Table 5
Laboratories and Test Methods

Laboratory	Test	Analysis Category	Purpose	Number of Samples
Zymax Forensic Geochemistry Lab	Hydrocarbon composition in water	Fingerprint Source	Needed to interpret Isotope work	15
Zymax Forensic Geochemistry Lab	Carbon and hydrogen isotope ratios of methane	Fingerprint Source	Determine methane source (coal, bacteria, natural gas)	15
Zymax Forensic Geochemistry Lab	C1-C5 hydrocarbons and fixed gas, production gases	Fingerprint Source	Fingerprint of production gas	15
Zymax Forensic Geochemistry Lab	C3-C10 hydrocarbon composition by GC/MS	Fingerprint Source	Fingerprint of dissolved gases	15
Zymax Forensic Geochemistry Lab	C10-C40 alkane analysis by GC/FID	Fingerprint Source	Fingerprint of dissolved gases	15
Zymax Forensic Geochemistry Lab	C3-C44 hydrocarbon composition.	Fingerprint Source/ Human Health	Fingerprint of liquid product	15
Energy Labs	8015 GRO/DRO	Fingerprint Source/ Human Health	Hydrocarbon analysis with lower reporting limits	43
Energy Labs	Bacteriological Testing - Heterotrophic Plate Counts (HPC), Iron Reducing Bacteria (IRB), and Sulphur Reducing Bacteria (SRB)	Bacterial	Iron and sulfur reducing bacteria presence	27
EPA Region 8 Lab	TOF specific analyte Testing	Fingerprint Source/ Human Health	Test for polar compounds	39
EPA Region 8 Lab	8260 Low-level VOC	Fingerprint Source/ Human Health	Non-polar compounds (low level)	41
EPA Region 8 Lab	8270 Low-level SVOC	Fingerprint Source/ Human Health	Non-polar compounds (low level)	39
EPA Region 8 Lab	RSK-175 Light Gases P, M, E, B	Fingerprint Source/ Human Health	Methane source (coal, bacteria, natural gas) all wells	34
EPA Region 8 Lab	Anions + Alkalinity	Aquifer Chemistry	Determine how wells and aquifers are interrelated	34
ALS Laboratory Group - EPA CLP Laboratory	CLP Volatiles	Standard Drinking Water Testing	Standard drinking water testing	41
ALS Laboratory Group - EPA CLP Laboratory	CLP Semi-Volatiles	Standard Drinking Water Testing	Standard drinking water testing	41
A4 Scientific - EPA CLP Laboratory	CLP Metals	Standard Drinking Water Testing	Standard drinking water testing	40
ALS Laboratory Group - EPA CLP Laboratory	CLP PCBs + Pesticides	Standard Drinking Water Testing	Standard drinking water testing	41

