	RL	Reporting Limit	S	Spike recovery outside accepted recovery limits



Date: 10/1/2014

Work Order: 1409268
CLIENT: Friedman & Bruya
Project: 409436

QC SUMMARY REPORT

Ferrous Iron by SM3500-Fe B

Sample ID: MB-R16987		SampType: MBLK		Units: mg/L		Prep Date: 9/24/2014			RunNo: 16987			
Client ID: MBLKW		Batch ID: R16987					Analysis Date: 9/24/2014			SeqNo: 340640		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	

Ferrous Iron	ND	0.0300									
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Sample ID: LCS-R16987		SampType: LCS			Units: mg/L		Prep Date: 9/24/2014			RunNo: 16987		
Client ID: LCSW		Batch ID: R16987			Analysis Date: 9/24/2014			SeqNo: 340641				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	

Ferrous Iron	0.950	0.0300	1.000	0	95.0	90	110				
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Sample ID: 1409268-001BDUP		SampType: DUP			Units: mg/L		Prep Date: 9/24/2014			RunNo: 16987		
Client ID: MW-15-092314		Batch ID: R16987			Analysis Date: 9/24/2014			SeqNo: 340644				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	

Ferrous Iron	ND	0.0300						0		20	
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Sample ID: 1409268-001BMS		SampType: MS		Units: mg/L		Prep Date: 9/24/2014			RunNo: 16987			
Client ID: MW-15-092314		Batch ID: R16987					Analysis Date: 9/24/2014			SeqNo: 340645		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	

Ferrous Iron	1.00	0.0300	1.000	0	100	85	115				
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Sample ID: 1409268-001BMSD		SampType: MSD			Units: mg/L		Prep Date: 9/24/2014			RunNo: 16987		
Client ID: MW-15-092314		Batch ID: R16987			Analysis Date: 9/24/2014					SeqNo: 340646		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	

Ferrous Iron	1.02	0.0300	1.000	0	102	85	115	1.000	1.98	20	
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Qualifiers:

B	Analyte detected in the associated Method Blank	D	Dilution was required	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	RL	Reporting Limit	S	Spike recovery outside accepted recovery limits



Date: 10/1/2014

Work Order: 1409268
CLIENT: Friedman & Bruya
Project: 409436

QC SUMMARY REPORT
Ion Chromatography by EPA Method 300.0

Sample ID: MB-R17009	SampType: MBLK	Units: mg/L			Prep Date: 9/24/2014			RunNo: 17009			
Client ID: MBLKW	Batch ID: R17009				Analysis Date: 9/24/2014			SeqNo: 341014			
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	ND	0.100									
Nitrite	ND	0.100									
Nitrate	ND	0.100									
Sulfate	ND	0.300									

Sample ID: LCS-R17009	SampType: LCS	Units: mg/L				Prep Date: 9/24/2014			RunNo: 17009		
Client ID: LCSW	Batch ID: R17009					Analysis Date: 9/24/2014			SeqNo: 341015		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	2.90	0.100	3.000	0	96.8	90	110				
Nitrite	2.79	0.100	3.000	0	92.9	90	110				
Nitrate	3.03	0.100	3.000	0	101	90	110				
Sulfate	15.7	0.300	15.00	0	105	90	110				

Sample ID: 1409268-001ADUP		SampType: DUP		Units: mg/L		Prep Date: 9/24/2014			RunNo: 17009		
Client ID: MW-15-092314		Batch ID: R17009					Analysis Date: 9/24/2014			SeqNo: 341017	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	2.34	0.100						2.304	1.39	20	
Nitrite	ND	0.100						0		20	
Nitrate	ND	0.100						0		20	
Sulfate	2.10	0.300						2.082	0.894	20	

Qualifiers:

B	Analyte detected in the associated Method Blank	D	Dilution was required	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	RL	Reporting Limit	S	Spike recovery outside accepted recovery limits



Date: 10/1/2014

Work Order: 1409268
CLIENT: Friedman & Bruya
Project: 409436

QC SUMMARY REPORT
Ion Chromatography by EPA Method 300.0

Sample ID: 1409268-001AMS		SampType: MS		Units: mg/L		Prep Date: 9/24/2014			RunNo: 17009		
Client ID: MW-15-092314		Batch ID: R17009					Analysis Date: 9/24/2014			SeqNo: 341018	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chloride	5.23	0.100	3.000	2.304	97.5	80	120				
Nitrite	2.76	0.100	3.000	0	91.8	80	120				
Nitrate	3.07	0.100	3.000	0	102	80	120				
Sulfate	17.9	0.300	15.00	2.082	106	80	120				

Sample ID: 1409268-001AMSD		SampType: MSD		Units: mg/L		Prep Date: 9/24/2014			RunNo: 17009		
Client ID: MW-15-092314		Batch ID: R17009					Analysis Date: 9/24/2014			SeqNo: 341019	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chloride	5.26	0.100	3.000	2.304	98.6	80	120	5.229	0.649	20	
Nitrite	2.81	0.100	3.000	0	93.5	80	120	2.755	1.80	20	
Nitrate	3.08	0.100	3.000	0	103	80	120	3.075	0.302	20	
Sulfate	18.0	0.300	15.00	2.082	106	80	120	17.92	0.255	20	

Qualifiers:

B	Analyte detected in the associated Method Blank	D	Dilution was required	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	RL	Reporting Limit	S	Spike recovery outside accepted recovery limits



Sample Log-In Check List

Client Name: **FB**
Logged by: **Erica Silva**

Work Order Number: **1409268**
Date Received: **9/24/2014 11:44:00 AM**

Chain of Custody

1. Is Chain of Custody complete? Yes ☒ No ☐ Not Present ☐
2. How was the sample delivered? Client

Log In

3. Coolers are present? Yes ☒ No ☐ NA ☐
4. Shipping container/cooler in good condition? Yes ☒ No ☐
5. Custody seals intact on shipping container/cooler? Yes ☐ No ☐ Not Required ☒
6. Was an attempt made to cool the samples? Yes ☒ No ☐ NA ☐
7. Were all coolers received at a temperature of $>0^{\circ}\text{C}$ to 10.0°C ? Yes ☒ No ☐ NA ☐
8. Sample(s) in proper container(s)? Yes ☒ No ☐
9. Sufficient sample volume for indicated test(s)? Yes ☒ No ☐
10. Are samples properly preserved? Yes ☒ No ☐
11. Was preservative added to bottles? Yes ☐ No ☒ NA ☐
12. Is the headspace in the VOA vials? Yes ☐ No ☐ NA ☒
13. Did all samples containers arrive in good condition(unbroken)? Yes ☒ No ☐
14. Does paperwork match bottle labels? Yes ☒ No ☐
15. Are matrices correctly identified on Chain of Custody? Yes ☒ No ☐
16. Is it clear what analyses were requested? Yes ☒ No ☐
17. Were all holding times able to be met? Yes ☒ No ☐

Special Handling (if applicable)

18. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☒

Person Notified: Date:
By Whom: Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person
Regarding:
Client Instructions:

19. Additional remarks:

Item Information

Item #	Temp °C	Condition
Cooler	7.3	Good
Sample	5.4	Good

SUBCONTRACT SAMPLE CHAIN OF CUSTODY

1409268

Send Report To Michael Erdahl
 Company Friedman and Bruva, Inc.
 Address 3012 16th Ave W
 City, State, ZIP Seattle, WA 98119
 Phone # (206) 285-8282 Fax # (206) 283-5044

SUBCONTRACTOR <u>Fremont</u>	
PROJECT NAME/NO. <u>409436</u>	PO # <u>D-216</u>
REMARKS <u>Please Email Results</u>	

Page # <u>1</u> of <u>1</u>
TURNAROUND TIME <input checked="" type="checkbox"/> Standard (2 Weeks) <input type="checkbox"/> RUSH Rush charges authorized by: _____
SAMPLE DISPOSAL <input type="checkbox"/> Dispose after 30 days <input type="checkbox"/> Return samples <input type="checkbox"/> Will call with instructions

Sample ID	Lab ID	Date Sampled	Time Sampled	Matrix	# of jars	Dioxins and Furans by 8290	EPH	chloride XpH	Nitrate	Sulfate	Alkalinity	Dissolved Heavy Iron	Notes
<u>15</u> <u>MW-16-092314</u>		<u>9/23/14</u>	<u>1311</u>	<u>water</u>	<u>3</u>			<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>	
<u>16</u> <u>MW-20-092314</u>		<u>↓</u>	<u>1320</u>	<u>↓</u>	<u>3</u>			<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>	

Friedman & Bruva, Inc.
 3012 16th Avenue West
 Seattle, WA 98119-2029
 Ph. (206) 285-8282
 Fax (206) 283-5044

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
<u>Michael Erdahl</u>	<u>Michael Erdahl</u>	<u>Friedman & Bruva</u>	<u>9/24/14</u>	<u>11:10 AM</u>
<u>Clare Griggs</u>	<u>Clare Griggs</u>	<u>FBI</u>	<u>9/24</u>	<u>11:44</u>

409436

SAMPLE CHAIN OF CUSTODY

ME 09-24-14

V4/1004/ATS

Send Report To

Kirsi Longley

Company

Aspect Consulting

Address

401 2nd Ave S

City, State, ZIP

Seattle, WA 98104

Phone

(206) 812 4944

Fax #

SAMPLERS (Signature)

PROJECT NAME/NO.

Kens Toxicol

120061

PO#

REMARKS

TURNAROUND TIME

☐ Standard (2 Weeks)☐ RUSH

Rush charges authorized by

SAMPLE DISPOSAL

☐ Dispose after 30 days☐ Return samples☐ Will call with instructions

ANALYSIS REQUESTED

						ANALYSIS REQUESTED													
Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of containers	TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by 8260	SVOCs by 8270	HFS	Alkalinity, ch nitrate/nitrite	Methane	Dissolved Mn	Dissolved Pb	Dissolved Fe	Dissolved Iron	0-per KL 10/14/14 Notes #4	
MW-10-092314	01G	9/23/14	1007	H ₂ O	7	X	X												60-per KL
MW-13-092314	02H	↓	1215	↓	8			X	X						X			9/24/14	
MW-14-092314	03H	↓	1103	↓	8			X	X						X			#4.	
MW-15-092314	04N	↓	1433	↓	14			X	X			(X)	(X)	(X)	(X)	(X)	(X)		
MW-16-092314	05Q	↓	1311	↓	17	↓	X	X	X			X	X	X	X	X	(X)		
MW-50-092314	06C	✓	1320	✓	3	↓			X			X	X	X	X	X		*canceled per 9/24/14 ac.	
																		3. #C	

Samples received at 3:15

Friedman & Bruya, Inc.
3012 16th Avenue West

Seattle, WA 98119-2029

Ph. (206) 285-8282

Fax (206) 283-5044

FORMS\COC\COC.DOC

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Brocan Zimmerman	Aspect Consulting	9/23/14	3:15pm
Received by:	DD	FeB2	9-24-14	10:55
Relinquished by:				
Received by:				

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Yelena Aravkina, M.S.
Michael Erdahl, B.S.
Arina Podnozova, B.S.
Eric Young, B.S.

3012 16th Avenue West
Seattle, WA 98119-2029
(206) 285-8282
fbi@isomedia.com
www.friedmanandbruya.com

January 6, 2015

Kirsi Longley, Project Manager
Aspect Consulting, LLC
401 2nd Ave S, Suite 201
Seattle, WA 98104

Dear Ms. Longley:

Included are the results from the testing of material submitted on December 24, 2014 from the Ken's Texaco 120061, F&BI 412393 project. There are 15 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

We appreciate this opportunity to be of service to you and hope you will call if you have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.



Michael Erdahl
Project Manager

Enclosures

c: data@aspectconsulting.com, Parker Wittman
ASP0106R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on December 24, 2014 by Friedman & Bruya, Inc. from the Aspect Consulting, LLC Ken's Texaco 120061, F&BI 412393 project. Samples were logged in under the laboratory ID's listed below.

<u>Laboratory ID</u>	<u>Aspect Consulting, LLC</u>
412393 -01	MW-7-122314
412393 -02	MW-8-122314
412393 -03	MW-10-122314
412393 -04	MW-14-122314

All quality control requirements were acceptable.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 01/06/15

Date Received: 12/24/14

Project: Ken's Texaco 120061, F&BI 412393

Date Extracted: 12/24/14

Date Analyzed: 12/24/14

**RESULTS FROM THE ANALYSIS OF WATER SAMPLES
FOR BENZENE, TOLUENE, ETHYLBENZENE,
XYLENES AND TPH AS GASOLINE
USING METHODS 8021B AND NWTPH-Gx**

Results Reported as ug/L (ppb)

<u>Sample ID</u> Laboratory ID	<u>Benzene</u>	<u>Toluene</u>	<u>Ethyl Benzene</u>	<u>Total Xylenes</u>	<u>Gasoline Range</u>	<u>Surrogate (% Recovery)</u> (Limit 52-124)
MW-7-122314 412393-01	<1	<1	1.5	3.5	460	112
MW-8-122314 412393-02	46	12	60	29	1,100	119
MW-10-122314 412393-03	<1	<1	<1	<3	<100	108
MW-14-122314 412393-04	<1	<1	<1	<3	<100	106
Method Blank 04-2556 MB	<1	<1	<1	<3	<100	104

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 01/06/15

Date Received: 12/24/14

Project: Ken's Texaco 120061, F&BI 412393

Date Extracted: 12/24/14

Date Analyzed: 12/26/14

**RESULTS FROM THE ANALYSIS OF WATER SAMPLES
FOR TOTAL PETROLEUM HYDROCARBONS AS
DIESEL AND MOTOR OIL
USING METHOD NWTPH-Dx**
Results Reported as ug/L (ppb)

<u>Sample ID</u> Laboratory ID	<u>Diesel Range</u> (C ₁₀ -C ₂₅)	<u>Motor Oil Range</u> (C ₂₅ -C ₃₆)	<u>Surrogate</u> (% Recovery) (Limit 41-152)
MW-7-122314 412393-01	110 x	<250	112
MW-8-122314 412393-02	160 x	<250	106
MW-10-122314 412393-03	<50	<250	100
MW-14-122314 412393-04	<50	<250	95
Method Blank 04-2563 MB	<50	<250	97

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 200.8

Client ID:	MW-14-122314	Client:	Aspect Consulting, LLC
Date Received:	12/24/14	Project:	Ken's Texaco 120061, F&BI 412393
Date Extracted:	12/24/14	Lab ID:	412393-04
Date Analyzed:	12/29/14	Data File:	412393-04.015
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Holmium	91	60	125

Analyte:	Concentration ug/L (ppb)
----------	-----------------------------

Lead	<1
------	----

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 200.8

Client ID:	Method Blank	Client:	Aspect Consulting, LLC
Date Received:	NA	Project:	Ken's Texaco 120061, F&BI 412393
Date Extracted:	12/24/14	Lab ID:	I4-822 mb
Date Analyzed:	12/29/14	Data File:	I4-822 mb.036
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Holmium	98	60	125

Analyte:	Concentration ug/L (ppb)
----------	-----------------------------

Lead	<1
------	----

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW-10-122314	Client:	Aspect Consulting, LLC
Date Received:	12/24/14	Project:	Ken's Texaco 120061, F&BI 412393
Date Extracted:	12/24/14	Lab ID:	412393-03
Date Analyzed:	12/24/14	Data File:	122411.D
Matrix:	Water	Instrument:	GCMS9
Units:	ug/L (ppb)	Operator:	SP

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	101	85	117
Toluene-d8	104	93	107
4-Bromofluorobenzene	98	76	126

Compounds:	Concentration ug/L (ppb)
1,2-Dichloroethane (EDC)	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	Method Blank	Client:	Aspect Consulting, LLC
Date Received:	Not Applicable	Project:	Ken's Texaco 120061, F&BI 412393
Date Extracted:	12/24/14	Lab ID:	04-2530 mb
Date Analyzed:	12/24/14	Data File:	122407.D
Matrix:	Water	Instrument:	GCMS9
Units:	ug/L (ppb)	Operator:	SP

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	100	85	117
Toluene-d8	104	93	107
4-Bromofluorobenzene	98	76	126

Compounds:	Concentration ug/L (ppb)
1,2-Dichloroethane (EDC)	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW-14-122314	Client:	Aspect Consulting, LLC
Date Received:	12/24/14	Project:	Ken's Texaco 120061, F&BI 412393
Date Extracted:	12/24/14	Lab ID:	412393-04
Date Analyzed:	12/24/14	Data File:	122412.D
Matrix:	Water	Instrument:	GCMS9
Units:	ug/L (ppb)	Operator:	SP

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	102	85	117
Toluene-d8	104	93	107
4-Bromofluorobenzene	99	76	126

Compounds:	Concentration ug/L (ppb)
Hexane	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	Method Blank	Client:	Aspect Consulting, LLC
Date Received:	Not Applicable	Project:	Ken's Texaco 120061, F&BI 412393
Date Extracted:	12/24/14	Lab ID:	04-2530 mb
Date Analyzed:	12/24/14	Data File:	122407.D
Matrix:	Water	Instrument:	GCMS9
Units:	ug/L (ppb)	Operator:	SP

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	100	85	117
Toluene-d8	104	93	107
4-Bromofluorobenzene	98	76	126

Compounds:	Concentration ug/L (ppb)
Hexane	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 01/06/15

Date Received: 12/24/14

Project: Ken's Texaco 120061, F&BI 412393

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR BENZENE, TOLUENE, ETHYLBENZENE, XYLENES, AND TPH AS GASOLINE USING EPA METHOD 8021B AND NWTPH-Gx

Laboratory Code: 412393-04 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	RPD (Limit 20)
Benzene	ug/L (ppb)	<1	<1	nm
Toluene	ug/L (ppb)	<1	<1	nm
Ethylbenzene	ug/L (ppb)	<1	<1	nm
Xylenes	ug/L (ppb)	<3	<3	nm
Gasoline	ug/L (ppb)	<100	<100	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery	Acceptance
			LCS	Criteria
Benzene	ug/L (ppb)	50	102	65-118
Toluene	ug/L (ppb)	50	106	72-122
Ethylbenzene	ug/L (ppb)	50	109	73-126
Xylenes	ug/L (ppb)	150	107	74-118
Gasoline	ug/L (ppb)	1,000	102	69-134

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 01/06/15

Date Received: 12/24/14

Project: Ken's Texaco 120061, F&BI 412393

**QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER
SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS
DIESEL EXTENDED USING METHOD NWTPH-Dx**

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	ug/L (ppb)	2,500	97	108	63-142	11

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 01/06/15

Date Received: 12/24/14

Project: Ken's Texaco 120061, F&BI 412393

**QUALITY ASSURANCE RESULTS
FOR THE ANALYSIS OF WATER SAMPLES
FOR TOTAL METALS USING EPA METHOD 200.8**

Laboratory Code: 412393-04 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Lead	ug/L (ppb)	10	<1	102	103	79-121	1

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Lead	ug/L (ppb)	10	109	83-115

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 01/06/15

Date Received: 12/24/14

Project: Ken's Texaco 120061, F&BI 412393

**QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER
SAMPLES FOR VOLATILES BY EPA METHOD 8260C**

Laboratory Code: 412393-03 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Acceptance Criteria
1,2-Dichloroethane (EDC)	ug/L (ppb)	50	<1	105	78-113

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
1,2-Dichloroethane (EDC)	ug/L (ppb)	50	101	99	79-109	2

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 01/06/15

Date Received: 12/24/14

Project: Ken's Texaco 120061, F&BI 412393

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR VOLATILES BY EPA METHOD 8260C

Laboratory Code: 412393-03 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Acceptance Criteria
Hexane	ug/L (ppb)	50	<1	98	61-127

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Hexane	ug/L (ppb)	50	98	97	51-153	1

Data Qualifiers & Definitions

- a - The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.
- b - The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be meaningful.
- ca - The calibration results for the analyte were outside of acceptance criteria. The value reported is an estimate.
- c - The presence of the analyte may be due to carryover from previous sample injections.
- cf - The sample was centrifuged prior to analysis.
- d - The sample was diluted. Detection limits were raised and surrogate recoveries may not be meaningful.
- dv - Insufficient sample volume was available to achieve normal reporting limits.
- f - The sample was laboratory filtered prior to analysis.
- fb - The analyte was detected in the method blank.
- fc - The compound is a common laboratory and field contaminant.
- hr - The sample and duplicate were reextracted and reanalyzed. RPD results were still outside of control limits. Variability is attributed to sample inhomogeneity.
- hs - Headspace was present in the container used for analysis.
- ht - The analysis was performed outside the method or client-specified holding time requirement.
- ip - Recovery fell outside of control limits. Compounds in the sample matrix interfered with the quantitation of the analyte.
- j - The analyte concentration is reported below the lowest calibration standard. The value reported is an estimate.
- J - The internal standard associated with the analyte is out of control limits. The reported concentration is an estimate.
- jl - The laboratory control sample(s) percent recovery and/or RPD were out of control limits. The reported concentration should be considered an estimate.
- js - The surrogate associated with the analyte is out of control limits. The reported concentration should be considered an estimate.
- lc - The presence of the analyte is likely due to laboratory contamination.
- L - The reported concentration was generated from a library search.
- nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.
- pc - The sample was received with incorrect preservation or in a container not approved by the method. The value reported should be considered an estimate.
- ve - The analyte response exceeded the valid instrument calibration range. The value reported is an estimate.
- vo - The value reported fell outside the control limits established for this analyte.
- x - The sample chromatographic pattern does not resemble the fuel standard used for quantitation.

FORMS\COC\COC.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Yelena Aravkina, M.S.
Michael Erdahl, B.S.
Arina Podnozova, B.S.
Eric Young, B.S.

3012 16th Avenue West
Seattle, WA 98119-2029
(206) 285-8282
fbi@isomedia.com
www.friedmanandbruya.com

January 9, 2015

Kirsi Longley, Project Manager
Aspect Consulting, LLC
401 2nd Ave S, Suite 201
Seattle, WA 98104

Dear Ms. Longley:

Included are the results from the testing of material submitted on December 24, 2014 from the Kens Texaco-120061, F&BI 412405 project. There are 8 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

We appreciate this opportunity to be of service to you and hope you will call if you have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.



Michael Erdahl
Project Manager

Enclosures

c: data@aspectconsulting.com, Parker Wittman
ASP0109R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on December 24, 2014 by Friedman & Bruya, Inc. from the Aspect Consulting, LLC Kens Texaco-120061, F&BI 412405 project. Samples were logged in under the laboratory ID's listed below.

<u>Laboratory ID</u>	<u>Aspect Consulting, LLC</u>
412405 -01	MW-1-122114
412405 -02	MW-11-122214
412405 -03	MW-12-122214
412405 -04	Trip Blank

All quality control requirements were acceptable.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 01/09/15

Date Received: 12/24/14

Project: Kens Texaco-120061, F&BI 412405

Date Extracted: 01/05/15

Date Analyzed: 01/05/15

**RESULTS FROM THE ANALYSIS OF WATER SAMPLES
FOR BENZENE, TOLUENE, ETHYLBENZENE, AND XYLENES
USING METHOD 8021B**

Results Reported as ug/L (ppb)

<u>Sample ID</u> Laboratory ID	<u>Benzene</u>	<u>Toluene</u>	<u>Ethyl Benzene</u>	<u>Total Xylenes</u>	<u>Surrogate (% Recovery)</u> Limit (50-150)
Trip Blank 412405-04	<1	<1	<1	<3	93
Method Blank 05-0013 MB	<1	<1	<1	<3	88

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 01/09/15

Date Received: 12/24/14

Project: Kens Texaco-120061, F&BI 412405

Date Extracted: 12/29/14

Date Analyzed: 12/29/14

**RESULTS FROM THE ANALYSIS OF WATER SAMPLES
FOR BENZENE, TOLUENE, ETHYLBENZENE,
XYLENES AND TPH AS GASOLINE
USING METHODS 8021B AND NWTPH-Gx**

Results Reported as ug/L (ppb)

<u>Sample ID</u> Laboratory ID	<u>Benzene</u>	<u>Toluene</u>	<u>Ethyl Benzene</u>	<u>Total Xylenes</u>	<u>Gasoline Range</u>	<u>Surrogate (% Recovery)</u> (Limit 52-124)
MW-1-122114 412405-01	<1	<1	7.0	16	2,000	ip
Method Blank 04-2557 MB	<1	<1	<1	<3	<100	105

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 01/09/15

Date Received: 12/24/14

Project: Kens Texaco-120061, F&BI 412405

Date Extracted: 12/29/14

Date Analyzed: 12/29/14

**RESULTS FROM THE ANALYSIS OF WATER SAMPLES
FOR TOTAL PETROLEUM HYDROCARBONS AS
DIESEL AND MOTOR OIL
USING METHOD NWTPH-Dx**
Results Reported as ug/L (ppb)

<u>Sample ID</u>	<u>Diesel Range</u>	<u>Motor Oil Range</u>	<u>Surrogate</u>
Laboratory ID	(C ₁₀ -C ₂₅)	(C ₂₅ -C ₃₆)	(% Recovery)
			(Limit 41-152)
MW-1-122114	320 x	<250	85
412405-01			
Method Blank	<50	<250	84
04-2571 MB			

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 01/09/15

Date Received: 12/24/14

Project: Kens Texaco-120061, F&BI 412405

**QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER
SAMPLES FOR BENZENE, TOLUENE, ETHYLBENZENE,
AND XYLENES
USING EPA METHOD 8021B**

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Benzene	ug/L (ppb)	50	84	85	72-119	1
Toluene	ug/L (ppb)	50	83	96	71-113	15
Ethylbenzene	ug/L (ppb)	50	83	96	72-114	15
Xylenes	ug/L (ppb)	150	76	86	72-113	12

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 01/09/15

Date Received: 12/24/14

Project: Kens Texaco-120061, F&BI 412405

**QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER
SAMPLES FOR BENZENE, TOLUENE, ETHYLBENZENE,
XYLENES, AND TPH AS GASOLINE
USING EPA METHOD 8021B AND NWTPH-Gx**

Laboratory Code: 412409-01 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	RPD (Limit 20)
Benzene	ug/L (ppb)	<1	<1	nm
Toluene	ug/L (ppb)	<1	<1	nm
Ethylbenzene	ug/L (ppb)	<1	<1	nm
Xylenes	ug/L (ppb)	<3	<3	nm
Gasoline	ug/L (ppb)	<100	<100	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery	Acceptance
			LCS	Criteria
Benzene	ug/L (ppb)	50	98	65-118
Toluene	ug/L (ppb)	50	102	72-122
Ethylbenzene	ug/L (ppb)	50	106	73-126
Xylenes	ug/L (ppb)	150	105	74-118
Gasoline	ug/L (ppb)	1,000	102	69-134

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 01/09/15

Date Received: 12/24/14

Project: Kens Texaco-120061, F&BI 412405

**QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER
SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS
DIESEL EXTENDED USING METHOD NWTPH-Dx**

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	ug/L (ppb)	2,500	82	85	63-142	4

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Data Qualifiers & Definitions

- a - The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.
- b - The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be meaningful.
- ca - The calibration results for the analyte were outside of acceptance criteria. The value reported is an estimate.
- c - The presence of the analyte may be due to carryover from previous sample injections.
- cf - The sample was centrifuged prior to analysis.
- d - The sample was diluted. Detection limits were raised and surrogate recoveries may not be meaningful.
- dv - Insufficient sample volume was available to achieve normal reporting limits.
- f - The sample was laboratory filtered prior to analysis.
- fb - The analyte was detected in the method blank.
- fc - The compound is a common laboratory and field contaminant.
- hr - The sample and duplicate were reextracted and reanalyzed. RPD results were still outside of control limits. Variability is attributed to sample inhomogeneity.
- hs - Headspace was present in the container used for analysis.
- ht - The analysis was performed outside the method or client-specified holding time requirement.
- ip - Recovery fell outside of control limits. Compounds in the sample matrix interfered with the quantitation of the analyte.
- j - The analyte concentration is reported below the lowest calibration standard. The value reported is an estimate.
- J - The internal standard associated with the analyte is out of control limits. The reported concentration is an estimate.
- jl - The laboratory control sample(s) percent recovery and/or RPD were out of control limits. The reported concentration should be considered an estimate.
- js - The surrogate associated with the analyte is out of control limits. The reported concentration should be considered an estimate.
- lc - The presence of the analyte is likely due to laboratory contamination.
- L - The reported concentration was generated from a library search.
- nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.
- pc - The sample was received with incorrect preservation or in a container not approved by the method. The value reported should be considered an estimate.
- ve - The analyte response exceeded the valid instrument calibration range. The value reported is an estimate.
- vo - The value reported fell outside the control limits established for this analyte.
- x - The sample chromatographic pattern does not resemble the fuel standard used for quantitation.

412 405

SAMPLE CHAIN OF CUSTODY ME 12-24-14 A04/BZ4, V3

Send Report To Kris Langley
 Company Aspect Consulting
 Address 401 2nd Ave S
 City, State, ZIP Seattle, WA 98104
 Phone # (206) 812 4746 Fax # _____

SAMPLERS (signature) <u>Breanna Zimmerman</u>	
PROJECT NAME/NO. <u>Kens Texaco - 120061</u>	PO#
REMARKS	

Page # _____ of _____
TURNAROUND TIME <input type="checkbox"/> Standard (2 Weeks) <input type="checkbox"/> RUSH Rush charges authorized by _____
SAMPLE DISPOSAL <input type="checkbox"/> Dispose after 30 days <input type="checkbox"/> Return samples <input type="checkbox"/> Will call with instructions

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of containers	ANALYSIS REQUESTED											Notes	
						TPH-Diesel	TPH-Gasoline	BTEX by 8021B	EDCs by 8264	SVOCs by 8270	HFS	Alkalinity, Chloride, Nitrate, Nitrite, Sulfate	Methane	Dissolved Hg	Dissolved Pb	Dissolved Fe		
MW-1-122214	01 A-D	12/22/14	1303	H ₂ O	4	X	X	X										
MW-11-122214	02 A-H	↓	1338	↓	14	↓	↓	↓	X			X	X	X	X	X		Hold per KL 12/24/14
MW-12-122214	03 A-Q	↓	1435	↓	16	↓	↓	↓				X	X	X	X	X		↓ M4.
Trip Blank	04 A-Q				3			0										
VB 12/24																		
																		O-per KL
																		1/2/15 MC

Friedman & Bruya, Inc.
 3012 16th Avenue West
 Seattle, WA 98119-2029
 Ph. (206) 285-8282
 Fax (206) 283-5044

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by: <u>[Signature]</u>	<u>Breanna Zimmerman</u>	<u>Aspect</u>	<u>12/22/14</u>	<u>3:15pm</u>
Received by: <u>[Signature]</u>	<u>James Bruya</u>	<u>FEB</u>	<u>12/24</u>	<u>0930</u>
Relinquished by:				
Received by:				

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Yelena Aravkina, M.S.
Michael Erdahl, B.S.
Arina Podnozova, B.S.
Eric Young, B.S.

3012 16th Avenue West
Seattle, WA 98119-2029
(206) 285-8282
fbi@isomedia.com
www.friedmanandbruya.com

January 15, 2015

Kirsi Longley, Project Manager
Aspect Consulting, LLC
401 2nd Ave S, Suite 201
Seattle, WA 98104

Dear Ms. Longley:

Included are the results from the testing of material submitted on December 30, 2014 from the Ken's Texaco 120061, F&BI 412427 project. There are 24 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

We appreciate this opportunity to be of service to you and hope you will call if you have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.



Michael Erdahl
Project Manager

Enclosures

c: data@aspectconsulting.com, Parker Wittman
ASP0115R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on December 30, 2014 by Friedman & Bruya, Inc. from the Aspect Consulting, LLC Ken's Texaco 120061, F&BI 412427 project. Samples were logged in under the laboratory ID's listed below.

<u>Laboratory ID</u>	<u>Aspect Consulting, LLC</u>
412427 -01	MW-15-122914
412427 -02	MW-16-122914
412427 -03	MW-13-122914
412427 -04	MW-55-122914

Samples MW-15-122914 and MW-16-122914 were sent to Amtest for sulfate, nitrate and nitrite as N, ferrous iron and alkalinity analyses. Review of the enclosed report indicates that all quality assurance were acceptable.

The dissolved manganese samples were filtered and preserved with nitric acid. The data were flagged accordingly.

All other quality control requirements were acceptable.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 01/15/15

Date Received: 12/30/14

Project: Ken's Texaco 120061, F&BI 412427

Date Extracted: 12/30/14

Date Analyzed: 12/30/14

**RESULTS FROM THE ANALYSIS OF WATER SAMPLES
FOR BENZENE, TOLUENE, ETHYLBENZENE,
XYLENES AND TPH AS GASOLINE
USING METHODS 8021B AND NWTPH-Gx**

Results Reported as ug/L (ppb)

<u>Sample ID</u> Laboratory ID	<u>Benzene</u>	<u>Toluene</u>	<u>Ethyl Benzene</u>	<u>Total Xylenes</u>	<u>Gasoline Range</u>	<u>Surrogate (% Recovery)</u> (Limit 52-124)
MW-15-122914 412427-01	<1	<1	<1	<3	<100	110
MW-16-122914 412427-02	<1	<1	11	<3	660	116
MW-13-122914 412427-03	<1	<1	<1	<3	<100	108
MW-55-122914 412427-04	<1	<1	16	<3	750	119
Method Blank 04-2559 MB	<1	<1	<1	<3	<100	108

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 01/15/15

Date Received: 12/30/14

Project: Ken's Texaco 120061, F&BI 412427

Date Extracted: 12/30/14

Date Analyzed: 12/30/14

**RESULTS FROM THE ANALYSIS OF WATER SAMPLES
FOR TOTAL PETROLEUM HYDROCARBONS AS
DIESEL AND MOTOR OIL
USING METHOD NWTPH-Dx**
Results Reported as ug/L (ppb)

<u>Sample ID</u> Laboratory ID	<u>Diesel Range</u> (C ₁₀ -C ₂₅)	<u>Motor Oil Range</u> (C ₂₅ -C ₃₆)	<u>Surrogate</u> <u>(% Recovery)</u> (Limit 41-152)
MW-15-122914 412427-01	<50	<250	88
MW-16-122914 412427-02	350 x	<250	85
MW-13-122914 412427-03	<50	<250	87
MW-55-122914 412427-04	260 x	<250	87
Method Blank 04-2571 MB2	<50	<250	89

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Dissolved Metals By EPA Method 200.8

Client ID:	MW-15-122914 pc f	Client:	Aspect Consulting, LLC
Date Received:	12/30/14	Project:	Ken's Texaco 120061, F&BI 412427
Date Extracted:	01/08/15	Lab ID:	412427-01
Date Analyzed:	01/09/15	Data File:	412427-01.033
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	AP

Internal Standard:	% Recovery:	Lower	Upper
Germanium	89	Limit:	Limit:
		60	125

Analyte:	Concentration
	ug/L (ppb)
Manganese	847

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Dissolved Metals By EPA Method 200.8

Client ID:	MW-16-122914 pc f	Client:	Aspect Consulting, LLC
Date Received:	12/30/14	Project:	Ken's Texaco 120061, F&BI 412427
Date Extracted:	01/08/15	Lab ID:	412427-02
Date Analyzed:	01/09/15	Data File:	412427-02.037
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	AP

Internal Standard:	% Recovery:	Lower	Upper
Germanium	83	Limit:	Limit:
		60	125

Analyte:	Concentration
	ug/L (ppb)
Manganese	3,280

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Dissolved Metals By EPA Method 200.8

Client ID:	Method Blank	Client:	Aspect Consulting, LLC
Date Received:	NA	Project:	Ken's Texaco 120061, F&BI 412427
Date Extracted:	01/08/15	Lab ID:	I5-015 mb
Date Analyzed:	01/09/15	Data File:	I5-015 mb.031
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	AP

Internal Standard:	% Recovery:	Lower	Upper
Germanium	93	Limit:	Limit:
		60	125

Analyte:	Concentration
	ug/L (ppb)

Manganese	<1
-----------	----

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 200.8

Client ID:	MW-15-122914	Client:	Aspect Consulting, LLC
Date Received:	12/30/14	Project:	Ken's Texaco 120061, F&BI 412427
Date Extracted:	01/02/15	Lab ID:	412427-01
Date Analyzed:	01/02/15	Data File:	412427-01.052
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Holmium	95	60	125

Analyte:	Concentration ug/L (ppb)
----------	-----------------------------

Lead	<1
------	----

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 200.8

Client ID:	MW-16-122914	Client:	Aspect Consulting, LLC
Date Received:	12/30/14	Project:	Ken's Texaco 120061, F&BI 412427
Date Extracted:	01/02/15	Lab ID:	412427-02
Date Analyzed:	01/02/15	Data File:	412427-02.053
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Holmium	103	60	125

Analyte:	Concentration ug/L (ppb)
----------	-----------------------------

Lead	<1
------	----

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 200.8

Client ID:	MW-13-122914	Client:	Aspect Consulting, LLC
Date Received:	12/30/14	Project:	Ken's Texaco 120061, F&BI 412427
Date Extracted:	01/02/15	Lab ID:	412427-03
Date Analyzed:	01/02/15	Data File:	412427-03.054
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Holmium	98	60	125

Analyte:	Concentration ug/L (ppb)
----------	-----------------------------

Lead	<1
------	----

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 200.8

Client ID:	Method Blank	Client:	Aspect Consulting, LLC
Date Received:	NA	Project:	Ken's Texaco 120061, F&BI 412427
Date Extracted:	01/02/15	Lab ID:	I5-001 mb
Date Analyzed:	01/02/15	Data File:	I5-001 mb.011
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	AP

Internal Standard:	% Recovery:	Lower	Upper
Holmium	99	Limit:	Limit:
		60	125

Analyte:	Concentration
	ug/L (ppb)

Lead	<1
------	----

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW-15-122914	Client:	Aspect Consulting, LLC
Date Received:	12/30/14	Project:	Ken's Texaco 120061, F&BI 412427
Date Extracted:	12/31/14	Lab ID:	412427-01
Date Analyzed:	12/31/14	Data File:	123114.D
Matrix:	Water	Instrument:	GCMS9
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	102	85	117
Toluene-d8	97	93	107
4-Bromofluorobenzene	99	76	126

Compounds:	Concentration ug/L (ppb)
Hexane	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW-16-122914	Client:	Aspect Consulting, LLC
Date Received:	12/30/14	Project:	Ken's Texaco 120061, F&BI 412427
Date Extracted:	12/31/14	Lab ID:	412427-02
Date Analyzed:	12/31/14	Data File:	123115.D
Matrix:	Water	Instrument:	GCMS9
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	99	85	117
Toluene-d8	97	93	107
4-Bromofluorobenzene	100	76	126

Compounds:	Concentration ug/L (ppb)
Hexane	7.2
Naphthalene	8.1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW-13-122914	Client:	Aspect Consulting, LLC
Date Received:	12/30/14	Project:	Ken's Texaco 120061, F&BI 412427
Date Extracted:	12/31/14	Lab ID:	412427-03
Date Analyzed:	12/31/14	Data File:	123116.D
Matrix:	Water	Instrument:	GCMS9
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	102	85	117
Toluene-d8	98	93	107
4-Bromofluorobenzene	101	76	126

Compounds:	Concentration ug/L (ppb)
Hexane	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	Method Blank	Client:	Aspect Consulting, LLC
Date Received:	Not Applicable	Project:	Ken's Texaco 120061, F&BI 412427
Date Extracted:	12/31/14	Lab ID:	04-2578 mb
Date Analyzed:	12/31/14	Data File:	123108.D
Matrix:	Water	Instrument:	GCMS9
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	103	85	117
Toluene-d8	98	93	107
4-Bromofluorobenzene	99	76	126

Compounds:	Concentration ug/L (ppb)
Hexane	<1
Naphthalene	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Dissolved Gasses By RSK 175

Client Sample ID:	MW-15-122914	Client:	Aspect Consulting, LLC
Date Received:	12/30/14	Project:	Ken's Texaco 120061, F&BI 412427
Date Extracted:	01/05/15	Lab ID:	412427-01
Date Analyzed:	01/05/15	Data File:	008F0801.D
Matrix:	Water	Instrument:	GC8
Units:	ug/L (ppb)	Operator:	JS

Compounds:	Concentration ug/L (ppb)
Methane	6.3

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Dissolved Gasses By RSK 175

Client Sample ID:	MW-16-122914	Client:	Aspect Consulting, LLC
Date Received:	12/30/14	Project:	Ken's Texaco 120061, F&BI 412427
Date Extracted:	01/05/15	Lab ID:	412427-02
Date Analyzed:	01/05/15	Data File:	009F0901.D
Matrix:	Water	Instrument:	GC8
Units:	ug/L (ppb)	Operator:	JS

Compounds:	Concentration ug/L (ppb)
Methane	63

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Dissolved Gasses By RSK 175

Client Sample ID:	Method Blank	Client:	Aspect Consulting, LLC
Date Received:	Not Applicable	Project:	Ken's Texaco 120061, F&BI 412427
Date Extracted:	01/05/15	Lab ID:	05-002 mb
Date Analyzed:	01/05/15	Data File:	007F0701.D
Matrix:	Water	Instrument:	GC8
Units:	ug/L (ppb)	Operator:	JS

Compounds:	Concentration ug/L (ppb)
Methane	<5

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 01/15/15

Date Received: 12/30/14

Project: Ken's Texaco 120061, F&BI 412427

**QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER
SAMPLES FOR BENZENE, TOLUENE, ETHYLBENZENE,
XYLENES, AND TPH AS GASOLINE
USING EPA METHOD 8021B AND NWTPH-Gx**

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Benzene	ug/L (ppb)	50	99	99	65-118	0
Toluene	ug/L (ppb)	50	101	101	72-122	0
Ethylbenzene	ug/L (ppb)	50	105	104	73-126	1
Xylenes	ug/L (ppb)	150	102	102	74-118	0
Gasoline	ug/L (ppb)	1,000	102	96	69-134	6

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 01/15/15

Date Received: 12/30/14

Project: Ken's Texaco 120061, F&BI 412427

**QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER
SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS
DIESEL EXTENDED USING METHOD NWTPH-Dx**

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	ug/L (ppb)	2,500	82	85	63-142	4

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 01/15/15

Date Received: 12/30/14

Project: Ken's Texaco 120061, F&BI 412427

**QUALITY ASSURANCE RESULTS
FOR THE ANALYSIS OF WATER SAMPLES
FOR DISSOLVED METALS USING EPA METHOD 200.8**

Laboratory Code: 412427-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Manganese	ug/L (ppb)	20	847	176 b	0 b	47-155	200 b

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Manganese	ug/L (ppb)	20	106	76-120

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 01/15/15

Date Received: 12/30/14

Project: Ken's Texaco 120061, F&BI 412427

**QUALITY ASSURANCE RESULTS
FOR THE ANALYSIS OF WATER SAMPLES
FOR TOTAL METALS USING EPA METHOD 200.8**

Laboratory Code: 412406-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Lead	ug/L (ppb)	10	4.27	106	102	79-121	4

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Lead	ug/L (ppb)	10	106	83-115

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 01/15/15

Date Received: 12/30/14

Project: Ken's Texaco 120061, F&BI 412427

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR VOLATILES BY EPA METHOD 8260C

Laboratory Code: 412442-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Acceptance Criteria
Hexane	ug/L (ppb)	50	24	88 b	61-127
Naphthalene	ug/L (ppb)	50	12	106 b	63-136

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Hexane	ug/L (ppb)	50	91	88	51-153	3
Naphthalene	ug/L (ppb)	50	106	108	75-131	2

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 01/15/15

Date Received: 12/30/14

Project: Ken's Texaco 120061, F&BI 412427

**QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF
WATER SAMPLES FOR DISSOLVED GASES
USING METHOD RSK 175**

Laboratory Code: 412442-02 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	Relative Percent Difference (Limit 20)
Methane	ug/L (ppb)	<5	<5	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Methane	ug/L (ppb)	78	69	60	50-150	14

Data Qualifiers & Definitions

- a - The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.
- b - The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be meaningful.
- ca - The calibration results for the analyte were outside of acceptance criteria. The value reported is an estimate.
- c - The presence of the analyte may be due to carryover from previous sample injections.
- cf - The sample was centrifuged prior to analysis.
- d - The sample was diluted. Detection limits were raised and surrogate recoveries may not be meaningful.
- dv - Insufficient sample volume was available to achieve normal reporting limits.
- f - The sample was laboratory filtered prior to analysis.
- fb - The analyte was detected in the method blank.
- fc - The compound is a common laboratory and field contaminant.
- hr - The sample and duplicate were reextracted and reanalyzed. RPD results were still outside of control limits. Variability is attributed to sample inhomogeneity.
- hs - Headspace was present in the container used for analysis.
- ht - The analysis was performed outside the method or client-specified holding time requirement.
- ip - Recovery fell outside of control limits. Compounds in the sample matrix interfered with the quantitation of the analyte.
- j - The analyte concentration is reported below the lowest calibration standard. The value reported is an estimate.
- J - The internal standard associated with the analyte is out of control limits. The reported concentration is an estimate.
- jl - The laboratory control sample(s) percent recovery and/or RPD were out of control limits. The reported concentration should be considered an estimate.
- js - The surrogate associated with the analyte is out of control limits. The reported concentration should be considered an estimate.
- lc - The presence of the analyte is likely due to laboratory contamination.
- L - The reported concentration was generated from a library search.
- nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.
- pc - The sample was received with incorrect preservation or in a container not approved by the method. The value reported should be considered an estimate.
- ve - The analyte response exceeded the valid instrument calibration range. The value reported is an estimate.
- vo - The value reported fell outside the control limits established for this analyte.
- x - The sample chromatographic pattern does not resemble the fuel standard used for quantitation.



Am Test Inc.
13600 NE 126TH PL
Suite C
Kirkland, WA 98034
(425) 885-1664

**Professional
Analytical
Services**

Jan 13 2015
Friedman & Bruya, Inc.
3012 16th Avenue West
Seattle, WA 98119-2029
Attention: MICHAEL ERDAHL

Dear MICHAEL ERDAHL:

Enclosed please find the analytical data for your project.

The following is a cross correlation of client and laboratory identifications for your convenience.

CLIENT ID	MATRIX	AMTEST ID	TEST
MW-15-122914	Water	14-A020108	MIN, NUT, MET
MW-16-122914	Water	14-A020109	MIN, NUT, MET

Your samples were received on Tuesday, December 30, 2014. At the time of receipt, the samples were logged in and properly maintained prior to the subsequent analysis.

The analytical procedures used at AmTest are well documented and are typically derived from the protocols of the EPA, USDA, FDA or the Army Corps of Engineers.

Following the analytical data you will find the Quality Control (QC) results.

Please note that the detection limits that are listed in the body of the report refer to the Practical Quantitation Limits (PQL's), as opposed to the Method Detection Limits (MDL's).

If you should have any questions pertaining to the data package, please feel free to contact me.

Sincerely,


Aaron W. Young
Laboratory Manager

Project #: 412427
PO Number: D-347

BACT = Bacteriological
CONV = Conventional

MET = Metals
ORG = Organics

NUT=Nutrients
DEM=Demand

MIN=Minerals

Am Test Inc.
13600 NE 126TH PL
Suite C
Kirkland, WA 98034
(425) 885-1664
www.amtestlab.com



*Professional
Analytical
Services*

ANALYSIS REPORT

Friedman & Bruya, Inc.
3012 16th Avenue West
Seattle, WA 98119-2029
Attention: MICHAEL ERDAHL
Project #: 412427
PO Number: D-347
All results reported on an as received basis.

Date Received: 12/30/14
Date Reported: 1/13/15

AMTEST Identification Number 14-A020108
Client Identification MW-15-122914
Sampling Date 12/29/14, 12:59

Conventionals

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Ferrous Iron	< 0.01	mg/l		0.01	SM 3500Fe D	BP	12/30/14

Minerals

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Alkalinity (as CaCO ₃)	120	mg/l		1	SM 2320B	BP	01/07/15
Sulfate	3.67	mg/l		0.1	EPA 300.0	MR	12/30/14

Nutrients

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Nitrite Nitrogen	0.002	mg/l		0.001	SM 4500-NO ₂ B	BP	12/30/14
Nitrate Nitrogen	< 0.02	mg/l		0.01	Calculated		
Nitrate + Nitrite	< 0.02	mg/l		0.02	EPA 353.2	MR	01/08/15

AMTEST Identification Number 14-A020109
Client Identification MW-16-122914
Sampling Date 12/29/14, 11:20

Conventionals

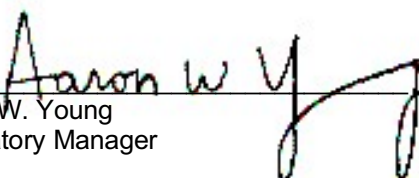
PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Ferrous Iron	1.57	mg/l		0.01	SM 3500Fe D	BP	12/30/14

Minerals

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Alkalinity (as CaCO ₃)	140	mg/l		1	SM 2320B	BP	01/07/15
Sulfate	5.97	mg/l		0.1	EPA 300.0	MR	12/30/14

Nutrients

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Nitrite Nitrogen	0.016	mg/l		0.001	SM 4500-NO ₂ B	BP	12/30/14
Nitrate Nitrogen	0.88	mg/l		0.01	Calculated		
Nitrate + Nitrite	0.90	mg/l		0.02	EPA 353.2	MR	01/08/15


Aaron W. Young
Laboratory Manager

QC Summary for sample numbers: 14-A020108 to 14-A020109

DUPLICATES

SAMPLE #	ANALYTE	UNITS	SAMPLE VALUE	DUP VALUE	RPD
14-A020079	Alkalinity (as CaCO ₃)	mg/l	480	490	2.1
14-A020112	Sulfate	mg/l	2.24	2.41	7.3

MATRIX SPIKES

SAMPLE #	ANALYTE	UNITS	SAMPLE VALUE	SMPL+ SPK	SPK AMT	RECOVERY
15-A000145	Nitrate + Nitrite	mg/l	< 0.02	0.40	0.50	80.00 %
15-A000145	Nitrate + Nitrite	mg/l	< 0.02	0.41	0.50	82.00 %
15-A000228	Nitrate + Nitrite	mg/l	0.070	0.50	0.50	86.00 %
15-A000228	Nitrate + Nitrite	mg/l	0.070	0.50	0.50	86.00 %
15-A000238	Nitrate + Nitrite	mg/l	< 0.02	0.46	0.50	92.00 %
15-A000238	Nitrate + Nitrite	mg/l	< 0.02	0.46	0.50	92.00 %
15-A000029	Nitrate + Nitrite	mg/l	4.0	8.9	5.0	98.00 %
15-A000029	Nitrate + Nitrite	mg/l	4.0	9.3	5.0	106.00 %
14-A020108	Nitrite Nitrogen	mg/l	0.002	0.030	0.027	103.70 %
14-A020108	Nitrite Nitrogen	mg/l	0.002	0.030	0.027	103.70 %
14-A020112	Sulfate	mg/l	2.24	4.45	2.00	110.50 %

MATRIX SPIKE DUPLICATES

SAMPLE #	ANALYTE	UNITS	SAMPLE + SPK	MSD VALUE	RPD
Spike	Nitrate + Nitrite	mg/l	0.40	0.41	2.5
Spike	Nitrate + Nitrite	mg/l	0.50	0.50	0.00
Spike	Nitrate + Nitrite	mg/l	0.46	0.46	0.00
Spike	Nitrate + Nitrite	mg/l	8.9	9.3	4.4
Spike	Nitrite Nitrogen	mg/l	0.030	0.030	0.00

STANDARD REFERENCE MATERIALS

ANALYTE	UNITS	TRUE VALUE	MEASURED VALUE	RECOVERY
Alkalinity (as CaCO ₃)	mg/l	240	220	91.7 %
Nitrate + Nitrite	mg/l	0.50	0.49	98.0 %
Nitrate + Nitrite	mg/l	0.50	0.50	100. %
Nitrate + Nitrite	mg/l	0.50	0.51	102. %
Nitrate + Nitrite	mg/l	0.50	0.49	98.0 %
Nitrite Nitrogen	mg/l	0.040	0.042	105. %
Sulfate	mg/l	2.00	1.99	99.5 %
Ferrous Iron	mg/l	0.50	0.52	104. %

BLANKS

ANALYTE	UNITS	RESULT
Alkalinity (as CaCO ₃)	mg/l	< 1
Nitrate + Nitrite	mg/l	< 0.02
Nitrate + Nitrite	mg/l	< 0.02

BLANKS continued....

ANALYTE	UNITS	RESULT
Nitrate + Nitrite	mg/l	< 0.02
Nitrate + Nitrite	mg/l	< 0.02
Nitrite Nitrogen	mg/l	< 0.001
Sulfate	mg/l	< 0.1
Ferrous Iron	mg/l	< 0.01

SUBCONTRACT SAMPLE CHAIN OF CUSTODY

Send Report To Michael Erdahl

Company Friedman and Bruya, Inc.

Address 3012 16th Ave W

City, State, ZIP Seattle, WA 98119

Phone # (206) 285-8282 Fax # (206) 283-5044

SUBCONTRACTOR <u>Amtest.</u>	
PROJECT NAME/NO. <div style="font-size: 1.5em; text-align: center;">412427</div>	PO # <div style="font-size: 1.5em; text-align: center;">D-347</div>
REMARKS <div style="text-align: center;">Please Email Results</div>	

Page # 1 of 1

TURNAROUND TIME	
<input checked="" type="checkbox"/> Standard (2 Weeks) <input type="checkbox"/> RUSH _____ Rush charges authorized by: _____	
SAMPLE DISPOSAL	
<input type="checkbox"/> Dispose after 30 days <input type="checkbox"/> Return samples <input type="checkbox"/> Will call with instructions	

Sample ID	Lab ID	Date Sampled	Time Sampled	Matrix	# of jars	Dioxins and Furans by 8290	EPH	VPH	Nitrate	Sulfate	Alkalinity	Nitrate/Nitrite as N	Ferric Iron			Notes
MW-15-122914	20108	12/29/14	1259	water						X	X	X	X			
MW-16-122914	20109	↓	1120	↓						X	X	X	X			

Friedman & Bruya, Inc.
 3012 16th Avenue West
 Seattle, WA 98119-2029
 Ph. (206) 285-8282
 Fax (206) 283-5044

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Michael Erdahl	Friedman & Bruya	12/30/14	10:20
Received by:				
Relinquished by:				
Received by:			12/30/14	1:20

4.0°C

Phone # (206) 812 4746 Fax # _____

Seattle, WA. 98104

Fax #

ME 12/30/14

AIG/AD4/1
1 of 1 V2

Page # 1 of 1

SAMPLERS (signature)

PROJECT NAME/NO.

120 041

PO#

REMARKS

TURNAROUND TIME

☐ Standard (2 Weeks)☐ RUSH

Rush charges authorized by

SAMPLE DISPOSAL

☐ Dispose after 30 days☐ Return samples☐ Will call with instructions

Per
KL
AK
2/30/14

FORMS\COC\COC.DOC

SIGNATURE

Relinquished by:

Received by:

Relinquished by:

Received by:

PRINT NAME _____

Breean Zimmerman

Nhan Phan

COMPANY

Aspect Consulted

FeBI

DATE _____

12/29/4

12/30/14

TIME

1440

1000

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Yelena Aravkina, M.S.
Michael Erdahl, B.S.
Arina Podnozova, B.S.
Eric Young, B.S.

3012 16th Avenue West
Seattle, WA 98119-2029
(206) 285-8282
fbi@isomedia.com
www.friedmanandbruya.com

January 15, 2015

Kirsi Longley, Project Manager
Aspect Consulting, LLC
401 2nd Ave S, Suite 201
Seattle, WA 98104

Dear Ms. Longley:

Included are the results from the testing of material submitted on December 31, 2014 from the Ken's Texaco 120061, F&BI 412442 project. There are 20 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

We appreciate this opportunity to be of service to you and hope you will call if you have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.



Michael Erdahl
Project Manager

Enclosures

c: data@aspectconsulting.com, Parker Wittman
ASP0115R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on December 31, 2014 by Friedman & Bruya, Inc. from the Aspect Consulting, LLC Ken's Texaco 120061, F&BI 412442 project. Samples were logged in under the laboratory ID's listed below.

<u>Laboratory ID</u>	<u>Aspect Consulting, LLC</u>
412442 -01	MW-11-123014
412442 -02	MW-12-123014

The samples were sent to Amtest for sulfate, nitrate and nitrite as N, ferrous iron and alkalinity analyses. Review of the enclosed report indicates that all quality assurance were acceptable.

The dissolved manganese samples were filtered at Friedman and Bruya on December 31, 2014 at 0917. The data were flagged accordingly.

All quality control requirements were acceptable.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 01/15/15

Date Received: 12/31/14

Project: Ken's Texaco 120061, F&BI 412442

Date Extracted: 12/31/14

Date Analyzed: 12/31/14

**RESULTS FROM THE ANALYSIS OF WATER SAMPLES
FOR BENZENE, TOLUENE, ETHYLBENZENE,
XYLENES AND TPH AS GASOLINE
USING METHODS 8021B AND NWTPH-Gx**

Results Reported as ug/L (ppb)

<u>Sample ID</u> Laboratory ID	<u>Benzene</u>	<u>Toluene</u>	<u>Ethyl Benzene</u>	<u>Total Xylenes</u>	<u>Gasoline Range</u>	<u>Surrogate (% Recovery)</u> (Limit 52-124)
MW-11-123014 412442-01	40	12	59	50	1,900	120
MW-12-123014 412442-02	<1	<1	<1	<3	<100	103
Method Blank 04-2559 MB	<1	<1	<1	<3	<100	108

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 01/15/15

Date Received: 12/31/14

Project: Ken's Texaco 120061, F&BI 412442

Date Extracted: 01/02/15

Date Analyzed: 01/02/15

**RESULTS FROM THE ANALYSIS OF WATER SAMPLES
FOR TOTAL PETROLEUM HYDROCARBONS AS
DIESEL AND MOTOR OIL
USING METHOD NWTPH-Dx**
Results Reported as ug/L (ppb)

<u>Sample ID</u> Laboratory ID	<u>Diesel Range</u> (C ₁₀ -C ₂₅)	<u>Motor Oil Range</u> (C ₂₅ -C ₃₆)	<u>Surrogate</u> <u>(% Recovery)</u> (Limit 51-134)
MW-11-123014 412442-01	1,100 x	540 x	121
MW-12-123014 412442-02	55 x	<250	110
Method Blank 05-007 MB	<50	<250	107

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Dissolved Metals By EPA Method 200.8

Client ID:	MW-11-123014 f	Client:	Aspect Consulting, LLC
Date Received:	12/31/14	Project:	Ken's Texaco 120061, F&BI 412442
Date Extracted:	12/31/14	Lab ID:	412442-01 x10
Date Analyzed:	01/06/15	Data File:	412442-01 x10.014
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	AP

Internal Standard:	% Recovery:	Lower	Upper
Germanium	97	Limit:	Limit:
		60	125

Analyte:	Concentration
	ug/L (ppb)
Manganese	17,900

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Dissolved Metals By EPA Method 200.8

Client ID:	MW-12-123014 f	Client:	Aspect Consulting, LLC
Date Received:	12/31/14	Project:	Ken's Texaco 120061, F&BI 412442
Date Extracted:	12/31/14	Lab ID:	412442-02
Date Analyzed:	01/06/15	Data File:	412442-02.011
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	AP

Internal Standard:	% Recovery:	Lower	Upper
Germanium	89	Limit:	Limit:
		60	125

Analyte:	Concentration
	ug/L (ppb)
Manganese	216

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Dissolved Metals By EPA Method 200.8

Client ID:	Method Blank	Client:	Aspect Consulting, LLC
Date Received:	NA	Project:	Ken's Texaco 120061, F&BI 412442
Date Extracted:	12/31/14	Lab ID:	I4-832 mb
Date Analyzed:	01/06/15	Data File:	I4-832 mb.009
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	AP

Internal Standard:	% Recovery:	Lower	Upper
Germanium	97	Limit:	Limit:
		60	125

Analyte:	Concentration
	ug/L (ppb)
Manganese	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 200.8

Client ID:	MW-11-123014	Client:	Aspect Consulting, LLC
Date Received:	12/31/14	Project:	Ken's Texaco 120061, F&BI 412442
Date Extracted:	01/02/15	Lab ID:	412442-01
Date Analyzed:	01/02/15	Data File:	412442-01.056
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Holmium	91	60	125

Analyte:	Concentration ug/L (ppb)
----------	-----------------------------

Lead	<1
------	----

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 200.8

Client ID:	Method Blank	Client:	Aspect Consulting, LLC
Date Received:	NA	Project:	Ken's Texaco 120061, F&BI 412442
Date Extracted:	01/02/15	Lab ID:	I5-001 mb
Date Analyzed:	01/02/15	Data File:	I5-001 mb.011
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	AP

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Holmium	99	60	125

Analyte:	Concentration ug/L (ppb)
----------	-----------------------------

Lead	<1
------	----

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW-11-123014	Client:	Aspect Consulting, LLC
Date Received:	12/31/14	Project:	Ken's Texaco 120061, F&BI 412442
Date Extracted:	12/31/14	Lab ID:	412442-01
Date Analyzed:	12/31/14	Data File:	123117.D
Matrix:	Water	Instrument:	GCMS9
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	101	85	117
Toluene-d8	99	93	107
4-Bromofluorobenzene	99	76	126

Compounds:	Concentration ug/L (ppb)
1,2-Dichloroethane (EDC)	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	Method Blank	Client:	Aspect Consulting, LLC
Date Received:	Not Applicable	Project:	Ken's Texaco 120061, F&BI 412442
Date Extracted:	12/31/14	Lab ID:	04-2578 mb
Date Analyzed:	12/31/14	Data File:	123108.D
Matrix:	Water	Instrument:	GCMS9
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	103	85	117
Toluene-d8	98	93	107
4-Bromofluorobenzene	99	76	126

Compounds:	Concentration ug/L (ppb)
1,2-Dichloroethane (EDC)	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Dissolved Gasses By RSK 175

Client Sample ID:	MW-11-123014	Client:	Aspect Consulting, LLC
Date Received:	12/31/14	Project:	Ken's Texaco 120061, F&BI 412442
Date Extracted:	01/05/15	Lab ID:	412442-01
Date Analyzed:	01/05/15	Data File:	010F1001.D
Matrix:	Water	Instrument:	GC8
Units:	ug/L (ppb)	Operator:	JS

Compounds:	Concentration ug/L (ppb)
Methane	270

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Dissolved Gasses By RSK 175

Client Sample ID:	MW-12-123014	Client:	Aspect Consulting, LLC
Date Received:	12/31/14	Project:	Ken's Texaco 120061, F&BI 412442
Date Extracted:	01/05/15	Lab ID:	412442-02
Date Analyzed:	01/05/15	Data File:	011F1101.D
Matrix:	Water	Instrument:	GC8
Units:	ug/L (ppb)	Operator:	JS

Compounds:	Concentration ug/L (ppb)
Methane	<5

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Dissolved Gasses By RSK 175

Client Sample ID:	Method Blank	Client:	Aspect Consulting, LLC
Date Received:	Not Applicable	Project:	Ken's Texaco 120061, F&BI 412442
Date Extracted:	01/05/15	Lab ID:	05-002 mb
Date Analyzed:	01/05/15	Data File:	007F0701.D
Matrix:	Water	Instrument:	GC8
Units:	ug/L (ppb)	Operator:	JS

Compounds:	Concentration ug/L (ppb)
Methane	<5

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 01/15/15

Date Received: 12/31/14

Project: Ken's Texaco 120061, F&BI 412442

**QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER
SAMPLES FOR BENZENE, TOLUENE, ETHYLBENZENE,
XYLENES, AND TPH AS GASOLINE
USING EPA METHOD 8021B AND NWTPH-Gx**

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Benzene	ug/L (ppb)	50	99	99	65-118	0
Toluene	ug/L (ppb)	50	101	101	72-122	0
Ethylbenzene	ug/L (ppb)	50	105	104	73-126	1
Xylenes	ug/L (ppb)	150	102	102	74-118	0
Gasoline	ug/L (ppb)	1,000	102	96	69-134	6

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 01/15/15

Date Received: 12/31/14

Project: Ken's Texaco 120061, F&BI 412442

**QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER
SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS
DIESEL EXTENDED USING METHOD NWTPH-Dx**

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	ug/L (ppb)	2,500	100	107	58-134	7

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 01/15/15

Date Received: 12/31/14

Project: Ken's Texaco 120061, F&BI 412442

**QUALITY ASSURANCE RESULTS
FOR THE ANALYSIS OF WATER SAMPLES
FOR DISSOLVED METALS USING EPA METHOD 200.8**

Laboratory Code: 412442-02 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Manganese	ug/L (ppb)	20	216	187 b	112 b	47-155	50 b

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Manganese	ug/L (ppb)	20	119	76-120

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 01/15/15

Date Received: 12/31/14

Project: Ken's Texaco 120061, F&BI 412442

**QUALITY ASSURANCE RESULTS
FOR THE ANALYSIS OF WATER SAMPLES
FOR TOTAL METALS USING EPA METHOD 200.8**

Laboratory Code: 412406-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Lead	ug/L (ppb)	10	4.27	106	102	79-121	4

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Lead	ug/L (ppb)	10	106	83-115

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 01/15/15

Date Received: 12/31/14

Project: Ken's Texaco 120061, F&BI 412442

**QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER
SAMPLES FOR VOLATILES BY EPA METHOD 8260C**

Laboratory Code: 412442-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Acceptance Criteria
1,2-Dichloroethane (EDC)	ug/L (ppb)	50	<1	91	78-113

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
1,2-Dichloroethane (EDC)	ug/L (ppb)	50	93	92	79-109	1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 01/15/15

Date Received: 12/31/14

Project: Ken's Texaco 120061, F&BI 412442

**QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF
WATER SAMPLES FOR DISSOLVED GASES
USING METHOD RSK 175**

Laboratory Code: 412427-02 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	Relative Percent Difference (Limit 20)
Methane	ug/L (ppb)	<5	<5	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Methane	ug/L (ppb)	78	69	60	50-150	14

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Data Qualifiers & Definitions

- a - The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.
- b - The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be meaningful.
- ca - The calibration results for the analyte were outside of acceptance criteria. The value reported is an estimate.
- c - The presence of the analyte may be due to carryover from previous sample injections.
- cf - The sample was centrifuged prior to analysis.
- d - The sample was diluted. Detection limits were raised and surrogate recoveries may not be meaningful.
- dv - Insufficient sample volume was available to achieve normal reporting limits.
- f - The sample was laboratory filtered prior to analysis.
- fb - The analyte was detected in the method blank.
- fc - The compound is a common laboratory and field contaminant.
- hr - The sample and duplicate were reextracted and reanalyzed. RPD results were still outside of control limits. Variability is attributed to sample inhomogeneity.
- hs - Headspace was present in the container used for analysis.
- ht - The analysis was performed outside the method or client-specified holding time requirement.
- ip - Recovery fell outside of control limits. Compounds in the sample matrix interfered with the quantitation of the analyte.
- j - The analyte concentration is reported below the lowest calibration standard. The value reported is an estimate.
- J - The internal standard associated with the analyte is out of control limits. The reported concentration is an estimate.
- jl - The laboratory control sample(s) percent recovery and/or RPD were out of control limits. The reported concentration should be considered an estimate.
- js - The surrogate associated with the analyte is out of control limits. The reported concentration should be considered an estimate.
- lc - The presence of the analyte is likely due to laboratory contamination.
- L - The reported concentration was generated from a library search.
- nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.
- pc - The sample was received with incorrect preservation or in a container not approved by the method. The value reported should be considered an estimate.
- ve - The analyte response exceeded the valid instrument calibration range. The value reported is an estimate.
- vo - The value reported fell outside the control limits established for this analyte.
- x - The sample chromatographic pattern does not resemble the fuel standard used for quantitation.



Am Test Inc.
13600 NE 126TH PL
Suite C
Kirkland, WA 98034
(425) 885-1664

**Professional
Analytical
Services**

Jan 13 2015
Friedman & Bruya, Inc.
3012 16th Avenue West
Seattle, WA 98119-2029
Attention: MICHAEL ERDAHL

Dear MICHAEL ERDAHL:

Enclosed please find the analytical data for your project.

The following is a cross correlation of client and laboratory identifications for your convenience.

CLIENT ID	MATRIX	AMTEST ID	TEST
MW-11-123014	Water	14-A020140	MIN, NUT, MET
MW-12-123014	Water	14-A020141	MIN, NUT, MET

Your samples were received on Wednesday, December 31, 2014. At the time of receipt, the samples were logged in and properly maintained prior to the subsequent analysis.

The analytical procedures used at AmTest are well documented and are typically derived from the protocols of the EPA, USDA, FDA or the Army Corps of Engineers.

Following the analytical data you will find the Quality Control (QC) results.

Please note that the detection limits that are listed in the body of the report refer to the Practical Quantitation Limits (PQL's), as opposed to the Method Detection Limits (MDL's).

If you should have any questions pertaining to the data package, please feel free to contact me.

Sincerely,


Aaron W. Young
Laboratory Manager

Project #: 412442
PO Number: D-347

BACT = Bacteriological
CONV = Conventional

MET = Metals
ORG = Organics

NUT=Nutrients
DEM=Demand

MIN=Minerals

Am Test Inc.
13600 NE 126TH PL
Suite C
Kirkland, WA 98034
(425) 885-1664
www.amtestlab.com



**Professional
Analytical
Services**

ANALYSIS REPORT

Friedman & Bruya, Inc.
3012 16th Avenue West
Seattle, WA 98119-2029
Attention: MICHAEL ERDAHL
Project #: 412442
PO Number: D-347
All results reported on an as received basis.

Date Received: 12/31/14
Date Reported: 1/13/15

AMTEST Identification Number 14-A020140
Client Identification MW-11-123014
Sampling Date 12/30/14, 11:30

Conventionals

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Ferrous Iron	0.10	mg/l		0.01	SM 3500Fe D	BP	01/05/15

Minerals

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Alkalinity (as CaCO ₃)	1100	mg/l		1	SM 2320B	BP	01/07/15
Sulfate	5.84	mg/l		0.1	EPA 300.0	MR	12/31/14

Nutrients

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Nitrite Nitrogen	< 0.001	mg/l		0.001	SM 4500-NO ₂ B	AB	12/31/14
Nitrate Nitrogen	< 0.02	mg/l		0.01	Calculated		
Nitrate + Nitrite	< 0.02	mg/l		0.02	EPA 353.2	MR	01/08/15

AMTEST Identification Number 14-A020141
Client Identification MW-12-123014
Sampling Date 12/30/14, 12:31

Conventionals

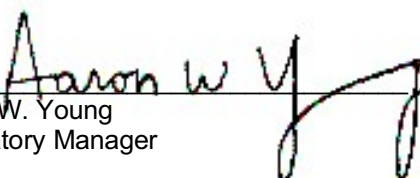
PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Ferrous Iron	< 0.01	mg/l		0.01	SM 3500Fe D	BP	01/05/15

Minerals

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Alkalinity (as CaCO3)	260	mg/l		1	SM 2320B	BP	01/07/15
Sulfate	11.8	mg/l		0.1	EPA 300.0	MR	12/31/14

Nutrients

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Nitrite Nitrogen	< 0.001	mg/l		0.001	SM 4500-NO2 B	AB	12/31/14
Nitrate Nitrogen	0.62	mg/l		0.01	Calculated		
Nitrate + Nitrite	0.62	mg/l		0.02	EPA 353.2	MR	01/08/15


Aaron W. Young
Laboratory Manager

QC Summary for sample numbers: 14-A020140 to 14-A020141

DUPLICATES

SAMPLE #	ANALYTE	UNITS	SAMPLE VALUE	DUP VALUE	RPD
14-A020079	Alkalinity (as CaCO ₃)	mg/l	480	490	2.1
14-A020141	Sulfate	mg/l	11.8	11.8	0.00

MATRIX SPIKES

SAMPLE #	ANALYTE	UNITS	SAMPLE VALUE	SMPL+ SPK	SPK AMT	RECOVERY
15-A000145	Nitrate + Nitrite	mg/l	< 0.02	0.40	0.50	80.00 %
15-A000145	Nitrate + Nitrite	mg/l	< 0.02	0.41	0.50	82.00 %
15-A000228	Nitrate + Nitrite	mg/l	0.070	0.50	0.50	86.00 %
15-A000228	Nitrate + Nitrite	mg/l	0.070	0.50	0.50	86.00 %
15-A000238	Nitrate + Nitrite	mg/l	< 0.02	0.46	0.50	92.00 %
15-A000238	Nitrate + Nitrite	mg/l	< 0.02	0.46	0.50	92.00 %
15-A000029	Nitrate + Nitrite	mg/l	4.0	8.9	5.0	98.00 %
15-A000029	Nitrate + Nitrite	mg/l	4.0	9.3	5.0	106.00 %
14-A020141	Nitrite Nitrogen	mg/l	< 0.001	0.026	0.026	100.00 %
14-A020141	Nitrite Nitrogen	mg/l	< 0.001	0.026	0.026	100.00 %
14-A020141	Sulfate	mg/l	11.8	24.0	12.0	101.67 %
14-A020141	Ferrous Iron	mg/l	< 0.01	0.47	0.50	94.00 %
14-A020141	Ferrous Iron	mg/l	< 0.01	0.47	0.50	94.00 %

MATRIX SPIKE DUPLICATES

SAMPLE #	ANALYTE	UNITS	SAMPLE + SPK	MSD VALUE	RPD
Spike	Nitrate + Nitrite	mg/l	0.40	0.41	2.5
Spike	Nitrate + Nitrite	mg/l	0.50	0.50	0.00
Spike	Nitrate + Nitrite	mg/l	0.46	0.46	0.00
Spike	Nitrate + Nitrite	mg/l	8.9	9.3	4.4
Spike	Nitrite Nitrogen	mg/l	0.026	0.026	0.00
Spike	Ferrous Iron	mg/l	0.47	0.47	0.00

STANDARD REFERENCE MATERIALS

ANALYTE	UNITS	TRUE VALUE	MEASURED VALUE	RECOVERY
Alkalinity (as CaCO ₃)	mg/l	240	220	91.7 %
Nitrate + Nitrite	mg/l	0.50	0.49	98.0 %
Nitrate + Nitrite	mg/l	0.50	0.50	100. %
Nitrate + Nitrite	mg/l	0.50	0.51	102. %
Nitrate + Nitrite	mg/l	0.50	0.49	98.0 %
Nitrite Nitrogen	mg/l	0.040	0.044	110. %
Sulfate	mg/l	2.00	1.89	94.5 %
Ferrous Iron	mg/l	0.50	0.48	96.0 %

BLANKS

ANALYTE	UNITS	RESULT
Alkalinity (as CaCO ₃)	mg/l	< 1
Nitrate + Nitrite	mg/l	< 0.02
Nitrate + Nitrite	mg/l	< 0.02
Nitrate + Nitrite	mg/l	< 0.02
Nitrate + Nitrite	mg/l	< 0.02
Nitrite Nitrogen	mg/l	< 0.001
Sulfate	mg/l	< 0.1
Ferrous Iron	mg/l	< 0.01

SUBCONTRACT SAMPLE CHAIN OF CUSTODY

Send Report To Michael Erdahl

Company Friedman and Bruya, Inc.

Address 3012-16th Ave W

City, State, ZIP Seattle, WA 98119

Phone # (206) 285-8282 Fax # (206) 283-5044

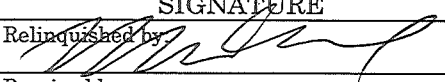

SUBCONTRACTER <u>A m test</u>	
PROJECT NAME/NO. <u>412442</u>	PO # <u>D-347</u>
REMARKS Please Email Results	

Page # 1 of 1

TURNAROUND TIME <input checked="" type="checkbox"/> Standard (2 Weeks) <input type="checkbox"/> RUSH _____ Rush charges authorized by: _____
SAMPLE DISPOSAL <input type="checkbox"/> Dispose after 30 days <input type="checkbox"/> Return samples <input type="checkbox"/> Will call with instructions

Sample ID	Lab ID	Date Sampled	Time Sampled	Matrix	# of jars	Dioxins and Furans by 8290	EPH	VPH	Nitrite + Nitrate as N	Sulfate	Alkalinity	Fluorides					Notes
MW-11-123014	20140	12/30/14	1130	water					X	X	X	X					
MW-12-123014	20141	↓	1231	↓					X	X	X	X					

Friedman & Bruya, Inc.
 3012 16th Avenue West
 Seattle, WA 98119-2029
 Ph. (206) 285-8282
 Fax (206) 283-5044

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by: 	Michael Erdahl	Friedman & Bruya	12/31/14	6:30
Received by: 			12/31/14	10:20
Relinquished by:				
Received by:				

Fedex 5.7°C

Send Report To Kirsi Longley
Company Aspect Consulting
Address 401 2nd Ave. S
City, State, ZIP Seattle, WA 98104
Phone # (206) 812 4746 **Fax #** _____

ME 12/31/19 V3
Page # 1 of 123
TURNAROUND TIME
PO# ☐ Standard (2 Weeks) ☐ Expedited
A24

PROJECT NAME/NO.

Ken's Texaco / 120061

REMARKS

Page # 1 of 1

TURNAROUND TIME

☐ Standard (2 Weeks)☐ RUSH



Rush charges authorized by

SAMPLE DISPOSAL

☐ **Dispose after 30 days**☐ Return samples☐ Will call with instructions

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of containers	ANALYSES REQUESTED											Notes
						TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by 8260	Methane	EDC	Total Lead	Alkalinity	Nitrate & Nitrite as Nitrogen	Sulfate	Ferrrous Iron	
MW-11-123014	01 ^A J	12/30/14	1130	H ₂ O	15	X	X	X		X	X	X	X	X	X		
MW-12-123014	02 ^A K	↓	1231	↓	11	X	X	X		X	X		X	X	X	will need to filter in lab	
Empty Bottles	—	N/A	N/A	None	13												

Friedman & Bruya, Inc.
3012 16th Avenue West
Seattle, WA 98119-2029
Ph. (206) 285-8282
Fax (206) 283-5044

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by: 	Breckan Zimmerman	Aspect Consulting	12/30/14	13:40
Received by: 	Nhan Phan	FBI	12/31/14	0800
Relinquished by:				
Received by:				

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Yelena Aravkina, M.S.
Michael Erdahl, B.S.
Arina Podnozova, B.S.
Eric Young, B.S.

