Sequoia Analytical

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Gettler Ryan/Geostrategies
6747 Sierra Court Suite J
Dublin, CA 94568

Attention: Clyde Galantine

Client Proj. ID: Unocal 4625, Oakland

Lab Proj. ID: 9804H11

Sampled: 04/23/98
Received: 04/24/98
Analyzed: see below

Reported: 05/07/98

LABORATORY ANALYSIS

Analyte	Units	Date Analyzed	Detection Limit	Sample Results
Lab No: 9804H11-01				
Sample Desc : **SOLID,UW-1-8.5**				
Cadmium by ICP	mg/Kg	05/04/98	0.50	N.D.
Chromium by ICP	**mg/Kg**	**05/04/98**	**0.50**	**700**
Lead by ICP	mg/Kg	05/04/98	5.0	N.D.
Nickel by ICP	**mg/Kg**	**05/04/98**	**2.5**	**1400**
TRPH (SM 5520 E&F)	**mg/Kg**	**05/05/98**	**50**	**56**
Zinc by ICP	**mg/Kg**	**05/04/98**	**0.50**	**22**

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

SEQUOIA ANALYTICAL - ELAP #1210

99 DEC -2 PM 1:09
ENVIRONMENTAL PROTECTION

Mike Gregory
Project Manager

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Gettler Ryan/Geostrategies	Client Proj. ID: Unocal 4625, Oakland	Sampled: 04/23/98
6747 Sierra Court Suite J	Sample Descript: UW-1-8.5	Received: 04/24/98
Dublin, CA 94568	Matrix: SOLID	Extracted: 04/29/98
	Analysis Method: EPA 8240	Analyzed: 05/04/98
Attention: Clyde Galantine	Lab Number: 9804H11-01	Reported: 05/07/98

QC Batch Number: MS0423988240EXA
Instrument ID: F3

Volatile Organics (EPA 8240)

Analyte	Detection Limit ug/Kg	Sample Results ug/Kg
Acetone	**3340**	**4800**
Benzene	**667**	**2100**
Bromodichloromethane	667	N.D.
Bromoform	667	N.D.
Bromomethane	667	N.D.
2-Butanone	3340	N.D.
Carbon disulfide	667	N.D.
Carbon tetrachloride	667	N.D.
Chlorobenzene	667	N.D.
Chloroethane	667	N.D.
2-Chloroethyl vinyl ether	3340	N.D.
Chloroform	667	N.D.
Chloromethane	667	N.D.
Dibromochloromethane	667	N.D.
1,1-Dichloroethane	667	N.D.
1,2-Dichloroethane	667	N.D.
1,1-Dichloroethene	667	N.D.
cis-1,2-Dichloroethene	667	N.D.
trans-1,2-Dichloroethene	667	N.D.
1,2-Dichloropropane	667	N.D.
cis-1,3-Dichloropropene	667	N.D.
trans-1,3-Dichloropropene	667	N.D.
Ethylbenzene	**667**	**17000**
2-Hexanone	3340	N.D.
Methylene chloride	1670	N.D.
4-Methyl-2-pentanone	3340	N.D.
Styrene	667	N.D.
1,1,2,2-Tetrachloroethane	667	N.D.
Tetrachloroethene	667	N.D.
Toluene	**667**	**34000**
1,1,1-Trichloroethane	667	N.D.
1,1,2-Trichloroethane	667	N.D.
Trichloroethene	667	N.D.
Trichlorofluoromethane	667	N.D.
Vinyl acetate	1670	N.D.
Vinyl chloride	667	N.D.
Total Xylenes	**667**	**100000**

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Gettler Ryan/Geostrategies	Client Proj. ID: Unocal 4625, Oakland	Sampled: 04/23/98
6747 Sierra Court Suite J	Sample Descript: UW-1-8.5	Received: 04/24/98
Dublin, CA 94568	Matrix: SOLID	Extracted: 04/29/98
	Analysis Method: EPA 8240	Analyzed: 05/04/98
Attention: Clyde Galantine	Lab Number: 9804H11-01	Reported: 05/07/98

QC Batch Number: MS0423988240EXA
Instrument ID: F3

Analyte	Detection Limit ug/Kg		Sample Results ug/Kg
Surrogates	**Control Limits %**		**% Recovery**
1,2-Dichloroethane-d4	70	121	113
Toluene-d8	81	117	112
4-Bromofluorobenzene	74	121	101

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

SEQUOIA ANALYTICAL - ELAP #1210

Mike Gregory
Project Manager

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Gettler Ryan/Geostrategies	Client Proj. ID: Unocal 4625, Oakland	Sampled: 04/23/98
6747 Sierra Court Suite J	Sample Descript: UW-1-8.5	Received: 04/24/98
Dublin, CA 94568	Matrix: SOLID	Extracted: 04/29/98
	Analysis Method: EPA 8270	Analyzed: 04/30/98
Attention: Clyde Galantine	Lab Number: 9804H11-01	Reported: 05/07/98

QC Batch Number: MS0429988270EXA
Instrument ID: H5

Semivolatile Organics (EPA 8270)

Analyte	Detection Limit ug/Kg	Sample Results ug/Kg
Acenaphthene	250	N.D.
Acenaphthylene	250	N.D.
Anthracene	250	N.D.
Benzoic Acid	500	N.D.
Benzo(a)anthracene	250	N.D.
Benzo(b)fluoranthene	250	N.D.
Benzo(k)fluoranthene	250	N.D.
Benzo(g,h,i)perylene	250	N.D.
Benzo(a)pyrene	250	N.D.
Benzyl alcohol	250	N.D.
Bis(2-chloroethoxy)methane	250	N.D.
Bis(2-chloroethyl)ether	250	N.D.
Bis(2-chloroisopropyl)ether	250	N.D.
Bis(2-ethylhexyl)phthalate	500	N.D.
4-Bromophenyl phenyl ether	250	N.D.
Butyl benzyl phthalate	250	N.D.
4-Chloroaniline	500	N.D.
2-Chloronaphthalene	250	N.D.
4-Chloro-3-methylphenol	250	N.D.
2-Chlorophenol	250	N.D.
4-Chlorophenyl phenyl ether	250	N.D.
Chrysene	250	N.D.
Dibenzo(a,h)anthracene	250	N.D.
Dibenzofuran	250	N.D.
Di-n-butyl phthalate	500	N.D.
1,2-Dichlorobenzene	250	N.D.
1,3-Dichlorobenzene	250	N.D.
1,4-Dichlorobenzene	250	N.D.
3,3'-Dichlorobenzidine	500	N.D.
2,4-Dichlorophenol	250	N.D.
Diethyl phthalate	250	N.D.
2,4-Dimethylphenol	250	N.D.
Dimethyl phthalate	250	N.D.
4,6-Dinitro-2-methylphenol	500	N.D.
2,4-Dinitrophenol	500	N.D.
2,4-Dinitrotoluene	250	N.D.
2,6-Dinitrotoluene	250	N.D.
Di-n-octyl phthalate	250	N.D.
Fluoranthene	250	N.D.

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Gettler Ryan/Geostrategies	Client Proj. ID: Unocal 4625, Oakland	Sampled: 04/23/98
6747 Sierra Court Suite J	Sample Descript: UW-1-8.5	Received: 04/24/98
Dublin, CA 94568	Matrix: SOLID	Extracted: 04/29/98
	Analysis Method: EPA 8270	Analyzed: 04/30/98
Attention: Clyde Galantine	Lab Number: 9804H11-01	Reported: 05/07/98

QC Batch Number: MS0429988270EXA
Instrument ID: H5

Analyte	Detection Limit ug/Kg	Sample Results ug/Kg
Fluorene	250	N.D.
Hexachlorobenzene	250	N.D.
Hexachlorobutadiene	250	N.D.
Hexachlorocyclopentadiene	500	N.D.
Hexachloroethane	250	N.D.
Indeno(1,2,3-cd)pyrene	250	N.D.
Isophorone	250	N.D.
2-Methylnaphthalene	**250**	**2100**
2-Methylphenol	250	N.D.
4-Methylphenol	250	N.D.
Naphthalene	**250**	**2200**
2-Nitroaniline	500	N.D.
3-Nitroaniline	500	N.D.
4-Nitroaniline	500	N.D.
Nitrobenzene	250	N.D.
2-Nitrophenol	250	N.D.
4-Nitrophenol	500	N.D.
N-Nitrosodiphenylamine	250	N.D.
N-Nitroso-di-n-propylamine	250	N.D.
Pentachlorophenol	500	N.D.
Phenanthrene	250	N.D.
Phenol	250	N.D.
Pyrene	250	N.D.
1,2,4-Trichlorobenzene	250	N.D.
2,4,5-Trichlorophenol	500	N.D.
2,4,6-Trichlorophenol	250	N.D.

Surrogates	Control Limits %		% Recovery
2-Fluorophenol	25	121	61
Phenol-d5	24	113	63
Nitrobenzene-d5	23	120	60
2-Fluorobiphenyl	30	115	64
2,4,6-Tribromophenol	19	122	60
p-Terphenyl-d14	18	137	70

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

SEQUOIA ANALYTICAL - ELAP #1210

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Gettler Ryan/Geostrategies	Client Proj. ID: Unocal 4625, Oakland	Sampled: 04/23/98
6747 Sierra Court Suite J	Sample Descript: UW-1-8.5	Received: 04/24/98
Dublin, CA 94568	Matrix: SOLID	Extracted: 04/30/98
	Analysis Method: 8015Mod/8020	Analyzed: 05/01/98
Attention: Clyde Galantine	Lab Number: 9804H11-01	Reported: 05/07/98

QC Batch Number: GC043098BTEXEXB
Instrument ID: GCHP18

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TPPH as Gas	**50**	**820**
Methyl t-Butyl Ether	**1.2**	**1.4**
Benzene	**0.25**	**2.7**
Toluene	**0.25**	**38**
Ethyl Benzene	**0.25**	**22**
Xylenes (Total)	**0.25**	**120**
Chromatogram Pattern:		**GAS**

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	137 Q
4-Bromofluorobenzene	60	140	6 Q

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

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Gettler Ryan/Geostrategies
6747 Sierra Court Suite J
Dublin, CA 94568

Attention: Clyde Galantine

Client Proj. ID: Unocal 4625, Oakland
Sample Descript: UW-1-8.5
Matrix: SOLID
Analysis Method: EPA 8015 Mod
Lab Number: 9804H11-01

Sampled: 04/23/98
Received: 04/24/98
Extracted: 04/29/98
Analyzed: 05/04/98
Reported: 05/07/98

QC Batch Number: GC0429980HBPEXA
Instrument ID: GCHP4B

Total Extractable Petroleum Hydrocarbons (TEPH)

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TEPH as Diesel	10	200
Chromatogram Pattern:		
Unidentified HC		C9-C24

Surrogates	Control Limits %		% Recovery
n-Pentacosane (C25)	50	150	85

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

SEQUOIA ANALYTICAL - ELAP #1210

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Gettler Ryan/Geostrategies	Client Proj. ID: Unocal 4625, Oakland	Sampled: 04/23/98
6747 Sierra Court Suite J	Sample Descript: UX-1-8.5	Received: 04/24/98
Dublin, CA 94568	Matrix: SOLID	Extracted: 04/30/98
	Analysis Method: 8015Mod/8020	Analyzed: 05/04/98
Attention: Clyde Galantine	Lab Number: 9804H11-02	Reported: 05/07/98

QC Batch Number: GC043098BTEXEXB
Instrument ID: GCHP07

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TPPH as Gas	**5.0**	**44**
Methyl t-Butyl Ether	**0.12**	**0.23**
Benzene	**0.025**	**0.16**
Toluene	**0.025**	**0.10**
Ethyl Benzene	0.025	N.D.
Xylenes (Total)	0.025	N.D.
Chromatogram Pattern:		
Gas & Unidentified HC		**C6-C12**

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	102
4-Bromofluorobenzene	60	140	Q

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

SEQUOIA ANALYTICAL - ELAP #1210

Mike Gregory
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Gettler Ryan/Geostrategies	Client Proj. ID: Unocal 4625, Oakland	Sampled: 04/23/98
6747 Sierra Court Suite J	Sample Descript: UX-2-8.5	Received: 04/24/98
Dublin, CA 94568	Matrix: SOLID	Extracted: 04/30/98
	Analysis Method: 8015Mod/8020	Analyzed: 05/04/98
Attention: Clyde Galantine	Lab Number: 9804H11-03	Reported: 05/07/98

QC Batch Number: GC043098BTEXEXB
Instrument ID: GCHP07

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TPPH as Gas	**100**	**1100**
Methyl t-Butyl Ether	**2.5**	**8.2**
Benzene	**0.50**	**13**
Toluene	**0.50**	**76**
Ethyl Benzene	**0.50**	**22**
Xylenes (Total)	**0.50**	**120**
Chromatogram Pattern:		**GAS**

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	104
4-Bromofluorobenzene	60	140	11 Q

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

SEQUOIA ANALYTICAL - ELAP #1210

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Gettler Ryan/Geostrategies	Client Proj. ID: Unocal 4625, Oakland	Sampled: 04/23/98
6747 Sierra Court Suite J	Sample Descript: UX-3-8.5	Received: 04/24/98
Dublin, CA 94568	Matrix: SOLID	Extracted: 04/30/98
	Analysis Method: 8015Mod/8020	Analyzed: 05/04/98
Attention: Clyde Galantine	Lab Number: 9804H11-04	Reported: 05/07/98

QC Batch Number: GC043098BTEXEXB
Instrument ID: GCHP18

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TPPH as Gas	**100**	**1700**
Methyl t-Butyl Ether	**2.5**	**16**
Benzene	**0.50**	**17**
Toluene	**0.50**	**120**
Ethyl Benzene	**0.50**	**47**
Xylenes (Total)	**0.50**	**240**
Chromatogram Pattern:		**GAS**

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	190 Q
4-Bromofluorobenzene	60	140	6 Q

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

SEQUOIA ANALYTICAL - ELAP #1210

Mike Gregory
Project Manager

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Gettler Ryan/Geostrategies	Client Proj. ID: Unocal 4625, Oakland	Sampled: 04/23/98
6747 Sierra Court Suite J	Sample Descript: UX-4-8.5	Received: 04/24/98
Dublin, CA 94568	Matrix: SOLID	Extracted: 04/30/98
	Analysis Method: 8015Mod/8020	Analyzed: 05/04/98
Attention: Clyde Galantine	Lab Number: 9804H11-05	Reported: 05/07/98

QC Batch Number: GC043098BTEXEXB
Instrument ID: GCHP18

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TPPH as Gas	**250**	**1400**
Methyl t-Butyl Ether	6.2	N.D.
Benzene	**1.2**	**7.3**
Toluene	**1.2**	**75**
Ethyl Benzene	**1.2**	**39**
Xylenes (Total)	**1.2**	**210**
Chromatogram Pattern:		**GAS**

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	116
4-Bromofluorobenzene	60	140	3 Q

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

SEQUOIA ANALYTICAL - ELAP #1210

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Gettler Ryan/Geostrategies	Client Proj. ID: Unocal 4625, Oakland	Received: 04/24/98
6747 Sierra Court Suite J		
Dublin, CA 94568	Lab Proj. ID: 9804H11	Reported: 05/07/98
Attention: Clyde Galantine		

LABORATORY NARRATIVE

In order to properly interpret this report, it must be reproduced in its entirety. This report contains a total of 21 pages including the laboratory narrative, sample results, quality control, and related documents as required (cover page, COC, raw data, etc.).