Table 6
Sample Locations and Analyses

Sample Location	Matrix	A4 Scientific CLP TAL Metals ICP-AES	A4 Scientific CLP TAL Total Metals/Hg ICP-MS and ICP/AES	A4 Scientific CLP TCL Semivolatiles and Pesticides/ PCBs	Datachem Laboratories CLP ICL Trace Volatiles	EPA Region 8 Lab SVOA/ MS-TOF / GRO/DRO	EPA Region 8 Lab VOCs	EPA Region 8 Lab VOC Light Gases	EPA Region 8 Alkalinity and Anions	Energy Labs Bacteria HPC/ IRB/ SRB	Energy Labs GRO/DRO	Zymax Geochemistry Forensics Testing
PGDW03	Water		XXXXXX	XXX								
PGDW04	Water		XXXXXX	XXXX								
PGDW05	Water		XXXXXX	XXX								
PGDW05D	Water		XXXXXX	X							XX	
PGDW10	Water		XXXXXX	XXX								
PGDW20	Water		XXXXXX	XXXX								
PGDW22	Water		XXXXXX	XXX								
PGDW23	Water		XXXXXX	XXXX								
PGDW25	Water		XXXXXX	XXX								
PGDW30	Water		XXXXXX	XXXX								
PGDW32	Water		XXXXXX	XXX								
PGDW39	Water		XXXXXX	XXX								
PGDW40	Water		XXXXXX	XXXX								
PGDW41	Water		XXXXXX	XXXX								
PGDW42	Water		XXXXXX	XXX								
PGDW43	Water		XXXXXX	XXXX								
PGDW44	Water		XXXXXX	XXXX								
PGDW45	Water		XXXXXX	XXX								
PGDW46	Water		XXXXXX	XXX								
PGDW47	Water		XXXXXX	XXX								
PGDW48	Water		XXXXXX	XXX								
PGDW49	Water		XXXXXX	XXX								
PGFB01	Water			XX								
PGMW01	Water		XXXXXX	XXX								
PGMW01D	Water		XXXXXX	XXX								
PGMW02	Water		XXXXXX	XXX								
PGMW03	Water		XXXXXX	XXX								
PGPP01	Product					XX						X
PGPP02	Product											X
PGPP03	Product											X
PGPP04	Product					XX						X
PGPP05	Product					XX						X
PGPP06	Product					XX						X
PGPW01	Municipal Water		XXXXXX	XXX								
PGPW02	Municipal Water		XXXXXX	XXX								
PGSE01	Sediment	X		XXX							X	
PGSE02	Sediment	X		XXX							X	
PGSE02d	Sediment	X		XXX							X	
PGSE03	Sediment	X		XXX							X	
PGSE04	Sediment	X		XXX							X	
PGSE05	Sediment	X		XXX							X	
PGSO01	Soil Boring					X					X	
PGSO02	Soil Boring					X					X	
PGSO03	Soil Boring					X					X	
PGSW01	Surface Water		XXXXXX								X	
PGSW02	Surface Water		XXXXXX								X	
PGSW02D	Surface Water		XXXXXX								X	
PGSW03	Surface Water		XXXXXX								X	
PGSW04	Surface Water		XXXXXX								X	
PGSW05	Surface Water		XXXXXX								X	
PGTB01	Water				XX							
PGFM20	Filter Sample					XX						