3012 16th Avenue West
Seattle, WA 98119-2029
(206) 285-8282
fbi@isomedia.com
www.friedmanandbruya.com

April 10, 2015

Kirsi Longley, Project Manager
Aspect Consulting, LLC
401 2nd Ave S, Suite 201
Seattle, WA 98104

Dear Ms. Longley:

Included are the results from the testing of material submitted on March 26, 2015 from the Ken's Texaco 120061, F&BI 503492 project. There are 36 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

We appreciate this opportunity to be of service to you and hope you will call if you have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.



Michael Erdahl
Project Manager

Enclosures

c: data@aspectconsulting.com, Parker Wittman
ASP0410R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on March 26, 2015 by Friedman & Bruya, Inc. from the Aspect Consulting, LLC Ken's Texaco 120061, F&BI 503492 project. Samples were logged in under the laboratory ID's listed below.

<u>Laboratory ID</u>	<u>Aspect Consulting, LLC</u>
503492 -01	MW13-032515
503492 -02	MW14-032515
503492 -03	MW10-032515
503492 -04	MW12-032515
503492 -05	MW11-032515
503492 -06	Trip Blank
503492 -07	MW-1-032515
503492 -08	MW-7-032515
503492 -09	MW-8-032515
503492 -10	MW-15-032515
503492 -11	MW-16-032515
503492 -12	MW-55-032515

Samples MW12-032515, MW11-032515, MW-15-032515, and MW-16-032515 were sent to Amtest for ferrous iron, alkalinity, sulfate, and nitrate and nitrite as N analyses. Review of the enclosed report indicates that all quality assurance were acceptable.

All quality control requirements were acceptable.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 04/10/15

Date Received: 03/26/15

Project: Ken's Texaco 120061, F&BI 503492

Date Extracted: 03/27/15

Date Analyzed: 03/27/15

**RESULTS FROM THE ANALYSIS OF WATER SAMPLES
FOR TOTAL PETROLEUM HYDROCARBONS AS GASOLINE
USING METHOD NWTPH-Gx**

Results Reported as ug/L (ppb)

<u>Sample ID</u> Laboratory ID	<u>Gasoline Range</u>	Surrogate (% Recovery) (Limit 51-134)
MW13-032515 503492-01	<100	95
MW14-032515 503492-02	<100	97
MW10-032515 503492-03	100	96
MW11-032515 503492-05	1,600	129
MW-8-032515 503492-09	2,300	130
MW-16-032515 503492-11	470	110
Method Blank 05-599 MB	<100	95

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 04/10/15

Date Received: 03/26/15

Project: Ken's Texaco 120061, F&BI 503492

Date Extracted: 03/27/15

Date Analyzed: 03/27/15

**RESULTS FROM THE ANALYSIS OF WATER SAMPLES
FOR BENZENE, TOLUENE, ETHYLBENZENE,
XYLENES AND TPH AS GASOLINE
USING METHODS 8021B AND NWTPH-Gx**

Results Reported as ug/L (ppb)

<u>Sample ID</u> Laboratory ID	<u>Benzene</u>	<u>Toluene</u>	<u>Ethyl Benzene</u>	<u>Total Xylenes</u>	<u>Gasoline Range</u>	<u>Surrogate (% Recovery)</u> (Limit 52-124)
MW12-032515 503492-04	<1	<1	<1	<3	<100	87
Trip Blank 503492-06	<1	<1	<1	<3	<100	82
MW-1-032515 503492-07	2.8	12	6.3	18	1,800	108
MW-7-032515 503492-08	1.6	5.6	2.5	5.1	740	93
MW-15-032515 503492-10	<1	<1	<1	<3	<100	87
MW-55-032515 503492-12	1.3	<1	15	<3	550	93
Method Blank 05-599 MB	<1	<1	<1	<3	<100	86

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 04/10/15

Date Received: 03/26/15

Project: Ken's Texaco 120061, F&BI 503492

Date Extracted: 03/26/15

Date Analyzed: 03/26/15

**RESULTS FROM THE ANALYSIS OF WATER SAMPLES
FOR TOTAL PETROLEUM HYDROCARBONS AS
DIESEL AND MOTOR OIL
USING METHOD NWTPH-Dx**
Results Reported as ug/L (ppb)

<u>Sample ID</u> Laboratory ID	<u>Diesel Range</u> (C ₁₀ -C ₂₅)	<u>Motor Oil Range</u> (C ₂₅ -C ₃₆)	<u>Surrogate</u> (% Recovery) (Limit 47-140)
MW13-032515 503492-01	<50	<250	105
MW14-032515 503492-02	<50	<250	91
MW10-032515 503492-03	<50	<250	98
MW12-032515 503492-04	61 x	<250	102
MW11-032515 503492-05	720 x	330 x	94
MW-1-032515 503492-07	330 x	<250	100
MW-7-032515 503492-08	250 x	<250	91
MW-8-032515 503492-09	470 x	<250	97
MW-15-032515 503492-10	<50	<250	90
MW-16-032515 503492-11	120 x	<250	94
Method Blank 05-626 MB	<50	<250	90

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Dissolved Metals By EPA Method 200.8

Client ID:	MW12-032515	Client:	Aspect Consulting, LLC
Date Received:	03/26/15	Project:	Ken's Texaco 120061, F&BI 503492
Date Extracted:	03/31/15	Lab ID:	503492-04
Date Analyzed:	04/01/15	Data File:	503492-04.066
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	ML

Internal Standard:	% Recovery:	Lower	Upper
Germanium	83	Limit:	Limit:
		60	125

Analyte:	Concentration
	ug/L (ppb)
Manganese	1,070

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Dissolved Metals By EPA Method 200.8

Client ID:	MW11-032515	Client:	Aspect Consulting, LLC
Date Received:	03/26/15	Project:	Ken's Texaco 120061, F&BI 503492
Date Extracted:	03/31/15	Lab ID:	503492-05 x10
Date Analyzed:	04/06/15	Data File:	503492-05 x10.010
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	ML

Internal Standard:	% Recovery:	Lower	Upper
Germanium	95	Limit:	Limit:
		60	125

Analyte:	Concentration
	ug/L (ppb)
Manganese	25,800

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Dissolved Metals By EPA Method 200.8

Client ID:	MW-15-032515	Client:	Aspect Consulting, LLC
Date Received:	03/26/15	Project:	Ken's Texaco 120061, F&BI 503492
Date Extracted:	03/31/15	Lab ID:	503492-10
Date Analyzed:	04/01/15	Data File:	503492-10.068
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	ML

Internal Standard:	% Recovery:	Lower	Upper
Germanium	95	Limit:	Limit:
		60	125

Analyte:	Concentration
	ug/L (ppb)
Manganese	1,730

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Dissolved Metals By EPA Method 200.8

Client ID:	MW-16-032515	Client:	Aspect Consulting, LLC
Date Received:	03/26/15	Project:	Ken's Texaco 120061, F&BI 503492
Date Extracted:	03/31/15	Lab ID:	503492-11
Date Analyzed:	04/01/15	Data File:	503492-11.069
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	ML

Internal Standard:	% Recovery:	Lower	Upper
Germanium	94	Limit:	Limit:
		60	125

Analyte:	Concentration
	ug/L (ppb)
Manganese	3,100

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Dissolved Metals By EPA Method 200.8

Client ID:	Method Blank	Client:	Aspect Consulting, LLC
Date Received:	NA	Project:	Ken's Texaco 120061, F&BI 503492
Date Extracted:	03/31/15	Lab ID:	I5-188 mb
Date Analyzed:	04/01/15	Data File:	I5-188 mb.060
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	ML

Internal Standard:	% Recovery:	Lower	Upper
Germanium	98	Limit:	Limit:
		60	125

Analyte:	Concentration
	ug/L (ppb)
Manganese	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 200.8

Client ID:	MW11-032515	Client:	Aspect Consulting, LLC
Date Received:	03/26/15	Project:	Ken's Texaco 120061, F&BI 503492
Date Extracted:	03/26/15	Lab ID:	503492-05
Date Analyzed:	03/27/15	Data File:	503492-05.069
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	ML

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Holmium	86	60	125

Analyte:	Concentration ug/L (ppb)
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Lead	<1
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FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 200.8

Client ID:	MW-8-032515	Client:	Aspect Consulting, LLC
Date Received:	03/26/15	Project:	Ken's Texaco 120061, F&BI 503492
Date Extracted:	03/26/15	Lab ID:	503492-09
Date Analyzed:	03/27/15	Data File:	503492-09.070
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	ML

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Holmium	95	60	125

Analyte:	Concentration ug/L (ppb)
----------	-----------------------------

Lead	<1
------	----

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 200.8

Client ID:	MW-16-032515	Client:	Aspect Consulting, LLC
Date Received:	03/26/15	Project:	Ken's Texaco 120061, F&BI 503492
Date Extracted:	03/26/15	Lab ID:	503492-11
Date Analyzed:	03/27/15	Data File:	503492-11.071
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	ML

Internal Standard:	% Recovery:	Lower Limit:	Upper Limit:
Holmium	97	60	125

Analyte:	Concentration ug/L (ppb)
----------	-----------------------------

Lead	<1
------	----

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 200.8

Client ID:	Method Blank	Client:	Aspect Consulting, LLC
Date Received:	NA	Project:	Ken's Texaco 120061, F&BI 503492
Date Extracted:	03/26/15	Lab ID:	I5-178 mb
Date Analyzed:	03/27/15	Data File:	I5-178 mb.064
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	ML

Internal Standard:	% Recovery:	Lower	Upper
Holmium	99	Limit:	Limit:
		60	125

Analyte:	Concentration
	ug/L (ppb)

Lead	<1
------	----

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW10-032515	Client:	Aspect Consulting, LLC
Date Received:	03/26/15	Project:	Ken's Texaco 120061, F&BI 503492
Date Extracted:	03/26/15	Lab ID:	503492-03
Date Analyzed:	03/27/15	Data File:	032707.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	97	57	121
Toluene-d8	98	63	127
4-Bromofluorobenzene	96	60	133

Compounds:	Concentration ug/L (ppb)
1,2-Dichloroethane (EDC)	<1
Benzene	3.0
Toluene	1.0
Ethylbenzene	7.0
m,p-Xylene	8.2
o-Xylene	<1
Naphthalene	1.9

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW11-032515	Client:	Aspect Consulting, LLC
Date Received:	03/26/15	Project:	Ken's Texaco 120061, F&BI 503492
Date Extracted:	03/26/15	Lab ID:	503492-05
Date Analyzed:	03/27/15	Data File:	032710.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	99	57	121
Toluene-d8	97	63	127
4-Bromofluorobenzene	98	60	133

Compounds:	Concentration ug/L (ppb)
1,2-Dichloroethane (EDC)	<1
Benzene	35
Toluene	4.2
Ethylbenzene	50
m,p-Xylene	39
o-Xylene	3.4
Naphthalene	9.2

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW-8-032515	Client:	Aspect Consulting, LLC
Date Received:	03/26/15	Project:	Ken's Texaco 120061, F&BI 503492
Date Extracted:	03/26/15	Lab ID:	503492-09
Date Analyzed:	03/27/15	Data File:	032708.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	102	57	121
Toluene-d8	99	63	127
4-Bromofluorobenzene	96	60	133

Compounds:	Concentration ug/L (ppb)
1,2-Dichloroethane (EDC)	<1
Benzene	56
Toluene	38
Ethylbenzene	160 ve
m,p-Xylene	220
o-Xylene	31
Naphthalene	37

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW-8-032515	Client:	Aspect Consulting, LLC
Date Received:	03/26/15	Project:	Ken's Texaco 120061, F&BI 503492
Date Extracted:	03/26/15	Lab ID:	503492-09 1/10
Date Analyzed:	03/27/15	Data File:	032711.D
Matrix:	Water	Instrument:	GCMS7
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	101	94	108
Toluene-d8	100	91	107
4-Bromofluorobenzene	98	91	110

Compounds:	Concentration ug/L (ppb)
1,2-Dichloroethane (EDC)	<10
Benzene	56
Toluene	34
Ethylbenzene	150
m,p-Xylene	200
o-Xylene	27
Naphthalene	32

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	Method Blank	Client:	Aspect Consulting, LLC
Date Received:	Not Applicable	Project:	Ken's Texaco 120061, F&BI 503492
Date Extracted:	03/26/15	Lab ID:	05-0609 mb
Date Analyzed:	03/26/15	Data File:	032607.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	100	57	121
Toluene-d8	98	63	127
4-Bromofluorobenzene	96	60	133

Compounds:	Concentration ug/L (ppb)
1,2-Dichloroethane (EDC)	<1
Benzene	<0.35
Toluene	<1
Ethylbenzene	<1
m,p-Xylene	<2
o-Xylene	<1
Naphthalene	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW13-032515	Client:	Aspect Consulting, LLC
Date Received:	03/26/15	Project:	Ken's Texaco 120061, F&BI 503492
Date Extracted:	03/26/15	Lab ID:	503492-01
Date Analyzed:	03/27/15	Data File:	032705.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	103	57	121
Toluene-d8	98	63	127
4-Bromofluorobenzene	95	60	133

Compounds:	Concentration ug/L (ppb)
Hexane	<1
Benzene	<0.35
1,2-Dibromoethane (EDB)	<1
1,2-Dichloroethane (EDC)	<1
Ethylbenzene	<1
Methyl t-butyl ether (MTBE)	<1
Naphthalene	<1
Toluene	<1
1,2,4-Trimethylbenzene	<1
1,3,5-Trimethylbenzene	<1
m,p-Xylene	<2
o-Xylene	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW14-032515	Client:	Aspect Consulting, LLC
Date Received:	03/26/15	Project:	Ken's Texaco 120061, F&BI 503492
Date Extracted:	03/26/15	Lab ID:	503492-02
Date Analyzed:	03/27/15	Data File:	032706.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	101	57	121
Toluene-d8	97	63	127
4-Bromofluorobenzene	95	60	133

Compounds:	Concentration ug/L (ppb)
Hexane	<1
Benzene	<0.35
1,2-Dibromoethane (EDB)	<1
1,2-Dichloroethane (EDC)	<1
Ethylbenzene	<1
Methyl t-butyl ether (MTBE)	<1
Naphthalene	<1
Toluene	<1
1,2,4-Trimethylbenzene	<1
1,3,5-Trimethylbenzene	<1
m,p-Xylene	<2
o-Xylene	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW-15-032515	Client:	Aspect Consulting, LLC
Date Received:	03/26/15	Project:	Ken's Texaco 120061, F&BI 503492
Date Extracted:	03/26/15	Lab ID:	503492-10
Date Analyzed:	03/27/15	Data File:	032709.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	104	57	121
Toluene-d8	97	63	127
4-Bromofluorobenzene	96	60	133

Compounds:	Concentration ug/L (ppb)
Hexane	<1
Benzene	<0.35
1,2-Dibromoethane (EDB)	<1
1,2-Dichloroethane (EDC)	<1
Ethylbenzene	<1
Methyl t-butyl ether (MTBE)	<1
Naphthalene	<1
Toluene	<1
1,2,4-Trimethylbenzene	<1
1,3,5-Trimethylbenzene	<1
m,p-Xylene	<2
o-Xylene	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW-16-032515	Client:	Aspect Consulting, LLC
Date Received:	03/26/15	Project:	Ken's Texaco 120061, F&BI 503492
Date Extracted:	03/26/15	Lab ID:	503492-11
Date Analyzed:	03/26/15	Data File:	032609.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	103	57	121
Toluene-d8	97	63	127
4-Bromofluorobenzene	95	60	133

Compounds:	Concentration ug/L (ppb)
Hexane	3.2
Benzene	<0.35
1,2-Dibromoethane (EDB)	<1
1,2-Dichloroethane (EDC)	<1
Ethylbenzene	14
Methyl t-butyl ether (MTBE)	<1
Naphthalene	8.3
Toluene	<1
1,2,4-Trimethylbenzene	<1
1,3,5-Trimethylbenzene	1.4
m,p-Xylene	<2
o-Xylene	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	Method Blank	Client:	Aspect Consulting, LLC
Date Received:	Not Applicable	Project:	Ken's Texaco 120061, F&BI 503492
Date Extracted:	03/26/15	Lab ID:	05-0609 mb
Date Analyzed:	03/26/15	Data File:	032607.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	100	57	121
Toluene-d8	98	63	127
4-Bromofluorobenzene	96	60	133

Compounds:	Concentration ug/L (ppb)
Hexane	<1
Benzene	<0.35
1,2-Dibromoethane (EDB)	<1
1,2-Dichloroethane (EDC)	<1
Ethylbenzene	<1
Methyl t-butyl ether (MTBE)	<1
Naphthalene	<1
Toluene	<1
1,2,4-Trimethylbenzene	<1
1,3,5-Trimethylbenzene	<1
m,p-Xylene	<2
o-Xylene	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Dissolved Gasses By RSK 175

Client Sample ID:	MW12-032515	Client:	Aspect Consulting, LLC
Date Received:	03/26/15	Project:	Ken's Texaco 120061, F&BI 503492
Date Extracted:	04/02/15	Lab ID:	503492-04
Date Analyzed:	04/02/15	Data File:	006F0601.D
Matrix:	Water	Instrument:	GC8
Units:	ug/L (ppb)	Operator:	JS

Compounds:	Concentration ug/L (ppb)
Methane	17

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Dissolved Gasses By RSK 175

Client Sample ID:	MW11-032515	Client:	Aspect Consulting, LLC
Date Received:	03/26/15	Project:	Ken's Texaco 120061, F&BI 503492
Date Extracted:	04/03/15	Lab ID:	503492-05 1/10
Date Analyzed:	04/03/15	Data File:	003F0301.D
Matrix:	Water	Instrument:	GC8
Units:	ug/L (ppb)	Operator:	JS

Compounds:	Concentration ug/L (ppb)
Methane	450

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Dissolved Gasses By RSK 175

Client Sample ID:	MW-15-032515	Client:	Aspect Consulting, LLC
Date Received:	03/26/15	Project:	Ken's Texaco 120061, F&BI 503492
Date Extracted:	04/02/15	Lab ID:	503492-10
Date Analyzed:	04/02/15	Data File:	008F0801.D
Matrix:	Water	Instrument:	GC8
Units:	ug/L (ppb)	Operator:	JS

Compounds:	Concentration ug/L (ppb)
Methane	<5

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Dissolved Gasses By RSK 175

Client Sample ID:	MW-16-032515	Client:	Aspect Consulting, LLC
Date Received:	03/26/15	Project:	Ken's Texaco 120061, F&BI 503492
Date Extracted:	04/02/15	Lab ID:	503492-11
Date Analyzed:	04/02/15	Data File:	009F0901.D
Matrix:	Water	Instrument:	GC8
Units:	ug/L (ppb)	Operator:	JS

Compounds:	Concentration ug/L (ppb)
Methane	73

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Dissolved Gasses By RSK 175

Client Sample ID:	Method Blank	Client:	Aspect Consulting, LLC
Date Received:	NA	Project:	Ken's Texaco 120061, F&BI 503492
Date Extracted:	04/02/15	Lab ID:	05-0648 mb
Date Analyzed:	04/02/15	Data File:	005F0501.D
Matrix:	Water	Instrument:	GC8
Units:	ug/L (ppb)	Operator:	JS

Compounds:	Concentration ug/L (ppb)
Methane	<5

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 04/10/15

Date Received: 03/26/15

Project: Ken's Texaco 120061, F&BI 503492

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR BENZENE, TOLUENE, ETHYLBENZENE, XYLENES, AND TPH AS GASOLINE USING EPA METHOD 8021B AND NWTPH-Gx

Laboratory Code: 503492-05 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	RPD (Limit 20)
Benzene	ug/L (ppb)	52	46	11
Toluene	ug/L (ppb)	10	11	3
Ethylbenzene	ug/L (ppb)	54	56	4
Xylenes	ug/L (ppb)	45	47	3
Gasoline	ug/L (ppb)	1,600	1,700	4

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery	Acceptance
			LCS	Criteria
Benzene	ug/L (ppb)	50	88	65-118
Toluene	ug/L (ppb)	50	89	72-122
Ethylbenzene	ug/L (ppb)	50	89	73-126
Xylenes	ug/L (ppb)	150	88	74-118
Gasoline	ug/L (ppb)	1,000	97	69-134

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 04/10/15

Date Received: 03/26/15

Project: Ken's Texaco 120061, F&BI 503492

**QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER
SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS
DIESEL EXTENDED USING METHOD NWTPH-Dx**

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	ug/L (ppb)	2,500	78	86	61-133	10

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 04/10/15

Date Received: 03/26/15

Project: Ken's Texaco 120061, F&BI 503492

**QUALITY ASSURANCE RESULTS
FOR THE ANALYSIS OF WATER SAMPLES
FOR DISSOLVED METALS USING EPA METHOD 200.8**

Laboratory Code: 503424-02 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Manganese	ug/L (ppb)	20	118	124	124	47-155	0

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Manganese	ug/L (ppb)	20	118	89-123

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 04/10/15

Date Received: 03/26/15

Project: Ken's Texaco 120061, F&BI 503492

**QUALITY ASSURANCE RESULTS
FOR THE ANALYSIS OF WATER SAMPLES
FOR TOTAL METALS USING EPA METHOD 200.8**

Laboratory Code: 503477-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Lead	ug/L (ppb)	10	<1	94	95	79-121	1

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Lead	ug/L (ppb)	10	103	83-115

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 04/10/15

Date Received: 03/26/15

Project: Ken's Texaco 120061, F&BI 503492

**QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER
SAMPLES FOR VOLATILES BY EPA METHOD 8260C**

Laboratory Code: 503492-11 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Acceptance Criteria
1,2-Dichloroethane (EDC)	ug/L (ppb)	50	<1	91	69-133
Benzene	ug/L (ppb)	50	<0.35	95	76-125
Toluene	ug/L (ppb)	50	<1	103	76-122
Ethylbenzene	ug/L (ppb)	50	14	99 b	69-135
m,p-Xylene	ug/L (ppb)	100	<2	100	69-135
o-Xylene	ug/L (ppb)	50	<1	101	60-140
Naphthalene	ug/L (ppb)	50	8.3	107	44-164

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
1,2-Dichloroethane (EDC)	ug/L (ppb)	50	94	91	73-132	3
Benzene	ug/L (ppb)	50	99	95	69-134	4
Toluene	ug/L (ppb)	50	107	104	72-122	3
Ethylbenzene	ug/L (ppb)	50	103	100	77-124	3
m,p-Xylene	ug/L (ppb)	100	104	101	83-125	3
o-Xylene	ug/L (ppb)	50	104	102	81-121	2
Naphthalene	ug/L (ppb)	50	111	108	64-133	3

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 04/10/15

Date Received: 03/26/15

Project: Ken's Texaco 120061, F&BI 503492

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR VOLATILES BY EPA METHOD 8260C

Laboratory Code: 503492-11 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Acceptance Criteria
Hexane	ug/L (ppb)	50	3.2	101	52-150
Methyl t-butyl ether (MTBE)	ug/L (ppb)	50	<1	93	74-127
1,2-Dichloroethane (EDC)	ug/L (ppb)	50	<1	91	69-133
Benzene	ug/L (ppb)	50	<0.35	95	76-125
Toluene	ug/L (ppb)	50	<1	103	76-122
1,2-Dibromoethane (EDB)	ug/L (ppb)	50	<1	103	69-134
Ethylbenzene	ug/L (ppb)	50	14	99 b	69-135
m,p-Xylene	ug/L (ppb)	100	<2	100	69-135
o-Xylene	ug/L (ppb)	50	<1	101	60-140
1,3,5-Trimethylbenzene	ug/L (ppb)	50	1.4	101	66-137
1,2,4-Trimethylbenzene	ug/L (ppb)	50	<1	99	59-146
Naphthalene	ug/L (ppb)	50	8.3	107	44-164

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Hexane	ug/L (ppb)	50	107	103	57-137	4
Methyl t-butyl ether (MTBE)	ug/L (ppb)	50	97	94	64-147	3
1,2-Dichloroethane (EDC)	ug/L (ppb)	50	94	91	73-132	3
Benzene	ug/L (ppb)	50	99	95	69-134	4
Toluene	ug/L (ppb)	50	107	104	72-122	3
1,2-Dibromoethane (EDB)	ug/L (ppb)	50	109	105	82-125	4
Ethylbenzene	ug/L (ppb)	50	103	100	77-124	3
m,p-Xylene	ug/L (ppb)	100	104	101	83-125	3
o-Xylene	ug/L (ppb)	50	104	102	81-121	2
1,3,5-Trimethylbenzene	ug/L (ppb)	50	105	102	78-123	3
1,2,4-Trimethylbenzene	ug/L (ppb)	50	103	100	79-122	3
Naphthalene	ug/L (ppb)	50	111	108	64-133	3

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 04/10/15

Date Received: 03/26/15

Project: Ken's Texaco 120061, F&BI 503492

**QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF
WATER SAMPLES FOR DISSOLVED GASES
USING METHOD RSK 175**

Laboratory Code: 503492-11 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	Relative Percent Difference (Limit 20)
Methane	ug/L (ppb)	<5	<5	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Methane	ug/L (ppb)	78	61	65	50-150	8

Data Qualifiers & Definitions

- a - The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.
- b - The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be meaningful.
- ca - The calibration results for the analyte were outside of acceptance criteria. The value reported is an estimate.
- c - The presence of the analyte may be due to carryover from previous sample injections.
- cf - The sample was centrifuged prior to analysis.
- d - The sample was diluted. Detection limits were raised and surrogate recoveries may not be meaningful.
- dv - Insufficient sample volume was available to achieve normal reporting limits.
- f - The sample was laboratory filtered prior to analysis.
- fb - The analyte was detected in the method blank.
- fc - The compound is a common laboratory and field contaminant.
- hr - The sample and duplicate were reextracted and reanalyzed. RPD results were still outside of control limits. Variability is attributed to sample inhomogeneity.
- hs - Headspace was present in the container used for analysis.
- ht - The analysis was performed outside the method or client-specified holding time requirement.
- ip - Recovery fell outside of control limits. Compounds in the sample matrix interfered with the quantitation of the analyte.
- j - The analyte concentration is reported below the lowest calibration standard. The value reported is an estimate.
- J - The internal standard associated with the analyte is out of control limits. The reported concentration is an estimate.
- jl - The laboratory control sample(s) percent recovery and/or RPD were out of control limits. The reported concentration should be considered an estimate.
- js - The surrogate associated with the analyte is out of control limits. The reported concentration should be considered an estimate.
- lc - The presence of the analyte is likely due to laboratory contamination.
- L - The reported concentration was generated from a library search.
- nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.
- pc - The sample was received with incorrect preservation or in a container not approved by the method. The value reported should be considered an estimate.
- ve - The analyte response exceeded the valid instrument calibration range. The value reported is an estimate.
- vo - The value reported fell outside the control limits established for this analyte.
- x - The sample chromatographic pattern does not resemble the fuel standard used for quantitation.



Am Test Inc.
13600 NE 126TH PL
Suite C
Kirkland, WA 98034
(425) 885-1664

**Professional
Analytical
Services**

Apr 8 2015
Friedman & Bruya, Inc.
3012 16th Avenue West
Seattle, WA 98119-2029
Attention: MICHAEL ERDAHL

Dear MICHAEL ERDAHL:

Enclosed please find the analytical data for your 503492 project.

The following is a cross correlation of client and laboratory identifications for your convenience.

CLIENT ID	MATRIX	AMTEST ID	TEST
MW12-032515	Water	15-A004124	MIN, NUT, MET
MW11-032515	Water	15-A004125	MIN, NUT, MET
MW15-032515	Water	15-A004126	MIN, NUT, MET
MW16-032515	Water	15-A004127	MIN, NUT, MET

Your samples were received on Thursday, March 26, 2015. At the time of receipt, the samples were logged in and properly maintained prior to the subsequent analysis.

The analytical procedures used at AmTest are well documented and are typically derived from the protocols of the EPA, USDA, FDA or the Army Corps of Engineers.

Following the analytical data you will find the Quality Control (QC) results.

Please note that the detection limits that are listed in the body of the report refer to the Practical Quantitation Limits (PQL's), as opposed to the Method Detection Limits (MDL's).

If you should have any questions pertaining to the data package, please feel free to contact me.

Sincerely,


Aaron W. Young
Laboratory Manager

PO Number: D-449

BACT = Bacteriological
CONV = Conventional

MET = Metals
ORG = Organics

NUT=Nutrients
DEM=Demand

MIN=Minerals

Am Test Inc.
13600 NE 126TH PL
Suite C
Kirkland, WA 98034
(425) 885-1664
www.amtestlab.com



**Professional
Analytical
Services**

ANALYSIS REPORT

Friedman & Bruya, Inc.
3012 16th Avenue West
Seattle, WA 98119-2029
Attention: MICHAEL ERDAHL
Project Name: 503492
PO Number: D-449
All results reported on an as received basis.

Date Received: 03/26/15
Date Reported: 4/ 8/15

AMTEST Identification Number 15-A004124
Client Identification MW12-032515
Sampling Date 03/25/15, 14:35

Conventionals

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Ferrous Iron	< 0.01	mg/l		0.01	SM 3500Fe D	BP	03/27/15

Minerals

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Alkalinity (as CaCO ₃)	370	mg/l		1	SM 2320B	BP	04/03/15
Sulfate	11.9	mg/l		0.1	EPA 300.0	MR	03/27/15

Nutrients

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Nitrite	< 0.005	mg/l		0.005	EPA 300.0	MR	03/26/15
Nitrate	0.332	mg/l		0.025	EPA 300.0	MR	03/26/15

AMTEST Identification Number 15-A004125
Client Identification MW11-032515
Sampling Date 03/25/15, 15:45

Conventionals

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Ferrous Iron	6.35	mg/l		0.01	SM 3500Fe D	BP	03/27/15

Minerals

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Alkalinity (as CaCO ₃)	1200	mg/l		1	SM 2320B	BP	04/03/15
Sulfate	5.70	mg/l		0.1	EPA 300.0	MR	03/26/15

Nutrients

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Nitrite	< 0.005	mg/l		0.005	EPA 300.0	MR	03/26/15
Nitrate	< 0.025	mg/l		0.025	EPA 300.0	MR	03/26/15

AMTEST Identification Number 15-A004126
Client Identification MW15-032515
Sampling Date 03/25/15, 15:44

Conventionals

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Ferrous Iron	< 0.01	mg/l		0.01	SM 3500Fe D	BP	03/27/15

Minerals

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Alkalinity (as CaCO ₃)	130	mg/l		1	SM 2320B	BP	04/03/15
Sulfate	2.29	mg/l		0.1	EPA 300.0	MR	03/26/15

Nutrients

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Nitrite	< 0.005	mg/l		0.005	EPA 300.0	MR	03/26/15
Nitrate	< 0.025	mg/l		0.025	EPA 300.0	MR	03/26/15

AMTEST Identification Number 15-A004127
Client Identification MW16-032515
Sampling Date 03/25/15, 14:28

Conventionals

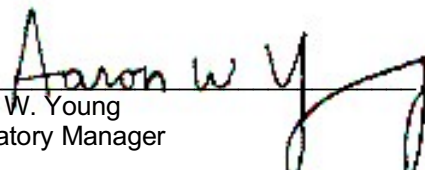
PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Ferrous Iron	3.43	mg/l		0.01	SM 3500Fe D	BP	03/27/15

Minerals

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Alkalinity (as CaCO ₃)	160	mg/l		1	SM 2320B	BP	04/03/15
Sulfate	4.94	mg/l		0.1	EPA 300.0	MR	03/26/15

Nutrients

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Nitrite	< 0.005	mg/l		0.005	EPA 300.0	MR	03/26/15
Nitrate	0.821	mg/l		0.025	EPA 300.0	MR	03/26/15



Aaron W. Young
Laboratory Manager

QC Summary for sample numbers: 15-A004124 to 15-A004127

DUPLICATES

SAMPLE #	ANALYTE	UNITS	SAMPLE VALUE	DUP VALUE	RPD
15-A003861	Alkalinity (as CaCO ₃)	mg/l	56.	56.	0.00

MATRIX SPIKES

SAMPLE #	ANALYTE	UNITS	SAMPLE VALUE	SMPL+ SPK	SPK AMT	RECOVERY
15-A004124	Ferrous Iron	mg/l	< 0.01	0.53	0.50	106.00 %
15-A004124	Ferrous Iron	mg/l	< 0.01	0.53	0.50	106.00 %

MATRIX SPIKE DUPLICATES

SAMPLE #	ANALYTE	UNITS	SAMPLE + SPK	MSD VALUE	RPD
Spike	Ferrous Iron	mg/l	0.53	0.53	0.00

STANDARD REFERENCE MATERIALS

ANALYTE	UNITS	TRUE VALUE	MEASURED VALUE	RECOVERY
Alkalinity (as CaCO ₃)	mg/l	240	250	104. %
Nitrate	mg/l	2.00	2.05	102. %
Nitrate	mg/l	2.00	1.82	91.0 %
Nitrite	mg/l	2.00	2.03	102. %
Nitrite	mg/l	2.00	1.85	92.5 %
Sulfate	mg/l	2.00	2.04	102. %
Sulfate	mg/l	2.00	2.07	104. %
Ferrous Iron	mg/l	0.50	0.53	106. %

BLANKS

ANALYTE	UNITS	RESULT
Nitrate	mg/l	< 0.025
Nitrate	mg/l	< 0.025
Nitrite	mg/l	< 0.005
Nitrite	mg/l	< 0.005
Sulfate	mg/l	< 0.1
Sulfate	mg/l	< 0.1
Ferrous Iron	mg/l	< 0.01

SUBCONTRACT SAMPLE CHAIN OF CUSTODY

Send Report To Michael Erdahl

Company Friedman and Bruya, Inc.

Address 3012 16th Ave W

City, State, ZIP Seattle, WA 98119

Phone # (206) 285-8282 Fax # (206) 283-5044

SUBCONTRACTER <u>Amtest</u>	
PROJECT NAME/NO. <div style="font-size: 1.2em; text-align: center;">503492</div>	PO # <div style="font-size: 1.2em; text-align: center;">D-449</div>
REMARKS <div style="text-align: center;">Please Email Results</div>	

Page # 1 of 1

TURNAROUND TIME	
<input checked="" type="checkbox"/> Standard (2 Weeks) <input type="checkbox"/> RUSH	
Rush charges authorized by: _____	
SAMPLE DISPOSAL	
<input type="checkbox"/> Dispose after 30 days <input type="checkbox"/> Return samples <input type="checkbox"/> Will call with instructions	

Sample ID	Lab ID	Date Sampled	Time Sampled	Matrix	# of jars	Dioxins and Furans by 8290	EPH	Nitrobenzene	Nitrate as N	Sulfate	Alkalinity	Ferrous Iron				Notes
MW12-032515	4124	3/25/15	1435	Water	2			X	X	X	X	X				
MW11-032515	4125	↓	1545	↓	2			X	X	X	X	X				5.40C
MW15-032515	4126	↓	1544	↓	2			X	X	X	X	X				UPS
MW16-032515	4127	↓	1428	↓	2			X	X	X	X	X				

Friedman & Bruya, Inc.
 3012 16th Avenue West
 Seattle, WA 98119-2029
 Ph. (206) 285-8282
 Fax (206) 283-5044

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Michael Erdahl	Friedman & Bruya	3/26/15	09:45
Received by:			3/26/15	12:30
Relinquished by:				
Received by:				

SAMPLE CHAIN OF CUSTODY

ME 03/26/15

VS/005/AIG

503492

Send Report to Kirsi Longley
 Company Aspect Consulting
 Address 401 Second Ave. South #201
 City, State, ZIP Seattle, WA 98104
 Phone # 206-812-4746 Fax # 206 390 2831

SAMPLERS (signature) <u>Kirsi Longley</u>	
PROJECT NAME/NO. <u>Ken's Texaco</u> <u>#120061</u>	PO#
REMARKS <u>Dissolved mn sample field filtered</u>	

Page # 1 of 2

TURNAROUND TIME <input checked="" type="checkbox"/> Standard (2 Weeks) <input type="checkbox"/> RUSH Rush charges authorized by _____	SAMPLE DISPOSAL <input checked="" type="checkbox"/> Dispose after 30 days <input type="checkbox"/> Return samples <input type="checkbox"/> Will call with instructions
--	---

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of containers	ANALYSES REQUESTED													Notes
						TPH-Diesel	TPH-Gasoline	BTEX by 8021B	* fuel related VOCs by 8260	SVOCs by 8270	metals	naphthalene	total lead	alkalinity	sulfate	nitrate as N	nitrite as N	dissolved Mn	
MW13-032515	03A-11	3/25/15	1150	W	8	X	X	X	X										
MW14-032515	03	"	1300	W	8	X	X	X	X										
MW10-032515	03	"	1335	W	8	X	X	X				X							
MW12-032515	04A-5	"	1435	W	10	X	X	X			X			X	X	X	X	X	
MW11-032515	05A-D	"	1545	W	15	X	X	X			X	X	X	X	X	X	X	X	
Trip Blank	06A-D	"	-	W	24		X	X											
					03														

Samples received at 3.2 °C

Friedman & Bruya, Inc.
 3012 16th Avenue West
 Seattle, WA 98119-2029
 Ph. (206) 285-8282
 Fax (206) 283-5044

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by: <u>Kirsi Longley</u>	<u>Kirsi Longley</u>	<u>Aspect</u>	<u>3/26/15</u>	<u>907</u>
Received by: <u>Kirsi Longley</u>	<u>Kirsi Longley</u>	<u>Aspect</u>	<u>3/26/15</u>	<u>907</u>
Relinquished by: _____				
Received by: _____				

* VOC list ~~includes~~ includes naphthalene, hexane, MTBE, EDC

SAMPLE CHAIN OF CUSTODY

503492

Send Report To Kirsti Longley
 Company Aspect Consulting
 Address 401 Second Ave S., #201
 City, State, ZIP Seattle, WA 98104
 Phone # 206 812 4746 Fax # _____

SAMPLERS (signature) [Signature]

PROJECT NAME/NO.

Ken's Texaco

120061

PO#

REMARKS

Dissolved MW sample field filtered

Page # 2 of 2

TURNAROUND TIME

☒ Standard (2 Weeks)

☐ RUSH

Rush charges authorized by _____

SAMPLE DISPOSAL

☒ Dispose after 30 days

☐ Return samples

☐ Will call with instructions

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of containers	ANALYSES REQUESTED														Notes		
						TPH-Diesel	TPH-Gasoline	BTEX by 8021B	Fuel related VOCs by 8260*	SVOCs by 8270	methane	naphthalene	EDC only	total lead	alkalinity	Sulfate	Nitrate as N	Nitrite as N	Dissolved Mn		Ferrous Iron	
MW-1-032515	07A0		1147		4	X	X	X														
MW-7-032515	081		1245		4	X	X	X														
MW-8-032515	09A-T		1324		9	X	X	X				X	X									
MW-15-032515	10A-N		1544		14	X	X	X	X		X			X	X	X	X	X				
MW-16-032515	11A-0		1428		15	X	X	X	X		X			X	X	X	X	X				
MW-55-032515	12A-C		1435		32		X	X														1 empty

Samples received at 32°C

Friedman & Bruya, Inc.
 3012 16th Avenue West
 Seattle, WA 98119-2029
 Ph. (206) 285-8282
 Fax (206) 283-5044

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by: <u>[Signature]</u>	<u>Kirsti Longley</u>	<u>Aspect</u>	<u>3/26/15</u>	<u>907</u>
Received by: <u>[Signature]</u>	<u>Kirsti Longley</u>	<u>FBI</u>	<u>3/26/15</u>	<u>907</u>
Relinquished by:				
Received by:				

FORMS\COC\COC.DOC

*fuel related VOCs to include naphthalene, Hexane, MTBE, EDC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Yelena Aravkina, M.S.
Michael Erdahl, B.S.
Arina Podnozova, B.S.
Eric Young, B.S.

3012 16th Avenue West
Seattle, WA 98119-2029
(206) 285-8282
fbi@isomedia.com
www.friedmanandbruya.com

September 15, 2016

Kirsi Longley, Project Manager
Aspect Consulting, LLC
401 2nd Ave S, Suite 201
Seattle, WA 98104

Dear Ms Longley:

Included are the results from the testing of material submitted on September 8, 2016 from the Ken's 120061, F&BI 609122 project. There are 8 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

We appreciate this opportunity to be of service to you and hope you will call if you have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.



Michael Erdahl
Project Manager

Enclosures

c: data@aspectconsulting.com
ASP0915R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on September 8, 2016 by Friedman & Bruya, Inc. from the Aspect Consulting, LLC Ken's 120061, F&BI 609122 project. Samples were logged in under the laboratory ID's listed below.

<u>Laboratory ID</u>	<u>Aspect Consulting, LLC</u>
609122 -01	MW-18-13
609122 -02	MW-18-28
609122 -03	MW-19-13
609122 -04	MW-19-26
609122 -05	MW-20-15
609122 -06	MW-20-17
609122 -07	MW-20-20
609122 -08	MW-20-28
609122 -09	MW-21-15
609122 -10	MW-21-18
609122 -11	MW-21-28

All quality control requirements were acceptable.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 09/15/16

Date Received: 09/08/16

Project: Ken's 120061, F&BI 609122

Date Extracted: 09/09/16

Date Analyzed: 09/12/16 and 09/13/16

**RESULTS FROM THE ANALYSIS OF SOIL SAMPLES
FOR BENZENE, TOLUENE, ETHYLBENZENE,
XYLENES AND TPH AS GASOLINE
USING METHODS 8021B AND NWTPH-Gx**

Results Reported on a Dry Weight Basis

Results Reported as mg/kg (ppm)

<u>Sample ID</u> Laboratory ID	<u>Benzene</u>	<u>Toluene</u>	<u>Ethyl Benzene</u>	<u>Total Xylenes</u>	<u>Gasoline Range</u>	<u>Surrogate (% Recovery)</u> (Limit 50-150)
MW-18-13 609122-01	<0.02	<0.02	<0.02	<0.06	<2	85
MW-18-28 609122-02	<0.02	<0.02	<0.02	<0.06	<2	84
MW-19-13 609122-03	<0.02	<0.02	<0.02	<0.06	<2	85
MW-19-26 609122-04	<0.02	<0.02	<0.02	<0.06	<2	94
MW-20-15 609122-05	0.68	3.7	3.0	6.1	790	ip
MW-20-17 609122-06 1/10	41	41	20	130	6,500	96
MW-20-20 609122-07	<0.02	<0.02	<0.02	<0.06	<2	94
MW-20-28 609122-08	<0.02	<0.02	<0.02	<0.06	<2	93
MW-21-15 609122-09	<0.02	<0.02	<0.02	<0.06	<2	94
MW-21-18 609122-10	<0.02	<0.02	<0.02	<0.06	<2	81

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 09/15/16

Date Received: 09/08/16

Project: Ken's 120061, F&BI 609122

Date Extracted: 09/09/16

Date Analyzed: 09/12/16 and 09/13/16

**RESULTS FROM THE ANALYSIS OF SOIL SAMPLES
FOR BENZENE, TOLUENE, ETHYLBENZENE,
XYLENES AND TPH AS GASOLINE
USING METHODS 8021B AND NWTPH-Gx**

Results Reported on a Dry Weight Basis

Results Reported as mg/kg (ppm)

<u>Sample ID</u> Laboratory ID	<u>Benzene</u>	<u>Toluene</u>	<u>Ethyl Benzene</u>	<u>Total Xylenes</u>	<u>Gasoline Range</u>	<u>Surrogate (% Recovery)</u> (Limit 50-150)
MW-21-28 609122-11	<0.02	<0.02	<0.02	<0.06	<2	83
Method Blank 06-1859 MB2	<0.02	<0.02	<0.02	<0.06	<2	83

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 09/15/16
Date Received: 09/08/16
Project: Ken's 120061, F&BI 609122
Date Extracted: 09/09/16
Date Analyzed: 09/09/16

**RESULTS FROM THE ANALYSIS OF SOIL SAMPLES
FOR TOTAL PETROLEUM HYDROCARBONS AS
DIESEL AND MOTOR OIL
USING METHOD NWTPH-Dx**

Results Reported on a Dry Weight Basis

Results Reported as mg/kg (ppm)

<u>Sample ID</u> Laboratory ID	<u>Diesel Range</u> (C ₁₀ -C ₂₅)	<u>Motor Oil Range</u> (C ₂₅ -C ₃₆)	<u>Surrogate</u> <u>(% Recovery)</u> (Limit 48-168)
MW-18-13 609122-01	<50	<250	94
MW-18-28 609122-02	<50	<250	98
MW-19-13 609122-03	<50	<250	103
MW-19-26 609122-04	<50	<250	103
MW-20-15 609122-05	<50	<250	99
MW-20-17 609122-06	1,100 x	<250	102
MW-20-20 609122-07	<50	<250	94
MW-20-28 609122-08	<50	<250	97
MW-21-15 609122-09	<50	<250	97
MW-21-18 609122-10	<50	<250	100

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 09/15/16

Date Received: 09/08/16

Project: Ken's 120061, F&BI 609122

Date Extracted: 09/09/16

Date Analyzed: 09/09/16

**RESULTS FROM THE ANALYSIS OF SOIL SAMPLES
FOR TOTAL PETROLEUM HYDROCARBONS AS
DIESEL AND MOTOR OIL
USING METHOD NWTPH-Dx**

Results Reported on a Dry Weight Basis

Results Reported as mg/kg (ppm)

<u>Sample ID</u>	<u>Diesel Range</u>	<u>Motor Oil Range</u>	<u>Surrogate</u>
Laboratory ID	(C ₁₀ -C ₂₅)	(C ₂₅ -C ₃₆)	(% Recovery)
			(Limit 48-168)
MW-21-28	<50	<250	99
609122-11			
Method Blank	<50	<250	97
06-1875 MB			

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 09/15/16

Date Received: 09/08/16

Project: Ken's 120061, F&BI 609122

**QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES
FOR BENZENE, TOLUENE, ETHYLBENZENE,
XYLENES, AND TPH AS GASOLINE
USING METHOD 8021B AND NWTPH-Gx**

Laboratory Code: 609127-01 (Duplicate)

Analyte	Reporting Units	Sample Result (Wet Wt)	Duplicate Result (Wet Wt)	RPD (Limit 20)
Benzene	mg/kg (ppm)	<0.02	<0.02	nm
Toluene	mg/kg (ppm)	<0.02	<0.02	nm
Ethylbenzene	mg/kg (ppm)	<0.02	<0.02	nm
Xylenes	mg/kg (ppm)	<0.06	<0.06	nm
Gasoline	mg/kg (ppm)	18	16	12

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Benzene	mg/kg (ppm)	0.5	84	69-120
Toluene	mg/kg (ppm)	0.5	92	70-117
Ethylbenzene	mg/kg (ppm)	0.5	93	65-123
Xylenes	mg/kg (ppm)	1.5	95	66-120
Gasoline	mg/kg (ppm)	20	100	71-131

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 09/15/16

Date Received: 09/08/16

Project: Ken's 120061, F&BI 609122

**QUALITY ASSURANCE RESULTS FROM THE ANALYSIS OF SOIL
SAMPLES
FOR TOTAL PETROLEUM HYDROCARBONS AS
DIESEL EXTENDED USING METHOD NWTPH-Dx**

Laboratory Code: 609122-02 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result (Wet Wt)	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	mg/kg (ppm)	5,000	<50	100	95	73-135	5

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Diesel Extended	mg/kg (ppm)	5,000	94	74-139

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Data Qualifiers & Definitions

- a - The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.
- b - The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be meaningful.
- ca - The calibration results for the analyte were outside of acceptance criteria. The value reported is an estimate.
- c - The presence of the analyte may be due to carryover from previous sample injections.
- cf - The sample was centrifuged prior to analysis.
- d - The sample was diluted. Detection limits were raised and surrogate recoveries may not be meaningful.
- dv - Insufficient sample volume was available to achieve normal reporting limits.
- f - The sample was laboratory filtered prior to analysis.
- fb - The analyte was detected in the method blank.
- fc - The compound is a common laboratory and field contaminant.
- hr - The sample and duplicate were reextracted and reanalyzed. RPD results were still outside of control limits. Variability is attributed to sample inhomogeneity.
- hs - Headspace was present in the container used for analysis.
- ht - The analysis was performed outside the method or client-specified holding time requirement.
- ip - Recovery fell outside of control limits. Compounds in the sample matrix interfered with the quantitation of the analyte.
- j - The analyte concentration is reported below the lowest calibration standard. The value reported is an estimate.
- J - The internal standard associated with the analyte is out of control limits. The reported concentration is an estimate.
- jl - The laboratory control sample(s) percent recovery and/or RPD were out of control limits. The reported concentration should be considered an estimate.
- js - The surrogate associated with the analyte is out of control limits. The reported concentration should be considered an estimate.
- lc - The presence of the analyte is likely due to laboratory contamination.
- L - The reported concentration was generated from a library search.
- nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.
- pc - The sample was received with incorrect preservation or in a container not approved by the method. The value reported should be considered an estimate.
- ve - The analyte response exceeded the valid instrument calibration range. The value reported is an estimate.
- vo - The value reported fell outside the control limits established for this analyte.
- x - The sample chromatographic pattern does not resemble the fuel standard used for quantitation.

609122

SAMPLE CHAIN OF CUSTODY

ME 09/08/16

CI2/VSI/BOY

Report To **KIRSI LONGLEY**
 Company **ASPECT**
 Address **Klongley@aspectconsulting.com**
 City, State, ZIP _____
 Phone **208-812-4746** Email _____

SAMPLERS (signature) **NR**

PROJECT NAME

Ken's 17(X)G1

PO #

REMARKS

INVOICE TO

Page # 1 of 1

TURNAROUND TIME

☐ Standard Turnaround☐ RUSH

Rush charges authorized by _____

SAMPLE DISPOSAL

☐ Dispose after 30 days☐ Archive Samples☐ Other

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of Jars	ANALYSES REQUESTED										Notes
						TPH-HCID	TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by 8260C	SVOCs by 8270D	PAHs 8270D SIM				
MW-18-13	01 A-E	9/6	13:50	SOI	5		X	X	X							
MW-18-28	02	9/6	14:10	"	5		X	X	X							
MW-19-13	03	9/6	16:50	"	5		X	X	X							
MW-19-26	04	9/6	17:25	"	5		X	X	X							
MW-20-15	05	9/7	11:10	"	5		X	X	X							
MW-20-17	06	"	09:50	"	5		X	X	X							
MW-20-20	07	"	10:45	"	5		X	X	X							
MW-20-28	08	"	10:50	"	5		X	X	X							
MW-21-15	09	"	13:25	"	5		X	X	X							
MW-21-18	10 ✓	"	13:30	"	5		X	X	X							

Friedman & Bruya, Inc.

3012 16th Avenue West

Seattle, WA 98119-2029

Ph. (206) 285-8282

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by: NR	Matthew von der Aue	Aspect	9/7	14:15
Received by: Pham Pham	Pham Pham	FEBI	9/8/16	0950
Relinquished by:				
Received by:		Samples received at _____ °C		

609122

SAMPLE CHAIN OF CUSTODY

ME 09/08/16

Page # 2 of 2
212/USI/BOY

Report To Kers, Langley
 Company klangley@aspectconsulting.com
 Address _____
 City, State, ZIP _____
 Phone 206 812 4746 Email _____

SAMPLERS (signature) NV

PROJECT NAME

Ken's 120061

PO #

REMARKS

INVOICE TO

Page #

of

TURNAROUND TIME

☐ Standard Turnaround
☐ RUSH
 Rush charges authorized by _____

SAMPLE DISPOSAL

☐ Dispose after 30 days
☐ Archive Samples
☐ Other _____

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of Jars	ANALYSES REQUESTED										Notes
						TPH-HCID	TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by 8260C	SVOCs by 8270D	PAHs 8270D SIM				
MW-21-28	11A-E	9/7	13:40	soil	5		X	X	X							

Friedman & Bruya, Inc.
 3012 16th Avenue West
 Seattle, WA 98119-2029
 Ph. (206) 285-8282

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by: <u>NV</u>	Matthew Vondra Ahe	Aspect	9/7	14:15
Received by: <u>Nhan Phan</u>	Nhan Phan	FCRI	9/8/16	0950
Relinquished by: _____	_____	_____	_____	_____
Received by: _____	_____	Samples received at _____ °C	_____	_____

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Yelena Aravkina, M.S.
Michael Erdahl, B.S.
Arina Podnozova, B.S.
Eric Young, B.S.

3012 16th Avenue West
Seattle, WA 98119-2029
(206) 285-8282
fbi@isomedia.com
www.friedmanandbruya.com

September 15, 2016

Kirsi Longley, Project Manager
Aspect Consulting, LLC
401 2nd Ave S, Suite 201
Seattle, WA 98104

Dear Ms Longley:

Included are the results from the testing of material submitted on September 9, 2016 from the Ken's 120061, F&BI 609153 project. There are 6 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

We appreciate this opportunity to be of service to you and hope you will call if you have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.



Michael Erdahl
Project Manager

Enclosures

c: data@aspectconsulting.com
ASP0915R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on September 9, 2016 by Friedman & Bruya, Inc. from the Aspect Consulting, LLC Ken's 120061, F&BI 609153 project. Samples were logged in under the laboratory ID's listed below.

<u>Laboratory ID</u>	<u>Aspect Consulting, LLC</u>
609153 -01	MW-22-17
609153 -02	MW-22-28

All quality control requirements were acceptable.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 09/15/16

Date Received: 09/09/16

Project: Ken's 120061, F&BI 609153

Date Analyzed: 09/13/16

**RESULTS FROM THE ANALYSIS OF SOIL SAMPLES
FOR BENZENE, TOLUENE, ETHYLBENZENE,
XYLENES AND TPH AS GASOLINE
USING METHODS 8021B AND NWTPH-Gx**

Results Reported on a Dry Weight Basis

Results Reported as mg/kg (ppm)

<u>Sample ID</u> Laboratory ID	<u>Benzene</u>	<u>Toluene</u>	<u>Ethyl Benzene</u>	<u>Total Xylenes</u>	<u>Gasoline Range</u>	<u>Surrogate (% Recovery)</u> (Limit 50-150)
MW-22-17 609153-01	<0.02	<0.02	<0.02	<0.06	<2	85
MW-22-28 609153-02	<0.02	<0.02	<0.02	<0.06	<2	83
Method Blank 06-1865 MB	<0.02	<0.02	<0.02	<0.06	<2	83

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 09/15/16

Date Received: 09/09/16

Project: Ken's 120061, F&BI 609153

Date Extracted: 09/12/16

Date Analyzed: 09/12/16

**RESULTS FROM THE ANALYSIS OF SOIL SAMPLES
FOR TOTAL PETROLEUM HYDROCARBONS AS
DIESEL AND MOTOR OIL
USING METHOD NWTPH-Dx**

Results Reported on a Dry Weight Basis

Results Reported as mg/kg (ppm)

<u>Sample ID</u> Laboratory ID	<u>Diesel Range</u> (C ₁₀ -C ₂₅)	<u>Motor Oil Range</u> (C ₂₅ -C ₃₆)	<u>Surrogate</u> <u>(% Recovery)</u> (Limit 53-144)
MW-22-17 609153-01	<50	<250	63
MW-22-28 609153-02	<50	<250	63
Method Blank 06-1885 MB	<50	<250	74

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 09/15/16

Date Received: 09/09/16

Project: Ken's 120061, F&BI 609153

**QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES
FOR BENZENE, TOLUENE, ETHYLBENZENE,
XYLENES, AND TPH AS GASOLINE
USING EPA METHOD 8021B AND NWTPH-Gx**

Laboratory Code: 609157-06 (Duplicate)

Analyte	Reporting Units	Sample Result (Wet Wt)	Duplicate Result (Wet Wt)	RPD (Limit 20)
Benzene	mg/kg (ppm)	<0.02	<0.02	nm
Toluene	mg/kg (ppm)	<0.02	<0.02	nm
Ethylbenzene	mg/kg (ppm)	<0.02	<0.02	nm
Xylenes	mg/kg (ppm)	<0.06	<0.06	nm
Gasoline	mg/kg (ppm)	<2	<2	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Benzene	mg/kg (ppm)	0.5	97	69-120
Toluene	mg/kg (ppm)	0.5	97	70-117
Ethylbenzene	mg/kg (ppm)	0.5	99	65-123
Xylenes	mg/kg (ppm)	1.5	97	66-120
Gasoline	mg/kg (ppm)	20	100	71-131

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 09/15/16

Date Received: 09/09/16

Project: Ken's 120061, F&BI 609153

**QUALITY ASSURANCE RESULTS FROM THE ANALYSIS OF SOIL
SAMPLES
FOR TOTAL PETROLEUM HYDROCARBONS AS
DIESEL EXTENDED USING METHOD NWTPH-Dx**

Laboratory Code: 609179-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result (Wet Wt)	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	mg/kg (ppm)	5,000	<50	88	91	64-133	3

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Diesel Extended	mg/kg (ppm)	5,000	90	58-147

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Data Qualifiers & Definitions

- a - The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.
- b - The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be meaningful.
- ca - The calibration results for the analyte were outside of acceptance criteria. The value reported is an estimate.
- c - The presence of the analyte may be due to carryover from previous sample injections.
- cf - The sample was centrifuged prior to analysis.
- d - The sample was diluted. Detection limits were raised and surrogate recoveries may not be meaningful.
- dv - Insufficient sample volume was available to achieve normal reporting limits.
- f - The sample was laboratory filtered prior to analysis.
- fb - The analyte was detected in the method blank.
- fc - The compound is a common laboratory and field contaminant.
- hr - The sample and duplicate were reextracted and reanalyzed. RPD results were still outside of control limits. Variability is attributed to sample inhomogeneity.
- hs - Headspace was present in the container used for analysis.
- ht - The analysis was performed outside the method or client-specified holding time requirement.
- ip - Recovery fell outside of control limits. Compounds in the sample matrix interfered with the quantitation of the analyte.
- j - The analyte concentration is reported below the lowest calibration standard. The value reported is an estimate.
- J - The internal standard associated with the analyte is out of control limits. The reported concentration is an estimate.
- jl - The laboratory control sample(s) percent recovery and/or RPD were out of control limits. The reported concentration should be considered an estimate.
- js - The surrogate associated with the analyte is out of control limits. The reported concentration should be considered an estimate.
- lc - The presence of the analyte is likely due to laboratory contamination.
- L - The reported concentration was generated from a library search.
- nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.
- pc - The sample was received with incorrect preservation or in a container not approved by the method. The value reported should be considered an estimate.
- ve - The analyte response exceeded the valid instrument calibration range. The value reported is an estimate.
- vo - The value reported fell outside the control limits established for this analyte.
- x - The sample chromatographic pattern does not resemble the fuel standard used for quantitation.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Yelena Aravkina, M.S.
Michael Erdahl, B.S.
Arina Podnozova, B.S.
Eric Young, B.S.

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Seattle, WA 98119-2029
(206) 285-8282
fbi@isomedia.com
www.friedmanandbruya.com

October 24, 2016

Kirsi Longley, Project Manager
Aspect Consulting, LLC
401 2nd Ave S, Suite 201
Seattle, WA 98104

Dear Ms Longley:

Included are the results from the testing of material submitted on October 6, 2016 from the Ken's Texaco, PO 120061, F&BI 610063 project. There are 24 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

We appreciate this opportunity to be of service to you and hope you will call if you have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.



Michael Erdahl
Project Manager

Enclosures

c: data@aspectconsulting.com

ASP1024R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on October 6, 2016 by Friedman & Bruya, Inc. from the Aspect Consulting, LLC Ken's Texaco, PO 120061 project. Samples were logged in under the laboratory ID's listed below.

<u>Laboratory ID</u>	<u>Aspect Consulting, LLC</u>
610063 -01	MW-11-100516
610063 -02	MW-16-100516
610063 -03	MW-8-100516
610063 -04	MW-20-100516

Samples MW-11-100516 and MW-16-100516 were sent to Amtest for sulfate, alkalinity, chloride, nitrate and nitrite analyses. The report is enclosed.

All quality control requirements were acceptable.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 10/24/16

Date Received: 10/06/16

Project: Ken's Texaco, PO 120061, F&BI 610063

Date Extracted: 10/06/16

Date Analyzed: 10/06/16 and 10/07/16

**RESULTS FROM THE ANALYSIS OF WATER SAMPLES
FOR BENZENE, TOLUENE, ETHYLBENZENE,
XYLENES AND TPH AS GASOLINE
USING METHODS 8021B AND NWTPH-Gx**

Results Reported as ug/L (ppb)

<u>Sample ID</u> Laboratory ID	<u>Benzene</u>	<u>Toluene</u>	<u>Ethyl Benzene</u>	<u>Total Xylenes</u>	<u>Gasoline Range</u>	<u>Surrogate (% Recovery)</u> (Limit 52-124)
MW-11-100516 610063-01	20	7.7	48	56	1,900	97
MW-16-100516 610063-02	<1	<1	3.5	<3	660	96
MW-8-100516 610063-03 1/10	330	37	250	94	4,500	90
MW-20-100516 610063-04	41	40	15	71	4,100	103
Method Blank 06-2017 MB	<1	<1	<1	<3	<100	93

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 10/24/16

Date Received: 10/06/16

Project: Ken's Texaco, PO 120061, F&BI 610063

Date Extracted: 10/07/16

Date Analyzed: 10/07/16

**RESULTS FROM THE ANALYSIS OF WATER SAMPLES
FOR TOTAL PETROLEUM HYDROCARBONS AS
DIESEL AND MOTOR OIL
USING METHOD NWTPH-Dx**
Results Reported as ug/L (ppb)

<u>Sample ID</u> Laboratory ID	<u>Diesel Range</u> (C ₁₀ -C ₂₅)	<u>Motor Oil Range</u> (C ₂₅ -C ₃₆)	<u>Surrogate</u> <u>(% Recovery)</u> (Limit 47-140)
MW-11-100516 610063-01	590 x	290 x	98
MW-16-100516 610063-02	100 x	<250	103
MW-8-100516 610063-03 1/1.2	820 x	<300	104
MW-20-100516 610063-04	570 x	<250	89
Method Blank 06-2114 MB	<50	<250	98

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Dissolved Metals By EPA Method 200.8

Client ID:	MW-11-100516	Client:	Aspect Consulting, LLC
Date Received:	10/06/16	Project:	Ken's Texaco, PO 120061, F&BI 610063
Date Extracted:	10/13/16	Lab ID:	610063-01 x10
Date Analyzed:	10/13/16	Data File:	610063-01 x10.047
Matrix:	Water	Instrument:	ICPMS2
Units:	ug/L (ppb)	Operator:	AP

Analyte:	Concentration ug/L (ppb)
Iron	5,200
Manganese	14,800

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Dissolved Metals By EPA Method 200.8

Client ID:	MW-16-100516	Client:	Aspect Consulting, LLC
Date Received:	10/06/16	Project:	Ken's Texaco, PO 120061, F&BI 610063
Date Extracted:	10/13/16	Lab ID:	610063-02
Date Analyzed:	10/13/16	Data File:	610063-02.041
Matrix:	Water	Instrument:	ICPMS2
Units:	ug/L (ppb)	Operator:	AP

Analyte:	Concentration ug/L (ppb)
Iron	4,550
Manganese	1,400

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Dissolved Metals By EPA Method 200.8

Client ID:	Method Blank	Client:	Aspect Consulting, LLC
Date Received:	NA	Project:	Ken's Texaco, PO 120061, F&BI 610063
Date Extracted:	10/13/16	Lab ID:	I6-676 mb
Date Analyzed:	10/13/16	Data File:	I6-676 mb.045
Matrix:	Water	Instrument:	ICPMS2
Units:	ug/L (ppb)	Operator:	AP

Analyte:	Concentration ug/L (ppb)
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Iron	<50
Manganese	<5

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 200.8

Client ID:	MW-11-100516	Client:	Aspect Consulting, LLC
Date Received:	10/06/16	Project:	Ken's Texaco, PO 120061, F&BI 610063
Date Extracted:	10/10/16	Lab ID:	610063-01
Date Analyzed:	10/10/16	Data File:	610063-01.080
Matrix:	Water	Instrument:	ICPMS2
Units:	ug/L (ppb)	Operator:	AP

Analyte:	Concentration ug/L (ppb)
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Lead	<1
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FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 200.8

Client ID:	MW-16-100516	Client:	Aspect Consulting, LLC
Date Received:	10/06/16	Project:	Ken's Texaco, PO 120061, F&BI 610063
Date Extracted:	10/10/16	Lab ID:	610063-02
Date Analyzed:	10/10/16	Data File:	610063-02.081
Matrix:	Water	Instrument:	ICPMS2
Units:	ug/L (ppb)	Operator:	AP

Analyte:	Concentration ug/L (ppb)
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Lead	<1
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FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 200.8

Client ID:	MW-8-100516	Client:	Aspect Consulting, LLC
Date Received:	10/06/16	Project:	Ken's Texaco, PO 120061, F&BI 610063
Date Extracted:	10/10/16	Lab ID:	610063-03
Date Analyzed:	10/10/16	Data File:	610063-03.082
Matrix:	Water	Instrument:	ICPMS2
Units:	ug/L (ppb)	Operator:	AP

Analyte:	Concentration ug/L (ppb)
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Lead	<1
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FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 200.8

Client ID:	MW-20-100516	Client:	Aspect Consulting, LLC
Date Received:	10/06/16	Project:	Ken's Texaco, PO 120061, F&BI 610063
Date Extracted:	10/10/16	Lab ID:	610063-04
Date Analyzed:	10/10/16	Data File:	610063-04.083
Matrix:	Water	Instrument:	ICPMS2
Units:	ug/L (ppb)	Operator:	AP

Analyte:	Concentration ug/L (ppb)
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Lead	2.02
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FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 200.8

Client ID:	Method Blank	Client:	Aspect Consulting, LLC
Date Received:	NA	Project:	Ken's Texaco, PO 120061, F&BI 610063
Date Extracted:	10/10/16	Lab ID:	I6-667 mb
Date Analyzed:	10/10/16	Data File:	I6-667 mb.023
Matrix:	Water	Instrument:	ICPMS2
Units:	ug/L (ppb)	Operator:	AP

Analyte:	Concentration ug/L (ppb)
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Lead	<1
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FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW-11-100516	Client:	Aspect Consulting, LLC
Date Received:	10/06/16	Project:	Ken's Texaco, PO 120061, F&BI 610063
Date Extracted:	10/06/16	Lab ID:	610063-01
Date Analyzed:	10/06/16	Data File:	100611.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	100	57	121
Toluene-d8	99	63	127
4-Bromofluorobenzene	101	60	133

Compounds:	Concentration ug/L (ppb)
1,2-Dichloroethane (EDC)	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW-20-100516	Client:	Aspect Consulting, LLC
Date Received:	10/06/16	Project:	Ken's Texaco, PO 120061, F&BI 610063
Date Extracted:	10/06/16	Lab ID:	610063-04
Date Analyzed:	10/06/16	Data File:	100612.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	102	57	121
Toluene-d8	100	63	127
4-Bromofluorobenzene	100	60	133

Compounds:	Concentration ug/L (ppb)
Hexane	110
Methyl t-butyl ether (MTBE)	<1
1,2-Dichloroethane (EDC)	<1
1,2-Dibromoethane (EDB)	<1
Naphthalene	7.6

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	Method Blank	Client:	Aspect Consulting, LLC
Date Received:	Not Applicable	Project:	Ken's Texaco, PO 120061, F&BI 610063
Date Extracted:	10/06/16	Lab ID:	06-2095 mb
Date Analyzed:	10/06/16	Data File:	100609.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	99	57	121
Toluene-d8	99	63	127
4-Bromofluorobenzene	102	60	133

Compounds:	Concentration ug/L (ppb)
Hexane	<1
Methyl t-butyl ether (MTBE)	<1
1,2-Dichloroethane (EDC)	<1
1,2-Dibromoethane (EDB)	<1
Naphthalene	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Dissolved Gasses By RSK 175

Client Sample ID:	MW-11-100516	Client:	Aspect Consulting, LLC
Date Received:	10/06/16	Project:	Ken's Texaco, PO 120061, F&BI 610063
Date Extracted:	10/07/16	Lab ID:	610063-01
Date Analyzed:	10/07/16	Data File:	006F0601.D
Matrix:	Water	Instrument:	GC8
Units:	ug/L (ppb)	Operator:	JS

Compounds:	Concentration ug/L (ppb)
Methane	210

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Dissolved Gasses By RSK 175

Client Sample ID:	MW-16-100516	Client:	Aspect Consulting, LLC
Date Received:	10/06/16	Project:	Ken's Texaco, PO 120061, F&BI 610063
Date Extracted:	10/07/16	Lab ID:	610063-02
Date Analyzed:	10/07/16	Data File:	008F0801.D
Matrix:	Water	Instrument:	GC8
Units:	ug/L (ppb)	Operator:	JS

Compounds:	Concentration ug/L (ppb)
Methane	89

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Dissolved Gasses By RSK 175

Client Sample ID:	Method Blank	Client:	Aspect Consulting, LLC
Date Received:	NA	Project:	Ken's Texaco, PO 120061, F&BI 610063
Date Extracted:	10/07/16	Lab ID:	06-2097 mb
Date Analyzed:	10/07/16	Data File:	005F0501.D
Matrix:	Water	Instrument:	GC8
Units:	ug/L (ppb)	Operator:	JS

Compounds:	Concentration ug/L (ppb)
Methane	<5

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 10/24/16

Date Received: 10/06/16

Project: Ken's Texaco, PO 120061, F&BI 610063

**QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER
SAMPLES FOR BENZENE, TOLUENE, ETHYLBENZENE,
XYLENES, AND TPH AS GASOLINE
USING METHOD 8021B AND NWTPH-Gx**

Laboratory Code: 610063-02 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	RPD (Limit 20)
Benzene	ug/L (ppb)	<1	<1	nm
Toluene	ug/L (ppb)	<1	<1	nm
Ethylbenzene	ug/L (ppb)	3.5	3.7	6
Xylenes	ug/L (ppb)	<3	<3	nm
Gasoline	ug/L (ppb)	660	680	3

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery	Acceptance
			LCS	Criteria
Benzene	ug/L (ppb)	50	94	65-118
Toluene	ug/L (ppb)	50	94	72-122
Ethylbenzene	ug/L (ppb)	50	88	73-126
Xylenes	ug/L (ppb)	150	90	74-118
Gasoline	ug/L (ppb)	1,000	91	69-134

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 10/24/16

Date Received: 10/06/16

Project: Ken's Texaco, PO 120061, F&BI 610063

**QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER
SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS
DIESEL EXTENDED USING METHOD NWTPH-Dx**

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	ug/L (ppb)	2,500	99	106	61-133	7

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 10/24/16

Date Received: 10/06/16

Project: Ken's Texaco, PO 120061, F&BI 610063

**QUALITY ASSURANCE RESULTS
FOR THE ANALYSIS OF WATER SAMPLES
FOR DISSOLVED METALS USING EPA METHOD 200.8**

Laboratory Code: 610166-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Iron	ug/L (ppb)	100	<50	98	102	70-130	4
Manganese	ug/L (ppb)	20	<1	102	105	70-130	3

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Iron	ug/L (ppb)	100	102	85-115
Manganese	ug/L (ppb)	20	106	85-115

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 10/24/16

Date Received: 10/06/16

Project: Ken's Texaco, PO 120061, F&BI 610063

**QUALITY ASSURANCE RESULTS
FOR THE ANALYSIS OF WATER SAMPLES
FOR TOTAL METALS USING EPA METHOD 200.8**

Laboratory Code: 610088-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Lead	ug/L (ppb)	10	<1	100	98	70-130	2

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Lead	ug/L (ppb)	10	103	85-115

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 10/24/16

Date Received: 10/06/16

Project: Ken's Texaco, PO 120061, F&BI 610063

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR VOLATILES BY EPA METHOD 8260C

Laboratory Code: 610079-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Acceptance Criteria
Hexane	ug/L (ppb)	50	<1	109	52-150
Methyl t-butyl ether (MTBE)	ug/L (ppb)	50	<1	100	74-127
1,2-Dichloroethane (EDC)	ug/L (ppb)	50	<1	86	69-133
1,2-Dibromoethane (EDB)	ug/L (ppb)	50	<1	105	69-134
Naphthalene	ug/L (ppb)	50	<1	93	44-164

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Hexane	ug/L (ppb)	50	108	104	57-137	4
Methyl t-butyl ether (MTBE)	ug/L (ppb)	50	97	96	64-147	1
1,2-Dichloroethane (EDC)	ug/L (ppb)	50	86	86	73-132	0
1,2-Dibromoethane (EDB)	ug/L (ppb)	50	107	107	82-125	0
Naphthalene	ug/L (ppb)	50	97	96	64-133	1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 10/24/16

Date Received: 10/06/16

Project: Ken's Texaco, PO 120061, F&BI 610063

**QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF
WATER SAMPLES FOR DISSOLVED GASES
USING METHOD RSK 175**

Laboratory Code: 610063-01 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	Relative Percent Difference (Limit 20)
Methane	ug/L (ppb)	210	250	17

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Methane	ug/L (ppb)	59	78	76	50-150	3

Data Qualifiers & Definitions

- a - The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.
- b - The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be meaningful.
- ca - The calibration results for the analyte were outside of acceptance criteria. The value reported is an estimate.
- c - The presence of the analyte may be due to carryover from previous sample injections.
- cf - The sample was centrifuged prior to analysis.
- d - The sample was diluted. Detection limits were raised and surrogate recoveries may not be meaningful.
- dv - Insufficient sample volume was available to achieve normal reporting limits.
- f - The sample was laboratory filtered prior to analysis.
- fb - The analyte was detected in the method blank.
- fc - The compound is a common laboratory and field contaminant.
- hr - The sample and duplicate were reextracted and reanalyzed. RPD results were still outside of control limits. Variability is attributed to sample inhomogeneity.
- hs - Headspace was present in the container used for analysis.
- ht - The analysis was performed outside the method or client-specified holding time requirement.
- ip - Recovery fell outside of control limits. Compounds in the sample matrix interfered with the quantitation of the analyte.
- j - The analyte concentration is reported below the lowest calibration standard. The value reported is an estimate.
- J - The internal standard associated with the analyte is out of control limits. The reported concentration is an estimate.
- jl - The laboratory control sample(s) percent recovery and/or RPD were out of control limits. The reported concentration should be considered an estimate.
- js - The surrogate associated with the analyte is out of control limits. The reported concentration should be considered an estimate.
- lc - The presence of the analyte is likely due to laboratory contamination.
- L - The reported concentration was generated from a library search.
- nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.
- pc - The sample was received with incorrect preservation or in a container not approved by the method. The value reported should be considered an estimate.
- ve - The analyte response exceeded the valid instrument calibration range. The value reported is an estimate.
- vo - The value reported fell outside the control limits established for this analyte.
- x - The sample chromatographic pattern does not resemble the fuel standard used for quantitation.



Am Test Inc.
13600 NE 126TH PL
Suite C
Kirkland, WA 98034
(425) 885-1664

**Professional
Analytical
Services**

Oct 20 2016
Friedman & Bruya, Inc.
3012 16th Avenue West
Seattle, WA 98119-2029
Attention: MICHAEL ERDAHL

Dear MICHAEL ERDAHL:

Enclosed please find the analytical data for your 610063 project.

The following is a cross correlation of client and laboratory identifications for your convenience.

CLIENT ID	MATRIX	AMTEST ID	TEST
MW-11-100516	Water	16-A026554	MIN, NUT
MW-16-100516	Water	16-A026555	MIN, NUT

Your samples were received on Thursday, October 6, 2016. At the time of receipt, the samples were logged in and properly maintained prior to the subsequent analysis.

The analytical procedures used at AmTest are well documented and are typically derived from the protocols of the EPA, USDA, FDA or the Army Corps of Engineers.

Following the analytical data you will find the Quality Control (QC) results.

Please note that the detection limits that are listed in the body of the report refer to the Practical Quantitation Limits (PQL's), as opposed to the Method Detection Limits (MDL's).

If you should have any questions pertaining to the data package, please feel free to contact me.

Sincerely,


Aaron W. Young
Laboratory Manager

Project #: 610063
PO Number: E-308

BACT = Bacteriological
CONV = Conventional

MET = Metals
ORG = Organics

NUT=Nutrients
DEM=Demand

MIN=Minerals

Am Test Inc.
13600 NE 126TH PL
Suite C
Kirkland, WA 98034
(425) 885-1664
www.amtestlab.com



*Professional
Analytical
Services*

ANALYSIS REPORT

Friedman & Bruya, Inc.
3012 16th Avenue West
Seattle, WA 98119-2029
Attention: MICHAEL ERDAHL
Project Name: 610063
Project #: 610063
PO Number: E-308
All results reported on an as received basis.