High #Q - Surrogate coelution was confirmed.
Low #Q - Surrogate low due to matrix effects.
Q - Surrogate diluted out.

SEQUOIA ANALYTICAL

Mike Gregory
Project Manager

Sequoia Analytical

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Gettler Ryan/Geostrategies
6747 Sierra Court, Suite J
Dublin, CA 94568
Attention: Clyde Galantine

Client Project ID: Unocal 4625, Oakland

QC Sample Group: 9804H11-01-05

Reported: May 7, 1998

QUALITY CONTROL DATA REPORT

Matrix: Solid
Method: EPA 8015/8020
Analyst: G. PESHINA

ANALYTE	Benzene	Toluene	Ethylbenzene	Xylenes	BTEX as TPH
QC Batch #:	GC043098BTEXEXB				
Sample No.:	GS9804I60-6				
Date Prepared:	4/29/98	4/29/98	4/29/98	4/29/98	4/29/98
Date Analyzed:	4/30/98	4/30/98	4/30/98	4/30/98	4/30/98
Instrument I.D.#:	GCHP18	GCHP18	GCHP18	GCHP18	GCHP18
Sample Conc., mg/Kg:	N.D.	N.D.	N.D.	N.D.	N.D.
Conc. Spiked, mg/Kg:	0.20	0.20	0.20	0.60	1.2
Matrix Spike, mg/Kg:	0.18	0.18	0.19	0.55	1.3
% Recovery:	90	90	95	92	108
Matrix Spike Duplicate, mg/Kg:	0.18	0.18	0.19	0.56	1.3
% Recovery:	90	90	95	93	108
Relative % Difference:	0.0	0.0	0.0	1.1	0.0
RPD Control Limits:	0-25	0-25	0-25	0-25	0-25

LCS Batch#:	GSBLK043098B				
Date Prepared:	4/30/98	4/30/98	4/30/98	4/30/98	4/30/98
Date Analyzed:	5/1/98	5/1/98	5/1/98	5/1/98	5/1/98
Instrument I.D.#:	GCHP01	GCHP01	GCHP01	GCHP01	GCHP01
Conc. Spiked, mg/Kg:	0.20	0.20	0.20	0.60	1.2
Recovery, mg/Kg:	0.18	0.17	0.17	0.50	1.2
LCS % Recovery:	90	85	85	83	100

Percent Recovery Control Limits:

MS/MSD	60-140	60-140	60-140	60-140	60-140
LCS	70-130	70-130	70-130	70-130	70-130

Quality Assurance Statement: All standard operating procedures and quality control requirements have been met.

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SEQUOIA ANALYTICAL

Mike Gregory
Project Manager

Sequoia Analytical

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Gettler Ryan/Geostrategies
6747 Sierra Court, Suite J
Dublin, CA 94568
Attention: Clyde Galantine

Client Project ID: Unocal 4625, Oakland

QC Sample Group: 9804H11-01

Reported: May 7, 1998

QUALITY CONTROL DATA REPORT

Matrix:	Solid
Method:	EPA 8015M
Analyst:	N. HERRERA
ANALYTE	Diesel

QC Batch #: GC0429980HBPEXA

Sample No.:	9804D85-01
Date Prepared:	4/29/98
Date Analyzed:	4/30/98
Instrument I.D.#:	GCHP4A
Sample Conc., mg/Kg:	N.D.
Conc. Spiked, mg/Kg:	17
Matrix Spike, mg/Kg:	14
% Recovery:	82
Matrix Spike Duplicate. mg/Kg:	14
% Recovery:	82
Relative % Difference:	0.0
RPD Control Limits:	0-50

LCS Batch#: BLK042998AS

Date Prepared:	4/29/98
Date Analyzed:	4/30/98
Instrument I.D.#:	GCHP4A
Conc. Spiked, mg/Kg:	17
Recovery, mg/Kg:	12
LCS % Recovery:	71

Percent Recovery Control Limits:

MS/MSD	50-150
LCS	60-140

Quality Assurance Statement: All standard operating procedures and quality control requirements have been met.

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Gettler Ryan/Geostrategies
6747 Sierra Court, Ste J
Dublin, CA 94568
Attention: Clyde Galantine

Client Project ID: Unocal #4625, Oakland
Matrix: Solid
Work Order #: 9804H11 -01

Reported: May 19, 1998

QUALITY CONTROL DATA REPORT

Analyte:	Phenol	2-Chlorophenol	1,4-Dichloro-benzene	N-Nitroso-Di-N-propylamine
QC Batch#:	MS0429988270EXA	MS0429988270EXA	MS0429988270EXA	MS0429988270EXA
Analy. Method:	EPA 8270	EPA 8270	EPA 8270	EPA 8270
Prep. Method:	EPA 3550	EPA 3550	EPA 3550	EPA 3550
Analyst:	B. Pitamah	B. Pitamah	B. Pitamah	B. Pitamah
MS/MSD #:	9804H3402	9804H3402	9804H3402	9804H3402
Sample Conc.:	N.D.	N.D.	N.D.	N.D.
Prepared Date:	4/29/98	4/29/98	4/29/98	4/29/98
Analyzed Date:	4/30/98	4/30/98	4/30/98	4/30/98
Instrument I.D.#:	H5	H5	H5	H5
Conc. Spiked:	3300 µg/Kg	3300 µg/Kg	3300 µg/Kg	3300 µg/Kg
Result:	2410	2370	2400	2590
MS % Recovery:	73	72	73	78
Dup. Result:	2390	2370	2360	2600
MSD % Recov.:	72	72	72	79
RPD:	0.83	0.0	1.7	0.39
RPD Limit:	0-40	0-40	0-40	0-40
LCS #:	LCS042998	LCS042998	LCS042998	LCS042998
Prepared Date:	4/29/98	4/29/98	4/29/98	4/29/98
Analyzed Date:	4/30/98	4/30/98	4/30/98	4/30/98
Instrument I.D.#:	H5	H5	H5	H5
Conc. Spiked:	3300 µg/Kg	3300 µg/Kg	3300 µg/Kg	3300 µg/Kg
LCS Result:	2120	2220	2270	2360
LCS % Recov.:	64	67	69	72
MS/MSD LCS Control Limits	26-90	25-102	28-104	41-126

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SEQUOIA ANALYTICAL

Mike Gregory
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Gettler Ryan/Geostrategies	Client Project ID:	Unocal #4625, Oakland	
6747 Sierra Court, Ste J	Matrix:	Solid	
Dublin, CA 94568			
Attention: Clyde Galantine	Work Order #:	9804H11-01	Reported: May 19, 1998

QUALITY CONTROL DATA REPORT

Analyte:	1,2,4-Trichloro-benzene	4-Chloro-3-Methylphenol	Acenaphthene	4-Nitrophenol
QC Batch#:	MS0429988270EXA	MS0429988270EXA	MS0429988270EXA	MS0429988270EXA
Analy. Method:	EPA 8270	EPA 8270	EPA 8270	EPA 8270
Prep. Method:	EPA 3550	EPA 3550	EPA 3550	EPA 3550
Analyst:	B. Pitamah	B. Pitamah	B. Pitamah	B. Pitamah
MS/MSD #:	9804H3402	9804H3402	9804H3402	9804H3402
Sample Conc.:	N.D.	N.D.	N.D.	N.D.
Prepared Date:	4/29/98	4/29/98	4/29/98	4/29/98
Analyzed Date:	4/30/98	4/30/98	4/30/98	4/30/98
Instrument I.D.#:	H5	H5	H5	H5
Conc. Spiked:	3300 µg/Kg	3300 µg/Kg	3300 µg/Kg	3300 µg/Kg
Result:	2830	2680	2380	2830
MS % Recovery:	86	81	72	86
Dup. Result:	2770	2730	2440	2720
MSD % Recov.:	84	83	74	82
RPD:	2.1	1.8	2.5	4.0
RPD Limit:	0-40	0-40	0-40	0-40
LCS #:	LCS042998	LCS042998	LCS042998	LCS042998
Prepared Date:	4/29/98	4/29/98	4/29/98	4/29/98
Analyzed Date:	4/30/98	4/30/98	4/30/98	4/30/98
Instrument I.D.#:	H5	H5	H5	H5
Conc. Spiked:	3300 µg/Kg	3300 µg/Kg	3300 µg/Kg	3300 µg/Kg
LCS Result:	2870	2560	2380	2660
LCS % Recov.:	87	78	72	81
MS/MSD LCS Control Limits	38-107	26-103	31-137	11-114

SEQUOIA ANALYTICAL

Mike Gregory
Project Manager

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Gettler Ryan/Geostrategies	Client Project ID:	Unocal #4625, Oakland	
6747 Sierra Court, Ste J	Matrix:	Solid	
Dublin, CA 94568			
Attention: Clyde Galantine	Work Order #:	9804H11-01	Reported: May 19, 1998

QUALITY CONTROL DATA REPORT

Analyte:	2,4-Dinitro-toluene	Pentachloro-phenol	Pyrene
QC Batch#:	MS0429988270EXA	MS0429988270EXA	MS0429988270EXA
Analy. Method:	EPA 8270	EPA 8270	EPA 8270
Prep. Method:	EPA 3550	EPA 3550	EPA 3550
Analyst:	B. Pitamah	B. Pitamah	B. Pitamah
MS/MSD #:	9804H3402	9804H3402	9804H3402
Sample Conc.:	N.D.	N.D.	N.D.
Prepared Date:	4/29/98	4/29/98	4/29/98
Analyzed Date:	4/30/98	4/30/98	4/30/98
Instrument I.D.#:	H5	H5	H5
Conc. Spiked:	3300 µg/Kg	3300 µg/Kg	3300 µg/Kg
Result:	2480	2740	2970
MS % Recovery:	75	83	90
Dup. Result:	2480	2680	2980
MSD % Recov.:	75	81	90
RPD:	0.0	2.2	0.34
RPD Limit:	0-40	0-40	0-40

LCS #:	LCS042998	LCS042998	LCS042998
Prepared Date:	4/29/98	4/29/98	4/29/98
Analyzed Date:	4/30/98	4/30/98	4/30/98
Instrument I.D.#:	H5	H5	H5
Conc. Spiked:	3300 µg/Kg	3300 µg/Kg	3300 µg/Kg
LCS Result:	2180	2650	2910
LCS % Recov.:	66	80	88

MS/MSD LCS Control Limits	28-89	17-109	35-142

SEQUOIA ANALYTICAL

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Gettler Ryan/Geostrategies
6747 Sierra Court, Ste J
Dublin, CA 94568
Attention: Clyde Galantine

Client Project ID: Unocal #4625, Oakland
Matrix: Solid
Work Order #: 9804H11-01
Reported: May 19, 1998

QUALITY CONTROL DATA REPORT

Analyte:	1,1-Dichloroethene	Trichloroethene	Benzene	Toluene	Chloro-benzene
QC Batch#:	MS0423988240EXA	MS0423988240EXA	MS0423988240EXA	MS0423988240EXA	MS0423988240EXA
Analy. Method:	EPA 8240	EPA 8240	EPA 8240	EPA 8240	EPA 8240
Prep. Method:	N.A.	N.A.	N.A.	N.A.	N.A.
Analyst:	L. Zhu	L. Zhu	L. Zhu	L. Zhu	L. Zhu
MS/MSD #:	9804C4301	9804C4301	9804C4301	9804C4301	9804C4301
Sample Conc.:	N.D.	N.D.	6900	8300	N.D.
Prepared Date:	4/23/98	4/23/98	4/23/98	4/23/98	4/23/98
Analyzed Date:	4/24/98	4/24/98	4/24/98	4/24/98	4/24/98
Instrument I.D.#:	F3	F3	F3	F3	F3
Conc. Spiked:	2500 µg/Kg	2500 µg/Kg	2500 µg/Kg	2500 µg/Kg	2500 µg/Kg
Result:					
MS % Recovery:					
Dup. Result:					
MSD % Recov.:					
RPD:					
RPD Limit:					
LCS #:	LCS042998	LCS042998	LCS042998	LCS042998	LCS042998
Prepared Date:	4/29/98	4/23/98	4/23/98	4/23/98	4/23/98
Analyzed Date:	5/1/98	4/24/98	4/24/98	4/24/98	4/24/98
Instrument I.D.#:	F3	F3	F3	F3	F3
Conc. Spiked:	2500 µg/Kg	2500 µg/Kg	2500 µg/Kg	2500 µg/Kg	2500 µg/Kg
LCS Result:	2600	2500	2900	2600	2800
LCS % Recov.:	104	100	116	104	112
MS/MSD	60-140	60-140	60-140	60-140	60-140
LCS	65-135	70-130	70-130	70-130	70-130
Control Limits					