Table 7
Pavillion Groundwater Plume Investigation ESI Analytes

Analyte	CAS Number	Laboratory Name	Reporting Limit	Reporting Limit Units	Method
ALUMINUM	7429-90-5	A4 SCIENTIFIC	200	µg/L	CLP Metals - 200.7 (ICP-AES)
IRON	7439-89-6	A4 SCIENTIFIC	100	µg/L	CLP Metals - 200.7 (ICP-AES)
LEAD	7439-92-1	A4 SCIENTIFIC	10	µg/L	CLP Metals - 200.7 (ICP-AES)
MAGNESIUM	7439-95-4	A4 SCIENTIFIC	5000	µg/L	CLP Metals - 200.7 (ICP-AES)
MANGANESE	7439-96-5	A4 SCIENTIFIC	15	µg/L	CLP Metals - 200.7 (ICP-AES)
NICKEL	7440-02-0	A4 SCIENTIFIC	40	µg/L	CLP Metals - 200.7 (ICP-AES)
POTASSIUM	7440-09-7	A4 SCIENTIFIC	5000	µg/L	CLP Metals - 200.7 (ICP-AES)
SILVER	7440-22-4	A4 SCIENTIFIC	10	µg/L	CLP Metals - 200.7 (ICP-AES)
SODIUM	7440-23-5	A4 SCIENTIFIC	5000	µg/L	CLP Metals - 200.7 (ICP-AES)
THALLIUM	7440-28-0	A4 SCIENTIFIC	25	µg/L	CLP Metals - 200.7 (ICP-AES)
ANTIMONY	7440-36-0	A4 SCIENTIFIC	60	µg/L	CLP Metals - 200.7 (ICP-AES)
ARSENIC	7440-38-2	A4 SCIENTIFIC	10	µg/L	CLP Metals - 200.7 (ICP-AES)
BARIUM	7440-39-3	A4 SCIENTIFIC	200	µg/L	CLP Metals - 200.7 (ICP-AES)
BERYLLIUM	7440-41-7	A4 SCIENTIFIC	5	µg/L	CLP Metals - 200.7 (ICP-AES)
CADMIUM	7440-43-9	A4 SCIENTIFIC	5	µg/L	CLP Metals - 200.7 (ICP-AES)
CHROMIUM	7440-47-3	A4 SCIENTIFIC	10	µg/L	CLP Metals - 200.7 (ICP-AES)
COBALT	7440-48-4	A4 SCIENTIFIC	50	µg/L	CLP Metals - 200.7 (ICP-AES)
COPPER	7440-50-8	A4 SCIENTIFIC	25	µg/L	CLP Metals - 200.7 (ICP-AES)
VANADIUM	7440-62-2	A4 SCIENTIFIC	50	µg/L	CLP Metals - 200.7 (ICP-AES)
ZINC	7440-66-6	A4 SCIENTIFIC	60	µg/L	CLP Metals - 200.7 (ICP-AES)
CALCIUM	7440-70-2	A4 SCIENTIFIC	5000	µg/L	CLP Metals - 200.7 (ICP-AES)
SELENIUM	7782-49-2	A4 SCIENTIFIC	35	µg/L	CLP Metals - 200.7 (ICP-AES)
Aroclor-1260	11096-82-5	ALS	1	µg/L	CLP - Arochlors
Aroclor-1254	11097-69-1	ALS	1	µg/L	CLP - Arochlors
Aroclor-1268	11100-14-4	ALS	1	µg/L	CLP - Arochlors
Aroclor-1221	11104-28-2	ALS	1	µg/L	CLP - Arochlors
Aroclor-1232	11141-16-5	ALS	1	µg/L	CLP - Arochlors
Aroclor-1248	12672-29-6	ALS	1	µg/L	CLP - Arochlors
Aroclor-1016	12674-11-2	ALS	1	µg/L	CLP - Arochlors
Aroclor-1262	37324-23-5	ALS	1	µg/L	CLP - Arochlors
Aroclor-1242	53469-21-9	ALS	1	µg/L	CLP - Arochlors
Heptachlor epoxide	1024-57-3	ALS	0.05	µg/L	CLP - Pesticides
Endosulfan sulfate	1031-07-8	ALS	0.1	µg/L	CLP - Pesticides
Aldrin	309-00-2	ALS	0.05	µg/L	CLP - Pesticides
alpha-BHC	319-84-6	ALS	0.05	µg/L	CLP - Pesticides
beta-BHC	319-85-7	ALS	0.05	µg/L	CLP - Pesticides
delta-BHC	319-86-8	ALS	0.05	µg/L	CLP - Pesticides
Endosulfan II	33213-65-9	ALS	0.1	µg/L	CLP - Pesticides
4,4'-DDT	50-29-3	ALS	0.1	µg/L	CLP - Pesticides
alpha-Chlordane	5103-71-9	ALS	0.05	µg/L	CLP - Pesticides
gamma-Chlordane	5103-74-2	ALS	0.05	µg/L	CLP - Pesticides
Endrin ketone	53494-70-5	ALS	0.1	µg/L	CLP - Pesticides
gamma-BHC (Lindane)	58-89-9	ALS	0.05	µg/L	CLP - Pesticides
Dieldrin	60-57-1	ALS	0.1	µg/L	CLP - Pesticides