Date Received: 10/06/16
Date Reported: 10/20/16

AMTEST Identification Number 16-A026554
Client Identification MW-11-100516
Sampling Date 10/05/16, 09:50

Minerals

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Alkalinity (as CaCO ₃)	730	mg/l		1	SM 2320B	PT	10/19/16
Chloride	81.8	mg/l		0.05	EPA 300.0	MJ	10/06/16
Sulfate	5.30	mg/l		0.1	EPA 300.0	MJ	10/06/16

Nutrients

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Nitrite	< 0.005	mg/l		0.005	EPA 300.0	MJ	10/06/16
Nitrate	< 0.025	mg/l		0.025	EPA 300.0	MJ	10/06/16
Nitrate+Nitrite	< 0.025	mg/l		0.025	EPA 300.0	Calculated	

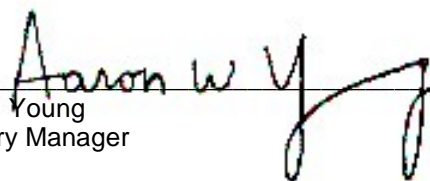
AMTEST Identification Number 16-A026555
Client Identification MW-16-100516
Sampling Date 10/05/16, 10:35

Minerals

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Alkalinity (as CaCO ₃)	54.	mg/l		1	SM 2320B	PT	10/19/16
Chloride	21.7	mg/l		0.05	EPA 300.0	MJ	10/06/16
Sulfate	75.2	mg/l		0.1	EPA 300.0	MJ	10/06/16

Nutrients

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Nitrite	< 0.005	mg/l		0.005	EPA 300.0	MJ	10/06/16
Nitrate	0.397	mg/l		0.025	EPA 300.0	MJ	10/06/16
Nitrate+Nitrite	0.397	mg/l		0.025	EPA 300.0	Calculated	



Aaron W. Young
Laboratory Manager

QC Summary for sample numbers: 16-A026554 to 16-A026555

DUPLICATES

SAMPLE #	ANALYTE	UNITS	SAMPLE VALUE	DUP VALUE	RPD
16-A027095	Alkalinity (as CaCO ₃)	mg/l	120	120	0.00
16-A027107	Alkalinity (as CaCO ₃)	mg/l	110	110	0.00
16-A026447	Alkalinity (as CaCO ₃)	mg/l	86.	92.	6.7
16-A026707	Alkalinity (as CaCO ₃)	mg/l	30.	30.	0.00
16-A026775	Alkalinity (as CaCO ₃)	mg/l	160	160	0.00
16-A026563	Chloride	mg/l	4.36	4.03	7.9
16-A026571	Nitrate	mg/l	1.54	1.57	1.9
16-A026571	Nitrite	mg/l	< 0.005	< 0.005	
16-A026563	Sulfate	mg/l	2.40	2.72	12.

MATRIX SPIKES

SAMPLE #	ANALYTE	UNITS	SAMPLE VALUE	SMPL+ SPK	SPK AMT	RECOVERY
16-A026563	Chloride	mg/l	4.36	22.8	20.0	92.20 %
16-A026571	Nitrate	mg/l	1.54	3.70	2.00	108.00 %
16-A026571	Nitrite	mg/l	< 0.005	2.10	2.00	105.00 %
16-A026563	Sulfate	mg/l	2.40	17.1	20.0	73.50 %

STANDARD REFERENCE MATERIALS

ANALYTE	UNITS	TRUE VALUE	MEASURED VALUE	RECOVERY
Alkalinity (as CaCO ₃)	mg/l	240	250	104. %
Alkalinity (as CaCO ₃)	mg/l	240	250	104. %
Alkalinity (as CaCO ₃)	mg/l	240	260	108. %
Chloride	mg/l	2.00	1.92	96.0 %
Chloride	mg/l	2.00	2.01	100. %
Nitrate	mg/l	2.00	1.91	95.5 %
Nitrate	mg/l	2.00	2.01	100. %
Nitrite	mg/l	2.00	1.92	96.0 %
Nitrite	mg/l	2.00	2.02	101. %
Sulfate	mg/l	2.00	1.75	87.5 %
Sulfate	mg/l	2.00	2.07	104. %

BLANKS

ANALYTE	UNITS	RESULT
Alkalinity (as CaCO ₃)	mg/l	< 1
Alkalinity (as CaCO ₃)	mg/l	< 1
Alkalinity (as CaCO ₃)	mg/l	< 1
Alkalinity (as CaCO ₃)	mg/l	< 1
Chloride	mg/l	< 0.05

QC Summary for sample numbers: 16-A026554 to 16-A026555...

BLANKS continued....

ANALYTE	UNITS	RESULT
Chloride	mg/l	< 0.05
Nitrate	mg/l	< 0.025
Nitrate	mg/l	< 0.025
Nitrite	mg/l	< 0.005
Nitrite	mg/l	< 0.005
Sulfate	mg/l	< 0.1
Sulfate	mg/l	< 0.1

SUBCONTRACT SAMPLE CHAIN OF CUSTODY

Send Report To Michael Erdahl

Company Friedman and Bruya, Inc.

Address 3012 16th Ave W

City, State, ZIP Seattle, WA 98119

Phone # (206) 285-8282 Fax # (206) 283-5044

SUBCONTRACTER <u>Antest</u>	
PROJECT NAME/NO. <u>610063</u>	PO # <u>E-308</u>
REMARKS Please Email Results	

Page # 1 of 1 P.6

TURNAROUND TIME	
<input checked="" type="checkbox"/> Standard (2 Weeks)	
<input type="checkbox"/> RUSH	
Rush charges authorized by: _____	
SAMPLE DISPOSAL	
<input type="checkbox"/> Dispose after 30 days	
<input type="checkbox"/> Return samples	
<input type="checkbox"/> Will call with instructions	


Sample ID	Lab ID	Date Sampled	Time Sampled	Matrix	# of jars	ANALYSES REQUESTED										Notes
						Dioxins/Furans	EPH	VPH	Nitrate	Sulfate	Alkalinity	TOC-9060M	Chloride	Nitrate + Nitrite as N		
MW-11-100516	20554	10/5/16	0950	water						X	X		X	X		
MW-16-100516	55	↓	1035	↓						X	X		X	X		

Friedman & Bruya, Inc. 3012 16th Avenue West Seattle, WA 98119-2029 Ph. (206) 285-8282 Fax (206) 283-5044	SIGNATURE		PRINT NAME		COMPANY		DATE	TIME
	Relinquished by:		Michael Erdahl		Friedman and Bruya		10/6/16	0804AM
	Received by:		ALANNA STAAB		AMTEST		10/6/16	11:27AM
	Relinquished by:		T=7.9 FEDEX					
	Received by:							

Report To Kirsi Longley
Company Aspect Consulting
Address 401 2nd Ave S. #201
City, State, ZIP Seattle, WA 98104
Phone 206-812-4746 Email 206-390-2831

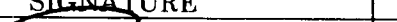

SAMPLE CHAIN OF CUSTODY

ME 10/6/16 U3/A12/DO

SAMPLERS (signature) 		Page # <u>112</u> of <u>112</u>
PROJECT NAME <u>120061</u> <u>Ken's Texaco</u>	PO # <u>120061</u>	TURNAROUND TIME <input checked="" type="checkbox"/> Standard Turnaround <input checked="" type="checkbox"/> RUSH <u>PM</u> - Rush charges authorized by: _____
REMARKS	INVOICE TO	SAMPLE DISPOSAL <input checked="" type="checkbox"/> Dispose after 30 days <input type="checkbox"/> Archive Samples <input type="checkbox"/> Other

						ANALYSES REQUESTED														
Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of Jars	TPH-HCID	TPH-Diesel	TPH-Gasoline	BTEX by 8021B	Water Target VOCs by 8260C and naphthalene	SVOCs by 8270D	PAHs 8270D SIM	Total Lead	Alkalinity/Sulfate	Pb, Fe, Mn	Ammonia/Nitrate	PSS. Membrane	ERC	Notes	
MW-11-100516	01 A-J	10/5/16	0950	W	10		/	/	/	/	/	/	/	/	/	/	/	/	/	
MW-16-100516	02 A-J		1035		10		/	/	/	/	/	/	/	/	/	/	/	/	/	
MW-8-100516	03 A-E		1116		5		/	/	/	/	/	/	/	/	/	/	/	/	/	
MW-20-100516	04 A-E		1200		5		/	/	/	/	/	/	/	/	/	/	/	/	/	

Friedman & Bruya, Inc.
3012 16th Avenue West
Seattle, WA 98119-2029
Ph. (206) 285-8282

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by: 	Rachel Bobich	Aspect	10/5/16	1200
Received by: 	Nhan Phan	FeB_I	10/6/16	0730
Relinquished by:				
Received by:				

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Yelena Aravkina, M.S.
Michael Erdahl, B.S.
Arina Podnozova, B.S.
Eric Young, B.S.

3012 16th Avenue West
Seattle, WA 98119-2029
(206) 285-8282
fbi@isomedia.com
www.friedmanandbruya.com

October 24, 2016

Kirsi Longley, Project Manager
Aspect Consulting, LLC
401 2nd Ave S, Suite 201
Seattle, WA 98104

Dear Ms Longley:

Included are the results from the testing of material submitted on October 5, 2016 from the Kens Texaco 120061, F&BI 610043 project. There are 23 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

We appreciate this opportunity to be of service to you and hope you will call if you have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.



Michael Erdahl
Project Manager

Enclosures

c: data@aspectconsulting.com

ASP1024R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on October 5, 2016 by Friedman & Bruya, Inc. from the Aspect Consulting, LLC Kens Texaco 120061, F&BI 610043 project. Samples were logged in under the laboratory ID's listed below.

<u>Laboratory ID</u>	<u>Aspect Consulting, LLC</u>
610043 -01	MW-13-100416
610043 -02	MW-14-100416
610043 -03	MW-10-100416
610043 -04	MW-7-100416
610043 -05	MW-15-100416
610043 -06	MW-01-100416

Sample MW-15-100416 was sent to Amtest for sulfate, alkalinity, chloride, nitrate and nitrite analyses. The report is enclosed.

All quality control requirements were acceptable.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 10/24/16

Date Received: 10/05/16

Project: Kens Texaco 120061, F&BI 610043

Date Extracted: 10/05/16

Date Analyzed: 10/05/16

**RESULTS FROM THE ANALYSIS OF WATER SAMPLES
FOR BENZENE, TOLUENE, ETHYLBENZENE,
XYLENES AND TPH AS GASOLINE
USING METHODS 8021B AND NWTPH-Gx**

Results Reported as ug/L (ppb)

<u>Sample ID</u> Laboratory ID	<u>Benzene</u>	<u>Toluene</u>	<u>Ethyl Benzene</u>	<u>Total Xylenes</u>	<u>Gasoline Range</u>	<u>Surrogate (% Recovery)</u> (Limit 52-124)
MW-13-100416 610043-01	<1	<1	<1	<3	<100	95
MW-14-100416 610043-02	<1	<1	<1	<3	<100	96
MW-10-100416 610043-03	<1	<1	<1	<3	<100	93
MW-7-100416 610043-04	<1	<1	<1	<3	<100	95
MW-15-100416 610043-05	<1	<1	<1	<3	<100	95
MW-01-100416 610043-06	<1	<1	2.2	3.8	550	97
Method Blank 06-2015 MB	<1	<1	<1	<3	<100	95

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 10/24/16

Date Received: 10/05/16

Project: Kens Texaco 120061, F&BI 610043

Date Extracted: 10/06/16

Date Analyzed: 10/06/16

**RESULTS FROM THE ANALYSIS OF WATER SAMPLES
FOR TOTAL PETROLEUM HYDROCARBONS AS
DIESEL AND MOTOR OIL
USING METHOD NWTPH-Dx**
Results Reported as ug/L (ppb)

<u>Sample ID</u> Laboratory ID	<u>Diesel Range</u> (C ₁₀ -C ₂₅)	<u>Motor Oil Range</u> (C ₂₅ -C ₃₆)	<u>Surrogate</u> <u>(% Recovery)</u> (Limit 47-140)
MW-13-100416 610043-01 1/1.3	<65	<325	83
MW-14-100416 610043-02	<50	<250	90
MW-10-100416 610043-03	<50	<250	74
MW-7-100416 610043-04	<50	<250	75
MW-15-100416 610043-05	<50	<250	92
MW-01-100416 610043-06	73 x	<250	70
Method Blank 06-2089 MB	<50	<250	72

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Dissolved Metals By EPA Method 200.8

Client ID:	MW-15-100416	Client:	Aspect Consulting, LLC
Date Received:	10/05/16	Project:	Kens Texaco 120061, F&BI 610043
Date Extracted:	10/05/16	Lab ID:	610043-05
Date Analyzed:	10/05/16	Data File:	610043-05.072
Matrix:	Water	Instrument:	ICPMS2
Units:	ug/L (ppb)	Operator:	SP

Analyte:	Concentration ug/L (ppb)
Iron	80.3
Manganese	530

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Dissolved Metals By EPA Method 200.8

Client ID:	Method Blank	Client:	Aspect Consulting, LLC
Date Received:	NA	Project:	Kens Texaco 120061, F&BI 610043
Date Extracted:	10/05/16	Lab ID:	I6-659 mb2
Date Analyzed:	10/05/16	Data File:	I6-659 mb2.071
Matrix:	Water	Instrument:	ICPMS2
Units:	ug/L (ppb)	Operator:	SP

Analyte:	Concentration ug/L (ppb)
----------	-----------------------------

Iron	<50
Manganese	<5

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 200.8

Client ID:	MW-13-100416	Client:	Aspect Consulting, LLC
Date Received:	10/05/16	Project:	Kens Texaco 120061, F&BI 610043
Date Extracted:	10/05/16	Lab ID:	610043-01
Date Analyzed:	10/06/16	Data File:	610043-01.030
Matrix:	Water	Instrument:	ICPMS2
Units:	ug/L (ppb)	Operator:	SP

Analyte:	Concentration ug/L (ppb)
----------	-----------------------------

Lead	<1
------	----

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 200.8

Client ID:	MW-14-100416	Client:	Aspect Consulting, LLC
Date Received:	10/05/16	Project:	Kens Texaco 120061, F&BI 610043
Date Extracted:	10/05/16	Lab ID:	610043-02
Date Analyzed:	10/06/16	Data File:	610043-02.034
Matrix:	Water	Instrument:	ICPMS2
Units:	ug/L (ppb)	Operator:	SP

Analyte:	Concentration ug/L (ppb)
----------	-----------------------------

Lead	<1
------	----

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 200.8

Client ID:	MW-10-100416	Client:	Aspect Consulting, LLC
Date Received:	10/05/16	Project:	Kens Texaco 120061, F&BI 610043
Date Extracted:	10/05/16	Lab ID:	610043-03
Date Analyzed:	10/06/16	Data File:	610043-03.035
Matrix:	Water	Instrument:	ICPMS2
Units:	ug/L (ppb)	Operator:	SP

Analyte:	Concentration ug/L (ppb)
----------	-----------------------------

Lead	<1
------	----

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 200.8

Client ID:	MW-7-100416	Client:	Aspect Consulting, LLC
Date Received:	10/05/16	Project:	Kens Texaco 120061, F&BI 610043
Date Extracted:	10/05/16	Lab ID:	610043-04
Date Analyzed:	10/06/16	Data File:	610043-04.040
Matrix:	Water	Instrument:	ICPMS2
Units:	ug/L (ppb)	Operator:	SP

Analyte:	Concentration ug/L (ppb)
----------	-----------------------------

Lead	1.09
------	------

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 200.8

Client ID:	MW-15-100416	Client:	Aspect Consulting, LLC
Date Received:	10/05/16	Project:	Kens Texaco 120061, F&BI 610043
Date Extracted:	10/05/16	Lab ID:	610043-05
Date Analyzed:	10/06/16	Data File:	610043-05.044
Matrix:	Water	Instrument:	ICPMS2
Units:	ug/L (ppb)	Operator:	SP

Analyte:	Concentration ug/L (ppb)
----------	-----------------------------

Lead	<1
------	----

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 200.8

Client ID:	MW-01-100416	Client:	Aspect Consulting, LLC
Date Received:	10/05/16	Project:	Kens Texaco 120061, F&BI 610043
Date Extracted:	10/05/16	Lab ID:	610043-06
Date Analyzed:	10/06/16	Data File:	610043-06.048
Matrix:	Water	Instrument:	ICPMS2
Units:	ug/L (ppb)	Operator:	SP

Analyte:	Concentration ug/L (ppb)
----------	-----------------------------

Lead	<1
------	----

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 200.8

Client ID:	Method Blank	Client:	Aspect Consulting, LLC
Date Received:	NA	Project:	Kens Texaco 120061, F&BI 610043
Date Extracted:	10/05/16	Lab ID:	I6-662 mb
Date Analyzed:	10/06/16	Data File:	I6-662 mb.019
Matrix:	Water	Instrument:	ICPMS2
Units:	ug/L (ppb)	Operator:	SP

Analyte:	Concentration ug/L (ppb)
----------	-----------------------------

Lead	<1
------	----

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW-10-100416	Client:	Aspect Consulting, LLC
Date Received:	10/05/16	Project:	Kens Texaco 120061, F&BI 610043
Date Extracted:	10/06/16	Lab ID:	610043-03
Date Analyzed:	10/06/16	Data File:	100610.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	99	57	121
Toluene-d8	99	63	127
4-Bromofluorobenzene	101	60	133

Compounds:	Concentration ug/L (ppb)
1,2-Dichloroethane (EDC)	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	Method Blank	Client:	Aspect Consulting, LLC
Date Received:	Not Applicable	Project:	Kens Texaco 120061, F&BI 610043
Date Extracted:	10/06/16	Lab ID:	06-2095 mb
Date Analyzed:	10/06/16	Data File:	100609.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	99	57	121
Toluene-d8	99	63	127
4-Bromofluorobenzene	102	60	133

Compounds:	Concentration ug/L (ppb)
1,2-Dichloroethane (EDC)	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Dissolved Gasses By RSK 175

Client Sample ID:	MW-15-100416	Client:	Aspect Consulting, LLC
Date Received:	10/05/16	Project:	Kens Texaco 120061, F&BI 610043
Date Extracted:	10/05/16	Lab ID:	610043-05
Date Analyzed:	10/05/16	Data File:	008F0701.D
Matrix:	Water	Instrument:	GC8
Units:	ug/L (ppb)	Operator:	JS

Compounds:	Concentration ug/L (ppb)
Methane	<5

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Dissolved Gasses By RSK 175

Client Sample ID:	Method Blank	Client:	Aspect Consulting, LLC
Date Received:	NA	Project:	Kens Texaco 120061, F&BI 610043
Date Extracted:	10/05/16	Lab ID:	06-2057 mb
Date Analyzed:	10/05/16	Data File:	006F0501.D
Matrix:	Water	Instrument:	GC8
Units:	ug/L (ppb)	Operator:	JS

Compounds:	Concentration ug/L (ppb)
Methane	<5

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 10/24/16

Date Received: 10/05/16

Project: Kens Texaco 120061, F&BI 610043

**QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER
SAMPLES FOR BENZENE, TOLUENE, ETHYLBENZENE,
XYLENES, AND TPH AS GASOLINE
USING EPA METHOD 8021B AND NWTPH-Gx**

Laboratory Code: 610022-01 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	RPD (Limit 20)
Benzene	ug/L (ppb)	<1	<1	nm
Toluene	ug/L (ppb)	<1	<1	nm
Ethylbenzene	ug/L (ppb)	<1	<1	nm
Xylenes	ug/L (ppb)	<3	<3	nm
Gasoline	ug/L (ppb)	<100	<100	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery	Acceptance
			LCS	Criteria
Benzene	ug/L (ppb)	50	92	65-118
Toluene	ug/L (ppb)	50	92	72-122
Ethylbenzene	ug/L (ppb)	50	86	73-126
Xylenes	ug/L (ppb)	150	88	74-118
Gasoline	ug/L (ppb)	1,000	89	69-134

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 10/24/16

Date Received: 10/05/16

Project: Kens Texaco 120061, F&BI 610043

**QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER
SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS
DIESEL EXTENDED USING METHOD NWTPH-Dx**

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	ug/L (ppb)	2,500	90	80	61-133	12

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 10/24/16

Date Received: 10/05/16

Project: Kens Texaco 120061, F&BI 610043

**QUALITY ASSURANCE RESULTS
FOR THE ANALYSIS OF WATER SAMPLES
FOR DISSOLVED METALS USING EPA METHOD 200.8**

Laboratory Code: 610031-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Iron	ug/L (ppb)	100	114	105	111	70-130	6
Manganese	ug/L (ppb)	20	340	180 b	190 b	70-130	5 b

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Iron	ug/L (ppb)	100	100	85-115
Manganese	ug/L (ppb)	20	100	85-115

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 10/24/16

Date Received: 10/05/16

Project: Kens Texaco 120061, F&BI 610043

**QUALITY ASSURANCE RESULTS
FOR THE ANALYSIS OF WATER SAMPLES
FOR TOTAL METALS USING EPA METHOD 200.8**

Laboratory Code: 610022-02 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Lead	ug/L (ppb)	10	<1	90	88	70-130	2

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Lead	ug/L (ppb)	10	106	85-115

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 10/24/16

Date Received: 10/05/16

Project: Kens Texaco 120061, F&BI 610043

**QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER
SAMPLES FOR VOLATILES BY EPA METHOD 8260C**

Laboratory Code: 610079-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Acceptance Criteria
1,2-Dichloroethane (EDC)	ug/L (ppb)	50	<1	86	69-133

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
1,2-Dichloroethane (EDC)	ug/L (ppb)	50	86	86	73-132	0

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 10/24/16

Date Received: 10/05/16

Project: Kens Texaco 120061, F&BI 610043

**QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF
WATER SAMPLES FOR DISSOLVED GASES
USING METHOD RSK 175**

Laboratory Code: 610043-05 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	Relative Percent Difference (Limit 20)
Methane	ug/L (ppb)	<5	<5	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Methane	ug/L (ppb)	59	79	75	50-150	5

Data Qualifiers & Definitions

- a - The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.
- b - The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be meaningful.
- ca - The calibration results for the analyte were outside of acceptance criteria. The value reported is an estimate.
- c - The presence of the analyte may be due to carryover from previous sample injections.
- cf - The sample was centrifuged prior to analysis.
- d - The sample was diluted. Detection limits were raised and surrogate recoveries may not be meaningful.
- dv - Insufficient sample volume was available to achieve normal reporting limits.
- f - The sample was laboratory filtered prior to analysis.
- fb - The analyte was detected in the method blank.
- fc - The compound is a common laboratory and field contaminant.
- hr - The sample and duplicate were reextracted and reanalyzed. RPD results were still outside of control limits. Variability is attributed to sample inhomogeneity.
- hs - Headspace was present in the container used for analysis.
- ht - The analysis was performed outside the method or client-specified holding time requirement.
- ip - Recovery fell outside of control limits. Compounds in the sample matrix interfered with the quantitation of the analyte.
- j - The analyte concentration is reported below the lowest calibration standard. The value reported is an estimate.
- J - The internal standard associated with the analyte is out of control limits. The reported concentration is an estimate.
- jl - The laboratory control sample(s) percent recovery and/or RPD were out of control limits. The reported concentration should be considered an estimate.
- js - The surrogate associated with the analyte is out of control limits. The reported concentration should be considered an estimate.
- lc - The presence of the analyte is likely due to laboratory contamination.
- L - The reported concentration was generated from a library search.
- nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.
- pc - The sample was received with incorrect preservation or in a container not approved by the method. The value reported should be considered an estimate.
- ve - The analyte response exceeded the valid instrument calibration range. The value reported is an estimate.
- vo - The value reported fell outside the control limits established for this analyte.
- x - The sample chromatographic pattern does not resemble the fuel standard used for quantitation.



Am Test Inc.
13600 NE 126TH PL
Suite C
Kirkland, WA 98034
(425) 885-1664

**Professional
Analytical
Services**

Oct 20 2016
Friedman & Bruya, Inc.
3012 16th Avenue West
Seattle, WA 98119-2029
Attention: MICHAEL ERDAHL

Dear MICHAEL ERDAHL:

Enclosed please find the analytical data for your 610043 project.

The following is a cross correlation of client and laboratory identifications for your convenience.

CLIENT ID	MATRIX	AMTEST ID	TEST
MW-15-100416	Water	16-A026551	MIN, NUT

Your sample was received on Thursday, October 6, 2016. At the time of receipt, the sample was logged in and properly maintained prior to the subsequent analysis.

The analytical procedures used at AmTest are well documented and are typically derived from the protocols of the EPA, USDA, FDA or the Army Corps of Engineers.

Following the analytical data you will find the Quality Control (QC) results.

Please note that the detection limits that are listed in the body of the report refer to the Practical Quantitation Limits (PQL's), as opposed to the Method Detection Limits (MDL's).

If you should have any questions pertaining to the data package, please feel free to contact me.

Sincerely,


Aaron W. Young
Laboratory Manager

Project #: 610043
PO Number: E-308

BACT = Bacteriological
CONV = Conventional

MET = Metals
ORG = Organics

NUT=Nutrients
DEM=Demand

MIN=Minerals

Am Test Inc.
13600 NE 126TH PL
Suite C
Kirkland, WA 98034
(425) 885-1664
www.amtestlab.com



**Professional
Analytical
Services**

ANALYSIS REPORT

Friedman & Bruya, Inc.
3012 16th Avenue West
Seattle, WA 98119-2029
Attention: MICHAEL ERDAHL
Project Name: 610043
Project #: 610043
PO Number: E-308
All results reported on an as received basis.

Date Received: 10/06/16
Date Reported: 10/20/16

AMTEST Identification Number 16-A026551
Client Identification MW-15-100416
Sampling Date 10/04/16, 13:45

Minerals

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Alkalinity (as CaCO ₃)	< 1	mg/l		1	SM 2320B	PT	10/19/16
Chloride	27.6	mg/l		0.05	EPA 300.0	MJ	10/06/16
Sulfate	134.	mg/l		0.1	EPA 300.0	MJ	10/06/16

Nutrients

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Nitrite	< 0.005	mg/l		0.005	EPA 300.0	MJ	10/06/16
Nitrate	1.23	mg/l		0.025	EPA 300.0	MJ	10/06/16
Nitrate+Nitrite	1.23	mg/l		0.025	EPA 300.0	Calculated	

Aaron W. Young
Laboratory Manager

A handwritten signature in black ink, appearing to read "Aaron W. Young", is written over a horizontal line.

QC Summary for sample number: 16-A026551

DUPLICATES

SAMPLE #	ANALYTE	UNITS	SAMPLE VALUE	DUP VALUE	RPD
16-A027095	Alkalinity (as CaCO ₃)	mg/l	120	120	0.00
16-A027107	Alkalinity (as CaCO ₃)	mg/l	110	110	0.00
16-A026447	Alkalinity (as CaCO ₃)	mg/l	86.	92.	6.7
16-A026707	Alkalinity (as CaCO ₃)	mg/l	30.	30.	0.00
16-A026775	Alkalinity (as CaCO ₃)	mg/l	160	160	0.00
16-A026563	Chloride	mg/l	4.36	4.03	7.9
16-A026571	Nitrate	mg/l	1.54	1.57	1.9
16-A026571	Nitrite	mg/l	< 0.005	< 0.005	
16-A026563	Sulfate	mg/l	2.40	2.72	12.

MATRIX SPIKES

SAMPLE #	ANALYTE	UNITS	SAMPLE VALUE	SMPL+ SPK	SPK AMT	RECOVERY
16-A026563	Chloride	mg/l	4.36	22.8	20.0	92.20 %
16-A026571	Nitrate	mg/l	1.54	3.70	2.00	108.00 %
16-A026571	Nitrite	mg/l	< 0.005	2.10	2.00	105.00 %
16-A026563	Sulfate	mg/l	2.40	17.1	20.0	73.50 %

STANDARD REFERENCE MATERIALS

ANALYTE	UNITS	TRUE VALUE	MEASURED VALUE	RECOVERY
Alkalinity (as CaCO ₃)	mg/l	240	250	104. %
Alkalinity (as CaCO ₃)	mg/l	240	250	104. %
Alkalinity (as CaCO ₃)	mg/l	240	260	108. %
Chloride	mg/l	2.00	1.92	96.0 %
Chloride	mg/l	2.00	2.01	100. %
Nitrate	mg/l	2.00	1.91	95.5 %
Nitrate	mg/l	2.00	2.01	100. %
Nitrite	mg/l	2.00	1.92	96.0 %
Nitrite	mg/l	2.00	2.02	101. %
Sulfate	mg/l	2.00	1.75	87.5 %
Sulfate	mg/l	2.00	2.07	104. %

BLANKS

ANALYTE	UNITS	RESULT
Alkalinity (as CaCO ₃)	mg/l	< 1
Alkalinity (as CaCO ₃)	mg/l	< 1
Alkalinity (as CaCO ₃)	mg/l	< 1
Alkalinity (as CaCO ₃)	mg/l	< 1
Chloride	mg/l	< 0.05

QC Summary for sample number: 16-A026551...

BLANKS continued....

ANALYTE	UNITS	RESULT
Chloride	mg/l	< 0.05
Nitrate	mg/l	< 0.025
Nitrate	mg/l	< 0.025
Nitrite	mg/l	< 0.005
Nitrite	mg/l	< 0.005
Sulfate	mg/l	< 0.1
Sulfate	mg/l	< 0.1

5.

Phone# (206) 285-8282 Fax# (206) 283-5044

SUBCONTRACTOR <i>Amtest</i>	
PROJECT NAME/NO. <i>610043</i>	PO # <i>E-308</i>
REMARKS <i>Please Email Results</i>	

Page # 1 of 1

TURNAROUND TIME

☒ Standard (2 Weeks)

☐ RUSH _____

Rush charges authorized by: _____

SAMPLE DISPOSAL

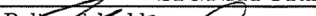

☐ Dispose after 30 days

☐ Return samples

☐ Will call with instructions

[illegible]

Friedman & Bruya, Inc.
3012 16th Avenue West
Seattle, WA 98119-2029
Ph. (206) 285-8282
Fax (206) 283-5044

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by: 	Michael Erdahl	Friedman and Bruya	10/5/16	0855 AM
Received by: 	ALANNA STAAB	AMTEST T=6.4	10/5/16	12:12
Relinquished by:	FEDEX			
Received by:				

610 043

SAMPLE CHAIN OF CUSTODY

ME 10/5/16 V3/AIS/1 DO3

Report To Kirsi Longley
 Company Aspect Consulting
 Address 401 2nd Ave. S #201
 City, State, ZIP Seattle, WA 98104
 Phone 206-812-4746 Email 206-390-2831

SAMPLERS (signature) Page # 1 of 1

PROJECT NAME

Kens Texaco
#120061

PO #

120061

REMARKS

INVOICE TO

TURNAROUND TIME

☒ Standard Turnaround☒ RUSH

Rush charges authorized by:

SAMPLE DISPOSAL


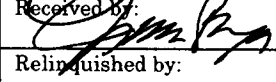
☒ Dispose after 30 days☐ Archive Samples☐ Other

NOT INCLUDED!

NOT INCLUDED!

						ANALYSES REQUESTED																
Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of Jars	TPH-HCID	NWTPH-Diesel	WTPH-Gasoline	BTEX by 8021B	VOCs by 8260C	SVOCs by 8270D	PAHs 8270D SIM	Total Lead	Alkalinity/ Sulfate	Diss Fe.	Diss Mn.	Chloride	Nitrate/Nitrite	Diss. Methane	EDC	Notes	
AW-21-100316		10/4/16		W			/	/	/				/									
MW-22-100316							/	/	/				/									
MW-13-100 ⁴ 16	01 A-E		1050		5		/	/	/				/									
MW-14-100 ⁴ 16	02 A-E		1135		5		/	/	/				/									1/2 L cap cracked
MW-10-100 ⁴ 16	03 A-E		1210		5		/	/	/				/								/	"
MW-7-100 ⁴ 16	04 A-E		1240		5		/	/	/				/									
MW-15-100 ⁴ 16	05 A-E		1345		10		/	/	/				/	/	/	/	/	/	/	/		1/2 L cap cracked 100 cracked
AW-11-100316							/	/	/				/	/	/	/	/	/	/	/		
AW-10-100316							/	/	/				/	/	/	/	/	/	/	/		
MW-01-100 ⁴ 16	06 A-E		1410		5		/	/	/				/									

Friedman & Bruya, Inc.
 3012 16th Avenue West
 Seattle, WA 98119-2029
 Ph. (206) 285-8282

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by: 	Rachel Bobich	Aspect Consulting	10/4/16	1442
Received by: 	James Bruya	F&B	10/5	0700
Relinquished by:				
Received by:		Samples received by:		2

TOTAL BOTTLES

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Yelena Aravkina, M.S.
Michael Erdahl, B.S.
Arina Podnozova, B.S.
Eric Young, B.S.

3012 16th Avenue West
Seattle, WA 98119-2029
(206) 285-8282
fbi@isomedia.com
www.friedmanandbruya.com

October 24, 2016

Kirsi Longley, Project Manager
Aspect Consulting, LLC
401 2nd Ave S, Suite 201
Seattle, WA 98104

Dear Ms Longley:

Included are the results from the testing of material submitted on October 4, 2016 from the Kens Texaco, PO 120061, F&BI 610022 project. There are 17 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

We appreciate this opportunity to be of service to you and hope you will call if you have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.



Michael Erdahl
Project Manager

Enclosures

c: data@aspectconsulting.com
ASP1024R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on October 4, 2016 by Friedman & Bruya, Inc. from the Aspect Consulting, LLC Kens Texaco, PO 120061, F&BI 610022project. Samples were logged in under the laboratory ID's listed below.

<u>Laboratory ID</u>	<u>Aspect Consulting, LLC</u>
610022 -01	MW-18-100316
610022 -02	MW-19-100316
610022 -03	MW-12-100316

Sample MW-12-100316 was sent to Amtest for sulfate, alkalinity, chloride, nitrate and nitrite analyses. The report is enclosed.

All quality control requirements were acceptable.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 10/24/16

Date Received: 10/04/16

Project: Kens Texaco, PO 120061, F&BI 610022

Date Extracted: 10/05/16

Date Analyzed: 10/05/16

**RESULTS FROM THE ANALYSIS OF WATER SAMPLES
FOR BENZENE, TOLUENE, ETHYLBENZENE,
XYLENES AND TPH AS GASOLINE
USING METHODS 8021B AND NWTPH-Gx**

Results Reported as ug/L (ppb)

<u>Sample ID</u> Laboratory ID	<u>Benzene</u>	<u>Toluene</u>	<u>Ethyl Benzene</u>	<u>Total Xylenes</u>	<u>Gasoline Range</u>	<u>Surrogate (% Recovery)</u> (Limit 52-124)
MW-18-100316 610022-01	<1	<1	<1	<3	<100	95
MW-19-100316 610022-02	<1	<1	<1	<3	<100	96
MW-12-100316 610022-03	<1	<1	<1	<3	<100	94
Method Blank 06-2015 MB	<1	<1	<1	<3	<100	95

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 10/24/16

Date Received: 10/04/16

Project: Kens Texaco, PO 120061, F&BI 610022

Date Extracted: 10/04/16

Date Analyzed: 10/04/16

**RESULTS FROM THE ANALYSIS OF WATER SAMPLES
FOR TOTAL PETROLEUM HYDROCARBONS AS
DIESEL AND MOTOR OIL
USING METHOD NWTPH-Dx**
Results Reported as ug/L (ppb)

<u>Sample ID</u> Laboratory ID	<u>Diesel Range</u> (C ₁₀ -C ₂₅)	<u>Motor Oil Range</u> (C ₂₅ -C ₃₆)	<u>Surrogate</u> <u>(% Recovery)</u> (Limit 47-140)
MW-18-100316 610022-01	<50	<250	89
MW-19-100316 610022-02	<50	<250	90
MW-12-100316 610022-03	<50	<250	94
Method Blank 06-2067 MB	<50	<250	71

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 200.8

Client ID:	MW-18-100316	Client:	Aspect Consulting, LLC
Date Received:	10/04/16	Project:	Kens Texaco, PO 120061, F&BI 610022
Date Extracted:	10/05/16	Lab ID:	610022-01
Date Analyzed:	10/06/16	Data File:	610022-01.021
Matrix:	Water	Instrument:	ICPMS2
Units:	ug/L (ppb)	Operator:	SP

Analyte:	Concentration ug/L (ppb)
----------	-----------------------------

Lead	<1
------	----

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 200.8

Client ID:	MW-19-100316	Client:	Aspect Consulting, LLC
Date Received:	10/04/16	Project:	Kens Texaco, PO 120061, F&BI 610022
Date Extracted:	10/05/16	Lab ID:	610022-02
Date Analyzed:	10/06/16	Data File:	610022-02.022
Matrix:	Water	Instrument:	ICPMS2
Units:	ug/L (ppb)	Operator:	SP

Analyte:	Concentration ug/L (ppb)
----------	-----------------------------

Lead	<1
------	----

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 200.8

Client ID:	MW-12-100316	Client:	Aspect Consulting, LLC
Date Received:	10/04/16	Project:	Kens Texaco, PO 120061, F&BI 610022
Date Extracted:	10/05/16	Lab ID:	610022-03
Date Analyzed:	10/06/16	Data File:	610022-03.025
Matrix:	Water	Instrument:	ICPMS2
Units:	ug/L (ppb)	Operator:	SP

Analyte:	Concentration ug/L (ppb)
----------	-----------------------------

Lead	<1
------	----

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 200.8

Client ID:	Method Blank	Client:	Aspect Consulting, LLC
Date Received:	NA	Project:	Kens Texaco, PO 120061, F&BI 610022
Date Extracted:	10/05/16	Lab ID:	I6-662 mb
Date Analyzed:	10/06/16	Data File:	I6-662 mb.019
Matrix:	Water	Instrument:	ICPMS2
Units:	ug/L (ppb)	Operator:	SP

Analyte:	Concentration ug/L (ppb)
----------	-----------------------------

Lead	<1
------	----

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Dissolved Metals By EPA Method 200.8

Client ID:	MW-12-100316	Client:	Aspect Consulting, LLC
Date Received:	10/04/16	Project:	Kens Texaco, PO 120061, F&BI 610022
Date Extracted:	10/04/16	Lab ID:	610022-03
Date Analyzed:	10/05/16	Data File:	610022-03.070
Matrix:	Water	Instrument:	ICPMS2
Units:	ug/L (ppb)	Operator:	SP

Analyte:	Concentration ug/L (ppb)
Iron	196
Manganese	1,940

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Dissolved Metals By EPA Method 200.8

Client ID:	Method Blank	Client:	Aspect Consulting, LLC
Date Received:	NA	Project:	Kens Texaco, PO 120061, F&BI 610022
Date Extracted:	10/04/16	Lab ID:	I6-659 mb
Date Analyzed:	10/04/16	Data File:	I6-659 mb.081
Matrix:	Water	Instrument:	ICPMS2
Units:	ug/L (ppb)	Operator:	SP

Analyte:	Concentration ug/L (ppb)
----------	-----------------------------

Iron	<50
Manganese	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Dissolved Gasses By RSK 175

Client Sample ID:	MW-12-100316	Client:	Aspect Consulting, LLC
Date Received:	10/04/16	Project:	Kens Texaco, PO 120061, F&BI 610022
Date Extracted:	10/05/16	Lab ID:	610022-03
Date Analyzed:	10/05/16	Data File:	007F0601.D
Matrix:	Water	Instrument:	GC8
Units:	ug/L (ppb)	Operator:	JS

Compounds:	Concentration ug/L (ppb)
Methane	<5

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Dissolved Gasses By RSK 175

Client Sample ID:	Method Blank	Client:	Aspect Consulting, LLC
Date Received:	NA	Project:	Kens Texaco, PO 120061, F&BI 610022
Date Extracted:	10/05/16	Lab ID:	06-2057 mb
Date Analyzed:	10/05/16	Data File:	006F0501.D
Matrix:	Water	Instrument:	GC8
Units:	ug/L (ppb)	Operator:	JS

Compounds:	Concentration ug/L (ppb)
Methane	<5

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 10/24/16

Date Received: 10/04/16

Project: Kens Texaco, PO 120061, F&BI 610022

**QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER
SAMPLES FOR BENZENE, TOLUENE, ETHYLBENZENE,
XYLENES, AND TPH AS GASOLINE
USING EPA METHOD 8021B AND NWTPH-Gx**

Laboratory Code: 610022-01 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	RPD (Limit 20)
Benzene	ug/L (ppb)	<1	<1	nm
Toluene	ug/L (ppb)	<1	<1	nm
Ethylbenzene	ug/L (ppb)	<1	<1	nm
Xylenes	ug/L (ppb)	<3	<3	nm
Gasoline	ug/L (ppb)	<100	<100	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery	Acceptance
			LCS	Criteria
Benzene	ug/L (ppb)	50	92	65-118
Toluene	ug/L (ppb)	50	92	72-122
Ethylbenzene	ug/L (ppb)	50	86	73-126
Xylenes	ug/L (ppb)	150	88	74-118
Gasoline	ug/L (ppb)	1,000	89	69-134

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 10/24/16

Date Received: 10/04/16

Project: Kens Texaco, PO 120061, F&BI 610022

**QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER
SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS
DIESEL EXTENDED USING METHOD NWTPH-Dx**

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	ug/L (ppb)	2,500	86	84	61-133	2

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 10/24/16

Date Received: 10/04/16

Project: Kens Texaco, PO 120061, F&BI 610022

**QUALITY ASSURANCE RESULTS
FOR THE ANALYSIS OF WATER SAMPLES
FOR TOTAL METALS USING EPA METHOD 200.8**

Laboratory Code: 610022-02 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Lead	ug/L (ppb)	10	<1	90	88	70-130	2

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Lead	ug/L (ppb)	10	106	85-115

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 10/24/16

Date Received: 10/04/16

Project: Kens Texaco, PO 120061, F&BI 610022

**QUALITY ASSURANCE RESULTS
FOR THE ANALYSIS OF WATER SAMPLES
FOR DISSOLVED METALS USING EPA METHOD 200.8**

Laboratory Code: 610031-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Iron	ug/L (ppb)	100	114	105	111	70-130	6
Manganese	ug/L (ppb)	20	340	180 b	190 b	70-130	5 b

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Iron	ug/L (ppb)	100	100	85-115
Manganese	ug/L (ppb)	20	100	85-115

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 10/24/16

Date Received: 10/04/16

Project: Kens Texaco, PO 120061, F&BI 610022

**QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF
WATER SAMPLES FOR DISSOLVED GASES
USING METHOD RSK 175**

Laboratory Code: 610043-05 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	Relative Percent Difference (Limit 20)
Methane	ug/L (ppb)	<5	<5	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Methane	ug/L (ppb)	59	79	75	50-150	5

Data Qualifiers & Definitions

- a - The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.
- b - The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be meaningful.
- ca - The calibration results for the analyte were outside of acceptance criteria. The value reported is an estimate.
- c - The presence of the analyte may be due to carryover from previous sample injections.
- cf - The sample was centrifuged prior to analysis.
- d - The sample was diluted. Detection limits were raised and surrogate recoveries may not be meaningful.
- dv - Insufficient sample volume was available to achieve normal reporting limits.
- f - The sample was laboratory filtered prior to analysis.
- fb - The analyte was detected in the method blank.
- fc - The compound is a common laboratory and field contaminant.
- hr - The sample and duplicate were reextracted and reanalyzed. RPD results were still outside of control limits. Variability is attributed to sample inhomogeneity.
- hs - Headspace was present in the container used for analysis.
- ht - The analysis was performed outside the method or client-specified holding time requirement.
- ip - Recovery fell outside of control limits. Compounds in the sample matrix interfered with the quantitation of the analyte.
- j - The analyte concentration is reported below the lowest calibration standard. The value reported is an estimate.
- J - The internal standard associated with the analyte is out of control limits. The reported concentration is an estimate.
- jl - The laboratory control sample(s) percent recovery and/or RPD were out of control limits. The reported concentration should be considered an estimate.
- js - The surrogate associated with the analyte is out of control limits. The reported concentration should be considered an estimate.
- lc - The presence of the analyte is likely due to laboratory contamination.
- L - The reported concentration was generated from a library search.
- nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.
- pc - The sample was received with incorrect preservation or in a container not approved by the method. The value reported should be considered an estimate.
- ve - The analyte response exceeded the valid instrument calibration range. The value reported is an estimate.
- vo - The value reported fell outside the control limits established for this analyte.
- x - The sample chromatographic pattern does not resemble the fuel standard used for quantitation.



Am Test Inc.
13600 NE 126TH PL
Suite C
Kirkland, WA 98034
(425) 885-1664

**Professional
Analytical
Services**

Oct 20 2016
Friedman & Bruya, Inc.
3012 16th Avenue West
Seattle, WA 98119-2029
Attention: MICHAEL ERDAHL

Dear MICHAEL ERDAHL:

Enclosed please find the analytical data for your 610022 project.

The following is a cross correlation of client and laboratory identifications for your convenience.

CLIENT ID	MATRIX	AMTEST ID	TEST
MW-12-100316	Water	16-A026433	MIN, NUT

Your sample was received on Tuesday, October 4, 2016. At the time of receipt, the sample was logged in and properly maintained prior to the subsequent analysis.

The analytical procedures used at AmTest are well documented and are typically derived from the protocols of the EPA, USDA, FDA or the Army Corps of Engineers.

Following the analytical data you will find the Quality Control (QC) results.

Please note that the detection limits that are listed in the body of the report refer to the Practical Quantitation Limits (PQL's), as opposed to the Method Detection Limits (MDL's).

If you should have any questions pertaining to the data package, please feel free to contact me.

Sincerely,


Aaron W. Young
Laboratory Manager

Project #: 610022
PO Number: E-308

BACT = Bacteriological
CONV = Conventional

MET = Metals
ORG = Organics

NUT=Nutrients
DEM=Demand

MIN=Minerals

Am Test Inc.
13600 NE 126TH PL
Suite C
Kirkland, WA 98034
(425) 885-1664
www.amtestlab.com



**Professional
Analytical
Services**

ANALYSIS REPORT

Friedman & Bruya, Inc.
3012 16th Avenue West
Seattle, WA 98119-2029
Attention: MICHAEL ERDAHL
Project Name: 610022
Project #: 610022
PO Number: E-308
All results reported on an as received basis.

Date Received: 10/04/16
Date Reported: 10/20/16

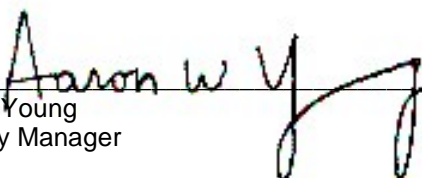
AMTEST Identification Number 16-A026433
Client Identification MW-12-100316
Sampling Date 10/03/16, 13:05

Minerals

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Alkalinity (as CaCO ₃)	280	mg/l		1	SM 2320B	PT	10/19/16
Chloride	17.2	mg/l		0.05	EPA 300.0	MJ	10/05/16
Sulfate	19.0	mg/l		0.1	EPA 300.0	MJ	10/05/16

Nutrients

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Nitrite	< 0.005	mg/l		0.005	EPA 300.0	MJ	10/05/16
Nitrate	8.34	mg/l		0.025	EPA 300.0	MJ	10/05/16
Nitrate+Nitrite	8.34	mg/l		0.025	EPA 300.0	Calculated	


Aaron W. Young
Laboratory Manager

QC Summary for sample number: 16-A026433

DUPLICATES

SAMPLE #	ANALYTE	UNITS	SAMPLE VALUE	DUP VALUE	RPD
16-A027095	Alkalinity (as CaCO ₃)	mg/l	120	120	0.00
16-A027107	Alkalinity (as CaCO ₃)	mg/l	110	110	0.00
16-A026447	Alkalinity (as CaCO ₃)	mg/l	86.	92.	6.7
16-A026707	Alkalinity (as CaCO ₃)	mg/l	30.	30.	0.00
16-A026775	Alkalinity (as CaCO ₃)	mg/l	160	160	0.00
16-A026415	Chloride	mg/l	208.	207.	0.48
16-A026384	Nitrate	mg/l	3.48	3.48	0.00
16-A026455	Nitrate	mg/l	< 0.025	< 0.025	
16-A026384	Nitrite	mg/l	< 0.005	< 0.005	
16-A026455	Nitrite	mg/l	< 0.005	< 0.005	
16-A026415	Sulfate	mg/l	10.4	13.0	22.

MATRIX SPIKES

SAMPLE #	ANALYTE	UNITS	SAMPLE VALUE	SMPL+ SPK	SPK AMT	RECOVERY
16-A026415	Chloride	mg/l	208.	608.	400.	100.00 %
16-A026384	Nitrate	mg/l	3.48	5.36	2.00	94.00 %
16-A026455	Nitrate	mg/l	< 0.025	2.03	2.00	101.50 %
16-A026384	Nitrite	mg/l	< 0.005	1.92	2.00	96.00 %
16-A026455	Nitrite	mg/l	< 0.005	2.01	2.00	100.50 %
16-A026415	Sulfate	mg/l	10.4	378.	400.	91.90 %

STANDARD REFERENCE MATERIALS

ANALYTE	UNITS	TRUE VALUE	MEASURED VALUE	RECOVERY
Alkalinity (as CaCO ₃)	mg/l	240	250	104. %
Alkalinity (as CaCO ₃)	mg/l	240	250	104. %
Alkalinity (as CaCO ₃)	mg/l	240	260	108. %
Chloride	mg/l	2.00	2.03	102. %
Chloride	mg/l	2.00	2.03	102. %
Nitrate	mg/l	2.00	2.04	102. %
Nitrite	mg/l	2.00	2.04	102. %
Sulfate	mg/l	2.00	2.01	100. %
Sulfate	mg/l	2.00	2.15	108. %

BLANKS

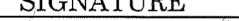

ANALYTE	UNITS	RESULT
Alkalinity (as CaCO ₃)	mg/l	< 1
Alkalinity (as CaCO ₃)	mg/l	< 1
Alkalinity (as CaCO ₃)	mg/l	< 1

QC Summary for sample number: 16-A026433...

BLANKS continued....


ANALYTE	UNITS	RESULT
Alkalinity (as CaCO ₃)	mg/l	< 1
Chloride	mg/l	0.10
Chloride	mg/l	< 0.05
Nitrate	mg/l	< 0.025
Nitrite	mg/l	< 0.005
Sulfate	mg/l	< 0.1
Sulfate	mg/l	< 0.1

5.4

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by: 	Michael Erdahl Eric [unclear]	Friedman and Bruya	10/4/16	8:45A
Received by: 	ALANNA STAAB	AMTST T-7.3	10/4/16	3:30
Relinquished by:				
Received by:				

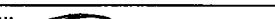


Report To Kirsi Longley
Company Aspect Consulting
Address 401 2nd Ave. S #201
City, State, ZIP Seattle, WA 98104
Phone 206-812-4716 Email 206.390.2831

ME 10/4/16 DO2/AI2/V2

SAMPLERS (signature) 		Page # <u>1</u> of <u>1</u>
PROJECT NAME Kens Texaco # 120061	PO # 120061	TURNAROUND TIME <input type="checkbox"/> Standard Turnaround <input checked="" type="checkbox"/> RUSH MW-12-100316 Rush charges authorized by: _____
REMARKS	INVOICE TO	SAMPLE DISPOSAL <input checked="" type="checkbox"/> Dispose after 30 days <input type="checkbox"/> Archive Samples <input type="checkbox"/> Other _____

						ANALYSES REQUESTED													
Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of Jars	NWTPH-HCID	NWTPH-Diesel	NWTPH-Gasoline	BTEX by 8021B	VOCs by 8260C	SVOCs by 8270D	PAHs 8270D SIM	Total Lead	Activity/Sulfate	Diss. Fe/ MISS. Mn	Chloride/ Nitrite	Diss. Methane	Notes	
MW-18-100316	01 A-E	10/03/16	1145	W	5		/	/	/				/						
MW-19-100316	02 A-E		1215	W	5		/	/	/				/						
MW-12-100316	03 A-J		1305	W	10		/	/	/				/	/	/	/	/		

Friedman & Bruya, Inc.
3012 16th Avenue West
Seattle, WA 98119-2029
Ph. (206) 285-8282

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by: 	Rachel Bobich	Aspect	10/3/16	245 (144)
Received by: 	Nhan Phan	FEBT	10/4/16	0730
Relinquished by: 				
Received by:				

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Yelena Aravkina, M.S.
Michael Erdahl, B.S.
Arina Podnozova, B.S.
Eric Young, B.S.

3012 16th Avenue West
Seattle, WA 98119-2029
(206) 285-8282
fbi@isomedia.com
www.friedmanandbruya.com

February 7, 2017

Kirsi Longley, Project Manager
Aspect Consulting, LLC
401 2nd Ave S, Suite 201
Seattle, WA 98104

Dear Ms Longley:

Included is the amended report from the testing of material submitted on January 20, 2017 from the Ken's Texaco 120061, F&BI 701226 project. Per your request, sample ID MW8-20170117 has been amended to MW18-20170117.

We appreciate this opportunity to be of service to you and hope you will call if you have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.



Michael Erdahl
Project Manager

Enclosures

c: data@aspectconsulting.com
ASP0202R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Yelena Aravkina, M.S.
Michael Erdahl, B.S.
Arina Podnozova, B.S.
Eric Young, B.S.

3012 16th Avenue West
Seattle, WA 98119-2029
(206) 285-8282
fbi@isomedia.com
www.friedmanandbruya.com

February 2, 2017

Kirsi Longley, Project Manager
Aspect Consulting, LLC
401 2nd Ave S, Suite 201
Seattle, WA 98104

Dear Ms Longley:

Included are the results from the testing of material submitted on January 20, 2017 from the Ken's Texaco 120061, F&BI 701226 project. There are 35 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

We appreciate this opportunity to be of service to you and hope you will call if you have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.



Michael Erdahl
Project Manager

Enclosures

c: data@aspectconsulting.com

ASP0202R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on January 20, 2017 by Friedman & Bruya, Inc. from the Aspect Consulting, LLC Ken's Texaco 120061, F&BI 701226 project. Samples were logged in under the laboratory ID's listed below.

<u>Laboratory ID</u>	<u>Aspect Consulting, LLC</u>
701226 -01	MW8-20170119
701226 -02	MW11-20170119
701226 -03	MW16-20170119
701226 -04	MW21-20170118
701226 -05	MW1-20170118
701226 -06	MW13-20170118
701226 -07	MW10-20170118
701226 -08	MW19-20170118
701226 -09	MW7-20170118
701226 -10	MW14-20170118
701226 -11	MW18-20170117

Samples MW8-20170119, MW11-20170119, and MW16-20170119 were sent to Fremont Analytical for nitrate, nitrite, chloride, alkalinity, and sulfate analyses. The report is enclosed.

All quality control requirements were acceptable.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 02/02/17

Date Received: 01/20/17

Project: Ken's Texaco 120061, F&BI 701226

Date Extracted: 01/26/17

Date Analyzed: 01/26/17 and 01/27/17

**RESULTS FROM THE ANALYSIS OF WATER SAMPLES
FOR BENZENE, TOLUENE, ETHYLBENZENE,
XYLENES AND TPH AS GASOLINE
USING METHODS 8021B AND NWTPH-Gx**
Results Reported as ug/L (ppb)

<u>Sample ID</u> Laboratory ID	<u>Benzene</u>	<u>Toluene</u>	<u>Ethyl Benzene</u>	<u>Total Xylenes</u>	<u>Gasoline Range</u>	<u>Surrogate (% Recovery)</u> (Limit 52-124)
MW8-20170119 701226-01 1/10	440	70	310	180	6,200	82
MW11-20170119 701226-02	35	<1	66	65	2,900	88
MW16-20170119 701226-03	<1	1.5	5.5	<3	970	82
MW21-20170118 701226-04	<1	<1	<1	<3	<100	79
MW1-20170118 701226-05	<1	<1	2.8	4.0	720	83
MW13-20170118 701226-06	<1	<1	<1	<3	<100	84
MW10-20170118 701226-07	<1	<1	<1	<3	<100	80
MW19-20170118 701226-08	<1	<1	<1	<3	<100	81
MW7-20170118 701226-09	<1	<1	<1	<3	100	83
MW14-20170118 701226-10	<1	<1	<1	<3	<100	82

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 02/02/17

Date Received: 01/20/17

Project: Ken's Texaco 120061, F&BI 701226

Date Extracted: 01/26/17

Date Analyzed: 01/26/17 and 01/27/17

**RESULTS FROM THE ANALYSIS OF WATER SAMPLES
FOR BENZENE, TOLUENE, ETHYLBENZENE,
XYLENES AND TPH AS GASOLINE
USING METHODS 8021B AND NWTPH-Gx**

Results Reported as ug/L (ppb)

<u>Sample ID</u> Laboratory ID	<u>Benzene</u>	<u>Toluene</u>	<u>Ethyl Benzene</u>	<u>Total Xylenes</u>	<u>Gasoline Range</u>	<u>Surrogate (% Recovery)</u> (Limit 52-124)
MW18-20170117 701226-11	<1	<1	<1	<3	<100	79
Method Blank 07-153 MB	<1	<1	<1	<3	<100	78

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 02/02/17

Date Received: 01/20/17

Project: Ken's Texaco 120061, F&BI 701226

Date Extracted: 01/20/17

Date Analyzed: 01/20/17

**RESULTS FROM THE ANALYSIS OF WATER SAMPLES
FOR TOTAL PETROLEUM HYDROCARBONS AS
DIESEL AND MOTOR OIL
USING METHOD NWTPH-Dx**
Results Reported as ug/L (ppb)

<u>Sample ID</u> Laboratory ID	<u>Diesel Range</u> (C ₁₀ -C ₂₅)	<u>Motor Oil Range</u> (C ₂₅ -C ₃₆)	<u>Surrogate</u> (% Recovery) (Limit 47-140)
MW8-20170119 701226-01	<50	<250	94
MW11-20170119 701226-02	890 x	370 x	90
MW16-20170119 701226-03	130 x	<250	79
MW21-20170118 701226-04	<50	<250	92
MW1-20170118 701226-05	96 x	<250	85
MW13-20170118 701226-06	<50	<250	88
MW10-20170118 701226-07	<50	<250	86
MW19-20170118 701226-08	<50	<250	86
MW7-20170118 701226-09	110 x	<250	97
MW14-20170118 701226-10	<50	<250	81

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 02/02/17

Date Received: 01/20/17

Project: Ken's Texaco 120061, F&BI 701226

Date Extracted: 01/20/17

Date Analyzed: 01/20/17

**RESULTS FROM THE ANALYSIS OF WATER SAMPLES
FOR TOTAL PETROLEUM HYDROCARBONS AS
DIESEL AND MOTOR OIL
USING METHOD NWTPH-Dx**
Results Reported as ug/L (ppb)

<u>Sample ID</u> Laboratory ID	<u>Diesel Range</u> (C ₁₀ -C ₂₅)	<u>Motor Oil Range</u> (C ₂₅ -C ₃₆)	<u>Surrogate</u> <u>(% Recovery)</u> (Limit 47-140)
MW18-20170117 701226-11	790 x	<250	91
Method Blank 07-132 MB	<50	<250	90

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Dissolved Metals By EPA Method 200.8

Client ID:	MW8-20170119	Client:	Aspect Consulting, LLC
Date Received:	01/20/17	Project:	Ken's Texaco 120061, F&BI 701226
Date Extracted:	01/23/17	Lab ID:	701226-01 x10
Date Analyzed:	01/24/17	Data File:	701226-01 x10.049
Matrix:	Water	Instrument:	ICPMS2
Units:	ug/L (ppb)	Operator:	SP

Analyte:	Concentration ug/L (ppb)
Iron	7,500
Manganese	10,700

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Dissolved Metals By EPA Method 200.8

Client ID:	MW11-20170119	Client:	Aspect Consulting, LLC
Date Received:	01/20/17	Project:	Ken's Texaco 120061, F&BI 701226
Date Extracted:	01/23/17	Lab ID:	701226-02 x10
Date Analyzed:	01/24/17	Data File:	701226-02 x10.050
Matrix:	Water	Instrument:	ICPMS2
Units:	ug/L (ppb)	Operator:	SP

Analyte:	Concentration ug/L (ppb)
Iron	8,120
Manganese	19,000

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Dissolved Metals By EPA Method 200.8

Client ID:	MW16-20170119	Client:	Aspect Consulting, LLC
Date Received:	01/20/17	Project:	Ken's Texaco 120061, F&BI 701226
Date Extracted:	01/23/17	Lab ID:	701226-03
Date Analyzed:	01/24/17	Data File:	701226-03.051
Matrix:	Water	Instrument:	ICPMS2
Units:	ug/L (ppb)	Operator:	SP

Analyte:	Concentration ug/L (ppb)
Iron	1,620
Manganese	1,250

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Dissolved Metals By EPA Method 200.8

Client ID:	Method Blank	Client:	Aspect Consulting, LLC
Date Received:	NA	Project:	Ken's Texaco 120061, F&BI 701226
Date Extracted:	01/23/17	Lab ID:	I7-036 mb
Date Analyzed:	01/23/17	Data File:	I7-036 mb rr.071
Matrix:	Water	Instrument:	ICPMS2
Units:	ug/L (ppb)	Operator:	SP

Analyte:	Concentration ug/L (ppb)
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Iron	<50
Manganese	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 200.8

Client ID:	MW8-20170119	Client:	Aspect Consulting, LLC
Date Received:	01/20/17	Project:	Ken's Texaco 120061, F&BI 701226
Date Extracted:	01/25/17	Lab ID:	701226-01
Date Analyzed:	01/25/17	Data File:	701226-01.062
Matrix:	Water	Instrument:	ICPMS2
Units:	ug/L (ppb)	Operator:	SP

Analyte:	Concentration ug/L (ppb)
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Lead	<1
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FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 200.8

Client ID:	MW11-20170119	Client:	Aspect Consulting, LLC
Date Received:	01/20/17	Project:	Ken's Texaco 120061, F&BI 701226
Date Extracted:	01/25/17	Lab ID:	701226-02
Date Analyzed:	01/25/17	Data File:	701226-02.063
Matrix:	Water	Instrument:	ICPMS2
Units:	ug/L (ppb)	Operator:	SP

Analyte:	Concentration ug/L (ppb)
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Lead	<1
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FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 200.8

Client ID:	MW16-20170119	Client:	Aspect Consulting, LLC
Date Received:	01/20/17	Project:	Ken's Texaco 120061, F&BI 701226
Date Extracted:	01/25/17	Lab ID:	701226-03
Date Analyzed:	01/25/17	Data File:	701226-03.064
Matrix:	Water	Instrument:	ICPMS2
Units:	ug/L (ppb)	Operator:	SP

Analyte:	Concentration ug/L (ppb)
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Lead	<1
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FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 200.8

Client ID:	MW21-20170118	Client:	Aspect Consulting, LLC
Date Received:	01/20/17	Project:	Ken's Texaco 120061, F&BI 701226
Date Extracted:	01/25/17	Lab ID:	701226-04
Date Analyzed:	01/25/17	Data File:	701226-04.065
Matrix:	Water	Instrument:	ICPMS2
Units:	ug/L (ppb)	Operator:	SP

Analyte:	Concentration ug/L (ppb)
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Lead	1.32
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FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 200.8

Client ID:	MW1-20170118	Client:	Aspect Consulting, LLC
Date Received:	01/20/17	Project:	Ken's Texaco 120061, F&BI 701226
Date Extracted:	01/25/17	Lab ID:	701226-05
Date Analyzed:	01/25/17	Data File:	701226-05.068
Matrix:	Water	Instrument:	ICPMS2
Units:	ug/L (ppb)	Operator:	SP

Analyte:	Concentration ug/L (ppb)
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Lead	3.96
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FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 200.8

Client ID:	MW13-20170118	Client:	Aspect Consulting, LLC
Date Received:	01/20/17	Project:	Ken's Texaco 120061, F&BI 701226
Date Extracted:	01/25/17	Lab ID:	701226-06
Date Analyzed:	01/25/17	Data File:	701226-06.070
Matrix:	Water	Instrument:	ICPMS2
Units:	ug/L (ppb)	Operator:	SP

Analyte:	Concentration ug/L (ppb)
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Lead	<1
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FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 200.8

Client ID:	MW10-20170118	Client:	Aspect Consulting, LLC
Date Received:	01/20/17	Project:	Ken's Texaco 120061, F&BI 701226
Date Extracted:	01/25/17	Lab ID:	701226-07
Date Analyzed:	01/25/17	Data File:	701226-07.071
Matrix:	Water	Instrument:	ICPMS2
Units:	ug/L (ppb)	Operator:	SP

Analyte:	Concentration ug/L (ppb)
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Lead	<1
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FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 200.8

Client ID:	MW19-20170118	Client:	Aspect Consulting, LLC
Date Received:	01/20/17	Project:	Ken's Texaco 120061, F&BI 701226
Date Extracted:	01/25/17	Lab ID:	701226-08
Date Analyzed:	01/25/17	Data File:	701226-08.072
Matrix:	Water	Instrument:	ICPMS2
Units:	ug/L (ppb)	Operator:	SP

Analyte:	Concentration ug/L (ppb)
----------	-----------------------------

Lead	<1
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FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 200.8

Client ID:	MW7-20170118	Client:	Aspect Consulting, LLC
Date Received:	01/20/17	Project:	Ken's Texaco 120061, F&BI 701226
Date Extracted:	01/25/17	Lab ID:	701226-09
Date Analyzed:	01/25/17	Data File:	701226-09.073
Matrix:	Water	Instrument:	ICPMS2
Units:	ug/L (ppb)	Operator:	SP

Analyte:	Concentration ug/L (ppb)
----------	-----------------------------

Lead	<1
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FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 200.8

Client ID:	MW14-20170118	Client:	Aspect Consulting, LLC
Date Received:	01/20/17	Project:	Ken's Texaco 120061, F&BI 701226
Date Extracted:	01/25/17	Lab ID:	701226-10
Date Analyzed:	01/25/17	Data File:	701226-10.074
Matrix:	Water	Instrument:	ICPMS2
Units:	ug/L (ppb)	Operator:	SP

Analyte:	Concentration ug/L (ppb)
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Lead	<1
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FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 200.8

Client ID:	MW18-20170117	Client:	Aspect Consulting, LLC
Date Received:	01/20/17	Project:	Ken's Texaco 120061, F&BI 701226
Date Extracted:	01/25/17	Lab ID:	701226-11
Date Analyzed:	01/25/17	Data File:	701226-11.075
Matrix:	Water	Instrument:	ICPMS2
Units:	ug/L (ppb)	Operator:	SP

Analyte:	Concentration ug/L (ppb)
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Lead	<1
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FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 200.8

Client ID:	Method Blank	Client:	Aspect Consulting, LLC
Date Received:	NA	Project:	Ken's Texaco 120061, F&BI 701226
Date Extracted:	01/25/17	Lab ID:	I7-042 mb
Date Analyzed:	01/25/17	Data File:	I7-042 mb.060
Matrix:	Water	Instrument:	ICPMS2
Units:	ug/L (ppb)	Operator:	SP

Analyte:	Concentration ug/L (ppb)
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Lead	<1
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FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW11-20170119	Client:	Aspect Consulting, LLC
Date Received:	01/20/17	Project:	Ken's Texaco 120061, F&BI 701226
Date Extracted:	01/20/17	Lab ID:	701226-02
Date Analyzed:	01/20/17	Data File:	012034.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	99	62	142
Toluene-d8	105	55	145
4-Bromofluorobenzene	99	65	139

Compounds:	Concentration ug/L (ppb)
1,2-Dichloroethane (EDC)	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW10-20170118	Client:	Aspect Consulting, LLC
Date Received:	01/20/17	Project:	Ken's Texaco 120061, F&BI 701226
Date Extracted:	01/20/17	Lab ID:	701226-07
Date Analyzed:	01/20/17	Data File:	012035.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	101	62	142
Toluene-d8	105	55	145
4-Bromofluorobenzene	103	65	139

Compounds:	Concentration ug/L (ppb)
1,2-Dichloroethane (EDC)	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	Method Blank	Client:	Aspect Consulting, LLC
Date Received:	Not Applicable	Project:	Ken's Texaco 120061, F&BI 701226
Date Extracted:	01/20/17	Lab ID:	07-083 mb
Date Analyzed:	01/20/17	Data File:	012014.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	102	57	121
Toluene-d8	103	63	127
4-Bromofluorobenzene	100	60	133

Compounds:	Concentration ug/L (ppb)
1,2-Dichloroethane (EDC)	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Dissolved Gasses By RSK 175

Client Sample ID:	MW8-20170119	Client:	Aspect Consulting, LLC
Date Received:	01/20/17	Project:	Ken's Texaco 120061, F&BI 701226
Date Extracted:	01/27/17	Lab ID:	701226-01
Date Analyzed:	01/27/17	Data File:	010F1001.D
Matrix:	Water	Instrument:	GC8
Units:	ug/L (ppb)	Operator:	JS

Compounds:	Concentration ug/L (ppb)
Methane	530

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Dissolved Gasses By RSK 175

Client Sample ID:	MW11-20170119	Client:	Aspect Consulting, LLC
Date Received:	01/20/17	Project:	Ken's Texaco 120061, F&BI 701226
Date Extracted:	01/27/17	Lab ID:	701226-02
Date Analyzed:	01/27/17	Data File:	011F1101.D
Matrix:	Water	Instrument:	GC8
Units:	ug/L (ppb)	Operator:	JS

Compounds:	Concentration ug/L (ppb)
Methane	320

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Dissolved Gasses By RSK 175

Client Sample ID:	MW16-20170119	Client:	Aspect Consulting, LLC
Date Received:	01/20/17	Project:	Ken's Texaco 120061, F&BI 701226
Date Extracted:	01/27/17	Lab ID:	701226-03
Date Analyzed:	01/27/17	Data File:	012F1201.D
Matrix:	Water	Instrument:	GC8
Units:	ug/L (ppb)	Operator:	JS

Compounds:	Concentration ug/L (ppb)
Methane	130

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Dissolved Gasses By RSK 175

Client Sample ID:	Method Blank	Client:	Aspect Consulting, LLC
Date Received:	Not Applicable	Project:	Ken's Texaco 120061, F&BI 701226
Date Extracted:	01/27/17	Lab ID:	07-0147 mb
Date Analyzed:	01/27/17	Data File:	005F0501.D
Matrix:	Water	Instrument:	GC8
Units:	ug/L (ppb)	Operator:	JS

Compounds:	Concentration ug/L (ppb)
Methane	<5

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 02/02/17

Date Received: 01/20/17

Project: Ken's Texaco 120061, F&BI 701226

**QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER
SAMPLES FOR BENZENE, TOLUENE, ETHYLBENZENE,
XYLENES, AND TPH AS GASOLINE
USING METHOD 8021B AND NWTPH-Gx**

Laboratory Code: 701226-06 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	RPD (Limit 20)
Benzene	ug/L (ppb)	<1	<1	nm
Toluene	ug/L (ppb)	<1	<1	nm
Ethylbenzene	ug/L (ppb)	<1	<1	nm
Xylenes	ug/L (ppb)	<3	<3	nm
Gasoline	ug/L (ppb)	<100	<100	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery	Acceptance
			LCS	Criteria
Benzene	ug/L (ppb)	50	105	65-118
Toluene	ug/L (ppb)	50	104	72-122
Ethylbenzene	ug/L (ppb)	50	106	73-126
Xylenes	ug/L (ppb)	150	102	74-118
Gasoline	ug/L (ppb)	1,000	96	69-134

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 02/02/17

Date Received: 01/20/17

Project: Ken's Texaco 120061, F&BI 701226

**QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER
SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS
DIESEL EXTENDED USING METHOD NWTPH-Dx**

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	ug/L (ppb)	2,500	103	108	61-133	5

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 02/02/17

Date Received: 01/20/17

Project: Ken's Texaco 120061, F&BI 701226

**QUALITY ASSURANCE RESULTS
FOR THE ANALYSIS OF WATER SAMPLES
FOR DISSOLVED METALS USING EPA METHOD 200.8**

Laboratory Code: 701215-07 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Iron	ug/L (ppb)	100	<50	97	97	70-130	0
Manganese	ug/L (ppb)	20	4.63	99	97	70-130	2

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Iron	ug/L (ppb)	100	102	85-115
Manganese	ug/L (ppb)	20	100	85-115

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 02/02/17

Date Received: 01/20/17

Project: Ken's Texaco 120061, F&BI 701226

**QUALITY ASSURANCE RESULTS
FOR THE ANALYSIS OF WATER SAMPLES
FOR TOTAL METALS USING EPA METHOD 200.8**

Laboratory Code: 701226-04 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Lead	ug/L (ppb)	10	1.32	81	81	70-130	0

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Lead	ug/L (ppb)	10	102	85-115

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 02/02/17

Date Received: 01/20/17

Project: Ken's Texaco 120061, F&BI 701226

**QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER
SAMPLES FOR VOLATILES BY EPA METHOD 8260C**

Laboratory Code: 701215-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Acceptance Criteria
1,2-Dichloroethane (EDC)	ug/L (ppb)	50	<1	106	69-133

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
1,2-Dichloroethane (EDC)	ug/L (ppb)	50	110	108	73-132	2

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 02/02/17

Date Received: 01/20/17

Project: Ken's Texaco 120061, F&BI 701226

**QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF
WATER SAMPLES FOR DISSOLVED GASES
USING METHOD RSK 175**

Laboratory Code: 701321-01 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	Relative Percent Difference (Limit 20)
Methane	ug/L (ppb)	3,400 ve	3,600 ve	6

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Methane	ug/L (ppb)	59	85	83	50-150	2

Data Qualifiers & Definitions

- a - The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.
- b - The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be meaningful.
- ca - The calibration results for the analyte were outside of acceptance criteria. The value reported is an estimate.
- c - The presence of the analyte may be due to carryover from previous sample injections.
- cf - The sample was centrifuged prior to analysis.
- d - The sample was diluted. Detection limits were raised and surrogate recoveries may not be meaningful.
- dv - Insufficient sample volume was available to achieve normal reporting limits.
- f - The sample was laboratory filtered prior to analysis.
- fb - The analyte was detected in the method blank.
- fc - The compound is a common laboratory and field contaminant.
- hr - The sample and duplicate were reextracted and reanalyzed. RPD results were still outside of control limits. Variability is attributed to sample inhomogeneity.
- hs - Headspace was present in the container used for analysis.
- ht - The analysis was performed outside the method or client-specified holding time requirement.
- ip - Recovery fell outside of control limits. Compounds in the sample matrix interfered with the quantitation of the analyte.
- j - The analyte concentration is reported below the lowest calibration standard. The value reported is an estimate.
- J - The internal standard associated with the analyte is out of control limits. The reported concentration is an estimate.
- jl - The laboratory control sample(s) percent recovery and/or RPD were out of control limits. The reported concentration should be considered an estimate.
- js - The surrogate associated with the analyte is out of control limits. The reported concentration should be considered an estimate.
- lc - The presence of the analyte is likely due to laboratory contamination.
- L - The reported concentration was generated from a library search.
- nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.
- pc - The sample was received with incorrect preservation or in a container not approved by the method. The value reported should be considered an estimate.
- ve - The analyte response exceeded the valid instrument calibration range. The value reported is an estimate.
- vo - The value reported fell outside the control limits established for this analyte.
- x - The sample chromatographic pattern does not resemble the fuel standard used for quantitation.



Fremont
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Friedman & Bruya
Michael Erdahl
3012 16th Ave. W.
Seattle, WA 98119

RE: 701226
Work Order Number: 1701207

January 27, 2017

Attention Michael Erdahl:

Fremont Analytical, Inc. received 3 sample(s) on 1/20/2017 for the analyses presented in the following report.

Ion Chromatography by EPA Method 300.0
Total Alkalinity by SM 2320B

This report consists of the following:

- Case Narrative
- Analytical Results
- Applicable Quality Control Summary Reports
- Chain of Custody

All analyses were performed consistent with the Quality Assurance program of Fremont Analytical, Inc. Please contact the laboratory if you should have any questions about the results.

Thank you for using Fremont Analytical.

Sincerely,

Mike Ridgeway
Laboratory Director

DoD/ELAP Certification #L2371, ISO/IEC 17025:2005
ORELAP Certification: WA 100009-007 (NELAP Recognized)

Original

www.fremontanalytical.com

Page 1 of 12

CLIENT: Friedman & Bruya
Project: 701226
Work Order: 1701207

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Date/Time Collected	Date/Time Received
1701207-001	MW8-20171119	01/19/2017 2:00 PM	01/20/2017 9:50 AM
1701207-002	MW11-20171119	01/19/2017 9:45 AM	01/20/2017 9:50 AM
1701207-003	MW16-20171119	01/19/2017 11:20 AM	01/20/2017 9:50 AM

CLIENT: Friedman & Bruya**Project:** 701226

I. SAMPLE RECEIPT:

Samples receipt information is recorded on the attached Sample Receipt Checklist.

II. GENERAL REPORTING COMMENTS:

Results are reported on a wet weight basis unless dry-weight correction is denoted in the units field on the analytical report ("mg/kg-dry" or "ug/kg-dry").

Matrix Spike (MS) and MS Duplicate (MSD) samples are tested from an analytical batch of "like" matrix to check for possible matrix effect. The MS and MSD will provide site specific matrix data only for those samples which are spiked by the laboratory. The sample chosen for spike purposes may or may not have been a sample submitted in this sample delivery group. The validity of the analytical procedures for which data is reported in this analytical report is determined by the Laboratory Control Sample (LCS) and the Method Blank (MB). The LCS and the MB are processed with the samples and the MS/MSD to ensure method criteria are achieved throughout the entire analytical process.

III. ANALYSES AND EXCEPTIONS:

Exceptions associated with this report will be footnoted in the analytical results page(s) or the quality control summary page(s) and/or noted below.

Qualifiers:

- * - Flagged value is not within established control limits
- B - Analyte detected in the associated Method Blank
- D - Dilution was required
- E - Value above quantitation range
- H - Holding times for preparation or analysis exceeded
- I - Analyte with an internal standard that does not meet established acceptance criteria
- J - Analyte detected below Reporting Limit
- N - Tentatively Identified Compound (TIC)
- Q - Analyte with an initial or continuing calibration that does not meet established acceptance criteria (<20%RSD, <20% Drift or minimum RRF)
- S - Spike recovery outside accepted recovery limits
- ND - Not detected at the Reporting Limit
- R - High relative percent difference observed

Acronyms:

- %Rec - Percent Recovery
- CCB - Continued Calibration Blank
- CCV - Continued Calibration Verification
- DF - Dilution Factor
- HEM - Hexane Extractable Material
- ICV - Initial Calibration Verification
- LCS/LCSD - Laboratory Control Sample / Laboratory Control Sample Duplicate
- MB or MBLANK - Method Blank
- MDL - Method Detection Limit
- MS/MSD - Matrix Spike / Matrix Spike Duplicate
- PDS - Post Digestion Spike
- Ref Val - Reference Value
- RL - Reporting Limit
- RPD - Relative Percent Difference
- SD - Serial Dilution
- SGT - Silica Gel Treatment
- SPK - Spike
- Surr - Surrogate



Analytical Report

Work Order: 1701207
Date Reported: 1/27/2017

Client: Friedman & Bruya

Collection Date: 1/19/2017 2:00:00 PM

Project: 701226

Lab ID: 1701207-001

Matrix: Water

Client Sample ID: MW8-20171119

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Ion Chromatography by EPA Method 300.0

Batch ID: R34073 Analyst: KT

Chloride	82.8	1.00	D	mg/L	10	1/20/2017 12:32:00 PM
Nitrate (as N)+Nitrite (as N)	ND	0.500	D	mg/L	5	1/20/2017 11:52:00 AM
Sulfate	2.69	1.50	D	mg/L	5	1/20/2017 11:52:00 AM

NOTES:

Diluted due to matrix.