SEQUOIA ANALYTICAL

Mike Gregory
Project Manager

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Gettler Ryan/Geostrategies	Client Project ID:	Unocal #4625, Oakland	
6747 Sierra Court, Ste J	Matrix:	Solid	
Dublin, CA 94568			
Attention: Clyde Galantine	Work Order #:	9804H11-01	Reported: May 19, 1998

QUALITY CONTROL DATA REPORT

Analyte:	Total Recoverable Petroleum Hydrocarbons
QC Batch#:	SP050498552000B
Analy. Method:	SM 5520EF
Prep. Method:	SM 5520EF

Analyst:	H. Olohan
MS/MSD #:	980464801
Sample Conc.:	66000
Prepared Date:	5/4/98
Analyzed Date:	5/5/98
Instrument I.D.#:	MANUAL
Conc. Spiked:	150 mg/Kg
Result:	8000
MS % Recovery:	0.0
Dup. Result:	14000
MSD % Recov.:	0.0
RPD:	55
RPD Limit:	0-30

LCS #:	BLK050498
Prepared Date:	5/4/98
Analyzed Date:	5/5/98
Instrument I.D.#:	MANUAL
Conc. Spiked:	150 mg/Kg
LCS Result:	165
LCS % Recov.:	110

MS/MSD	60-140
LCS	70-130
Control Limits	

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Gettler Ryan/Geostrategies
6747 Sierra Court, Ste J
Dublin, CA 94568
Attention: Clyde Galantine

Client Project ID: Unocal #4625, Oakland
Matrix: Solid
Work Order #: 9804H11-01

Reported: May 19, 1998

QUALITY CONTROL DATA REPORT

Analyte:	Beryllium	Cadmium	Chromium	Nickel
QC Batch#:	ME0429986010MDB	ME0429986010MDB	ME0429986010MDB	ME0429986010MDB
Analy. Method:	EPA 6010	EPA 6010	EPA 6010	EPA 6010
Prep. Method:	EPA 3050	EPA 3050	EPA 3050	EPA 3050
Analyst:	R. Butler	R. Butler	R. Butler	R. Butler
MS/MSD #:	9804I6001	9804I6001	9804I6001	9804I6001
Sample Conc.:	N.D.	N.D.	6.6	12
Prepared Date:	4/30/98	4/30/98	4/30/98	4/30/98
Analyzed Date:	5/1/98	5/1/98	5/1/98	5/1/98
Instrument I.D.#:	MTJA5	MTJA5	MTJA5	MTJA5
Conc. Spiked:	50 mg/Kg	50 mg/Kg	50 mg/Kg	50 mg/Kg
Result:	43	44	52	54
MS % Recovery:	86	88	90	84
Dup. Result:	34	37	45	52
MSD % Recov.:	68	74	77	80
RPD:	23	17	14	3.8
RPD Limit:	0-20	0-20	0-20	0-20

LCS #:	BLK043098	BLK043098	BLK043098	BLK043098
Prepared Date:	4/30/98	4/30/98	4/30/98	4/30/98
Analyzed Date:	4/30/98	4/30/98	4/30/98	4/30/98
Instrument I.D.#:	MTJA5	MTJA5	MTJA5	MTJA5
Conc. Spiked:	50 mg/Kg	50 mg/Kg	50 mg/Kg	50 mg/Kg
LCS Result:	47	49	46	48
LCS % Recov.:	94	98	92	96

MS/MSD	80-120	80-120	80-120	80-120
LCS	80-120	80-120	80-120	80-120
Control Limits				

SEQUOIA ANALYTICAL

Mike Gregory
Project Manager

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☐ East 11115 Montgomery, Suite B • Spokane, WA 99206 • (509) 924-9200
☐ 15055 S.W. Sequoia Pkwy, Suite 110 • Portland, OR 97222 • (503) 624-9800

Consultant Company: Getler-Ryan 140158.02	Project Name: Unocal # 4625
Address: 6747 Sierra Ct Suite J	UNOCAL Project Manager: Tina Berry
City: Dublin State: CA Zip Code: 94568	AFE #:
Telephone: (510) 551-7555 FAX #: (510) 551-7888	Site #, City, State: 4625 Oakland, CA
Report To: Clyde Galantine Sampler: Clyde Galantine	QC Data: ☐ Level D (Standard) ☐ Level C ☐ Level B ☐ Level A

Turnaround Time: ☒ 10 Work Days ☐ 5 Work Days ☐ 3 Work Days ☐ 2 Work Days ☐ 1 Work Day ☐ 2-8 Hours

CODE: ☐ Misc. ☒ Detect. ☐ Eval. ☐ Remed. ☐ Demol. ☐ Closure

☐ Drinking Water ☐ Waste Water ☐ Other

Analyses Requested 9804411

Client Sample I.D.	Date/Time Sampled	Matrix Desc.	# of Cont.	Cont. Type	Laboratory Sample #	TPHg BTEX MTBE 8015/8020	TPH-d 8015	O&G 5520 E&F	8240	8270	ICAPs metals				Comments
1. UW-1-8.5	4/23/98 12:50	Soil	1	Tube	1	X	X	X	X	X	X				
2.															
3. UX-1-8.5	↓ 12:15	↓	1	↓	2	X									
4. UX-2-8.5	12:25		1		3	X									
5. UX-3-8.5	12:35		1		4	X									AP 24 1998
6. UX-4-8.5	12:45		1		5	X									
7.															
8.															
9.															
10.															

Relinquished By	Date	Time	Received By	Date	Time
Relinquished By: Clyde Galantine	Date: 4/23/98	Time: 7:30	Received By: [signature]	Date: 4/24/98	Time: 9:35
Relinquished By: [signature]	Date: 4/24/98	Time:	Received By: ——	Date: ——	Time: ——
Relinquished By:	Date:	Time:	Received By Lab: Terri Downs	Date: 4/24	Time: 1104

Were Samples Received in Good Condition? ☐ Yes ☐ No Samples on Ice? ☐ Yes ☐ No Method of Shipment________ Page __ of __

To be completed upon receipt of report:

1) Were the analyses requested on the Chain of Custody reported? ☐ Yes ☐ No If no, what analyses are still needed? ________

2) Was the report issued within the requested turnaround time? ☐ Yes ☐ No If no, what was the turnaround time? ________

Approved by: ________ Signature: ________ Company: ________ Date: ________

Pink - Client
Yellow - Laboratory
White - Laboratory

Sequoia Analytical

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Gettler Ryan/Geostrategies
6747 Sierra Court Suite J
Dublin, CA 94568

Client Proj. ID: Unocal 4625,Oakland

Lab Proj. ID: 9805713

Attention: Deanna Harding

RECEIVED
JUN 03 1998
GETTLER-RYAN INC.
GENERAL CONTRACTORS

Sampled: 05/08/98
Received: 05/11/98
Analyzed: see below
Reported: 05/27/98

LABORATORY ANALYSIS

Analyte	Units	Date Analyzed	Detection Limit	Sample Results
Lab No: 9805713-10				
Sample Desc : **SOLID,UWT-1-2**				
Cadmium by ICP	mg/Kg	05/14/98	0.50	N.D.
Chromium by ICP	**mg/Kg**	**05/14/98**	**0.50**	**46**
Lead by ICP	**mg/Kg**	**05/14/98**	**5.0**	**9.1**
Nickel by ICP	**mg/Kg**	**05/14/98**	**2.5**	**61**
TRPH (SM 5520 E&F)	mg/Kg	05/19/98	50	N.D.
Zinc by ICP	**mg/Kg**	**05/14/98**	**0.50**	**56**

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

SEQUOIA ANALYTICAL - ELAP #1210

Jod Granicher
Project Manager

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Gettler Ryan/Geostrategies	Client Proj. ID: Unocal 4625,Oakland	Sampled: 05/08/98
6747 Sierra Court Suite J	Sample Descript: UT-1-4	Received: 05/11/98
Dublin, CA 94568	Matrix: SOLID	Extracted: 05/15/98
	Analysis Method: 8015Mod/8020	Analyzed: 05/22/98
Attention: Deanna Harding	Lab Number: 9805713-01	Reported: 05/27/98

QC Batch Number: GC051598BTEXEXC
Instrument ID: GCHP07

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TPPH as Gas	**100**	**660**
Methyl t-Butyl Ether	**2.5**	**150**
Benzene	**0.50**	**5.1**
Toluene	**0.50**	**35**
Ethyl Benzene	**0.50**	**11**
Xylenes (Total)	**0.50**	**65**
Chromatogram Pattern:		**GAS**

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	100
4-Bromofluorobenzene	60	140	4 Q

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

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Gettler Ryan/Geostrategies	Client Proj. ID: Unocal 4625,Oakland	Sampled: 05/08/98
6747 Sierra Court Suite J	Sample Descript: UT-1-8	Received: 05/11/98
Dublin, CA 94568	Matrix: SOLID	Extracted: 05/15/98
	Analysis Method: 8015Mod/8020	Analyzed: 05/22/98
Attention: Deanna Harding	Lab Number: 9805713-02	Reported: 05/27/98

QC Batch Number: GC051598BTEXEXC
Instrument ID: GCHP22

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TPPH as Gas	**100**	**910**
Methyl t-Butyl Ether	**2.5**	**69**
Benzene	**0.50**	**3.8**
Toluene	**0.50**	**38**
Ethyl Benzene	**0.50**	**15**
Xylenes (Total)	**0.50**	**96**
Chromatogram Pattern:		**GAS**

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	136 Q
4-Bromofluorobenzene	60	140	1 Q

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

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Gettler Ryan/Geostrategies	Client Proj. ID: Unocal 4625,Oakland	Sampled: 05/08/98
6747 Sierra Court Suite J	Sample Descript: UT-2-4	Received: 05/11/98
Dublin, CA 94568	Matrix: SOLID	Extracted: 05/15/98
	Analysis Method: 8015Mod/8020	Analyzed: 05/22/98
Attention: Deanna Harding	Lab Number: 9805713-03	Reported: 05/27/98

QC Batch Number: GC051598BTEXEXC
Instrument ID: GCHP22

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TPPH as Gas	**50**	**220**
Methyl t-Butyl Ether	**1.2**	**1.4**
Benzene	**0.25**	**0.67**
Toluene	0.25	N.D.
Ethyl Benzene	**0.25**	**0.56**
Xylenes (Total)	**0.25**	**3.5**
Chromatogram Pattern:		
Unidentified HC		**C6-C12**

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	110
4-Bromofluorobenzene	60	140	15 Q

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

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Gettler Ryan/Geostrategies	Client Proj. ID: Unocal 4625,Oakland	Sampled: 05/08/98
6747 Sierra Court Suite J	Sample Descript: UT-3-4	Received: 05/11/98
Dublin, CA 94568	Matrix: SOLID	Extracted: 05/15/98
	Analysis Method: 8015Mod/8020	Analyzed: 05/22/98
Attention: Deanna Harding	Lab Number: 9805713-04	Reported: 05/27/98

QC Batch Number: GC051598BTEXEXC
Instrument ID: GCHP18

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TPPH as Gas	**2.5**	**13**
Methyl t-Butyl Ether	**0.062**	**0.071**
Benzene	**0.012**	**0.029**
Toluene	**0.012**	**0.015**
Ethyl Benzene	**0.012**	**0.030**
Xylenes (Total)	**0.012**	**0.17**
Chromatogram Pattern:		
Unidentified HC		**C6-C12**

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	103
4-Bromofluorobenzene	60	140	1 Q

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

SEQUOIA ANALYTICAL - ELAP #1210

Jod Granicher
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Gettler Ryan/Geostrategies	Client Proj. ID: Unocal 4625,Oakland	Sampled: 05/08/98
6747 Sierra Court Suite J	Sample Descript: UT-4-4	Received: 05/11/98
Dublin, CA 94568	Matrix: SOLID	Extracted: 05/15/98
	Analysis Method: 8015Mod/8020	Analyzed: 05/22/98
Attention: Deanna Harding	Lab Number: 9805713-05	Reported: 05/27/98

QC Batch Number: GC051598BTEXEXC
Instrument ID: GCHP22

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TPPH as Gas	**1.0**	**8.1**
Methyl t-Butyl Ether	**0.025**	**0.075**
Benzene	**0.0050**	**0.042**
Toluene	**0.0050**	**0.0050**
Ethyl Benzene	**0.0050**	**0.020**
Xylenes (Total)	**0.0050**	**0.050**
Chromatogram Pattern:		
Unidentified HC		**C6-C12**

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	118
4-Bromofluorobenzene	60	140	134

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

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Gettler Ryan/Geostrategies	Client Proj. ID: Unocal 4625,Oakland	Sampled: 05/08/98
6747 Sierra Court Suite J	Sample Descript: UT-5-4	Received: 05/11/98
Dublin, CA 94568	Matrix: SOLID	Extracted: 05/15/98
	Analysis Method: 8015Mod/8020	Analyzed: 05/22/98
Attention: Deanna Harding	Lab Number: 9805713-06	Reported: 05/27/98

QC Batch Number: GC051598BTEXEXC
nstrument ID: GCHP18

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TPPH as Gas	**1.0**	**4.2**
Methyl t-Butyl Ether	**0.025**	**0.30**
Benzene	**0.0050**	**0.27**
Toluene	**0.0050**	**0.0059**
Ethyl Benzene	**0.0050**	**0.0077**
Xylenes (Total)	**0.0050**	**0.0094**
Chromatogram Pattern:		**GAS**

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	118
4-Bromofluorobenzene	60	140	109