Table 7
Pavillion Groundwater Plume Investigation ESI Analytes

Analyte	CAS Number	Laboratory Name	Reporting Limit	Reporting Limit Units	Method
Endrin	72-20-8	ALS	0.1	µg/L	CLP - Pesticides
Methoxychlor	72-43-5	ALS	0.5	µg/L	CLP - Pesticides
4,4'-DDD	72-54-8	ALS	0.1	µg/L	CLP - Pesticides
4,4'-DDE	72-55-9	ALS	0.1	µg/L	CLP - Pesticides
Endrin aldehyde	7421-93-4	ALS	0.1	µg/L	CLP - Pesticides
Heptachlor	76-44-8	ALS	0.05	µg/L	CLP - Pesticides
Toxaphene	8001-35-2	ALS	5	µg/L	CLP - Pesticides
Endosulfan I	959-98-8	ALS	0.05	µg/L	CLP - Pesticides
4-Nitroaniline	100-01-6	ALS	10	µg/L	CLP - Semi-volatiles
4-Nitrophenol	100-02-7	ALS	10	µg/L	CLP - Semi-volatiles
Benzaldehyde	100-52-7	ALS	5	µg/L	CLP - Semi-volatiles
4-Bromophenyl-phenylether	101-55-3	ALS	5	µg/L	CLP - Semi-volatiles
Caprolactam	105-60-2	ALS	5	µg/L	CLP - Semi-volatiles
2,4-Dimethylphenol	105-67-9	ALS	5	µg/L	CLP - Semi-volatiles
4-Methylphenol	106-44-5	ALS	5	µg/L	CLP - Semi-volatiles
4-Chloroaniline	106-47-8	ALS	5	µg/L	CLP - Semi-volatiles
2,2'-Oxybis(1-chloropropane)	108-60-1	ALS	5	µg/L	CLP - Semi-volatiles
Phenol	108-95-2	ALS	5	µg/L	CLP - Semi-volatiles
Bis(2-chloroethyl)ether	111-44-4	ALS	5	µg/L	CLP - Semi-volatiles
Bis(2-chloroethoxy)methane	111-91-1	ALS	5	µg/L	CLP - Semi-volatiles
Bis(2-ethylhexyl)phthalate	117-81-7	ALS	5	µg/L	CLP - Semi-volatiles
Di-n-octylphthalate	117-84-0	ALS	5	µg/L	CLP - Semi-volatiles
Hexachlorobenzene	118-74-1	ALS	5	µg/L	CLP - Semi-volatiles
Anthracene	120-12-7	ALS	5	µg/L	CLP - Semi-volatiles
2,4-Dichlorophenol	120-83-2	ALS	5	µg/L	CLP - Semi-volatiles
2,4-Dinitrotoluene	121-14-2	ALS	5	µg/L	CLP - Semi-volatiles
Pyrene	129-00-0	ALS	5	µg/L	CLP - Semi-volatiles
Dimethylphthalate	131-11-3	ALS	5	µg/L	CLP - Semi-volatiles
Dibenzofuran	132-64-9	ALS	5	µg/L	CLP - Semi-volatiles
Atrazine	1912-24-9	ALS	5	µg/L	CLP - Semi-volatiles
Benzo(g,h,i)perylene	191-24-2	ALS	5	µg/L	CLP - Semi-volatiles
Indeno(1,2,3-cd)pyrene	193-39-5	ALS	5	µg/L	CLP - Semi-volatiles
Benzo(b)fluoranthene	205-99-2	ALS	5	µg/L	CLP - Semi-volatiles
Fluoranthene	206-44-0	ALS	5	µg/L	CLP - Semi-volatiles
Benzo(k)fluoranthene	207-08-9	ALS	5	µg/L	CLP - Semi-volatiles
Acenaphthylene	208-96-8	ALS	5	µg/L	CLP - Semi-volatiles
Chrysene	218-01-9	ALS	5	µg/L	CLP - Semi-volatiles
Benzo(a)pyrene	50-32-8	ALS	5	µg/L	CLP - Semi-volatiles
2,4-Dinitrophenol	51-28-5	ALS	10	µg/L	CLP - Semi-volatiles
4,6-Dinitro-2-methylphenol	534-52-1	ALS	10	µg/L	CLP - Semi-volatiles
Dibenzo(a,h)anthracene	53-70-3	ALS	5	µg/L	CLP - Semi-volatiles
Benzo(a)anthracene	56-55-3	ALS	5	µg/L	CLP - Semi-volatiles
2,3,4,6-Tetrachlorophenol	58-90-2	ALS	5	µg/L	CLP - Semi-volatiles
4-Chloro-3-methylphenol	59-50-7	ALS	5	µg/L	CLP - Semi-volatiles