Total Alkalinity by SM 2320B

Batch ID: R34127 Analyst: KT

Alkalinity, Total (As CaCO ₃)	432	2.50		mg/L	1	1/27/2017 4:30:00 PM
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Analytical Report

Work Order: 1701207
Date Reported: 1/27/2017

Client: Friedman & Bruya

Collection Date: 1/19/2017 9:45:00 AM

Project: 701226

Lab ID: 1701207-002

Matrix: Water

Client Sample ID: MW11-20171119

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Ion Chromatography by EPA Method 300.0

Batch ID: R34073 Analyst: KT

Chloride	147	2.00	D	mg/L	20	1/20/2017 12:43:00 PM
Nitrate (as N)+Nitrite (as N)	ND	1.00	D	mg/L	10	1/20/2017 12:02:00 PM
Sulfate	3.52	3.00	D	mg/L	10	1/20/2017 12:02:00 PM

NOTES:

Diluted due to matrix.

Total Alkalinity by SM 2320B

Batch ID: R34127 Analyst: KT

Alkalinity, Total (As CaCO ₃)	1,280	2.50		mg/L	1	1/27/2017 4:40:00 PM
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Analytical Report

Work Order: 1701207
Date Reported: 1/27/2017

Client: Friedman & Bruya

Collection Date: 1/19/2017 11:20:00 AM

Project: 701226

Lab ID: 1701207-003

Matrix: Water

Client Sample ID: MW16-20171119

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Ion Chromatography by EPA Method 300.0

Batch ID: R34073 Analyst: KT

Chloride	4.44	0.100		mg/L	1	1/20/2017 12:12:00 PM
Nitrate (as N)+Nitrite (as N)	0.116	0.100		mg/L	1	1/20/2017 12:12:00 PM
Sulfate	0.936	0.300		mg/L	1	1/20/2017 12:12:00 PM

Total Alkalinity by SM 2320B

Batch ID: R34127 Analyst: KT

Alkalinity, Total (As CaCO ₃)	106	2.50		mg/L	1	1/27/2017 4:50:00 PM
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Date: 1/27/2017

Work Order: 1701207
CLIENT: Friedman & Bruya
Project: 701226

QC SUMMARY REPORT
Total Alkalinity by SM 2320B

Sample ID	MB-R34127	SampType:	MBLK	Units:	mg/L	Prep Date:	1/27/2017	RunNo:	34127			
Client ID:	MBLKW	Batch ID:	R34127			Analysis Date:	1/27/2017	SeqNo:	649872			
Analyte		Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Alkalinity, Total (As CaCO3)	ND	2.50										
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Sample ID	LCS-R34127	SampType:	LCS	Units:	mg/L	Prep Date:	1/27/2017	RunNo:	34127			
Client ID:	LCSW	Batch ID:	R34127			Analysis Date:	1/27/2017	SeqNo:	649873			
Analyte		Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Alkalinity, Total (As CaCO3)	111	2.50	100.0	0	111	80	120					
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Sample ID	1701210-001CDUP	SampType:	DUP	Units:	mg/L	Prep Date:	1/27/2017	RunNo:	34127			
Client ID:	BATCH	Batch ID:	R34127			Analysis Date:	1/27/2017	SeqNo:	649875			
Analyte		Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Alkalinity, Total (As CaCO3)	250	2.50							248.0	0.803	20	
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Work Order: 1701207
CLIENT: Friedman & Bruya
Project: 701226

QC SUMMARY REPORT

Ion Chromatography by EPA Method 300.0

Sample ID	MB-R34073	SampType:	MBLK	Units:	mg/L	Prep Date:	1/20/2017			RunNo:	34073	
Client ID:	MBLKW	Batch ID:	R34073	Analysis Date:			1/20/2017			SeqNo:	648629	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	

Chloride	ND	0.100									
Nitrate (as N)+Nitrite (as N)	ND	0.100									
Sulfate	ND	0.300									

Sample ID	LCS-R34073	SampType: LCS			Units: mg/L		Prep Date: 1/20/2017			RunNo: 34073		
Client ID:	LCSW	Batch ID: R34073			Analysis Date: 1/20/2017				SeqNo: 648630			
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	

Chloride	3.08	0.100	3.000	0	103	90	110				
Nitrate (as N)+Nitrite (as N)	6.17	0.100	6.000	0	103	90	110				
Sulfate	15.6	0.300	15.00	0	104	90	110				

Sample ID	1701207-003ADUP	SampType:	DUP	Units:	mg/L	Prep Date:	1/20/2017	RunNo:	34073		
Client ID:	MW16-20171119	Batch ID:	R34073			Analysis Date:	1/20/2017	SeqNo:	648636		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chloride	4.45	0.100						4.436	0.218	20	
Nitrate (as N)+Nitrite (as N)	0.126	0.100						0.1159	8.67	20	
Sulfate	0.954	0.300						0.9363	1.90	20	

Sample ID	1701207-003AMS	SampType:	MS	Units:	mg/L	Prep Date:	1/20/2017	RunNo:	34073		
Client ID:	MW16-20171119	Batch ID:	R34073	Analysis Date:				1/20/2017	SeqNo:	648637	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chloride	7.02	0.100	3.000	4.436	86.1	80	120				
Nitrate (as N)+Nitrite (as N)	6.30	0.100	6.000	0.1159	103	80	120				
Sulfate	15.8	0.300	15.00	0.9363	99.4	80	120				

Work Order: 1701207
CLIENT: Friedman & Bruya
Project: 701226

QC SUMMARY REPORT

Ion Chromatography by EPA Method 300.0

Sample ID	1701207-003AMSD	SampType: MSD	Units: mg/L			Prep Date: 1/20/2017			RunNo: 34073		
Client ID:	MW16-20171119	Batch ID: R34073				Analysis Date: 1/20/2017			SeqNo: 648638		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	7.03	0.100	3.000	4.436	86.5	80	120	7.020	0.161	20	
Nitrate (as N)+Nitrite (as N)	6.37	0.100	6.000	0.1159	104	80	120	6.300	1.15	20	
Sulfate	15.9	0.300	15.00	0.9363	99.8	80	120	15.84	0.352	20	

Client Name: **FB**
 Logged by: **Chelsea Ward**

Work Order Number: **1701207**
 Date Received: **1/20/2017 9:50:00 AM**

Chain of Custody

1. Is Chain of Custody complete? Yes ☒ No ☐ Not Present ☐
 2. How was the sample delivered? Client

Log In

3. Coolers are present? Yes ☒ No ☐ NA ☐
 4. Shipping container/cooler in good condition? Yes ☒ No ☐
 5. Custody Seals present on shipping container/cooler?
 (Refer to comments for Custody Seals not intact) Yes ☐ No ☐ Not Required ☒
 6. Was an attempt made to cool the samples? Yes ☒ No ☐ NA ☐
 7. Were all items received at a temperature of >0°C to 10.0°C* Yes ☒ No ☐ NA ☐
 8. Sample(s) in proper container(s)? Yes ☒ No ☐
 9. Sufficient sample volume for indicated test(s)? Yes ☒ No ☐
 10. Are samples properly preserved? Yes ☒ No ☐
 11. Was preservative added to bottles? Yes ☐ No ☒ NA ☐
 12. Is there headspace in the VOA vials? Yes ☐ No ☐ NA ☒
 13. Did all samples containers arrive in good condition(unbroken)? Yes ☒ No ☐
 14. Does paperwork match bottle labels? Yes ☒ No ☐
 15. Are matrices correctly identified on Chain of Custody? Yes ☒ No ☐
 16. Is it clear what analyses were requested? Yes ☒ No ☐
 17. Were all holding times able to be met? Yes ☒ No ☐

Special Handling (if applicable)

18. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☒

Person Notified: Date
 By Whom: Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person
 Regarding:
 Client Instructions:

19. Additional remarks:

Item Information

Item #	Temp °C
Cooler	5.7
Sample	2.9

* Note: DoD/ELAP and TNI require items to be received at 4°C +/- 2°C

1701207

Phone # (206) 285-8282 Fax # (206) 283-5044

Please Email Results

☐ Will call with instructions

701226

SAMPLE CHAIN OF CUSTODY

ME 01-20-17

AIS / V/W3
2 / 104

Send Report To Kirsi Longley
 Company Aspect Consulting
 Address klongley@aspectconsulting.com
 City, State, ZIP Seattle WA 98104
 Phone # 206 912 4746 Fax #
 Email Address

SAMPLERS (signature) <u>KL</u>	
PROJECT NAME/NO. <u>Ken's Ter 200 61</u>	PO # <u>120601</u>
PROJECT ADDRESS <u>101 East University Way Ellensburg, WA</u>	
ELECTRONIC DATA REQUESTED	

Page # <u>1</u> of <u>2</u>
TURNAROUND TIME
• Standard Turnaround
• RUSH
Rush charges authorized by:
SAMPLE DISPOSAL
• Dispose after 30 days
• Return samples
• Will call with instructions
Samples Received at: <u> </u> °C

Sample ID	Lab ID	Date	Time	Sample Type	# of containers	ANALYSES REQUESTED											Notes
						TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by 8260	SVOCs by 8270	Dissolved Metals	EDC	Total lead	Dissolved Fe, Mn, & Zn	Chloride, Alkalinity	Sulfate	
MW8-20170119	01 AI	1/19	1400	W	4 9	X	X	X			X		X	X	X	Unprocessed total lead container	
MW11-20170119	02 T	"	0945	W	4 9	X	X	X			X	X	X	X	X		
MW16-20170119	03 T	"	11:20	W	4 9	X	X	X			X		X	X	X		
MW21-20170118	04 A-E	1/18	11:35	W	5	X	X	X					X				
MW1-20170118	05 T	1/18	19:40	W	5	X	X	X					X				
MW13-20170118	06 T	1/18	16:00	W	5	X	X	X					X				
MW10-20170119	07 T	1/18	10:00	W	5	X	X	X				X	X				
MW19-20170118	08 T	1/18	08:30	W	5	X	X	X					X				
MW7-20170118	09 T	1/18	17:30	W	5	X	X	X					X				
MW14-20170118	10 T	1/18	14:30	W	5	X	X	X					X				

Friedman & Bruya, Inc.
 3012 16th Avenue West
 Seattle, WA 98119-2029
 Ph. (206) 285-8282

Fax (206) 283-5044

FORMS\COC\COC.DOC

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by: <u>Kirsi Longley</u>	<u>Kirsi Longley</u>	<u>Aspect</u>	<u>1/20/17</u>	<u>800</u>
Received by: <u>Eric Jones</u>	<u>Eric Jones</u>	<u>EA B</u>	<u>1/20/17</u>	<u>9:5</u>
Relinquished by:				
Received by:				

* Dissolved metals field filtered

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Yelena Aravkina, M.S.
Michael Erdahl, B.S.
Arina Podnozova, B.S.
Eric Young, B.S.

3012 16th Avenue West
Seattle, WA 98119-2029
(206) 285-8282
fbi@isomedia.com
www.friedmanandbruya.com

April 26, 2017

Kirsi Longley, Project Manager
Aspect Consulting, LLC
401 2nd Ave S, Suite 201
Seattle, WA 98104

Dear Ms Longley:

Included are the results from the testing of material submitted on April 12, 2017 from the Ken's Texaco, PO 120061, F&BI 704187 project. There are 26 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

We appreciate this opportunity to be of service to you and hope you will call if you have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.



Michael Erdahl
Project Manager

Enclosures

c: data@aspectconsulting.com
ASP0426R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on April 12, 2017 by Friedman & Bruya, Inc. from the Aspect Consulting, LLC Ken's Texaco, PO 120061, F&BI 704187 project. Samples were logged in under the laboratory ID's listed below.

<u>Laboratory ID</u>	<u>Aspect Consulting, LLC</u>
704187 -01	MW-12-041017
704187 -02	MW-13-041017
704187 -03	MW-14-041017
704187 -04	MW-15-041017
704187 -05	MW-19-041017
704187 -06	MW-21-041017
704187 -07	MW-22-041117
704187 -08	MW-10-041117

Sample MW-12-041017 was sent to Fremont Analytical for alkalinity, chloride, nitrate, nitrite, and sulfate analyses. The report is enclosed.

All quality control requirements were acceptable.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 04/26/17
 Date Received: 04/12/17
 Project: Ken's Texaco, PO 120061, F&BI 704187
 Date Extracted: 04/12/17
 Date Analyzed: 04/12/17

**RESULTS FROM THE ANALYSIS OF WATER SAMPLES
 FOR BENZENE, TOLUENE, ETHYLBENZENE,
 XYLENES AND TPH AS GASOLINE
 USING METHODS 8021B AND NWTPH-Gx**
 Results Reported as ug/L (ppb)

<u>Sample ID</u> Laboratory ID	<u>Benzene</u>	<u>Toluene</u>	<u>Ethyl Benzene</u>	<u>Total Xylenes</u>	<u>Gasoline Range</u>	<u>Surrogate (% Recovery)</u> (Limit 52-124)
MW-12-041017 704187-01	<1	<1	<1	<3	<100	74
MW-13-041017 704187-02	<1	<1	<1	<3	<100	79
MW-14-041017 704187-03	<1	<1	<1	<3	<100	78
MW-15-041017 704187-04	<1	<1	<1	<3	<100	77
MW-19-041017 704187-05	<1	<1	<1	<3	<100	78
MW-21-041017 704187-06	<1	<1	<1	<3	<100	74
MW-22-041117 704187-07	<1	<1	<1	<3	<100	76
MW-10-041117 704187-08	33	11	51	85	1,500	80
Method Blank 07-711 MB	<1	<1	<1	<3	<100	78

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 04/26/17

Date Received: 04/12/17

Project: Ken's Texaco, PO 120061, F&BI 704187

Date Extracted: 04/12/17

Date Analyzed: 04/12/17

**RESULTS FROM THE ANALYSIS OF WATER SAMPLES
FOR TOTAL PETROLEUM HYDROCARBONS AS
DIESEL AND MOTOR OIL
USING METHOD NWTPH-Dx**
Results Reported as ug/L (ppb)

<u>Sample ID</u> Laboratory ID	<u>Diesel Range</u> (C ₁₀ -C ₂₅)	<u>Motor Oil Range</u> (C ₂₅ -C ₃₆)	<u>Surrogate</u> <u>(% Recovery)</u> (Limit 41-152)
MW-12-041017 704187-01	200 x	<250	89
MW-13-041017 704187-02	<50	<250	95
MW-14-041017 704187-03	<50	<250	105
MW-15-041017 704187-04	<50	<250	97
MW-19-041017 704187-05	<50	<250	94
MW-21-041017 704187-06	<50	<250	93
MW-22-041117 704187-07	<50	<250	91
MW-10-041117 704187-08	550 x	<250	97
Method Blank 07-765 MB	<50	<250	85

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 6020A

Client ID:	MW-12-041017	Client:	Aspect Consulting, LLC
Date Received:	04/12/17	Project:	Ken's Texaco, PO 120061, F&BI 704187
Date Extracted:	04/14/17	Lab ID:	704187-01
Date Analyzed:	04/17/17	Data File:	704187-01.049
Matrix:	Water	Instrument:	ICPMS2
Units:	ug/L (ppb)	Operator:	AP

Analyte:	Concentration ug/L (ppb)
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Lead	<1
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FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 6020A

Client ID:	MW-13-041017	Client:	Aspect Consulting, LLC
Date Received:	04/12/17	Project:	Ken's Texaco, PO 120061, F&BI 704187
Date Extracted:	04/14/17	Lab ID:	704187-02
Date Analyzed:	04/17/17	Data File:	704187-02.084
Matrix:	Water	Instrument:	ICPMS2
Units:	ug/L (ppb)	Operator:	AP

Analyte:	Concentration ug/L (ppb)
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Lead	<1
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FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 6020A

Client ID:	MW-14-041017	Client:	Aspect Consulting, LLC
Date Received:	04/12/17	Project:	Ken's Texaco, PO 120061, F&BI 704187
Date Extracted:	04/14/17	Lab ID:	704187-03
Date Analyzed:	04/17/17	Data File:	704187-03.085
Matrix:	Water	Instrument:	ICPMS2
Units:	ug/L (ppb)	Operator:	AP

Analyte:	Concentration ug/L (ppb)
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Lead	<1
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FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 6020A

Client ID:	MW-15-041017	Client:	Aspect Consulting, LLC
Date Received:	04/12/17	Project:	Ken's Texaco, PO 120061, F&BI 704187
Date Extracted:	04/14/17	Lab ID:	704187-04
Date Analyzed:	04/17/17	Data File:	704187-04.086
Matrix:	Water	Instrument:	ICPMS2
Units:	ug/L (ppb)	Operator:	AP

Analyte:	Concentration ug/L (ppb)
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Lead	<1
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FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 6020A

Client ID:	MW-19-041017	Client:	Aspect Consulting, LLC
Date Received:	04/12/17	Project:	Ken's Texaco, PO 120061, F&BI 704187
Date Extracted:	04/14/17	Lab ID:	704187-05
Date Analyzed:	04/17/17	Data File:	704187-05.098
Matrix:	Water	Instrument:	ICPMS2
Units:	ug/L (ppb)	Operator:	AP

Analyte:	Concentration ug/L (ppb)
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Lead	<1
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FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 6020A

Client ID:	MW-21-041017	Client:	Aspect Consulting, LLC
Date Received:	04/12/17	Project:	Ken's Texaco, PO 120061, F&BI 704187
Date Extracted:	04/14/17	Lab ID:	704187-06
Date Analyzed:	04/17/17	Data File:	704187-06.099
Matrix:	Water	Instrument:	ICPMS2
Units:	ug/L (ppb)	Operator:	AP

Analyte:	Concentration ug/L (ppb)
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Lead	<1
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FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 6020A

Client ID:	MW-22-041117	Client:	Aspect Consulting, LLC
Date Received:	04/12/17	Project:	Ken's Texaco, PO 120061, F&BI 704187
Date Extracted:	04/14/17	Lab ID:	704187-07
Date Analyzed:	04/17/17	Data File:	704187-07.100
Matrix:	Water	Instrument:	ICPMS2
Units:	ug/L (ppb)	Operator:	AP

Analyte:	Concentration ug/L (ppb)
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Lead	<1
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FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 6020A

Client ID:	MW-10-041117	Client:	Aspect Consulting, LLC
Date Received:	04/12/17	Project:	Ken's Texaco, PO 120061, F&BI 704187
Date Extracted:	04/14/17	Lab ID:	704187-08
Date Analyzed:	04/17/17	Data File:	704187-08.101
Matrix:	Water	Instrument:	ICPMS2
Units:	ug/L (ppb)	Operator:	AP

Analyte:	Concentration ug/L (ppb)
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Lead	<1
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FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 6020A

Client ID:	Method Blank	Client:	Aspect Consulting, LLC
Date Received:	NA	Project:	Ken's Texaco, PO 120061, F&BI 704187
Date Extracted:	04/14/17	Lab ID:	I7-196 mb
Date Analyzed:	04/17/17	Data File:	I7-196 mb.043
Matrix:	Water	Instrument:	ICPMS2
Units:	ug/L (ppb)	Operator:	AP

Analyte:	Concentration ug/L (ppb)
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Lead	<1
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FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Dissolved Metals By EPA Method 6020A

Client ID:	MW-12-041017	Client:	Aspect Consulting, LLC
Date Received:	04/12/17	Project:	Ken's Texaco, PO 120061, F&BI 704187
Date Extracted:	04/13/17	Lab ID:	704187-01
Date Analyzed:	04/13/17	Data File:	704187-01.075
Matrix:	Water	Instrument:	ICPMS2
Units:	ug/L (ppb)	Operator:	AP

Analyte:	Concentration ug/L (ppb)
Iron	410
Manganese	12,200 ve

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Dissolved Metals By EPA Method 6020A

Client ID:	MW-12-041017	Client:	Aspect Consulting, LLC
Date Received:	04/12/17	Project:	Ken's Texaco, PO 120061, F&BI 704187
Date Extracted:	04/13/17	Lab ID:	704187-01 x10
Date Analyzed:	04/14/17	Data File:	704187-01 x10.051
Matrix:	Water	Instrument:	ICPMS2
Units:	ug/L (ppb)	Operator:	SP

Analyte:	Concentration ug/L (ppb)
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Manganese	10,800
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FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Dissolved Metals By EPA Method 6020A

Client ID:	Method Blank	Client:	Aspect Consulting, LLC
Date Received:	NA	Project:	Ken's Texaco, PO 120061, F&BI 704187
Date Extracted:	04/13/17	Lab ID:	I7-194 mb
Date Analyzed:	04/13/17	Data File:	I7-194 mb.033
Matrix:	Water	Instrument:	ICPMS2
Units:	ug/L (ppb)	Operator:	AP

Analyte:	Concentration ug/L (ppb)
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Iron	<50
Manganese	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW-10-041117	Client:	Aspect Consulting, LLC
Date Received:	04/12/17	Project:	Ken's Texaco, PO 120061, F&BI 704187
Date Extracted:	04/13/17	Lab ID:	704187-08
Date Analyzed:	04/13/17	Data File:	041310.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	100	57	121
Toluene-d8	96	63	127
4-Bromofluorobenzene	102	60	133

Compounds:	Concentration ug/L (ppb)
1,2-Dichloroethane (EDC)	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	Method Blank	Client:	Aspect Consulting, LLC
Date Received:	Not Applicable	Project:	Ken's Texaco, PO 120061, F&BI 704187
Date Extracted:	04/13/17	Lab ID:	07-757 mb
Date Analyzed:	04/13/17	Data File:	041309.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	98	57	121
Toluene-d8	98	63	127
4-Bromofluorobenzene	100	60	133

Compounds:	Concentration ug/L (ppb)
1,2-Dichloroethane (EDC)	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Dissolved Gasses By RSK 175

Client Sample ID:	MW-12-041017	Client:	Aspect Consulting, LLC
Date Received:	04/12/17	Project:	Ken's Texaco, PO 120061, F&BI 704187
Date Extracted:	04/18/17	Lab ID:	704187-01
Date Analyzed:	04/18/17	Data File:	008F0801.D
Matrix:	Water	Instrument:	GC8
Units:	ug/L (ppb)	Operator:	JS

Compounds:	Concentration ug/L (ppb)
Methane	390

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Dissolved Gasses By RSK 175

Client Sample ID:	Method Blank	Client:	Aspect Consulting, LLC
Date Received:	NA	Project:	Ken's Texaco, PO 120061, F&BI 704187
Date Extracted:	04/18/17	Lab ID:	07-808 mb
Date Analyzed:	04/18/17	Data File:	007F0701.D
Matrix:	Water	Instrument:	GC8
Units:	ug/L (ppb)	Operator:	JS

Compounds:	Concentration ug/L (ppb)
Methane	<5

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 04/26/17

Date Received: 04/12/17

Project: Ken's Texaco, PO 120061, F&BI 704187

**QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER
SAMPLES FOR BENZENE, TOLUENE, ETHYLBENZENE,
XYLENES, AND TPH AS GASOLINE
USING EPA METHOD 8021B AND NWTPH-Gx**

Laboratory Code: 704177-01 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	RPD (Limit 20)
Benzene	ug/L (ppb)	<1	<1	nm
Toluene	ug/L (ppb)	<1	<1	nm
Ethylbenzene	ug/L (ppb)	<1	<1	nm
Xylenes	ug/L (ppb)	<1	<1	nm
Gasoline	ug/L (ppb)	<100	<100	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery	Acceptance
			LCS	Criteria
Benzene	ug/L (ppb)	50	118	65-118
Toluene	ug/L (ppb)	50	120	72-122
Ethylbenzene	ug/L (ppb)	50	122	73-126
Xylenes	ug/L (ppb)	150	117	74-118
Gasoline	ug/L (ppb)	1,000	106	69-134

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 04/26/17

Date Received: 04/12/17

Project: Ken's Texaco, PO 120061, F&BI 704187

**QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER
SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS
DIESEL EXTENDED USING METHOD NWTPH-Dx**

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	ug/L (ppb)	2,500	104	103	63-142	1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 04/26/17

Date Received: 04/12/17

Project: Ken's Texaco, PO 120061, F&BI 704187

**QUALITY ASSURANCE RESULTS
FOR THE ANALYSIS OF WATER SAMPLES
FOR TOTAL METALS USING EPA METHOD 6020A**

Laboratory Code: 704237-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Lead	ug/L (ppb)	10	1.06	100	96	75-125	4

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Lead	ug/L (ppb)	10	97	80-120

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 04/26/17

Date Received: 04/12/17

Project: Ken's Texaco, PO 120061, F&BI 704187

**QUALITY ASSURANCE RESULTS
FOR THE ANALYSIS OF WATER SAMPLES
FOR DISSOLVED METALS USING EPA METHOD 6020A**

Laboratory Code: 704085-12 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Iron	ug/L (ppb)	100	156	105	99	75-125	6
Manganese	ug/L (ppb)	20	603	144 b	123 b	75-125	16

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Iron	ug/L (ppb)	100	103	80-120
Manganese	ug/L (ppb)	20	104	80-120

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 04/26/17

Date Received: 04/12/17

Project: Ken's Texaco, PO 120061, F&BI 704187

**QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER
SAMPLES FOR VOLATILES BY EPA METHOD 8260C**

Laboratory Code: 704209-04 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Acceptance Criteria
1,2-Dichloroethane (EDC)	ug/L (ppb)	50	<1	96	69-133

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
1,2-Dichloroethane (EDC)	ug/L (ppb)	50	91	96	73-132	5

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 04/26/17

Date Received: 04/12/17

Project: Ken's Texaco, PO 120061, F&BI 704187

**QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF
WATER SAMPLES FOR DISSOLVED GASES
USING METHOD RSK 175**

Laboratory Code: 704193-06 1/10 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	Relative Percent Difference (Limit 20)
Methane	ug/L (ppb)	520	580	11

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Methane	ug/L (ppb)	59	94	96	50-150	2

Data Qualifiers & Definitions

- a - The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.
- b - The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be meaningful.
- ca - The calibration results for the analyte were outside of acceptance criteria. The value reported is an estimate.
- c - The presence of the analyte may be due to carryover from previous sample injections.
- cf - The sample was centrifuged prior to analysis.
- d - The sample was diluted. Detection limits were raised and surrogate recoveries may not be meaningful.
- dv - Insufficient sample volume was available to achieve normal reporting limits.
- f - The sample was laboratory filtered prior to analysis.
- fb - The analyte was detected in the method blank.
- fc - The compound is a common laboratory and field contaminant.
- hr - The sample and duplicate were reextracted and reanalyzed. RPD results were still outside of control limits. Variability is attributed to sample inhomogeneity.
- hs - Headspace was present in the container used for analysis.
- ht - The analysis was performed outside the method or client-specified holding time requirement.
- ip - Recovery fell outside of control limits. Compounds in the sample matrix interfered with the quantitation of the analyte.
- j - The analyte concentration is reported below the lowest calibration standard. The value reported is an estimate.
- J - The internal standard associated with the analyte is out of control limits. The reported concentration is an estimate.
- jl - The laboratory control sample(s) percent recovery and/or RPD were out of control limits. The reported concentration should be considered an estimate.
- js - The surrogate associated with the analyte is out of control limits. The reported concentration should be considered an estimate.
- lc - The presence of the analyte is likely due to laboratory contamination.
- L - The reported concentration was generated from a library search.
- nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.
- pc - The sample was received with incorrect preservation or in a container not approved by the method. The value reported should be considered an estimate.
- ve - The analyte response exceeded the valid instrument calibration range. The value reported is an estimate.
- vo - The value reported fell outside the control limits established for this analyte.
- x - The sample chromatographic pattern does not resemble the fuel standard used for quantitation.



Fremont
Analytical

3600 Fremont Ave. N.
Seattle, WA 98103
T: (206) 352-3790
F: (206) 352-7178
info@fremontanalytical.com

Friedman & Bruya
Michael Erdahl
3012 16th Ave. W.
Seattle, WA 98119

RE: 704187
Work Order Number: 1704127

April 19, 2017

Attention Michael Erdahl:

Fremont Analytical, Inc. received 1 sample(s) on 4/12/2017 for the analyses presented in the following report.

Ion Chromatography by EPA Method 300.0
Total Alkalinity by SM 2320B

This report consists of the following:

- Case Narrative
- Analytical Results
- Applicable Quality Control Summary Reports
- Chain of Custody

All analyses were performed consistent with the Quality Assurance program of Fremont Analytical, Inc. Please contact the laboratory if you should have any questions about the results.

Thank you for using Fremont Analytical.

Sincerely,

Mike Ridgeway
Laboratory Director

DoD/ELAP Certification #L2371, ISO/IEC 17025:2005
ORELAP Certification: WA 100009-007 (NELAP Recognized)



Date: 04/19/2017

CLIENT: Friedman & Bruya
Project: 704187
Work Order: 1704127

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Date/Time Collected	Date/Time Received
1704127-001	MW-12-041017	04/10/2017 10:40 AM	04/12/2017 10:48 AM

CLIENT: Friedman & Bruya**Project:** 704187

I. SAMPLE RECEIPT:

Samples receipt information is recorded on the attached Sample Receipt Checklist.

II. GENERAL REPORTING COMMENTS:

Results are reported on a wet weight basis unless dry-weight correction is denoted in the units field on the analytical report ("mg/kg-dry" or "ug/kg-dry").

Matrix Spike (MS) and MS Duplicate (MSD) samples are tested from an analytical batch of "like" matrix to check for possible matrix effect. The MS and MSD will provide site specific matrix data only for those samples which are spiked by the laboratory. The sample chosen for spike purposes may or may not have been a sample submitted in this sample delivery group. The validity of the analytical procedures for which data is reported in this analytical report is determined by the Laboratory Control Sample (LCS) and the Method Blank (MB). The LCS and the MB are processed with the samples and the MS/MSD to ensure method criteria are achieved throughout the entire analytical process.

III. ANALYSES AND EXCEPTIONS:

Exceptions associated with this report will be footnoted in the analytical results page(s) or the quality control summary page(s) and/or noted below.

Qualifiers:

- * - Flagged value is not within established control limits
- B - Analyte detected in the associated Method Blank
- D - Dilution was required
- E - Value above quantitation range
- H - Holding times for preparation or analysis exceeded
- I - Analyte with an internal standard that does not meet established acceptance criteria
- J - Analyte detected below Reporting Limit
- N - Tentatively Identified Compound (TIC)
- Q - Analyte with an initial or continuing calibration that does not meet established acceptance criteria (<20%RSD, <20% Drift or minimum RRF)
- S - Spike recovery outside accepted recovery limits
- ND - Not detected at the Reporting Limit
- R - High relative percent difference observed

Acronyms:

- %Rec - Percent Recovery
- CCB - Continued Calibration Blank
- CCV - Continued Calibration Verification
- DF - Dilution Factor
- HEM - Hexane Extractable Material
- ICV - Initial Calibration Verification
- LCS/LCSD - Laboratory Control Sample / Laboratory Control Sample Duplicate
- MB or MBLANK - Method Blank
- MDL - Method Detection Limit
- MS/MSD - Matrix Spike / Matrix Spike Duplicate
- PDS - Post Digestion Spike
- Ref Val - Reference Value
- RL - Reporting Limit
- RPD - Relative Percent Difference
- SD - Serial Dilution
- SGT - Silica Gel Treatment
- SPK - Spike
- Surr - Surrogate



Analytical Report

Work Order: 1704127
Date Reported: 4/19/2017

Client: Friedman & Bruya

Collection Date: 4/10/2017 10:40:00 AM

Project: 704187

Lab ID: 1704127-001

Matrix: Water

Client Sample ID: MW-12-041017

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Ion Chromatography by EPA Method 300.0

Batch ID: R35534 Analyst: KT

Chloride	42.2	1.00	D	mg/L	10	4/13/2017 10:22:00 AM
Nitrite (as N)	ND	0.500	D	mg/L	5	4/12/2017 12:13:00 PM
Nitrate (as N)	2.49	0.500	D	mg/L	5	4/12/2017 12:13:00 PM
Sulfate	20.0	1.50	D	mg/L	5	4/12/2017 12:13:00 PM

NOTES:

Diluted due to matrix.

Total Alkalinity by SM 2320B

Batch ID: R35630 Analyst: MW

Alkalinity, Total (As CaCO ₃)	664	2.50		mg/L	1	4/19/2017 1:50:00 PM
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Work Order: 1704127
CLIENT: Friedman & Bruya
Project: 704187

QC SUMMARY REPORT

Total Alkalinity by SM 2320B

Sample ID	MB-R35630	SampType:	MBLK	Units:	mg/L	Prep Date:	4/19/2017	RunNo:	35630		
Client ID:	MBLKW	Batch ID:	R35630			Analysis Date:	4/19/2017	SeqNo:	682511		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Alkalinity, Total (As CaCO₃) ND 2.50

Sample ID	LCS-R35630	SampType: LCS			Units: mg/L		Prep Date: 4/19/2017			RunNo: 35630		
Client ID:	LCSW	Batch ID: R35630			Analysis Date: 4/19/2017			SeqNo: 682512				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	

Alkalinity, Total (As CaCO₃) 110 2.50 100.0 0 110 80 120

Sample ID	1704142-001ADUP	SampType:	DUP	Units:	mg/L	Prep Date:	4/19/2017	RunNo:	35630		
Client ID:	BATCH	Batch ID:	R35630	Analysis Date:				4/19/2017	SeqNo:	682517	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Alkalinity, Total (As CaCO₃) 132 2.50 132.0 0 20



Date: 4/19/2017

Work Order: 1704127
CLIENT: Friedman & Bruya
Project: 704187

QC SUMMARY REPORT
Ion Chromatography by EPA Method 300.0

Sample ID	MB-R35518	SampType:	MBLK	Units:	mg/L	Prep Date:	4/12/2017	RunNo:	35518		
Client ID:	MBLKW	Batch ID:	R35518			Analysis Date:	4/12/2017	SeqNo:	680390		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Nitrite (as N)	ND	0.100									
Nitrate (as N)	ND	0.100									
Sulfate	ND	0.300									

Sample ID	LCS-R35518	SampType:	LCS	Units:	mg/L	Prep Date:	4/12/2017	RunNo:	35518		
Client ID:	LCSW	Batch ID:	R35518			Analysis Date:	4/12/2017	SeqNo:	680391		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Nitrite (as N)	2.84	0.100	3.000	0	94.6	90	110				
Nitrate (as N)	2.93	0.100	3.000	0	97.8	90	110				
Sulfate	14.7	0.300	15.00	0	97.9	90	110				

Sample ID	1704121-001BDUP	SampType:	DUP	Units:	mg/L	Prep Date:	4/12/2017	RunNo:	35518		
Client ID:	BATCH	Batch ID:	R35518			Analysis Date:	4/12/2017	SeqNo:	680393		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Nitrite (as N)	ND	0.100						0		20	
Nitrate (as N)	ND	0.100						0		20	
Sulfate	45.1	0.300						44.91	0.413	20	

Sample ID	1704121-001BMS	SampType:	MS	Units:	mg/L	Prep Date:	4/12/2017	RunNo:	35518		
Client ID:	BATCH	Batch ID:	R35518			Analysis Date:	4/12/2017	SeqNo:	680394		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Nitrite (as N)	2.81	0.100	3.000	0	93.6	80	120				
Nitrate (as N)	3.05	0.100	3.000	0	102	80	120				
Sulfate	62.7	0.300	15.00	44.91	119	80	120				E

NOTES:

E - Estimated value. The amount exceeds the linear working range of the instrument.

Work Order: 1704127
CLIENT: Friedman & Bruya
Project: 704187

QC SUMMARY REPORT

Ion Chromatography by EPA Method 300.0

Sample ID	1704121-001BMSD	SampType: MSD	Units: mg/L			Prep Date: 4/12/2017			RunNo: 35518		
Client ID:	BATCH	Batch ID:	R35518			Analysis Date: 4/12/2017			SeqNo: 680395		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrite (as N)	2.84	0.100	3.000	0	94.7	80	120	2.809	1.18	20	
Nitrate (as N)	2.87	0.100	3.000	0	95.8	80	120	3.050	6.00	20	
Sulfate	62.9	0.300	15.00	44.91	120	80	120	62.72	0.261	20	E

NOTES:

E - Estimated value. The amount exceeds the linear working range of the instrument.

Sample ID	MB-R35534	SampType:	MBLK	Units:	mg/L	Prep Date:	4/13/2017	RunNo:	35534		
Client ID:	MBLKW	Batch ID:	R35534			Analysis Date:	4/13/2017	SeqNo:	680703		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	ND	0.100									

Sample ID	LCS-R35534	SampType:	LCS	Units:	mg/L	Prep Date:	4/13/2017	RunNo:	35534		
Client ID:	LCSW	Batch ID:	R35534			Analysis Date:	4/13/2017	SeqNo:	680704		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	2.78	0.100	3.000	0	92.6	90	110				

Sample ID	1704142-001ADUP	SampType:	DUP	Units:	mg/L	Prep Date:	4/13/2017	RunNo:	35534		
Client ID:	BATCH	Batch ID:	R35534			Analysis Date:	4/13/2017	SeqNo:	680711		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	4.68	0.100						4.656	0.508	20	

Sample ID	1704142-001AMS	SampType:	MS	Units:	mg/L	Prep Date:	4/13/2017	RunNo:	35534		
Client ID:	BATCH	Batch ID:	R35534			Analysis Date:	4/13/2017	SeqNo:	680712		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	7.35	0.100	3.000	4.656	90.0	80	120				E



Date: 4/19/2017

Work Order: 1704127
CLIENT: Friedman & Bruya
Project: 704187

QC SUMMARY REPORT
Ion Chromatography by EPA Method 300.0

Sample ID	1704142-001AMS			SampType:	MS		Units:	mg/L		Prep Date:	4/13/2017		RunNo:	35534	
Client ID:	BATCH			Batch ID:	R35534					Analysis Date:	4/13/2017		SeqNo:	680712	
Analyte		Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual			

NOTES:

E - Estimated value. The amount exceeds the linear working range of the instrument.

Sample ID	1704142-001AMSD			SampType:	MSD		Units:	mg/L		Prep Date:	4/13/2017		RunNo:	35534	
Client ID:	BATCH			Batch ID:	R35534					Analysis Date:	4/13/2017		SeqNo:	680713	
Analyte				Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val		%RPD	RPDLimit	Qual

Chloride	7.38	0.100	3.000	4.656	90.7	80	120	7.355	0.309	20	E
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NOTES:

E - Estimated value. The amount exceeds the linear working range of the instrument.

Client Name: **FB**
 Logged by: **Erica Silva**

Work Order Number: **1704127**
 Date Received: **4/12/2017 10:48:00 AM**

Chain of Custody

1. Is Chain of Custody complete? Yes ☒ No ☐ Not Present ☐
 2. How was the sample delivered? FedEx

Log In

3. Coolers are present? Yes ☐ No ☒ NA ☐

Sample received at appropriate temperature

4. Shipping container/cooler in good condition? Yes ☒ No ☐
 5. Custody Seals present on shipping container/cooler?
 (Refer to comments for Custody Seals not intact) Yes ☐ No ☒ Not Required ☐
 6. Was an attempt made to cool the samples? Yes ☒ No ☐ NA ☐
 7. Were all items received at a temperature of >0°C to 10.0°C* Yes ☒ No ☐ NA ☐
 8. Sample(s) in proper container(s)? Yes ☒ No ☐
 9. Sufficient sample volume for indicated test(s)? Yes ☒ No ☐
 10. Are samples properly preserved? Yes ☒ No ☐
 11. Was preservative added to bottles? Yes ☐ No ☒ NA ☐
 12. Is there headspace in the VOA vials? Yes ☐ No ☐ NA ☒
 13. Did all samples containers arrive in good condition(unbroken)? Yes ☒ No ☐
 14. Does paperwork match bottle labels? Yes ☒ No ☐
 15. Are matrices correctly identified on Chain of Custody? Yes ☒ No ☐
 16. Is it clear what analyses were requested? Yes ☒ No ☐
 17. Were all holding times able to be met? Yes ☒ No ☐

Special Handling (if applicable)

18. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☒

Person Notified: Date
 By Whom: Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person
 Regarding:
 Client Instructions:

19. Additional remarks:

Item Information

Item #	Temp °C
Sample	5.9

* Note: DoD/ELAP and TNI require items to be received at 4°C +/- 2°C

SUBCONTRACT SAMPLE CHAIN OF CUSTODY

1704127

Send Report To Michael ErdahlCompany Friedman and Bruya, Inc.Address 3012 16th Ave WCity, State, ZIP Seattle, WA 98119Phone # (206) 285-8282 Fax # (206) 283-5044

SUBCONTRACTOR

Fremont

PROJECT NAME/NO.

704187

PO #

E-591

REMARKS

Aspect style EDD
Please Email ResultsPage # 1 of 1

TURNAROUND TIME

☒ Standard (~~2 Weeks~~) 1 week☐ RUSH

Rush charges authorized by:

SAMPLE DISPOSAL

☐ Dispose after 30 days☐ Return samples☐ Will call with instructions

Page 11 of 11

Sample ID	Lab ID	Date Sampled	Time Sampled	Matrix	# of jars	ANALYSES REQUESTED										Notes
						Dioxins/Furans	EPH	VPH	Nitrate	Sulfate	Alkalinity	nitrite 40C-999M	Chloride			
MW-12-041017		4/10/17	1040	water	2				X	X	X	X	X			

Friedman & Bruya, Inc.
3012 16th Avenue West

Seattle, WA 98119-2029

Ph. (206) 285-8282

Fax (206) 283-5044

SIGNATURE

Relinquished by:

Received by:

Relinquished by:

Received by:

PRINT NAME

Michael Erdahl

PAI

COMPANY

Friedman and Bruya

DATE

4/12/17

TIME

10:06

10:18

704187

SAMPLE CHAIN OF CUSTODY

ME 04/12/17

VW4/AD/BOY

Report To Kirsi Longley
 Company Aspect Consulting
 Address _____
 City, State, ZIP Seattle Office
 Phone _____ Email _____

SAMPLERS (signature)

Kristin BeckPage # 1 of 1

PROJECT NAME

Ken's Texaco

PO #

120061

REMARKS

INVOICE TO

Accts Payable

TURNAROUND TIME

☐ Standard Turnaround☐ RUSH

Rush charges authorized by: _____

SAMPLE DISPOSAL

☐ Dispose after 30 days☐ Archive Samples☐ Other _____

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of Jars	ANALYSES REQUESTED														
						TPH-HCID	TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by 8260C	SVOCs by 8270D	PAHs 8270D SIM	Total Lead (ppm)	Alkalinity	Chloride	Nitrite/Nitrate	Sulfate	Dissolved Fe	Dissolved Mn	Dissolved Methane
MW-12-041017	01 A-K	4/10/17	1040	water	11		X	X	X				X	X	X	X	X	X	X	
MW-13-041017	02 A-E	4/10/17	1140	water	5		X	X	X				X							
MW-14-041017	03	4/10/17	1225	water	5		X	X	X				X							
MW-15-041017	04	4/10/17	1310	water	5		X	X	X				X							
MW-19-041017	05	4/10/17	1405	water	5		X	X	X				X							
MW-21-041017	06	4/10/17	1515	water	5		X	X	X				X							
MW-22-041117	07	4/11/17	0905	water	5		X	X	X				X							
MW-10-041117	08 ✓	4/11/17	1005	water	5		X	X	X				X							X KB
XXXXXXXXXXXX		XXXXXX																		

Friedman & Bruya, Inc.
 3012 16th Avenue West
 Seattle, WA 98119-2029
 Ph. (206) 285-8282

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by: <u>Kristin Beck</u>	<u>Kristin Beck</u>	<u>Aspect</u>	<u>4/11/17</u>	
Received by: <u>Nhan Phan</u>	<u>Nhan Phan</u>	<u>FBI</u>	<u>4/12/17</u>	<u>0940</u>
Relinquished by:			<u>3</u>	
Received by:		Samples received at	<u>3</u>	<u>°C</u>

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Yelena Aravkina, M.S.
Michael Erdahl, B.S.
Arina Podnozova, B.S.
Eric Young, B.S.

3012 16th Avenue West
Seattle, WA 98119-2029
(206) 285-8282
fbi@isomedia.com
www.friedmanandbruya.com

April 26, 2017

Kirsi Longley, Project Manager
Aspect Consulting, LLC
401 2nd Ave S, Suite 201
Seattle, WA 98104

Dear Ms Longley:

Included are the results from the testing of material submitted on April 12, 2017 from the Ken's Texaco, 120061, F&BI 704193 project. There are 27 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

We appreciate this opportunity to be of service to you and hope you will call if you have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.



Michael Erdahl
Project Manager

Enclosures

c: data@aspectconsulting.com
ASP0426R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on April 12, 2017 by Friedman & Bruya, Inc. from the Aspect Consulting, LLC Ken's Texaco, 120061, F&BI 704193 project. Samples were logged in under the laboratory ID's listed below.

<u>Laboratory ID</u>	<u>Aspect Consulting, LLC</u>
704193 -01	MW-1-041117
704193 -02	MW-7-041117
704193 -03	MW-18-041117
704193 -04	MW-16-041117
704193 -05	MW-8-041217
704193 -06	MW-11-041217

Samples MW-16-041117, MW-8-041217, and MW-11-041217 were sent to Fremont analytical for alkalinity, chloride, nitrate, nitrite, and sulfate analyses. The report is enclosed.

All quality control requirements were acceptable.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 04/26/17

Date Received: 04/12/17

Project: Ken's Texaco, 120061, F&BI 704193

Date Extracted: 04/14/17

Date Analyzed: 04/14/17

**RESULTS FROM THE ANALYSIS OF WATER SAMPLES
FOR BENZENE, TOLUENE, ETHYLBENZENE,
XYLENES AND TPH AS GASOLINE
USING METHODS 8021B AND NWTPH-Gx**

Results Reported as ug/L (ppb)

<u>Sample ID</u> Laboratory ID	<u>Benzene</u>	<u>Toluene</u>	<u>Ethyl Benzene</u>	<u>Total Xylenes</u>	<u>Gasoline Range</u>	<u>Surrogate (% Recovery)</u> (Limit 52-124)
MW-1-041117 704193-01	1.9	<1	7.1	12	1,600	86
MW-7-041117 704193-02	<1	<1	2.8	4.6	930	84
MW-18-041117 704193-03	<1	<1	<1	<3	<100	84
MW-16-041117 704193-04	<1	<1	28	4.6	2,300	73
MW-8-041217 704193-05 1/10	290	100	320	410	6,300	80
MW-11-041217 704193-06	51	12	96	100	2,600	88
Method Blank 07-787 MB	<1	<1	<1	<3	<100	77

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 04/26/17

Date Received: 04/12/17

Project: Ken's Texaco, 120061, F&BI 704193

Date Extracted: 04/13/17

Date Analyzed: 04/13/17

**RESULTS FROM THE ANALYSIS OF WATER SAMPLES
FOR TOTAL PETROLEUM HYDROCARBONS AS
DIESEL AND MOTOR OIL
USING METHOD NWTPH-Dx**
Results Reported as ug/L (ppb)

<u>Sample ID</u> Laboratory ID	<u>Diesel Range</u> (C ₁₀ -C ₂₅)	<u>Motor Oil Range</u> (C ₂₅ -C ₃₆)	<u>Surrogate</u> (% Recovery) (Limit 47-140)
MW-1-041117 704193-01	420 x	<250	98
MW-7-041117 704193-02	350 x	<250	108
MW-18-041117 704193-03	<50	<250	108
MW-16-041117 704193-04	430 x	<250	87
MW-8-041217 704193-05	670 x	<250	110
MW-11-041217 704193-06	800 x	270 x	111
Method Blank 07-765 MB2	<50	<250	94

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 6020A

Client ID:	MW-1-041117	Client:	Aspect Consulting, LLC
Date Received:	04/12/17	Project:	Ken's Texaco, 120061, F&BI 704193
Date Extracted:	04/14/17	Lab ID:	704193-01
Date Analyzed:	04/17/17	Data File:	704193-01.102
Matrix:	Water	Instrument:	ICPMS2
Units:	ug/L (ppb)	Operator:	AP

Analyte:	Concentration ug/L (ppb)
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Lead	<1
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FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 6020A

Client ID:	MW-7-041117	Client:	Aspect Consulting, LLC
Date Received:	04/12/17	Project:	Ken's Texaco, 120061, F&BI 704193
Date Extracted:	04/14/17	Lab ID:	704193-02
Date Analyzed:	04/17/17	Data File:	704193-02.103
Matrix:	Water	Instrument:	ICPMS2
Units:	ug/L (ppb)	Operator:	AP

Analyte:	Concentration ug/L (ppb)
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Lead	<1
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FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 6020A

Client ID:	MW-18-041117	Client:	Aspect Consulting, LLC
Date Received:	04/12/17	Project:	Ken's Texaco, 120061, F&BI 704193
Date Extracted:	04/14/17	Lab ID:	704193-03
Date Analyzed:	04/17/17	Data File:	704193-03.107
Matrix:	Water	Instrument:	ICPMS2
Units:	ug/L (ppb)	Operator:	AP

Analyte:	Concentration ug/L (ppb)
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Lead	<1
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FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 6020A

Client ID:	MW-16-041117	Client:	Aspect Consulting, LLC
Date Received:	04/12/17	Project:	Ken's Texaco, 120061, F&BI 704193
Date Extracted:	04/14/17	Lab ID:	704193-04
Date Analyzed:	04/17/17	Data File:	704193-04.108
Matrix:	Water	Instrument:	ICPMS2
Units:	ug/L (ppb)	Operator:	AP

Analyte:	Concentration ug/L (ppb)
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Lead	<1
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FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 6020A

Client ID:	MW-8-041217	Client:	Aspect Consulting, LLC
Date Received:	04/12/17	Project:	Ken's Texaco, 120061, F&BI 704193
Date Extracted:	04/14/17	Lab ID:	704193-05
Date Analyzed:	04/17/17	Data File:	704193-05.109
Matrix:	Water	Instrument:	ICPMS2
Units:	ug/L (ppb)	Operator:	AP

Analyte:	Concentration ug/L (ppb)
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Lead	<1
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FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 6020A

Client ID:	MW-11-041217	Client:	Aspect Consulting, LLC
Date Received:	04/12/17	Project:	Ken's Texaco, 120061, F&BI 704193
Date Extracted:	04/14/17	Lab ID:	704193-06
Date Analyzed:	04/17/17	Data File:	704193-06.110
Matrix:	Water	Instrument:	ICPMS2
Units:	ug/L (ppb)	Operator:	AP

Analyte:	Concentration ug/L (ppb)
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Lead	<1
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FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 6020A

Client ID:	Method Blank	Client:	Aspect Consulting, LLC
Date Received:	NA	Project:	Ken's Texaco, 120061, F&BI 704193
Date Extracted:	04/14/17	Lab ID:	I7-196 mb
Date Analyzed:	04/17/17	Data File:	I7-196 mb.043
Matrix:	Water	Instrument:	ICPMS2
Units:	ug/L (ppb)	Operator:	AP

Analyte:	Concentration ug/L (ppb)
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Lead	<1
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FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Dissolved Metals By EPA Method 6020A

Client ID:	MW-16-041117	Client:	Aspect Consulting, LLC
Date Received:	04/12/17	Project:	Ken's Texaco, 120061, F&BI 704193
Date Extracted:	04/13/17	Lab ID:	704193-04
Date Analyzed:	04/13/17	Data File:	704193-04.076
Matrix:	Water	Instrument:	ICPMS2
Units:	ug/L (ppb)	Operator:	AP

Analyte:	Concentration ug/L (ppb)
Iron	3,740
Manganese	4,130

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Dissolved Metals By EPA Method 6020A

Client ID:	MW-8-041217	Client:	Aspect Consulting, LLC
Date Received:	04/12/17	Project:	Ken's Texaco, 120061, F&BI 704193
Date Extracted:	04/13/17	Lab ID:	704193-05 x10
Date Analyzed:	04/14/17	Data File:	704193-05 x10.052
Matrix:	Water	Instrument:	ICPMS2
Units:	ug/L (ppb)	Operator:	AP

Analyte:	Concentration ug/L (ppb)
Iron	7,240
Manganese	12,900

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Dissolved Metals By EPA Method 6020A

Client ID:	MW-11-041217	Client:	Aspect Consulting, LLC
Date Received:	04/12/17	Project:	Ken's Texaco, 120061, F&BI 704193
Date Extracted:	04/13/17	Lab ID:	704193-06 x10
Date Analyzed:	04/14/17	Data File:	704193-06 x10.053
Matrix:	Water	Instrument:	ICPMS2
Units:	ug/L (ppb)	Operator:	AP

Analyte:	Concentration ug/L (ppb)
Iron	9,780
Manganese	24,600

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Dissolved Metals By EPA Method 6020A

Client ID:	Method Blank	Client:	Aspect Consulting, LLC
Date Received:	NA	Project:	Ken's Texaco, 120061, F&BI 704193
Date Extracted:	04/13/17	Lab ID:	I7-194 mb
Date Analyzed:	04/13/17	Data File:	I7-194 mb.033
Matrix:	Water	Instrument:	ICPMS2
Units:	ug/L (ppb)	Operator:	AP

Analyte:	Concentration ug/L (ppb)
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Iron	<50
Manganese	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW-11-041217	Client:	Aspect Consulting, LLC
Date Received:	04/12/17	Project:	Ken's Texaco, 120061, F&BI 704193
Date Extracted:	04/13/17	Lab ID:	704193-06
Date Analyzed:	04/13/17	Data File:	041312.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	100	57	121
Toluene-d8	97	63	127
4-Bromofluorobenzene	103	60	133

Compounds:	Concentration ug/L (ppb)
1,2-Dichloroethane (EDC)	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	Method Blank	Client:	Aspect Consulting, LLC
Date Received:	Not Applicable	Project:	Ken's Texaco, 120061, F&BI 704193
Date Extracted:	04/13/17	Lab ID:	07-757 mb
Date Analyzed:	04/13/17	Data File:	041309.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	98	57	121
Toluene-d8	98	63	127
4-Bromofluorobenzene	100	60	133

Compounds:	Concentration ug/L (ppb)
1,2-Dichloroethane (EDC)	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Dissolved Gasses By RSK 175

Client Sample ID:	MW-16-041117	Client:	Aspect Consulting, LLC
Date Received:	04/12/17	Project:	Ken's Texaco, 120061, F&BI 704193
Date Extracted:	04/18/17	Lab ID:	704193-04 1/10
Date Analyzed:	04/24/17	Data File:	003F0301.D
Matrix:	Water	Instrument:	GC8
Units:	ug/L (ppb)	Operator:	JS

Compounds:	Concentration ug/L (ppb)
Methane	570

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Dissolved Gasses By RSK 175

Client Sample ID:	MW-8-041217	Client:	Aspect Consulting, LLC
Date Received:	04/12/17	Project:	Ken's Texaco, 120061, F&BI 704193
Date Extracted:	04/18/17	Lab ID:	704193-05 1/10
Date Analyzed:	04/24/17	Data File:	004F0401.D
Matrix:	Water	Instrument:	GC8
Units:	ug/L (ppb)	Operator:	JS

Compounds:	Concentration ug/L (ppb)
Methane	440

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Dissolved Gasses By RSK 175

Client Sample ID:	MW-11-041217	Client:	Aspect Consulting, LLC
Date Received:	04/12/17	Project:	Ken's Texaco, 120061, F&BI 704193
Date Extracted:	04/18/17	Lab ID:	704193-06 1/10
Date Analyzed:	04/24/17	Data File:	005F0501.D
Matrix:	Water	Instrument:	GC8
Units:	ug/L (ppb)	Operator:	JS

Compounds:	Concentration ug/L (ppb)
Methane	520

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Dissolved Gasses By RSK 175

Client Sample ID:	Method Blank	Client:	Aspect Consulting, LLC
Date Received:	NA	Project:	Ken's Texaco, 120061, F&BI 704193
Date Extracted:	04/18/17	Lab ID:	07-808 mb
Date Analyzed:	04/18/17	Data File:	007F0701.D
Matrix:	Water	Instrument:	GC8
Units:	ug/L (ppb)	Operator:	JS

Compounds:	Concentration ug/L (ppb)
Methane	<5

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 04/26/17

Date Received: 04/12/17

Project: Ken's Texaco, 120061, F&BI 704193

**QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER
SAMPLES FOR BENZENE, TOLUENE, ETHYLBENZENE,
XYLENES, AND TPH AS GASOLINE
USING EPA METHOD 8021B AND NWTPH-Gx**

Laboratory Code: 704193-03 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	RPD (Limit 20)
Benzene	ug/L (ppb)	<1	<1	nm
Toluene	ug/L (ppb)	<1	<1	nm
Ethylbenzene	ug/L (ppb)	<1	<1	nm
Xylenes	ug/L (ppb)	<3	<3	nm
Gasoline	ug/L (ppb)	<100	<100	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery	Acceptance
			LCS	Criteria
Benzene	ug/L (ppb)	50	112	65-118
Toluene	ug/L (ppb)	50	113	72-122
Ethylbenzene	ug/L (ppb)	50	114	73-126
Xylenes	ug/L (ppb)	150	110	74-118
Gasoline	ug/L (ppb)	1,000	100	69-134

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 04/26/17

Date Received: 04/12/17

Project: Ken's Texaco, 120061, F&BI 704193

**QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER
SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS
DIESEL EXTENDED USING METHOD NWTPH-Dx**

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	ug/L (ppb)	2,500	104	103	63-142	1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 04/26/17

Date Received: 04/12/17

Project: Ken's Texaco, 120061, F&BI 704193

**QUALITY ASSURANCE RESULTS
FOR THE ANALYSIS OF WATER SAMPLES
FOR TOTAL METALS USING EPA METHOD 6020A**

Laboratory Code: 704237-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Lead	ug/L (ppb)	10	1.06	100	96	75-125	4

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Lead	ug/L (ppb)	10	97	80-120

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 04/26/17

Date Received: 04/12/17

Project: Ken's Texaco, 120061, F&BI 704193

**QUALITY ASSURANCE RESULTS
FOR THE ANALYSIS OF WATER SAMPLES
FOR DISSOLVED METALS USING EPA METHOD 6020A**

Laboratory Code: 704085-12 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Iron	ug/L (ppb)	100	156	105	99	75-125	6
Manganese	ug/L (ppb)	20	603	144 b	123 b	75-125	16

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Iron	ug/L (ppb)	100	103	80-120
Manganese	ug/L (ppb)	20	104	80-120

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 04/26/17

Date Received: 04/12/17

Project: Ken's Texaco, 120061, F & BI 704193

**QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER
SAMPLES FOR VOLATILES BY EPA METHOD 8260C**

Laboratory Code: 704209-04 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Acceptance Criteria
1,2-Dichloroethane (EDC)	ug/L (ppb)	50	<1	96	69-133

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
1,2-Dichloroethane (EDC)	ug/L (ppb)	50	91	96	73-132	5

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 04/26/17

Date Received: 04/12/17

Project: Ken's Texaco, 120061, F&BI 704193

**QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF
WATER SAMPLES FOR DISSOLVED GASES
USING METHOD RSK 175**

Laboratory Code: 704193-06 1/10 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	Relative Percent Difference (Limit 20)
Methane	ug/L (ppb)	520	580	11

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Methane	ug/L (ppb)	59	94	96	50-150	2

Data Qualifiers & Definitions

- a - The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.
- b - The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be meaningful.
- ca - The calibration results for the analyte were outside of acceptance criteria. The value reported is an estimate.
- c - The presence of the analyte may be due to carryover from previous sample injections.
- cf - The sample was centrifuged prior to analysis.
- d - The sample was diluted. Detection limits were raised and surrogate recoveries may not be meaningful.
- dv - Insufficient sample volume was available to achieve normal reporting limits.
- f - The sample was laboratory filtered prior to analysis.
- fb - The analyte was detected in the method blank.
- fc - The compound is a common laboratory and field contaminant.
- hr - The sample and duplicate were reextracted and reanalyzed. RPD results were still outside of control limits. Variability is attributed to sample inhomogeneity.
- hs - Headspace was present in the container used for analysis.
- ht - The analysis was performed outside the method or client-specified holding time requirement.
- ip - Recovery fell outside of control limits. Compounds in the sample matrix interfered with the quantitation of the analyte.
- j - The analyte concentration is reported below the lowest calibration standard. The value reported is an estimate.
- J - The internal standard associated with the analyte is out of control limits. The reported concentration is an estimate.
- jl - The laboratory control sample(s) percent recovery and/or RPD were out of control limits. The reported concentration should be considered an estimate.
- js - The surrogate associated with the analyte is out of control limits. The reported concentration should be considered an estimate.
- lc - The presence of the analyte is likely due to laboratory contamination.
- L - The reported concentration was generated from a library search.
- nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.
- pc - The sample was received with incorrect preservation or in a container not approved by the method. The value reported should be considered an estimate.
- ve - The analyte response exceeded the valid instrument calibration range. The value reported is an estimate.
- vo - The value reported fell outside the control limits established for this analyte.
- x - The sample chromatographic pattern does not resemble the fuel standard used for quantitation.



Fremont
Analytical

3600 Fremont Ave. N.
Seattle, WA 98103
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info@fremontanalytical.com

Friedman & Bruya
Michael Erdahl
3012 16th Ave. W.
Seattle, WA 98119

RE: 704193
Work Order Number: 1704142

April 19, 2017

Attention Michael Erdahl:

Fremont Analytical, Inc. received 3 sample(s) on 4/12/2017 for the analyses presented in the following report.

Ion Chromatography by EPA Method 300.0
Total Alkalinity by SM 2320B

This report consists of the following:

- Case Narrative
- Analytical Results
- Applicable Quality Control Summary Reports
- Chain of Custody

All analyses were performed consistent with the Quality Assurance program of Fremont Analytical, Inc. Please contact the laboratory if you should have any questions about the results.

Thank you for using Fremont Analytical.

Sincerely,

Mike Ridgeway
Laboratory Director

DoD/ELAP Certification #L2371, ISO/IEC 17025:2005
ORELAP Certification: WA 100009-007 (NELAP Recognized)

CLIENT: Friedman & Bruya
Project: 704193
Work Order: 1704142

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Date/Time Collected	Date/Time Received
1704142-001	MW-16-041117	04/11/2017 2:20 PM	04/12/2017 3:10 PM
1704142-002	MW-8-041217	04/12/2017 8:55 AM	04/12/2017 3:10 PM
1704142-003	MW-11-041217	04/12/2017 10:00 AM	04/12/2017 3:10 PM

CLIENT: Friedman & Bruya**Project:** 704193

I. SAMPLE RECEIPT:

Samples receipt information is recorded on the attached Sample Receipt Checklist.

II. GENERAL REPORTING COMMENTS:

Results are reported on a wet weight basis unless dry-weight correction is denoted in the units field on the analytical report ("mg/kg-dry" or "ug/kg-dry").

Matrix Spike (MS) and MS Duplicate (MSD) samples are tested from an analytical batch of "like" matrix to check for possible matrix effect. The MS and MSD will provide site specific matrix data only for those samples which are spiked by the laboratory. The sample chosen for spike purposes may or may not have been a sample submitted in this sample delivery group. The validity of the analytical procedures for which data is reported in this analytical report is determined by the Laboratory Control Sample (LCS) and the Method Blank (MB). The LCS and the MB are processed with the samples and the MS/MSD to ensure method criteria are achieved throughout the entire analytical process.

III. ANALYSES AND EXCEPTIONS:

Exceptions associated with this report will be footnoted in the analytical results page(s) or the quality control summary page(s) and/or noted below.

Qualifiers:

- * - Flagged value is not within established control limits
- B - Analyte detected in the associated Method Blank
- D - Dilution was required
- E - Value above quantitation range
- H - Holding times for preparation or analysis exceeded
- I - Analyte with an internal standard that does not meet established acceptance criteria
- J - Analyte detected below Reporting Limit
- N - Tentatively Identified Compound (TIC)
- Q - Analyte with an initial or continuing calibration that does not meet established acceptance criteria (<20%RSD, <20% Drift or minimum RRF)
- S - Spike recovery outside accepted recovery limits
- ND - Not detected at the Reporting Limit
- R - High relative percent difference observed

Acronyms:

- %Rec - Percent Recovery
- CCB - Continued Calibration Blank
- CCV - Continued Calibration Verification
- DF - Dilution Factor
- HEM - Hexane Extractable Material
- ICV - Initial Calibration Verification
- LCS/LCSD - Laboratory Control Sample / Laboratory Control Sample Duplicate
- MB or MBLANK - Method Blank
- MDL - Method Detection Limit
- MS/MSD - Matrix Spike / Matrix Spike Duplicate
- PDS - Post Digestion Spike
- Ref Val - Reference Value
- RL - Reporting Limit
- RPD - Relative Percent Difference
- SD - Serial Dilution
- SGT - Silica Gel Treatment
- SPK - Spike
- Surr - Surrogate



Analytical Report

Work Order: 1704142
Date Reported: 4/19/2017

Client: Friedman & Bruya

Collection Date: 4/11/2017 2:20:00 PM

Project: 704193

Lab ID: 1704142-001

Matrix: Water

Client Sample ID: MW-16-041117

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
----------	--------	----	------	-------	----	---------------

Ion Chromatography by EPA Method 300.0

Batch ID: R35534 Analyst: KT

Chloride	4.66	0.100		mg/L	1	4/13/2017 10:31:00 AM
Nitrite (as N)	ND	0.100		mg/L	1	4/13/2017 10:31:00 AM
Nitrate (as N)	ND	0.100		mg/L	1	4/13/2017 10:31:00 AM
Sulfate	3.39	0.300		mg/L	1	4/13/2017 10:31:00 AM

Total Alkalinity by SM 2320B

Batch ID: R35630 Analyst: MW

Alkalinity, Total (As CaCO ₃)	132	2.50		mg/L	1	4/19/2017 1:20:00 PM
---	-----	------	--	------	---	----------------------



Analytical Report

Work Order: 1704142
Date Reported: 4/19/2017

Client: Friedman & Bruya

Collection Date: 4/12/2017 8:55:00 AM

Project: 704193

Lab ID: 1704142-002

Matrix: Water

Client Sample ID: MW-8-041217

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
----------	--------	----	------	-------	----	---------------

Ion Chromatography by EPA Method 300.0

Batch ID: R35534 Analyst: KT

Chloride	93.4	2.50	D	mg/L	25	4/13/2017 11:30:00 AM
Nitrite (as N)	ND	0.500	D	mg/L	5	4/13/2017 10:41:00 AM
Nitrate (as N)	ND	0.500	D	mg/L	5	4/13/2017 10:41:00 AM
Sulfate	7.72	1.50	D	mg/L	5	4/13/2017 10:41:00 AM

NOTES:

Diluted due to matrix.

Total Alkalinity by SM 2320B

Batch ID: R35630 Analyst: MW

Alkalinity, Total (As CaCO ₃)	380	2.50		mg/L	1	4/19/2017 1:30:00 PM
---	-----	------	--	------	---	----------------------



Analytical Report

Work Order: 1704142
Date Reported: 4/19/2017

Client: Friedman & Bruya

Collection Date: 4/12/2017 10:00:00 AM

Project: 704193

Lab ID: 1704142-003

Matrix: Water

Client Sample ID: MW-11-041217

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
----------	--------	----	------	-------	----	---------------

Ion Chromatography by EPA Method 300.0

Batch ID: R35534 Analyst: KT

Chloride	163	5.00	D	mg/L	50	4/13/2017 11:40:00 AM
Nitrite (as N)	ND	1.00	D	mg/L	10	4/13/2017 10:51:00 AM
Nitrate (as N)	0.994	1.00	JD	mg/L	10	4/13/2017 10:51:00 AM
Sulfate	27.9	3.00	D	mg/L	10	4/13/2017 10:51:00 AM

NOTES:

Diluted due to matrix.

Total Alkalinity by SM 2320B

Batch ID: R35630 Analyst: MW

Alkalinity, Total (As CaCO ₃)	968	2.50		mg/L	1	4/19/2017 1:40:00 PM
---	-----	------	--	------	---	----------------------

Work Order: 1704142
CLIENT: Friedman & Bruya
Project: 704193

QC SUMMARY REPORT

Total Alkalinity by SM 2320B

Sample ID	MB-R35630	SampType:	MBLK	Units:	mg/L	Prep Date:	4/19/2017	RunNo:	35630		
Client ID:	MBLKW	Batch ID:	R35630	Analysis Date:				4/19/2017	SeqNo:	682511	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Alkalinity, Total (As CaCO3) ND 2.50

Sample ID	LCS-R35630	SampType:	LCS	Units:	mg/L	Prep Date:	4/19/2017			RunNo:	35630	
Client ID:	LCSW	Batch ID:	R35630	Analysis Date:			4/19/2017			SeqNo:	682512	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	

Alkalinity, Total (As CaCO3) 110 2.50 100.0 0 110 80 120

Sample ID	1704142-001ADUP	SampType:	DUP	Units:	mg/L	Prep Date:	4/19/2017	RunNo:	35630		
Client ID:	MW-16-041117	Batch ID:	R35630			Analysis Date:	4/19/2017	SeqNo:	682517		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Alkalinity, Total (As CaCO3) 132 2.50 132.0 0 20

Work Order: 1704142
CLIENT: Friedman & Bruya
Project: 704193

QC SUMMARY REPORT

Ion Chromatography by EPA Method 300.0

Sample ID	MB-R35534	SampType:	MBLK	Units:	mg/L	Prep Date:	4/13/2017	RunNo:	35534		
Client ID:	MBLKW	Batch ID:	R35534			Analysis Date:	4/13/2017	SeqNo:	680703		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	ND	0.100									
Nitrite (as N)	ND	0.100									
Nitrate (as N)	ND	0.100									
Sulfate	ND	0.300									

Sample ID	LCS-R35534	SampType:	LCS	Units:	mg/L	Prep Date:	4/13/2017	RunNo:	35534		
Client ID:	LCSW	Batch ID:	R35534			Analysis Date:	4/13/2017	SeqNo:	680704		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	2.78	0.100	3.000	0	92.6	90	110				
Nitrite (as N)	2.76	0.100	3.000	0	92.0	90	110				
Nitrate (as N)	2.86	0.100	3.000	0	95.4	90	110				
Sulfate	14.6	0.300	15.00	0	97.4	90	110				

Sample ID	1704142-001ADUP	SampType:	DUP	Units:	mg/L	Prep Date:	4/13/2017	RunNo:	35534		
Client ID:	MW-16-041117	Batch ID:	R35534			Analysis Date:	4/13/2017	SeqNo:	680711		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	4.68	0.100						4.656	0.508	20	
Nitrite (as N)	ND	0.100						0		20	
Nitrate (as N)	ND	0.100						0		20	
Sulfate	3.48	0.300						3.392	2.49	20	

Sample ID	1704142-001AMS	SampType:	MS	Units:	mg/L	Prep Date:	4/13/2017	RunNo:	35534		
Client ID:	MW-16-041117	Batch ID:	R35534			Analysis Date:	4/13/2017	SeqNo:	680712		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	7.35	0.100	3.000	4.656	90.0	80	120				E
Nitrite (as N)	2.90	0.100	3.000	0	96.5	80	120				

Work Order: 1704142
CLIENT: Friedman & Bruya
Project: 704193

QC SUMMARY REPORT

Ion Chromatography by EPA Method 300.0

Sample ID	1704142-001AMS	SampType:	MS	Units:	mg/L	Prep Date:	4/13/2017	RunNo:	35534		
Client ID:	MW-16-041117	Batch ID:	R35534	Analysis Date:	4/13/2017	SeqNo:	680712				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Nitrate (as N)	2.87	0.100	3.000	0	95.6	80	120				
Sulfate	18.4	0.300	15.00	3.392	99.8	80	120				

NOTES:

E - Estimated value. The amount exceeds the linear working range of the instrument.

Sample ID	1704142-001AMSD	SampType:	MSD	Units:	mg/L	Prep Date:	4/13/2017	RunNo:	35534		
Client ID:	MW-16-041117	Batch ID:	R35534	Analysis Date:	4/13/2017	SeqNo:	680713				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chloride	7.38	0.100	3.000	4.656	90.7	80	120	7.355	0.309	20	E
Nitrite (as N)	2.96	0.100	3.000	0	98.6	80	120	2.895	2.12	20	
Nitrate (as N)	2.88	0.100	3.000	0	96.2	80	120	2.867	0.623	20	
Sulfate	18.4	0.300	15.00	3.392	99.9	80	120	18.37	0.0550	20	

NOTES:

E - Estimated value. The amount exceeds the linear working range of the instrument.

Client Name: **FB**
 Logged by: **Erica Silva**

Work Order Number: **1704142**
 Date Received: **4/12/2017 3:10:00 PM**

Chain of Custody

1. Is Chain of Custody complete? Yes ☒ No ☐ Not Present ☐
 2. How was the sample delivered? FedEx

Log In

3. Coolers are present? Yes ☐ No ☒ NA ☐

Sample received at appropriate temperature

4. Shipping container/cooler in good condition? Yes ☒ No ☐
 5. Custody Seals present on shipping container/cooler?
 (Refer to comments for Custody Seals not intact) Yes ☐ No ☒ Not Required ☐
 6. Was an attempt made to cool the samples? Yes ☒ No ☐ NA ☐
 7. Were all items received at a temperature of >0°C to 10.0°C* Yes ☒ No ☐ NA ☐
 8. Sample(s) in proper container(s)? Yes ☒ No ☐
 9. Sufficient sample volume for indicated test(s)? Yes ☒ No ☐
 10. Are samples properly preserved? Yes ☒ No ☐
 11. Was preservative added to bottles? Yes ☐ No ☒ NA ☐
 12. Is there headspace in the VOA vials? Yes ☐ No ☐ NA ☒
 13. Did all samples containers arrive in good condition(unbroken)? Yes ☒ No ☐
 14. Does paperwork match bottle labels? Yes ☒ No ☐
 15. Are matrices correctly identified on Chain of Custody? Yes ☒ No ☐
 16. Is it clear what analyses were requested? Yes ☒ No ☐
 17. Were all holding times able to be met? Yes ☒ No ☐

Special Handling (if applicable)

18. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☒

Person Notified: Date
 By Whom: Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person
 Regarding:
 Client Instructions:

19. Additional remarks:

Item Information

Item #	Temp °C
Sample	3.4

* Note: DoD/ELAP and TNI require items to be received at 4°C +/- 2°C

1704142

Phone # (206) 285-8282 Fax # (206) 283-5044



SUBCONTRACTOR <i>Fremont</i>	
PROJECT NAME/NO. <i>704193</i>	PO # <i>E-585</i>
REMARKS <i>Aspect Equis end</i> Please Email Results	

Rush charges authorized by:

- ☐ Will call with instructions

[illegible]

Fax (206) 283-5044

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by: 	Michael Erdahl	Friedman and Bruya	4/12/17	1403
Received by: 	Brianna Barnes	FAH	4/12/17	1510
Relinquished by:				
Received by:				

704193

SAMPLE CHAIN OF CUSTODY

ME 04/12/17 AIS/VW4/B04

Report To Kirsi LongleyCompany Aspect Consulting

Address _____

City, State, ZIP Seattle OfficePhone _____ Email klongley@aspectconsulting.com

SAMPLERS (signature)

Krist Beck

PROJECT NAME

Ken's Texaco

PO #

120061

REMARKS

INVOICE TO

Accts PayablePage # 1 of 1

TURNAROUND TIME

☒ Standard Turnaround☐ RUSH

Rush charges authorized by: _____

SAMPLE DISPOSAL

☒ Dispose after 30 days☐ Archive Samples☐ Other: _____

						ANALYSES REQUESTED																
Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of Jars	TPH-HCID	TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by 8260C	SVOCs by 8270D	PAHs 8270D SIM	Total Lead (6020)	EDC	Alkalinity	Chloride	Nitrite/Nitrate	Sulfate	Diss. Fe	Diss. Mn	Diss. Methanol	
MW-1-041117	01 A-E	4/11/17	1050	water	5		X	X	X				X									
MW-7-041117	02 A-E	↓	1150	↓	5		X	X	X				X									
MW-18-041117	03 A-E	↓	1250	↓	5		X	X	X				X									
MW-16-041117	04 A-K	↓	1420	↓	11		X	X	X				X		X	X	X	X	X	X	X	X
MW-8-041217	05 A-K	4/12/17	0855	↓	11		X	X	X				X		X	X	X	X	X	X	X	X
MW-11-041217	06 A-N	↓	1000	↓	14		X	X	X				X	X	X	X	X	X	X	X	X	X
								</														

Samples received at 3 °C

Friedman & Bruya, Inc.

3012 16th Avenue West

Seattle, WA 98119-2029

Ph. (206) 285-8282

SIGNATURE

Relinquished by:

Krist Beck

Received by:

M Khan

Relinquished by:

Received by:

PRINT NAME

Kristin BeckKhan Phin

COMPANY

Aspect+ EBT

DATE

4/12/174/12/17

TIME

13351335

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Yelena Aravkina, M.S.
Michael Erdahl, B.S.
Arina Podnozova, B.S.
Eric Young, B.S.

3012 16th Avenue West
Seattle, WA 98119-2029
(206) 285-8282
fbi@isomedia.com
www.friedmanandbruya.com

May 9, 2017

Kirsi Longley, Project Manager
Aspect Consulting, LLC
401 2nd Ave S, Suite 201
Seattle, WA 98104

Dear Ms Longley:

Included are the results from the testing of material submitted on May 3, 2017 from the Ken's Texaco, PO 120061, F&BI 705050 project. There are 4 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

We appreciate this opportunity to be of service to you and hope you will call if you have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.