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

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Gettler Ryan/Geostrategies	Client Proj. ID: Unocal 4625,Oakland	Sampled: 05/08/98
6747 Sierra Court Suite J	Sample Descript: UT-6-4	Received: 05/11/98
Dublin, CA 94568	Matrix: SOLID	Extracted: 05/15/98
	Analysis Method: 8015Mod/8020	Analyzed: 05/22/98
Attention: Deanna Harding	Lab Number: 9805713-07	Reported: 05/27/98

QC Batch Number: GC051598BTEXEXC
Instrument ID: GCHP18

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TPPH as Gas	**1.0**	**3.0**
Methyl t-Butyl Ether	**0.025**	**1.0**
Benzene	**0.0050**	**0.013**
Toluene	**0.0050**	**0.0057**
Ethyl Benzene	**0.0050**	**0.0062**
Xylenes (Total)	**0.0050**	**0.047**
Chromatogram Pattern:		
Unidentified HC		**C6-C12**

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	109
4-Bromofluorobenzene	60	140	102

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

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Gettler Ryan/Geostrategies	Client Proj. ID: Unocal 4625,Oakland	Sampled: 05/08/98
6747 Sierra Court Suite J	Sample Descript: UT-7-4	Received: 05/11/98
Dublin, CA 94568	Matrix: SOLID	Extracted: 05/15/98
	Analysis Method: 8015Mod/8020	Analyzed: 05/22/98
Attention: Deanna Harding	Lab Number: 9805713-08	Reported: 05/27/98

QC Batch Number: GC051598BTEXEXC
Instrument ID: GCHP22

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TPPH as Gas	**50**	**140**
Methyl t-Butyl Ether	1.2	N.D.
Benzene	0.25	N.D.
Toluene	**0.25**	**1.8**
Ethyl Benzene	**0.25**	**2.0**
Xylenes (Total)	**0.25**	**13**
Chromatogram Pattern:		
Weathered Gas		**C6-C12**

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	94
4-Bromofluorobenzene	60	140	2 Q

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

SEQUOIA ANALYTICAL - ELAP #1210

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Gettler Ryan/Geostrategies	Client Proj. ID: Unocal 4625,Oakland	Sampled: 05/08/98
6747 Sierra Court Suite J	Sample Descript: UT-8-4	Received: 05/11/98
Dublin, CA 94568	Matrix: SOLID	Extracted: 05/15/98
	Analysis Method: 8015Mod/8020	Analyzed: 05/22/98
Attention: Deanna Harding	Lab Number: 9805713-09	Reported: 05/27/98

QC Batch Number: GC051598BTEXEXC
Instrument ID: GCHP22

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TPPH as Gas	1.0	N.D.
Methyl t-Butyl Ether	**0.025**	**0.70**
Benzene	0.0050	N.D.
Toluene	0.0050	N.D.
Ethyl Benzene	0.0050	N.D.
Xylenes (Total)	0.0050	N.D.
Chromatogram Pattern:		

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	95
4-Bromofluorobenzene	60	140	98

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

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Gettler Ryan/Geostrategies
6747 Sierra Court Suite J
Dublin, CA 94568

Attention: Deanna Harding

Client Proj. ID: Unocal 4625,Oakland
Sample Descript: UWT-1-2
Matrix: SOLID
Analysis Method: EPA 8240
Lab Number: 9805713-10

Sampled: 05/08/98
Received: 05/11/98
Extracted: 05/13/98
Analyzed: 05/13/98
Reported: 05/27/98

QC Batch Number: MS0513988240EXA
Instrument ID: F2

Volatile Organics (EPA 8240)

Analyte	Detection Limit ug/Kg	Sample Results ug/Kg
Acetone	500	N.D.
Benzene	100	N.D.
Bromodichloromethane	100	N.D.
Bromoform	100	N.D.
Bromomethane	100	N.D.
2-Butanone	500	N.D.
Carbon disulfide	100	N.D.
Carbon tetrachloride	100	N.D.
Chlorobenzene	100	N.D.
Chloroethane	100	N.D.
2-Chloroethyl vinyl ether	500	N.D.
Chloroform	100	N.D.
Chloromethane	100	N.D.
Dibromochloromethane	100	N.D.
1,1-Dichloroethane	100	N.D.
1,2-Dichloroethane	100	N.D.
1,1-Dichloroethene	100	N.D.
cis-1,2-Dichloroethene	100	N.D.
trans-1,2-Dichloroethene	100	N.D.
1,2-Dichloropropane	100	N.D.
cis-1,3-Dichloropropene	100	N.D.
trans-1,3-Dichloropropene	100	N.D.
Ethylbenzene	100	N.D.
2-Hexanone	500	N.D.
Methylene chloride	250	N.D.
4-Methyl-2-pentanone	500	N.D.
Styrene	100	N.D.
1,1,2,2-Tetrachloroethane	100	N.D.
Tetrachloroethene	100	N.D.
Toluene	100	N.D.
1,1,1-Trichloroethane	100	N.D.
1,1,2-Trichloroethane	100	N.D.
Trichloroethene	100	N.D.
Trichlorofluoromethane	100	N.D.
Vinyl acetate	250	N.D.
Vinyl chloride	100	N.D.
Total Xylenes	100	N.D.

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Gettler Ryan/Geostrategies	Client Proj. ID: Unocal 4625,Oakland	Sampled: 05/08/98
6747 Sierra Court Suite J	Sample Descript: UWT-1-2	Received: 05/11/98
Dublin, CA 94568	Matrix: SOLID	Extracted: 05/13/98
	Analysis Method: EPA 8240	Analyzed: 05/13/98
Attention: Deanna Harding	Lab Number: 9805713-10	Reported: 05/27/98

QC Batch Number: MS0513988240EXA
Instrument ID: F2

Analyte	Detection Limit ug/Kg		Sample Results ug/Kg
Surrogates	**Control Limits %**		**% Recovery**
1,2-Dichloroethane-d4	70	121	115
Toluene-d8	81	117	95
4-Bromofluorobenzene	74	121	95

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

SEQUOIA ANALYTICAL - ELAP #1210

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Gettler Ryan/Geostrategies	Client Proj. ID: Unocal 4625,Oakland	Sampled: 05/08/98
6747 Sierra Court Suite J	Sample Descript: UWT-1-2	Received: 05/11/98
Dublin, CA 94568	Matrix: SOLID	Extracted: 05/13/98
	Analysis Method: EPA 8270	Analyzed: 05/14/98
Attention: Deanna Harding	Lab Number: 9805713-10	Reported: 05/27/98

QC Batch Number: MS0512988270EXA
nstrument ID: F4

Semivolatile Organics (EPA 8270)

Analyte	Detection Limit ug/Kg	Sample Results ug/Kg
Acenaphthene	250	N.D.
Acenaphthylene	250	N.D.
Anthracene	250	N.D.
Benzoic Acid	500	N.D.
Benzo(a)anthracene	250	N.D.
Benzo(b)fluoranthene	250	N.D.
Benzo(k)fluoranthene	250	N.D.
Benzo(g,h,i)perylene	250	N.D.
Benzo(a)pyrene	250	N.D.
Benzyl alcohol	250	N.D.
Bis(2-chloroethoxy)methane	250	N.D.
Bis(2-chloroethyl)ether	250	N.D.
Bis(2-chloroisopropyl)ether	250	N.D.
Bis(2-ethylhexyl)phthalate	500	N.D.
4-Bromophenyl phenyl ether	250	N.D.
Butyl benzyl phthalate	250	N.D.
4-Chloroaniline	500	N.D.
2-Chloronaphthalene	250	N.D.
4-Chloro-3-methylphenol	250	N.D.
2-Chlorophenol	250	N.D.
4-Chlorophenyl phenyl ether	250	N.D.
Chrysene	250	N.D.
Dibenzo(a,h)anthracene	250	N.D.
Dibenzofuran	250	N.D.
Di-n-butyl phthalate	500	N.D.
1,2-Dichlorobenzene	250	N.D.
1,3-Dichlorobenzene	250	N.D.
1,4-Dichlorobenzene	250	N.D.
3,3'-Dichlorobenzidine	500	N.D.
2,4-Dichlorophenol	250	N.D.
Diethyl phthalate	250	N.D.
2,4-Dimethylphenol	250	N.D.
Dimethyl phthalate	250	N.D.
4,6-Dinitro-2-methylphenol	500	N.D.
2,4-Dinitrophenol	500	N.D.
2,4-Dinitrotoluene	250	N.D.
2,6-Dinitrotoluene	250	N.D.
Di-n-octyl phthalate	250	N.D.
Fluoranthene	250	N.D.

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Gettler Ryan/Geostrategies
6747 Sierra Court Suite J
Dublin, CA 94568

Attention: Deanna Harding

Client Proj. ID: Unocal 4625,Oakland
Sample Descript: UWT-1-2
Matrix: SOLID
Analysis Method: EPA 8270
Lab Number: 9805713-10

Sampled: 05/08/98
Received: 05/11/98
Extracted: 05/13/98
Analyzed: 05/14/98
Reported: 05/27/98

QC Batch Number: MS0512988270EXA
Instrument ID: F4

Analyte	Detection Limit ug/Kg	Sample Results ug/Kg
Fluorene	250	N.D.
Hexachlorobenzene	250	N.D.
Hexachlorobutadiene	250	N.D.
Hexachlorocyclopentadiene	500	N.D.
Hexachloroethane	250	N.D.
Indeno(1,2,3-cd)pyrene	250	N.D.
Isophorone	250	N.D.
2-Methylnaphthalene	250	N.D.
2-Methylphenol	250	N.D.
4-Methylphenol	250	N.D.
Naphthalene	250	N.D.
2-Nitroaniline	500	N.D.
3-Nitroaniline	500	N.D.
4-Nitroaniline	500	N.D.
Nitrobenzene	250	N.D.
2-Nitrophenol	250	N.D.
4-Nitrophenol	500	N.D.
N-Nitrosodiphenylamine	250	N.D.
N-Nitroso-di-n-propylamine	250	N.D.
Pentachlorophenol	500	N.D.
Phenanthrene	250	N.D.
Phenol	250	N.D.
Pyrene	250	N.D.
1,2,4-Trichlorobenzene	250	N.D.
2,4,5-Trichlorophenol	500	N.D.
2,4,6-Trichlorophenol	250	N.D.

Surrogates	Control Limits %		% Recovery
2-Fluorophenol	25	121	56
Phenol-d5	24	113	65
Nitrobenzene-d5	23	120	64
2-Fluorobiphenyl	30	115	62
2,4,6-Tribromophenol	19	122	90
p-Terphenyl-d14	18	137	70

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

SEQUOIA ANALYTICAL - ELAP #1210

Tod Granicher
Project Manager

Sequoia Analytical

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Gettler Ryan/Geostrategies	Client Proj. ID: Unocal 4625,Oakland	Sampled: 05/08/98
6747 Sierra Court Suite J	Sample Descript: UWT-1-2	Received: 05/11/98
Dublin, CA 94568	Matrix: SOLID	Extracted: 05/15/98
	Analysis Method: 8015Mod/8020	Analyzed: 05/22/98
Attention: Deanna Harding	Lab Number: 9805713-10	Reported: 05/27/98

QC Batch Number: GC051598BTEXEXC
Instrument ID: GCHP22

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TPPH as Gas	1.0	N.D.
Methyl t-Butyl Ether	0.025	N.D.
Benzene	0.0050	N.D.
Toluene	0.0050	N.D.
Ethyl Benzene	0.0050	N.D.
Xylenes (Total)	0.0050	N.D.
Chromatogram Pattern:		

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	92
4-Bromofluorobenzene	60	140	99

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

SEQUOIA ANALYTICAL - ELAP #1210

Jod Granicher
Project Manager

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Gettler Ryan/Geostrategies	Client Proj. ID: Unocal 4625,Oakland	Sampled: 05/08/98
6747 Sierra Court Suite J	Sample Descript: UWT-1-2	Received: 05/11/98
Dublin, CA 94568	Matrix: SOLID	Extracted: 05/14/98
	Analysis Method: EPA 8015 Mod	Analyzed: 05/15/98
Attention: Deanna Harding	Lab Number: 9805713-10	Reported: 05/27/98

QC Batch Number: GC0514980HBPEXB
Instrument ID: GCHP4A

Total Extractable Petroleum Hydrocarbons (TEPH)

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TEPH as Diesel	1.0	1.5
Chromatogram Pattern:		
Unidentified HC		C9-C24

Surrogates	Control Limits %		% Recovery
n-Pentacosane (C25)	50	150	95

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

SEQUOIA ANALYTICAL - ELAP #1210

Tod Granicher
Project Manager

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Gettler Ryan/Geostrategies
6747 Sierra Court, Ste. J
Dublin, CA 94568
Attention: Deanna Harding

Client Project ID: Unocal 4625, Oakland

QC Sample Group: 9805713

Reported: May 31, 1998

QUALITY CONTROL DATA REPORT

Matrix:	Solid
Method:	EPA 8015
Analyst:	R. GECKLER
ANALYTE	Gasoline

QC Batch #: GC051598BTEXEXC

Sample No.:	GS9805713-10
Date Prepared:	5/15/98
Date Analyzed:	5/18/98
Instrument I.D.#:	GCHP7
Sample Conc., mg/Kg:	N.D.
Conc. Spiked, mg/Kg:	5.0
Matrix Spike, mg/Kg:	5.2
% Recovery:	104
Matrix Spike Duplicate, mg/Kg:	5.5
% Recovery:	110
Relative % Difference:	5.6
RPD Control Limits:	0-25

LCS Batch#: GSBLK051598C

Date Prepared:	5/15/98
Date Analyzed:	5/18/98
Instrument I.D.#:	GCHP7
Conc. Spiked, mg/Kg:	5.0
Recovery, mg/Kg:	5.7
LCS % Recovery:	114

Percent Recovery Control Limits:

MS/MSD	60-140
LCS	70-130

Quality Assurance Statement: All standard operating procedures and quality control requirements have been met.