Table 7
Pavillion Groundwater Plume Investigation ESI Analytes

Analyte	CAS Number	Laboratory Name	Reporting Limit	Reporting Limit Units	Method
2,6-Dinitrotoluene	606-20-2	ALS	5	µg/L	CLP - Semi-volatiles
N-Nitroso-di-n-propylamine	621-64-7	ALS	5	µg/L	CLP - Semi-volatiles
Hexachloroethane	67-72-1	ALS	5	µg/L	CLP - Semi-volatiles
4-Chlorophenyl-phenylether	7005-72-3	ALS	5	µg/L	CLP - Semi-volatiles
Hexachlorocyclopentadiene	77-47-4	ALS	5	µg/L	CLP - Semi-volatiles
Isophorone	78-59-1	ALS	5	µg/L	CLP - Semi-volatiles
Acenaphthene	83-32-9	ALS	5	µg/L	CLP - Semi-volatiles
Diethylphthalate	84-66-2	ALS	5	µg/L	CLP - Semi-volatiles
Di-n-butylphthalate	84-74-2	ALS	5	µg/L	CLP - Semi-volatiles
Phenanthrene	85-01-8	ALS	5	µg/L	CLP - Semi-volatiles
Butylbenzylphthalate	85-68-7	ALS	5	µg/L	CLP - Semi-volatiles
N-Nitrosodiphenylamine	86-30-6	ALS	5	µg/L	CLP - Semi-volatiles
Fluorene	86-73-7	ALS	5	µg/L	CLP - Semi-volatiles
Carbazole	86-74-8	ALS	5	µg/L	CLP - Semi-volatiles
Hexachlorobutadiene	87-68-3	ALS	5	µg/L	CLP - Semi-volatiles
Pentachlorophenol	87-86-5	ALS	10	µg/L	CLP - Semi-volatiles
2,4,6-Trichlorophenol	88-06-2	ALS	5	µg/L	CLP - Semi-volatiles
2-Nitroaniline	88-74-4	ALS	10	µg/L	CLP - Semi-volatiles
2-Nitrophenol	88-75-5	ALS	5	µg/L	CLP - Semi-volatiles
Naphthalene	91-20-3	ALS	5	µg/L	CLP - Semi-volatiles
2-Methylnaphthalene	91-57-6	ALS	5	µg/L	CLP - Semi-volatiles
2-Chloronaphthalene	91-58-7	ALS	5	µg/L	CLP - Semi-volatiles
3,3'-Dichlorobenzidine	91-94-1	ALS	5	µg/L	CLP - Semi-volatiles
1,1'-Biphenyl	92-52-4	ALS	5	µg/L	CLP - Semi-volatiles
2-Methylphenol	95-48-7	ALS	5	µg/L	CLP - Semi-volatiles
2-Chlorophenol	95-57-8	ALS	5	µg/L	CLP - Semi-volatiles
1,2,4,5-Tetrachlorobenzene	95-94-3	ALS	5	µg/L	CLP - Semi-volatiles
2,4,5-Trichlorophenol	95-95-4	ALS	5	µg/L	CLP - Semi-volatiles
Acetophenone	98-86-2	ALS	5	µg/L	CLP - Semi-volatiles
Nitrobenzene	98-95-3	ALS	5	µg/L	CLP - Semi-volatiles
3-Nitroaniline	99-09-2	ALS	10	µg/L	CLP - Semi-volatiles
MERCURY	7439-97-6	A4 SCIENTIFIC	0.2	µg/L	CLP - Mercury (Cold Vapor)
IRON	7439-89-6	A4 SCIENTIFIC	100	µg/L	CLP Metals - 200.8 (ICP-MS)
LEAD	7439-92-1	A4 SCIENTIFIC	1	µg/L	CLP Metals - 200.8 (ICP-MS)
MANGANESE	7439-96-5	A4 SCIENTIFIC	1	µg/L	CLP Metals - 200.8 (ICP-MS)
NICKEL	7440-02-0	A4 SCIENTIFIC	1	µg/L	CLP Metals - 200.8 (ICP-MS)
SILVER	7440-22-4	A4 SCIENTIFIC	1	µg/L	CLP Metals - 200.8 (ICP-MS)
THALLIUM	7440-28-0	A4 SCIENTIFIC	1	µg/L	CLP Metals - 200.8 (ICP-MS)
ANTIMONY	7440-36-0	A4 SCIENTIFIC	2	µg/L	CLP Metals - 200.8 (ICP-MS)
ARSENIC	7440-38-2	A4 SCIENTIFIC	1	µg/L	CLP Metals - 200.8 (ICP-MS)
BARIUM	7440-39-3	A4 SCIENTIFIC	10	µg/L	CLP Metals - 200.8 (ICP-MS)
BERYLLIUM	7440-41-7	A4 SCIENTIFIC	1	µg/L	CLP Metals - 200.8 (ICP-MS)
CADMIUM	7440-43-9	A4 SCIENTIFIC	1	µg/L	CLP Metals - 200.8 (ICP-MS)
CHROMIUM	7440-47-3	A4 SCIENTIFIC	2	µg/L	CLP Metals - 200.8 (ICP-MS)