Michael Erdahl
Project Manager

Enclosures

c: data@aspectconsulting.com
ASP0509R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on May 3, 2017 by Friedman & Bruya, Inc. from the Aspect Consulting, LLC Ken's Texaco, PO 120061, F&BI 705050 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID
705050 -01

Aspect Consulting, LLC
MW-12-050217

All quality control requirements were acceptable.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 05/09/17

Date Received: 05/03/17

Project: Ken's Texaco, PO 120061, F&BI 705050

Date Extracted: 05/04/17

Date Analyzed: 05/04/17

**RESULTS FROM THE ANALYSIS OF WATER SAMPLES
FOR TOTAL PETROLEUM HYDROCARBONS AS
DIESEL AND MOTOR OIL
USING METHOD NWTPH-Dx**
Results Reported as ug/L (ppb)

<u>Sample ID</u>	<u>Diesel Range</u>	<u>Motor Oil Range</u>	<u>Surrogate</u>
Laboratory ID	(C ₁₀ -C ₂₅)	(C ₂₅ -C ₃₆)	(% Recovery)
			(Limit 41-152)
MW-12-050217	<50	<250	73
705050-01			
Method Blank	<50	<250	72
07-954 MB2			

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 05/09/17

Date Received: 05/03/17

Project: Ken's Texaco, PO 120061, F&BI 705050

**QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER
SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS
DIESEL EXTENDED USING METHOD NWTPH-Dx**

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	ug/L (ppb)	2,500	83	89	63-142	7

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Data Qualifiers & Definitions

- a - The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.
- b - The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be meaningful.
- ca - The calibration results for the analyte were outside of acceptance criteria. The value reported is an estimate.
- c - The presence of the analyte may be due to carryover from previous sample injections.
- cf - The sample was centrifuged prior to analysis.
- d - The sample was diluted. Detection limits were raised and surrogate recoveries may not be meaningful.
- dv - Insufficient sample volume was available to achieve normal reporting limits.
- f - The sample was laboratory filtered prior to analysis.
- fb - The analyte was detected in the method blank.
- fc - The compound is a common laboratory and field contaminant.
- hr - The sample and duplicate were reextracted and reanalyzed. RPD results were still outside of control limits. Variability is attributed to sample inhomogeneity.
- hs - Headspace was present in the container used for analysis.
- ht - The analysis was performed outside the method or client-specified holding time requirement.
- ip - Recovery fell outside of control limits. Compounds in the sample matrix interfered with the quantitation of the analyte.
- j - The analyte concentration is reported below the lowest calibration standard. The value reported is an estimate.
- J - The internal standard associated with the analyte is out of control limits. The reported concentration is an estimate.
- jl - The laboratory control sample(s) percent recovery and/or RPD were out of control limits. The reported concentration should be considered an estimate.
- js - The surrogate associated with the analyte is out of control limits. The reported concentration should be considered an estimate.
- lc - The presence of the analyte is likely due to laboratory contamination.
- L - The reported concentration was generated from a library search.
- nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.
- pc - The sample was received with incorrect preservation or in a container not approved by the method. The value reported should be considered an estimate.
- ve - The analyte response exceeded the valid instrument calibration range. The value reported is an estimate.
- vo - The value reported fell outside the control limits established for this analyte.
- x - The sample chromatographic pattern does not resemble the fuel standard used for quantitation.

Report To Kirsi Longley
Company Aspect Consulting
Address _____
City, State, ZIP Seattle Office
Phone _____ Email klongley@aspect

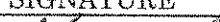


SAMPLE CHAIN OF CUSTODY

ME 05/03/17, DO4

SAMPLERS (signature) <i>Kat Beebe</i>		Page # <u>1</u> of <u>1</u>
PROJECT NAME <i>Ken's Teraco</i>	PO # <i>120061</i>	TURNAROUND TIME <input checked="" type="checkbox"/> Standard Turnaround <input type="checkbox"/> RUSH _____ Rush charges authorized by: _____
REMARKS	INVOICE TO <i>Accts Payable</i>	SAMPLE DISPOSAL <input checked="" type="checkbox"/> Dispose after 30 days <input type="checkbox"/> Archive Samples <input type="checkbox"/> Other _____

						ANALYSES REQUESTED											
Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of Jars	TPH-HCID	TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by 8260C	SVOCs by 8270D	PAHs 8270D SIM					Notes
MW-12-050217	01 AB	5/2/17	1245	Water	2	X											

Friedman & Bruya, Inc.
3012 16th Avenue West
Seattle, WA 98119-2029
Ph. (206) 285-8282

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by: 	Kristin Beck	Aspect	5/3/17	
Received by: 	Rick Vazquez	Felx	5-3-17	8:52
Relinquished by:				
Received by: 	Nhan Phan	FEBI	5/3/17	1030

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Yelena Aravkina, M.S.
Michael Erdahl, B.S.
Arina Podnozova, B.S.
Eric Young, B.S.

3012 16th Avenue West
Seattle, WA 98119-2029
(206) 285-8282
fbi@isomedia.com
www.friedmanandbruya.com

July 21, 2017

Kirsi Longley, Project Manager
Aspect Consulting, LLC
401 2nd Ave S, Suite 201
Seattle, WA 98104

Dear Ms Longley:

Included are the results from the testing of material submitted on July 13, 2017 from the Ken's Texaco, PO 120061, F&BI 707156 project. There are 16 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

We appreciate this opportunity to be of service to you and hope you will call if you have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.



Michael Erdahl
Project Manager

Enclosures

c: data@aspectconsulting.com
ASP0721R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on July 13, 2017 by Friedman & Bruya, Inc. from the Aspect Consulting, LLC Ken's Texaco, PO 120061, F&BI 707156 project. Samples were logged in under the laboratory ID's listed below.

<u>Laboratory ID</u>	<u>Aspect Consulting, LLC</u>
707156 -01	MW-19-071117
707156 -02	MW-10-071217
707156 -03	MW-1-071217
707156 -04	MW-18-071217
707156 -05	MW-7-071217

All quality control requirements were acceptable.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 07/21/17

Date Received: 07/13/17

Project: Ken's Texaco, PO 120061, F&BI 707156

Date Extracted: 07/17/17

Date Analyzed: 07/17/17

**RESULTS FROM THE ANALYSIS OF WATER SAMPLES
FOR BENZENE, TOLUENE, ETHYLBENZENE,
XYLENES AND TPH AS GASOLINE
USING METHODS 8021B AND NWTPH-Gx**

Results Reported as ug/L (ppb)

<u>Sample ID</u> Laboratory ID	<u>Benzene</u>	<u>Toluene</u>	<u>Ethyl Benzene</u>	<u>Total Xylenes</u>	<u>Gasoline Range</u>	<u>Surrogate (% Recovery)</u> (Limit 52-124)
MW-19-071117 707156-01	<1	<1	<1	<3	<100	76
MW-10-071217 707156-02	11	3.8	19	9.7	400	75
MW-1-071217 707156-03	<1	<1	2.9	4.0	620	81
MW-18-071217 707156-04	<1	<1	<1	<3	<100	75
MW-7-071217 707156-05	<1	<1	<1	<3	160	75
Method Blank 07-1438 MB	<1	<1	<1	<3	<100	79

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 07/21/17

Date Received: 07/13/17

Project: Ken's Texaco, PO 120061, F&BI 707156

Date Extracted: 07/14/17

Date Analyzed: 07/14/17

**RESULTS FROM THE ANALYSIS OF WATER SAMPLES
FOR TOTAL PETROLEUM HYDROCARBONS AS
DIESEL AND MOTOR OIL
USING METHOD NWTPH-Dx**
Results Reported as ug/L (ppb)

<u>Sample ID</u> Laboratory ID	<u>Diesel Range</u> (C ₁₀ -C ₂₅)	<u>Motor Oil Range</u> (C ₂₅ -C ₃₆)	<u>Surrogate</u> <u>(% Recovery)</u> (Limit 47-140)
MW-19-071117 707156-01	<50	<250	94
MW-10-071217 707156-02	240 x	<250	94
MW-1-071217 707156-03	200 x	<250	95
MW-18-071217 707156-04	<50	<250	99
MW-7-071217 707156-05	230 x	<250	93
Method Blank 07-1502 MB	<50	<250	93

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 6020A

Client ID:	MW-19-071117	Client:	Aspect Consulting, LLC
Date Received:	07/13/17	Project:	Ken's Texaco, PO 120061
Date Extracted:	07/14/17	Lab ID:	707156-01
Date Analyzed:	07/14/17	Data File:	707156-01.039
Matrix:	Water	Instrument:	ICPMS2
Units:	ug/L (ppb)	Operator:	AP

Analyte:	Concentration ug/L (ppb)
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Lead	<1
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FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 6020A

Client ID:	MW-10-071217	Client:	Aspect Consulting, LLC
Date Received:	07/13/17	Project:	Ken's Texaco, PO 120061
Date Extracted:	07/14/17	Lab ID:	707156-02
Date Analyzed:	07/14/17	Data File:	707156-02.040
Matrix:	Water	Instrument:	ICPMS2
Units:	ug/L (ppb)	Operator:	AP

Analyte:	Concentration ug/L (ppb)
----------	-----------------------------

Lead	<1
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FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 6020A

Client ID:	MW-1-071217	Client:	Aspect Consulting, LLC
Date Received:	07/13/17	Project:	Ken's Texaco, PO 120061
Date Extracted:	07/14/17	Lab ID:	707156-03
Date Analyzed:	07/14/17	Data File:	707156-03.041
Matrix:	Water	Instrument:	ICPMS2
Units:	ug/L (ppb)	Operator:	AP

Analyte:	Concentration ug/L (ppb)
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Lead	<1
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FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 6020A

Client ID:	MW-18-071217	Client:	Aspect Consulting, LLC
Date Received:	07/13/17	Project:	Ken's Texaco, PO 120061
Date Extracted:	07/14/17	Lab ID:	707156-04
Date Analyzed:	07/14/17	Data File:	707156-04.042
Matrix:	Water	Instrument:	ICPMS2
Units:	ug/L (ppb)	Operator:	AP

Analyte:	Concentration ug/L (ppb)
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Lead	<1
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FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 6020A

Client ID:	MW-7-071217	Client:	Aspect Consulting, LLC
Date Received:	07/13/17	Project:	Ken's Texaco, PO 120061
Date Extracted:	07/14/17	Lab ID:	707156-05
Date Analyzed:	07/14/17	Data File:	707156-05.047
Matrix:	Water	Instrument:	ICPMS2
Units:	ug/L (ppb)	Operator:	AP

Analyte:	Concentration ug/L (ppb)
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Lead	<1
------	----

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 6020A

Client ID:	Method Blank	Client:	Aspect Consulting, LLC
Date Received:	NA	Project:	Ken's Texaco, PO 120061
Date Extracted:	07/14/17	Lab ID:	I7-373 mb2
Date Analyzed:	07/14/17	Data File:	I7-373 mb2.048
Matrix:	Water	Instrument:	ICPMS2
Units:	ug/L (ppb)	Operator:	AP

Analyte:	Concentration ug/L (ppb)
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Lead	<1
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FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW-10-071217	Client:	Aspect Consulting, LLC
Date Received:	07/13/17	Project:	Ken's Texaco, PO 120061
Date Extracted:	07/14/17	Lab ID:	707156-02
Date Analyzed:	07/14/17	Data File:	071411.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	101	57	121
Toluene-d8	101	63	127
4-Bromofluorobenzene	101	60	133

Compounds:	Concentration ug/L (ppb)
1,2-Dichloroethane (EDC)	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	Method Blank	Client:	Aspect Consulting, LLC
Date Received:	Not Applicable	Project:	Ken's Texaco, PO 120061
Date Extracted:	07/14/17	Lab ID:	07-1439 mb
Date Analyzed:	07/14/17	Data File:	071405.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	102	57	121
Toluene-d8	101	63	127
4-Bromofluorobenzene	100	60	133

Compounds:	Concentration ug/L (ppb)
1,2-Dichloroethane (EDC)	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 07/21/17

Date Received: 07/13/17

Project: Ken's Texaco, PO 120061, F&BI 707156

**QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER
SAMPLES FOR BENZENE, TOLUENE, ETHYLBENZENE,
XYLENES, AND TPH AS GASOLINE
USING EPA METHOD 8021B AND NWTPH-Gx**

Laboratory Code: 707156-01 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	RPD (Limit 20)
Benzene	ug/L (ppb)	<1	<1	nm
Toluene	ug/L (ppb)	<1	<1	nm
Ethylbenzene	ug/L (ppb)	<1	<1	nm
Xylenes	ug/L (ppb)	<3	<3	nm
Gasoline	ug/L (ppb)	<100	<100	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery	Acceptance
			LCS	Criteria
Benzene	ug/L (ppb)	50	102	65-118
Toluene	ug/L (ppb)	50	100	72-122
Ethylbenzene	ug/L (ppb)	50	101	73-126
Xylenes	ug/L (ppb)	150	96	74-118
Gasoline	ug/L (ppb)	1,000	95	69-134

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 07/21/17

Date Received: 07/13/17

Project: Ken's Texaco, PO 120061, F&BI 707156

**QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER
SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS
DIESEL EXTENDED USING METHOD NWTPH-Dx**

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	ug/L (ppb)	2,500	88	96	61-133	9

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 07/21/17

Date Received: 07/13/17

Project: Ken's Texaco, PO 120061, F&BI 707156

**QUALITY ASSURANCE RESULTS
FOR THE ANALYSIS OF WATER SAMPLES
FOR TOTAL METALS USING EPA METHOD 6020A**

Laboratory Code: 707132-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Lead	ug/L (ppb)	10	<1	84	79	75-125	6

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Lead	ug/L (ppb)	10	101	80-120

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 07/21/17

Date Received: 07/13/17

Project: Ken's Texaco, PO 120061, F&BI 707156

**QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER
SAMPLES FOR VOLATILES BY EPA METHOD 8260C**

Laboratory Code: 707151-06 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
1,2-Dichloroethane (EDC)	ug/L (ppb)	50	<1	106	105	69-133	1

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
1,2-Dichloroethane (EDC)	ug/L (ppb)	50	98	73-132

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Data Qualifiers & Definitions

- a - The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.
- b - The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be meaningful.
- ca - The calibration results for the analyte were outside of acceptance criteria. The value reported is an estimate.
- c - The presence of the analyte may be due to carryover from previous sample injections.
- cf - The sample was centrifuged prior to analysis.
- d - The sample was diluted. Detection limits were raised and surrogate recoveries may not be meaningful.
- dv - Insufficient sample volume was available to achieve normal reporting limits.
- f - The sample was laboratory filtered prior to analysis.
- fb - The analyte was detected in the method blank.
- fc - The compound is a common laboratory and field contaminant.
- hr - The sample and duplicate were reextracted and reanalyzed. RPD results were still outside of control limits. Variability is attributed to sample inhomogeneity.
- hs - Headspace was present in the container used for analysis.
- ht - The analysis was performed outside the method or client-specified holding time requirement.
- ip - Recovery fell outside of control limits. Compounds in the sample matrix interfered with the quantitation of the analyte.
- j - The analyte concentration is reported below the lowest calibration standard. The value reported is an estimate.
- J - The internal standard associated with the analyte is out of control limits. The reported concentration is an estimate.
- jl - The laboratory control sample(s) percent recovery and/or RPD were out of control limits. The reported concentration should be considered an estimate.
- js - The surrogate associated with the analyte is out of control limits. The reported concentration should be considered an estimate.
- lc - The presence of the analyte is likely due to laboratory contamination.
- L - The reported concentration was generated from a library search.
- nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.
- pc - The sample was received with incorrect preservation or in a container not approved by the method. The value reported should be considered an estimate.
- ve - The analyte response exceeded the valid instrument calibration range. The value reported is an estimate.
- vo - The value reported fell outside the control limits established for this analyte.
- x - The sample chromatographic pattern does not resemble the fuel standard used for quantitation.

707156

SAMPLE CHAIN OF CUSTODY

ME

07/13/17

CO.4 / A13

Report To Kirsi Longley
 Company Aspect Consulting
 Address _____
 City, State, ZIP Seattle office
 Phone _____ Email _____

SAMPLERS (signature)

Kristin Beck

PROJECT NAME

Ken's Texaco

PO #

120061

REMARKS

INVOICE TO

Accts Payable

Page # _____ of _____

TURNAROUND TIME

☒ Standard Turnaround☐ RUSH

Rush charges authorized by: _____

SAMPLE DISPOSAL

☒ Dispose after 30 days☐ Archive Samples☐ Other _____

ANALYSES REQUESTED

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of Jars	TPH-HClD	TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by 8260C	SVOCs by 8270D	PAHs 8270D SIM	Total Pb	EDC	Notes
MW-19-071117	01 ^A / _E	7/11/17	1420	Water	5		X	X	X				X		(X) per KB 07/13/17 gp
MW-10-071217	02 ^A / _E	7/12/17	1120		5		X	X	X				X (X)		
MW-1-071217	03 ^A / _E		1205		5		X	X	X				X		
MW-10-071217			1120		5		X	X	X				X		
MW-18-071217	04 ^A / _E	↓	1330	↓	5		X	X	X				X		
MW-7-071217	05 ^A / _E	↓	1245	↓	5		X	X	X				X		

Samples received at 4 °C

Friedman & Bruya, Inc.
 3012 16th Avenue West
 Seattle, WA 98119-2029
 Ph. (206) 285-8282

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by: <u>Kristin Beck</u>	<u>Kristin Beck</u>	<u>Aspect</u>	<u>7/13/17</u>	
Received by: <u>D. A. 10</u>	<u>D. A. 10</u>	<u>F. B.</u>	<u>7-13-17</u>	<u>10.15</u>
Relinquished by: _____				
Received by: _____				

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Yelena Aravkina, M.S.
Michael Erdahl, B.S.
Arina Podnozova, B.S.
Eric Young, B.S.

3012 16th Avenue West
Seattle, WA 98119-2029
(206) 285-8282
fbi@isomedia.com
www.friedmanandbruya.com

July 21, 2017

Kirsi Longley, Project Manager
Aspect Consulting, LLC
401 2nd Ave S, Suite 201
Seattle, WA 98104

Dear Ms Longley:

Included are the results from the testing of material submitted on July 13, 2017 from the Ken's Texaco, PO 120061, F&BI 707165 project. There are 27 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

We appreciate this opportunity to be of service to you and hope you will call if you have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.



Michael Erdahl
Project Manager

Enclosures

c: data@aspectconsulting.com
ASP0721R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on July 13, 2017 by Friedman & Bruya, Inc. from the Aspect Consulting, LLC Ken's Texaco, PO 120061, F&BI 707165 project. Samples were logged in under the laboratory ID's listed below.

<u>Laboratory ID</u>	<u>Aspect Consulting, LLC</u>
707165 -01	MW-22-071217
707165 -02	MW-21-071317
707165 -03	MW-16-071317
707165 -04	MW-8-071317
707165 -05	MW-11-071317

Samples MW-16-071317, MW-8-071317, and MW-11-071317 were sent to Fremont Analytical for alkalinity, chloride, nitrate, nitrite, and sulfate analyses. The report is enclosed.

A 6020A internal standard failed the acceptance criteria for sample MW-22-071217 due to matrix interferences. The data were flagged accordingly. The sample was diluted and reanalyzed.

All other quality control requirements were acceptable.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 07/21/17

Date Received: 07/13/17

Project: Ken's Texaco, PO 120061, F&BI 707165

Date Extracted: 07/14/17

Date Analyzed: 07/14/17 and 07/17/17

**RESULTS FROM THE ANALYSIS OF WATER SAMPLES
FOR BENZENE, TOLUENE, ETHYLBENZENE,
XYLENES AND TPH AS GASOLINE
USING METHODS 8021B AND NWTPH-Gx**

Results Reported as ug/L (ppb)

<u>Sample ID</u> Laboratory ID	<u>Benzene</u>	<u>Toluene</u>	<u>Ethyl Benzene</u>	<u>Total Xylenes</u>	<u>Gasoline Range</u>	<u>Surrogate (% Recovery)</u> (Limit 52-124)
MW-22-071217 707165-01	<1	<1	<1	<3	<100	76
MW-21-071317 707165-02	<1	<1	<1	<3	<100	79
MW-16-071317 707165-03	<1	<1	5.0	<3	510	81
MW-8-071317 707165-04 1/10	490	120	460	390	7,800	79
MW-11-071317 707165-05	61	3.9	38	37	1,500	80
Method Blank 07-1437 MB	<1	<1	<1	<3	<100	80

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 07/21/17

Date Received: 07/13/17

Project: Ken's Texaco, PO 120061, F&BI 707165

Date Extracted: 07/14/17

Date Analyzed: 07/14/17

**RESULTS FROM THE ANALYSIS OF WATER SAMPLES
FOR TOTAL PETROLEUM HYDROCARBONS AS
DIESEL AND MOTOR OIL
USING METHOD NWTPH-Dx**
Results Reported as ug/L (ppb)

<u>Sample ID</u> Laboratory ID	<u>Diesel Range</u> (C ₁₀ -C ₂₅)	<u>Motor Oil Range</u> (C ₂₅ -C ₃₆)	<u>Surrogate</u> <u>(% Recovery)</u> (Limit 47-140)
MW-22-071217 707165-01 1/1.8	<90	<450	73
MW-21-071317 707165-02 1/1.4	<70	<350	93
MW-16-071317 707165-03 1/1.4	240 x	<350	86
MW-8-071317 707165-04 1/1.4	1,400 x	<350	92
MW-11-071317 707165-05 1/1.4	1,300 x	670 x	91
Method Blank 07-1502 MB	<50	<250	93

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Dissolved Metals By EPA Method 6020A

Client ID:	MW-16-071317	Client:	Aspect Consulting, LLC
Date Received:	07/13/17	Project:	Ken's Texaco, PO 120061
Date Extracted:	07/17/17	Lab ID:	707165-03 x5
Date Analyzed:	07/18/17	Data File:	707165-03 x5.036
Matrix:	Water	Instrument:	ICPMS2
Units:	ug/L (ppb)	Operator:	AP

Analyte:	Concentration ug/L (ppb)
Iron	4,150
Manganese	3,420

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Dissolved Metals By EPA Method 6020A

Client ID:	MW-8-071317	Client:	Aspect Consulting, LLC
Date Received:	07/13/17	Project:	Ken's Texaco, PO 120061
Date Extracted:	07/17/17	Lab ID:	707165-04 x10
Date Analyzed:	07/18/17	Data File:	707165-04 x10.037
Matrix:	Water	Instrument:	ICPMS2
Units:	ug/L (ppb)	Operator:	AP

Analyte:	Concentration ug/L (ppb)
Iron	9,280
Manganese	14,900

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Dissolved Metals By EPA Method 6020A

Client ID:	MW-11-071317	Client:	Aspect Consulting, LLC
Date Received:	07/13/17	Project:	Ken's Texaco, PO 120061
Date Extracted:	07/17/17	Lab ID:	707165-05 x20
Date Analyzed:	07/18/17	Data File:	707165-05 x20.038
Matrix:	Water	Instrument:	ICPMS2
Units:	ug/L (ppb)	Operator:	AP

Analyte:	Concentration ug/L (ppb)
Iron	7,570
Manganese	22,500

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Dissolved Metals By EPA Method 6020A

Client ID:	Method Blank	Client:	Aspect Consulting, LLC
Date Received:	NA	Project:	Ken's Texaco, PO 120061
Date Extracted:	07/17/17	Lab ID:	I7-375 mb
Date Analyzed:	07/18/17	Data File:	I7-375 mb.021
Matrix:	Water	Instrument:	ICPMS2
Units:	ug/L (ppb)	Operator:	AP

Analyte:	Concentration ug/L (ppb)
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Iron	<50
Manganese	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 6020A

Client ID:	MW-22-071217	Client:	Aspect Consulting, LLC
Date Received:	07/13/17	Project:	Ken's Texaco, PO 120061
Date Extracted:	07/14/17	Lab ID:	707165-01
Date Analyzed:	07/18/17	Data File:	707165-01.077
Matrix:	Water	Instrument:	ICPMS2
Units:	ug/L (ppb)	Operator:	AP

Analyte:	Concentration ug/L (ppb)
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Lead	1.07 J
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FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 6020A

Client ID:	MW-22-071217	Client:	Aspect Consulting, LLC
Date Received:	07/13/17	Project:	Ken's Texaco, PO 120061
Date Extracted:	07/14/17	Lab ID:	707165-01 x5
Date Analyzed:	07/18/17	Data File:	707165-01 x5.084
Matrix:	Water	Instrument:	ICPMS2
Units:	ug/L (ppb)	Operator:	AP

Analyte:	Concentration ug/L (ppb)
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Lead	<5
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FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 6020A

Client ID:	MW-21-071317	Client:	Aspect Consulting, LLC
Date Received:	07/13/17	Project:	Ken's Texaco, PO 120061
Date Extracted:	07/14/17	Lab ID:	707165-02
Date Analyzed:	07/18/17	Data File:	707165-02.078
Matrix:	Water	Instrument:	ICPMS2
Units:	ug/L (ppb)	Operator:	AP

Analyte:	Concentration ug/L (ppb)
----------	-----------------------------

Lead	<1
------	----

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 6020A

Client ID:	MW-16-071317	Client:	Aspect Consulting, LLC
Date Received:	07/13/17	Project:	Ken's Texaco, PO 120061
Date Extracted:	07/14/17	Lab ID:	707165-03
Date Analyzed:	07/18/17	Data File:	707165-03.079
Matrix:	Water	Instrument:	ICPMS2
Units:	ug/L (ppb)	Operator:	AP

Analyte:	Concentration ug/L (ppb)
----------	-----------------------------

Lead	<1
------	----

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 6020A

Client ID:	MW-8-071317	Client:	Aspect Consulting, LLC
Date Received:	07/13/17	Project:	Ken's Texaco, PO 120061
Date Extracted:	07/14/17	Lab ID:	707165-04
Date Analyzed:	07/18/17	Data File:	707165-04.080
Matrix:	Water	Instrument:	ICPMS2
Units:	ug/L (ppb)	Operator:	AP

Analyte:	Concentration ug/L (ppb)
----------	-----------------------------

Lead	<1
------	----

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 6020A

Client ID:	MW-11-071317	Client:	Aspect Consulting, LLC
Date Received:	07/13/17	Project:	Ken's Texaco, PO 120061
Date Extracted:	07/14/17	Lab ID:	707165-05
Date Analyzed:	07/18/17	Data File:	707165-05.083
Matrix:	Water	Instrument:	ICPMS2
Units:	ug/L (ppb)	Operator:	AP

Analyte:	Concentration ug/L (ppb)
----------	-----------------------------

Lead	<1
------	----

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 6020A

Client ID:	Method Blank	Client:	Aspect Consulting, LLC
Date Received:	NA	Project:	Ken's Texaco, PO 120061
Date Extracted:	07/14/17	Lab ID:	I7-373 mb2
Date Analyzed:	07/14/17	Data File:	I7-373 mb2.048
Matrix:	Water	Instrument:	ICPMS2
Units:	ug/L (ppb)	Operator:	AP

Analyte:	Concentration ug/L (ppb)
----------	-----------------------------

Lead	<1
------	----

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW-11-071317	Client:	Aspect Consulting, LLC
Date Received:	07/13/17	Project:	Ken's Texaco, PO 120061
Date Extracted:	07/14/17	Lab ID:	707165-05
Date Analyzed:	07/14/17	Data File:	071410.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	101	57	121
Toluene-d8	101	63	127
4-Bromofluorobenzene	101	60	133

Compounds:	Concentration ug/L (ppb)
1,2-Dichloroethane (EDC)	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	Method Blank	Client:	Aspect Consulting, LLC
Date Received:	Not Applicable	Project:	Ken's Texaco, PO 120061
Date Extracted:	07/14/17	Lab ID:	07-1439 mb
Date Analyzed:	07/14/17	Data File:	071405.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	102	57	121
Toluene-d8	101	63	127
4-Bromofluorobenzene	100	60	133

Compounds:	Concentration ug/L (ppb)
1,2-Dichloroethane (EDC)	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Dissolved Gasses By RSK 175

Client Sample ID:	MW-16-071317	Client:	Aspect Consulting, LLC
Date Received:	07/13/17	Project:	Ken's Texaco, PO 120061
Date Extracted:	07/14/17	Lab ID:	707165-03
Date Analyzed:	07/14/17	Data File:	006F0601.D
Matrix:	Water	Instrument:	GC8
Units:	ug/L (ppb)	Operator:	JS

Compounds:	Concentration ug/L (ppb)
Methane	38

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Dissolved Gasses By RSK 175

Client Sample ID:	MW-8-071317	Client:	Aspect Consulting, LLC
Date Received:	07/13/17	Project:	Ken's Texaco, PO 120061
Date Extracted:	07/14/17	Lab ID:	707165-04
Date Analyzed:	07/14/17	Data File:	008F0801.D
Matrix:	Water	Instrument:	GC8
Units:	ug/L (ppb)	Operator:	JS

Compounds:	Concentration ug/L (ppb)
Methane	350

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Dissolved Gasses By RSK 175

Client Sample ID:	MW-11-071317	Client:	Aspect Consulting, LLC
Date Received:	07/13/17	Project:	Ken's Texaco, PO 120061
Date Extracted:	07/14/17	Lab ID:	707165-05 1/10
Date Analyzed:	07/14/17	Data File:	011F1101.D
Matrix:	Water	Instrument:	GC8
Units:	ug/L (ppb)	Operator:	JS

Compounds:	Concentration ug/L (ppb)
Methane	490

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Dissolved Gasses By RSK 175

Client Sample ID:	Method Blank	Client:	Aspect Consulting, LLC
Date Received:	NA	Project:	Ken's Texaco, PO 120061
Date Extracted:	07/14/17	Lab ID:	07-1482 mb
Date Analyzed:	07/14/17	Data File:	05F1101.D
Matrix:	Water	Instrument:	GC8
Units:	ug/L (ppb)	Operator:	JS

Compounds:	Concentration ug/L (ppb)
Methane	<5

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 07/21/17

Date Received: 07/13/17

Project: Ken's Texaco, PO 120061, F&BI 707165

**QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER
SAMPLES FOR BENZENE, TOLUENE, ETHYLBENZENE,
XYLENES, AND TPH AS GASOLINE
USING METHOD 8021B AND NWTPH-Gx**

Laboratory Code: 707165-01 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	RPD (Limit 20)
Benzene	ug/L (ppb)	<1	<1	nm
Toluene	ug/L (ppb)	<1	<1	nm
Ethylbenzene	ug/L (ppb)	<1	<1	nm
Xylenes	ug/L (ppb)	<3	<3	nm
Gasoline	ug/L (ppb)	<100	<100	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Benzene	ug/L (ppb)	50	103	65-118
Toluene	ug/L (ppb)	50	100	72-122
Ethylbenzene	ug/L (ppb)	50	101	73-126
Xylenes	ug/L (ppb)	150	96	74-118
Gasoline	ug/L (ppb)	1,000	98	69-134

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 07/21/17

Date Received: 07/13/17

Project: Ken's Texaco, PO 120061, F&BI 707165

**QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER
SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS
DIESEL EXTENDED USING METHOD NWTPH-Dx**

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	ug/L (ppb)	2,500	88	96	61-133	9

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 07/21/17

Date Received: 07/13/17

Project: Ken's Texaco, PO 120061, F&BI 707165

**QUALITY ASSURANCE RESULTS
FOR THE ANALYSIS OF WATER SAMPLES
FOR DISSOLVED METALS USING EPA METHOD 6020A**

Laboratory Code: 707132-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Iron	ug/L (ppb)	100	439	106 b	74 b	75-125	36 b
Manganese	ug/L (ppb)	20	4,720 ve	0 b	0 b	75-125	0 b

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Iron	ug/L (ppb)	100	98	80-120
Manganese	ug/L (ppb)	20	96	80-120

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 07/21/17

Date Received: 07/13/17

Project: Ken's Texaco, PO 120061, F&BI 707165

**QUALITY ASSURANCE RESULTS
FOR THE ANALYSIS OF WATER SAMPLES
FOR TOTAL METALS USING EPA METHOD 6020A**

Laboratory Code: 707132-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Lead	ug/L (ppb)	10	<1	84	79	75-125	6

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Lead	ug/L (ppb)	10	101	80-120

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 07/21/17

Date Received: 07/13/17

Project: Ken's Texaco, PO 120061, F&BI 707165

**QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER
SAMPLES FOR VOLATILES BY EPA METHOD 8260C**

Laboratory Code: 707151-06 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
1,2-Dichloroethane (EDC)	ug/L (ppb)	50	<1	106	105	69-133	1

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
1,2-Dichloroethane (EDC)	ug/L (ppb)	50	98	73-132

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 07/21/17

Date Received: 07/13/17

Project: Ken's Texaco, PO 120061, F&BI 707165

**QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF
WATER SAMPLES FOR DISSOLVED GASES
USING METHOD RSK 175**

Laboratory Code: 707165-03 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	Relative Percent Difference (Limit 20)
Methane	ug/L (ppb)	38	40	5

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Methane	ug/L (ppb)	59	78	77	50-150	1

Data Qualifiers & Definitions

- a - The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.
- b - The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be meaningful.
- ca - The calibration results for the analyte were outside of acceptance criteria. The value reported is an estimate.
- c - The presence of the analyte may be due to carryover from previous sample injections.
- cf - The sample was centrifuged prior to analysis.
- d - The sample was diluted. Detection limits were raised and surrogate recoveries may not be meaningful.
- dv - Insufficient sample volume was available to achieve normal reporting limits.
- f - The sample was laboratory filtered prior to analysis.
- fb - The analyte was detected in the method blank.
- fc - The compound is a common laboratory and field contaminant.
- hr - The sample and duplicate were reextracted and reanalyzed. RPD results were still outside of control limits. Variability is attributed to sample inhomogeneity.
- hs - Headspace was present in the container used for analysis.
- ht - The analysis was performed outside the method or client-specified holding time requirement.
- ip - Recovery fell outside of control limits. Compounds in the sample matrix interfered with the quantitation of the analyte.
- j - The analyte concentration is reported below the lowest calibration standard. The value reported is an estimate.
- J - The internal standard associated with the analyte is out of control limits. The reported concentration is an estimate.
- jl - The laboratory control sample(s) percent recovery and/or RPD were out of control limits. The reported concentration should be considered an estimate.
- js - The surrogate associated with the analyte is out of control limits. The reported concentration should be considered an estimate.
- lc - The presence of the analyte is likely due to laboratory contamination.
- L - The reported concentration was generated from a library search.
- nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.
- pc - The sample was received with incorrect preservation or in a container not approved by the method. The value reported should be considered an estimate.
- ve - The analyte response exceeded the valid instrument calibration range. The value reported is an estimate.
- vo - The value reported fell outside the control limits established for this analyte.
- x - The sample chromatographic pattern does not resemble the fuel standard used for quantitation.



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Analytical

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Friedman & Bruya
Michael Erdahl
3012 16th Ave. W.
Seattle, WA 98119

RE: 707165
Work Order Number: 1707118

July 19, 2017

Attention Michael Erdahl:

Fremont Analytical, Inc. received 3 sample(s) on 7/14/2017 for the analyses presented in the following report.

Ion Chromatography by EPA Method 300.0
Total Alkalinity by SM 2320B

This report consists of the following:

- Case Narrative
- Analytical Results
- Applicable Quality Control Summary Reports
- Chain of Custody

All analyses were performed consistent with the Quality Assurance program of Fremont Analytical, Inc. Please contact the laboratory if you should have any questions about the results.

Thank you for using Fremont Analytical.

Sincerely,

Mike Ridgeway
Laboratory Director

DoD/ELAP Certification #L17-135, ISO/IEC 17025:2005
ORELAP Certification: WA 100009-007 (NELAP Recognized)

Original

www.fremontanalytical.com

Page 1 of 12

CLIENT: Friedman & Bruya
Project: 707165
Work Order: 1707118

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Date/Time Collected	Date/Time Received
1707118-001	MW-16-071317	07/13/2017 9:35 AM	07/14/2017 8:38 AM
1707118-002	MW-8-071317	07/13/2017 10:45 AM	07/14/2017 8:38 AM
1707118-003	MW-11-071317	07/13/2017 12:01 PM	07/14/2017 8:38 AM

CLIENT: Friedman & Bruya**Project:** 707165

I. SAMPLE RECEIPT:

Samples receipt information is recorded on the attached Sample Receipt Checklist.

II. GENERAL REPORTING COMMENTS:

Results are reported on a wet weight basis unless dry-weight correction is denoted in the units field on the analytical report ("mg/kg-dry" or "ug/kg-dry").

Matrix Spike (MS) and MS Duplicate (MSD) samples are tested from an analytical batch of "like" matrix to check for possible matrix effect. The MS and MSD will provide site specific matrix data only for those samples which are spiked by the laboratory. The sample chosen for spike purposes may or may not have been a sample submitted in this sample delivery group. The validity of the analytical procedures for which data is reported in this analytical report is determined by the Laboratory Control Sample (LCS) and the Method Blank (MB). The LCS and the MB are processed with the samples and the MS/MSD to ensure method criteria are achieved throughout the entire analytical process.

III. ANALYSES AND EXCEPTIONS:

Exceptions associated with this report will be footnoted in the analytical results page(s) or the quality control summary page(s) and/or noted below.

Qualifiers:

- * - Flagged value is not within established control limits
- B - Analyte detected in the associated Method Blank
- D - Dilution was required
- E - Value above quantitation range
- H - Holding times for preparation or analysis exceeded
- I - Analyte with an internal standard that does not meet established acceptance criteria
- J - Analyte detected below Reporting Limit
- N - Tentatively Identified Compound (TIC)
- Q - Analyte with an initial or continuing calibration that does not meet established acceptance criteria (<20%RSD, <20% Drift or minimum RRF)
- S - Spike recovery outside accepted recovery limits
- ND - Not detected at the Reporting Limit
- R - High relative percent difference observed

Acronyms:

- %Rec - Percent Recovery
- CCB - Continued Calibration Blank
- CCV - Continued Calibration Verification
- DF - Dilution Factor
- HEM - Hexane Extractable Material
- ICV - Initial Calibration Verification
- LCS/LCSD - Laboratory Control Sample / Laboratory Control Sample Duplicate
- MB or MBLANK - Method Blank
- MDL - Method Detection Limit
- MS/MSD - Matrix Spike / Matrix Spike Duplicate
- PDS - Post Digestion Spike
- Ref Val - Reference Value
- RL - Reporting Limit
- RPD - Relative Percent Difference
- SD - Serial Dilution
- SGT - Silica Gel Treatment
- SPK - Spike
- Surr - Surrogate



Analytical Report

Work Order: 1707118
Date Reported: 7/19/2017

Client: Friedman & Bruya

Collection Date: 7/13/2017 9:35:00 AM

Project: 707165

Lab ID: 1707118-001

Matrix: Water

Client Sample ID: MW-16-071317

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Ion Chromatography by EPA Method 300.0

Batch ID: R37465 Analyst: MW

Chloride	15.3	1.00	D	mg/L	10	7/14/2017 4:37:00 PM
Nitrite (as N)	0.172	0.200	JD	mg/L	2	7/14/2017 3:11:00 PM
Nitrate (as N)	1.80	0.200	D	mg/L	2	7/14/2017 3:11:00 PM
Sulfate	8.23	0.600	D	mg/L	2	7/14/2017 3:11:00 PM

Total Alkalinity by SM 2320B

Batch ID: R37440 Analyst: MW

Alkalinity, Total (As CaCO ₃)	151	2.50		mg/L	1	7/17/2017 3:40:00 PM
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Analytical Report

Work Order: 1707118
Date Reported: 7/19/2017

Client: Friedman & Bruya

Collection Date: 7/13/2017 10:45:00 AM

Project: 707165

Lab ID: 1707118-002

Matrix: Water

Client Sample ID: MW-8-071317

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Ion Chromatography by EPA Method 300.0

Batch ID: R37465 Analyst: MW

Chloride	113	10.0	D	mg/L	100	7/14/2017 4:58:00 PM
Nitrite (as N)	ND	1.00	D	mg/L	10	7/14/2017 3:32:00 PM
Nitrate (as N)	ND	1.00	D	mg/L	10	7/14/2017 3:32:00 PM
Sulfate	33.5	30.0	D	mg/L	100	7/14/2017 4:58:00 PM

Total Alkalinity by SM 2320B

Batch ID: R37440 Analyst: MW

Alkalinity, Total (As CaCO ₃)	483	2.50		mg/L	1	7/17/2017 3:45:00 PM
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Analytical Report

Work Order: 1707118
Date Reported: 7/19/2017

Client: Friedman & Bruya

Collection Date: 7/13/2017 12:01:00 PM

Project: 707165

Lab ID: 1707118-003

Matrix: Water

Client Sample ID: MW-11-071317

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Ion Chromatography by EPA Method 300.0

Batch ID: R37465 Analyst: MW

Chloride	139	10.0	D	mg/L	100	7/14/2017 7:04:00 PM
Nitrite (as N)	ND	1.00	D	mg/L	10	7/14/2017 7:25:00 PM
Nitrate (as N)	ND	1.00	D	mg/L	10	7/14/2017 7:25:00 PM
Sulfate	13.3	3.00	D	mg/L	10	7/14/2017 7:25:00 PM

Total Alkalinity by SM 2320B

Batch ID: R37440 Analyst: MW

Alkalinity, Total (As CaCO ₃)	1,110	2.50		mg/L	1	7/17/2017 3:50:00 PM
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Work Order: 1707118
CLIENT: Friedman & Bruya
Project: 707165

QC SUMMARY REPORT

Ion Chromatography by EPA Method 300.0

Sample ID	MB-R37465	SampType: MBLK			Units: mg/L		Prep Date: 7/14/2017			RunNo: 37465		
Client ID:	MBLKW	Batch ID: R37465			Analysis Date: 7/14/2017					SeqNo: 720176		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	

Chloride	ND	0.100
Nitrite (as N)	ND	0.100
Nitrate (as N)	ND	0.100
Sulfate	ND	0.300

Sample ID	LCS-R37465	SampType:	LCS	Units:	mg/L	Prep Date:	7/14/2017	RunNo:	37465		
Client ID:	LCSW	Batch ID:	R37465	Analysis Date:				7/14/2017	SeqNo:	720177	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chloride	0.730	0.100	0.7500	0	97.3	90	110
Nitrite (as N)	0.684	0.100	0.7500	0	91.2	90	110
Nitrate (as N)	0.725	0.100	0.7500	0	96.7	90	110
Sulfate	3.45	0.300	3.750	0	92.1	90	110

Sample ID	1707118-002ADUP	SampType:	DUP	Units:	mg/L	Prep Date:	7/14/2017	RunNo:	37465		
Client ID:	MW-8-071317	Batch ID:	R37465			Analysis Date:	7/14/2017	SeqNo:	720183		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chloride	112	10.0						112.7	0.267	20	D
Nitrite (as N)	ND	10.0						0		20	D
Nitrate (as N)	ND	10.0						0		20	D
Sulfate	36.8	30.0						33.50	9.39	20	D

Sample ID	1707118-002AMS	SampType:	MS	Units:	mg/L	Prep Date:	7/14/2017	RunNo:	37465		
Client ID:	MW-8-071317	Batch ID:	R37465	Analysis Date:				7/14/2017	SeqNo:	720184	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chloride	194	10.0	75.00	112.7	108	80	120				D
Nitrite (as N)	70.6	10.0	75.00	0	94.1	80	120				D

Work Order: 1707118
CLIENT: Friedman & Bruya
Project: 707165

QC SUMMARY REPORT

Ion Chromatography by EPA Method 300.0

Sample ID	1707118-002AMS	SampType:	MS	Units:	mg/L	Prep Date:	7/14/2017	RunNo:	37465		
Client ID:	MW-8-071317	Batch ID:	R37465	Analysis Date:				7/14/2017	SeqNo:	720184	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Nitrate (as N)	75.3	10.0	75.00	0	100	80	120				D
Sulfate	411	30.0	375.0	33.50	101	80	120				D

Sample ID	1707118-002AMSD	SampType:	MSD	Units:	mg/L	Prep Date:	7/14/2017	RunNo:	37465		
Client ID:	MW-8-071317	Batch ID:	R37465	Analysis Date:	7/14/2017	SeqNo:	720185				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chloride	193	10.0	75.00	112.7	107	80	120	194.0	0.361	20	D
Nitrite (as N)	68.5	10.0	75.00	0	91.3	80	120	70.60	3.02	20	D
Nitrate (as N)	74.0	10.0	75.00	0	98.7	80	120	75.30	1.74	20	D
Sulfate	405	30.0	375.0	33.50	99.0	80	120	410.5	1.42	20	D



Date: 7/19/2017

Work Order: 1707118
CLIENT: Friedman & Bruya
Project: 707165

QC SUMMARY REPORT
Total Alkalinity by SM 2320B

Sample ID	MB-R37440	SampType:	MBLK	Units:	mg/L	Prep Date:	7/17/2017	RunNo:	37440		
Client ID:	MBLKW	Batch ID:	R37440	Analysis Date:				7/17/2017	SeqNo:	719528	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Alkalinity, Total (As CaCO3)	ND	2.50									
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Sample ID	LCS-R37440	SampType: LCS			Units: mg/L		Prep Date: 7/17/2017			RunNo: 37440		
Client ID:	LCSW	Batch ID: R37440			Analysis Date: 7/17/2017			SeqNo: 719529				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	

Alkalinity, Total (As CaCO3)	111	2.50	100.0	0	111	80	120				
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Sample ID	1707118-001BDUP	SampType:	DUP	Units:	mg/L	Prep Date:	7/17/2017	RunNo:	37440		
Client ID:	MW-16-071317	Batch ID:	R37440			Analysis Date:	7/17/2017	SeqNo:	719539		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Alkalinity, Total (As CaCO3)	149	2.50						151.2	1.40	20	
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Client Name: **FB**
 Logged by: **Erica Silva**

 Work Order Number: **1707118**
 Date Received: **7/14/2017 8:38:00 AM**

Chain of Custody

1. Is Chain of Custody complete? Yes ☒ No ☐ Not Present ☐
2. How was the sample delivered? FedEx

Log In

3. Coolers are present? Yes ☐ No ☒ NA ☐

Samples received at appropriate temperature

4. Shipping container/cooler in good condition? Yes ☒ No ☐
5. Custody Seals present on shipping container/cooler?
(Refer to comments for Custody Seals not intact) Yes ☐ No ☒ Not Required ☐
6. Was an attempt made to cool the samples? Yes ☒ No ☐ NA ☐
7. Were all items received at a temperature of >0°C to 10.0°C* Yes ☒ No ☐ NA ☐
8. Sample(s) in proper container(s)? Yes ☒ No ☐
9. Sufficient sample volume for indicated test(s)? Yes ☒ No ☐
10. Are samples properly preserved? Yes ☒ No ☐
11. Was preservative added to bottles? Yes ☐ No ☒ NA ☐
12. Is there headspace in the VOA vials? Yes ☐ No ☐ NA ☒
13. Did all samples containers arrive in good condition(unbroken)? Yes ☒ No ☐
14. Does paperwork match bottle labels? Yes ☒ No ☐
15. Are matrices correctly identified on Chain of Custody? Yes ☒ No ☐
16. Is it clear what analyses were requested? Yes ☒ No ☐
17. Were all holding times able to be met? Yes ☒ No ☐

Special Handling (if applicable)

18. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☒

Person Notified:	<input type="text"/>	Date	<input type="text"/>
By Whom:	<input type="text"/>	Via:	<input type="checkbox"/> eMail <input type="checkbox"/> Phone <input type="checkbox"/> Fax <input type="checkbox"/> In Person
Regarding:	<input type="text"/>		
Client Instructions:	<input type="text"/>		

19. Additional remarks:

Item Information

Item #	Temp °C
Sample	2.7



* Note: DoD/ELAP and TNI require items to be received at 4°C +/- 2°C

1707118

Phone # (206) 285-8282 Fax # (206) 283-5044

Page #	1	of	1
TURNAROUND TIME			
<input checked="" type="checkbox"/> Standard (2 Weeks)	1 week		
<input type="checkbox"/> RUSH			
Rush charges authorized by:			
SAMPLE DISPOSAL			
<input type="checkbox"/> Dispose after 30 days			
<input type="checkbox"/> Return samples			
<input type="checkbox"/> Will call with instructions			

Friedman & Bruya, Inc.
3012 16th Avenue West
Seattle, WA 98119-2029
Ph. (206) 285-8282
Fax (206) 283-5044

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by: 	Michael Erdahl	Friedman and Bruya	7/14/17	08:00 AM
Received by: 	Brianna Barnes	FAI	7/14/17	0838
Relinquished by:				
Received by:				

707165

SAMPLE CHAIN OF CUSTODY

ME 07-13-17

B04/C13/VW4

Report To Kirsi LongleyCompany Aspect Consulting

Address _____

City, State, ZIP Seattle office

Phone _____ Email _____

SAMPLERS (signature) Kat Beck

PROJECT NAME

Ken's Texaco

PO #

120061

REMARKS

INVOICE TO

Accts payablePage # 1 of 1

TURNAROUND TIME

☒ Standard Turnaround☐ RUSH

Rush charges authorized by: _____

SAMPLE DISPOSAL

☒ Dispose after 30 days☐ Archive Samples☐ Other _____

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of Jars	ANALYSES REQUESTED															
						TPH-HCID	TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by 8260C	SVOCs by 8270D	PAHs 8270D SIM	Total Pb	EDC	Alkalinity	Chloride	Nitrate/Nitrite	Sulfate	Diss Fe	Diss Mn	Diss Methane
MW-22-071217	01A-E	7/12/17	1500	Water	5	X	X	X					X								
MW-21-071317	02 +	7/13/17	0800		5	X	X	X					X								
MW-16-071317	03A-L		0935		12	X	X	X					X		X	X	X	X	X	X	X
MW-8-071317	04		1045		12	X	X	X					X		X	X	X	X	X	X	X
MW-11-071317	05 ↓	↓	1201	↓	12	X	X	X					X	X	X	X	X	X	X	X	X

Samples received at 3 °C

Samples received at 3 °C

Friedman & Bruya, Inc.

3012 16th Avenue West

Seattle, WA 98119-2029

Ph. (206) 285-8282

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by: <u>Kat Beck</u>	<u>Kristin Beck</u>	<u>Aspect</u>	<u>7/13/17</u>	<u>1525</u>
Received by: <u>[Signature]</u>	<u>Eric Young</u>	<u>F&B</u>	<u>7/13/17</u>	<u>1525</u>
Relinquished by: _____				
Received by: _____				

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Yelena Aravkina, M.S.
Michael Erdahl, B.S.
Arina Podnozova, B.S.
Eric Young, B.S.

3012 16th Avenue West
Seattle, WA 98119-2029
(206) 285-8282
fbi@isomedia.com
www.friedmanandbruya.com

July 20, 2017

Kirsi Longley, Project Manager
Aspect Consulting, LLC
401 2nd Ave S, Suite 201
Seattle, WA 98104

Dear Ms Longley:

Included are the results from the testing of material submitted on July 12, 2017 from the Ken's Texaco, PO 120061, F&BI 707132 project. There are 18 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

We appreciate this opportunity to be of service to you and hope you will call if you have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.



Michael Erdahl
Project Manager

Enclosures

c: data@aspectconsulting.com
ASP0720R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on July 12, 2017 by Friedman & Bruya, Inc. from the Aspect Consulting, LLC Ken's Texaco, PO 120061, F&BI 707132 project. Samples were logged in under the laboratory ID's listed below.

<u>Laboratory ID</u>	<u>Aspect Consulting, LLC</u>
707132 -01	MW-12-071117
707132 -02	MW-13-071117
707132 -03	MW-14-071117
707132 -04	MW-15-071117

Sample MW-12-071117 was sent to Fremont Analytical for alkalinity, chloride, nitrate, nitrite, and sulfate analyses. The report is enclosed.

All quality control requirements were acceptable.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 07/20/17

Date Received: 07/12/17

Project: Ken's Texaco, PO 120061, F&BI 707132

Date Extracted: 07/12/17

Date Analyzed: 07/12/17

**RESULTS FROM THE ANALYSIS OF WATER SAMPLES
FOR BENZENE, TOLUENE, ETHYLBENZENE,
XYLENES AND TPH AS GASOLINE
USING METHODS 8021B AND NWTPH-Gx**

Results Reported as ug/L (ppb)

<u>Sample ID</u> Laboratory ID	<u>Benzene</u>	<u>Toluene</u>	<u>Ethyl Benzene</u>	<u>Total Xylenes</u>	<u>Gasoline Range</u>	<u>Surrogate (% Recovery)</u> (Limit 52-124)
MW-12-071117 707132-01	<1	<1	<1	<3	<100	68
MW-13-071117 707132-02	<1	<1	<1	<3	<100	69
MW-14-071117 707132-03	<1	<1	<1	<3	<100	69
MW-15-071117 707132-04	<1	<1	<1	<3	<100	69
Method Blank 07-1433 MB	<1	<1	<1	<3	<100	75

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 07/20/17

Date Received: 07/12/17

Project: Ken's Texaco, PO 120061, F&BI 707132

Date Extracted: 07/14/17

Date Analyzed: 07/14/17

**RESULTS FROM THE ANALYSIS OF WATER SAMPLES
FOR TOTAL PETROLEUM HYDROCARBONS AS
DIESEL AND MOTOR OIL
USING METHOD NWTPH-Dx**

Results Reported as ug/L (ppb)

<u>Sample ID</u> Laboratory ID	<u>Diesel Range</u> (C ₁₀ -C ₂₅)	<u>Motor Oil Range</u> (C ₂₅ -C ₃₆)	<u>Surrogate</u> (% Recovery) (Limit 47-140)
MW-12-071117 707132-01	130 x	<250	93
MW-13-071117 707132-02	<50	<250	100
MW-14-071117 707132-03	<50	<250	96
MW-15-071117 707132-04	<50	<250	56
Method Blank 07-1502 MB	<50	<250	93

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Dissolved Metals By EPA Method 6020A

Client ID:	MW-12-071117	Client:	Aspect Consulting, LLC
Date Received:	07/12/17	Project:	Ken's Texaco, PO 120061
Date Extracted:	07/17/17	Lab ID:	707132-01 x5
Date Analyzed:	07/18/17	Data File:	707132-01 x5.034
Matrix:	Water	Instrument:	ICPMS2
Units:	ug/L (ppb)	Operator:	AP

Analyte:	Concentration ug/L (ppb)
----------	-----------------------------

Iron	469
Manganese	4,620

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Dissolved Metals By EPA Method 6020A

Client ID:	Method Blank	Client:	Aspect Consulting, LLC
Date Received:	NA	Project:	Ken's Texaco, PO 120061
Date Extracted:	07/17/17	Lab ID:	I7-375 mb
Date Analyzed:	07/18/17	Data File:	I7-375 mb.021
Matrix:	Water	Instrument:	ICPMS2
Units:	ug/L (ppb)	Operator:	AP

Analyte:	Concentration ug/L (ppb)
----------	-----------------------------

Iron	<50
Manganese	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 6020A

Client ID:	MW-12-071117	Client:	Aspect Consulting, LLC
Date Received:	07/12/17	Project:	Ken's Texaco, PO 120061
Date Extracted:	07/13/17	Lab ID:	707132-01
Date Analyzed:	07/13/17	Data File:	707132-01.058
Matrix:	Water	Instrument:	ICPMS2
Units:	ug/L (ppb)	Operator:	SP

Analyte:	Concentration ug/L (ppb)
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Lead	<1
------	----

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 6020A

Client ID:	MW-13-071117	Client:	Aspect Consulting, LLC
Date Received:	07/12/17	Project:	Ken's Texaco, PO 120061
Date Extracted:	07/13/17	Lab ID:	707132-02
Date Analyzed:	07/13/17	Data File:	707132-02.061
Matrix:	Water	Instrument:	ICPMS2
Units:	ug/L (ppb)	Operator:	SP

Analyte:	Concentration ug/L (ppb)
----------	-----------------------------

Lead	<1
------	----

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 6020A

Client ID:	MW-14-071117	Client:	Aspect Consulting, LLC
Date Received:	07/12/17	Project:	Ken's Texaco, PO 120061
Date Extracted:	07/13/17	Lab ID:	707132-03
Date Analyzed:	07/13/17	Data File:	707132-03.062
Matrix:	Water	Instrument:	ICPMS2
Units:	ug/L (ppb)	Operator:	SP

Analyte:	Concentration ug/L (ppb)
----------	-----------------------------

Lead	<1
------	----

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 6020A

Client ID:	MW-15-071117	Client:	Aspect Consulting, LLC
Date Received:	07/12/17	Project:	Ken's Texaco, PO 120061
Date Extracted:	07/13/17	Lab ID:	707132-04
Date Analyzed:	07/13/17	Data File:	707132-04.063
Matrix:	Water	Instrument:	ICPMS2
Units:	ug/L (ppb)	Operator:	SP

Analyte:	Concentration ug/L (ppb)
----------	-----------------------------

Lead	<1
------	----

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 6020A

Client ID:	Method Blank	Client:	Aspect Consulting, LLC
Date Received:	NA	Project:	Ken's Texaco, PO 120061
Date Extracted:	07/13/17	Lab ID:	I7-373 mb
Date Analyzed:	07/13/17	Data File:	I7-373 mb.056
Matrix:	Water	Instrument:	ICPMS2
Units:	ug/L (ppb)	Operator:	SP

Analyte:	Concentration ug/L (ppb)
----------	-----------------------------

Lead	<1
------	----

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Dissolved Gasses By RSK 175

Client Sample ID:	MW-12-071117	Client:	Aspect Consulting, LLC
Date Received:	07/12/17	Project:	Ken's Texaco, PO 120061
Date Extracted:	07/12/17	Lab ID:	707132-01
Date Analyzed:	07/12/17	Data File:	006F0601.D
Matrix:	Water	Instrument:	GC8
Units:	ug/L (ppb)	Operator:	JS

Compounds:	Concentration ug/L (ppb)
Methane	57

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Dissolved Gasses By RSK 175

Client Sample ID:	Method Blank	Client:	Aspect Consulting, LLC
Date Received:	NA	Project:	Ken's Texaco, PO 120061
Date Extracted:	07/12/17	Lab ID:	07-1477 mb
Date Analyzed:	07/12/17	Data File:	005F0501.D
Matrix:	Water	Instrument:	GC8
Units:	ug/L (ppb)	Operator:	JS

Compounds:	Concentration ug/L (ppb)
Methane	<5

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 07/20/17

Date Received: 07/12/17

Project: Ken's Texaco, PO 120061, F&BI 707132

**QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER
SAMPLES FOR BENZENE, TOLUENE, ETHYLBENZENE,
XYLENES, AND TPH AS GASOLINE
USING EPA METHOD 8021B AND NWTPH-Gx**

Laboratory Code: 707113-02 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	RPD (Limit 20)
Benzene	ug/L (ppb)	<1	<1	nm
Toluene	ug/L (ppb)	<1	<1	nm
Ethylbenzene	ug/L (ppb)	<1	<1	nm
Xylenes	ug/L (ppb)	<3	<3	nm
Gasoline	ug/L (ppb)	<100	<100	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent	
			Recovery LCS	Acceptance Criteria
Benzene	ug/L (ppb)	50	104	65-118
Toluene	ug/L (ppb)	50	103	72-122
Ethylbenzene	ug/L (ppb)	50	105	73-126
Xylenes	ug/L (ppb)	150	99	74-118
Gasoline	ug/L (ppb)	1,000	100	69-134

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 07/20/17

Date Received: 07/12/17

Project: Ken's Texaco, PO 120061, F&BI 707132

**QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER
SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS
DIESEL EXTENDED USING METHOD NWTPH-Dx**

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	ug/L (ppb)	2,500	88	96	61-133	9

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 07/20/17

Date Received: 07/12/17

Project: Ken's Texaco, PO 120061, F&BI 707132

**QUALITY ASSURANCE RESULTS
FOR THE ANALYSIS OF WATER SAMPLES
FOR DISSOLVED METALS USING EPA METHOD 6020A**

Laboratory Code: 707132-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Iron	ug/L (ppb)	100	439	106 b	74 b	75-125	36 b
Manganese	ug/L (ppb)	20	4,720 ve	0 b	0 b	75-125	0 b

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Iron	ug/L (ppb)	100	98	80-120
Manganese	ug/L (ppb)	20	96	80-120

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 07/20/17

Date Received: 07/12/17

Project: Ken's Texaco, PO 120061, F&BI 707132

**QUALITY ASSURANCE RESULTS
FOR THE ANALYSIS OF WATER SAMPLES
FOR TOTAL METALS USING EPA METHOD 6020A**

Laboratory Code: 707132-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Lead	ug/L (ppb)	10	<1	84	79	75-125	6

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Lead	ug/L (ppb)	10	101	80-120

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 07/20/17

Date Received: 07/12/17

Project: Ken's Texaco, PO 120061, F&BI 707132

**QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF
WATER SAMPLES FOR DISSOLVED GASSES
USING METHOD RSK 175**

Laboratory Code: 707132-01 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	Relative Percent Difference (Limit 20)
Methane	ug/L (ppb)	57	59	3

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Methane	ug/L (ppb)	59	74	73	50-150	1

Data Qualifiers & Definitions

a - The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.

b - The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be meaningful.

ca - The calibration results for the analyte were outside of acceptance criteria. The value reported is an estimate.

c - The presence of the analyte may be due to carryover from previous sample injections.

cf - The sample was centrifuged prior to analysis.

d - The sample was diluted. Detection limits were raised and surrogate recoveries may not be meaningful.

dv - Insufficient sample volume was available to achieve normal reporting limits.

f - The sample was laboratory filtered prior to analysis.

fb - The analyte was detected in the method blank.

fc - The compound is a common laboratory and field contaminant.

hr - The sample and duplicate were reextracted and reanalyzed. RPD results were still outside of control limits. Variability is attributed to sample inhomogeneity.

hs - Headspace was present in the container used for analysis.

ht - The analysis was performed outside the method or client-specified holding time requirement.

ip - Recovery fell outside of control limits. Compounds in the sample matrix interfered with the quantitation of the analyte.

j - The analyte concentration is reported below the lowest calibration standard. The value reported is an estimate.

J - The internal standard associated with the analyte is out of control limits. The reported concentration is an estimate.

jl - The laboratory control sample(s) percent recovery and/or RPD were out of control limits. The reported concentration should be considered an estimate.

js - The surrogate associated with the analyte is out of control limits. The reported concentration should be considered an estimate.

lc - The presence of the analyte is likely due to laboratory contamination.

L - The reported concentration was generated from a library search.

nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.

pc - The sample was received with incorrect preservation or in a container not approved by the method. The value reported should be considered an estimate.

ve - The analyte response exceeded the valid instrument calibration range. The value reported is an estimate.

vo - The value reported fell outside the control limits established for this analyte.

x - The sample chromatographic pattern does not resemble the fuel standard used for quantitation.



Fremont
Analytical

3600 Fremont Ave. N.
Seattle, WA 98103
T: (206) 352-3790
F: (206) 352-7178
info@fremontanalytical.com

Friedman & Bruya
Michael Erdahl
3012 16th Ave. W.
Seattle, WA 98119

RE: 707132
Work Order Number: 1707091

July 18, 2017

Attention Michael Erdahl:

Fremont Analytical, Inc. received 1 sample(s) on 7/12/2017 for the analyses presented in the following report.

Ion Chromatography by EPA Method 300.0
Total Alkalinity by SM 2320B

This report consists of the following:

- Case Narrative
- Analytical Results
- Applicable Quality Control Summary Reports
- Chain of Custody

All analyses were performed consistent with the Quality Assurance program of Fremont Analytical, Inc. Please contact the laboratory if you should have any questions about the results.

Thank you for using Fremont Analytical.

Sincerely,

Mike Ridgeway
Laboratory Director

CLIENT: Friedman & Bruya
Project: 707132
Work Order: 1707091

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Date/Time Collected	Date/Time Received
1707091-001	MW-12-071117	07/11/2017 10:25 AM	07/12/2017 11:27 AM

CLIENT: Friedman & Bruya**Project:** 707132

I. SAMPLE RECEIPT:

Samples receipt information is recorded on the attached Sample Receipt Checklist.

II. GENERAL REPORTING COMMENTS:

Results are reported on a wet weight basis unless dry-weight correction is denoted in the units field on the analytical report ("mg/kg-dry" or "ug/kg-dry").

Matrix Spike (MS) and MS Duplicate (MSD) samples are tested from an analytical batch of "like" matrix to check for possible matrix effect. The MS and MSD will provide site specific matrix data only for those samples which are spiked by the laboratory. The sample chosen for spike purposes may or may not have been a sample submitted in this sample delivery group. The validity of the analytical procedures for which data is reported in this analytical report is determined by the Laboratory Control Sample (LCS) and the Method Blank (MB). The LCS and the MB are processed with the samples and the MS/MSD to ensure method criteria are achieved throughout the entire analytical process.

III. ANALYSES AND EXCEPTIONS:

Exceptions associated with this report will be footnoted in the analytical results page(s) or the quality control summary page(s) and/or noted below.

Qualifiers:

- * - Flagged value is not within established control limits
- B - Analyte detected in the associated Method Blank
- D - Dilution was required
- E - Value above quantitation range
- H - Holding times for preparation or analysis exceeded
- I - Analyte with an internal standard that does not meet established acceptance criteria
- J - Analyte detected below Reporting Limit
- N - Tentatively Identified Compound (TIC)
- Q - Analyte with an initial or continuing calibration that does not meet established acceptance criteria (<20%RSD, <20% Drift or minimum RRF)
- S - Spike recovery outside accepted recovery limits
- ND - Not detected at the Reporting Limit
- R - High relative percent difference observed

Acronyms:

- %Rec - Percent Recovery
- CCB - Continued Calibration Blank
- CCV - Continued Calibration Verification
- DF - Dilution Factor
- HEM - Hexane Extractable Material
- ICV - Initial Calibration Verification
- LCS/LCSD - Laboratory Control Sample / Laboratory Control Sample Duplicate
- MB or MBLANK - Method Blank
- MDL - Method Detection Limit
- MS/MSD - Matrix Spike / Matrix Spike Duplicate
- PDS - Post Digestion Spike
- Ref Val - Reference Value
- RL - Reporting Limit
- RPD - Relative Percent Difference
- SD - Serial Dilution
- SGT - Silica Gel Treatment
- SPK - Spike
- Surr - Surrogate



Analytical Report

Work Order: 1707091
Date Reported: 7/18/2017

Client: Friedman & Bruya

Collection Date: 7/11/2017 10:25:00 AM

Project: 707132

Lab ID: 1707091-001

Matrix: Water

Client Sample ID: MW-12-071117

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Ion Chromatography by EPA Method 300.0

Batch ID: R37441 Analyst: KT

Chloride	32.1	2.00	D	mg/L	20	7/12/2017 2:20:00 PM
Nitrite (as N)	ND	2.00	D	mg/L	20	7/12/2017 2:20:00 PM
Nitrate (as N)	4.58	2.00	D	mg/L	20	7/12/2017 2:20:00 PM
Sulfate	35.1	6.00	D	mg/L	20	7/12/2017 2:20:00 PM

NOTES:

Diluted due to matrix.

Total Alkalinity by SM 2320B

Batch ID: R37440 Analyst: MW

Alkalinity, Total (As CaCO ₃)	439	2.50		mg/L	1	7/17/2017 3:35:00 PM
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Work Order: 1707091
CLIENT: Friedman & Bruya
Project: 707132

QC SUMMARY REPORT

Ion Chromatography by EPA Method 300.0

Sample ID	LCS-R37441	SampType:	LCS	Units:	mg/L	Prep Date:	7/12/2017	RunNo:	37441		
Client ID:	LCSW	Batch ID:	R37441			Analysis Date:	7/12/2017	SeqNo:	719598		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	0.718	0.100	0.7500	0	95.7	90	110				
Nitrite (as N)	0.718	0.100	0.7500	0	95.7	90	110				
Nitrate (as N)	0.718	0.100	0.7500	0	95.7	90	110				
Sulfate	3.56	0.300	3.750	0	95.0	90	110				

Sample ID	MB-R37441	SampType:	MBLK		Units:	mg/L		Prep Date:	7/12/2017		RunNo:	37441	
Client ID:	MBLKW	Batch ID:	R37441					Analysis Date:	7/12/2017		SeqNo:	719599	
Analyte		Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val		%RPD	RPDLimit	Qual
Chloride		ND	0.100										
Nitrite (as N)		ND	0.100										
Nitrate (as N)		ND	0.100										
Sulfate		ND	0.300										

Sample ID	1707081-001CDUP	SampType:	DUP	Units:	mg/L	Prep Date:	7/13/2017	RunNo:	37441		
Client ID:	BATCH	Batch ID:	R37441			Analysis Date:	7/13/2017	SeqNo:	719628		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	3.86	0.200						3.900	0.979	20	D
Nitrite (as N)	ND	0.200						0	0	20	D
Nitrate (as N)	0.362	0.200						0.3640	0.551	20	D
Sulfate	8.45	0.600						8.378	0.856	20	D

Sample ID	1707081-001CMS	SampType:	MS	Units:	mg/L	Prep Date:	7/13/2017	RunNo:	37441		
Client ID:	BATCH	Batch ID:	R37441			Analysis Date:	7/13/2017	SeqNo:	719629		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	5.47	0.200	1.500	3.900	105	80	120				D
Nitrite (as N)	1.43	0.200	1.500	0	95.2	80	120				D

Work Order: 1707091
CLIENT: Friedman & Bruya
Project: 707132

QC SUMMARY REPORT
Ion Chromatography by EPA Method 300.0

Sample ID	1707081-001CMS	SampType:	MS	Units:	mg/L	Prep Date:	7/13/2017	RunNo:	37441		
Client ID:	BATCH	Batch ID:	R37441			Analysis Date:	7/13/2017	SeqNo:	719629		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Nitrate (as N)	1.80	0.200	1.500	0.3640	95.6	80	120				D
Sulfate	16.3	0.600	7.500	8.378	105	80	120				D

Sample ID	1707081-001CMSD	SampType:	MSD	Units:	mg/L	Prep Date:	7/13/2017	RunNo:	37441		
Client ID:	BATCH	Batch ID:	R37441	Analysis Date:	7/13/2017	SeqNo:	719631				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chloride	5.51	0.200	1.500	3.900	108	80	120	5.472	0.765	20	D
Nitrite (as N)	1.45	0.200	1.500	0	96.7	80	120	1.428	1.53	20	D
Nitrate (as N)	1.80	0.200	1.500	0.3640	95.9	80	120	1.798	0.222	20	D
Sulfate	16.4	0.600	7.500	8.378	106	80	120	16.27	0.552	20	D

Work Order: 1707091
CLIENT: Friedman & Bruya
Project: 707132

QC SUMMARY REPORT

Total Alkalinity by SM 2320B

Sample ID	MB-R37440	SampType:	MBLK	Units:	mg/L	Prep Date:	7/17/2017	RunNo:	37440		
Client ID:	MBLKW	Batch ID:	R37440			Analysis Date:	7/17/2017	SeqNo:	719528		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Alkalinity, Total (As CaCO3) ND 2.50

Sample ID	LCS-R37440	SampType: LCS			Units: mg/L		Prep Date: 7/17/2017			RunNo: 37440		
Client ID:	LCSW	Batch ID: R37440			Analysis Date: 7/17/2017					SeqNo: 719529		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	

Alkalinity, Total (As CaCO3) 111 2.50 100.0 0 111 80 120

Sample ID	1707118-001BDUP	SampType:	DUP	Units:	mg/L	Prep Date:	7/17/2017	RunNo:	37440		
Client ID:	BATCH	Batch ID:	R37440			Analysis Date:	7/17/2017	SeqNo:	719539		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Alkalinity, Total (As CaCO3) 149 2.50 151.2 1.40 20

Client Name: **FB**
 Logged by: **Erica Silva**

Work Order Number: **1707091**
 Date Received: **7/12/2017 11:27:00 AM**

Chain of Custody

1. Is Chain of Custody complete? Yes ☒ No ☐ Not Present ☐
 2. How was the sample delivered? FedEx

Log In

3. Coolers are present? Yes ☒ No ☐ NA ☐
 4. Shipping container/cooler in good condition? Yes ☒ No ☐
 5. Custody Seals present on shipping container/cooler?
 (Refer to comments for Custody Seals not intact) Yes ☐ No ☒ Not Required ☐
 6. Was an attempt made to cool the samples? Yes ☒ No ☐ NA ☐
 7. Were all items received at a temperature of $>0^{\circ}\text{C}$ to 10.0°C * Yes ☒ No ☐ NA ☐
 8. Sample(s) in proper container(s)? Yes ☒ No ☐
 9. Sufficient sample volume for indicated test(s)? Yes ☒ No ☐
 10. Are samples properly preserved? Yes ☒ No ☐
 11. Was preservative added to bottles? Yes ☐ No ☒ NA ☐
 12. Is there headspace in the VOA vials? Yes ☐ No ☐ NA ☒
 13. Did all samples containers arrive in good condition(unbroken)? Yes ☒ No ☐
 14. Does paperwork match bottle labels? Yes ☒ No ☐
 15. Are matrices correctly identified on Chain of Custody? Yes ☒ No ☐
 16. Is it clear what analyses were requested? Yes ☒ No ☐
 17. Were all holding times able to be met? Yes ☒ No ☐

Special Handling (if applicable)

18. Was client notified of all discrepancies with this order? Yes ☒ No ☐ NA ☐

Person Notified:	<u>Michael Erdahl</u>	Date	<u>7/12/2017</u>
By Whom:	<u>Erica Silva</u>	Via:	<input type="checkbox"/> eMail <input checked="" type="checkbox"/> Phone <input type="checkbox"/> Fax <input type="checkbox"/> In Person
Regarding:	<u>Analytical request / TAT</u>		
Client Instructions:	<u>Same as WO 1704127 / Standard</u>		

19. Additional remarks:

Item Information

Item #	Temp °C
Cooler	1.7
Sample	3.1

* Note: DoD/ELAP and TNI require items to be received at $4^{\circ}\text{C} \pm 2^{\circ}\text{C}$

1707091

Phone # (206) 285-8282 Fax # (206) 283-5044

Page # _____ of _____

TURNAROUND TIME

☐ Standard (2 Weeks)

☐ RUSH _____

Rush charges authorized by: _____



SAMPLE DISPOSAL

☐ Dispose after 30 days

☐ Return samples

☐ Will call with instructions

per M. Erdahl
7/12/17 JS

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by: 	Michael Erdahl	Friedman and Bruya	7/2/12	10:30
Received by: 	ERICA SILVA	FAI	7/12/17	11:27
Relinquished by:				
Received by:				

APPENDIX D

Boring Logs

Classifications of soils in this report are based on visual field and/or laboratory observations, which include density/consistency, moisture condition, grain size, and plasticity estimates and should not be construed to imply field or laboratory testing unless presented herein. Visual-manual and/or laboratory classification methods of ASTM D-2487 and D-2488 were used as an identification guide for the Unified Soil Classification System.

**Boring Log**Project Number
120061Boring Number
B-1Sheet
1 of 1

Project Name: Ken's Texaco

Ground Surface Elev _____

Location: Ellensburg, WA / _____

Driller/Method: Holt-Brian / Sonic

Depth to Water (ft BGS) 13'

Sampling Method: Continuous Core

Start/Finish Date 9/16/2014

Depth / Elevation (feet)	Borehole Completion	Sample Type/ID	Tests	PID (ppm)	Drive/ Recovery (inches)	Material Type	Description	Depth (ft)
1	Borehole backfilled with hydrated bentonite chips (NSF/ANSI 60)	S1	B-1-9	0			Moist, brown-gray, sandy GRAVEL (GP); fine to medium sand, fine gravel	1
2				0			Moist, red-brown, slightly gravelly, sandy SILT (ML); coarse gravel	2
3				0			Moist, brown, silty, sandy GRAVEL (GM)	3
4				0				4
5				0			Grades to brown, sandy GRAVEL (GP); fine sand, coarse gravel with cobbles, no odors	5
6		S2	B-1-12	0.2				6
7				0.3				7
8				0.2				8
9				3.3			Grades to brown, silty, sandy GRAVEL (GM); coarse gravel, cobbles up to 6" in diameter, slight petrol odor	9
10				124.1				10
11				4.7				11
12				1.9				12
13	Borehole backfilled with hydrated bentonite chips (NSF/ANSI 60)	S3	B-1-18	1.1			Grades to wet, brown, slightly silty, sandy GRAVEL (GP-GM); cobbles, no odor	13
14				0.7				14
15				2.2				15
16				4.1				16
17				0.4			Wet, brown, sandy, very gravelly SILT (ML); no odor	17
18		S4	B-1-30	0				18
19				0				19
20				0				20
21				0			Wet, brown, sandy, silty GRAVEL (GM); coarse sand, coarse gravel, no odor	21
22				0				22
23				0			Wet, brown, sandy, gravelly SILT (ML); coarse gravel with cobbles, no odor	23
24				0				24
25				0			Grades to brown, sandy, silty GRAVEL (GM); coarse gravel with cobbles, no odor	25
26				0				26
27				0			Wet, red-brown, very sandy GRAVEL (GP); fine to coarse sand, fine gravel, no cobbles	27
28				0				28
29				0			Bottom of Boring at 30 ft BGS	29
30								30
31								31

Sampler Type:

PID - Photoionization Detector (Headspace Measurement)

Logged by: AET

☐ No Recovery☒ Static Water Level

Approved by: KSL

☒ Continuous Core☐ Water Level (ATD)

Figure No.