SEQUOIA ANALYTICAL

Tod Granicher
Project Manager

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Gettler Ryan/Geostrategies
6747 Sierra Court, Ste. J
Dublin, CA 94568
Attention: Deanna Harding

Client Project ID: Unocal 4625, Oakland

QC Sample Group: 9805713

Reported: May 31, 1998

QUALITY CONTROL DATA REPORT

Matrix:	Solid
Method:	EPA 8015M
Analyst:	A. PORTER
ANALYTE	Diesel

QC Batch #: GC0514980HBPEXB

Sample No.:	9805703-1
Date Prepared:	5/14/98
Date Analyzed:	5/15/98
Instrument I.D.#:	GCHP4A
Sample Conc., mg/Kg:	110 mg/Kg
Conc. Spiked, mg/Kg:	17
Matrix Spike, mg/Kg:	64
% Recovery:	-270
Matrix Spike Duplicate, mg/Kg:	74
% Recovery:	-210
Relative % Difference:	-25
RPD Control Limits:	0-50

THE SAMPLE, MS AND MSD WERE ALL RUN AT A 20X DILUTION.

LCS Batch#: BLK051498BS

Date Prepared:	5/14/98
Date Analyzed:	5/15/98
Instrument I.D.#:	GCHP4A
Conc. Spiked, mg/Kg:	17
Recovery, mg/Kg:	14
LCS % Recovery:	82

Percent Recovery Control Limits:

MS/MSD	50-150
LCS	60-140

Quality Assurance Statement: All standard operating procedures and quality control requirements have been met.

SEQUOIA ANALYTICAL

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Gettler Ryan/Geostrategies	Client Project ID:	Unocal 4625, Oakland	
6747 Sierra Court, Ste J	Matrix:	Solid	
Dublin, CA 94568			
Attention: Deanna Harding	Work Order #:	9805713	Reported: Jun 2, 1998

QUALITY CONTROL DATA REPORT

Analyte:	1,1-Dichloroethene	Trichloroethene	Benzene
QC Batch#:	MS0513988240EXA	MS0513988240EXA	MS0513988240EXA
Analy. Method:	EPA 8240	EPA 8240	EPA 8240
Prep. Method:			
Analyst:	L. Zhu	L. Zhu	L. Zhu
MS/MSD #:	980564301	980564301	980564301
Sample Conc.:	N.D.	N.D.	N.D.
Prepared Date:	5/13/98	5/13/98	5/13/98
Analyzed Date:	5/13/98	5/13/98	5/13/98
Instrument I.D.#:	F2	F2	F2
Conc. Spiked:	2500 µg/Kg	2500 µg/Kg	2500 µg/Kg
Result:	1800	1700	2100
MS % Recovery:	72	68	84
Dup. Result:	1700	1700	2000
MSD % Recov.:	68	68	80
RPD:	5.7	0.0	4.9
RPD Limit:	0-25	0-25	0-25

LCS #:	LCS051398	LCS051398	LCS051398
Prepared Date:	5/13/98	5/13/98	5/13/98
Analyzed Date:	5/13/98	5/13/98	5/13/98
Instrument I.D.#:	F2	F2	F2
Conc. Spiked:	2500 µg/Kg	2500 µg/Kg	2500 µg/Kg
LCS Result:	2700	2600	3000
LCS % Recov.:	108	104	120

MS/MSD	60-140	60-140	60-140
LCS	65-135	70-130	70-130
Control Limits			

SEQUOIA ANALYTICAL

Tod Granicher
Project Manager

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** MS = Matrix Spike, MSD = MS Duplicate, RPD = Relative % Difference

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Gettler Ryan/Geostrategies	Client Project ID:	Unocal 4625, Oakland	
6747 Sierra Court, Ste J	Matrix:	Solid	
Dublin, CA 94568			
Attention: Deanna Harding	Work Order #:	9805713	Reported: Jun 2, 1998

QUALITY CONTROL DATA REPORT

Analyte:	Toluene	MTBE	Chloro-benzene
QC Batch#:	MS0513988240EXA	MS0513988240EXA	MS0513988240EXA
Analy. Method:	EPA 8240	EPA 8240	EPA 8240
Prep. Method:			
Analyst:	L. Zhu	L. Zhu	L. Zhu
MS/MSD #:	980564301	980564301	980564301
Sample Conc.:	N.D.	N.D.	N.D.
Prepared Date:	5/13/98	5/13/98	5/13/98
Analyzed Date:	5/13/98	5/13/98	5/13/98
Instrument I.D.#:	F2	F2	F2
Conc. Spiked:	2500 µg/Kg	2500 µg/Kg	2500 µg/Kg
Result:	1800	2100	1800
MS % Recovery:	72	84	72
Dup. Result:	1800	2300	1700
MSD % Recov.:	72	92	68
RPD:	0.0	9.1	5.7
RPD Limit:	0-25	0-25	0-25
LCS #:	LCS051398	LCS051398	LCS051398
Prepared Date:	5/13/98	5/13/98	5/13/98
Analyzed Date:	5/13/98	5/13/98	5/13/98
Instrument I.D.#:	F2	F2	F2
Conc. Spiked:	2500 µg/Kg	2500 µg/Kg	2500 µg/Kg
LCS Result:	2700	2600	2600
LCS % Recov.:	108	104	104
MS/MSD Control Limits	60-140	60-140	60-140
LCS Control Limits	70-130	70-130	70-130

SEQUOIA ANALYTICAL

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Gettler Ryan/Geostrategies	Client Project ID:	Unocal 4625, Oakland	
6747 Sierra Court, Ste J	Matrix:	Solid	
Dublin, CA 94568			
Attention: Deanna Harding	Work Order #:	9805713	Reported: Jun 2, 1998

QUALITY CONTROL DATA REPORT

Analyte:	Phenol	2-Chlorophenol	1,4-Dichloro-benzene	N-Nitroso-Di-N-propylamine
QC Batch#:	MS0512988270EXA	MS0512988270EXA	MS0512988270EXA	MS0512988270EXA
Analy. Method:	EPA 8270	EPA 8270	EPA 8270	EPA 8270
Prep. Method:	EPA 3550	EPA 3550	EPA 3550	EPA 3550
Analyst:	B. Pitamah	B. Pitamah	B. Pitamah	B. Pitamah
MS/MSD #:	BLK051298	BLK051298	BLK051298	BLK051298
Sample Conc.:	N.D.	N.D.	N.D.	N.D.
Prepared Date:	5/12/98	5/12/98	5/12/98	5/12/98
Analyzed Date:	5/12-13/98	5/12-13/98	5/12-13/98	5/12-13/98
Instrument I.D.#:	F4	F4	F4	F4
Conc. Spiked:	3300 µg/Kg	3300 µg/Kg	3300 µg/Kg	3300 µg/Kg
Result:	1990	2340	2160	2190
MS % Recovery:	60	71	65	66
Dup. Result:	2150	2450	2290	2300
MSD % Recov.:	65	74	69	70
RPD:	7.7	4.6	5.8	4.9
RPD Limit:	0-40	0-40	0-40	0-40
LCS #:	LCS051398	LCS051398	LCS051398	LCS051398
Prepared Date:	5/13/98	5/13/98	5/13/98	5/13/98
Analyzed Date:	5/13/98	5/13/98	5/13/98	5/13/98
Instrument I.D.#:	F4	F4	F4	F4
Conc. Spiked:	3300 µg/Kg	3300 µg/Kg	3300 µg/Kg	3300 µg/Kg
LCS Result:	2100	2430	2310	2270
LCS % Recov.:	64	74	70	69
MS/MSD LCS Control Limits	26-90	25-102	28-104	41-126

SEQUOIA ANALYTICAL

Tod Granicher
Project Manager

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Gettler Ryan/Geostrategies	Client Project ID:	Unocal 4625, Oakland	
6747 Sierra Court, Ste J	Matrix:	Solid	
Dublin, CA 94568			
Attention: Deanna Harding	Work Order #:	9805713	Reported: Jun 2, 1998

QUALITY CONTROL DATA REPORT

Analyte:	1,2,4-Trichloro-benzene	4-Chloro-3-Methylphenol	Acenaphthene	4-Nitrophenol
QC Batch#:	MS0512988270EXA	MS0512988270EXA	MS0512988270EXA	MS0512988270EXA
Analy. Method:	EPA 8270	EPA 8270	EPA 8270	EPA 8270
Prep. Method:	EPA 3550	EPA 3550	EPA 3550	EPA 3550
Analyst:	B. Pitamah	B. Pitamah	B. Pitamah	B. Pitamah
MS/MSD #:	BLK051298	BLK051298	BLK051298	BLK051298
Sample Conc.:	N.D.	N.D.	N.D.	N.D.
Prepared Date:	5/12/98	5/12/98	5/12/98	5/12/98
Analyzed Date:	5/12-13/98	5/12-13/98	5/12-13/98	5/12-13/98
Instrument I.D.#:	F4	F4	F4	F4
Conc. Spiked:	3300 µg/Kg	3300 µg/Kg	3300 µg/Kg	3300 µg/Kg
Result:	2830	2480	2060	2790
MS % Recovery:	86	76	62	85
Dup. Result:	3040	2620	2170	2790
MSD % Recov.:	92	79	66	85
RPD:	7.2	5.5	5.2	0.0
RPD Limit:	0-40	0-40	0-40	0-40
LCS #:	LCS051398	LCS051398	LCS051398	LCS051398
Prepared Date:	5/13/98	5/13/98	5/13/98	5/13/98
Analyzed Date:	5/13/98	5/13/98	5/13/98	5/13/98
Instrument I.D.#:	F4	F4	F4	F4
Conc. Spiked:	3300 µg/Kg	3300 µg/Kg	3300 µg/Kg	3300 µg/Kg
LCS Result:	3030	2600	2180	2730
LCS % Recov.:	92	79	66	83
MS/MSD LCS Control Limits	38-107	26-103	31-137	11-114

SEQUOIA ANALYTICAL

Tod Granicher
Project Manager

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Gettler Ryan/Geostrategies	Client Project ID:	Unocal 4625, Oakland	
6747 Sierra Court, Ste J	Matrix:	Solid	
Dublin, CA 94568			
Attention: Deanna Harding	Work Order #:	9805713	Reported: Jun 2, 1998

QUALITY CONTROL DATA REPORT

Analyte:	2,4-Dinitro-toluene	Pentachloro-phenol	Pyrene
QC Batch#:	MS0512988270EXA	MS0512988270EXA	MS0512988270EXA
Analy. Method:	EPA 8270	EPA 8270	EPA 8270
Prep. Method:	EPA 3550	EPA 3550	EPA 3550
Analyst:	B. Pitamah	B. Pitamah	B. Pitamah
MS/MSD #:	BLK051298	BLK051298	BLK051298
Sample Conc.:	N.D.	N.D.	N.D.
Prepared Date:	5/12/98	5/12/98	5/12/98
Analyzed Date:	5/12-13/98	5/12-13/98	5/12-13/98
Instrument I.D.#:	F4	F4	F4
Conc. Spiked:	3300 µg/Kg	3300 µg/Kg	3300 µg/Kg
Result:	2490	2290	2350
MS % Recovery:	75	69	71
Dup. Result:	2620	2100	2460
MSD % Recov.:	79	64	75
RPD:	5.1	8.7	4.6
RPD Limit:	0-40	0-40	0-40

LCS #:	LCS051398	LCS051398	LCS051398
Prepared Date:	5/13/98	5/13/98	5/13/98
Analyzed Date:	5/13/98	5/13/98	5/13/98
Instrument I.D.#:	F4	F4	F4
Conc. Spiked:	3300 µg/Kg	3300 µg/Kg	3300 µg/Kg
LCS Result:	2590	2690	2590
LCS % Recov.:	78	82	78

MS/MSD LCS Control Limits	28-89	17-109	35-142

SEQUOIA ANALYTICAL

Tod Granicher
Project Manager

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Gettler Ryan/Geostrategies	Client Project ID:	Unocal 4625, Oakland	
6747 Sierra Court, Ste J	Matrix:	Solid	
Dublin, CA 94568			
Attention: Deanna Harding	Work Order #:	98805713	Reported: Jun 2, 1998

QUALITY CONTROL DATA REPORT

Analyte:	Total Recoverable Petroleum Hydrocarbons
QC Batch#:	SP0518985520EXB
Analy. Method:	SM 5520EF
Prep. Method:	SM 5520EF

Analyst:	H. Olonan
BS/BSD #:	980580004
Sample Conc.:	1060
Prepared Date:	5/18/98
Analyzed Date:	5/19/98
Instrument I.D.#:	MANUAL
Conc. Spiked:	150 mg/Kg
Result:	1500
BS % Recovery:	300
Dup. Result:	1500
BSD % Recov.:	300
RPD:	0.0
RPD Limit:	0-30

LCS #:	
Prepared Date:	
Analyzed Date:	
Instrument I.D.#:	
Conc. Spiked:	
LCS Result:	
LCS % Recov.:	

MS/MSD	60-140
LCS	70-130
Control Limits	

SEQUOIA ANALYTICAL

Tod Granicher
Project Manager

Please Note:
The LCS is a control sample of known, interferent-free matrix that is analyzed using the same reagents, preparation, and analytical methods employed for the samples. The matrix spike is an aliquot of sample fortified with known quantities of specific compounds and subjected to the entire analytical procedure. If the recovery of analytes from the matrix spike does not fall within specified control limits due to matrix interference, the LCS recovery is to be used to validate the batch.

** MS = Matrix Spike, MSD = MS Duplicate, RPD = Relative % Difference

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Gettler Ryan/Geostrategies
6747 Sierra Court Suite J
Dublin, CA 94568
Attention: Deanna Harding

Client Proj. ID: Unocal 4625,Oakland

Lab Proj. ID: 9805713

Received: 05/11/98

Reported: 05/27/98

LABORATORY NARRATIVE

In order to properly interpret this report, it must be reproduced in its entirety. This report contains a total of 26 pages including the laboratory narrative, sample results, quality control, and related documents as required (cover page, COC, raw data, etc.).

