



KAPREALIAN ENGINEERING, INC.

Consulting Engineers

P.O. BOX 998 • BENICIA, CA 94510

(707) 746-6915 • (707) 746-6916 • FAX: (707) 746-5581

TRANSMITTAL PAGE

DATE:

8/23/90

TO:

Ms. Susan Hugo

FROM:

Haig

Number of Pages

(including cover):

18

SUBJECT: BP Station - Oakland - 5425 Martin Luther
King Blvd / 55th St

If any problems occur in receiving, please
call the number listed above.

SAMPLE	D1	D2	D3	D4	P1	P2	D2(15)	SW1	SW2	SW3	SW4
DEPTH (feet)	3	3	3	3	3	3	15	14	14	14	14

KAPREALIAN ENGINEERING, INC.

CHAIN OF CUSTODY

AUG 23 '90 13:46



SAMPLER <i>Haring</i>		SITE NAME & ADDRESS <i>BP Service Station - Oakland 5425 Martin Luther King Blvd</i>					ANALYSES REQUESTED			TURN AROUND TIME: <i>24 Hrs</i>	
WITNESSING AGENCY							TPH-G BTXE Total Lead			REMARKS	
SAMPLE ID NO.	DATE	TIME	SOIL	WATER	GRAB	NO. OF CONT.					
<i>Comp B</i>	<i>8/9/90</i>		<input checked="" type="checkbox"/>			<i>2</i>	<i>STOCKPILE</i>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<i>008 P22</i>
Relinquished by: (Signature) <i>Haring</i>	Date/Time <i>8/9/90 5:30</i>	Received by: (Signature) <i>Tim M. Fain</i>	The following MUST BE completed by the laboratory accepting samples for analysis:								
Relinquished by: (Signature) <i>Tim M. Fain</i>	Date/Time	Received by: (Signature)	1. Have all samples received for analysis been stored in ice? <i>yes</i>								
Relinquished by: (Signature)	Date/Time	Received by: (Signature)	2. Will samples remain refrigerated until analyzed? <i>yes</i>								
Relinquished by: (Signature)	Date/Time	Received by: (Signature)	3. Did any samples received for analysis have head space? <i>N/A</i>								
Relinquished by: (Signature)	Date/Time	Received by: (Signature)	4. Were samples in appropriate containers and properly packaged? <i>yes</i>								
	<i>8/9 7:05</i>	<i>[Signature]</i>	Signature: <i>[Signature]</i> Title: <i>Log in</i> Date: <i>8/9</i>								

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SEQUOIA ANALYTICAL

680 Chesapeake Drive • Redwood City, CA 94063
(415) 364-9600 • FAX (415) 364-9233

Kapreallan Engineering, Inc. P.O. Box 996 Benicia, CA 94510 Attention: Mardo Kapreallan, P.E.	Client Project ID: BP, Oakland., 5425 Martin Luther King Blvd. Sample Descript: Soil, Composite B Lab Number: 008-1992 A-B	Sampled: Aug 9, 1990 Received: Aug 9, 1990 Extracted: Aug 10, 1990 Analyzed: Aug 10, 1990 Reported: Aug 13, 1990
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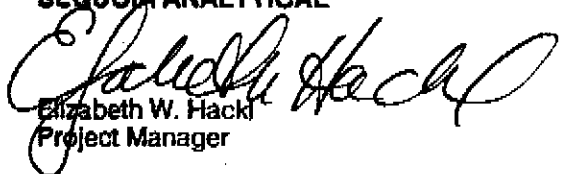
LABORATORY ANALYSIS

Analyte	Detection Limit mg/kg	Sample Results mg/kg
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Lead	0.25	5.8
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Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL


Elizabeth W. Hackl
Project Manager

81992.KEI <1>

AUG 23 '90 13:44

707 746 5581 PAGE.016



SEQUOIA ANALYTICAL
 680 Chesapeake Drive • Redwood City, CA 94063
 (415) 384-9600 • FAX (415) 384-9233