Table 7
Pavillion Groundwater Plume Investigation ESI Analytes

Analyte	CAS Number	Laboratory Name	Reporting Limit	Reporting Limit Units	Method
COBALT	7440-48-4	A4 SCIENTIFIC	1	µg/L	CLP Metals - 200.8 (ICP-MS)
COPPER	7440-50-8	A4 SCIENTIFIC	2	µg/L	CLP Metals - 200.8 (ICP-MS)
VANADIUM	7440-62-2	A4 SCIENTIFIC	5	µg/L	CLP Metals - 200.8 (ICP-MS)
ZINC	7440-66-6	A4 SCIENTIFIC	2	µg/L	CLP Metals - 200.8 (ICP-MS)
SELENIUM	7782-49-2	A4 SCIENTIFIC	5	µg/L	CLP Metals - 200.8 (ICP-MS)
Ethylbenzene	100-41-4	ALS	0.5	µg/L	CLP - Volatiles
Styrene	100-42-5	ALS	0.5	µg/L	CLP - Volatiles
cis-1,3-Dichloropropene	10061-01-5	ALS	0.5	µg/L	CLP - Volatiles
trans-1,3-Dichloropropene	10061-02-6	ALS	0.5	µg/L	CLP - Volatiles
1,4-Dichlorobenzene	106-46-7	ALS	0.5	µg/L	CLP - Volatiles
1,2-Dibromoethane	106-93-4	ALS	0.5	µg/L	CLP - Volatiles
1,2-Dichloroethane	107-06-2	ALS	0.5	µg/L	CLP - Volatiles
4-Methyl-2-Pentanone	108-10-1	ALS	5	µg/L	CLP - Volatiles
Methylcyclohexane	108-87-2	ALS	0.5	µg/L	CLP - Volatiles
Toluene	108-88-3	ALS	0.5	µg/L	CLP - Volatiles
Chlorobenzene	108-90-7	ALS	0.5	µg/L	CLP - Volatiles
Cyclohexane	110-82-7	ALS	0.5	µg/L	CLP - Volatiles
1,2,4-Trichlorobenzene	120-82-1	ALS	0.5	µg/L	CLP - Volatiles
Dibromochloromethane	124-48-1	ALS	0.5	µg/L	CLP - Volatiles
Tetrachloroethene	127-18-4	ALS	0.5	µg/L	CLP - Volatiles
cis-1,2-Dichloroethene	156-59-2	ALS	0.5	µg/L	CLP - Volatiles
trans-1,2-Dichloroethene	156-60-5	ALS	0.5	µg/L	CLP - Volatiles
Methyl tert-butyl ether	1634-04-4	ALS	0.5	µg/L	CLP - Volatiles
m,p-Xylene	179601-23-1	ALS	0.5	µg/L	CLP - Volatiles
1,3-Dichlorobenzene	541-73-1	ALS	0.5	µg/L	CLP - Volatiles
Carbon tetrachloride	56-23-5	ALS	0.5	µg/L	CLP - Volatiles
2-Hexanone	591-78-6	ALS	5	µg/L	CLP - Volatiles
Acetone	67-64-1	ALS	5	µg/L	CLP - Volatiles
Chloroform	67-66-3	ALS	0.5	µg/L	CLP - Volatiles
Benzene	71-43-2	ALS	0.5	µg/L	CLP - Volatiles
1,1,1-Trichloroethane	71-55-6	ALS	0.5	µg/L	CLP - Volatiles
Bromomethane	74-83-9	ALS	0.5	µg/L	CLP - Volatiles
Chloromethane	74-87-3	ALS	0.5	µg/L	CLP - Volatiles
Bromochloromethane	74-97-5	ALS	0.5	µg/L	CLP - Volatiles
Chloroethane	75-00-3	ALS	0.5	µg/L	CLP - Volatiles
Vinyl chloride	75-01-4	ALS	0.5	µg/L	CLP - Volatiles
Methylene chloride	75-09-2	ALS	0.5	µg/L	CLP - Volatiles
Carbon disulfide	75-15-0	ALS	0.5	µg/L	CLP - Volatiles
Bromoform	75-25-2	ALS	0.5	µg/L	CLP - Volatiles
Bromodichloromethane	75-27-4	ALS	0.5	µg/L	CLP - Volatiles
1,1-Dichloroethane	75-34-3	ALS	0.5	µg/L	CLP - Volatiles
1,1-Dichloroethene	75-35-4	ALS	0.5	µg/L	CLP - Volatiles
Trichlorofluoromethane	75-69-4	ALS	0.5	µg/L	CLP - Volatiles
Dichlorodifluoromethane	75-71-8	ALS	0.5	µg/L	CLP - Volatiles