Boring Log

Project Number
120061

Boring Number
B-2

Sheet
1 of 1

Project Name: Ken's Texaco

Ground Surface Elev _____

Location: Ellensburg, WA / _____

Driller/Method: Holt-Brian / Sonic

Depth to Water (ft BGS) 11'

Sampling Method: Continuous Core

Start/Finish Date 9/16/2014

Depth / Elevation (feet)	Borehole Completion	Sample Type/ID	Tests	PID (ppm)	Drive/ Recovery (inches)	Material Type	Description	Depth (ft)			
1	Borehole backfilled with hydrated bentonite chips (NSF/ANSI 60)	S1	B-2-9.5	0			Moist, brown, sandy GRAVEL (GP); fine sand, fine gravel, fill	1			
2				0				2			
3				0				3			
4				0				4			
5		S2		0				5			
6				0				6			
7				0				7			
8		S3		0				8			
9				0				9			
10		S4		5.6			Moist, brown, blue-gray mottled, sandy, silty GRAVEL (GM); cobbles up to 6" in diameter, mild petrol odor	10			
11				4.1				11			
12		B-2-13	S4	308.2			Wet, blue-gray, brown mottled, gravelly, sandy SILT (ML); petrol odor	12			
13				166.7				13			
14				308.1			Grades to Wet, brown, red mottled, silty SAND (SM); trace gravel	14			
15				19.4				15			
16				11.6				16			
17				0.8				17			
18				0.3			Wet, red-brown, sandy SILT (ML); trace gravel	18			
19				0.3				19			
20				B-2-20			S5	0.1		Wet, brown to red-brown, silty, sandy GRAVEL (GM)	20
21								0			21
22		0	Wet, red-brown, sandy GRAVEL (GP); trace silt, coarse sand, fine gravel with cobbles up to 6" in diameter			22					
23		0				23					
24		0				24					
25		0				25					
26		0	Bottom of Boring at 30 ft BGS			26					
27		0				27					
28		0		28							
29		0		29							
30		B-2-30		0				30			
31									31		

Sampler Type:

PID - Photoionization Detector (Headspace Measurement)

Logged by: AET

☐ No Recovery

☒ Static Water Level

Approved by: KSL

☒ Continuous Core

☐ Water Level (ATD)

Figure No.



Boring Log

Project Number
120061

Boring Number
B-3

Sheet
1 of 1

Project Name: Ken's Texaco

Ground Surface Elev _____

Location: Ellensburg, WA / _____

Driller/Method: Holt-Brian / Sonic

Depth to Water (ft BGS) 12'

Sampling Method: Continuous Core

Start/Finish Date 9/16/2014

Depth / Elevation (feet)	Borehole Completion	Sample Type/ID	Tests	PID (ppm)	Drive/ Recovery (inches)	Material Type	Description	Depth (ft)
1	Borehole backfilled with hydrated bentonite chips (NSF/ANSI 60)	S1		0			Gravel fill, no fines, coarse gravel	1
2				0			Moist, red brown, slightly silty, sandy GRAVEL (GP-GM); fine sand, coarse gravel, cobbles up to 6" in diameter, no odor	2
3				0				3
4				0				4
5				0				5
6		S2	B-3-11.5	68.8			No Recovery	6
7				390.7				7
8				371.0				8
9				44.6			Becomes wet	9
10				226.6				10
11		S3	B-3-14.5	26.1			Wet, blue-gray SAND (SP); fine to medium sand, petrol odor	11
12				57.5			Wet, red-brown with slightly green tinge, silty, sandy GRAVEL (GM); cobbles	12
13				26.7			Wet, blue gray SILT (ML); trace sand	13
14				1.5			Grades to red-brown, slightly silty, sandy GRAVEL (GP-GM)	14
15				2.5				15
16		S3	B-3-20	0			Wet, brown SAND (SP); medium sand	16
17				0			Wet, brown to red-brown, slightly silty, sandy GRAVEL (GP-GM); fine to medium sand, cobbles up to 6" in diameter	17
18				0				18
19				0				19
20				0				20
21		S3	B-3-30	0				21
22				0				22
23				0				23
24				0				24
25				0				25
26		S3	B-3-30	0				26
27				0				27
28				0				28
29				0				29
30				0			Bottom of Boring at 30 ft BGS	30
31								31

Sampler Type:

PID - Photoionization Detector (Headspace Measurement)

Logged by: AET

No Recovery

Static Water Level

Approved by: KSL

Continuous Core

Water Level (ATD)

Figure No.

Boring Log

Project Number
080129

Boring Number
MW-1

Sheet
1 of 1

Project Name **Ken's Texaco**

Ground Surface Elev 104.77 Relative Site

Location Ellensburg, WA

Driller/Method Cascade Drilling / Hollow Stem Auger

Depth to Water 16.20

Sampling Method D&M, 300 lb. Jars / Hammer Weight: 300 lb / Hammer Drop:




Start/Finish Date 7/21/2008

Depth / Elevation (feet)	Borehole Completion	Sample Type/ID	Tests	PID (ppm)	Blows/ 6"	Material Type	Description	Depth (ft)
	8" flushmount monument, 2" J-plug well cap, concrete seal, 0'-1'						Very dense, slightly moist, brown, slightly sandy, slightly silty GRAVEL (GM). Coarse gravel, 3 in.	
5	2" diameter schedule 40 PVC casing, threaded connection, 0'-14'			0.0	12 50/6			5
	Hydrated bentonite chips 1'-12'			0.0	12 17 22		Slightly clayey, silty.	
10		MW-1-10.5		0.5	8 16 17			10
	#2/12 silica sand filter pack, 12'-24'			100	50/6		Moist.	
15		MW-1-15.5	TPH-D, TPH-G, BTEX	14.5	12 12 6		Medium dense, very moist, olive gray, slightly clayey SILT (ML). Slight petroleum odor.	15
	2" diameter, schedule 40 PVC screen, 10-slot, 14'-24'			146	5 3 2		Loose.	
20		MW-1-20.5	TPH-D, TPH-G, BTEX	15.8	5 3 3			20
	Threaded PVC endcap			1.4	18 50/6		Very dense, wet, olive gray, clayey, silty, SAND/GRAVEL (SC-GC), with root fragments. Fine sand, medium gravel.	
25							Boring terminated at 24 ft BGS.	25

Sampler Type:

PID - Photoionization Detector (Headspace Measurement)

Logged by: **BMS**

-  No Recovery
-  3.25" OD D&M Split-Spoon
-  Ring Sampler

 Static Water Level

 Water Level (ATD)

Approved by: **RRH**

Figure No. **A - 2**

Boring Log

 Project Number
080129

 Boring Number
MW-2

 Sheet
1 of 1

 Project Name **Ken's Texaco**

 Ground Surface Elev **104.63 Relative Site**

 Location **Ellensburg, WA**

 Driller/Method **Cascade Drilling / Hollow Stem Auger**

 Depth to Water **16.35**

 Sampling Method **D&M, 300 lb. Jars / Hammer Weight: 300 lb / Hammer Drop:**

 Start/Finish Date **7/21/2008**

Depth / Elevation (feet)	Borehole Completion	Sample Type/ID	Tests	PID (ppm)	Blows/ 6"	Material Type	Description	Depth (ft)
	8" flushmount monument, 2" J-plug well cap, concrete seal, 0'-1'						Loose, slightly moist, brown, slightly clayey, slightly sandy SILT (ML). Coarse angular sand.	
5	2" diameter schedule 40 PVC casing, threaded connection 0'-16.5'				2 3 3			5
	Hydrated bentonite chips, 1'-14.5'				3 3 3		Slightly gravelly. Fine subrounded gravel.	
10		MW-2-10.5		8.2	2 2 3		Very moist, gray to black. No clay.	10
				44.7	50/6		Loose, dark gray, very moist, gravelly SAND (SP). Medium sand. Coarse gravel, 3 in. Petroleum odor.	
							Very stiff, wet, dark gray, slightly silty SAND/GRAVEL (SP-GP). Medium to coarse sand. Subangular gravel. Petroleum odor.	
15	#2/12 silica sand filter pack 14.5'-26.5'	MW-2-14.5	TPH-D, TPH-G, BTEX	237	4 3 4		Loose, gray to orange, clayey, silty.	15
							Loose, moist, brown yellow SILT (ML). Slight petroleum odor.	
							Loose, moist, gray, fine SAND (SP).	
							Loose, moist, yellow red, slightly clayey SILT (ML).	
				0.5	3 4 6			
20	2" diameter, schedule 40 PVC screen, 10-slot, 16.5'-26.5'				3 2 2		Very dense, gray, very moist, clayey, silty, fine SAND (SC-SM).	20
		MW-2-22.0	TPH-D, TPH-G, BTEX	3.9	14 25 31		Moist, green gray to olive gray, slightly silty SAND (SW). Medium to coarse sand. Petroleum odor.	
25				0.6	50/5		Very stiff, wet, brown, silty, very gravelly SAND (SP). Fine sand. Coarse subangular gravel, 2 in.	25
	Threaded PVC endcap							
							Boring terminated at 26.5 ft BGS.	

Sampler Type:

PID - Photoionization Detector (Headspace Measurement)

 Logged by: **BMS**

- No Recovery
- 3.25" OD D&M Split-Spoon
- Ring Sampler

▼ Static Water Level

▽ Water Level (ATD)

 Approved by: **RRH**

 Figure No. **A - 3**

Boring Log

 Project Number
 080129

 Boring Number
 MW-3

 Sheet
 1 of 2

 Project Name **Ken's Texaco**

 Ground Surface Elev **104.03 Relative Site**

 Location **Ellensburg, WA**

 Driller/Method **Cascade Drilling / Hollow Stem Auger**

 Depth to Water **16.55**

 Sampling Method **D&M, 300 lb. Jars**

 Start/Finish Date **7/21/2008**

Depth / Elevation (feet)	Borehole Completion	Sample Type/ID	Tests	PID (ppm)	Blows/ 6"	Material Type	Description	Depth (ft)
1	8" flushmount monument, 2" J-plug well cap, concrete seal, 0'-1'						Very loose, moist, dark gray, clayey, gravelly, SILT (ML). Fine to coarse gravel, subangular. Slight petroleum odor.	1
2								2
3								3
4	2" diameter schedule 40 PVC casing, threaded connection 0'-16.5'	MW-3-4.0	TPH-D, TPH-G, BTEX	51.1	2 1 1			4
5								5
6								6
7	Hydrated bentonite chips, 1'-17'			49.5	2 2 2		Slightly gravelly.	7
8								8
9		MW-3-9.0	TPH-D, TPH-G, BTEX	50/6			Very stuff, very gravelly.	9
10								10
11								11
12				13.5	50/		Slightly moist, olive gray.	12
13								13
14								14
15				22.2	7 7 15		Medium dense, slightly moist, olive gray, slightly clayey SILT/GRAVEL (GM-ML). Coarse gravel. Slight petroleum odor.	15
16								16
17				15.	50/6		Very stiff, moist, brown, slightly clayey, very gravelly SILT (ML). Coarse gravel, 2in., subangular. Slight petroleum odor.	17
18	#2/12 silica sand filter pack 17'-29'							18
19		MW-3-19.5	TPH-D, TPH-G, BTEX	4.2	3 3 6		Loose, slightly moist, olive gray to brown, silty CLAY (CL). Slight petroleum odor.	19
20								20
21	2" diameter, schedule 40 PVC screen, 10-slot, 19'-29'	MW-3-23.0		0.0	5 6 8		Stiff, moist, brown yellow, sandy SILT (ML). Fine sand. Very slight petroleum odor.	21
22								22
23								23
24				0.0	12 50/2		Very stiff, very moist, brown yellow, silty, very gravelly SAND (SM). Medium sand. Coarse gravel, 3in. Very	24

Sampler Type:

PID - Photoionization Detector (Headspace Measurement)

 Logged by: **BMS**

-  No Recovery
-  3.25" OD D&M Split-Spoon
-  Ring Sampler

 Static Water Level

 Water Level (ATD)

 Approved by: **RRH**

 Figure No. **A -**

Boring Log

 Project Number
080129

 Boring Number
MW-3

 Sheet
2 of 2

 Project Name **Ken's Texaco**

 Ground Surface Elev **104.03** Relative Site

 Location **Ellensburg, WA**

 Driller/Method **Cascade Drilling / Hollow Stem Auger**

 Depth to Water **16.55**

 Sampling Method **D&M, 300 lb. Jars**

 Start/Finish Date **7/21/2008**

Depth / Elevation (feet)	Borehole Completion	Sample Type/ID	Tests	PID (ppm)	Blows/ 6"	Material Type	Description	Depth (ft)
26							slight petroleum odor.	26
27		MW-3-27.0		0.0	50/5		Very stiff, wet, silty, very sandy GAVEL (GP). Coarse sand. Fine gravel.	27
28								28
29	Threaded PVC endcap							29
30								30
31								31
32								32
33								33
34								34
35								35
36								36
37								37
38								38
39								39
40								40
41								41
42								42
43								43
44								44
45								45
46								46
47								47
48								48
49								49


Sampler Type:

PID - Photoionization Detector (Headspace Measurement)

 Logged by: **BMS**

- ☐ No Recovery
- ☐ 3.25" OD D&M Split-Spoon
- ☐ Ring Sampler

 Static Water Level

 Water Level (ATD)

 Approved by: **RRH**

 Figure No. **A -**

Boring Log

 Project Number
 080129

 Boring Number
 MW-4

 Sheet
 1 of 1

 Project Name **Ken's Texaco**

Ground Surface Elev _____




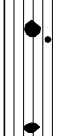


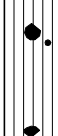
 Location **Ellensburg, WA**

 Driller/Method **Cascade Drilling / Hollow Stem Auger**

Depth to Water (24 ft BGS ATD) _____

 Sampling Method **D&M, 300 lb. Jars**

 Start/Finish Date **7/22/2008**

Depth / Elevation (feet)	Borehole Completion	Sample Type/ID	Tests	PID (ppm)	Blows/ 6"	Material Type	Description	Depth (ft)
1	Hydrated bentonite chip backfill		TPH-D, TPH-G, BTEX	0.1	12 15 50		Very dense, slightly moist, brown, SILT/GRAVEL (GM-ML). Fine to coarse gravel, subrounded.	1
2		2						
3		3						
4		4						
5		5						
6		6						
7				0.0	50/1		Very dense, slightly moist, brown, gravelly SILT (ML). Fine gravel, subangular.	7
8		8						
9				0.0	18 50/2		Brown to brown yellow. Fine to coarse gravel.	9
10		10						
11				0.0	4 4 10		Medium dense.	11
12	MW-4-12.0	12						
13		13						
14		14						
15		15						
16		16						
17				0.0	22 50/6		Very dense, slightly moist, brown, slightly clayey, slightly gravelly, very silty SAND (SM). Fine sand. Coarse gravel, 2 in.	17
18		18						
19				0.0	12 15 16		Dense, moist, dark brown, gravelly, clayey SILT (ML). Fine gravel, subangular.	19
20	MW-4-19.0	20						
21				0.0	2 3 10		Medium dense, moist, dark brown, silty, gravelly SAND (SM).	22
22	MW-4-22.0	Medium dense, moist, light brown, slightly gravelly, silty CLAY (CL). Coarse gravel, angular.					23	
23		Very dense, wet, brown, silty, very sandy GRAVEL (GW). Fine to medium sand. Medium to coarse gravel, subangular.					24	
24	MW-4-24.5	Boring terminated at 24.5 ft BGS						



Monitoring Well Construction Log

Project Number
120061

Well Number
MW-13

Sheet
1 of 1

Project Name: Ken's Texaco

Ground Surface Elev. _____

Location: Ellensburg, WA /

Top of Casing Elev. _____

Driller/Method: Holt-Brian / Sonic

Depth to Water (ft BGS) _____

14'

Sampling Method: Continuous Core

Start/Finish Date _____

9/16/2014

Depth / Elevation (feet)	Borehole Completion	Sample Type/ID	Tests	PID (ppm)	Blows/ 6"	Material Type	Description	Depth (ft)
1	Flush 8-in monument Thermos cap	S1	MW-13-5.5	0		Asphalt	Moist, brown, gravelly, sandy SILT (ML); fine to medium sand, fine to coarse gravel, no odor	1
2				0				2
3	Bentonite chip seal (NSF/ANSI 60)			0			Moist, brown, sandy GRAVEL (GP); coarse gravel with cobbles up to 6" in diameter, fine sand, no odor	3
4				0				4
5	2-in diameter schedule 40 PVC with threaded connection (0-8 ft)	S2	MW-13-5.5	0			Moist, brown, gravelly, sandy SILT (ML); fine to medium sand, fine to coarse gravel	5
6				0			Moist, brown, sandy GRAVEL (GP); fine to medium sand, coarse gravel with cobbles	6
7				0				7
8				0			Trace silt, 8-10.5 ft BGS	8
9	#10/20 sand filter pack (8-25 ft)	S3	MW-13-14	0				9
10				0				10
11				0			Moist, brown, silty, sandy GRAVEL (GM); cobbles up to 6" in diameter within sandy silt matrix	11
12				0				12
13				0				13
14				0				14
15	2-in diameter schedule 40 PVC 10 slot screen (10-25 ft)			0			Becomes very silty	15
16				0				16
17		S4	MW-13-21	0			Wet, brown, sandy GRAVEL (GP); trace silt, fine to medium sand, cobbles up to 6" in diameter, no odor	17
18				0				18
19				0				19
20				0				20
21				0			Wet, light gray, orange mottled, sandy SILT (ML); trace coarse gravel, fine to medium sand, scattered organics, no odor	21
22				0				22
23				0			Grades to wet, light gray, orange mottled, silty SAND (SM); scattered organics, trace gravel, no odor	23
24				0				24
25	Threaded PVC endcap	S4	MW-13-30	0				25
26				0			Wet, brown to red-brown, sandy GRAVEL (GP); trace silt, fine to medium sand, coarse gravel with cobbles	26
27				0				27
28	Bentonite chip seal (NSF/ANSI 60)			0				28
29				0				29
30				0			Bottom of Boring at 30 ft BGS	30
31								31

Sampler Type:

- ☐ No Recovery
☒ Continuous Core

PID - Photoionization Detector

- ▼ Static Water Level
▽ Water Level (ATD)

Logged by: AET

Approved by: KSL

Figure No.



Monitoring Well Construction Log

Project Number
120061

Well Number
MW-14

Sheet
1 of 1

Project Name: Ken's Texaco

Ground Surface Elev. _____

Location: Ellensburg, WA /

Top of Casing Elev. _____

Driller/Method: Holt-Brian / Sonic

Depth to Water (ft BGS) _____

12'

Sampling Method: Continuous Core

Start/Finish Date _____

9/15/2014

Depth / Elevation (feet)	Borehole Completion	Sample Type/ID	Tests	PID (ppm)	Blows/ 6"	Material Type	Description	Depth (ft)
1	Flush 8-in monument Thermos cap	S1	MW-14-7	0		Moist, red-brown, silty, gravelly SAND (SM); fine to medium sand, coarse gravel		1
2				0.3				2
3	Bentonite chip seal (NSF/ANSI 60)			0				3
4				0			Moist, gray-brown, slightly silty, sandy GRAVEL (GP-GM); coarse gravel with cobbles, no odor	4
5	2-in diameter schedule 40 PVC with treaded connection (0-8 ft)			0.6				5
6				0.4				6
7				0.7				7
8				0.2				8
9	#10/20 sand filter pack (8-25 ft)			0				9
10		S2	MW-14-12	0		Grades to very moist, blue-gray, slightly silty, sandy GRAVEL (GM); with cobbles, no odor		10
11				0				11
12	▽			1.9				12
13				0			Grade to wet, red-brown, slightly silty, sandy GRAVEL (GP-GM); coarse gravel with cobbles, no odor	13
14				0.1				14
15				0.3				15
16	2-in diameter schedule 40 PVC 10 slot screen (10-25 ft)			0.8				16
17				0				17
18				0				18
19		S3	MW-14-18	0.2				19
20				0				20
21				0				21
22				0				22
23				0				23
24				0				24
25	Threaded PVC endcap			0			Wet, red-brown, sandy GRAVEL (GP); coarse sand with cobbles	25
26				0				26
27				0				27
28	Bentonite chip seal (NSF/ANSI 60)			0				28
29				0				29
30			MW-14-30				Bottom of Boring at 30 ft BGS	30
31								31

Sampler Type:

- ☐ No Recovery
☒ Continuous Core

PID - Photoionization Detector

▽ Static Water Level

▽ Water Level (ATD)

Logged by: AET

Approved by: KSL

Figure No.



Monitoring Well Construction Log

Project Number
120061

Well Number
MW-15

Sheet
1 of 1

Project Name: Ken's Texaco

Ground Surface Elev. _____

Location: Ellensburg, WA /

Top of Casing Elev. _____

Driller/Method: Holt-Brian / Sonic

Depth to Water (ft BGS) _____

13'

Sampling Method: Continuous Core

Start/Finish Date _____

9/15/2014

Depth / Elevation (feet)	Borehole Completion	Sample Type/ID	Tests	PID (ppm)	Blows/ 6"	Material Type	Description	Depth (ft)
1	Flush 8-in monument Thermos cap	S1	MW-15-10	0			Moist, brown-red, gravelly, slightly silty SAND (SP-SM)	1
2				0			Becomes gray, no odor	2
3	Bentonite chip seal (NSF/ANSI 60)			0				3
4				0				4
5	2-in diameter schedule 40 PVC with threaded connection (0-8 ft)	S2	MW-15-10	0			Moist, gray, GRAVEL (GP); fill, 2" diameter angular gravel, no odor	5
6				0				6
7				0			Moist, brown-gray, very gravelly, sandy SILT (ML); no odor, boulders up to 6" in diameter	7
8		S3	MW-15-10	0			Moist, brown-gray, silty, sandy GRAVEL (GM); no odor, cobbles up to 6" in diameter	8
9	#10-20 sand filter pack (8-25.3 ft)			0				9
10				0				10
11	2-in diameter schedule 40 PVC 10 slot screen (10-15 ft)	S4	MW-15-12.5	3.0			Moist, brown-gray, very gravelly, sandy SILT (ML); coarse gravel with cobbles	11
12				26.1			Petroleum-like odor	12
13			MW-15-16	3.1			Grades to wet, blue-gray, orange mottled, gravelly, slightly silty SAND (SP-SM); fine to medium sand becomes predominately orange at 14 ft BGS, with no petrol odor	13
14				2.4				14
15				4.4			Moist to wet, orange SILT (ML)	15
16				0			Wet, blue-gray SAND (SP); fine-medium sand, trace gravel	16
17			MW-15-16	0			Wet, brown, blue mottled, silty, sandy GRAVEL (GM)	17
18				0			Grades to wet, red, slightly silty, sandy GRAVEL (GP-GM)	18
19				0				19
20				0			Wet, red-brown, sandy GRAVEL (GP); with cobble up to 6" in diameter, trace silt, no odor	20
21		S5	MW-15-30	0				21
22	2-in diameter schedule 40 PVC with threaded connection (15-25 ft)			0				22
23				0			Becomes brown, with white flecks, wood	23
24				0				24
25				0				25
26	Threaded PVC endcap			0				26
27				0				27
28				0				28
29	Bentonite chip seal (NSF/ANSI 60)			0				29
30				0			Grades to moist, brown, gravelly SILT (ML)	30
31							Bottom of Boring at 30 ft BGS	31

Sampler Type:

- ☐ No Recovery
☒ Continuous Core

PID - Photoionization Detector

▼ Static Water Level

▽ Water Level (ATD)

Logged by: AET

Approved by: KSL

Figure No.



Monitoring Well Construction Log

Project Number
120061

Well Number
MW-16

Sheet
1 of 1

Project Name: Ken's Texaco

Ground Surface Elev. _____

Location: Ellensburg, WA /

Top of Casing Elev. _____

Driller/Method: Holt-Brian / Sonic

Depth to Water (ft BGS) _____

14'

Sampling Method: Continuous Core

Start/Finish Date _____

9/15/2014

Depth / Elevation (feet)	Borehole Completion	Sample Type/ID	Tests	PID (ppm)	Blows/ 6"	Material Type	Description	Depth (ft)
1	Flush 8-in monument Thermos cap			0			Moist, brown, slightly silty, very sandy GRAVEL (GP-GM); with cobbles up to 6" in diameter, sub-rounded coarse gravel, fill	1
2				0.3				2
3	Bentonite chip seal (NSF/ANSI 60)			0				3
4				0				4
5	2-in diameter schedule 40 PVC with threaded connection (0-8 ft)	S1		0				5
6				0.2				6
7				0.6				7
8			MW-16-8	0.7				8
9	#10-20 sand filter pack (8-25 ft)			0				9
10				0				10
11				1.9				11
12				5.5				12
13				71.4				13
14	2-in diameter schedule 40 PVC 10 slot screen (10-25 ft)	S2	MW-16-14	83.5			Very moist to wet, blue-gray, brown mottled, sandy, silty GRAVEL (GM)	14
15				26.7			Grades to wet, blue-gray, slightly gravelly SILT (ML)	15
16				16.8				16
17			MW-16-17.5	65.2			Grades to wet, blue-gray, silty, very gravelly SAND (SM); fine gravel, fine sand	17
18				153.1				18
19				16.5				19
20				0.3			Very moist, red-brown, slightly silty, sandy GRAVEL (GP-GM); slight odor, fine to coarse gravel, predominately coarse gravel	20
21				1.5				21
22				0			Wet, red-brown, sandy, silty GRAVEL (GM); coarse gravel with cobbles, no odor	22
23				0				23
24				0			Wet, gray, sandy GRAVEL (GP); medium sand, coarse gravel	24
25				0			Becomes red-brown	25
26				0			Wet, brown, sandy, silty GRAVEL (GM); coarse gravel	26
27				0				27
28				0			Wet, brown to red-brown, trace to slightly silty, sandy GRAVEL (GM); coarse gravel with cobbles up to 6" in diameter, no odor	28
29				0				29
30				0			Becomes gray-brown	30
31				0				31
	Threaded PVC endcap	S3		0				
				0				
				0				
	Bentonite chip seal (NSF/ANSI 60)			0				
				0				
				0			Becomes red-brown	
			MW-16-30	0			Bottom of Boring at 30 ft BGS	

Sampler Type:

- ☐ No Recovery
☒ Continuous Core

PID - Photoionization Detector

▼ Static Water Level

▽ Water Level (ATD)

Logged by: AET

Approved by: KSL

Figure No.



Monitoring Well Construction Log

Project Number

080129

Well Number

MW-10

Sheet

1 of 1

Project Name: Ken's Texaco

Ground Surface Elev.

104.50 Relative Site

Location: 101 East University Way, Ellensburg, WA

Top of Casing Elev.

12.48 ft BTOC - 2/13/2013

Driller/Method: Holt Services Inc / Hollow Stem Auger

Depth to Water

2/4/2013

Sampling Method: SPT auto hammer

Start/Finish Date

2/4/2013

Depth / Elevation (feet)	Borehole Completion	Sample Type/ID	Tests	PID (ppm)	Blows/ 6"	Material Type	Description	Depth (ft)
5	8" flushmount monument, 2" thermos cap, concrete seal, 0'-2' 2" diameter schedule 40 PVC casing, threaded connection 0'-7" Hydrated bentonite chips, 2'-5'						Loose, moist, brown, sandy, very silty GRAVEL (GM/FILL); scattered organics.	5
10	10/20 silica sand filter pack 5'-25.5'			0	2 4 3			10
15	2" diameter, schedule 40 PVC screen, 10-slot, 7'-22'				9 7 5		Becomes medium dense, wet.	15
20	Threaded PVC endcap		MW-10-20	0.6	10 50/6		Very dense, wet, brown yellow with iron stain, gravelly SAND (SP); fine to medium sand.	20
25			MW-10-25	0.1	30 50/6		Very dense, wet, brown and orange mottled, sandy GRAVEL (GP).	25
				0.5	50/6		Refusal at 25.5 ft BGS.	

Sampler Type:

PID - Photoionization Detector

Logged by: AET

- ☐ No Recovery
☒ Standard Penetration Test (ASTM D1586)

▼ Static Water Level

▽ Water Level (ATD)

Approved by: RRRH

Figure No. A -



Monitoring Well Construction Log

Project Number

080129

Well Number

MW-11

Sheet

1 of 1

Project Name: Ken's Texaco

Ground Surface Elev.

104.55 Relative Site

Location: 101 East University Way, Ellensburg, WA

Top of Casing Elev.

12.96 ft BTOC - 2/13/2013

Driller/Method: Holt Services Inc / Hollow Stem Auger

Depth to Water

2/4/2013

Sampling Method: SPT auto hammer

Start/Finish Date

Depth / Elevation (feet)	Borehole Completion	Sample Type/ID	Tests	PID (ppm)	Blows/ 6"	Material Type	Description	Depth (ft)
5	8" flushmount monument, 2" thermos cap, concrete seal, 0'-2' 2" diameter schedule 40 PVC casing, threaded connection 0'-10' Hydrated bentonite chips, 2'-8'						Dense, moist, brown, orange, and green gray mottled, gravelly, very silty SAND (SM); fine sand, no odors.	5
10	10/20 silica sand filter pack 8'-26'			0.5 1.5 0.4	4 34 14			10
15	2/13/2013 2" diameter, schedule 40 PVC screen, 10-slot, 10'-25'		MW-11-15	662 32.8	22 30 50/5		Becomes very moist to wet, strong petroleum odor.	15
20				1.3 0.4	25 50/3		Very dense, wet, brown, slightly silty, sandy GRAVEL (GP-GM); fine to medium sand.	20
			MW-11-23	1.1 9.6	50/6		Very dense, wet, brown and orange mottled, gravelly, very silty SAND (SM); fine sand.	
25	Threaded PVC endcap			1.9 1.0	40 50/4.5		Very dense, wet, brown, orange, and green gray mottled, silty, very sandy GRAVEL (GM); fine to medium sand. Boring terminated at 26 ft BGS.	25

Sampler Type:

- ☐ No Recovery
☒ Standard Penetration Test (ASTM D1586)

PID - Photoionization Detector

▼ Static Water Level

▽ Water Level (ATD)

Logged by: AET

Approved by: RRH

Figure No. A -



Monitoring Well Construction Log

Project Number

080129

Well Number

MW-12

Sheet

1 of 1

Project Name: Ken's Texaco

Ground Surface Elev.

105.26 Relative Site

Location: 101 East University Way, Ellensburg, WA

Top of Casing Elev.

12.85 ft BTOC - 2/13/2013

Driller/Method: Holt Services Inc / Hollow Stem Auger

Depth to Water

2/5/2013

Sampling Method: SPT auto hammer

Start/Finish Date

Depth / Elevation (feet)	Borehole Completion	Sample Type/ID	Tests	PID (ppm)	Blows/ 6"	Material Type	Description	Depth (ft)
0	8" flushmount monument, 2" thermos cap, concrete seal, 0'-2'			0	2		Loose, moist, brown, slightly sandy, gravelly SILT (ML/FILL); numerous organics.	
5	2" diameter schedule 40 PVC casing, threaded connection 0'-10'				3			
	Hydrated bentonite chips, 2'-8'				3		No recovery.	5
					3			
10	10/20 silica sand filter pack 8'-25.5'				50/6			
				0	1		Loose, moist, brown, slightly sandy, gravelly SILT (ML/FILL); numerous organics.	10
					2			
					3			
15	2/13/2013			0	2		Becomes dark brown.	
					3			
	2" diameter, schedule 40 PVC screen, 10-slot, 10'-25'			0	2			
					3			
					4			
20			MW-12-17.5	0	11		Very dense, wet, red brown, slightly silty, gravelly SAND (SP-SM); fine to medium sand.	
				0	36			
				0	45			
				0	50/6		Very dense, wet, red brown, slightly silty, sandy GRAVEL (GW-GM); fine to medium sand, cobbles.	20
				0				
			MW-12-23	0	39		Very dense, wet, red brown, sandy GRAVEL (GW); fine to medium sand, cobbles.	
					50/4			
25	Threaded PVC endcap			0	50/5		Very dense, wet, red brown, sandy GRAVEL (GP); fine gravel, fine to coarse sand.	25
							Boring terminated at 25.5 ft BGS.	

Sampler Type:

- ☐ No Recovery
☒ Standard Penetration Test (ASTM D1586)

PID - Photoionization Detector

▼ Static Water Level

▽ Water Level (ATD)

Logged by: AET

Approved by: RRRH

Figure No. A -



Monitoring Well Construction Log

Project Number
080129

Well Number
MW-5

Sheet
1 of 1

Project Name: **Ken's Texaco**

Ground Surface Elev. _____

Location: **101 East University Way, Ellensburg, WA**

Top of Casing Elev. _____

Driller/Method: **Holt Services Inc / Hollow Stem Auger**

Depth to Water _____

Sampling Method: **SPT auto hammer**

Start/Finish Date _____

2/5/2013 - 2/6/2013

Depth / Elevation (feet)	Borehole Completion	Sample Type/ID	Tests	PID (ppm)	Blows/ 6"	Material Type	Description	Depth (ft)
5	Hydrated bentonite chip backfill	○		0	13 32 31	Very dense, moist, dark brown, slightly sandy, very silty GRAVEL (GM/FILL).		
		○		0	8 50/5	Very dense, moist, brown, silty, gravelly SAND (SM); fine sand.		5
		○		0	50/3.5			
10							Refusal at 9 ft BGS	10
15								15
20								20
25								25

Sampler Type:

- No Recovery
■ Standard Penetration Test (ASTM D1586)

PID - Photoionization Detector

- ▼ Static Water Level
▽ Water Level (ATD)

Logged by: **AET**

Approved by: **RRH**

Figure No. **A -**



Monitoring Well Construction Log

Project Number
080129

Well Number
MW-6

Sheet
1 of 1

Project Name: **Ken's Texaco**

Ground Surface Elev. _____

Location: **101 East University Way, Ellensburg, WA**

Top of Casing Elev. _____

Driller/Method: **Holt Services Inc / Hollow Stem Auger**

Depth to Water _____

Sampling Method: **SPT auto hammer**

Start/Finish Date **2/6/2013**

Depth / Elevation (feet)	Borehole Completion	Sample Type/ID	Tests	PID (ppm)	Blows/ 6"	Material Type	Description	Depth (ft)
5	Hydrated bentonite chip backfill			0			Very dense, moist, brown, silty, gravelly SAND (SM); fine sand.	
				0	50/2		Very low recovery, drill action indicates gravel and cobbles.	5
					14 50/6		Refusal at 6 ft BGS	
10								10
15								15
20								20
25								25

Sampler Type:

- ☐ No Recovery
☒ Standard Penetration Test
(ASTM D1586)

PID - Photoionization Detector

- ☒ Static Water Level
☐ Water Level (ATD)

Logged by: **AET**

Approved by: **RRH**

Figure No. **A -**



Monitoring Well Construction Log

Project Number
080129

Well Number
MW-7

Sheet
1 of 1

Project Name: Ken's Texaco

Ground Surface Elev. _____

Location: 101 East University Way, Ellensburg, WA

Top of Casing Elev. _____

104.40 Relative Site

Driller/Method: Holt Services Inc / Hollow Stem Auger

Depth to Water _____

11.67 ft BTOC - 2/13/2013

Sampling Method: SPT auto hammer

Start/Finish Date _____

2/6/2013

Depth / Elevation (feet)	Borehole Completion	Sample Type/ID	Tests	PID (ppm)	Blows/ 6"	Material Type	Description	Depth (ft)
	8" flushmount monument, 2" thermos cap, concrete seal, 0'-2'						No recovery due to a rock in driveshoe.	
5	2" diameter schedule 40 PVC casing, threaded connection 0'-8.5'				4 7 7			
	Hydrated bentonite chips, 2'-6.5'			0	6 6 6		Medium dense, moist, brown, gravelly, sandy SILT (ML).	5
	10/20 silica sand filter pack 6.5'-23.5'			0	14 42 42		Very dense, moist, brown, gray and orange mottled, sandy, silty GRAVEL (GM); fine sand, fine to coarse gravel with cobbles, scattered organics.	
10				0	50/2			10
	2/13/2013							
	2" diameter, schedule 40 PVC screen, 10-slot, 8.5'-23.5'			0 0	10 14 17		Medium dense, moist, brown, orange, and green gray mottled, gravelly, sandy SILT (ML).	
15				0 0 0	5 3 4		Becomes clayey silt.	15
			MW-7-16.5	0 0	18 50/5		Loose, wet, green gray SAND (SP); fine to medium sand.	
				0 0	9 11 12		Hard, wet, light green gray to white and orange mottled, silty CLAY; trace coarse black sand.	
20				0 0			Medium dense, wet, orange, white, green gray mottled, slightly gravelly, silty SAND (SM); fine to medium sand.	20
					50/5		No recovery due to rock in driveshoe.	
	Threaded PVC endcap						Refusal at 23.5 ft BGS.	
25								25

Sampler Type:

- No Recovery
- Standard Penetration Test (ASTM D1586)

PID - Photoionization Detector

▼ Static Water Level

▽ Water Level (ATD)

Logged by: AET

Approved by: RRRH

Figure No. A -



Monitoring Well Construction Log

Project Number

080129

Well Number

MW-8

Sheet

1 of 1

Project Name: Ken's Texaco

Ground Surface Elev.

104.26 Relative Site

Location: 101 East University Way, Ellensburg, WA

Top of Casing Elev.

12.97 ft BTOC - 2/13/2013

Driller/Method: Holt Services Inc / Hollow Stem Auger

Depth to Water

2/6/2013 - 2/7/2013

Sampling Method: SPT auto hammer

Start/Finish Date

2/6/2013 - 2/7/2013

Depth / Elevation (feet)	Borehole Completion	Sample Type/ID	Tests	PID (ppm)	Blows/ 6"	Material Type	Description	Depth (ft)
0	8" flushmount monument, 2" thermos cap, concrete seal, 0'-2'			0	5		Very dense, moist, brown and gray mottled, sandy, silty GRAVEL (GM); fine sand, cobbles.	0
5	2" diameter schedule 40 PVC casing, threaded connection 0'-10'			0	23			5
	Hydrated bentonite chips, 2'-8'			0	33			
				0	33			
				0	27			
10	10/20 silica sand filter pack 8'-25.5'			0	50/2			
				0	50/4		Rock in driveshoe.	10
				0	37		Trace sand.	
15	2" diameter, schedule 40 PVC screen, 10'-25'			0	50/5			
					50/1		No recovery.	15
					50/0			
20					50/2			
				0	50/6		Very dense, wet, brown, slightly silty, slightly sandy GRAVEL (GW-GM); fine to coarse gravel.	
25	Threaded PVC endcap				50/4		No recovery.	25
							Boring terminated at 25.5 ft BGS.	

Sampler Type:

PID - Photoionization Detector

Logged by: AET

- ☐ No Recovery
☒ Standard Penetration Test (ASTM D1586)

☒ Static Water Level

Approved by: RRH

☐ Water Level (ATD)

Figure No. A -



Ken's Texaco - 120061

Monitoring Well Log

Project Address & Site Specific Location

Coordinates (WA SPS NAD83 ft)

Exploration Number

101 East University Way, Ellensburg, WA, West side of B Street.

E:1628651 N:607788

MW-18

Contractor
Holt Services

Equipment
Sonic Rotary Rig

Sampling Method
Grab

Ground Surface (GS) Elev. (NAVD88)
1565.9'

Ecology Well Tag No.
BKY384

Operator
David

Exploration Method(s)
Sonic rotary

Work Start/Completion Dates
9/6/2016

Top of Casing Elev. (NAVD88)
1565.7'

Depth to Water (Below GS)
18.25' (Static)

Depth (feet)	Elev. (feet)	Exploration Completion and Notes	Sample Type/ID	Analytical Sample Number & Lab Test(s)	Field Tests	Material Type	Description	Depth (ft)
1565		Flush monument in concrete Compression plug					Concrete.	
		2 inch Schedule 40 PVC riser to 13 feet			PID= 0		QUATERNARY ALLUVIUM Moist, light brown silty SAND (SM); fine sand, very thin beds.	
5		Bentonite chips			PID= 0		Moist, light brown and light gray, sandy, silty GRAVEL (GM) with cobbles; fine to coarse gravel.	5
10					PID= 0			10
15		Hard drilling 12 to 14 feet			PID= 0		Becomes very moist, mottled red brown, and with increased clay content .	
		10x20 silica sand			PID= 0			
15		9/6/2016			PID= 0		Wet, brown and gray mottled, gravelly SILT (MH) with cobbles; medium plasticity.	15
20		2 inch Schedule 40 PVC 0.010-inch slot screen 13 to 28 feet			PID= 0		Becomes sandy .	20
		9/8/2016			PID= 0		Moist, dark brown, sandy, silty GRAVEL (GM); subrounded to angular gravel.	
25					PID= 0			25
30		Threaded cap			PID= 0		Wet, light gray, slightly silty SAND (SP-SM); fine to medium sand.	
		Bentonite chips			PID= 0		Slightly moist, mottled light and dark gray-brown and red-brown, silty GRAVEL (GM) with cobbles.	
30					PID= 0		Bottom of exploration at 30 ft. bgs.	30

Legend

- Continuous core 4" ID
- Grab Sample

- Static Water Level
- Water Level ATD

See Exploration Log Key for explanation of symbols

Logged by: Matthew Von Der Ahe
Approved by: JGF-12/13/2017

Exploration Log
MW-18

Sheet 1 of 1



Ken's Texaco - 120061

Monitoring Well Log

Project Address & Site Specific Location

Coordinates (WA SPS NAD83 ft)

Exploration Number

101 East University Way, Ellensburg, WA, West side of B Street.

E:1628654 N:607719

MW-19

Contractor

Equipment

Sampling Method

Ground Surface (GS) Elev. (NAVD88)

Ecology Well Tag No.
BKY385

Holt Services

Sonic Rotary Rig

Grab

1564.5'

Operator

Exploration Method(s)

Work Start/Completion Dates

Top of Casing Elev. (NAVD88)

Depth to Water (Below GS)

David

Sonic rotary

9/6/2016

1563.8'

19.8' (Static)

Depth (feet)	Elev. (feet)	Exploration Completion and Notes	Sample Type/ID	Analytical Sample Number & Lab Test(s)	Field Tests	Material Type	Description	Depth (ft)
		Flush monument in concrete Compression plug					Concrete.	
		2 inch Schedule 40 PVC riser to 13 feet			PID= 0		QUATERNARY ALLUVIUM Moist, light brown, silty SAND (SM).	
5	1560	Bentonite chips			PID= 0		Moist, brown, sandy, silty GRAVEL (GM) with cobbles; fine to coarse gravel.	5
10	1555	9/6/2016			PID= 0		Becomes very moist, mottled brown and gray, trace organics .	10
15	1550	10x20 silica sand		NWTPH-Gx, BTEX, NWTPH-Dx	PID= 0		Wet, mottled brown, red-brown, and gray, gravelly SILT (MH) with cobbles; medium plasticity.	15
20	1545	2 inch Schedule 40 PVC 0.010-inch slot screen 13 to 28 feet			PID= 0		Wet, mottled light brown, red-brown, and gray, gravelly SILT (ML) with cobbles; medium plasticity, rapid dilatency.	
25	1540	9/8/2016			PID= 0		Wet, dark brown, sandy, silty GRAVEL (GM) with cobbles; subrounded to angular gravel.	20
30	1535	Threaded cap		NWTPH-Gx, BTEX, NWTPH-Dx	PID= 0		Moist, light brown, sandy SILT (ML) with cobbles.	25
		Bentonite chips			PID= 0		Wet, dark brown, sandy, silty GRAVEL (GM) with cobbles.	30
							Bottom of exploration at 30 ft. bgs.	

Legend

- Continuous core 4" ID
- Grab Sample

Water
Level

- Static Water Level
- Water Level ATD

See Exploration Log Key for explanation
of symbols

Logged by: Matthew Von Der Ahe
Approved by: JGF-12/13/2017

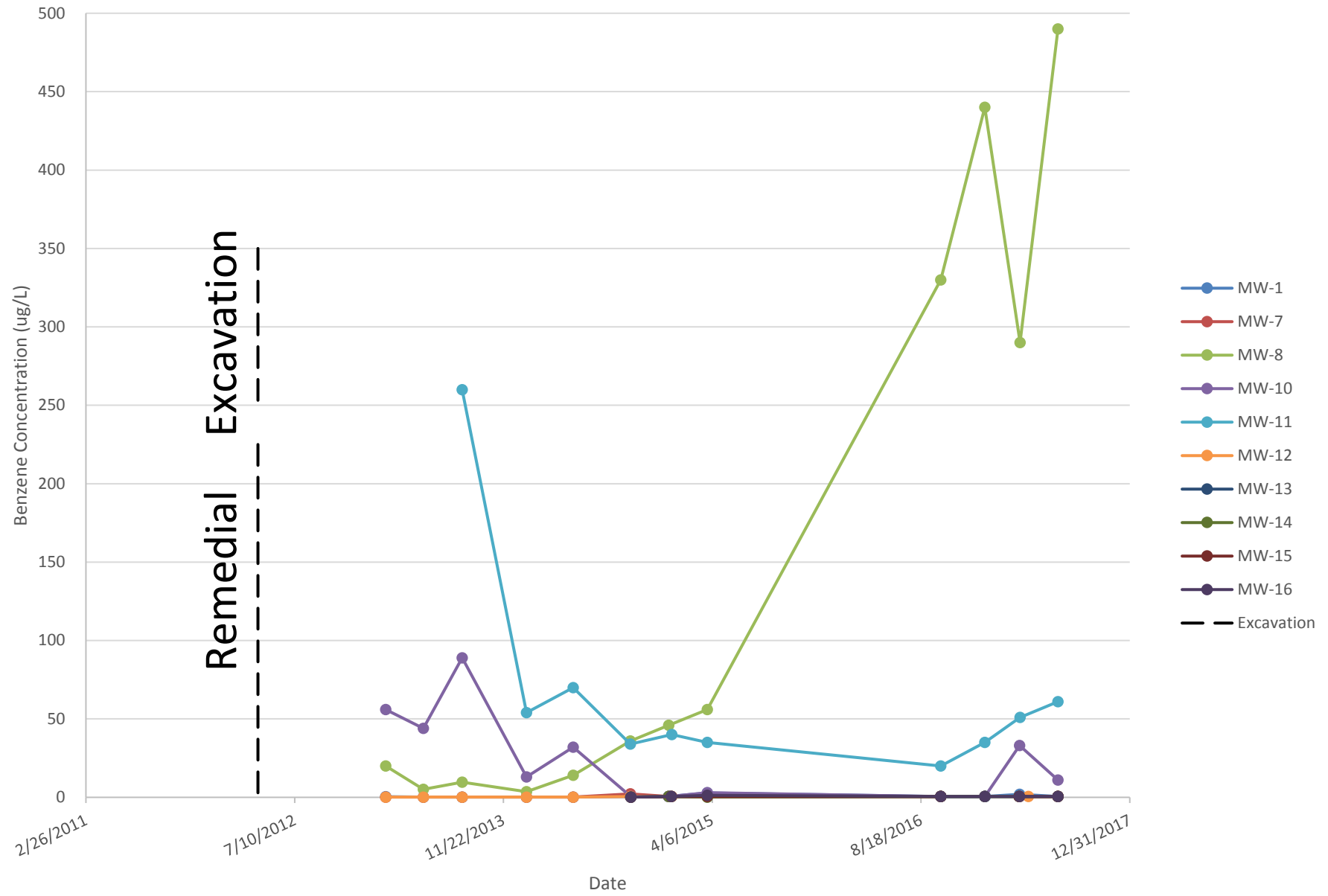
**Exploration
Log
MW-19**

Sheet 1 of 1

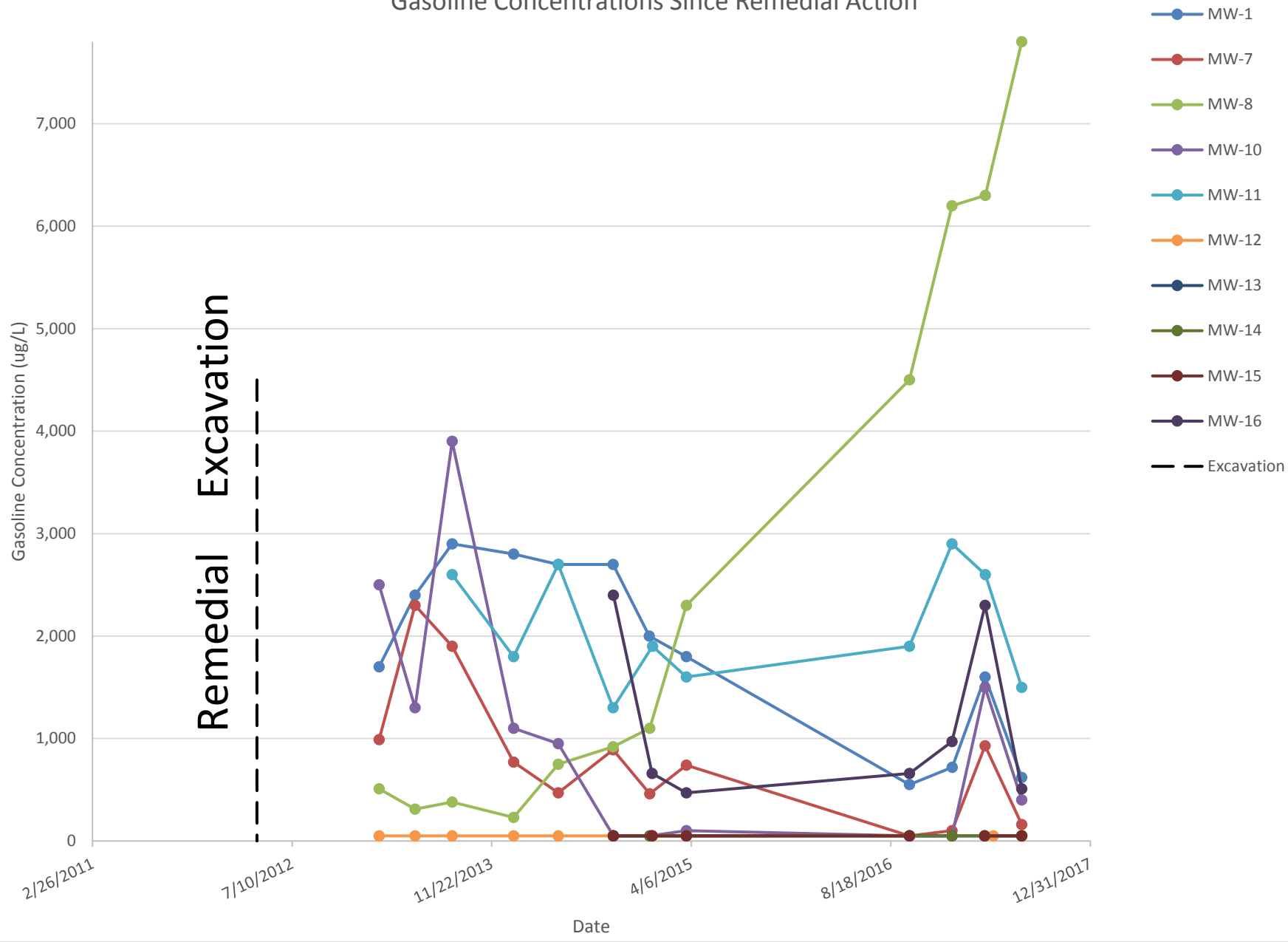
APPENDIX E

Groundwater Quality Trend Graphs

Benzene Concentrations Since Remedial Action



Gasoline Concentrations Since Remedial Action



APPENDIX F

Off-Site Sources Information

F. Off-Site Sources Discussion

Historically the University Auto Dealership operated as a gasoline station and auto dealership with an auto service center. The 1928 Sanborn Map, presented in Appendix E, depicts a “gas and oil” station near the center of the property with a canopy extending northward towards East University Way (then referred to as East 8th Avenue).

Presumably the pump island was beneath the canopy, on the north side of the property, just west of center. The Sanborn Maps do not depict where the tanks were located in the 1928 gasoline station configuration. The Sanborn Maps depict three more gasoline stations to the west of the University Auto Center property. The 1956 aerial photograph, presented in Appendix E, is of poor quality, but generally confirms the same gasoline station configuration as the 1928 Sanborn map. Reportedly during the 1970’s energy crisis, the tanks were used by a local fuel distributor to store diesel and heating oil (Fulcrum, 2008). The 1970 aerial photograph resolution is poor, but it appears that the property has been redeveloped with an “L” shaped gasoline station-like building further to the east than the 1928 configuration. The redevelopment of the property was confirmed by the Kittitas County Tax Assessor, which notes the existing building construction age of 1965. The 1981 and 1983 aerial photographs confirm the redevelopment of the property at some time prior to 1970. Property-use appears to be consistent with a car dealership as indicated by the uniformity of parked cars. By 2005, it appears that a canopy from the north side of the property was removed, leaving behind a triangular shaped patch in the concrete.

The most recent gasoline station operated three gasoline and diesel USTs (approximately 3,000 gallons each), which were closed in the 1980’s. The date of UST removal is unknown. Reportedly, no soil or groundwater sampling was conducted when the tanks were removed as their removal predated UST regulations (Fulcrum Environmental Consulting, 2008). The USTs were located adjacent west of the existing building while the pump island was located north of the building with East University Way frontage. Annotated figures depicting the UST basin, in relation to MW-20 are presented in Appendix E. The property also historically operated two 500-gallon waste oil tanks that were closed in place in 1991 and removed in 1992 (White Shield Inc., 1992). The waste oil tanks were formerly located on the southeast side of the existing building adjacent to the alley.

1992 Waste Oil Tank Removal

White Shield Inc. (1992) conducted a UST site assessment during and after removal of the two 500-gallon waste oil USTs and associated piping. Both tanks and piping were removed from an excavation 6 feet wide, 10 feet long, and 7 feet deep. Oil stains and free oil were observed in the pea gravel on the surface of the tanks and below the fill spouts indicating product spillage during filling activities occurred. Impacted tank backfill (e.g. pea gravel) and impacted native soils were excavated and stockpiled. Field screening was conducted on the excavation side walls and excavation bottom using an organic vapor analyzer for the headspace screening method and thin-layer chromatography for diesel. Reportedly no petroleum contamination was observed. One soil sample was collected from the bottom of the excavation and two sidewall composite samples were collected for laboratory analysis. Three stockpile soil samples were collected for characterization.

Laboratory analysis for petroleum hydrocarbons (using analytical method WTPH-418.1 modified) indicated concentrations were detected below MTCA Method A cleanup levels. The bottom sample was not detected above the laboratory reporting limit of 100 mg/kg for “total heavy oils” while the two sidewall composite samples had detectable concentrations of 39 mg/kg and 48 mg/kg for “total heavy oils”. Stockpile samples had concentrations of “total heavy oil” ranging from 648 mg/kg to 1158 mg/kg. The stockpile soil was taken off-site for landfarming treatment. No groundwater was encountered during the 1992. White Shield Inc. noted that there were no groundwater monitoring wells on the property in 1992.

Ecology made a determination of No Further Action (NFA) for the waste oil tank removal in 2006.

2007 UST Investigation

Fulcrum Environmental Consulting, Inc. conducted a UST investigation in 2007 to confirm removal of the gasoline and diesel USTs on the west side of the existing building and to evaluate the potential for historical releases to the subsurface. Vent pipes for the USTs were observed still attached to the southwest corner of the building at the time of Fulcrum’s investigation and a depression with asphalt cracking were observed in the general area where the UST basin was suspected to be located. Fulcrum trenched to 12.5 feet bgs in two locations in the vicinity of the former UST basin to observe soil conditions. The vent pipes leading from the UST basin to the building were removed at this time. On the north side of the UST basin trenches, Fulcrum observed voids and distribution line “pipe segments” extending north from the basin toward the former pump island area. The condition of the soil and groundwater adjacent to these distribution lines, north of the UST basin were not investigated. Gray discolored soil with a diesel odor was also observed on the “north boundary” of the site. The report is unclear as to whether this gray discolored soil was sampled and exactly where it was located. UST basin backfill included concrete, asphalt, and metal piping debris. Fulcrum also investigated the presumed location of the former pump island, but the report did not provide a full description of these excavation activities or observations.

Fulcrum collected 10 bottom and sidewall samples from the trenches in the UST basin at depths of approximately 12 to 12.5 feet and 6 feet bgs, respectively. Two soil samples were collected from the former dispenser location excavation at 3 feet bgs. All soil samples were analyzed by a laboratory for diesel-, heavy oil-, and gasoline range petroleum hydrocarbons, BTEX, and lead. Lead was detected in three samples at concentrations below MTCA Method A. Diesel was detected in one sample collected on the north sidewall of the UST basin excavation, but at a concentration below MTCA Method A. No gasoline or BTEX were detected in any samples. No groundwater was encountered in either of the excavations. Fulcrum concluded that there were no indications of a release to the environment.

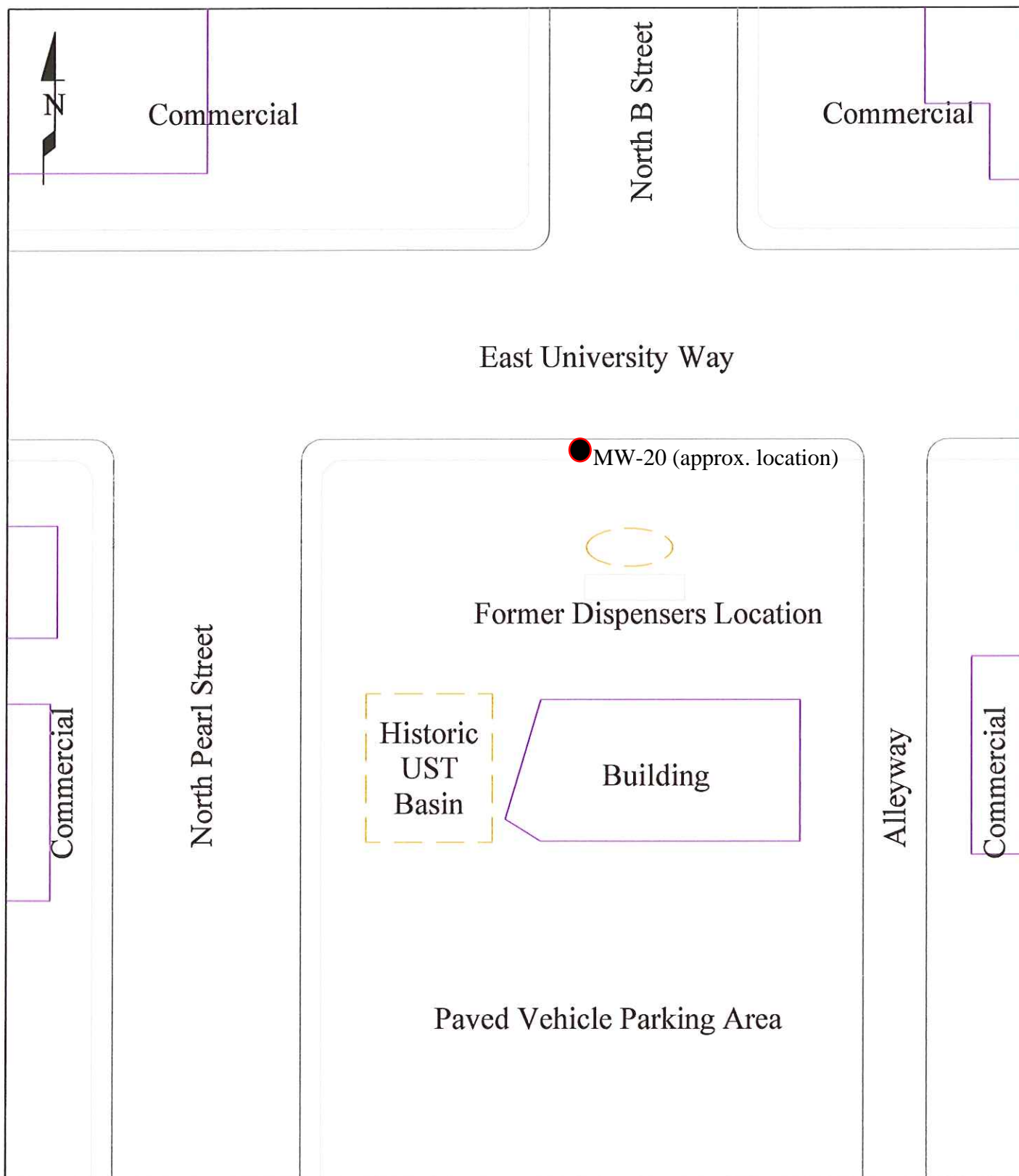
Ecology confirmed in 2009 that the NFA made in 2006 should remain unchanged for petroleum products in soil. The site was subsequently removed from the Confirmed and Suspected Contaminated Sites List and the Leaking Underground Storage Tank List.

Off-Site Source Evaluation

Fulcrum did not adequately characterize this site for impacted media caused by releases from the USTs and related infrastructure. Diesel was detected in the north sidewall sample collected below the piping (112007-21), but Fulcrum did not report this detection in Table 1. The figure depicting the sample locations has duplicate samples labeled 111907-01; does not depict sample 111907-10; and depicts bottom samples in areas shaded as “lesser elevations” which is unclear. The northwest quarter of the property, where the fuel distribution lines were observed extending north of the former UST area, was not investigated. The gray discolored soil with a diesel odor was left in place and not investigated further. And finally, the excavation extended only to 12.5 feet at its deepest point. Groundwater is known to be at 15 feet bgs in this area, so their excavation was not deep enough to adequately characterize the condition of groundwater.

Based on the aerial photograph review, it appears that there were two gasoline station configurations. If this is the case, then the Fulcrum investigation did not adequately characterize the potential for releases caused by the 1928 configuration, which was further west on the property than the present-day building.

The annotated figures presented in Appendix E depict the location of the excavations and the former pump island relative to the location of monitoring well MW-20. As noted above, soil samples collected at 15 and 17 feet bgs at MW-20, had concentrations of gasoline-range TPH and BTEX above MTCA Method A cleanup levels. Diesel was also elevated in the soil sample at 17 feet bgs, but it was below MTCA Method A cleanup levels. The detections of petroleum related compounds in soil at depths below what was characterized by Fulcrum is further indication of the inadequacy of their investigation to characterize the horizontal and vertical extent of their release. In groundwater, diesel- and gasoline-range TPH and benzene were detected at MW-20 in October 2016 at concentrations exceeding MTCA Method A cleanup levels. The diesel detection was not qualified by the laboratory, so it is indicative of a diesel release. As depicted on Figures 4, 7, and 8, the water table and groundwater gradient of this area are extremely flat, despite an overall general south to southwest flow direction. The flat gradient suggests that MW-20 is effectively cross-gradient from the former UST infrastructure at the University Auto Center property. Given the history of diesel usage at the University Auto Center property and the cross-gradient proximity of MW-20 to the historical fueling activities at this property, it is most likely that impacts to soil and groundwater in monitoring well MW-20 are related to historical releases on the University Auto Center property. As a result of this evaluation, MW-20 was removed from the remedial investigation as a compliance point for the Ken’s Texaco Site.



Legend

Excavation Sites:



Scale: NTS

Figure 2 Subject Site Map

Former University Auto
Dealership Site
100 East University Way
Ellensburg, Washington



Fulcrum Environmental Consulting, Inc.
406 North Second Street
Yakima, Washington 98901
Phone (509) 574-0839 Fax (509) 575-8453

Drawn by: AMP

Project Number: 07-498

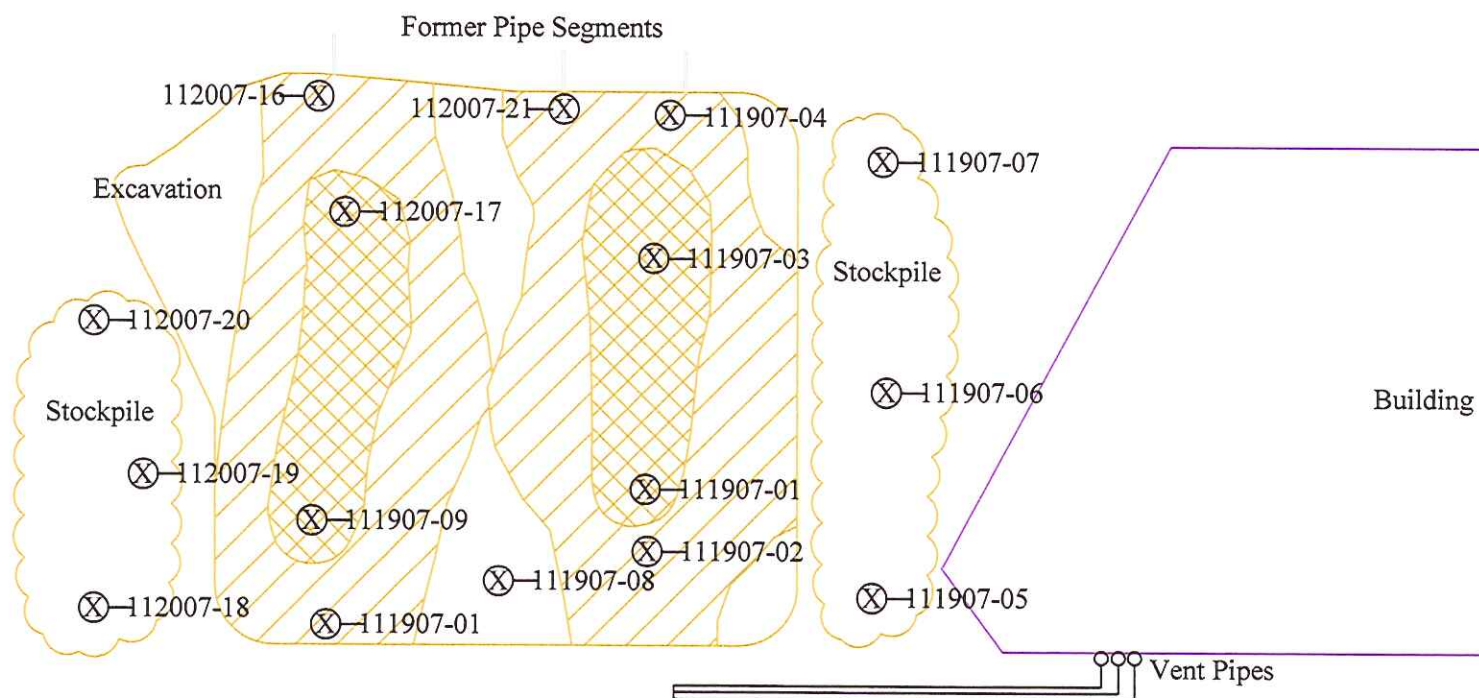
Date: 01/28/2008

File Name: University Auto Phase II

MW-20 (approx. location)



Excavation
112007-13-⊗
112007-14-⊗
112007-15-⊗
112007-12-⊗
Former Dispensers Location
112007-11-⊗
Stockpile



Legend

Sample Locations:
Pit Bottom:
Lesser Elevation:
Scale: NTS

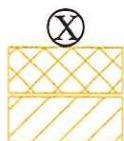


Figure 3 Excavation & Sample Locations Map

Former University Auto Dealership Site
100 East University Way
Ellensburg, Washington



Fulcrum Environmental Consulting, Inc.
406 North Second Street
Yakima, Washington 98901
Phone (509) 574-0839 Fax (509) 575-8453

Drawn by: AMP

Date: 01/28/2008

Project Number: 07-498

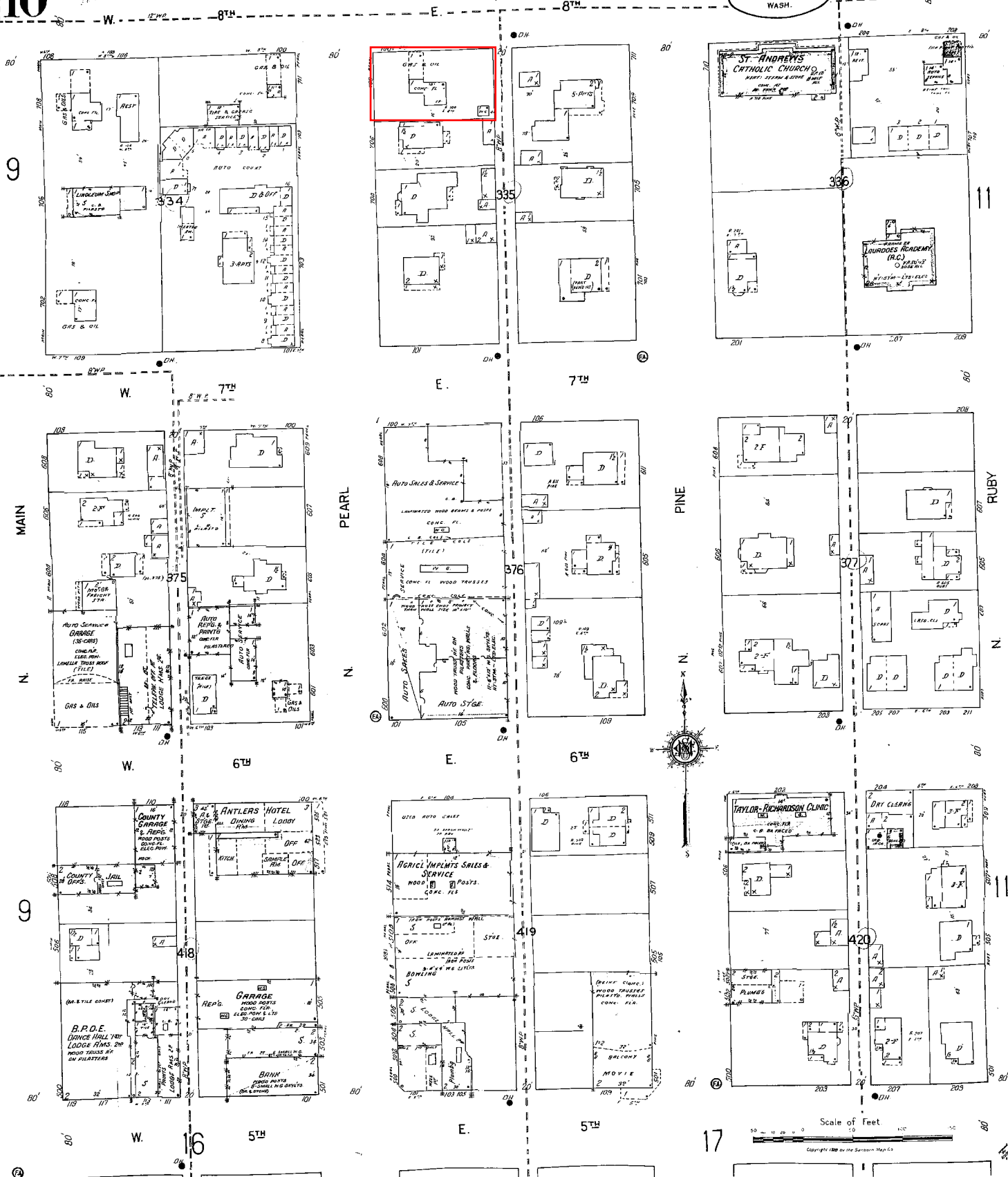
File Name: University Auto Phase II

10

4

ELLENSBURG
WASH.
JAN. 1928

10



1/1 CW

U0000162
001829 JMS



UST SITE ASSESSMENT REPORT

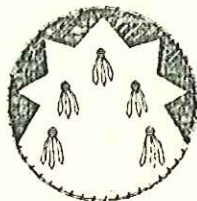
DEPARTMENT OF ECOLOGY
UNDERGROUND STORAGE TANKS

DEC 07 1992

UNIVERSITY AUTO CENTER
ELLENSBURG, WA

Prepared for:
AER-EX, Inc.
312 Ridgeview Lane
Ellensburg, WA 98926

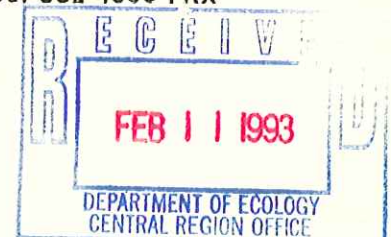
DECEMBER, 1992



WHITE SHIELD

INC.

P.O. BOX 477, 246 DIVISION STREET, GRANDVIEW, WA 98930
TELEPHONE: (509) 882-1144 VOICE (509) 882-4566 FAX





WHITE SHIELD, INC.

P.O. BOX 477 • GRANDVIEW, WA 98930 • (509) 882-1144
FAX (509) 882-4566



December 3, 1992

Mr. Mike Smith
AER-EX, Inc.
312 Ridgeview Lane
Ellensburg, WA 98926

SUBJECT: SITE ASSESSMENT REPORT - UNIVERSITY AUTO CENTER -
ELLENSBURG, WASHINGTON

Dear Mike:

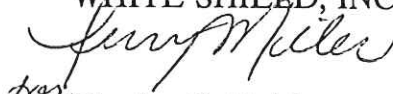
Enclosed, please find two copies of a UST closure site assessment report for the above referenced site, as required by the Washington State Department of Ecology (WSDOE). Based on the data and findings reported herein, we find no evidence of petroleum contamination exceeding WSDOE cleanup guidelines at the site.

The WSDOE requires that you retain this report for a minimum of ten years. We recommend that you retain it indefinitely. The WSDOE also requires us to submit a copy of the Underground Storage Tank Site Check/Site Assessment Checklist to the Olympia office and it is attached to this report as Appendix D.

We understand that, since you provided the decommissioning services, you will send a copy of the Underground Storage Tank Permanent Closure/Change-in-Service Checklist as required to the Olympia office of the WSDOE.

We appreciate the opportunity to provide you with technical assistance for your UST closure. Please call us at (509) 882-1144 should you have any questions or need any additional information.

Respectfully Yours,
WHITE SHIELD, INC.

for 
Charles O. Robinson,
Environment Technician

Project Number: AER-0892

cc: Department of Ecology, Olympia Headquarters
Department of Ecology, Central Regional Office

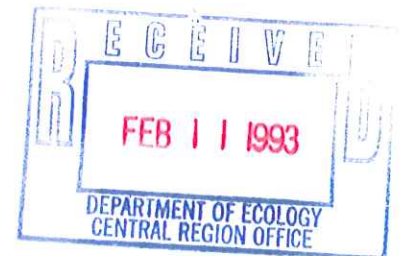


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Appendix B:	Laboratory Reports and Chain of Custody
Appendix C:	Method A Cleanup Levels as established by the <u>Model Toxics Control Act, Chapter 173-340 WAC</u>
Appendix D:	Underground Storage Tank Site Check/Site Assessment Checklist
Appendix E:	Table V: End Use Criteria for Petroleum Contaminated Soil

EXECUTIVE SUMMARY

White Shield, Inc. (WSI) provided site assessment services upon removal of two 500 gallon waste oil tanks, located at the rear of the University Auto Center, Ellensburg, WA.

Based on our visual observations, analytical laboratory analyses, site information, and interviews, we found no evidence of petroleum contamination in excess of Washington State Department of Ecology cleanup levels.

1.0 Introduction

1.1 Purpose

This report describes findings and actions taken for work associated with Underground Storage Tank (UST) removal. The work and investigation responds to regulatory requirements set forth by the United States Environmental Protection Agency (EPA) and in compliance with Chapter 173-360 WAC and Chapter 173-340 WAC of the State of Washington and enforced by the Department of Ecology (WSDOE).

1.2 Scope of Work

This report completes site assessment services provided by White Shield, Inc. (WSI), for two 500 gallon waste oil USTs at the rear of the University Auto Center. AER-EX, Incorporated provided the UST decommissioning services.

2.0 Background Information

2.1 Site Location

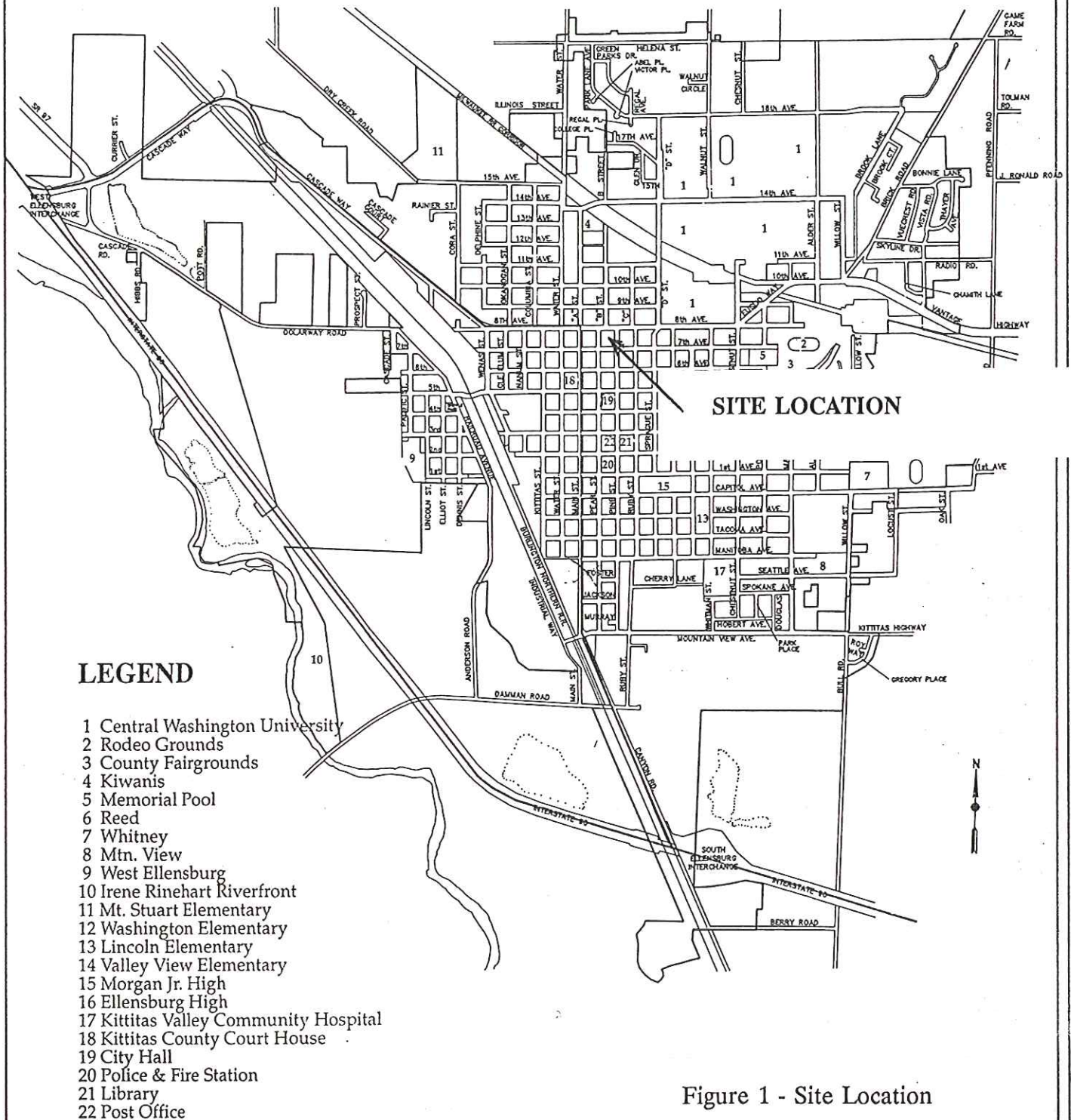
The site is located at 8th Avenue and Pearl Street in downtown Ellensburg. The site is described as the NE 1/4 Section 35, T8N, R18E, WM. Refer to Figure 1, Site Location Map.