Kaprealian Engineering, Inc.	Client Project ID:	BP, Oakland,, 5425 Martin Luther King Blvd.	Sampled:	Aug 9, 1990
P.O. Box 996	Sample Descript.:	Soil, Composite B	Received:	Aug 9, 1990
Benicia, CA 94510	Analysis Method:	EPA 5030/8015/8020	Analyzed:	Aug 10, 1990
Attention: Mardo Kaprealian, P.E.	Lab Number:	008-1992 A-B	Reported:	Aug 13, 1990

TOTAL PETROLEUM FUEL HYDROCARBONS WITH BTEX DISTINCTION (EPA 8015/8020)

Analyte	Detection Limit mg/kg (ppm)	Sample Results mg/kg (ppm)
Low to Medium Boiling Point Hydrocarbons	1.0	930
Benzene	0.0050	0.13
Toluene	0.0050	5.4
Ethyl Benzene	0.0050	15
Xylenes	0.0050	95

Low to Medium Boiling Point Hydrocarbons are quantitated against a gasoline standard.
 Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL

Elizabeth W. Hackl
 Elizabeth W. Hackl
 Project Manager

81992.KEI <2>

AUG 28 90 13:44



KAPREALIAN ENGINEERING, INC.

CHAIN OF CUSTODY

SAMPLED <i>Haig</i>		SITE NAME & ADDRESS <i>BP - Oakland</i>					ANALYSES REQUESTED				TURN AROUND TIME: <i>24 Hrs</i>			
WITNESSING AGENCY		<i>5425 Martin Luther King Blvd</i>					TPH-G	BTXE	Total Lead	Organic Lead	REMARKS			
SAMPLE ID NO.	DATE	TIME	SOIL	WATER	GRAB	CONC	CONF.	SAMPLING LOCATION	TPH-G	BTXE	Total Lead	Organic Lead	REMARKS	
<i>Comp A</i>	<i>8/8/90</i>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		<i>2 STOCKPILE</i>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<i>008179</i>	
Relinquished by: (Signature) <i>Haig</i>			Date/Time <i>8/9/90 8:30</i>		Received by: (Signature) <i>Tim McLean</i>								The following MUST BE completed by the laboratory accepting samples for analysis:	
Relinquished by: (Signature) <i>Tim McLean</i>			Date/Time <i>8/9/90 10:30</i>		Received by: (Signature) <i>[Signature]</i>								1. Have all samples received for analysis been stored in ice? <input checked="" type="checkbox"/>	
Relinquished by: (Signature)			Date/Time		Received by: (Signature)								2. Will samples remain refrigerated until analyzed? <input checked="" type="checkbox"/>	
Relinquished by: (Signature)			Date/Time		Received by: (Signature)								3. Did any samples received for analysis have head space? <input checked="" type="checkbox"/>	
Relinquished by: (Signature)			Date/Time		Received by: (Signature)								4. Were samples in appropriate containers and properly packaged? <input checked="" type="checkbox"/>	
													Signature: <i>[Signature]</i> Title: <i>SR.</i> Date: <i>8/9</i>	

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SEQUOIA ANALYTICAL

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(415) 364-9600 • FAX (415) 364-9233

Kapreallan Engineering, Inc.	Client Project ID: BP, Oakland, 5425 Martin Luther King Blvd.	Sampled: Aug 8, 1990
P.O. Box 996	Sample Descript.: Soil, Composite A	Received: Aug 9, 1990
Benicia, CA 94510	Analysis Method: EPA 5030/8015/8020	Analyzed: Aug 10, 1990
Attention: Mardo Kapreallan, P.E.	Lab Number: 008-1719	Reported: Aug 13, 1990

TOTAL PETROLEUM FUEL HYDROCARBONS WITH BTEX DISTINCTION (EPA 8015/8020)