TPGBMS: Sample 713-2 TFT high by matrix effect and 4-BFB diluted low.
Sample 713-1,3,4,8 4-BFB low by dilution.

SEQUOIA ANALYTICAL

Tod Granicher
Project Manager

UNOCAL 76

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❑ East 11115 Montgomery, Suite B • Spokane, WA 99206 • (509) 924-9200
❑ 15055 S.W. Sequoia Pkwy, Suite 110 • Portland, OR 97222 • (503) 624-9800

Consultant Company: Gettler-Ryan 140058.02	Project Name: Unocal #4625
Address: 6747 Sierra Ct Suite J	UNOCAL Project Manager: Tina Berry
City: Dublin CA State: CA Zip Code: 94568	AFE #:
Telephone: (510) 551-7555 FAX #: (510) 551-7888	Site #, City, State: #4625 Oakland CA
Report To: C Galantine Sampler: C Galantine	QC Data: ❑ Level D (Standard) ❑ Level C ❑ Level B ❑ Level A

Turnaround Time: ☒ 10 Work Days ❑ 5 Work Days ❑ 3 Work Days ❑ 2 Work Days ❑ 1 Work Day ❑ 2-8 Hours

❑ Drinking Water ❑ Waste Water ❑ Other

CODE: ❑ Misc. ☒ Detect. ❑ Eval. ❑ Remed. ❑ Demol. ❑ Closure

Analyses Requested: G405713

Client Sample I.D.	Date/Time Sampled	Matrix Desc.	# of Cont.	Cont. Type	Laboratory Sample #	TPH G BTEX MTBE 8015/8020	O&G 5520 E&F	TPHd	8240	8270	ICAP 5 metal				Comments
1. UT-1-4	5/8/98 10:55	soil	1	tube	1	X									
2. UT-1-8	12:05				2	X									
3. UT-2-4	11:00				3	X									
4. UT-3-4	11:05				4	X									
5. UT-4-4	11:10				5	X									
6. UT-5-4	11:20				6	X									
7. UT-64	11:25				7	X									
8. UT-7-4	11:30				8	X									
9. UT-8-4	11:35				9	X									
10. UWT-1-2	10:10				10	X	X	X	X	X	X				

Relinquished By: [signature]	Date: 5/8/98	Time: 14:15	Received By: [signature]	Date: 5/11/98	Time: 10:20
Relinquished By: [signature]	Date: 5/11/98	Time:	Received By:	Date:	Time:
Relinquished By:	Date:	Time:	Received By Lab: Terri Dunn	Date: 5/11/98	Time: 1159

Were Samples Received in Good Condition? ❑ Yes ❑ No Samples on Ice? ❑ Yes ❑ No Method of Shipment________ Page __ of __

To be completed upon receipt of report:
1) Were the analyses requested on the Chain of Custody reported? ❑ Yes ❑ No If no, what analyses are still needed? ________
2) Was the report issued within the requested turnaround time? ❑ Yes ❑ No If no, what was the turnaround time? ________
Approved by: ________ Signature: ________ Company: ________ Date: ________

Pink - Client Yellow - Laboratory White - Laboratory

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Gettler Ryan/Geostrategies
6747 Sierra Court Suite J
Dublin, CA 94568

Client Proj. ID: Unocal 4625
Lab Proj. ID: 9804H48

Sampled: 04/24/98
Received: 04/27/98
Analyzed: see below

Attention: Clyde Galantine

Reported: 05/12/98

LABORATORY ANALYSIS

Analyte	Units	Date Analyzed	Detection Limit	Sample Results
Lab No: 9804H48-01				
Sample Desc : **SOLID,UWS-1(A-D)comp**				
Cadmium by ICP	mg/Kg	04/29/98	0.50	N.D.
Chromium by ICP	**mg/Kg**	**04/29/98**	**0.50**	**43**
Lead by ICP	**mg/Kg**	**04/29/98**	**5.0**	**35**
Nickel by ICP	**mg/Kg**	**04/29/98**	**2.5**	**63**
TRPH (SM 5520 E&F)	**mg/Kg**	**05/07/98**	**50**	**2400**
Zinc by ICP	**mg/Kg**	**04/29/98**	**0.50**	**65**
Lab No: 9804H48-02				
Sample Desc : **SOLID,US-1 (A-D) Comp**				
Lead by ICP	**mg/Kg**	**04/29/98**	**5.0**	**19**
Lab No: 9804H48-06				
Sample Desc : **SOLID,US-5 (A-D) Comp**				
Lead by ICP	**mg/Kg**	**04/29/98**	**5.0**	**7.5**

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

SEQUOIA ANALYTICAL - ELAP #1210

Mike Gregory
Project Manager

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Gettler Ryan/Geostrategies	Client Proj. ID: Unocal 4625	Sampled: 04/24/98
6747 Sierra Court Suite J	Sample Descript: UWS-1(A-D)comp	Received: 04/27/98
Dublin, CA 94568	Matrix: SOLID	Extracted: 05/08/98
	Analysis Method: EPA 8240	Analyzed: 05/08/98
Attention: Clyde Galantine	Lab Number: 9804H48-01	Reported: 05/12/98

QC Batch Number: MS0504988260EXA
Instrument ID: F3

Volatile Organics (EPA 8240)

Analyte	Detection Limit ug/Kg	Sample Results ug/Kg
Acetone	500	N.D.
Benzene	100	N.D.
Bromodichloromethane	100	N.D.
Bromoform	100	N.D.
Bromomethane	100	N.D.
2-Butanone	500	N.D.
Carbon disulfide	100	N.D.
Carbon tetrachloride	100	N.D.
Chlorobenzene	100	N.D.
Chloroethane	100	N.D.
2-Chloroethyl vinyl ether	500	N.D.
Chloroform	100	N.D.
Chloromethane	100	N.D.
Dibromochloromethane	100	N.D.
1,1-Dichloroethane	100	N.D.
1,2-Dichloroethane	100	N.D.
1,1-Dichloroethene	**100**	**130**
cis-1,2-Dichloroethene	100	N.D.
trans-1,2-Dichloroethene	100	N.D.
1,2-Dichloropropane	100	N.D.
cis-1,3-Dichloropropene	100	N.D.
trans-1,3-Dichloropropene	100	N.D.
Ethylbenzene	100	N.D.
2-Hexanone	500	N.D.
Methylene chloride	250	N.D.
4-Methyl-2-pentanone	500	N.D.
Styrene	100	N.D.
1,1,2,2-Tetrachloroethane	100	N.D.
Tetrachloroethene	100	N.D.
Toluene	**100**	**110**
1,1,1-Trichloroethane	100	N.D.
1,1,2-Trichloroethane	100	N.D.
Trichloroethene	100	N.D.
Trichlorofluoromethane	100	N.D.
Vinyl acetate	250	N.D.
Vinyl chloride	100	N.D.
Total Xylenes	100	N.D.

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Gettler Ryan/Geostrategies	Client Proj. ID: Unocal 4625	Sampled: 04/24/98
6747 Sierra Court Suite J	Sample Descript: UWS-1(A-D)comp	Received: 04/27/98
Dublin, CA 94568	Matrix: SOLID	Extracted: 05/08/98
	Analysis Method: EPA 8240	Analyzed: 05/08/98
Attention: Clyde Galantine	Lab Number: 9804H48-01	Reported: 05/12/98

QC Batch Number: MS0504988260EXA
Instrument ID: F3

Analyte	Detection Limit ug/Kg		Sample Results ug/Kg
Surrogates	**Control Limits %**		**% Recovery**
1,2-Dichloroethane-d4	70	121	108
Toluene-d8	81	117	93
4-Bromofluorobenzene	74	121	94

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

SEQUOIA ANALYTICAL - ELAP #1210

Mike Gregory
Project Manager

Sequoia Analytical

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Gettler Ryan/Geostrategies
6747 Sierra Court Suite J
Dublin, CA 94568

Attention: Clyde Galantine

Client Proj. ID: Unocal 4625
Sample Descript: UWS-1(A-D)comp
Matrix: SOLID
Analysis Method: EPA 8270
Lab Number: 9804H48-01

Sampled: 04/24/98
Received: 04/27/98
Extracted: 05/01/98
Analyzed: 05/07/98
Reported: 05/12/98

QC Batch Number: MS0501988270EXA
Instrument ID: F4

Semivolatile Organics (EPA 8270)

Analyte	Detection Limit ug/Kg	Sample Results ug/Kg
Acenaphthene	5000	N.D.
Acenaphthylene	5000	N.D.
Anthracene	5000	N.D.
Benzoic Acid	10000	N.D.
Benzo(a)anthracene	5000	N.D.
Benzo(b)fluoranthene	5000	N.D.
Benzo(k)fluoranthene	5000	N.D.
Benzo(g,h,i)perylene	5000	N.D.
Benzo(a)pyrene	5000	N.D.
Benzyl alcohol	5000	N.D.
Bis(2-chloroethoxy)methane	5000	N.D.
Bis(2-chloroethyl)ether	5000	N.D.
Bis(2-chloroisopropyl)ether	5000	N.D.
Bis(2-ethylhexyl)phthalate	10000	N.D.
4-Bromophenyl phenyl ether	5000	N.D.
Butyl benzyl phthalate	5000	N.D.
4-Chloroaniline	10000	N.D.
2-Chloronaphthalene	5000	N.D.
4-Chloro-3-methylphenol	5000	N.D.
2-Chlorophenol	5000	N.D.
4-Chlorophenyl phenyl ether	5000	N.D.
Chrysene	5000	N.D.
Dibenzo(a,h)anthracene	5000	N.D.
Dibenzofuran	5000	N.D.
Di-n-butyl phthalate	10000	N.D.
1,2-Dichlorobenzene	5000	N.D.
1,3-Dichlorobenzene	5000	N.D.
1,4-Dichlorobenzene	5000	N.D.
3,3'-Dichlorobenzidine	10000	N.D.
2,4-Dichlorophenol	5000	N.D.
Diethyl phthalate	5000	N.D.
2,4-Dimethylphenol	5000	N.D.
Dimethyl phthalate	5000	N.D.
4,6-Dinitro-2-methylphenol	10000	N.D.
2,4-Dinitrophenol	10000	N.D.
2,4-Dinitrotoluene	5000	N.D.
2,6-Dinitrotoluene	5000	N.D.
Di-n-octyl phthalate	5000	N.D.
Fluoranthene	5000	N.D.

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Gettler Ryan/Geostrategies
6747 Sierra Court Suite J
Dublin, CA 94568

Attention: Clyde Galantine

Client Proj. ID: Unocal 4625
Sample Descript: UWS-1(A-D)comp
Matrix: SOLID
Analysis Method: EPA 8270
Lab Number: 9804H48-01

Sampled: 04/24/98
Received: 04/27/98
Extracted: 05/01/98
Analyzed: 05/07/98
Reported: 05/12/98

QC Batch Number: MS0501988270EXA
Instrument ID: F4

Analyte	Detection Limit ug/Kg	Sample Results ug/Kg
Fluorene	5000	N.D.
Hexachlorobenzene	5000	N.D.
Hexachlorobutadiene	5000	N.D.
Hexachlorocyclopentadiene	10000	N.D.
Hexachloroethane	5000	N.D.
Indeno(1,2,3-cd)pyrene	5000	N.D.
Isophorone	5000	N.D.
2-Methylnaphthalene	5000	N.D.
2-Methylphenol	5000	N.D.
4-Methylphenol	5000	N.D.
Naphthalene	5000	N.D.
2-Nitroaniline	10000	N.D.
3-Nitroaniline	10000	N.D.
4-Nitroaniline	10000	N.D.
Nitrobenzene	5000	N.D.
2-Nitrophenol	5000	N.D.
4-Nitrophenol	10000	N.D.
N-Nitrosodiphenylamine	5000	N.D.
N-Nitroso-di-n-propylamine	5000	N.D.
Pentachlorophenol	10000	N.D.
Phenanthrene	5000	N.D.
Phenol	5000	N.D.
Pyrene	5000	N.D.
1,2,4-Trichlorobenzene	5000	N.D.
2,4,5-Trichlorophenol	10000	N.D.
2,4,6-Trichlorophenol	5000	N.D.