2.2 Site Description and History

We understand that this UST system formerly supported temporary storage for waste oil generated on the site. The installation date of the USTs is unknown. They were removed on November 12, 1992 by AER-EX, Inc.

The tanks were located in the alley between Pearl Street and Pine Street at the rear of the University Auto Center Service Bays. The University Auto Center lot lies immediately to the south of the tanks. A medium density single family residential area begins on the east side of the alley. The area to the north and west is commercial. Refer Figure 2, Site Sketch and Sampling Plan.

CITY OF ELLENSBURG



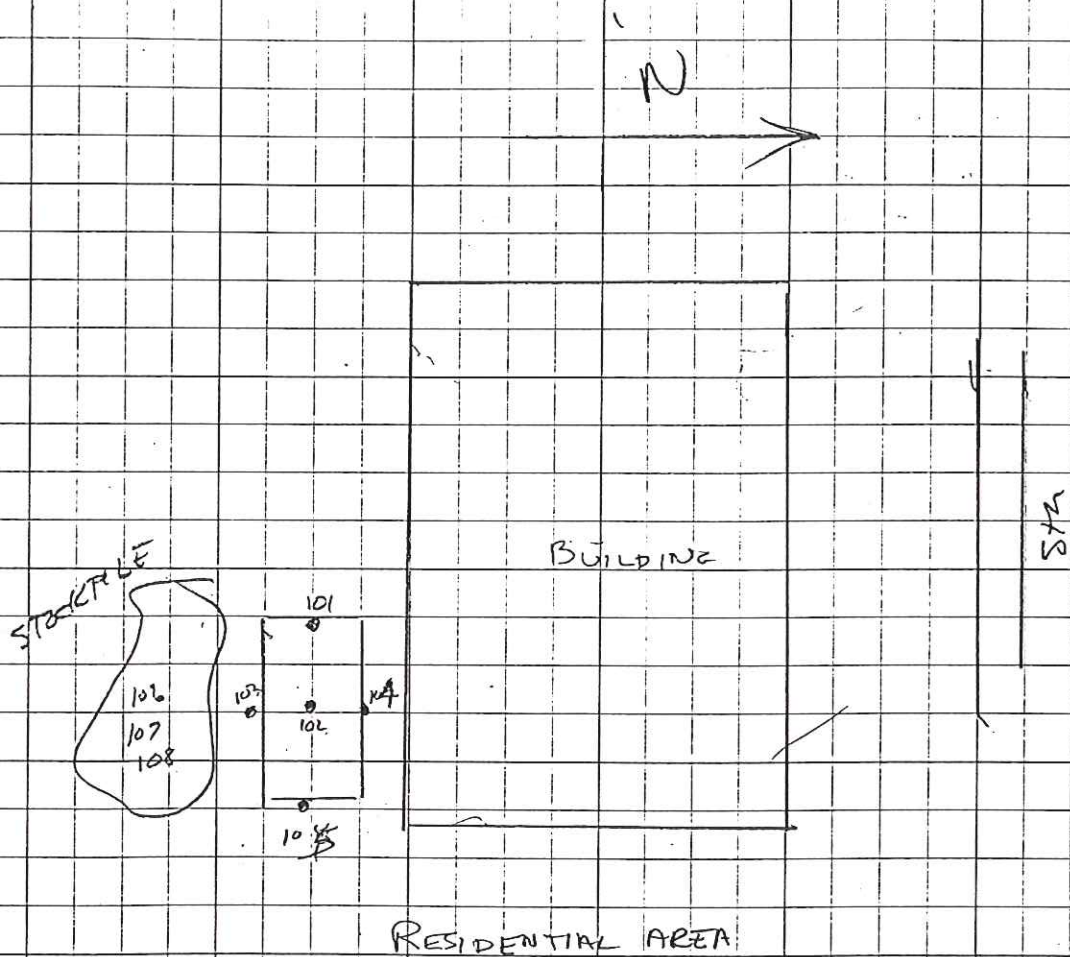


Figure 2 Site Sketch and Sampling Plan

All of the piping was completely contained within the excavation. The petroleum products were poured directly into the USTs. The bedding around the USTs consisted of native soils. The UST system contained no leak detection or secondary containment. No groundwater monitoring wells are present at the site.

2.3 Soils Description

Our inspection found the soil to be a very rocky silt loam with cobbles to 6 inches. Using the Unified Soil Classification System, the soil would probably be classified as a poorly graded gravel with a GP to GM classification.

3.0 Field Activities

3.1 General Investigative Methods

We visually inspected each UST, the soil and the fill. We also used field screening, analytical laboratory analyses, and interviews for data. The methods and general conclusions are discussed below.

3.2 Tank Inspection

We removed attached soil and scale to completely expose the tanks. With the soil and scale removed, we carefully examined each tank. The tanks were in good condition. The tanks exhibited moderate evidence of corrosion and pitting, but with no apparent holes. There were oil stains and oil coated pea gravel on the surface of the tanks, below the fill spouts, indicating that there may have been some spillage of product around the fill spouts.

3.3 Site Assessment

Charles Robinson, a site assessor registered with the Washington State Department of Ecology Underground Storage Tank Program, performed the site assessment on November 12, 1992 during and after removal of the USTs. Both tanks were contained in a single excavation approximately 6 feet x 10 feet x 7 feet deep. Soil samples from the bottom of the excavation and the four side walls were field screened using TLC screening for waste oil. The field screening detected no petroleum contamination in the soil. Based on the field screening results and the small size of the excavation, a single soil sample was collected from the bottom of the excavation between the two USTs and two composite samples from the side walls were submitted to Wy'East Environmental Sciences for laboratory analysis. Because of the excessive amount of rock in the soil, soil samples were collected in one quart

jars. The analytical results indicated that petroleum hydrocarbon concentrations fall below Model Toxics Control Act Method A cleanup guidelines.

Three soil samples were submitted for laboratory analysis from the stockpile for characterization. The stockpiled soil was removed from the site by AER-EX, Inc. immediately following the completion of the site assessment. Refer to Section 3.4.

There was no indication of groundwater within the excavation or reason to suspect groundwater contamination from this UST system.

Refer to the Field Sampling Log, Appendix A, and the sampling plan, Figure 2 for sample location and excavation extent.

As required by WSDOE, we have completed the Underground Storage Tank Site Check/Site Assessment Checklist for each tank and have enclosed them in this report as Appendix D. The Underground Storage Tank Permanent Closure/Change-in-Service Checklist as required by WSDOE will be submitted under separate cover by AER-EX, Inc.

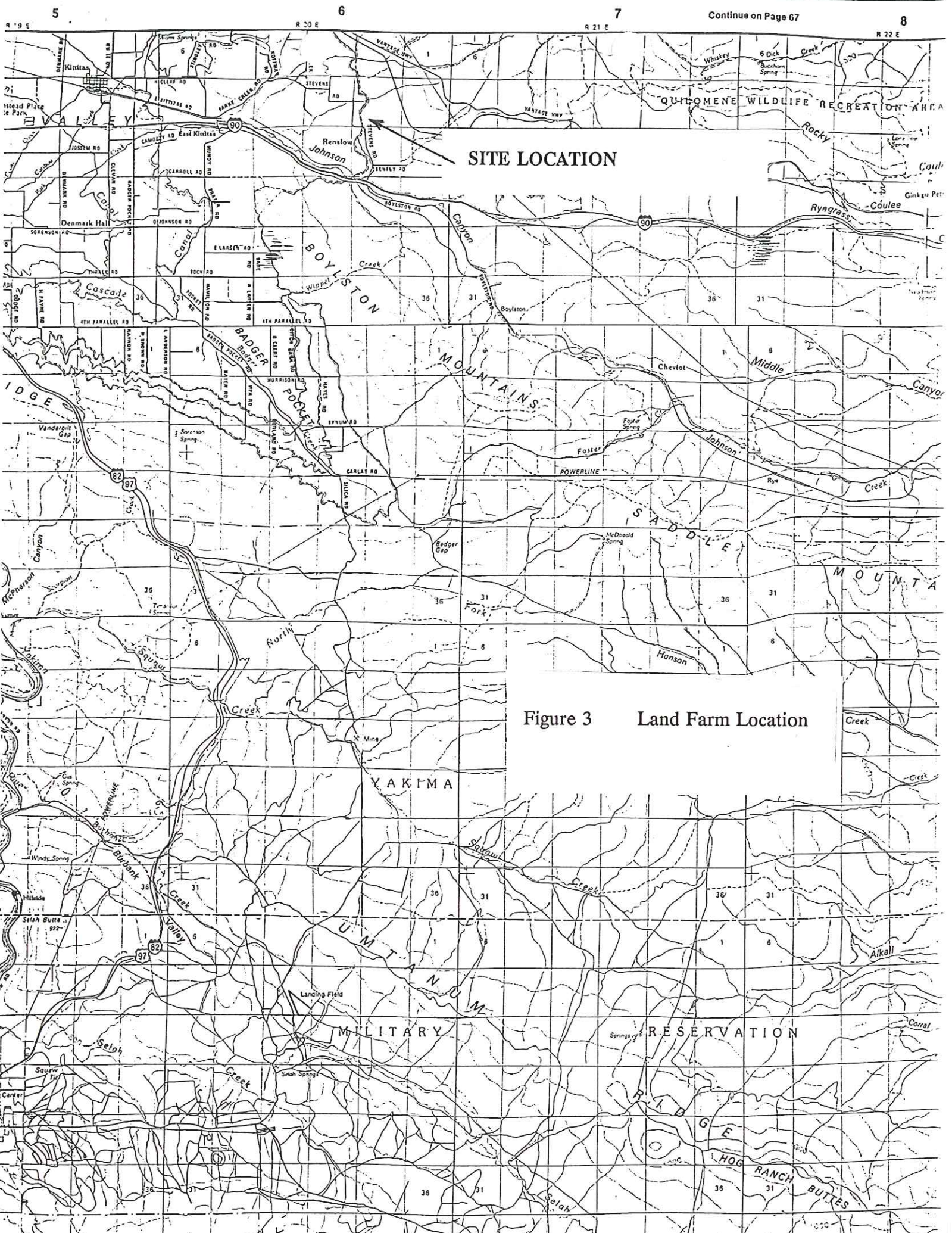
3.4 Treatment of Petroleum Contaminated Soils

The stockpiles of excavated soils were removed from the site by AER-EX, Inc. Based on the analytical results of samples AER-0892-106 through 108 from the stockpile, Appendix B, the soil is a Class 3 soil. Table V. End Use Criteria for Petroleum Contaminated Soils (Appendix E) requires disposal at permitted municipal landfill or treatment. The soil will be spread at the John Clerf property located approximately 9 miles east of Kittitas in the S 1/2, SE 1/4, Sec 11, T17N, R20E, WM, for treatment by landfarming. Refer to Figure 3 for location.

4.0 Investigative Methods

4.1 Field Screening

For field analysis of compounds containing volatile organics, WSI uses a Foxboro Organic Vapor Analyzer in conjunction with the interim headspace method as recommended by the manufacturer. This method is used to confirm the presence or absence of volatile components in the soil and provides only a rough indication of the contaminant concentrations. The analysis procedure involves:



SITE LOCATION

Figure 3 Land Farm Location

1. Selecting a clean, wide mouth jar (1 qt.) and filling the bottom 1/3 with a discrete soil sample.
2. Place aluminum foil over the top of the jar and place a ring over the jar to create a seal.
3. Boil the sample for 10 minutes. This causes the volatile compounds to become vapors and collect in the space above the soil.
4. Remove the sample from the boiling water and insert the instrument probe through the aluminum foil for vapor analysis.
5. Record the instrument response on the Field Form.

For field analysis of semi-volatile (diesel) and non-volatile compounds (motor oil), WSI uses Thin Layer Chromatography (TLC) for qualitative and quantitative analysis. This analytical technique utilizes the principle of chromatography to separate individual components for comparison to known standards.

TLC is classified as a solid-liquid chromatographic system, meaning there are two phases through which an extract of the sample is passed; a solid phase (silica gel) and a liquid phase (a solvent such as hexane).

The solid phase is stationary and is coated on a glass plate. During the chromatography process, the liquid phase carries the sample through the solid phase. The solvent moves at a fairly constant rate through the solid phase. However, the compound in the sample (analyte) are partitioned by a relative attractiveness of the analyte between the solid phase and the liquid phase. Analytes strongly attracted to the silica will remain on the silica longer and move more slowly than analytes that are not as strongly attracted to the silica. When the chromatography is stopped, the distance the analyte has moved relative to the distance the solvent has moved is used to identify the compound. When the plate is viewed under ultraviolet light, the analytes can be seen and compared to standards of known concentration for quantitative analysis.

4.2 Soil Sampling

The Sampling Plan, Figure 3 and attached Field Sampling Log (Appendix A) shows the location, depth and types of samples taken. In general, sample collection and control followed the following protocol:

1. Select a laboratory certified clean sample jar for sample collection.
2. Using clean latex gloves and clean sampling utensils (tri-sodium phosphate, chlorine solution, tap water rinse and distilled water

- rinse cycle) tightly pack the soil sample in the sample jar to the top of the jar to prevent any airspace.
3. Label the jar with the soil sample number, the type of laboratory test required, the date, name of site and sampler. The sample is then entered on the chain of custody form.
 4. Cool the sample in wet ice to approximately 4 degrees centigrade.
 5. Repack the samples for shipment to the laboratory in blue ice and a cooler.
 6. Relinquish sample to courier for shipment to the laboratory.

4.3 Soil Analysis Summary

The laboratory analysis of the composite Sample # AER-0892-101S and 103S from the west and south walls showed 48 ppm, composite Sample #AER-0892-104S and 105S, from the north and east walls showed 39 ppm heavy oil to be present. Sample #AER-0892-102S, from the bottom showed no petroleum contamination to be present.

Results of the analyses are shown in Appendix B. These results indicate contamination levels below the Model Toxics Control Act Method A Cleanup Levels for Petroleum Releases (Appendix C). The cleanup for diesel and oil is 200 ppm.

5.0 Conclusion

5.1 Summary

Based upon the analytical results and our investigation, WSI finds no evidence of petroleum concentrations remaining within the excavation on the site in excess of the Cleanup Levels as established by the Model Toxics Control Act (WAC 173-340-720).

5.2 Recommendations

WSI recommends that the petroleum contaminated soils be treated by landfarming. WSI recommends that the landfarmed soils be monitored and sampled at 3 month to 6 month intervals to determine the success of the remediation. WSI finds that no further action is necessary associated with the decommissioning of the UST system on this site.

6.0 Limitations

In performing our professional services, WSI uses a degree of care ordinarily exercised under similar circumstances by members of our profession. No warranty, expressed or implied, is made or intended. Our conclusions and recommendations, developed from our field and laboratory investigation reported herein, are based upon this firm's understanding of the project and are in concurrence with generally accepted practice.

APPENDIX A
Field Sampling Log

AER-0897

21

APPENDIX B
Laboratory Reports and Chain of Custody

SUMMARY OF SAMPLE ANALYSIS

UNIVERSITY AUTO - ELLENSBURG, WA - PROJECT #AER-0892

SITE ASSESSMENT - NOVEMBER 12, 1991

SAMPLE	LOCATION	DEPTH	MATRIX	WTPH-418.1	
				ppm	
AER-0892-101S	West Wall	5	Soil	48	Composite
AER-0892-103S	South Wall	5	Soil		
AER-0892-104S	North Wall	5	Soil	39	Composite
AER-0892-105S	East Wall	5	Soil		
AER-0892-102S	Bottom	7	Soil	ND	
AER-0892-106S	Stockpile	--	Soil	1158	
AER-0892-107S	Stockpile	--	Soil	648	
AER-0892-108S	Stockpile	--	Soil	914	

Laboratory Reporting Limit:

WTPH-418.1 Modified: 100 ppm

LABORATORY REPORT

White Shield, Inc.
PO Box 477
Grand View, WA 98930

PROJECT NAME / SITE: University Auto **REPORT NUMBER:** 11582
PROJECT NUMBER: AER-0892 **REPORT DATE:** 11-20-92
EXTRACTION DATE: 11-18-92 for Lab ID 7482-7487
11-19-92 for Lab ID 7488-7489

WASHINGTON TPH-418.1 MODIFIED

Analyte: Total Heavy Oils Quantification, Dry Weight Basis

Reporting Limit: 100 mg/Kg (ppm)

Field ID	Lab ID	Matrix	Sample
	C=composite sample		mg/Kg (ppm)
AER-0892-101 S + 103 S	7482-7483 C	SOIL	48
AER-0892-102 S	7484	SOIL	ND
AER-0892-104 S + 105 S	7485-7486 C	SOIL	39
AER-0892-106 SP	7487	SOIL	1158
AER-0892-107 SP	7488	SOIL	648
AER-0892-108 SP	7489	SOIL	914
BLANK	-	-	ND

ND Not Detected (below reporting limit or detection limit)

WY'EST ENVIRONMENTAL SCIENCES, INC.

1128 S.W. 13th.

Portland, OR 97205

(503) 223-2737 FAX: 223-6168

CHAIN OF CUSTODY

2005

PROJECT #	AER-0892	PROJECT NAME:	University Auto	P.O. #	TODAY'S DATE:
COMPANY NAME:	White Shield			PHONE: 509-882-1144	
REPORT ATTENTION:	Chuck Robinson			FAX: 509-882-4566	
SAMPLES COLLECTED BY:	Chuck Robinson	DATE COLLECTED:	11/12/92	TIME COLLECTED:	
FIELD I.D.	MEDIA (SOIL, WATER...)	CONTAINER PRESERVATIVE (VOA VIAL, 9 oz. JAR...) (° C, HCL, ...)	ANALYSIS REQUIRED	LAB I.D.	
AER-0892-1013	w. wall	Soil	WTPH-418.1 } Composite	7482	
AER-0892-1035	s. wall	Soil	WTPH-418.1 }	7483	
AER-0892-1025	Bottom	Soil	WTPH-418.1	7484	
AER-0892-1045	N. Wall	Soil	WTPH-418.1 } Composite	7485	
AER-0892-1055	E. Wall	Soil	WTPH-418.1 }	7486	
AER-0892-106SP	Stackpile	Soil	WTPH-418.1	7487	
AER-0892-107SP	Stackpile	Soil	WTPH-418.1	7488	
AER-0892-108SP	Stackpile	Soil	WTPH-418.1	7489	
RELINQUISHED BY:	[Signature]	DATE/TIME	11-16-92	RECEIVED BY:	Chris Bangor
RELINQUISHED BY:	[Signature]	DATE/TIME	11-16-92	RECEIVED BY LAB:	
REMARKS:				UPS	FED-EX GREYHOUND MAIL

WHITE COPY - WY-EAST ENVIRONMENTAL SCIENCES INC.

PINK COPY - CLIENTS COPY

APPENDIX C
Method A Cleanup Levels

Table 2

Method A Cleanup Levels - Soil ^a

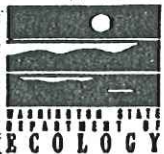
Hazardous Substance	CAS Number	Cleanup Level
Arsenic	7440-38-2	20.0 mg/kg ^b
Benzene	71-43-2	0.5 mg/kg ^c
Cadmium	7440-43-9	2.0 mg/kg ^d
Chromium	7440-47-3	100.0 mg/kg ^e
DDT	50-29-3	1.0 mg/kg ^f
Ethylbenzene	100-41-4	20.0 mg/kg ^g
Ethylene dibromide	106-93-4	0.001 mg/kg ^h
Lead	7439-92-1	250.0 mg/kg ⁱ
Lindane	58-89-9	1.0 mg/kg ^j
Methylene chloride	75-09-2	0.5 mg/kg ^k
Mercury (inorganic)	7439-97-6	1.0 mg/kg ^l
PAHs (carcinogenic)		1.0 mg/kg ^m
PCB Mixtures		1.0 mg/kg ⁿ
Tetrachloroethylene	127-18-4	0.5 mg/kg ^o
Toluene	108-88-3	40.0 mg/kg ^p
TPH (gasoline)		100.0 mg/kg ^q
TPH (diesel)		200.0 mg/kg ^r
TPH (other)		200.0 mg/kg ^s
1,1,1 Trichloroethane	71-55-6	20.0 mg/kg ^t
Trichloroethylene	79-01-5	0.5 mg/kg ^u
Xylenes	1330-20-7	20.0 mg/kg ^v

^a Caution on misusing method A tables. Method A tables have been developed for specific purposes. They are intended to provide conservative cleanup levels for sites undergoing routine cleanup actions or those sites with relatively few hazardous substances. The tables may not be appropriate for defining cleanup levels at other sites. For these reasons, the values in these tables should not automatically be used to define cleanup levels that must be met for financial, real estate, insurance coverage or placement, or similar transactions or purposes. Exceedances of the values in these tables do not necessarily trigger requirements for cleanup action under this chapter.

^b Arsenic. Cleanup level based on background concentrations in the state of Washington.

^c Benzene. Cleanup level based on protection of ground water.

APPENDIX D
UST Site Check/Site Assessment Checklist



UNDERGROUND STORAGE TANK Site Check/Site Assessment Checklist

For Office Use Only

Owner # _____

Site # _____

INSTRUCTIONS:

When a release has **not** been confirmed and reported, this Site Check/Site Assessment **must** be completed and signed by a person registered with Ecology. The results of the site check or site assessment **must** be included with this checklist. This form must be submitted to Ecology at the address shown below within 30 days after completion of the site check/site assessment.

DEPARTMENT OF ECOLOGY
UNDERGROUND STORAGE TANKS

DEC 07 1992

SITE INFORMATION: Include the Ecology site ID number if the tanks are registered with Ecology. This number may be found on the tank owner's invoice or tank permit.

TANK INFORMATION: Please list all tanks for which the site check or site assessment is being conducted. Use the owner's tank ID numbers if available, and indicate tank capacity and substance stored.

REASON FOR CONDUCTING SITE CHECK/SITE ASSESSMENT: Please check the appropriate item.

CHECKLIST: Please initial each item in the appropriate box.

SITE ASSESSOR INFORMATION: This form must be signed by the registered site assessor who is responsible for conducting the site check/site assessment.

Underground Storage Tank Section
Department of Ecology
P. O. Box 47655
Olympia, WA 98504-7655

SITE INFORMATION

Site ID Number (on invoice or available from Ecology if the tanks are registered): 001829

Site/Business Name: University Auto Center

Site Address: 8th & Pearl Telephone: (509) 925-1455

Ellensburg

Street

WA

98926

City

State

ZIP-Code

TANK INFORMATION

Tank ID No.

Tank Capacity

Substance Stored

1 WASTE OIL 500 Waste Oil

2 WASTE OIL 500 Waste Oil

REASON FOR CONDUCTING SITE CHECK/SITE ASSESSMENT

Check one:

☐ Investigate suspected release due to on-site environmental contamination

☐ Investigate suspected release due to off-site environmental contamination.

☐ Extend temporary closure of UST system for more than 12 months.

☐ UST system undergoing change-in-service.

☐ UST system permanently closed-in-place.

☒ UST system permanently closed with tank removed.

☐ Abandoned tank containing product.

☐ Required by Ecology or delegated agency for UST system closed before 12/22/88.

☐ Other (describe): _____

APPENDIX E

Table V: End Use Criteria for Petroleum Contaminated Soil

TABLE V. END USE CRITERIA FOR PETROLEUM-CONTAMINATED SOILS

Analyte	Analytical Method	Soil Class (ppm)			
		1	2	3	4
Heavy fuel hydrocarbons (C24-C30)	WTPH-418.1 mod.	<60	60-200	200-2000	>2000
Diesel (C12-C24)	WTPH-D	<25	25-200	200-500	>500
Gasoline (C6-C12)	WTPH-G	<5	5-100	100-250	>250
Benzene	8020	<0.005	0.005-0.5	≤0.5	>0.5
Ethylbenzene	8020	<0.005	0.005-20	≤20	>20
Toluene	8020	<0.005	0.005-40	≤40	>40
Xylenes (total)	8020	<0.005	0.005-20	≤20	>20

Treatment is recommended for all Class 3 and 4 soils.

NOTES:

Class 1 Soil Uses:

Any use which will not cause threat to human health or the environment.

Class 2 Soil Uses:

Backfill at the cleanup site

Fill in commercial or industrial areas

Cover or fill in permitted landfills

Road subgrade or other road construction fill

Fill in or near: wetlands, surface water, ground water, drinking water wells or utility trenches is NOT recommended. Use as residential topsoil is also NOT recommended.

Class 3 Soil Uses:

Treatment

Disposal at the original site (no solid waste disposal permit needed)

Road construction (no solid waste disposal permit needed)

Use or disposal in permitted, municipal landfills

Permitted as a new PCS landfill

(An evaluation should be made to ensure that disposal will not cause a threat to human health or the environment, e.g. use near water bodies)

Class 4 Soil Uses:

Treatment

Disposal in a permitted, municipal landfill

Permitted as a new PCS landfill



Fulcrum Environmental Consulting, Inc.
406 North Second Street, Yakima, Washington 98901
Phone: (509) 574-0839 Fax: (509) 575-8453

MEMO

To: Toxics Program
Washington State Department of Ecology

February 1, 2008
Page 1 of 1

From: Ryan Mathews
Fulcrum Environmental Consulting, Inc.

RE: UST Investigation Report

Enclosed please find one bound copy of the Underground Storage Tank Investigation report for the tank investigation conducted at the Former University Auto Dealership site located at 100 East University Way in Ellensburg, Washington.

If you should have any questions, please feel free to call me at 574-0839.



Previous closure
Site 001829
F.S. 65863261
LEAST SITE



UNDERGROUND STORAGE TANK INVESTIGATION REPORT

Former University Auto Dealership
100 East University Way
Ellensburg, Washington


/d

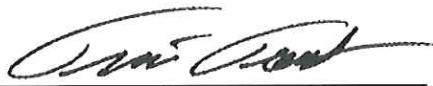
Project Number 07-498

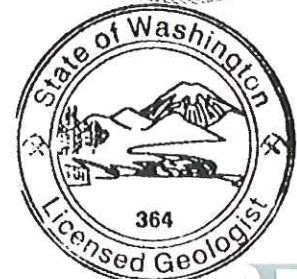
January 31, 2008

Prepared for: Allen Faltus
University Auto Center
P.O. Box 619
Ellensburg, Washington 98942

Prepared by: Fulcrum Environmental Consulting, Inc.
406 North Second Street
Yakima, Washington 98901-2361
(509) 574-0839

Authored by:  **Date:** 01/31/2008
Ryan K. Mathews, CHMM, Project Manager
Certified UST Site Assessor #5071810.U7

Reviewed by:  **Date:** 01/31/2008
Travis L. Trent, PG, Managing Principal
Certified UST Site Assessor #1059647-U7



Travis Lyle Trent

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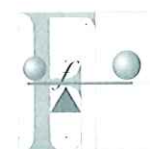
TABLES

Table 1: Laboratory Results – Former University Auto Center Site	5
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FIGURES & APPENDICES

Figure 1: General Site Map
Figure 2: Subject Site Map
Figure 3: Excavation and Sample Locations Map

Appendix A Personnel Certificates
Appendix B Site Photographs
Appendix C Laboratory Analytical Results
Appendix D UST Site Check/Site Assessment Checklist



EXECUTIVE SUMMARY

On November 19 and 20, 2007, Fulcrum Environmental Consulting, Inc. (Fulcrum), completed underground storage tank (UST) investigation activities at the former University Auto Center sales and dealership site located on University Way in Ellensburg, Washington.

Purpose of the investigation was to confirm past removal and to complete site assessment investigations of three USTs historically located west of the site building (historic UST basin). The tanks were reported to have been associated with a gasoline service station that operated at the site prior to acquisition by University Auto.

Excavation activities were completed by Belsaas & Smith, Inc. and included removal of asphalt or concrete surfacing, excavation of site soils, and backfilling of the site.

Although use of the tanks pre-dates current Washington State Department of Ecology (Ecology) regulations, Fulcrum performed and provided site services consistent with Ecology's UST Site Assessment regulations. Fulcrum collected soil samples at select locations along the bottom and sidewalls of the excavation, below accessible portions of UST system piping, adjacent to the historic fuel dispensers, and from excavated soils.

Soil sampling locations were collected consistent with Ecology guidelines. Samples were analyzed by Libby Environmental for gasoline; benzene, toluene, ethylbenzene, xylene (BTEX); diesel; and lead. Except for naturally occurring concentrations of lead, no contaminants were identified at concentrations above method detection limits.

Fulcrum's investigation confirmed that each of the three USTs had been previously removed from the area west of the University Auto Dealership site. No indications of a release to the environment from the historic site USTs, portions of piping investigation, or adjacent to the dispenser island were identified.



1.0 INTRODUCTION

On November 19 and 20, 2007, Fulcrum Environmental Consulting, Inc. (Fulcrum) completed investigation and sampling of three previously removed underground storage tanks (UST) from the Former University Auto Dealership site. The site is located at 100 East University in Ellensburg, Washington. See Figure 1 for the general site location. Fulcrum was retained by University Auto Center to complete the project scope of work. Purpose of the investigation was to confirm past removal and to complete site assessment investigations of three USTs historically located west of the site building. The tanks were reported to have been associated with a gasoline service station that operated at the site prior to property acquisition by University Auto Center.

No information suggesting that the tanks had leaked or otherwise resulted in a release to the environment prior to their removal was identified during this investigation. Although the tanks pre-date regulations for a UST Site Assessment, Fulcrum has preformed this investigation consistent with Washington State Department of Ecology (Ecology) UST Site Assessment requirements.

2.0 SCOPE OF WORK

Fulcrum was retained by University Auto Center to complete a UST site assessment of three historically removed USTs. Purpose of the investigation was to confirm past removal and to confirm absence of residual contamination. Fulcrum's scope of work for this project included oversight of excavation activities, investigation of the tank basin, sampling of the former tank basin and excavated soils, sub-contract analysis of confirmatory samples, and project reporting. Ryan Mathews of Fulcrum was the Certified UST Site Assessor (Certificate No: 5071810.U7) for the project. See Appendix A for professional certifications. Belsaas & Smith, Inc. was retained by University Auto Center to remove asphalt and concrete surfacing, excavate site soils, assist in Fulcrum's investigation, and backfill the site to the owner's specifications.

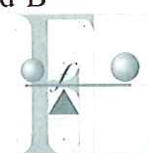
3.0 DISCUSSION OF PERTINENT REGULATIONS AND GUIDANCE

3.1 UST Guidance

Washington Administrative Code (WAC) 360-173-190 provides requirements for completion of UST site assessment services in the State of Washington. Because the tanks were last used more than 30-years ago, regulations requiring the completion of a site check or site assessment do not directly apply. However, these regulations represent the standard of care for UST investigations in the State of Washington and as such, were followed to the extent possible in the absence of the actual tanks.

3.2 MTCA Regulations

In March of 1989, the Model Toxics Control Act (MTCA) went into effect in Washington State. The MTCA regulations set standards to ensure quality of cleanup and protection of human health and the environment. A major portion of the MTCA regulation (completed in 1991) was the development of numerical cleanup standards and requirements for cleanup actions. Three options were established under MTCA for site-specific cleanup levels: Method A, B, and C. Method A defines cleanup levels for 25 of the most common hazardous substances found at sites. Method B



levels are set using a site risk assessment, which enables consideration of site-specific characteristics. Method C is similar to Method B, however the individual substance's cancer risk portion of the assessment is set at 1 in 100,000 rather than 1 in 1,000,000.

Rule amendments to MTCA, which became effective August 15, 2001, changed the cleanup levels of petroleum hydrocarbon contamination. Whereas diesel and heavy oil concentrations were increased, the MTCA Method A cleanup levels for gasoline and gasoline components (Benzene, Toluene, Ethylbenzene, and Xylene) were lowered significantly.

3.3 Cleanup Standard Selected

Washington State Department of Ecology's (Ecology) MTCA Method A cleanup tables were developed to provide conservative cleanup levels for sites undergoing routine cleanup actions or those sites with relatively few hazardous substances. Method A cleanup levels are specifically designated as appropriate for residential facilities and are appropriate for a conservative approach at commercial sites. Therefore, Fulcrum has determined that Ecology's MTCA Method A cleanup levels to be the most appropriate regulatory guidance for evaluating the need for site cleanup at the subject site.

4.0 ENVIRONMENTAL SETTING

4.1 Regional Setting

The site is located within the Kittitas Valley, present on the western margin of the Columbia Plateau, an extensive featureless plain overlain by middle Tertiary basaltic lava interlayered with sedimentary materials. Regional geomorphology is dominated by the east/west trending anticline and syncline structures of the Yakima fold belt, the erosional effects of the Columbia River and its tributaries, and the complex faults and uplift of the North Cascades. Large-scale alluvial features associated with the Spokane floods, glacial deposits, and windborn loess deposits dominate the near surface geology of this portion of the Columbia Plateau.

Groundwater flow direction is a function of localized variations in geology and topography but overall trends in a south to southeast direction in the area of the subject site. Well logs located at the Washington State Department of Ecology were reviewed to assess depth to groundwater reported at depths from 8-feet (ft.) below ground surface (bgs) to 10-ft. bgs. Local groundwater depth will vary as rainfall and irrigation practices affect the level of water.

4.2 Site Setting

The former University Auto Center dealership site is located at 100 East University Way in Ellensburg, Washington, within the Kittitas Valley in Central Washington State. Historically, the site was recognized as 100 West 8th Avenue. The site is located one block east of Main Street, in the north central portion of Ellensburg, Washington and is approximately 1,560-ft. above sea level.

Properties adjacent to the site are primarily of commercial in use. Central Washington University is located north and east of the site. The site is located along a commercial portion of North Main that connects the downtown area of Ellensburg with Interstate 90. See Figure 2 for subject site location.



Historically, the site was located near the crossroads of U.S. Highway 97 and Vantage Highway, predecessors to U.S. Interstate 90 and U.S. Interstate 82. Businesses at the crossroads included automotive fueling and service stations and other traveler amenities and restaurants. Following construction of the interstates, these businesses moved south and west near Interstate 90.

The majority of soil at the site was present beneath an impermeable cover. A layer of asphalt parking lot covers soil on the exterior of the building. Site soils included sands, clays, and cobbles.

5.0 BACKGROUND

Allen Faltus, with University Auto Center, was the primary contact for the project and can be reached at (509) 962-7151.

Mr. Faltus reported that the three USTs were last used in the 1970s or 1980s. He believed the USTs to have been used for gasoline storage associated with the onsite fueling station. Mr. Faltus recalled that during the 1970s energy crisis, the tanks may have been used by a local fuel distributor for temporary storage of diesel fuel or heating oil. Mr. Faltus was unable to recall the capacity of the USTs, but believed them to be of at least 3,000-gallon capacity and each of the same relative size. A dispenser island, with two dispensers, was historically located north of the site building. Mr. Faltus was unable to recall the orientation, direction, and spacing of the USTs.

Upon acquisition of the site by University Auto fueling services ceased. Subsequently, the canopy, standards, and dispensers were removed from the site and the site building was renovated.

Two underground storage tanks; a used oil/waste oil and a heating oil, each reported to be less than 1,000 gallons, were previously removed from the site under a separate project. No additional investigation of these USTs was completed as a portion of this investigation as these USTs have been separately investigated and reported by others.

6.0 SITE INVESTIGATION

On October 8, 2007, Ryan Mathews of Fulcrum, Allen Faltus of University Auto Center, and Russ Smith of Belssas & Smith, Inc. reviewed site conditions. The area of the historic UST basin was observed to be located west of the site building. At the southwest corner of the building, three vent pipes, each approximately 2.5-inches in diameter, remained attached to the building. Cracking and slight depressions in the asphalt parking area generally coincided with the reported former location of the USTs.

On November 19, and November 20, 2007, Ryan Mathews, along with Mr. Faltus, Mr. Smith and Paul Rugh, operator with Belsass & Smith, arrived onsite. Mr. Mathews completed a review of the proposed investigation activities and site-specific safety and health considerations.

Asphalt parking lot coverings had been previously removed by Belsaas & Smith from the approximate extents of the former UST basin. Below the asphalt covering, approximately 2 to 4-inches of gray crushed gravel was present.



Excavation activities began at the southeastern corner of the former UST basin, and continued in a northerly direction. The easterly north-south excavation was completed during the first day of site activities. Following sample collection, in all except the northeast portion of the excavation, stockpiled soils were returned to the excavation to prevent sloughing of the east sidewall and the potential of undermining the sidewalk or site building.

Subsequently on November 20, 2007, excavation activities began from the southwest corner to the northwest corner of the former UST basin. Less than 6-feet of soil was present at any location between the two roughly shaped north-south trenches. During excavation activities both trenches were connected near the center of the former UST basin. See Figure 3 for excavation diagram. See Appendix B for site photographs.

The three vent pipes attached to the southeast corner of the building were removed from the building and the remaining portions of underground piping, along the south portion of the excavation, were removed. Extent of piping was limited to a few feet of length into the excavation and did not assist in identifying the historic orientation of the USTs.

Visible delineation was present between native soils and imported backfill. Native soils were observed to consist primarily of brown clayey loam. Imported soils consisted of medium brown colored soil of poorly sorted gravels and cobbles intermixed in sandy loam. Density of cobbles decreased with depth of excavation. Concrete, asphalt, and metal piping debris was encountered in backfilled soils and appeared to be consistent with materials that might be generated during the excavation and removal of the USTs.

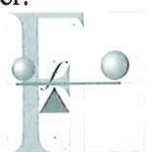
Excavation bottom and sidewall samples were preferentially collected from native soils adjacent to the native and imported soil boundary. Along the north boundary of the excavation, segments of piping or identifiable voids were identified consistent with UST System piping. Soil samples from the excavation sidewalls were preferentially selected from below these areas to assist in evaluation of potential for a release from UST system piping. See Section 7.0 for sampling information.

No odors typical of gasoline or BTEX constituents were noted during site excavation. No UST or other fuel tanks were identified within the excavation. Except for a localized area of gray discoloration, no indications of a release to the environmental, such as soil staining or petroleum odors, were noted within the removed soil.

An area of gray discoloration was visible along the north boundary of the site. A slight diesel odor was apparent. Following localized investigation at the area of discoloration, no additional material was identified. Subsequent excavation in sloughed soils did not locate the discolored soil. Extent of discolored soil was estimated to be less than 1 cubic foot of soil and was determined to be a de minimis condition.

7.0 SAMPLE COLLECTION

Soil samples were collected from the excavation and stockpiled soils and were labeled 111907-01 through 111907-10 and 112007-11 through 112007-21. Samples were collected and placed in containers based on the analysis to be performed. Sampling containers utilized included 4-ounce borosilicate glass jars with Teflon lined lids and 40-milliliter glass vials collected by impinger sampler.



Each 4-ounce soil sample was obtained by either direct collection or by a grab sample from a backhoe bucket of soil collected from the desired location. All direct collection samples were collected by hand using new nitrile gloves. Samples collected from backhoe bucket were obtained from the relatively undisturbed soil between the teeth by hand using new nitrile gloves.

Each 40-milliliter vial sample was collected using an impinger sampler to minimize loss of volatile organic compounds. Disposable, single-use impingers were utilized to collect a measured soil sample of undisturbed soil. Following each sample collection, the sample was immediately placed into a new 40-milliliter vial. Consistent with Ecology guidance, sample preparation, including extraction by Methanol was completed at the laboratory within 24-hours of sample collection.

The 4-ounce jars were utilized for analysis by Northwest Total Petroleum Hydrocarbon (NWTPH) Diesel Extended (Dx Ext) analysis and for lead by Environmental Protection Agency (EPA) Method 7000 series. The 40-milliliter glass vials were utilized for NWTPH-Gasoline (Gx) and benzene, toluene, ethylbenzene, and xylenes (BTEX) analysis. All samples for laboratory analysis were deposited into labeled containers, packaged with ice, and delivered under chain-of-custody by common carrier to the laboratory.

Samples were shipped via common carrier under chain-of-custody to Libby Environmental, LLC (Libby) located in Olympia, Washington for analysis. Libby subcontracted portions of laboratory analysis to a third-party laboratory. See Appendix C for laboratory analytical results.

8.0 LABORATORY RESULTS

Laboratory results were received from Libby on November 28, 2007 and December 17, 2007. Received samples included analysis for NWTPH-Dx, NWTPH-Gx, BTEX, and lead.

Table 1: Laboratory Results – Former University Auto Center Site

Sample Number/Description	Analyte ¹								
	Gasoline	Benzene	Toluene	Ethylbenzene	Xylenes	Diesel	Mineral Oil	Oil	Lead
111907-01: Excavation Bottom, Southeast, 12.5-ft. bgs.	ND	ND	ND	ND	ND	ND	ND	ND	ND
111907-02: Southeast trench, south sidewall, 6-ft. bgs.	ND	ND	ND	ND	ND	ND	ND	ND	5.9
111907-03: Excavation Bottom, East Center, 12-ft. bgs.	ND	ND	ND	ND	ND	ND	ND	ND	ND
111907-04: East Trench, North sidewall, 6-ft. bgs.	ND	ND	ND	ND	ND	ND	ND	ND	ND
111907-05: Stockpile, Southeast	ND	ND	ND	ND	ND	ND	ND	ND	ND
111907-06: Stockpile, West Center	ND	ND	ND	ND	ND	ND	ND	ND	ND

¹ = Parts per million ND = None Detected



Table 1: Laboratory Results – Former University Auto Center Site (Continued)

Sample Number/Description	Analyte ¹								
	Gasoline	Benzene	Toluene	Ethylbenzene	Xylenes	Diesel	Mineral Oil	Oil	Lead
111907-07: Stockpile, North	ND	ND	ND	ND	ND	ND	ND	ND	ND
111907-08: Excavation Bottom, West Trench, 12.5-ft. bgs.	ND	ND	ND	ND	ND	ND	ND	ND	ND
111907-09: West Trench, West Sidewall, 6-ft. bgs.	ND	ND	ND	ND	ND	ND	ND	ND	8.7
111907-10: West Trench, South Sidewall, 6-ft. bgs.	ND	ND	ND	ND	ND	ND	ND	ND	ND
112007-11: Overburden Soil, North Stockpile, South	-	-	-	-	-	ND	ND	ND	-
112007-12: Overburden Soil, North Stockpile, East	-	-	-	-	-				-
112007-13: Overburden Soil, North Stockpile, North	-	-	-	-	-				-
112007-14: Dispenser Location, West Extent, 3-ft. bgs.	ND	ND	ND	ND	ND	ND	ND	ND	ND
112007-15: Dispenser Location, East/Center Extent, 3-ft. bgs.	ND	ND	ND	ND	ND	ND	ND	ND	ND
112007-16: West Trench, North Sidewall, 6-ft. bgs.	ND	ND	ND	ND	ND	ND	ND	ND	ND
112007-17: Excavation Bottom, Northwest. 10-ft. bgs.	ND	ND	ND	ND	ND	ND	ND	ND	ND
112007-18: West Stockpile, South	-	-	-	-	-	ND	ND	ND	ND
112007-19: West Stockpile, Center	-	-	-	-	-				ND
112007-20: West Stockpile, North	-	-	-	-	-				6
112007-21: West Trench, North Sidewall Below Piping, 4-ft. bgs.	ND	ND	ND	ND	ND	ND	ND	ND	ND
MTCA Method A Cleanup Level	30/100	0.03	7	6	9	2,000	4,000	2,000	250

¹ = Parts per million ND = None Detected - = Sample Not Analyzed

Laboratory results did not identified any detectable constituents in the submitted samples.

9.0 RESULTS AND CONCLUSIONS

Fulcrum was retained by University Auto Center to complete a UST site assessment of three USTs historically removed from the former University Auto Dealership site located at 100 East University Way in Ellensburg, Washington. Purpose of the investigation was to confirm past removal and to complete site assessment investigations of three USTs historically located west of the site building. The tanks were reported to have been associated with a gasoline service station that operated at the site prior to acquisition by University Auto.



Although use of the tanks pre-dates current Ecology regulations, Fulcrum performed and provided site services consistent with Ecology's UST Site Assessment regulations. Fulcrum collected soil samples at select locations along the bottom and sidewalls of the excavation, below accessible portion of UST system piping, adjacent to the historic fuel dispensers, and from excavated soils. Laboratory analysis was completed for diesel, heavy oil, oil, lead, gasoline, benzene, toluene, ethylbenzene, and xylenes. Except for naturally occurring levels of lead in site soils, all tested contaminants were below method detection limits.

Fulcrum's investigation confirmed that each of the three USTs had been previously removed from the area west of the University Auto Dealership building. No indications of a release to the environment or residual petroleum hydrocarbon or lead impact from the historic site USTs, portions of piping investigation, or adjacent to the dispenser island were identified.

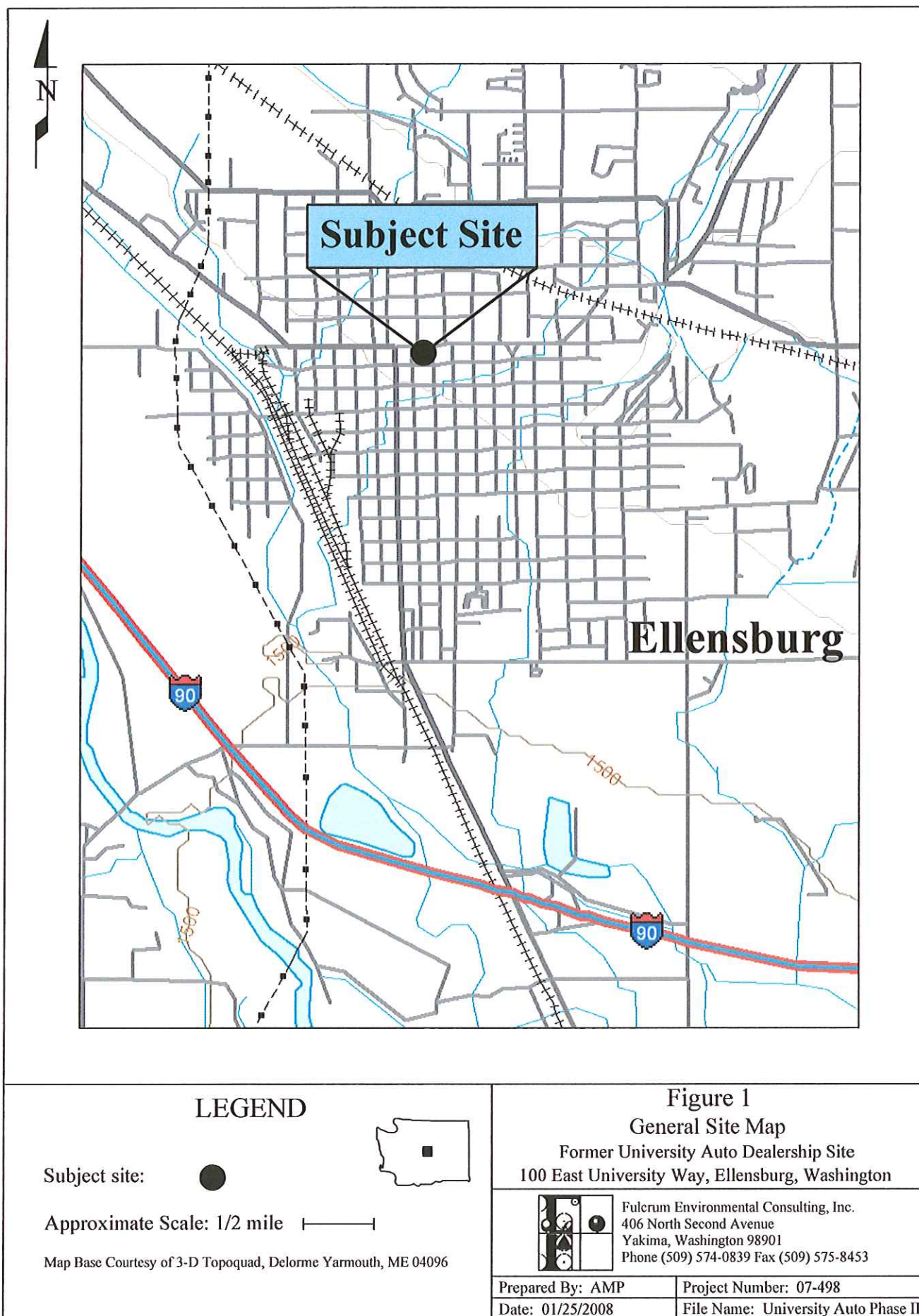
10.0 LIMITATIONS

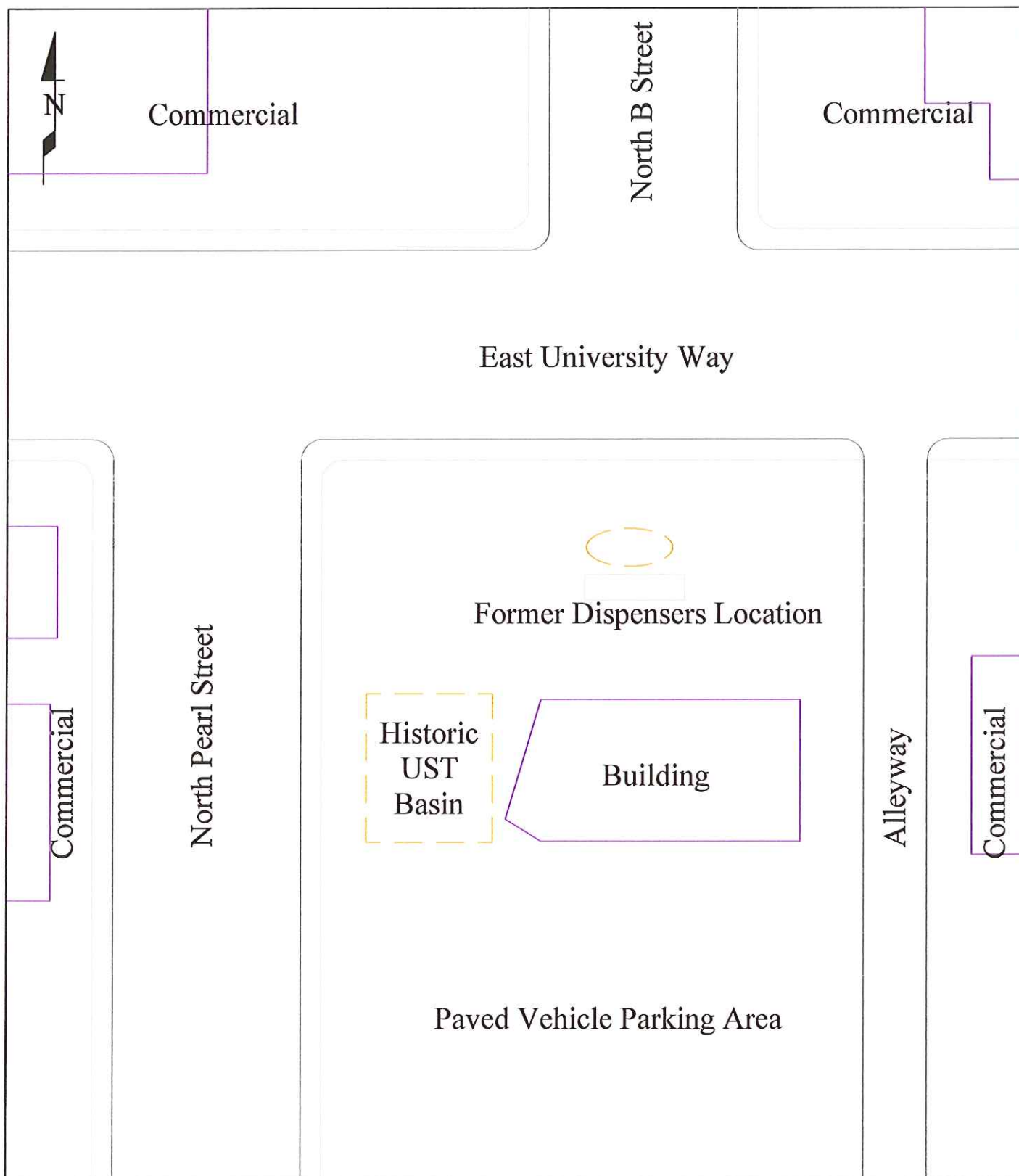
Fulcrum Environmental Consulting, Inc. has performed professional services in accordance with generally accepted professional consulting principles and practices. No other warranty, expressed or implied, is made. The conclusions and recommendations are based upon our field observations, field screening, and independent laboratory analysis. The scope of services for this project is limited to the investigation of the historic location of three underground storage tanks located west of the University Auto Dealership site building and limited investigation of UST system piping, and the historic dispenser location.

Site assessment services included observation of removal activities, site investigation, and sample collection. Tank cleaning and removal activities were not included within Fulcrum's scope of services. Fulcrum makes no warranties expressed or implied as to the accuracy or completeness of other's work included or referenced herein, nor the use of segregated portions of this report. This document does not imply that the property is free of other environmental concerns. This report is solely for the use and information of our client. Any reliance on this report by a third party is at that party's sole risk.

Opinions and recommendations contained in this report apply to conditions existing at the time services were performed. Fulcrum Environmental Consulting, Inc. is not responsible for the impact of changes in environmental standards, practices, or regulations subsequent to the performance of services. Fulcrum Environmental Consulting, Inc. assumes no liability for conditions that were not included in our scope of services, or conditions not generally recognized as predictable when services were performed.







Legend

Excavation Sites:



Scale: NTS

Figure 2 Subject Site Map

Former University Auto
Dealership Site
100 East University Way
Ellensburg, Washington



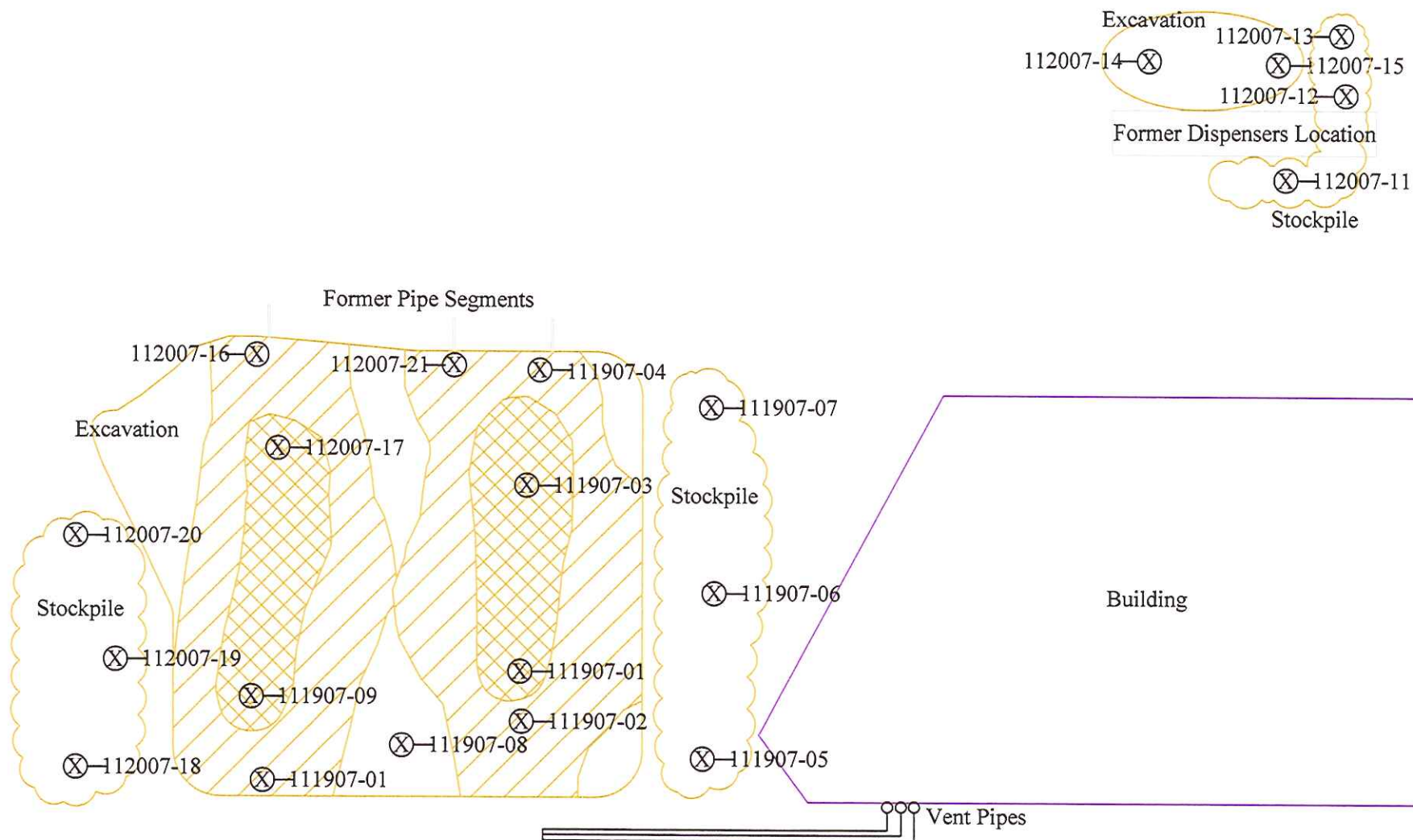
Fulcrum Environmental Consulting, Inc.
406 North Second Street
Yakima, Washington 98901
Phone (509) 574-0839 Fax (509) 575-8453

Drawn by: AMP

Project Number: 07-498

Date: 01/28/2008

File Name: University Auto Phase II



Legend

Sample Locations:
Pit Bottom:
Lesser Elevation:
Scale: NTS

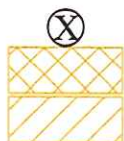


Figure 3 Excavation & Sample Locations Map

Former University Auto Dealership Site
100 East University Way
Ellensburg, Washington



Fulcrum Environmental Consulting, Inc.
406 North Second Street
Yakima, Washington 98901
Phone (509) 574-0839 Fax (509) 575-8453

Drawn by: AMP

Project Number: 07-498

Date: 01/28/2008

File Name: University Auto Phase II

APPENDIX A

Personnel Certificates



INTERNATIONAL CODE COUNCIL

RYAN K MATHEWS

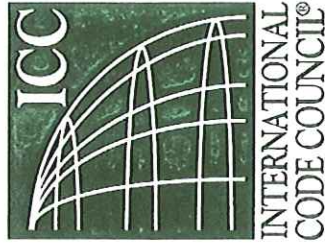
The International Code Council attests that the individual named on this certificate has satisfactorily demonstrated knowledge as required by the International Code Council by successfully completing the prescribed written examination based on codes and standards then in effect, and is hereby issued this certification as:

WASHINGTON STATE SITE ASSESSMENT

given this day of December 1, 2005

5071810-U7

Certificate Number



Henry L. Green

Henry L. Green

President, ICC Board of Directors

James L. Witt

James L. Witt
ICC Chief Executive Officer

INTERNATIONAL CODE COUNCIL

—•••—
TRAVIS L TRENT

The International Code Council attests that the individual named on this certificate has satisfactorily demonstrated knowledge as required by the International Code Council by successfully completing the prescribed written examination based on codes and standards then in effect, and is hereby issued this certification as:

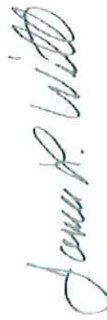
WASHINGTON STATE SITE ASSESSMENT

given this day of August 31, 2006



Henry L. Green

President, ICC Board of Directors



James L. Witt
ICC Chief Executive Officer

1059647-U7
Certificate Number



APPENDIX B
Site Photographs





Site conditions present following asphalt removal prior to excavation of the former UST basin.



Southwest corner of the site building with remnant UST vent piping.



Soils present within the excavation boundaries.



Excavation activities within the east trench of the excavation.



Sloughing soils undermining asphalt and concrete along the east boundary of the excavation



Excavation of imported backfill in the east trench of the excavation.



The north extent of the east trench.



Soils present within the excavation boundaries.



Excavation activities at the northwest corner of the former UST basin.



Excavation activities near the north center of the former UST basin.



Soils present within the excavation boundaries.



Yellow flagging tape used to mark the excavation extents prior to backfilling.



Excavation extents at the former dispenser island location.



Excavated overburden at the former dispenser island.



Backfilling of site soils neat the southwest portion of the excavated area.

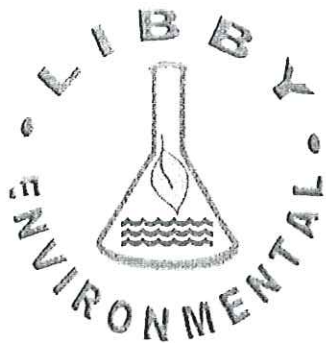


Excavation at the northern most poriotn of the

APPENDIX C

Laboratory Analytical Results





Libby Environmental, Inc.

4139 Libby Road N.E., Olympia, WA 98506-2518

November 28, 2007

Ryan Mathews
Fulcrum Environmental Consulting, Inc.
222 North 2nd Street
Suite A
Yakima, WA 98901

Dear Mr. Mathews:

Please find enclosed the analytical data report for the University Auto UST Project located in Ellensburg, Washington. Soil samples were analyzed for Gasoline by NWTPH-Gx, BTEX by EPA Method 8021B, and Total Lead by EPA Method 7000 Series on November 23 & 25, 2007.

The results of the analyses are summarized in the attached tables. Applicable detection limits and QA/QC data are included. An invoice for this analytical work is also enclosed. All soil samples are reported on a dry weight basis.

Libby Environmental, Inc. appreciates the opportunity to have provided analytical services for this project. If you have any further questions about the data report, please give me a call. It was a pleasure working with you on this project, and we are looking forward to the next opportunity to work together.

Sincerely,

Sherry L. Chilcutt
President
Libby Environmental, Inc.

LIBBY ENVIRONMENTAL CHEMISTRY LABORATORY

UNIVERSITY AUTO UST PROJECT
Ellensburg, Washington
Fulcrum Environmental, Inc.
Client Project #07-498
Libby Project No.L071120-2

Analyses of Gasoline (NWTPH-Gx) & BTEX (EPA Method 8021B) in Soil

Sample Number	Date Analyzed	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Xylenes (mg/kg)	Gasoline (mg/kg)	Surrogate Recovery (%)
Method Blank	11/23/07	nd	nd	nd	nd	nd	83
LCS	11/23/07	88%	113%				84
111907-01	11/23/07	nd	nd	nd	nd	nd	80
111907-02	11/23/07	nd	nd	nd	nd	nd	80
111907-03	11/23/07	nd	nd	nd	nd	nd	80
111907-04	11/23/07	nd	nd	nd	nd	nd	76
111907-05	11/23/07	nd	nd	nd	nd	nd	67
111907-06	11/23/07	nd	nd	nd	nd	nd	68
111907-07	11/23/07	nd	nd	nd	nd	nd	105
111907-08	11/23/07	nd	nd	nd	nd	nd	84
111907-09	11/23/07	nd	nd	nd	nd	nd	84
111907-10	11/23/07	nd	nd	nd	nd	nd	70
111907-10 Dup	11/23/07	nd	nd	nd	nd	nd	82
MS	11/23/07	94%	110%				75
Practical Quantitation Limit		0.02	0.05	0.05	0.05	10	

"nd" Indicates not detected at the listed detection limits.

"int" Indicates that interference prevents determination.

ACCEPTABLE RECOVERY LIMITS FOR SURROGATE (Trifluorotoluene): 65% TO 135%

ANALYSES PERFORMED BY: Sherry Chilcutt

LIBBY ENVIRONMENTAL CHEMISTRY LABORATORY

UNIVERSITY AUTO UST PROJECT

Ellensburg, Washington

Fulcrum Environmental, Inc.

Client Project #07-498

Libby Project No.L071120-2

Analyses of Total Lead in Soil by EPA Method 7421

Sample Number	Date Analyzed	Lead (mg/kg)
Method Blank	11/25/07	nd
111907-01	11/25/07	nd
111907-02	11/25/07	5.9
111907-03	11/25/07	nd
111907-04	11/25/07	nd
111907-05	11/25/07	nd
111907-06	11/25/07	nd
111907-07	11/25/07	nd
111907-08	11/25/07	nd
111907-09	11/25/07	8.7
111907-10	11/25/07	nd
111907-10 Dup	11/25/07	nd
Practical Quantitation Limit		5.0

"nd" Indicates not detected at the listed detection limits.

ANALYSES PERFORMED BY: Sherry Chilcutt

LIBBY ENVIRONMENTAL CHEMISTRY LABORATORY

UNIVERSITY AUTO UST PROJECT

Ellensburg, Washington

Fulcrum Environmental, Inc.

Client Project #07-498

Libby Project No.L071120-2

QA/QC for Lead in Soil by EPA Method 7421

Sample Number	Date Analyzed	Lead (mg/kg)
LCS	11/25/07	109%
111907-10 MS	11/25/07	102%
111907-10 MSD	11/25/07	128%
RPD	11/25/07	22.6
Practical Quantitation Limit		5.0

ACCEPTABLE RECOVERY LIMITS FOR MATRIX SPIKES: 65%-135%

ACCEPTABLE RPD IS 35%

ANALYSES PERFORMED BY: Sherry Chilcutt

Libby Environmental, Inc.

4139 Libby Road NE
Olympia, WA 98506

Ph: 360-352-2110
Fax: 360-352-4154

Chain of Custody Record

Date: 11/19/07

Page: 1 of 1

Client: Fulcrum Environmental

Project Manager: Ryan Mathews

Address: 222 N. 2nd St., Suite A 2801

Project Name: Person Storage Phase II Universal Auto

Phone: (509) 574-0839 Fax: (509) 575-8453

Location: Ellensburg, WA

Client Project # 07-498

Collector: 11/19/07

Sample Number	Depth	Time	Sample Type	Container Type	VOA 8021B (6x4 BTEX)	VOA 8021B BTEX ONLY	SEM VOL 8270	NWTPH-GX	NWTPH-HCID	NWTPH-DX	PAH-8270	PCBs 8082	MTCAs Metals	Lead	Field Note# Containers
1 11907-01	12.5'		Soil Gelatin		X										1-Jan/2008
2 11907-02	6'				X										1-Jan/2008
3 11907-03	12'				X										1-Jan/2008
4 11907-04	6'				X										1-Jan/2008
5 11907-05					X										1-Jan/2008
6 11907-06					X										1-Jan/2008
7 11907-07					X										1-Jan/2008
8 11907-08	12'				X										1-Jan/2008
9 11907-09	6'				X										1-Jan/2008
10 11907-10	6'				X										1-Jan/2008
11															
12															
13															
14															
15															
16															
17															
18															

Remarks:

Sample Receipt:

Date / Time

Received by

Date / Time

Received by

Date / Time

Relinquished by:

Date / Time

Received by

Date / Time

Received by

Date / Time

Relinquished by:

Good Condition?

Cold?

Seals Intact?

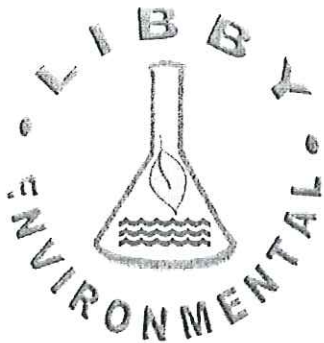
Total Number of Containers

TAT

24HR

48HR

5-Day



Libby Environmental, Inc.

4139 Libby Road N.E., Olympia, WA 98506-2518

November 28, 2007

Ryan Mathews
Fulcrum Environmental Consulting, Inc.
222 North 2nd Street
Suite A
Yakima, WA 98901

Dear Mr. Mathews:

Please find enclosed the analytical data report for the University Auto UST Project located in Ellensburg, Washington. Soil samples were analyzed for Gasoline by NWTPH-Gx, BTEX by EPA Method 8021B, and Total Lead by EPA Method 7000 Series on November 23 & 25, 2007.

The results of the analyses are summarized in the attached tables. Applicable detection limits and QA/QC data are included. An invoice for this analytical work is also enclosed. All soil samples are reported on a dry weight basis.

Libby Environmental, Inc. appreciates the opportunity to have provided analytical services for this project. If you have any further questions about the data report, please give me a call. It was a pleasure working with you on this project, and we are looking forward to the next opportunity to work together.

Sincerely,

Sherry L. Chilcutt
President
Libby Environmental, Inc.

LIBBY ENVIRONMENTAL CHEMISTRY LABORATORY

UNIVERSITY AUTO UST PROJECT
Ellensburg, Washington
Fulcrum Environmental, Inc.
Client Project #07-498
Libby Project No.L071120-2

Analyses of Gasoline (NWTPH-Gx) & BTEX (EPA Method 8021B) in Soil

Sample Number	Date Analyzed	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Xylenes (mg/kg)	Gasoline (mg/kg)	Surrogate Recovery (%)
Method Blank	11/23/07	nd	nd	nd	nd	nd	83
LCS	11/23/07	88%	113%				84
112007-14	11/23/07	nd	nd	nd	nd	nd	103
112007-15	11/23/07	nd	nd	nd	nd	nd	109
112007-16	11/23/07	nd	nd	nd	nd	nd	99
112007-17	11/23/07	nd	nd	nd	nd	nd	76
112007-21	11/23/07	nd	nd	nd	nd	nd	90
112007-21 Dup	11/23/07	nd	nd	nd	nd	nd	91
112007-21 MS	11/23/07	94%	110%				75
Practical Quantitation Limit		0.02	0.05	0.05	0.05	10	

"nd" Indicates not detected at the listed detection limits.

"int" Indicates that interference prevents determination.

ACCEPTABLE RECOVERY LIMITS FOR SURROGATE (Trifluorotoluene): 65% TO 135%

ANALYSES PERFORMED BY: Sherry Chilcutt

LIBBY ENVIRONMENTAL CHEMISTRY LABORATORY

UNIVERSITY AUTO UST PROJECT
Ellensburg, Washington
Fulcrum Environmental, Inc.
Client Project #07-498
Libby Project No.L071120-2

Analyses of Total Lead in Soil by EPA Method 7421

Sample Number	Date Analyzed	Lead (mg/kg)
Method Blank	11/25/07	nd
112007-14	11/25/07	nd
112007-15	11/25/07	nd
112007-16	11/25/07	nd
112007-17	11/25/07	nd
112007-21	11/25/07	6
Practical Quantitation Limit		5.0

"nd" Indicates not detected at the listed detection limits.

ANALYSES PERFORMED BY: Sherry Chilcutt

LIBBY ENVIRONMENTAL CHEMISTRY LABORATORY

UNIVERSITY AUTO UST PROJECT

Ellensburg, Washington

Fulcrum Environmental, Inc.

Client Project #07-498

Libby Project No.L071120-2

QA/QC for Lead in Soil by EPA Method 7421

Sample Number	Date Analyzed	Lead (mg/kg)
LCS	11/25/07	109%
MS	11/25/07	102%
MSD	11/25/07	128%
RPD	11/25/07	22.6
Practical Quantitation Limit		5.0

ACCEPTABLE RECOVERY LIMITS FOR MATRIX SPIKES: 65%-135%

ACCEPTABLE RPD IS 35%

ANALYSES PERFORMED BY: Sherry Chilcutt

Libby Environmental, Inc.

4139 Libby Road NE
Olympia, WA 98506
Ph: 360-352-2110
Fax: 360-352-4154

Chain of Custody Record

Date: 11/20/07 Page: 2 of 2

Client: Superior Industries
Address: 221 1st St NW, WA
Phone: 360-352-2110 Fax: 360-352-4154
Client Project #: 11/20/07

Project Manager: David J. Smith
Project Name: Remediation Project
Location: Ellensburg, WA
Collector: David J. Smith Date of Collection: 11/20/07

Sample Number	Depth	Time	Sample Type	Container Type	VOA 8021B BTEX Only	VOA 8021B	VOA 8260	SEM VOL 8270	NWTPH-HCID	NWTPH-GX	NWTPH-DX	PAH 8270	PCBs 8082	MTCA 5 Metals	Field Note/# Containers
1 112007-01	2'		Soil	112007-01											112007-01
2 112007-02	2'		Soil												112007-02
3 112007-03	2'		Soil												112007-03
4 112007-04	3'		Soil												112007-04
5 112007-05	3'		Soil												112007-05
6 112007-06	6'		Soil												112007-06
7 112007-07	10'		Soil												112007-07
8 112007-08			Soil												112007-08
9 112007-09			Soil												112007-09
10 112007-10			Soil												112007-10
11 112007-11	4'		Soil												112007-11
12															
13															
14															
15															
16															
17															
18															

Relinquished by: David J. Smith Date / Time: 11/20/07 10:30 AM

Relinquished by: David J. Smith Date / Time: 11/20/07 10:30 AM

Relinquished by: David J. Smith Date / Time: 11/20/07 10:30 AM

Received by: David J. Smith Date / Time: 11/20/07 10:30 AM

Received by: David J. Smith Date / Time: 11/20/07 10:30 AM

Received by: David J. Smith Date / Time: 11/20/07 10:30 AM

Remarks:

Good Condition? ☒

Cold? ☒

Seals Intact? ☒

Total Number of Containers: 11



Libby Environmental, Inc.

4139 Libby Road N.E., Olympia, WA 98506-2518

December 17, 2007

Ryan Mathews
Fulcrum Environmental Consulting, Inc.
222 North 2nd Street
Suite A
Yakima, WA 98901

Dear Mr. Mathews:

Please find enclosed the analytical data report for the University Auto UST Project located in Ellensburg, Washington. Soil samples were analyzed for Diesel by NWTPH-Dx on December 14, 2007.

The results of the analyses are summarized in the attached tables. Applicable detection limits and QA/QC data are included. An invoice for this analytical work is also enclosed. All soil samples are reported on a dry weight basis.

Libby Environmental, Inc. appreciates the opportunity to have provided analytical services for this project. If you have any further questions about the data report, please give me a call. It was a pleasure working with you on this project, and we are looking forward to the next opportunity to work together.

Sincerely,

Sherry L. Chilcutt
President
Libby Environmental, Inc.

LIBBY ENVIRONMENTAL CHEMISTRY LABORATORY

UNIVERSITY AUTO UST PROJECT

Ellensburg, Washington

Fulcrum Environmental

Libby Project No.L071213-1

Analyses of Diesel & Oil (NWTPH-Dx/Dx Extended) in Soil

Sample Number	Date Analyzed	Surrogate Recovery (%)	Diesel (mg/kg)	Mineral Oil (mg/kg)	Oil (mg/kg)
Method Blank	12/14/2007	106	nd	nd	nd
111907-01	12/14/2007	72	nd	nd	nd
111907-02	12/14/2007	89	nd	nd	nd
111907-03	12/14/2007	72	nd	nd	nd
111907-04	12/14/2007	73	nd	nd	nd
111907-05	12/14/2007	70	nd	nd	nd
111907-06	12/14/2007	91	nd	nd	nd
111907-07	12/14/2007	89	nd	nd	nd
111907-08	12/14/2007	104	nd	nd	nd
111907-09	12/14/2007	69	nd	nd	nd
111907-10	12/14/2007	97	nd	nd	nd
112007-11,12,13	12/14/2007	85	nd	nd	nd
112007-14	12/14/2007	89	nd	nd	nd
112007-15	12/14/2007	122	nd	nd	nd
112007-16	12/14/2007	99	nd	nd	nd
112007-17	12/14/2007	83	nd	nd	nd
112007-18,19,20	12/14/2007	102	nd	nd	nd
112007-21	12/14/2007	116	nd	nd	nd
112007-21 Dup	12/14/2007	106	31	nd	nd
Practical Quantitation Limit			25	40	40

"nd" Indicates not detected at the listed detection limits.

"int" Indicates that interference prevents determination.

ACCEPTABLE RECOVERY LIMITS FOR SURROGATE (2-F Biphenyl): 65% TO 135%

ANALYSES PERFORMED BY: Sherry Chilcutt

Libby Environmental, Inc. Chain of Custody Record

4139 Libby Road NE
Olympia, WA 98506
Ph: 360-352-2110
Fax: 360-352-4154

Client: Fulcrum Environmental

Address: 222 N. 2nd St., Suite A 400

Phone: (509) 574-0869 Fax: (509) 575-8453

Client Project # 07-498

Date: 11/19/07

Project Manager: Evan Mathews

Project Name: Person Storage Phase II (University of WA)

Location: Ellensburg, WA

Collector: US

Page: 1 of 1

Date of Collection: 11/19/07

Sample Number	Depth	Time	Sample Type	Container Type	VOA 802B (GLY BTEX)	VOA 802B BTEX ONLY	SEMI VOL 820	VOA 820	SWTPH-HCl	SWTPH-GX	SWTPH-DX	PAH-DX EX	PCBS 8082	MTCA 5 Metals	Field Note/# Containers
1 11907-01	12.5'		Soil	Galvanized	X										1-Jan/2008
2 11907-02	6'				X										1-Jan/2008
3 11907-03	12'				X										1-Jan/2008
4 11907-04	6'				X										1-Jan/2008
5 11907-05					X										1-Jan/2008
6 11907-06					X										1-Jan/2008
7 11907-07					X										1-Jan/2008
8 11907-08	12'				X										1-Jan/2008
9 11907-09	6'				X										1-Jan/2008
10 11907-10	6'				X										1-Jan/2008
11															1-Jan/2008
12															
13															
14															
15															
16															
17															
18															

Relinquished by:

A. Palmer

Relinquished by:

11/19/07 4:15 pm

Received by:

Libby Environmental

Date / Time

11/20/07

Sample Receipt:

Good condition?

Remarks:

Seals Intact?

TAT

24HR

48HR

5-Day

Libby Environmental, Inc.