Analyte	Detection Limit mg/kg (ppm)	Sample Results mg/kg (ppm)
Low to Medium Boiling Point Hydrocarbons.....	1.0	N.D.
Benzene.....	0.0050	0.0089
Toluene.....	0.0050	0.029
Ethyl Benzene.....	0.0050	N.D.
Xylenes.....	0.0050	0.057

Low to Medium Boiling Point Hydrocarbons are quantitated against a gasoline standard.
Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL

Elizabeth W. Hackl
Elizabeth W. Hackl
Project Manager



SEQUOIA ANALYTICAL

680 Chesapeake Drive • Redwood City, CA 94063
(415) 364-9600 • FAX (415) 364-9233

Kapreallan Engineering, Inc. P.O. Box 996 Benicia, CA 94610 Attention: Mardo Kapreallan, P.E.	Client Project ID: BP, Oakland, 5425 Martin Luther King Blvd. Sample Descript: Soil, Composite A Lab Number: 008-1719	Sampled: Aug 8, 1990 Received: Aug 9, 1990 Extracted: Aug 9, 1990 Analyzed: Aug 9, 1990 Reported: Aug 13, 1990
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LABORATORY ANALYSIS

Analyte	Detection Limit mg/kg	Sample Results mg/kg
Lead	0.26	14

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL

Elizabeth W. Hackl
Elizabeth W. Hackl
Project Manager

81719.KEI <2>



SEQUOIA ANALYTICAL

680 Chesapeake Drive • Redwood City, CA 94063
(415) 364-9600 • FAX (415) 364-9233

Kaprealian Engineering, Inc. P.O. Box 996 Benicia, CA 94510 Attention: Mardo Kaprealian, P.E.	Client Project ID: BP, Oakland, 5425 Martin Luther King Blvd. Sample Descript: Soil Analysis Method: California LUFT Manual, 12/87 First Sample #: 008-1719	Sampled: Aug 8, 1990 Received: Aug 9, 1990 Analyzed: Aug 10, 1990 Reported: Aug 13, 1990
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ORGANIC LEAD

Sample Number	Sample Description	Sample Results mg/kg (ppm)
008-1719	Composite A	N.D.

Detection Limits: 0.050

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL


Elizabeth W. Hackl
Project Manager

61719.KEI <3>



KAPREALIAN ENGINEERING, INC.

CHAIN OF CUSTODY

SAMPLE Haig	SITE NAME & ADDRESS BP Service Station - Oakland		ANALYSES REQUESTED			TURN AROUND TIME: 24 Hrs
ISSUING AGENCY	5425 Martin Luther King Blvd		TPH-C	BTEX	Total Lead	

SAMPLE ID NO.	DATE	TIME	NO. OF				SAMPLE LOCATION	ANALYSES	REMARKS
			SOIL	WATER	GRAB	COMP			
D2 (15)	8/9/90		✓	✓	1	Beneath Dispensee	TPH-C BTEX Total Lead	0081997	

Delivered by: (Signature) Haig	Date/Time 8/9/90 5:30	Received by: (Signature) Tim M. Jan	The following MUST BE completed by the laboratory accepting samples for analysis: 1. Have all samples received for analysis been stored in ice? <u>YES</u> 2. Will samples remain refrigerated until analyzed? <u>YES</u> 3. Did any samples received for analysis have head space? <u>N/A</u> 4. Were samples in appropriate containers and properly packaged? <u>YES</u>
Delivered by: (Signature) Tim M. Jan	Date/Time	Received by: (Signature)	
Delivered by: (Signature)	Date/Time	Received by: (Signature)	
Delivered by: (Signature)	Date/Time 8/9 7:05	Received by: (Signature) [Signature]	
			Signature: <u>Log in</u> Title: <u>Log in</u> Date: <u>8/9</u>