Surrogates	Control Limits %		% Recovery
2-Fluorophenol	25	121	Q
Phenol-d5	24	113	Q
Nitrobenzene-d5	23	120	Q
2-Fluorobiphenyl	30	115	Q
2,4,6-Tribromophenol	19	122	Q
p-Terphenyl-d14	18	137	Q

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

SEQUOIA ANALYTICAL - ELAP #1210

Mike Gregory
Project Manager

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Gettler Ryan/Geostrategies	Client Proj. ID: Unocal 4625	Sampled: 04/24/98
6747 Sierra Court Suite J	Sample Descript: UWS-1(A-D)comp	Received: 04/27/98
Dublin, CA 94568	Matrix: SOLID	Extracted: 05/04/98
	Analysis Method: 8015Mod/8020	Analyzed: 05/07/98
Attention: Clyde Galantine	Lab Number: 9804H48-01	Reported: 05/12/98

QC Batch Number: GC050498BTEXEXB
Instrument ID: GCHP07

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TPPH as Gas	**25**	**140**
Methyl t-Butyl Ether	0.62	N.D.
Benzene	0.12	N.D.
Toluene	0.12	N.D.
Ethyl Benzene	0.12	N.D.
Xylenes (Total)	0.12	N.D.
Chromatogram Pattern:		
Unidentified HC		**C6-C12**

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	103
4-Bromofluorobenzene	60	140	Q

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

SEQUOIA ANALYTICAL - ELAP #1210

Mike Gregory
Project Manager

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Gettler Ryan/Geostrategies	Client Proj. ID: Unocal 4625	Sampled: 04/24/98
6747 Sierra Court Suite J	Sample Descript: UWS-1(A-D)comp	Received: 04/27/98
Dublin, CA 94568	Matrix: SOLID	Extracted: 05/06/98
	Analysis Method: EPA 8015 Mod	Analyzed: 05/07/98
Attention: Clyde Galantine	Lab Number: 9804H48-01	Reported: 05/12/98

QC Batch Number: GC0506980HBPEXB
Instrument ID: GCHP4B

Total Extractable Petroleum Hydrocarbons (TEPH)

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TEPH as Diesel	**20**	**840**
Chromatogram Pattern:		
Unidentified HC		**C9-C24**

Surrogates	Control Limits %		% Recovery
n-Pentacosane (C25)	50	150	Q

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

SEQUOIA ANALYTICAL - ELAP #1210

Mike Gregory
Project Manager

Sequoia Analytical

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Gettler Ryan/Geostrategies	Client Proj. ID: Unocal 4625	Sampled: 04/24/98
6747 Sierra Court Suite J	Sample Descript: US-1 (A-D) Comp	Received: 04/27/98
Dublin, CA 94568	Matrix: SOLID	Extracted: 05/04/98
	Analysis Method: 8015Mod/8020	Analyzed: 05/05/98
Attention: Clyde Galantine	Lab Number: 9804H48-02	Reported: 05/12/98

QC Batch Number: GC050498BTEXEXB
Instrument ID: GCHP01

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TPPH as Gas	**5.0**	**49**
Methyl t-Butyl Ether	**0.12**	**0.62**
Benzene	0.025	N.D.
Toluene	**0.025**	**0.21**
Ethyl Benzene	0.025	N.D.
Xylenes (Total)	**0.025**	**0.20**
Chromatogram Pattern:		
Unidentified HC		**+ >C10**
Weathered Gas		**C6-C12**

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	112
4-Bromofluorobenzene	60	140	39 Q

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

SEQUOIA ANALYTICAL - ELAP #1210

Mike Gregory
Project Manager

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Gettler Ryan/Geostrategies	Client Proj. ID: Unocal 4625	Sampled: 04/24/98
6747 Sierra Court Suite J	Sample Descript: US-2 (A-D) Comp	Received: 04/27/98
Dublin, CA 94568	Matrix: SOLID	Extracted: 05/04/98
	Analysis Method: 8015Mod/8020	Analyzed: 05/05/98
Attention: Clyde Galantine	Lab Number: 9804H48-03	Reported: 05/12/98

QC Batch Number: GC050498BTEXEXB
Instrument ID: GCHP01

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TPPH as Gas	**1.0**	**8.2**
Methyl t-Butyl Ether	**0.025**	**0.14**
Benzene	0.0050	N.D.
Toluene	**0.0050**	**0.021**
Ethyl Benzene	**0.0050**	**0.013**
Xylenes (Total)	**0.0050**	**0.018**
Chromatogram Pattern:		
Unidentified HC		**+ > C10**
Weathered Gas		**C6-C12**

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	96
4-Bromofluorobenzene	60	140	134

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

SEQUOIA ANALYTICAL - ELAP #1210

Mike Gregory
Project Manager

Sequoia Analytical

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Gettler Ryan/Geostrategies	Client Proj. ID: Unocal 4625	Sampled: 04/24/98
6747 Sierra Court Suite J	Sample Descript: US-3 (A-D) Comp	Received: 04/27/98
Dublin, CA 94568	Matrix: SOLID	Extracted: 05/04/98
	Analysis Method: 8015Mod/8020	Analyzed: 05/05/98
Attention: Clyde Galantine	Lab Number: 9804H48-04	Reported: 05/12/98

QC Batch Number: GC050498BTEXEXB
Instrument ID: GCHP01

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TPPH as Gas	**1.0**	**16**
Methyl t-Butyl Ether	**0.025**	**0.13**
Benzene	0.0050	N.D.
Toluene	**0.0050**	**0.049**
Ethyl Benzene	**0.0050**	**0.024**
Xylenes (Total)	**0.0050**	**0.082**
Chromatogram Pattern:		
Unidentified HC		**+ >C10**
Weathered Gas		**C6-C12**

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	119
4-Bromofluorobenzene	60	140	145 Q

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

SEQUOIA ANALYTICAL - ELAP #1210

Mike Gregory
Project Manager

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (650) 364-9600, FAX (650) 364-9233
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1455 McDowell Blvd. North, Ste. D, Petaluma, CA 94954, (707) 792-1865, FAX (707) 792-0342

Gettler Ryan/Geostrategies	Client Proj. ID: Unocal 4625	Sampled: 04/24/98
6747 Sierra Court Suite J	Sample Descript: US-4 (A-D) Comp	Received: 04/27/98
Dublin, CA 94568	Matrix: SOLID	Extracted: 05/04/98
	Analysis Method: 8015Mod/8020	Analyzed: 05/05/98
Attention: Clyde Galantine	Lab Number: 9804H48-05	Reported: 05/12/98

QC Batch Number: GC050498BTEXEXB
Instrument ID: GCHP01

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TPPH as Gas	**1.0**	**5.5**
Methyl t-Butyl Ether	**0.025**	**0.20**
Benzene	**0.0050**	**0.010**
Toluene	**0.0050**	**0.0098**
Ethyl Benzene	**0.0050**	**0.021**
Xylenes (Total)	**0.0050**	**0.0064**
Chromatogram Pattern:		
Weathered Gas		**C6-C12**

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	93
4-Bromofluorobenzene	60	140	80

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

SEQUOIA ANALYTICAL - ELAP #1210

Mike Gregory
Project Manager

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Gettler Ryan/Geostrategies	Client Proj. ID: Unocal 4625	Sampled: 04/24/98
6747 Sierra Court Suite J	Sample Descript: US-5 (A-D) Comp	Received: 04/27/98
Dublin, CA 94568	Matrix: SOLID	Extracted: 05/04/98
	Analysis Method: 8015Mod/8020	Analyzed: 05/05/98
Attention: Clyde Galantine	Lab Number: 9804H48-06	Reported: 05/12/98

QC Batch Number: GC050498BTEXEXB
Instrument ID: GCHP18

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TPPH as Gas	**50**	**850**
Methyl t-Butyl Ether	**1.2**	**4.5**
Benzene	0.25	N.D.
Toluene	**0.25**	**1.2**
Ethyl Benzene	**0.25**	**4.0**
Xylenes (Total)	**0.25**	**24**
Chromatogram Pattern:		
Unidentified HC		**+ >C10**
Weathered Gas		**C6-C12**

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	117
4-Bromofluorobenzene	60	140	12 Q

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

SEQUOIA ANALYTICAL - ELAP #1210

Mike Gregory
Project Manager

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Gettler Ryan/Geostrategies	Client Proj. ID: Unocal 4625	Sampled: 04/24/98
6747 Sierra Court Suite J	Sample Descript: US-6 (A-D) Comp	Received: 04/27/98
Dublin, CA 94568	Matrix: SOLID	Extracted: 05/04/98
	Analysis Method: 8015Mod/8020	Analyzed: 05/04/98
Attention: Clyde Galantine	Lab Number: 9804H48-07	Reported: 05/12/98

QC Batch Number: GC050498BTEXEXB
Instrument ID: GCHP07

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TPPH as Gas	**50**	**660**
Methyl t-Butyl Ether	**1.2**	**2.2**
Benzene	**0.25**	**0.74**
Toluene	**0.25**	**2.6**
Ethyl Benzene	**0.25**	**4.4**
Xylenes (Total)	**0.25**	**34**
Chromatogram Pattern:		**GAS**

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	112
4-Bromofluorobenzene	60	140	20 Q

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

SEQUOIA ANALYTICAL - ELAP #1210

Mike Gregory
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Gettler Ryan/Geostrategies	Client Proj. ID: Unocal 4625	Sampled: 04/24/98
6747 Sierra Court Suite J	Sample Descript: US-7 (A-D) Comp	Received: 04/27/98
Dublin, CA 94568	Matrix: SOLID	Extracted: 05/04/98
	Analysis Method: 8015Mod/8020	Analyzed: 05/05/98
Attention: Clyde Galantine	Lab Number: 9804H48-08	Reported: 05/12/98

QC Batch Number: GC050498BTEXEXB
Instrument ID: GCHP07

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TPPH as Gas	**500**	**2000**
Methyl t-Butyl Ether	12	N.D.
Benzene	2.5	N.D.
Toluene	**2.5**	**6.3**
Ethyl Benzene	**2.5**	**13**
Xylenes (Total)	**2.5**	**89**
Chromatogram Pattern:		
Weathered Gas		**C6-C12**

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	98
4-Bromofluorobenzene	60	140	2 Q

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

SEQUOIA ANALYTICAL - ELAP #1210

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Project Manager

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Gettler Ryan/Geostrategies
6747 Sierra Court Suite J
Dublin, CA 94568
Attention: Clyde Galantine

Client Proj. ID: Unocal 4625
Lab Proj. ID: 9804H48

Received: 04/27/98
Reported: 05/12/98

LABORATORY NARRATIVE

In order to properly interpret this report, it must be reproduced in its entirety. This report contains a total of 13 pages including the laboratory narrative, sample results, quality control, and related documents as required (cover page, COC, raw data, etc.).

TPGBMS: Sample H48-1,2,6,7,8 4-BFB diluted low.
Sample H48-4 4-BFB high by matrix effect.

8270 Note:
Sample 9804H48-01 was diluted 20 times due to high late-eluting hydrocarbons.

8240 Note:
Sample 9804H48-02 was analyzed by method 8260, but the results are reported on method 8240 template.

SEQUOIA ANALYTICAL

Mike Gregory
Project Manager

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Gettler Ryan/Geostrategies
6747 Sierra Court, Suite J
Dublin, CA 94568
Attention: Clyde Galantine

Client Project ID: Unocal 4625

QC Sample Group: 9804H48-01

Reported: May 12, 1998

QUALITY CONTROL DATA REPORT

Matrix:	Solid
Method:	EPA 8015M
Analyst:	A. PORTER
ANALYTE	Diesel

QC Batch #: GC0506980HBPEXB

Sample No.:	9804J67-10
Date Prepared:	5/6/98
Date Analyzed:	5/6/98
Instrument I.D.#:	GCHP5B
Sample Conc., mg/Kg:	N.D.
Conc. Spiked, mg/Kg:	17
Matrix Spike, mg/Kg:	14
% Recovery:	82
Matrix Spike Duplicate, mg/Kg:	13
% Recovery:	76
Relative % Difference:	7.6
RPD Control Limits:	0-50

LCS Batch#: BLK050698BS

Date Prepared:	5/6/98
Date Analyzed:	5/6/98
Instrument I.D.#:	GCHP5B
Conc. Spiked, mg/Kg:	17
Recovery, mg/Kg:	14
LCS % Recovery:	82

Percent Recovery Control Limits:

MS/MSD	50-150
LCS	60-140

Quality Assurance Statement: All standard operating procedures and quality control requirements have been met.

Please Note:
The LCS is a control sample of known, interferent free matrix that is analyzed using the same reagents, preparation, and analytical methods employed for the samples. The matrix spike is an aliquot of sample fortified with known quantities of specific compounds and subjected to the entire analytical procedure. If the recovery of analytes from the matrix spike does not fall within specified control limits due to matrix interference, the LCS recovery is to be used to validate the batch.

SEQUOIA ANALYTICAL

Mike Gregory
Project Manager

UNOCAL 76

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☐ East 11115 Montgomery ... Spokane, WA 99206 • (509) 924-9200
☐ 15055 S.W. Sequoia Pkwy, Suite 110 • Portland, OR 97224

SAME DAY CHARGE

9804448

05-13-1998 10:11 — MAY 13 1998 4:59PM — 5105517899

Consultant Company: Gettler-Ryan 140158.02	Project Name: # 4625 [redacted]
Address: 6747 Sierra Ct Suite J	UNOCAL Project Manager: Tina Berry
City: Dublin State: CA Zip Code: 94568	AFE #:
Telephone: (510) 551-7555 FAX #: (510) 551-7888	Site #, City, State: 4625 Oakland, CA
Report To: Clyde Galantine Sampler: Clyde Galantine	QC Data: ☐ Level D (Standard) ☐ Level C ☐ Level B ☐ Level A

Turnaround Time: ☑ 10 Work Days ☐ 5 Work Days ☐ 3 Work Days ☐ 2 Work Days ☐ 1 Work Day ☐ 2-8 Hours

CODE: ☐ Misc. ☑ Detect. ☐ Eval. ☐ Remed. ☐ Demol. ☐ Closure

☐ Drinking Water ☐ Waste Water ☐ Other

Analyses Requested

Client Sample I.D.	Date/Time Sampled	Matrix Desc.	# of Cont.	Cont. Type	Laboratory Sample #	TPHg BTEX MTBE	TPHd 3015/8015	O&G 5520 E&F	8240	8270	ICAPS metals	Total Pb			Comments
1. WS-1 (comp)	4/24/98 15:10	Soil	4	tube	1	X	X	X	X	X	X	X			
2.															
3. US-1 (comp)	15:30	↓	↓	↓	2	X						X			
4. US-2	15:45				3	X									
5. US-3	16:00				4	X									
6. US-4	16:15				5	X									
7. US-5	16:30				6	X						X			
8. US-6	16:45				7	X									
9. US-7 ↓	↓ 17:00	↓	↓	↓	8	X									
10.															