4139 Libby Road NE
Olympia, WA 98506
Ph: 360-352-2110
Fax: 360-352-4154

Client: Furukawa Environmental

Address: 222 North 2nd Street, Yakima, WA

Phone: 509 574 0837 Fax: 509 575 0453

Client Project #

Chain of Custody Record

Date: 11/20/07

Project Manager: Ryan Mayhew

Project Name: University Area USF

Location: Ellensburg, WA

Collector: Ryan Mayhew

Date of Collection: 11/20/2007

Sample Number	Depth	Time	Sample Type	Container Type	VOA 8021B	VOA 8021B BTEX Only	SEM VOL 8270	NWTPH-HCID	NWTPH-GX + BTEX	NWTPH-DX	PAH 8270	PCBs 8082	MTCA 5 Metals	Field Note/# Containers
1 112007-01	1'		Soil	4oz 40ml										1-Jan / 1 VOA
2 112007-02	1'													1-Jan / 1 VOA
3 112007-13	1'													1-Jan / 1 VOA
4 112007-14	3'													1-Jan / 2 VOA
5 112007-15	3'													1-Jan / 2 VOA
6 112007-16	6'													1-Jan / 2 VOA
7 112007-17	10'													1-Jan / 2 VOA
8 112007-18	1'													1-Jan / 1 VOA
9 112007-19	1'													1-Jan / 1 VOA
10 112007-20	1'													1-Jan / 1 VOA
11 112007-21	4'													1-Jan / 1 VOA
12														1-Jan / 2 VOA
13														
14														
15														
16														
17														
18														

Relinquished by: [Signature] Date / Time: 11/20/07 3:30pm Received by: [Signature] Date / Time: 11/20/07 10:30am

Relinquished by: [Signature] Date / Time: 11/20/07 3:30pm Received by: [Signature] Date / Time: 11/20/07 10:30am

Relinquished by: [Signature] Date / Time: 11/20/07 3:30pm Received by: [Signature] Date / Time: 11/20/07 10:30am

APPENDIX D

UST Site Check/Site Assessment Checklist





UNDERGROUND STORAGE TANK Site Check/Site Assessment Checklist

FOR OFFICE USE ONLY

Site #: _____

Facility Site ID #: _____

INSTRUCTIONS

When a release has not been confirmed and reported, this Site Check/Site Assessment Checklist must be completed and signed by a person certified by ICC or a Washington registered professional engineer who is competent, by means of examination, experience, or education, to perform site assessments. **The results of the site check or site assessment must be included with this checklist.** This form must be submitted to Ecology at the address shown below within 30 days after completion of the site check/site assessment.

SITE INFORMATION: Include the Ecology site ID number if the tanks are registered with Ecology. This number may be found on the tank owner's invoice or tank permit.

TANK INFORMATION: Please list all tanks for which the site check or site assessment is being conducted. Use the owner's tank ID numbers if available, and indicate tank capacity and substance stored.

REASON FOR CONDUCTING SITE CHECK/SITE ASSESSMENT: Please check the appropriate item.

CHECKLIST: Please initial each item in the appropriate box.

SITE ASSESSOR INFORMATION: This information must be signed by the registered site assessor who is responsible for conducting the site check/site assessment.

Underground Storage Tank Section
Department of Ecology
PO Box 47655
Olympia WA 98504-7655

SITE INFORMATION

Site ID Number (Available from Ecology if the tanks are registered): _____
Site/Business Name: the Former UNIVERSITY AUTO DEALERSHIP SITE
Site Address: 100 EAST UNIVERSITY way Telephone: () N/A
ELLENBURG WA 98926
City State Zip Code

TANK INFORMATION

Tank ID No.	Tank Capacity	Substance Stored
<u>USTs were previously removed west of the site building.</u>		
<u>Tanks were reported to have been used for gasoline service</u>		
<u>but may have been used in the 1970s for diesel storage.</u>		

REASON FOR CONDUCTING SITE CHECK/SITE ASSESSMENT

Check one:

- ☐ Investigate suspected release due to on-site environmental contamination.
- ☐ Investigate suspected release due to off-site environmental contamination.
- ☐ Extend temporary closure of UST system for more than 12 months.
- ☐ UST system undergoing change-in-service.
- ☐ UST system permanently closed with tank removed.
- ☐ Abandoned tank containing product.
- ☐ Required by Ecology or delegated agency for UST system closed before 12/22/88.
- ☒ Other (describe): CONFIRM previous removal and conduct Site Assessment.

CHECKLIST

Each item of the following checklist shall be initialed by the person registered with the Department of Ecology whose signature appears below.

	YES	NO
1. The location of the UST site is shown on a vicinity map.	N/A	
2. A brief summary of information obtained during the site inspection is provided. (see Section 3.2 in site assessment guidance)	RKM	
3. A summary of UST system data is provided. (see Section 3.1.)	RKM	
4. The soils characteristics at the UST site are described. (see Section 5.2)	RKM	
5. Is there any apparent groundwater in the tank excavation?		RKM
6. A brief description of the surrounding land use is provided. (see Section 3.1)	RKM	
7. Information has been provided indicating the number and types of samples collected, methods used to collect and analyze the samples, and the name and address of the laboratory used to perform the analyses.	RKM	
8. A sketch or sketches showing the following items is provided:		
- location and ID number for all field samples collected	RKM	
- groundwater samples distinguished from soil samples (if applicable)	N/A	
- samples collected from stockpiled excavated soil	RKM	
- tank and piping locations and limits of excavation pit	RKM	
- adjacent structures and streets	RKM	
- approximate locations of any on-site and nearby utilities	RKM	
9. If sampling procedures different from those specified in the guidance were used, has justification for using these alternative sampling procedures been provided? (see Section 3.4)	N/A	
10. A table is provided showing laboratory results for each sample collected including; sample ID number, constituents analyzed for and corresponding concentration, analytical method and detection limit for that method.	RKM	
11. Any factors that may have compromised the quality of the data or validity of the results are described.	N/A	
12. The results of this site check/site assessment indicate that a confirmed release of a regulated substance has occurred.		RKM

SITE ASSESSOR INFORMATION

RYAN K. MATHEWS FURCHUM ENVIRONMENTAL CONSULTING
Person registered with Ecology Firm Affiliated with
Business Address: 406 NORTH 2ND STREET Telephone: (509) 574 0839
Street
YAKIMA WA 98901
City State Zip Code

I hereby certify that I have been in responsible charge of performing the site check/site assessment described above. Persons submitting false information are subject to penalties under Chapter 173.360 WAC.

1/31/2008
Date

Ryan K. Mathews
Signature of Person Registered with Ecology

If you need this publication in an alternate format, please contact Toxics Cleanup Program at (360) 407-7170. For persons with a speech or hearing impairment call 711 for relay service or 800-833-6388 for TTY.



STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

15 W Yakima Ave, Ste 200 • Yakima, WA 98902-3452 • (509) 575-2490

January 22, 2009

Mr. Ryan Matthews
Fulcrum Environmental
406 North 2nd Street
Yakima, WA 98901

Re: No Further Action at the following Site:

- **Site Name:** University Auto Center
- **Site Address:** 100 East University Way, Ellensburg
- **Facility/Site No.:** 65863261
- **VCP Project No.:** CE0300

Dear Mr. Matthews:

The Washington State Department of Ecology (Ecology) received your request for an opinion on your independent cleanup of the University Auto Center (Site). This letter provides our opinion. We are providing this opinion under the authority of the Model Toxics Control Act (MTCA), Chapter 70.105D RCW.

Issue Presented and Opinion

Is further remedial action necessary to clean up contamination at the Site?

NO. Ecology has determined that no further remedial action is necessary to clean up contamination at the Site.

This opinion is based on an analysis of whether the remedial action meets the substantive requirements of MTCA, Chapter 70.105D RCW, and its implementing regulations, Chapter 173-340 WAC (collectively "substantive requirements of MTCA"). The analysis is provided below.

Description of the Site

This opinion applies only to the above-referenced Site. The Site is defined by the nature and extent of contamination associated with the following release:

- petroleum products into the soil

Basis for the Opinion

This opinion is based on the information contained in the following documents:

- *Underground Storage Tank Investigation Report*, Fulcrum Environmental Consulting, Inc., January 31, 2008
- *UST Site Assessment Report*, White Shield, Inc., December 1992
- Site Correspondence File, Ecology's Central Regional Office

Those documents are kept in the Central Files of the Central Regional Office of Ecology (CRO) for review by appointment only. You can make an appointment by calling the CRO resource contact, Roger Johnson, at (509) 454-7658.

This opinion is void if any of the information contained in those documents is materially false or misleading.

Analysis of the Cleanup

Ecology has concluded that **no further remedial action** is necessary to clean up contamination at the Site. This site's corresponding 1992 *UST Site Assessment Report* was reviewed by staff in both 2001 and 2006. In 2006, a determination of No Further Action (NFA) was made. The Department Decision Recommendation containing that determination is included as an enclosure to this letter. Although the subsequent *UST Site Assessment Report* was received and reviewed in 2008, it did not contain any new information regarding an additional release of petroleum products. Indeed, its soil sampling results confirmed soil exceeding cleanup levels was not present. Therefore, the NFA determination made in 2006 remained unchanged.

As of today, and based on a further review of the supporting documentation listed above, Ecology has **determined that the independent remedial action(s) conducted at the Site are sufficient to meet the substantive requirements contained in MTCA and its implementing regulations, Chapter 70.105D RCW and Chapter 173-340 WAC, for characterizing and addressing the contamination at the Site.** Therefore, pursuant to WAC 173-340-515(5), Ecology is issuing this opinion that **no further remedial action is necessary at the Site.**

Listing of the Site

Because this site received a No Further Action determination in 2006, it was removed from the applicable statewide lists of hazardous waste sites at that time, including:

- Confirmed and Suspected Contaminated Sites List
- Leaking Underground Storage Tank List

Limitations of the Opinion

1. **Opinion does not settle liability with the state.**

Liable persons are strictly liable, jointly and severally, for all remedial action costs and for all natural resource damages resulting from the release or releases of hazardous substances at the Site. This opinion **does not**:

- Resolve or alter a person's liability to the state.
- Protect liable persons from contribution claims by third parties.

To settle liability with the state and obtain protection from contribution claims, a person must enter into a consent decree with Ecology under RCW 70.105D.040(4).

2. Opinion does not constitute a determination of substantial equivalence.

To recover remedial action costs from other liable persons under MTCA, one must demonstrate that the action is the substantial equivalent of an Ecology-conducted or Ecology-supervised action. This opinion does not determine whether the action you performed is substantially equivalent. Courts make that determination. *See* RCW 70.105D.080 and WAC 173-340-545.

3. State is immune from liability.

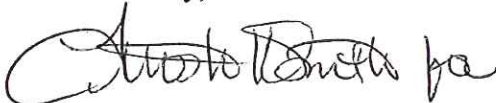
The state, Ecology, and its officers and employees are immune from all liability, and no cause of action of any nature may arise from any act or omission in providing this opinion. *See* RCW 70.105D.030(1)(i).

Termination of Agreement

Thank you for cleaning up the Site under the Voluntary Cleanup Program (VCP). This opinion terminates the VCP Agreement governing this project (CE0300).

For more information about the VCP and the cleanup process, please visit our web site: www.ecy.wa.gov/programs/tcp/vcp/vcpmain.htm. If you have any questions about this opinion or the termination of the Agreement, please contact me at (509) 454-7886.

Sincerely,



Valerie Bound
Unit Supervisor
CRO Toxics Cleanup Program

Enclosure

cc: Allen Faltus
Dolores Mitchell, VCP Financial Manager

**WASHINGTON STATE DEPARTMENT OF ECOLOGY
TOXICS CLEANUP PROGRAM
VCP SITE LOG**

SITE NAME: Univ Auto	
FACILITY / SITE NUMBER: 65863261	YEAR: 2008
VCP PROJECT (ACCOUNT) NUMBER: CE0300	MONTH: December
SIC: J1C57	PAYROLL 1-15 <input type="checkbox"/>
EMPLOYEE'S NAME: Valerie Bound	PERIOD 16-31 <input checked="" type="checkbox"/>

DATE	HOURS	ACTIVITY DESCRIPTION
12/30	3.0	Completed letter, reviewed documents/reports

ON-DEMAND BILLING	<i>For use only by the Site Manager assigned to the VCP project, not other staff or attorneys working on the project.</i>
<ul style="list-style-type: none"> If this site log contains your final charges for this VCP project and you want to use on-demand billing to invoice those charges, then check the following box: <input checked="" type="checkbox"/> If other staff or attorneys need to submit site logs before final invoicing can occur, then also check the following box: <input type="checkbox"/> If so, how many other site logs need to be submitted? [] 	

DATA ON THIS FORM IS CONSISTENT WITH THE EMPLOYEE'S TIMESHEET.

EMPLOYEE'S SIGNATURE Valerie Bound **DATE** 12-30-08

SUPERVISOR'S SIGNATURE Donna M. [Signature] **DATE** 12-30-08

Hours entered in
BARTS 12/30/08 #8



Voluntary Cleanup Program

Washington State Department of Ecology
Toxics Cleanup Program

VCP INTERNAL REVIEW CHECKLIST

Site Name: University Auto Center
Facility / Site No.: 65863261
VCP Project No.: CE0330
Site Manager: VB Date submitted: 12/30/08

If applicable (property-specific):
Tax Parcel(s) No.:
Property Address: 100 E University Way

What opinion are you providing the Applicant in the attached draft Letter?

- | | |
|---|---|
| <input type="checkbox"/> Site Likely NFA | <i>PROPERTY-SPECIFIC</i> |
| <input type="checkbox"/> Site Likely FA | <input type="checkbox"/> <i>Property Likely FA</i> |
| <input checked="" type="checkbox"/> NFA at Site (Please attach all previous opinion letters for review) | <input type="checkbox"/> <i>Property Likely NFA, FA at Site</i> |
| <input type="checkbox"/> Partial Sufficiency, FA at Site | <input type="checkbox"/> <i>Further Action at Property</i> |
| <input type="checkbox"/> Further Action at Site | <input type="checkbox"/> <i>Property NFA, FA at Site</i> |
| <input type="checkbox"/> Other (Please identify, such as Proposed or Completed RI, FS, etc.): | |

- Have you informed the VCP Unit Manager and the Data Coordinator of information submitted by applicant?
☒ Yes ☐ No – If No, please do so to ensure a Project Activity is created in ISIS.

Report Received Date/Project Activity Initiation Date: 12/8/08

Due Date for Response to Applicant (90 days from Initiation Date): 3/8/09

- VCP application reviewed to ensure all information is current? ☒ Yes ☐ No
If No, please be sure to provide the Data Coordinator with any changes needed.
- BARTS: If issuing NFA opinion, notify applicant that letter will be held until final payment is received.
Have you completed your site logs? ☒ Yes ☐ No
- Is this a *regulated* UST/LUST site? ☐ Yes ☒ No If Yes, coordinate with LUST staff.
- Do any other government agencies or Ecology Programs have interest in site activities?
☐ Yes ☒ No If Yes, please be sure to cc: the appropriate agency/program contact.
- Has the environmental sampling data been entered into EIM?
☒ Yes ☐ No If Yes, when? Date:
Will additional data be generated requiring EIM submittal?
☐ Yes ☒ No
- If site is to be de-listed based on an NFA opinion, have you coordinated with COEES? ☒ Yes ☐ No
- Has the lateral and vertical nature and extent of contamination at the site been adequately characterized for all media?
☒ Yes ☐ No If No, please be sure data gaps are clearly identified in the opinion letter.
- Are institutional controls, such as an environmental covenant, needed for the site?
☐ Yes ☒ No ☐ Unknown at this time (Feasibility Study not completed yet)

If *Yes*, is a compliance monitoring plan required to be submitted?

☐ Yes ☐ No If *Yes* to both, include an explanation of the requirements in the opinion letter.

If an environmental covenant was generated, has it been signed by Ecology, filed with the appropriate county, and included as an attachment to the NFA? ☐ Yes ☐ No

- Are periodic reviews necessary at the Site (e.g., where institutional and/or engineered controls, and/or non-permanent remedies are part of the cleanup action)?

☐ Yes ☒ No If *Yes*, when should the first review be completed? Date:

- Was geologic, hydrogeologic, or engineering work stamped by a licensed professional?

☐ Yes ☐ No ☒ Not Applicable

If *No*, please include a comment in your opinion letter indicating that these types of work when submitted to Ecology for review must be under the seal of an appropriately licensed professional, as required by Chapters 18.43 and 18.220 RCW.

- Has a Terrestrial Ecological Evaluation Form been submitted? ☒ Yes ☐ No

Has it been accepted? ☒ Yes ☐ No

If *No* to either question, please include a comment in your opinion letter.

Comments or responses not related to the opinion letter (*Document relevant information*):

Sign and Date, When Approved for Transmittal

If you have comments, do not sign. Check the comments box and fill in the date. Check the comments resolved box when applicable, then sign and date.

Peer Reviewer (if applicable)

Date

- ☐ Comments, see attached Date:
☐ Comments Resolved

Valerie Bound

12-30-08

Unit Supervisor

Date

- ☐ Comments, see attached Date:
☐ Comments Resolved

Section Manager (if not delegated)

Date

- ☐ Comments, see attached Date:
☐ Comments Resolved



FILE COPY

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

15 W Yakima Ave, Ste 200 • Yakima, WA 98902-3452 • (509) 575-2490

December 9, 2008

Mr. Ryan Mathews
Fulcrum Environmental Inc.
406 N 2nd St
Yakima WA 98901

Dear Mr. Mathews:

An application for the Voluntary Cleanup Program was received on December 8, 2008. The purpose of this letter is to acknowledge receipt of your application and to provide you with the name of the Site Manager assigned your file.

Site Name: University Auto Center
Site Manager: Valerie Bound
Facility Site Number: 65863261
VCP ID Number: CE0300

Our database has been updated to reflect your participation in the Voluntary Cleanup Program. If you have any questions, please contact the site manager at (509) 454-7886.

Thank you for your commitment to the environment and the Voluntary Cleanup Program.

Sincerely,

Frosti Smith
Voluntary Cleanup Program Coordinator
Central Regional Office
Toxics Cleanup Program

Enclosure: VCP Agreement



MEMORANDUM

FULCRUM
environmental consulting



RECEIVED

DEC 08 2008

DATE: December 3, 2008

TOTAL PAGES: 2

TO: Frosti Smith
CO: Department of Ecology

FROM: Ryan Mathews, CMC, CHMM
Fulcrum Environmental Consulting, Inc.
406 North 2nd Street
Yakima, Washington 98901
p: 509.574.0839 f: 509.575.8453

DEPARTMENT OF ECOLOGY - CENTRAL REGIONAL OFFICE

RE: University Auto Center VCP Review Request

Fulcrum Environmental Consulting, Inc. (Fulcrum) is requesting that the Washington State Department of Ecology (Ecology) complete a Voluntary Cleanup Program review of a report prepared for the Former University Auto Center site. The specific parcel for which the VCP review is requested is located at 100 East University Way in Ellensburg, Washington (University and Pearl Site). Three underground storage tanks (USTs) were historically removed from the site. Fulcrum is requesting review investigation confirming removal and completed UST Site Assessment.

Purpose of this summary memorandum is to provide a historical review of the University and Pearl Site and University Auto Center properties located adjacent.

University and Pearl Site History

The University and Pearl Site is located the intersection of University Way (formerly 8th Avenue) and Pearl Street in Ellensburg, Washington. The site currently consists of a large dealership/sales building and associated paved asphalt lot and occupies the west ½ of a city block in Ellensburg. In 2005, University Auto Center constructed a new facility and moved from the University and Pearl Site. Since that time the site has been utilized primarily under lease by Central Washington University for student parking.

In 1992, White Shield completed removal of two 500-gallon waste oil underground storage tank (UST) from the University and Pearl Site. During removal contamination was identified, remediated, and Ecology prepared a Department Decision Recommendation of No-Further Action determination (2001) for activities related to the two waste oil USTs. No further VCP review of this historic remediation action is requested.

Adjacent Properties

Adjacent properties owned and operated by University Auto Center have been investigated and remediation efforts completed. Specifically the property located at 607 North Pearl Street in Ellensburg, Washington (607 Site). The 607 Site served as the maintenance and repair facility for University Auto Center. In 2001, the site building was destroyed by fire. In the process of completing site cleanup activities, petroleum, metal, and chlorinated solvent contamination were identified. Remedial activities at the 607 Site are not associated with the requested VCP review.

Additionally, The 607 Site is also currently listed as a hazardous waste generator. The generator status is not associated with the current use of the University and Pearl Site.

Current VCP Request

Fulcrum is requesting review of the report titled, *Underground Storage Tank Investigation Report, Former University Auto Dealership, 100 East University Way, Ellensburg, Washington*, dated January 31, 2008. As the report summarizes, three underground storage tanks (approximately 3,000-gallons each), were formerly located west of the current site building. In the 1980s the three USTs were removed from the site. No environmental sampling was completed at the time. In 2007, Fulcrum completed a UST Site Assessment of the area to confirm that the tanks had been removed and to collect soil samples consistent with Ecology's

If you should have any questions, please let me know.

VCP AGREEMENT



INSTRUCTIONS: Submit this Agreement (original) to Ecology as part of your Application. Before submitting, enter the Customer's name and the Site's address on the first page and sign the Agreement on the second page. If your Application is accepted, then Ecology will do the following: 1) identify the Site and VCP project in the box below; 2) sign the Agreement; and 3) send you a copy of the completed Agreement.

This document constitutes an Agreement between the State of Washington Department of Ecology (Ecology) and Fulcrum Environmental Consulting, Inc. (Customer) to provide informal site-specific technical consultations under the Voluntary Cleanup Program (VCP) for the Site identified below and associated with the following address:
Former University Auto Center, 100 East University Way, Ellensburg, Washington

The purpose of this Agreement is to facilitate independent remedial action at the Site. Ecology is entering into this Agreement under the authority of the Model Toxics Control Act (MTCA), Chapter 70.105D RCW, and its implementing regulations, Chapter 173-340 WAC. If a term in this Agreement is defined in MTCA or Chapter 173-340 WAC, then that definition shall govern.

Services Provided by Ecology

Upon request, Ecology agrees to provide the Customer informal site-specific technical consultations on the independent remedial actions proposed for or performed at the Site consistent with WAC 173-340-515(5). Those consultations may include assistance in identifying applicable regulatory requirements and opinions on whether the remedial actions proposed for or conducted at the Site meet those requirements.

Ecology may use any appropriate resource to provide the Customer with the requested consultative services. Those resources may include, but shall not be limited to, those of Ecology and the Office of the Attorney General. However, Ecology shall not use independent contractors unless the Customer provides Ecology with prior written authorization.

In accordance with RCW 70.105D.030(1)(i), any opinions provided by Ecology under this Agreement are advisory only and not binding on Ecology. Ecology, the state, and officers and employees of the state are immune from all liability. Furthermore, no cause of action of any nature may arise from any act or omission in providing, or failing to provide, informal advice and assistance under the VCP.

Payment for Services by Customer

The Customer agrees to pay all costs incurred by Ecology in providing the informal site-specific technical consultations requested by the Customer consistent with WAC 173-340-515(6) and 173-340-550(6). Those costs may include the costs incurred by attorneys or independent contractors used by Ecology to provide the requested consultative services. Ecology's hourly costs shall be determined based on the method in WAC 173-340-550(2).

Ecology shall mail the Customer a monthly itemized statement of costs (invoice) by the tenth day of each month (invoice date) that there is a balance on the account. The invoice shall include a summary of the costs incurred, payments received, identity of staff involved, and amount of time staff spent on the project.

The Customer shall pay the required amount by the due date, which shall be thirty (30) calendar days after the invoice date. If payment has not been received by the due date, then Ecology shall withhold

FOR COMPLETION BY ECOLOGY ONLY	Facility / Site Name: <u>University Auto Center</u>
	Facility / Site No.: <u>6586 3261</u>
	VCP Project No.: <u>CE 0300</u>

any requested opinions and notify the Customer by certified mail that the debt is past due. If payment has not been received within sixty (60) calendar days of the invoice date, then Ecology shall stop all work under the Agreement and may, as appropriate, assign the debt to a collection agency under Chapter 19.16 RCW. The Customer agrees to pay the collection agency fee incurred by Ecology in the course of debt collection.

Reservation of Rights / No Settlement

This Agreement does not constitute a settlement of liability to the state under MTCA. This Agreement also does not protect a liable person from contribution claims by third parties for matters addressed by the Agreement. The state does not have the authority to settle with any person potentially liable under MTCA except in accordance with RCW 70.105D.040(4). Ecology's signature on this Agreement in no way constitutes a covenant not to sue or a compromise of any Ecology rights or authority.

Ecology reserves all rights under MTCA, including the right to require additional or different remedial actions at the Site should it deem such actions necessary to protect human health and the environment, and to issue orders requiring such remedial actions. Ecology also reserves all rights regarding the injury to, destruction of, or loss of natural resources resulting from the release or threatened release of hazardous substances at the Site.

Effective Date, Modifications, and Severability

The effective date of this Agreement shall be the date on which this Agreement is signed by the Toxics Cleanup Program's Section Manager or delegated representative. This Agreement may be amended by mutual agreement of Ecology and the Customer. Amendments shall be in writing and shall be effective when signed by the Toxics Cleanup Program's Section Manager or delegated representative. If any provision of this Agreement proves to be void, it shall in no way invalidate any other provision of this Agreement.

Termination of Agreement

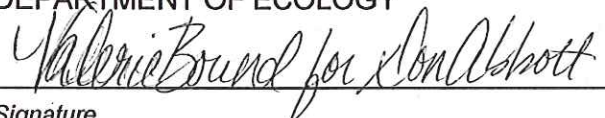
Either party may terminate this Agreement without cause by sending written notice by U.S. mail to the other party. The effective date of termination shall be the date Ecology sends notice to the Customer or the date Ecology receives notice from the Customer, whichever occurs first. Unless otherwise directed, issuance of a No Further Action opinion, either for the Site as a whole or for a portion of the real property located within the Site, shall constitute notice of termination by Ecology.

Under this Agreement, the Customer is only responsible for costs incurred by Ecology before the effective date of termination. However, termination of this Agreement shall not affect any right Ecology may have to recover its costs under MTCA or any other provision of law.

Representations and Signatures

The undersigned representative of the Customer hereby certifies that he or she is fully authorized to enter into this Agreement and to execute and legally bind the Customer to comply with the Agreement.

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY


Signature

Donald W. Abbott
Printed Name

Section Manager, CRO
Toxics Cleanup Program Section

Date: 12-9-08

Fulcrum Environmental Consulting, Inc.

Name of Customer


Signature

Ryan K. Mathews
Printed Name of Signatory

Principal
Title of Signatory

Date: 12/03/2008



Voluntary Cleanup Program

Washington State Department of Ecology Toxics Cleanup Program

REQUEST FOR OPINION FORM

Use this form to request a written opinion on your planned or completed independent remedial action under the Voluntary Cleanup Program (VCP). Attach to this form the plans or reports documenting the remedial action. Please submit only one form for each request.

Step 1: IDENTIFY HAZARDOUS WASTE SITE

Please identify below the hazardous waste site for which you are requesting a written opinion under the VCP. This information may be found on the VCP Agreement.

Facility/Site Name: Former University Auto Center

Facility/Site Address: 100 East University Way, Ellensburg, WA

Facility/Site No: 65863261

VCP Project No.: CEO300

Step 2: REQUEST WRITTEN OPINION ON PLAN OR REPORT

What type of independent remedial action plan or report are you submitting to Ecology for review under the VCP? Please check all that apply.

- ☐ Remedial investigation plan
- ☒ Remedial investigation report
- ☐ Feasibility study report
- ☐ Property cleanup* plan (* cleanup of one or more parcels located within the Site)
- ☐ Property cleanup* report
- ☐ Site cleanup plan
- ☐ Site cleanup report
- ☐ Other – please specify:

Do you want Ecology to provide you with a written opinion on the planned or completed independent remedial action?

☒ Yes ☐ No

Please note that Ecology's opinion will be limited to:

- Whether the planned or completed remedial action at the site meets the substantive requirements of the Model Toxics Control Act (MTCA), and/or
- Whether further remedial action is necessary at the site under MTCA.

Step 3: REPRESENTATIONS AND SIGNATURE

The undersigned representative of the Customer hereby certifies that he or she is fully authorized to request services from Ecology under the Agreement for this VCP Project.

Name: Ryan Mathews

Title: Principal

Signature: *Ryan Mathews*

Date: 12/03/2008

Organization: Fulcrum Environmental Consulting, Inc.

Mailing address: 406 North 2nd Street

City: Yakima

State: WA

Zip code: 98901

Phone: 509.574.0839

Fax: 509.575.8453

E-mail: rmathews@efulcrum.net

Step 4: SUBMITTAL

Please mail your completed form and the independent remedial action plan or report that you are requesting Ecology review to the site manager Ecology assigned to your Site. If a site manager has not yet been assigned, please mail your completed form to the Ecology regional office for the County in which your Site is located.



Northwest Region: Attn: Sara Maser 3190 160 th Ave. SE Bellevue, WA 98008-5452	Central Region: Attn: Mark Dunbar 15 W. Yakima Ave., Suite 200 Yakima, WA 98902
Southwest Region: Attn: Scott Rose P.O. Box 47775 Olympia, WA 98504-7775	Eastern Region: Attn: Patti Carter N. 4601 Monroe Spokane WA 99205-1295

If you need this publication in an alternate format, please call the Toxics Cleanup Program at 360-407-7170. Persons with hearing loss can call 711 for Washington Relay Service. Persons with a speech disability can call 877-833-6341.



Voluntary Cleanup Program

Washington State Department of Ecology Toxics Cleanup Program

APPLICATION FORM

Under the Voluntary Cleanup Program (VCP), the Department of Ecology (Ecology) may provide informal site-specific technical consultations to persons conducting independent remedial actions at a hazardous waste site. Ecology may provide such consultations under the authority of the Model Toxics Control Act (MTCA), Chapter 70.105D RCW, and its implementing regulations, Chapter 173-340 WAC.

To enter the VCP, complete and submit to the Department of Ecology (Ecology) a VCP Application. The Application consists of the following two documents:

1. Application Form (including required attachments). ← **THIS DOCUMENT**
2. Agreement.

For guidance on how to complete your Application, please refer to the Application Instructions, which are available separately on the VCP web site: www.ecy.wa.gov/programs/tcp/vcp/vcpmain.htm.

Part 1 - ADMINISTRATION

A. Customer Information. The Customer is the person or organization requesting services from Ecology under the VCP, and is responsible for paying the costs incurred by Ecology. The authority and duty of the Customer are explained in the Agreement.

Name of Customer: Fulcrum Environmental, Inc

What type of entity is the Customer?

☐ Person

If the Customer is a "person," then the Customer shall serve as both the Manager and Billing Contact for the Project. When identifying the Project Manager below, please enter the name of the Customer and his or her contact information.

☒ Organization

If the Customer is an "organization," then please identify below both a Manager and Billing Contact for the Project. Those persons must be employed by the organization.

What is the Customer's involvement at the Site? Please check all that apply.

☐ Property owner

☐ Business owner (operator)

☐ Past property owner

☐ Mortgage holder

☐ Future property owner

☒ Consultant

☐ Property lessee

☐ Attorney

☐ Other – please specify: _____

If not the current property owner, is the Customer acting as the agent for the property owner?

☒ Yes ☐ No

If not the current property owner, is the Customer authorized to grant access to the property?

☒ Yes ☐ No

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DEPARTMENT OF ECOLOGY - CENTRAL REGIONAL OFFICE

Part 1 – ADMINISTRATION continued

B. Project Manager Information. Ecology will send this person all official correspondence. Please enter the required information below.

Name: Ryan Mathews		Title: Principal
Mailing address: 406 North 2 nd Street		
City: Yakima	State: WA	Zip: 98901
Phone: 509.574.0839	Fax: 509.574.8453	E-mail: rmathews@efulcrum.net

C. Project Billing Contact Information. Ecology will send this person monthly invoices.

Is the Project Billing Contact the same as the Project Manager?

- ☒ Yes *If you answered "YES," then skip to the next question.*
☐ No *If you answered "NO," then please enter the required information below.*

Name:		Title:
Mailing address:		
City:	State:	Zip:
Phone:	Fax:	E-mail:

D. Project Consultant Information.

Is the Customer a consultant?

- ☒ Yes *If you answered "YES," then skip to the next question.*
☐ No *If you answered "NO" and the Customer hired a consultant to conduct the independent remedial action, then enter the required information below.*

Name:		Title:
Organization:		
Mailing address:		
City:	State:	Zip:
Phone:	Fax:	E-mail:

Do you want Ecology to contact the Project Consultant?

- ☐ Yes ☐ No

E. Property Owner Information.

Is the Customer the owner of the property where independent remedial action is being conducted?

- ☐ Yes *If you answered "YES," then enter the type of entity and skip to the next question.*
☒ No *If you answered "NO," then please enter all of the required information below.*

Name: Allen Faultus		Title:
Organization:		
Mailing address: P.O. Box 619		
City: Ellensburg	State: WA	Zip: 98942
Phone: 509.962.7151	Fax: 509.962.7161	E-mail:

Part 1 – ADMINISTRATION continued

What type of entity is the property owner? Please check only one.

- | | |
|--|--|
| <input checked="" type="checkbox"/> Private | <input type="checkbox"/> County |
| <input type="checkbox"/> Tribal | <input type="checkbox"/> Municipal |
| <input type="checkbox"/> Federal | <input type="checkbox"/> Mixed |
| <input type="checkbox"/> State | <input type="checkbox"/> Public School |
| <input type="checkbox"/> Other – please specify: _____ | |

F. Request for Written Opinion.

Are you submitting a remedial action plan or report with your VCP Application?

- ☒ Yes ☐ No

If you answered "YES" above, do you want Ecology to provide you with a written opinion on the planned or completed remedial action?

- ☒ Yes ☐ No

Please note that Ecology's opinion will be limited to:

- ☐ Whether the planned or completed remedial action at the site meets the substantive requirements of the Model Toxics Control Act (MTCA), and/or
- ☐ Whether further remedial action is necessary at the site under MTCA.

Do you expect to request additional written opinions in the future?

- ☒ Yes ☐ No

G. Reporting Requirements.

Please comply with the following reporting requirements when requesting written opinions on planned or completed remedial actions:

- ☐ **Licensing.** Documents submitted containing geologic, hydrologic, or engineering work must be under the seal of an appropriately licensed professional, as required by Chapters 18.43 and 18.220 RCW.
- ☐ **Data Submittal.** Environmental sampling data must be submitted in both a printed form and an electronic form capable of being transferred into Ecology's data management systems. For instructions on how to submit the data, please refer to the following Ecology web site:
www.ecy.wa.gov/programs/tcp/data_submittal/Data_Requirements.htm.

Failure to comply with these requirements may result in unnecessary delays. **Ecology will not issue a No Further Action (NFA) opinion unless these requirements are satisfied.**

Part 2 - DESCRIPTION OF THE SITE

A. Name of the Site. If Ecology has already identified the Site, enter the name provided by Ecology. Otherwise, enter a suggested name for the Site. You may also include an alternate name.

Name: Former University Auto Center

Alternate Name: University Auto Center/8th & Pearl, University & Pearl

B. Location of Property where the Releases Occurred (Source Property).

The "source property" is the property where hazardous substances were released into the environment. For example, if petroleum was released from a leaking UST, the source property is the property where the UST was located.

Do you know on which property the releases occurred?

☐ Yes

If you answered "YES," then please refer to the source property when answering the following questions.

☐ No

If you answered "NO," then please refer to the property addressed by your remedial action (cleanup) when answering the following questions.

Physical Address. Please enter the physical address of the property below.

Street Address: 100 East University Way

City: Ellensburg

State: WA

Zip: 98942

Geographic Position. Please enter the geographical position of the property below. For additional guidance on how to complete this part, please refer to instructions on the VCP web site.

COORDINATES	LATITUDE:	Degrees: 46	Minutes: 59	Seconds: 57
	LONGITUDE :	Degrees: -120	Minutes: 32	Seconds: 46
LOCATION ON PROPERTY: [e.g., point of release or center of parcel]	Center			
COLLECTION METHOD: [e.g., GPS or address matching]				
COLLECTION SOURCE: [i.e., map scale]	Google Earth			
HORIZONTAL DATUM: [i.e., base reference for coordinate system]				
ACCURACY LEVEL: [i.e., +/- feet or meters]				

Legal Descriptions.

TRS DATA:	Township: 8N	Range: 18E	Section: 35	Quarter-Quarter: NE
TAX PARCEL #(s):	057-4301			

Part 2 - DESCRIPTION OF THE SITE continued

C. Identification of Properties affected by the Releases (Affected Properties).

An "affected property" is a property affected by the release of hazardous substances on the source property. For example, petroleum released from a leaking UST on one property (source property) may migrate through the soil or ground water onto an adjacent property (affected property).

Do any of the releases affect any properties adjacent to the source property?

- ☐ Yes *If you answered "YES," then please identify below each property that you know has been affected by the releases on the source property. If you need to identify additional properties, please attach additional pages.*
- ☒ No *If you answered "NO," then skip to the next question.*
- ☐ Unknown *If you answered "UNKNOWN," then skip to the next question.*

1.	Address:
	Tax Parcel(s):
2.	Address:
	Tax Parcel(s):
3.	Address:
	Tax Parcel(s):
4.	Address:
	Tax Parcel(s):

D. Identification of Public Right-of-Ways affected by the Releases.

Do any of the releases affect any public right-of-ways (e.g., streets)?

- ☐ Yes ☒ No ☐ Unknown

If you answered "YES" above, please specify below. Otherwise, skip to the next question.

Attach additional pages if necessary.

E. Extent of the Site.

What is the approximate areal extent of the Site? Please check only one.

- ☐ < 5,000 square feet
- ☒ > 5,000 square feet, but < 1 acre
- ☐ > 1 acre, but < 10 acres
- ☐ > 10 acres
- ☐ Unknown

Part 2 - DESCRIPTION OF THE SITE continued

F. Description of Release(s) at the Site.

Source of Release(s).

What are the source(s) of the release(s) at the Site? Please check all that apply.

- ☒ Point source (e.g., leaking tank)
- ☐ Non-point source (e.g., contaminated soil used as fill)
- ☐ Area-wide lead and arsenic soil contamination (see questions below)
- ☐ Other – please specify: _____
- ☐ Unknown

To the extent known, please describe the source(s) of the release(s):

Investigation was part of a site assessment of historically remover gasoline and diesel fuel tanks associated with the historic gasoline service station. Sampling results identified no indication of a release to the environment.

Attach additional pages if necessary.

Circumstances of Release(s). To the extent known, please describe below the circumstances of the release(s).

See above

Attach additional pages if necessary.

Circumstances of Release Discovery. To the extent known, please describe below the circumstances of the discovery of the release(s).

N/A

Attach additional pages if necessary.

Part 2 - DESCRIPTION OF THE SITE continued

Area-Wide Soil Contamination. For information about the area-wide soil contamination project, please refer to the following web site: www.ecy.wa.gov/programs/tcp/area_wide/area_wide_hp.html. For information about the Tacoma Smelter Plume (TSP) and the associated Management Plan, please refer to the following web site: www.ecy.wa.gov/programs/tcp/sites/tacoma_smelter/ts_hp.htm.

Is the Site located within an area affected by smelter emissions, such as the TSP area?

☐ Yes ☒ No ☐ Unknown

To determine whether your Site is located within the TSP area, please refer to the map on the TSP web site identified above.

Is the Site located on a former apple or pear orchard in operation prior to 1947?

☐ Yes ☒ No ☐ Unknown

Is the Site impacted by area-wide arsenic and/or lead soil contamination?

☐ Yes ☒ No ☐ Unknown

G. Nature and Extent of Hazardous Substances Released at the Site. The following questions refer to conditions after the release, but prior to any cleanup, of the hazardous substances at the Site.

Hazardous Substances and Affected Media. To the extent known, please identify in the following table the hazardous substances released at the Site and the media (e.g., soil) impacted by those substances. Use the codes at the bottom of the table.

HAZARDOUS SUBSTANCE	AFFECTED MEDIA				
	SOIL	GROUND WATER	SURFACE WATER	SEDIMENT	AIR
EXAMPLE: Benzene	C	S	N/A	N/A	B
Gasoline	O				
Benzene	O				
Toluene	O				
Ethylbenzene	O				
Xylenes	O				
Diesel	O				
Mineral Oil	O				
Oil	O				
Lead	B				

When identifying the affected media in the table above, please use one of the following codes:

- C = confirmed, above cleanup level
- B = confirmed, below cleanup level
- O = confirmed, not present
- S = suspected
- N/A = not suspected
- U = unknown

Part 2 - DESCRIPTION OF THE SITE continued

Drinking Water.

Does any of the contamination at the Site pose a threat or potential threat to an existing drinking water source (ground water or surface water)?

☐ Yes ☒ No ☐ Unknown

If you answered "YES" above, what type of drinking water system is threatened by the contamination? Please check all that apply.

☐ Single Family
☐ Community

Indoor Air.

Are contaminant odors present in any buildings, manholes, or other confined spaces?

☐ Yes ☒ No ☐ Unknown

If you answered "YES" above, please specify:

No contamination was identified

Attach additional pages if necessary.

H. Maps of the Site.

Please attach to this application map(s) that identify, to the extent known, the following:

- ☐ The location of the site.
- ☐ The properties, and any public right-of ways, affected by the site.
- ☐ The source(s) of the release(s) at the site.
- ☐ The nature and extent of contamination at the site.
- ☐ Any human or ecological receptors impacted by the site (e.g., drinking water wells).
- ☐ The physical characteristics of the site (e.g., property lines, building and road outlines, surface water bodies, water supply wells, ground water flow direction, and utility right-of-ways).
- ☐ The properties adjacent to the site and the uses of those properties (e.g., gas station, dry cleaner, residential).

Part 3 – OPERATIONAL HISTORY OF THE SITE

A. Current Use of Source Property. *Note that the following questions refer only to the Source Property, not other properties affected by the Site. Answer these questions to the best of your ability.*

Current Property Owners. To the extent known, please identify below the current owner of the source property.

Name: Allen Faltus	Title:	
Organization:		
Mailing address: P.O. Box 619		
City: Ellensburg	State: WA	Zip code: 98942
Phone: 509.962.7151		

Current Business Owner (Operator). To the extent known, please identify below the current owner of the business located on the source property.

Name:	Title:	
Organization:		
Mailing address:		
City:	State:	Zip code:
Phone:		

Current Business Operations. To the extent known, please identify below the current operations of the business located on the source property.

What is the current land use of the source property? Please check all that apply.

- | | |
|---|---|
| <input type="checkbox"/> Residential | <input type="checkbox"/> School |
| <input type="checkbox"/> Commercial | <input type="checkbox"/> Childcare facility |
| <input type="checkbox"/> Industrial | <input type="checkbox"/> Park |
| <input type="checkbox"/> Agricultural | |
| <input checked="" type="checkbox"/> Other – please specify: <u>Commercial property not currently in use</u> | |

Is there a currently operational commercial or industrial business located on the source property?

- ☐ Yes ☒ No ☐ Unknown

If you answered "YES" above, please identify in the following table the current business operations using the North American Industry Classification System (NAICS) codes and specifying the operations.

NAICS CODE	DESCRIPTION OF OPERATIONS
EX: 447110	Gasoline Stations with Convenience Stores

Part 3 – OPERATIONAL HISTORY OF THE SITE continued

Is there a solid waste handling facility located on the Source Property?

☐ Yes ☒ No ☐ Unknown

If you answered "YES" above, please identify:

Attach additional pages if necessary.

Is there a dangerous waste treatment, storage, or disposal facility located on the Source Property?

☐ Yes ☒ No ☐ Unknown

If you answered "YES" above, please identify:

Attach additional pages if necessary.

Regulation of Current Business Operations.

Does the business operate under any federal, state, or local permits related to the release of hazardous substances into the environment (e.g., NPDES permit)?

☐ Yes ☒ No ☐ Unknown

If you answered "YES" above, please specify the regulated operation, the name of the permit, and the date it was issued in the table below.

REGULATED OPERATION	PERMIT	DATE ISSUED
EX: Wastewater discharge	NPDES permit	02/02/02

Has a state or federal notice of enforcement action (e.g., notice of violation) ever been issued related to the release of hazardous substances at the business?

☐ Yes ☒ No ☐ Unknown

If you answered "yes" above, please specify (notice and year issued): _____

Have business operations resulted in any other spills or other unpermitted releases on the source property?

☐ Yes ☒ No ☐ Unknown

If you answered "YES" above, please specify in the table below.

RELEASE	DATE OF RELEASE	STATUS OF RELEASE

Part 3 – OPERATIONAL HISTORY OF THE SITE continued

Storage Tank Information. In table below, please identify all above ground storage tanks (AST) and underground storage tanks (UST) that have been used for storing hazardous substances on the source property, irrespective of whether the tanks are still in use or in place. *If you are unable to provide answers to specific questions regarding a tank, please enter "U" for unknown.*

IDENTIFICATION				STATUS AND CLOSURE				RELEASES	
Hazardous Substance	Type (AST/UST)	Size (Gallons)	TANK ID	DATE INSTALL	IN USE (Y/N)	DATE CLOSED	CLOSURE METHOD (*)	PAST (Y/N)	CURRENT (Y/N)
EX: Diesel	UST	10,000	4	02/87	N	05/98	Removed	Y	N
Gas & Diesel	UST	3,000	3		N	1980s	Removed	N	N
Gas & Diesel	UST	3,000	4		N	1980s	Removed	N	N
Gas & Diesel	UST	3,000	5		N	1980s	Removed	N	N
Waste Oil	UST	500	1		N	1991	Removed	Y	N
Waste Oil	UST	500	2		N	1991	Removed	N	N

(*) Options = Removed or Closed in Place

B. Past Use of Source Property. Note that the following questions refer only to the Source Property, not other properties affected by the Site. Please answer these questions to the best of your ability.

Past Property Owners. To the extent known, please identify below the owner of the source property at the time the release occurred.

Name:		Title:	
Organization:			
Mailing address:			
City:		State:	Zip code:
Phone:	Fax:	E-mail:	

Past Business Owners (Operators). To the extent known, please identify below the owner of the business (operator) at the time the release occurred.

Name: Allen Faltus		Title:	
Organization: University Auto Center			
Mailing address: P.O. Box 619			
City: Ellesburg		State: WA	Zip code: 98942
Phone:	Fax:	E-mail:	

Identification of Past Business Operations. Please identify in the following table the past operations of businesses located on the source property using the North American Industry Classification System (NAICS) codes and/or specifying the operations.

NAICS CODE	DESCRIPTION OF OPERATIONS
EX: 447110	Gasoline Stations with Convenience Stores
441120	Used Car Dealership
447110	Gasoline Stations with Convenience Stores

Part 3 – OPERATIONAL HISTORY OF THE SITE continued

C. Future Use of Source and Affected Properties. The following questions refer to both source and affected properties. Please answer these questions to the best of your ability.

Will any ownership interest in the source or affected properties be conveyed prior to, or upon completion of, the cleanup?

☐ Yes ☐ No ☐ Unknown

If you answered "YES" above, please specify:

N/A

Attach additional pages if necessary.

Will any of the source or affected properties, or portions of those properties, be redeveloped as part of the cleanup?

☐ Yes ☐ No ☐ Unknown

If you answered "YES" above, please specify the proposed land use below. Please check all that apply.

- | | |
|--|---|
| <input type="checkbox"/> Residential | <input type="checkbox"/> School |
| <input type="checkbox"/> Commercial | <input type="checkbox"/> Childcare facility |
| <input type="checkbox"/> Industrial | <input type="checkbox"/> Park |
| <input type="checkbox"/> Agricultural | |
| <input type="checkbox"/> Other – please specify: | |

Please also specify the activities proposed for that land use:

N/A

Attach additional pages if necessary.

Part 4 – ADMINISTRATIVE HISTORY OF THE SITE

Have you previously reported the release(s) of hazardous substances at the Site to Ecology?

☐ Yes – If so, when? _____ ☒ No ☐ Unknown

Has the cleanup of the Site, or any portion of the Site, ever been managed under the VCP?

☐ Yes – If so, please specify the VCP Project Number: _____
☒ No
☐ Unknown

Has the cleanup of the Site, or any portion of the Site, ever been managed under a federal or state order or decree?

☐ Yes – If so, please specify the type and docket number: _____
☒ No
☐ Unknown

Part 5 – DESCRIPTION OF INDEPENDENT REMEDIAL ACTIONS AT THE SITE

A. Scope of Remedial Actions.

Do you plan to characterize and address all of the contamination at the Site, including any contamination located on affected adjacent properties, as part of the VCP project?

☒ Yes ☐ No ☐ Unknown

If you answered "NO" above, please describe below the scope of the VCP project, including the contamination (properties, portions of a property, media and/or hazardous substances) that you DO NOT plan on characterizing and/or addressing as part of the VCP project. Please include additional pages if necessary.

Attach additional pages if necessary.

Part 5 – DESCRIPTION OF INDEPENDENT REMEDIAL ACTIONS AT THE SITE continued

B. Status of Remedial Actions.

What is the current status of remedial actions at the site? Please check all that apply in the table below.

REMEDIAL ACTION	PLANNED	ONGOING	COMPLETED	NOT APPLICABLE
INITIAL RESPONSE (UST ONLY)				X
INTERIM ACTION				X
REMEDIAL INVESTIGATION			X	
FEASIBILITY STUDY				X
CLEANUP ACTION				X

C. Documentation of Remedial Actions.

Please list in the table below all known remedial action plans or reports produced for the site, including:

- The title of the plan or report,
- The author (e.g. consulting firm) of the plan or report,
- The date the plan or report was produced,
- Whether the plan or report has been submitted to Ecology,
- The date the plan or report was submitted to Ecology.

	TITLE	AUTHOR	DATE	SUBMITTED TO ECOLOGY	
				Y/N?	DATE
EX:	John Doe's Site: Remedial Investigation Work Plan	Mom's Consulting Firm	02/20/05	NO	N/A
1.	UST Site Assessment Report, University Auto Center, Ellensburg, WA	White Shield, Inc	12/03/92	Yes	12/07/92
2.	Underground Storage Tank Investigation Report, Former University Auto Dealership, 100 East University Way, Ellensburg, Washington	Fulcrum Environmental, Inc	1/31/08	Yes	
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					

Part 6 – STATEMENT AND SIGNATURE

A. Statement and Signature. The undersigned affirms that the information contained in this application is true and accurate to the best of his or her knowledge. Please note that someone other than the Customer may sign this Application Form.

Name: Ryan Mathews

Title: Principal

Signature:

Date: 12/03/08

Organization: Fulcrum Environmental Consulting, INC

Mailing address: 402 North 2nd Stree

City: Yakima

State: WA

Zip code: 98942

Phone: 509.574.0838

Fax: 509.574.8453

E-mail: rmathews@efulcrum.net

B. Affiliation.

What is the signatory's involvement at the Site? Please check all that apply.

- ☐ Customer
- ☐ Property Owner
- ☒ Consultant
- ☐ Attorney
- ☐ Other – please specify: _____

If you need this publication in an alternate format, please call the Toxics Cleanup Program at 360-407-7170. Persons with hearing loss can call 711 for Washington Relay Service. Persons with a speech disability can call 877-833-6341.



Voluntary Cleanup Program

Washington State Department of Ecology Toxics Cleanup Program

TERRESTRIAL ECOLOGICAL EVALUATION EXCLUSION FORM

Under the Model Toxics Control Act (MTCA), a Terrestrial Ecological Evaluation (TEE) is not required if the Site meets the criteria in WAC 173-340-7491 for an exclusion. If you determine that your Site does not require a TEE, please complete this form and submit it to the Department of Ecology (Ecology) at the appropriate time, either with your VCP Application or with a subsequent request for a written opinion. Please note that exclusion from the TEE does not exclude the Site from an evaluation of aquatic or sediment ecological receptors.

If your Site does not meet the criteria for exclusion under WAC 173-340-7491, then you may have to conduct a simplified TEE in accordance with WAC 173-340-7492 or a site-specific TEE in accordance with WAC 173-340-7493. If you have questions about conducting a simplified or site-specific TEE, please contact the Ecology site manager assigned to your Site or the appropriate Ecology regional office.

Step 1: IDENTIFY HAZARDOUS WASTE SITE AND EVALUATOR

Please identify below the hazardous waste site for which you are documenting an exclusion from conducting a TEE and the name of the person who conducted the evaluation.

Facility/Site Name: Former University Auto Center

Facility/Site Address: 100 East University Way

Facility/Site No: 65863261

VCP Project No.: CE0300

Name of Evaluator: Ryan Mathews, Fulcrum Environmental Consulting, Inc.

Step 2: DOCUMENT BASIS FOR EXCLUSION

The bases for excluding a site from a terrestrial ecological evaluation are set forth in WAC 173-340-7491(1). Please identify below the basis for excluding your Site from further evaluation. Please check all that apply.

POINT OF COMPLIANCE – WAC 173-340-7491(1)(A)

- 1-☒ No contamination present at site.
- 2-☐ All contamination is 15 feet below ground level prior to remedial activities.
- 3-☐ All contamination is six feet below ground level and an institutional control has been implemented as required by WAC 173-340-440.
- 4-☐ All contamination is below a site-specific point of compliance established in compliance with WAC 173-340-7490(4)(b) with an institutional control implemented as required by WAC 173-340-440. *Please provide documentation that describes the rationale for setting a site-specific point of compliance.*

BARRIERS TO EXPOSURE – WAC 173-340-7491(1)(b)

- 5-☐ All contaminated soil, is or will be, covered by physical barriers (such as buildings or paved roads) that prevent exposure to plants and wildlife and an institutional control has been implemented as required by WAC 173-340-440. *An exclusion based on future land use must have a completion date for future development that is acceptable to Ecology.*

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Step 2: DOCUMENT BASIS FOR EXCLUSION continued

UNDEVELOPED LAND – WAC 173-340-7491(1)(c)

“Undeveloped land” is land that is not covered by building, roads, paved areas, or other barriers that would prevent wildlife from feeding on plants, earthworms, insects, or other food in or on the soil.

“Contiguous” undeveloped land is an area of undeveloped land that is not divided into smaller areas of highways, extensive paving, or similar structures that are likely to reduce the potential use of the overall area by wildlife.

- 6-☐ There is less than one-quarter acre of contiguous undeveloped land on or within 500 feet of any area of the Site and any of the following chemicals is present: chlorinated dioxins or furans, PCB mixtures, DDT, DDE, DDD, aldrin, chlordane, dieldrin, endosulfan, endrin, heptachlor, heptachlor epoxide, benzene hexachloride, toxaphene, hexachlorobenzene, pentachlorophenol, or pentachlorobenzene.
- 7-☐ For sites not containing any of the chemicals mentioned above, there is less than one-and-a-half acres of contiguous undeveloped land on or within 500 feet of any area of the Site.

BACKGROUND CONCENTRATIONS – WAC 173-340-7491(1)(d)

- 8-☒ Concentrations of hazardous substances in soil do not exceed natural background levels as described in WAC 173-340-200 and 173-340-709.

Step 3: PROVIDE EXPLANATION FOR EXCLUSION (IF NECESSARY)

Attach additional pages if necessary.

Step 4: SUBMITTAL

Please mail your completed form to Ecology at the appropriate time, either with your VCP Application or with a subsequent request for a written opinion. If you complete the form after you enter the VCP, please mail your completed form to the Ecology site manager assigned to your Site. If a site manager has not yet been assigned, please mail your completed form to the Ecology regional office for the County in which your Site is located.



Northwest Region: Attn: Sara Maser 3190 160 th Ave. SE Bellevue, WA 98008-5452	Central Region: Attn: Mark Dunbar 15 W. Yakima Ave., Suite 200 Yakima, WA 98902
Southwest Region: Attn: Scott Rose P.O. Box 47775 Olympia, WA 98504-7775	Eastern Region: Patti Carter N. 4601 Monroe Spokane WA 99205-1295

If you need this publication in an alternate format, please call the Toxics Cleanup Program at 360-407-7170. Persons with hearing loss can call 711 for Washington Relay Service. Persons with a speech disability can call 877-833-6341.



FILE COPY
TCP Correspondence

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

15 West Yakima Avenue, Suite 200 • Yakima, Washington 98902-3452 • (509) 575-2490

February 1, 2006

City of Ellensburg
501 North Anderson Street
Ellensburg, WA 98926

To Whom It May Concern:

I am writing to verify the current street name for Eighth Avenue / University Way in Ellensburg.

Ecology records have various facilities listed at addresses on Eighth Avenue and University Way in Ellensburg. In the past, I have contacted the City to verify that addresses listed as Eighth Avenue are in fact on University Way.

I am now seeking written confirmation that the street name was changed in order to update Ecology database records. If there have been other street name changes in recent years, I would be interested in receiving information about those as well.

Your assistance in this matter is appreciated. If you have any questions about this letter, please call me at (509) 454-7841.

Sincerely,

Frosti Smith
Data Coordinator
Toxics Cleanup Program
Central Regional Office

cc: Rachael Erickson, Database Administrator



Department Decision Recommendation

RE: LUST # 1829

Site: University Auto Center/8th & Pearl

City: Ellensburg

County: Kittitas

In keeping with the requirement of WAC 173-340-310 (4) I recommend that this site receive a No Further Action determination.

Supporting Criteria:

In November 1992 White Shield, Inc. performed an UST closure site assessment after removing two 500-gallon waste oil tanks from the site. The tanks were located in the alley between Pearl and Pine Streets at the rear of the University Auto Center service bays.

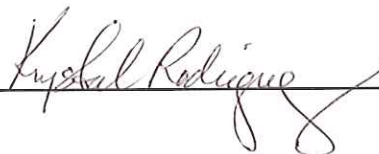
The report states that the tanks and all associated piping were contained within one excavation. Upon removal, the tanks were reported to be in good condition with no apparent holes. Some staining was observed in the pea gravel on the surface of the tanks and was assumed to be related to small spills around the fill spout.

The excavation extended to a depth of seven feet, however, no groundwater was encountered. Five soil samples were collected from the base and sidewalls of the excavation; three samples (including composites of the sidewall samples) were analyzed for total petroleum hydrocarbons by Method WTPH 418.1. Laboratory analysis did not detect petroleum in the bottom sample and the sidewall samples indicated a maximum level of 48 ppm TPH. Additionally, three samples were collected from the stockpile; the highest TPH level was 1158 ppm. All of these results are below the current MTCA cleanup levels for heavy oil.

The stockpiled soil was taken to the John Clerf property for remediation by landfarming; it is located approximately nine miles east of Kittitas. No additional soil samples of the landfarmed soil have been taken to determine if the landfarming was effective. However, due to the adjustments made to the cleanup levels in the revised MTCA, the levels detected during the 1992 cleanup do not warrant remedial actions. Therefore, this site requires no further action.

This Department Decision Recommendation should be reviewed and re-evaluated based on any new information about these sites.

Investigator(s) Krystal Rodriguez
Print and sign name(s)



DATE: 1/11/06

Valerie Drews
Section Supervisor, Acting

DATE: 1-12-06

Zerby, Christina E.

From: Davis, Tara
Sent: Friday, May 24, 2002 11:25 AM
To: Zerby, Christina E.
Subject: RE: University Auto Center

Hello!

Tell Rachel that I can understand why her head hurts. I didn't do this...just so you know. I caught this because of the report that came in for the 7th & Pearl st. On several sites, I have noticed that tanks are being marked 'removed' before any report w/documents come in. I went to mark in comments that the tanks should not have been marked removed...(I didn't finish my thought) but intended to delete what I had said, because I don't need to be making negative comments in there. A number of sites have been marked 'removed' and don't have any supporting documents. I have been doing tons...well, ... several file reviews for NWRO and have found a tremendous amount of 'removed' instead of 'closure in process' sites....so any time you find something like this, please let me know. I have been leaving sites the way they are marked and doing research by contacting regional offices, owner or contacting the consultant.

So, I will research this further and deal with it on Tuesday. I am leaving early and won't be able to do this today...but I will next week.

Have a safe and wonderful weekend...and don't forget to buckle up!

Tara

-----Original Message-----

From: Zerby, Christina E.
Sent: Friday, May 24, 2002 10:37 AM
To: Davis, Tara
Subject: FW: University Auto Center

Per my voice mail. We can discuss more if further clarification is needed.

Christina

-----Original Message-----

From: Caron, Rachel
Sent: Friday, May 24, 2002 10:20 AM
To: Zerby, Christina E.; Smith, Frosti K.
Subject: University Auto Center

Here's the update.

I pulled the University Auto Center file. As far as I can tell, the 1992 site is about a block away from the 2002 tank excavation. So, the sites should be listed as 2 different sites, not the same one. So, even though they are listed on ISIS as the same, the 1992 University Auto Center file pertains to the 8th Ave and Pearl site and the new report we just received pertains to the 7th Ave and Pearl site.

As far as the four tanks listed on ISIS, I'm not sure if the four listed in the 2002 report are those tanks. In the 2002 report, it says those tanks were not registered with Ecology. So, are there 4 more tanks out there (at the 8th and Pearl site) or were they just entered into the system when HQ received the 2002 report?

So, this is how I see it:

Site 1829 is located at 8th and Pearl, there were two 500 gallon waste oil tanks removed in 1992, and

the site has an RCU.

Site ?? is located at 7th and Pearl, four tanks were removed in January of this year and should be put on the LUST list separately from the 1829 site.

This is making my head hurt.

Rachel



University Auto Center

TELEPHONE REPORT

Call From: Dave Green
ACR Sciences

Date: ⁴2-5-02
Time: am^{pm}
(circle)

Phone No.: _____

Call To: R Carin

Subject: Technical Assistance & Reporting a

Summary: Release

Questions on Method B Calculations

Reported release

Location: University Auto Center

7th Ave + Pearl St in Ellensburg

4 tanks removed

3 1,000 Gallon leaded

\$1 675 gal heating oil

Amt of release not known

PCS on site

? gw impacted

Will turn in report when done

Signature _____

ECY 010-46(a)

Date _____



February 5, 2001

Mr. Art McEwen
Yakima Health District
104 North First Street
Yakima, WA 98901

**SUBJECT: REQUEST FOR INFORMATION REGARDING ALLOWABLE
VOLATILE ORGANIC COMPOUND CONCENTRATIONS
ADMISSIBLE TO ANDERSON DEMOLITION PITS, YAKIMA, WA**

Dear Mr. McEwen,

Sage Earth Sciences, Inc. (Sage) was retained by University Auto Center (UAC), Ellensburg, WA to perform closure site assessment of an Underground Storage Tank (UST) system and two unlined catch basins at their facility located 7th Avenue and Pearl Street, Ellensburg, WA. Petroleum Contaminated Soil (PCS) was found in the UST Basin and Catch Basin areas. However, Volatile Organic Compounds (VOC's) and RCRA Metals were also found to originate from the catch basin locations. Some of the VOC's were found to extend into the UST basin area.

Sage has verbal approval to transport soil with the highest VOC concentrations to Roosevelt, WA for disposal. UAC proposes to initially transport soil generated at the catch basin locations to Roosevelt due to the high VOC and total lead concentrations. However, to reduce transport fees for the currently unknown quantity of soil, UAC hopes to discontinue transport of impacted soil to Roosevelt when VOC and lead concentrations are sufficiently low to allow treatment/disposal at the Anderson Demolition Pits facility.

Sage requests that you provide us with the maximum allowable concentrations for transport of EACH of the following compounds to the Anderson Demolition Pits facility:

- Gasoline,
- Diesel and Heavy Oil,
- Benzene,
- Toluene,
- Ethylbenzene,
- Xylenes
- Barium,
- Lead, - 250
- 1,1,1-Trichloroethane, 2 70,200 mg/kg
- Isopropylbenzene (Cumene), 3200 mg/kg - 64 mg/kg 8000
- n-Propylbenzene, 7856 6050 6040 mg/kg C₉H₁₂
- 1,3,5-Trimethylbenzene (Mesitylene), 5810
- tert-Butylbenzene, 1551 C₁₀H₁₄
- 1,2,4-Trimethylbenzene, - per document 7929 C₉H₁₂
- sec-Butylbenzene, 1550
- p-Isopropyltoluene (Cymene), 2470 4750 mg/kg
- 1,2-Dichlorobenzene, 72 mg/kg 7200

Please provide the information requested in writing to:

David Green
Sage Earth Sciences, Inc.
P.O. Box 1644
Zillah, WA 98953

If you have any questions, please call me at (509) 829-6400.

Respectfully,
SAGE EARTH SCIENCES, INC.



David L. Green
Geologist

Cc: file

FILE COPY

LUST File Review
12/20/01
R. Caron

Site Name: University Auto Center
Site ID: 1829
Address: 8th and Pearl, Ellensburg
County: Kittitas
Reference: *UST Site Assessment Report, University Auto Center, Ellensburg, WA.,*
White Shield, Inc., December 1992.

Summary: Two 500 gallon waste oil tanks were removed from the site in November 1992. The excavated area was approximately 6 feet x 10 feet, and 7 feet deep.

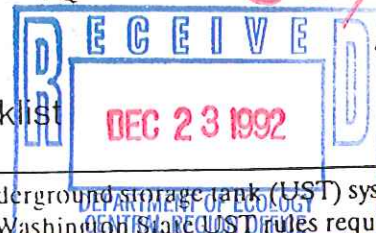
No waste oil was detected in soil samples (bottom and 4 side-wall) from the excavated area that were screened in the field using TLC screening. No groundwater was encountered during excavation. One sample from the bottom of the excavation and two composite samples from the side walls were analyzed using WTPH-418.1. Results indicated that heavy oils were not present in these samples at concentrations greater than MTCA Method A levels for soil. Additional soil samples were taken from the soil stockpile on site. Heavy oil concentrations ranged from 648 ppm to 1158 ppm.

The report indicated that the stockpiled soil was removed from the site and was to be transported to the John Clef property, located approximately 9 miles east of Kittitas for treatment by landfarming.

Action: It is my recommendation, based on the information contained in the report listed above, that this site be listed as Reported Cleaned Up. Reasons for this include the fact that soil samples taken after PCS was removed from the tank excavation indicate that heavy oils are not present at concentrations above MTCA Method A levels for soil.



UNDERGROUND STORAGE TANK
Permanent Closure/Change-In-Service Checklist



The purpose of this form is to certify the proper closure/change-in-service of underground storage tank (UST) systems. These activities must be conducted in accordance with Chapter 173.360 WAC. Washington State UST rules require the tank owner or operator to notify Ecology in writing 30 days prior to closure or change-in-service of tanks. This must be done by completing the 30 Day Notice form (ECY 010-155).

This Permanent Closure Checklist shall be completed and signed by a Licensed Decommissioning Supervisor. The supervisor shall be on site when all tank permanent closure/change-in-service activities are being conducted. The firm which employs the licensed supervisor shall also be licensed by the Washington State Department of Ecology as a Service Provider. If any of the activities listed below have been supervised by a different licensed supervisor, a separate checklist must be filled out and signed by the licensed supervisor performing those activities.

For further information about completing this form, please contact the Department of Ecology UST Program.

A separate checklist must be completed for each UST system (tank and associated piping), except that UST systems at one site may be reported together by completing page 2 of this form separately for each system. The completed checklist should be mailed to the following address within 30 days of the completion of the closure or change-in-service.

Underground Storage Tank Section
Department of Ecology
Mail Stop PV-11
Olympia, WA 98504-8711

DEC 14 1992

1. UST SYSTEM OWNER AND LOCATION

Site Owner/Operator: University Auto
Owners Address: 8th & Pearl Ellensburg Wa 98926
Telephone: (509) 925-1455

Site ID Number (on invoice or available from Ecology if tank is registered): 1 Wastair (001829)
2 Wasteoil

Site/Business Name: University Auto
Site Address: 8th & Pearl Ellensburg Wa 98926
Kittitas County

2. TANK PERMANENT CLOSURE/CHANGE-IN-SERVICE PERFORMED BY:

Firm: Her-Ex Inc. License Number: 5002062
Address: 312 Ridgeview Lane Ellensburg Wa 98926
Telephone: (509) 925-9338
Licensed Supervisor: Mike Smith Decommissioning License Number: W001441

3. TANK CLOSURE/CHANGE-IN-SERVICE INFORMATION

1. Tank ID Number (as registered with Ecology): WasteCo 1

2. Year installed: Unknown

3. Tank capacity in gallons: 2 - 500

4. Date of last use: 10 - 91

5. Last substance stored: WasteCo

6. Date of closure/change-in-service: Nov 12 - 1992

7. Type of closure: ☒ Closure with Tank Removal

☐ In-place Closure

☐ Change-in-Service

8. If in-place closure is used, the tank has been filled with the following substance:

9. If change-in-service, indicate new substance stored in tank:

10. Local permit(s) (if any) obtained from: Ellensburg Fire Dept

Always contact local authorities regarding permit requirements.

11. Has a site assessment been completed? ☒ Yes ☐ No

Unless an external release detection system is operating at the time of closure or change in service, and a report is provided as specified in WAC 173-360-390, a site assessment must be conducted. This site assessment must be conducted by a person registered with the Department of Ecology to perform site assessments. Results of the site assessment must be included with the Site Assessment Checklist (ECY 010-158).

4. CHECKLIST

Each item of the following checklist shall be initiated by the licensed supervisor whose signature appears below.

1. Has all liquid been removed from product lines? ☒

2. Has all product piping been capped or removed? ☒

3. Have all non-product lines been capped or removed? ☒

4. Have all liquid and accumulated sludges been removed from the tank? ☒

5. Has the tank been properly purged or inerted? ☒

6. Have the drop tube, fill pipe, gauge pipe, pumps and other tank fixtures been removed? ☒

7. Have all tank openings been plugged or capped? NOTE: One plug should have 1/8 inch vent hole. ☒

8. Have all sludges removed from the tank been designated and disposed of in accordance with the state of Washington's dangerous waste regulations (Chapter 173-303 WAC)? ☒

9. If removed, was tank properly labeled and disposed of in accordance with all applicable local, state and federal regulations? ☒

*Item not applicable

I hereby certify that I have been the licensed supervisor present on site during the above listed permanent closure activities and to the best of my knowledge they have been conducted in compliance with all applicable state and federal laws, regulations and procedures pertaining to underground storage tanks.

Persons submitting false information are subject to penalties under Chapter 173.360 WAC.

Date: 12-5-92

Signature of Licensed Supervisor: Mike Smith

5. ADDITIONAL REQUIRED SIGNATURES

Date: 12-5-92

Signature of Licensed Service Provider (firm) Owner or Authorized Representative: Mike Smith

Date: 12-8-92

Signature of Tank Owner or Authorized Representative: Mike Smith

Underground Storage Tank Permit

This permit only valid when stamped by the Department of Ecology.

SWORN STATEMENT:

I hereby swear under penalty of law that the underground storage tank identified at right is in compliance with applicable state requirements.

VALIDATED BY

DEPARTMENT OF ECOLOGY

JUL 1 1991

print or type:

Jeff Falouts

Name and Official Title of UST Owner or UST Owner's Authorized Representative

EXPIRES JUNE 30, 1-31-92

Signature of UST Owner or Authorized Representative

Date Signed

Owner:

Name: University Auto center

610 N. Pearl P.O. Box 619

Ellensburg WA 98926

ECY 010-165

If the permit should be sent to an address different from the owner's, please place a correctly addressed mailing label over the address shown above.

Site Location:

Site Addr: University Auto center

8th & Pearl St.

Ellensburg WA 98926

Tank Id. 992

Space for owner to identify tank to product distributor:

Waste Oil

P 868 668 610
Certified mail



Certified Mail Receipt
No Insurance Coverage Provided
Do not use for International Mail
(See Reverse)

Sent to	
UNIV. AUTO CENTER	
Street & No. 7th & Pearl	
P.O. Box 619	
P.O., State & ZIP Code	
Ellensburg WA	
Postage	\$ 98926
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt Showing to Whom & Date Delivered	
Return Receipt Showing to Whom, Date, & Address of Delivery	
TOTAL Postage & Fees	\$
Postmark or Date	

PS Form 3800, June 1990

UST Permit 157

APPENDIX G

Documentation of Terrestrial Ecological Evaluation

Terrestrial Ecological Evaluation Process- Simplified or Site-Specific Evaluation?

Documentation Form

	Terrestrial Concern	Response (Circle One)
*1	Is the site is located on or directly adjacent to an area where management or land use plans will maintain or restore native or semi-native vegetation?	Yes / <input checked="" type="radio"/> No
*2a	Is the site used by a threatened or endangered species ?	Yes / <input checked="" type="radio"/> No
*2b	Is the site used by a wildlife species classified by the state department of fish and wildlife as a "priority species" or "species of concern" under Title 77 RCW?	Yes / <input checked="" type="radio"/> No
*2c	Is the site used by a plant species classified by the Washington state department of Natural Resources natural heritage program as "endangered," "threatened," or "sensitive" under Title 79 RCW.	Yes / <input checked="" type="radio"/> No
*3	Is the site (area where the contamination is located) located on a property that contains at least ten acres of native vegetation within 500 feet of the area where the contamination is located?	Yes / <input checked="" type="radio"/> No
4	Has the department determined that the site may present a risk to significant wildlife populations?	Yes / <input checked="" type="radio"/> No

*1 This includes for example, green-belts, protected wetlands, forestlands, locally designated environmentally sensitive areas, open space areas managed for wildlife, and some parks or outdoor recreation areas. This does not include park areas used for intensive sport activities such as baseball or football.

*2a [What are the threatened or endangered species in Washington state?](#)

*2b [Which plant species are classified as threatened, endangered, or sensitive? Where can I find out more information about this topic?](#)

*2c For plants, "used" means that a plant species grows at the site or has been found growing at the site. For animals, "used" means that individuals of a species have been observed to live, feed or breed at the site.

*3 For this analysis, do not include native vegetation beyond the property boundary.

The following sources shall be used in making this determination: Natural Vegetation of Oregon and Washington, J.F. Franklin and C.T. Dyrness, Oregon State University Press, 1988, and L.C. Hitchcock, C.L. Hitchcock, J.W. Thompson and A. Cronquist, 1955-1969, Vascular Plants of the Pacific Northwest(5 volumes). Areas planted with native species for ornamental or landscaping purposes shall not be considered to be native vegetation. [WAC 173-340-7491(2)(c)(i)]

(Here's a link to the [Seattle Public Library](#) and the [Washington State Library](#) to borrow a copy of Natural Vegetation of Oregon and Washington, J.F. Franklin and C.T. Dyrness, Oregon State University Press, 1988, or you may purchase it through your favorite bookseller. Here's an additional link to a useful online [Field Guide to Selected Rare Plants of Washington](#) developed by the Washington State Department of Natural Resources' Natural Heritage Program (WNHP) and the Spokane District of the U.S.D.I. Bureau of Land Management (BLM) which contains fact sheets for 139 vascular plant species and one lichen species. [Here is an aid to calculating area](#) and an [aerial photo depicting a site](#), its 500 foot boundary and several labeled circles identifying various areas for reference in judging the area of native vegetation within the 500 foot radius.

[\[Exclusions Main\]](#) [\[TEE Definitions\]](#) [\[Simplified or Site-Specific?\]](#) [\[Simplified Ecological Evaluation\]](#) [\[Site-Specific Ecological Evaluation\]](#) [\[WAC 173-340-7493\]](#)
[\[Index of Tables\]](#)
[\[TEE Home\]](#)

Table 749-1

Simplified Terrestrial Ecological Evaluation-Exposure Analysis Procedure

Estimate the area of contiguous (connected) <u>undeveloped land</u> on the site or within 500 feet of any area of the site to the nearest 1/2 acre (1/4 acre if the area is less than 0.5 acre).		
1) From the table below, find the number of points corresponding to the area and enter this number in the field to the right.		5
Ken's Texaco, 120061, 101 University Ave, Ellensburg WA	<u>Area (acres)</u>	<u>Points</u>
	0.25 or less	4
Site Minimum points = 5	0.5	5
Site score = 9	1.0	6
Simplified TEE Exposure Analysis Procedure is complete.	1.5	7
	2.0	8
	2.5	9
	3.0	10
	3.5	11
	4.0 or more	12
2) Is this an <u>industrial</u> or <u>commercial</u> property? If yes, enter a score of 3. If no, enter a score of 1		3
3) ^a Enter a score in the box to the right for the habitat quality of the site, using the following rating system ^b . High=1, Intermediate=2, Low=3		1
4) Is the undeveloped land likely to attract wildlife? If yes, enter a score of 1 in the box to the right. If no, enter a score of 2. ^c		1
5) Are there any of the following soil contaminants present: Chlorinated dioxins/furans, PCB mixtures, DDT, DDE, DDD, aldrin, chlordane, dieldrin, endosulfan, endrin, heptachlor, benzene hexachloride, toxaphene, hexachlorobenzene, pentachlorophenol, pentachlorobenzene? If yes, enter a score of 1 in the box to the right. If no, enter a score of 4.		4
6) Add the numbers in the boxes on lines 2-5 and enter this number in the box to the right. If this number is larger than the number in the box on line 1, the simplified evaluation may be ended.		9

Notes for Table 749-1

^a It is expected that this habitat evaluation will be undertaken by an experienced field biologist. If this is not the case, enter a conservative score of (1) for questions 3 and 4.

^b **Habitat rating system.** Rate the quality of the habitat as high, intermediate or low based on your professional judgment as a field biologist. The following are suggested factors to consider in making this evaluation:

Low: Early successional vegetative stands; vegetation predominantly noxious, nonnative, exotic plant species or weeds. Areas severely disturbed by human activity, including intensively cultivated croplands. Areas isolated from other habitat used by wildlife.

High: Area is ecologically significant for one or more of the following reasons: Late-[successional](#) native plant communities present; relatively high species diversity; used by an uncommon or rare species; [priority habitat](#) (as defined by the Washington Department of fish and Wildlife); part of a larger area of habitat where size or fragmentation may be important for the retention of some species.

Intermediate: Area does not rate as either high or low.

^c Indicate "yes" if the area attracts wildlife or is likely to do so. Examples: Birds frequently visit the area to feed; evidence of high use b mammals (tracks, scat, etc.); habitat "island" in an industrial area; unusual features of an area that make it important for feeding animals; heavy use during seasonal migrations.

[\[Area Calculation Aid\]](#) [\[Aerial Photo with Area Designations\]](#) [TEE Table 749-1] [\[Index of Tables\]](#)

[\[Exclusions Main\]](#) [\[TEE Definitions\]](#) [\[Simplified or Site-Specific?\]](#) [\[Simplified Ecological Evaluation\]](#) [\[Site-Specific Ecological Evaluation\]](#) [\[WAC 173-340-7493\]](#)

[\[TEE Home\]](#)