SEQUOIA ANALYTICAL

880 Chesapeake Drive • Redwood City, CA 94063
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Kapreallan Engineering, Inc. P.O. Box 996 Benicia, CA 94510 Attention: Mardo Kapreallan, P.E.	Client Project ID: BP, Oakland, 5425 Martin Luther King Blvd. Sample Descript: Soil, D2 (15) Lab Number: 008-1997	Sampled: Aug 9, 1990 Received: Aug 9, 1990 Extracted: Aug 10, 1990 Analyzed: Aug 10, 1990 Reported: Aug 13, 1990
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LABORATORY ANALYSIS

Analyte	Detection Limit mg/kg	Sample Results mg/kg
Lead	0.26	8.4

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL

Elizabeth W. Hackl
Elizabeth W. Hackl
Project Manager

81997.KEI <1>



SEQUOIA ANALYTICAL

680 Chesapeake Drive • Redwood City, CA 94063
(415) 364-9600 • FAX (415) 364-9233

Kapreallan Engineering, Inc.	Client Project ID: BP, Oakland, 5425 Martin Luther King Blvd.	Sampled: Aug 9, 1990
P.O. Box 996	Sample Descript.: Soil, D2 (15)	Received: Aug 9, 1990
Benicia, CA 94510	Analysis Method: EPA 5030/8015/8020	Analyzed: Aug 10, 1990
Attention: Mardo Kapreallan, P.E.	Lab Number: 008-1997	Reported: Aug 13, 1990

TOTAL PETROLEUM FUEL HYDROCARBONS WITH BTEX DISTINCTION (EPA 8015/8020)

Analyte	Detection Limit mg/kg (ppm)	Sample Results mg/kg (ppm)
Low to Medium Boiling Point Hydrocarbons	1.0	74
Benzene	0.0050	N.D.
Toluene	0.0050	0.951
Ethyl Benzene	0.0050	0.44
Xylenes	0.0050	0.14

Low to Medium Boiling Point Hydrocarbons are quantitated against a gasoline standard.
Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL

Elizabeth W. Hack
Elizabeth W. Hack
Project Manager

81997.KEI <2>



KAPREALIAN ENGINEERING, INC.

CHAIN OF CUSTODY

SAMPLER Hand		SITE NAME & ADDRESS BP Service Station - Oakland 5425 Martin Luther King Blvd					ANALYSES REQUESTED			TURN AROUND TIME: 24 hrs	
WITNESSING AGENCY							TPH-G	BTEX	Total Lead		
SAMPLE ID NO.	DATE	TIME	SOIL	WATER	GRAB	NO. OF CONT.	SAMPLING LOCATION	TPH-G	BTEX	Total Lead	REMARKS
SW1	8/9/90		✓	✓		1	Sidewalk	✓	✓	✓	0081993
SW2	8/9/90		✓	✓		1		✓	✓	✓	0081994
SW3	8/9/90		✓	✓		1		✓	✓	✓	0081995
SW4	8/9/90		✓	✓		1	✓	✓	✓	✓	0081996
Relinquished by: (Signature)		Date/Time		Received by: (Signature)		<p>The following MUST BE completed by the laboratory accepting samples for analysis:</p> <p>1. Have all samples received for analysis been stored in ice? <u>yes</u></p> <p>2. Will samples remain refrigerated until analyzed? <u>yes</u></p> <p>3. Did any samples received for analysis have head space? <u>N/A</u></p> <p>4. Were samples in appropriate containers and properly packaged? <u>yes</u></p>					
Relinquished by: (Signature)		Date/Time		Received by: (Signature)							
Relinquished by: (Signature)		Date/Time		Received by: (Signature)							
Relinquished by: (Signature)		Date/Time		Received by: (Signature)							
Hand		8/9/90 5:30		Tom McLean		Log in		8/9			
Tom McLean		8/9 7:05		[Signature]		[Signature]		[Signature]			



SEQUOIA ANALYTICAL

680 Chesapeake Drive • Redwood City, CA 94063
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Kapreallan Engineering, Inc.

P.O. Box 996

Benicia, CA 94510

Attention: Mardo Kapreallan, P.E.