AP 27 S 30

Relinquished By: Clyde Galantine	Date: 4/24/98	Time: 17:50	Received By: [signature]	Date: 4.24.98	Time: 1502
Relinquished By: [signature]	Date: 4.27.98	Time:	Received By:	Date:	Time:
Relinquished By:	Date:	Time:	Received By Lab: [signature]	Date: 4-27	Time: 17:30

Were Samples Received in Good Condition? ☐ Yes ☐ No Samples on Ice? ☐ Yes ☐ No Method of Shipment ________ Page __ of __

To be completed upon receipt of report:

1) Were the analyses requested on the Chain of Custody reported? ☑ Yes ☐ No If no, what analyses are still needed? ________
2) Was the report issued within the requested turnaround time? ☐ Yes ☑ No If no, what was the turnaround time? 12 days not 10

Approved by: Clyde Galantine Signature: [signature] Company: GR Date: 5/13/98

Pink • Client Yellow • Laboratory White • Laboratory

NO. 1164 P. 17/17 P.01

Sequoia Analytical

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Gettler Ryan/Geostrategies
6747 Sierra Court, Suite J
Dublin, CA 94568
Attention: Clyde Galantine

Client Project ID: Unocal 4625

QC Sample Group: 9804H48-01-08

Reported: May 15, 1998

QUALITY CONTROL DATA REPORT

Matrix: Solid
Method: EPA 8015/8020
Analyst: G. PESHINA

ANALYTE	Benzene	Toluene	Ethylbenzene	Xylenes	Gasoline
QC Batch #:	GC050498BTEXEXB				
Sample No.:	GS9804H67-8				
Date Prepared:	5/4/98	5/4/98	5/4/98	5/4/98	
Date Analyzed:	5/4/98	5/4/98	5/4/98	5/4/98	
Instrument I.D.#:	GCHP1	GCHP1	GCHP1	GCHP1	
Sample Conc., mg/Kg:	N.D.	N.D.	N.D.	N.D.	N.D.
Conc. Spiked, mg/Kg:	0.20	0.20	0.20	0.60	1.2
Matrix Spike, mg/Kg:	0.17	0.17	0.17	0.52	1.5
% Recovery:	85	85	85	87	125
Matrix Spike Duplicate, mg/Kg:	0.17	0.16	0.16	0.48	1.2
% Recovery:	85	80	80	80	100
Relative % Difference:	0.0	6.1	6.1	8.4	22
RPD Control Limits:	0-25	0-25	0-25	0-25	0-25

LCS Batch#:	GAWBLK050498BTEXEXB				
Date Prepared:	5/4/98	5/4/98	5/4/98	5/4/98	5/4/98
Date Analyzed:	5/4/98	5/4/98	5/4/98	5/4/98	5/4/98
Instrument I.D.#:	GCHP1	GCHP1	GCHP1	GCHP1	GCHP1
Conc. Spiked, mg/Kg:	0.20	0.20	0.20	0.60	1.2
Recovery, mg/Kg:	0.17	0.16	0.16	0.48	1.1
LCS % Recovery:	85	80	80	80	92

Percent Recovery Control Limits:

MS/MSD	60-140	60-140	60-140	60-140	60-140
LCS	70-130	70-130	70-130	70-130	70-130

Quality Assurance Statement: All standard operating procedures and quality control requirements have been met.

Please Note:

The LCS is a control sample of known, interferent free matrix that is analyzed using the same reagents, preparation, and analytical methods employed for the samples. The matrix spike is an aliquot of sample fortified with known quantities of specific compounds and subjected to the entire analytical procedure. If the recovery of analytes from the matrix spike does not fall within specified control limits due to matrix interference, the LCS recovery is to be used to validate the batch.

SEQUOIA ANALYTICAL

Mike Gregory
Project Manager

Sequoia Analytical

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Gettler Ryan/Geostrategies
6747 Sierra Court, Ste J
Dublin, CA 94568
Attention: Clyde Galantine

Client Project ID: Unocal 4625
Matrix: Solid
Work Order #: 9804H48 -01

Reported: May 18, 1998

QUALITY CONTROL DATA REPORT

Analyte:	1,1-Dichloroethene	Trichloroethene	Benzene	Toluene	Chloro-benzene
QC Batch#:	MS0504988260EXA	MS0504988260EXA	MS0504988260EXA	MS0504988260EXA	MS0504988260EXA
Analy. Method:	EPA 8260	EPA 8260	EPA 8260	EPA 8260	EPA 8260
Prep. Method:	N.A.	N.A.	N.A.	N.A.	N.A.
Analyst:	E. Manuel	E. Manuel	E. Manuel	E. Manuel	E. Manuel
MS/MSD #:	980504501	980504501	980504501	980504501	980504501
Sample Conc.:	N.D.	N.D.	N.D.	N.D.	N.D.
Prepared Date:	5/4/98	5/4/98	5/4/98	5/4/98	5/4/98
Analyzed Date:	5/4/98	5/4/98	5/4/98	5/4/98	5/4/98
Instrument I.D.#:	F2	F2	F2	F2	F2
Conc. Spiked:	2500 µg/L	2500 µg/L	2500 µg/L	2500 µg/L	2500 µg/L
Result:	2000	2700	2900	2600	2400
MS % Recovery:	80	108	116	104	96
Dup. Result:	2300	2800	3100	2800	2700
MSD % Recov.:	92	112	124	112	108
RPD:	14	3.6	6.7	7.4	12
RPD Limit:	0-25	0-25	0-25	0-25	0-25
LCS #:	LCS050898	LCS050898	LCS050898	LCS050898	LCS050898
Prepared Date:	5/8/98	5/8/98	5/8/98	5/8/98	5/8/98
Analyzed Date:	5/8/98	5/8/98	5/8/98	5/8/98	5/8/98
Instrument I.D.#:	F2	F2	F2	F2	F2
Conc. Spiked:	2500 µg/Kg	2500 µg/Kg	2500 µg/Kg	2500 µg/Kg	2500 µg/Kg
LCS Result:	1930	2040	2330	2060	2100
LCS % Recov.:	77	82	93	82	84
MS/MSD Control Limits	60-140	60-140	60-140	60-140	60-140
LCS Control Limits	65-135	70-130	70-130	70-130	70-130

SEQUOIA ANALYTICAL

Mike Gregory
Project Manager

Please Note:
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** MS = Matrix Spike, MSD = MS Duplicate, RPD = Relative % Difference

Sequoia Analytical

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Gettler Ryan/Geostrategies
6747 Sierra Court, Ste J
Dublin, CA 94568
Attention: Clyde Galantine

Client Project ID: Unocal 4625
Matrix: Liquid
Work Order #: 9804H48-01

Reported: May 18, 1998

QUALITY CONTROL DATA REPORT

Analyte:	Phenol	2-Chlorophenol	1,4-Dichloro-benzene	N-Nitroso-Di-N-propylamine
QC Batch#:	MS0501988270EXA	MS0501988270EXA	MS0501988270EXA	MS0501988270EXA
Analy. Method:	EPA 8270	EPA 8270	EPA 8270	EPA 8270
Prep. Method:	EPA 3510	EPA 3510	EPA 3510	EPA 3510
Analyst:	B. Pitamah	B. Pitamah	B. Pitamah	B. Pitamah
MS/MSD #:	BLK050198	BLK050198	BLK050198	BLK050198
Sample Conc.:	N.D.	N.D.	N.D.	N.D.
Prepared Date:	5/1/98	5/1/98	5/1/98	5/1/98
Analyzed Date:	5/4/98	5/4/98	5/4/98	5/4/98
Instrument I.D.#:	H5	H5	H5	H5
Conc. Spiked:	200 µg/L	200 µg/L	200 µg/L	200 µg/L
Result:	37	97	97	128
MS % Recovery:	19	49	49	64
Dup. Result:	45	107	102	133
MSD % Recov.:	23	54	51	67
RPD:	20	9.8	5.0	3.8
RPD Limit:	0-30	0-30	0-30	0-30

LCS #:	
Prepared Date:	
Analyzed Date:	
Instrument I.D.#:	
Conc. Spiked:	
LCS Result:	
LCS % Recov.:	

MS/MSD LCS Control Limits	12-110	27-123	36-97	41-116

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** MS = Matrix Spike, MSD = MS Duplicate, RPD = Relative % Difference

SEQUOIA ANALYTICAL

Mike Gregory
Project Manager

Sequoia Analytical

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1455 McDowell Blvd. North, Ste. D, Petaluma, CA 94954, (707) 792-1865, FAX (707) 792-0342

Gettler Ryan/Geostrategies	Client Project ID:	Unocal 4625	
6747 Sierra Court, Ste J	Matrix:	Liquid	
Dublin, CA 94568			
Attention: Clyde Galantine	Work Order #:	9804H48-01	Reported: May 18, 1998

QUALITY CONTROL DATA REPORT

Analyte:	1,2,4-Trichloro-benzene	4-Chloro-3-Methylphenol	Acenaphthene	4-Nitrophenol
QC Batch#:	MS0501988270EXA	MS0501988270EXA	MS0501988270EXA	MS0501988270EXA
Analy. Method:	EPA 8270	EPA 8270	EPA 8270	EPA 8270
Prep. Method:	EPA 3510	EPA 3510	EPA 3510	EPA 3510
Analyst:	B. Pitamah	B. Pitamah	B. Pitamah	B. Pitamah
MS/MSD #:	BLK050198	BLK050198	BLK050198	BLK050198
Sample Conc.:	N.D.	N.D.	N.D.	N.D.
Prepared Date:	5/1/98	5/1/98	5/1/98	5/1/98
Analyzed Date:	5/4/98	5/4/98	5/4/98	5/4/98
Instrument I.D.#:	H5	H5	H5	H5
Conc. Spiked:	200 µg/L	200 µg/L	200 µg/L	200 µg/L
Result:	126	113	134	41
MS % Recovery:	63	57	67	21
Dup. Result:	130	130	133	49
MSD % Recov.:	65	65	67	25
RPD:	3.1	14	0.75	18
RPD Limit:	0-30	0-30	0-30	0-30

LCS #:				
Prepared Date:				
Analyzed Date:				
Instrument I.D.#:				
Conc. Spiked:				
LCS Result:				
LCS % Recov.:				

MS/MSD LCS Control Limits	39-98	23-97	46-118	10-80

Please Note:
The LCS is a control sample of known, interferent-free matrix that is analyzed using the same reagents, preparation, and analytical methods employed for the samples. The matrix spike is an aliquot of sample fortified with known quantities of specific compounds and subjected to the entire analytical procedure. If the recovery of analytes from the matrix spike does not fall within specified control limits due to matrix interference, the LCS recovery is to be used to validate the batch.

** MS = Matrix Spike, MSD = MS Duplicate, RPD = Relative % Difference

SEQUOIA ANALYTICAL

Mike Gregory
Project Manager

Sequoia Analytical

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Gettler Ryan/Geostrategies	Client Project ID:	Unocal 4625	
6747 Sierra Court, Ste J	Matrix:	Liquid	
Dublin, CA 94568			
Attention: Clyde Galantine	Work Order #:	9804H48-01	Reported: May 18, 1998

QUALITY CONTROL DATA REPORT

Analyte:	2,4-Dinitro-toluene	Pentachloro-phenol	Pyrene
QC Batch#:	MS0501988270EXA	MS0501988270EXA	MS0501988270EXA
Analy. Method:	EPA 8270	EPA 8270	EPA 8270
Prep. Method:	EPA 3510	EPA 3510	EPA 3510
Analyst:	B. Pitamah	B. Pitamah	B. Pitamah
MS/MSD #:	BLK050198	BLK050198	BLK050198
Sample Conc.:	N.D.	N.D.	N.D.
Prepared Date:	5/1/98	5/1/98	5/1/98
Analyzed Date:	5/4/98	5/4/98	5/4/98
Instrument I.D.#:	H5	H5	H5
Conc. Spiked:	200 µg/L	200 µg/L	200 µg/L
Result:	147	157	169
MS % Recovery:	74	79	85
Dup. Result:	146	153	172
MSD % Recov.:	73	77	86
RPD:	0.68	2.6	1.8
RPD Limit:	0-30	0-30	0-30

LCS #:			
Prepared Date:			
Analyzed Date:			
Instrument I.D.#:			
Conc. Spiked:			
LCS Result:			
LCS % Recov.:			

MS/MSD LCS Control Limits	24-96	9-103	26-127

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** MS = Matrix Spike, MSD = MS Duplicate, RPD = Relative % Difference

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Gettler Ryan/Geostrategies
6747 Sierra Court, Ste J
Dublin, CA 94568
Attention: Clyde Galantine

Client Project ID: Unocal 4625
Matrix: Solid
Work Order #: 9804H48-01, 02, 06

Reported: May 18, 1998

QUALITY CONTROL DATA REPORT

Analyte:	Beryllium	Cadmium	Chromium	Nickel
QC Batch#:	ME0428986010MDB	ME0428986010MDB	ME0428986010MDB	ME0428986010MDB
Analy. Method:	EPA 6010	EPA 6010	EPA 6010	EPA 6010
Prep. Method:	EPA 3050	EPA 3050	EPA 3050	EPA 3050
Analyst:	S. LaBarron	S. LaBarron	S. LaBarron	S. LaBarron
MS/MSD #:	9804G9002	9804G9002	9804G9002	9804G9002
Sample Conc.:	N.D.	2.2	61	56
Prepared Date:	4/28/98	4/28/98	4/28/98	4/28/98
Analyzed Date:	4/29/98	4/29/98	4/29/98	4/29/98
Instrument I.D.#:	MTJA5	MTJA5	MTJA5	MTJA5
Conc. Spiked:	50 mg/Kg	50 mg/Kg	50 mg/Kg	50 mg/Kg
Result:	41	48	100	97
MS % Recovery:	82	92	78	82
Dup. Result:	40	46	95	97
MSD % Recov.:	80	88	68	82
RPD:	2.5	4.3	5.1	0.0
RPD Limit:	0-20	0-20	0-20	0-20
LCS #:	BLK042898	BLK042898	BLK042898	BLK042898
Prepared Date:	4/28/98	4/28/98	4/28/98	4/28/98
Analyzed Date:	4/29/98	4/29/98	4/29/98	4/29/98
Instrument I.D.#:	MTJA5	MTJA5	MTJA5	MTJA5
Conc. Spiked:	50 mg/Kg	50 mg/Kg	50 mg/Kg	50 mg/Kg
LCS Result:	51	50	52	51
LCS % Recov.:	102	100	104	102
MS/MSD Control Limits	80-120	80-120	80-120	80-120
LCS Control Limits	80-120	80-120	80-120	80-120

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** MS=Matrix Spike, MSD=MS Duplicate, RPD=Relative % Difference