Client Project ID:

Sample Descript:

Analysis for:

First Sample #:

BP, Oakland, 5425 Martin Luther King Blvd.

Soil

Lead

008-1993

Sampled: Aug 9, 1990

Received: Aug 9, 1990

Extracted: Aug 10, 1990

Analyzed: Aug 10, 1990

Reported: Aug 13, 1990

LABORATORY ANALYSIS FOR: Lead

Sample Number	Sample Description	Detection Limit mg/kg	Sample Result mg/kg
008-1993	SW1	0.25	5.3
008-1994	SW2	0.25	4.4
008-1995	SW3	0.25	5.0
008-1996	SW4	0.25	6.1

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL

Elizabeth W. Hackl
Elizabeth W. Hackl
Project Manager

81993.KEI <1>



SEQUOIA ANALYTICAL

880 Chesapeake Drive • Redwood City, CA 94063
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Kaprealian Engineering, Inc. P.O. Box 996 Benicia, CA 94510 Attention: Mardo Kaprealian, P.E.	Client Project ID: BP, Oakland, 5425 Martin Luther King Blvd. Matrix Descript: Soil Analysis Method: EPA 5030/8015/8020 First Sample #: 008-1993	Sampled: Aug 9, 1990 Received: Aug 9, 1990 Analyzed: Aug 10, 1990 Reported: Aug 13, 1990
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TOTAL PETROLEUM FUEL HYDROCARBONS with BTEX DISTINCTION (EPA 8015/8020)

Sample Number	Sample Description	Low/Medium B.P. Hydrocarbons mg/kg (ppm)	Benzene mg/kg (ppm)	Toluene mg/kg (ppm)	Ethyl Benzene mg/kg (ppm)	Xylenes mg/kg (ppm)
008-1993	SW1	78	0.053	0.17	0.35	0.30
008-1994	SW2	23	0.0084	0.031	0.010	0.071
008-1995	SW3	35	0.0099	0.031	0.014	0.31
008-1996	SW4	2.9	N.D.	0.019	0.066	0.065

Detection Limits:	1.0	0.0050	0.0050	0.0050	0.0050
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Low to Medium Boiling Point Hydrocarbons are quantitated against a gasoline standard. Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL

Elizabeth W. Hackl
Elizabeth W. Hackl
Project Manager

81993.KEI <2>



AUG 23 190 13:37

KAPREALIAN ENGINEERING, INC.

CHAIN OF CUSTODY

SAMPLER		SITE NAME & ADDRESS							ANALYSES REQUESTED			TURN AROUND TIME:	
Haig		BP Service Station - Oakland										24 Hrs	
WITNESSING AGENCY		5425 Martin Luther King Blvd											
SAMPLE ID NO.	DATE	TIME	SOIL	WATER	GRAB	COMP	NO. OF CONT.	SAMPLING LOCATION	PH-G	BTXE	Total Lead	REMARKS	
✓ D1	8/8/90		✓	✓			1	Beneath Dispenser	✓	✓	✓	0081721	
✓ D2	8/8/90		✓	✓			1	Beneath Dispenser	✓	✓	✓	1722	
✓ D3	8/8/90		✓	✓			1	Beneath Dispenser	✓	✓	✓	1723	
✓ D4	8/8/90		✓	✓			1	Beneath Dispenser	✓	✓	✓	1724	
✓ P1	8/8/90		✓	✓			1	Pipe Trench	✓	✓	✓	1725	
✓ P2	8/8/90		✓	✓			1	Pipe Trench	✓	✓	✓	1726	
Relinquished by: (Signature)		Date/Time		Received by: (Signature)							The following MUST BE completed by the laboratory accepting samples for analysis:		
Haig Kowal		8/9/90 8:30		Tom Mc Lain							1. Have all samples received for analysis been stored in ice? <input checked="" type="checkbox"/>		
Relinquished by: (Signature)		Date/Time		Received by: (Signature)							2. Will samples remain refrigerated until analyzed? <input checked="" type="checkbox"/>		
Tom Mc Lain		8/9/90 10:30		Randy [Signature]							3. Did any samples received for analysis have head space? <input checked="" type="checkbox"/>		
Relinquished by: (Signature)		Date/Time		Received by: (Signature)							4. Were samples in appropriate containers and properly packaged? <input checked="" type="checkbox"/>		
Relinquished by: (Signature)		Date/Time		Received by: (Signature)							Signature: <u>2W</u> Field: <u>JK</u> Date: <u>8/9/90</u>		

707 746 5581 PAGE: 005



SEQUOIA ANALYTICAL

680 Chesapeake Drive • Redwood City, CA 94063
(415) 364-9600 • FAX (415) 364-9233

Kaprealian Engineering, Inc.

P.O. Box 996

Benicia, CA 94510

Attention: Mardo Kaprealian, P.E.

Client Project ID:

Sample Descript:

Analysis for:

First Sample #:

BP, Oakland, 5425 Martin Luther King Blvd.

Soil

Lead

008-1721

Sampled: Aug 8, 1990

Received: Aug 9, 1990

Extracted: Aug 10, 1990

Analyzed: Aug 10, 1990

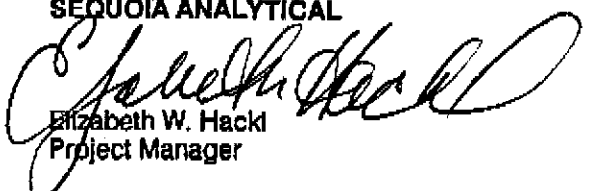
Reported: Aug 13, 1990

LABORATORY ANALYSIS FOR: Lead

Sample Number	Sample Description	Detection Limit mg/kg	Sample Result mg/kg
008-1721	D1	0.25	4.8
008-1722	D2	0.25	4.7
008-1723	D3	0.25	4.8
008-1724	D4	0.25	8.7
008-1725	P1	0.25	5.8
008-1726	P2	0.25	4.9

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL


Elizabeth W. Hackl
Project Manager

81721.KEI <1>



SEQUOIA ANALYTICAL

680 Chesapeake Drive • Redwood City, CA 94063
(415) 364-9600 • FAX (415) 364-9233

Kaprealian Engineering, Inc.
P.O. Box 996
Benicia, CA 94510
Attention: Mardo Kaprealian, P.E.

Client Project ID: BP, Oakland, 5425 Martin Luther King Blvd.
Matrix Descript: Soil
Analysis Method: EPA 5030/8015/8020
First Sample #: 008-1721

Sampled: Aug 8, 1990
Received: Aug 9, 1990
Analyzed: Aug 9, 1990
Reported: Aug 13, 1990

TOTAL PETROLEUM FUEL HYDROCARBONS with BTEX DISTINCTION (EPA 8015/8020)

Sample Number	Sample Description	Low/Medium B.P. Hydrocarbons mg/kg (ppm)	Benzene mg/kg (ppm)	Toluene mg/kg (ppm)	Ethyl Benzene mg/kg (ppm)	Xylenes mg/kg (ppm)
008-1721	D1	N.D.	0.023	0.11	N.D.	0.016
008-1722	D2	N.D.	N.D.	0.0099	N.D.	N.D.
008-1723	D3	N.D.	0.0094	0.036	0.0064	0.036
008-1724	D4	N.D.	N.D.	0.013	N.D.	0.029
008-1725	P1	3.1	0.021	0.10	0.063	0.17
008-1726	P2	N.D.	N.D.	0.029	N.D.	0.016

Detection Limits:	1.0	0.0050	0.0050	0.0050	0.0050
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Low to Medium Boiling Point Hydrocarbons are quantitated against a gasoline standard.
Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL

Elizabeth W. Hackl
Elizabeth W. Hackl
Project Manager

81721.KEI <2>