Table 7
Pavillion Groundwater Plume Investigation ESI Analytes

Analyte	CAS Number	Laboratory Name	Reporting Limit	Reporting Limit Units	Method
1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	ALS	0.5	µg/L	CLP - Volatiles
1,2-Dichloropropane	78-87-5	ALS	0.5	µg/L	CLP - Volatiles
2-Butanone	78-93-3	ALS	5	µg/L	CLP - Volatiles
1,1,2-Trichloroethane	79-00-5	ALS	0.5	µg/L	CLP - Volatiles
Trichloroethene	79-01-6	ALS	0.5	µg/L	CLP - Volatiles
Methyl acetate	79-20-9	ALS	0.5	µg/L	CLP - Volatiles
1,1,2,2-Tetrachloroethane	79-34-5	ALS	0.5	µg/L	CLP - Volatiles
1,2,3-Trichlorobenzene	87-61-6	ALS	0.5	µg/L	CLP - Volatiles
o-Xylene	95-47-6	ALS	0.5	µg/L	CLP - Volatiles
1,2-Dichlorobenzene	95-50-1	ALS	0.5	µg/L	CLP - Volatiles
1,2-Dibromo-3-chloropropane	96-12-8	ALS	0.5	µg/L	CLP - Volatiles
Isopropylbenzene	98-82-8	ALS	0.5	µg/L	CLP - Volatiles
Heterotrophic Plate count	NA	Energy Laboratories	2	MFN/mL	Microbiological - SM 9215
Iron Reducing Bacteria	NA	Energy Laboratories	100	CPU/mL	Microbiological - IRB BART
Sulfur Reducing Bacteria	NA	Energy Laboratories	Present/ Absen	CPU/mL	Microbiological - SRB BART
Total Purgeable Hydrocarbons	NA	Energy Laboratories	20	ug/L	SW-846 8015B
Total Extractable Hydrocarbons	NA	Energy Laboratories	0.31	mg/L	SW-846 8015B
1,2,4-Trichlorobenzene	120-82-1	EPA R8 Laboratory	0.5	µg/L	EPA 8270D
1,2-Dichlorobenzene	95-50-1	EPA R8 Laboratory	0.5	µg/L	EPA 8270D
1,3-Dichlorobenzene	541-73-1	EPA R8 Laboratory	0.5	µg/L	EPA 8270D
1,4-Dichlorobenzene	106-46-7	EPA R8 Laboratory	0.5	µg/L	EPA 8270D
2,4,5-Trichlorophenol	95-95-4	EPA R8 Laboratory	0.5	µg/L	EPA 8270D
2,4,6-Trichlorophenol	88-06-2	EPA R8 Laboratory	0.5	µg/L	EPA 8270D
2,4-Dichlorophenol	120-83-2	EPA R8 Laboratory	0.5	µg/L	EPA 8270D
2,4-Dimethylphenol	105-67-9	EPA R8 Laboratory	0.5	µg/L	EPA 8270D
2,4-Dinitrophenol	51-28-5	EPA R8 Laboratory	5	µg/L	EPA 8270D
2,4-Dinitrotoluene	121-14-2	EPA R8 Laboratory	5	µg/L	EPA 8270D
2,6-Dinitrotoluene	606-20-2	EPA R8 Laboratory	0.5	µg/L	EPA 8270D
2-Chloronaphthalene	91-58-7	EPA R8 Laboratory	0.5	µg/L	EPA 8270D
2-Chlorophenol	95-57-8	EPA R8 Laboratory	0.5	µg/L	EPA 8270D
2-Methylnaphthalene	91-57-6	EPA R8 Laboratory	0.5	µg/L	EPA 8270D
2-Methylphenol	95-48-7	EPA R8 Laboratory	0.5	µg/L	EPA 8270D
2-Nitroaniline	88-74-4	EPA R8 Laboratory	0.5	µg/L	EPA 8270D
2-Nitrophenol	88-75-5	EPA R8 Laboratory	0.5	µg/L	EPA 8270D
3 & 4-Methylphenol	106-44-5	EPA R8 Laboratory	0.5	µg/L	EPA 8270D
3-Nitroaniline	99-09-2	EPA R8 Laboratory	0.5	µg/L	EPA 8270D
4,6-Dinitro-2-methylphenol	534-52-1	EPA R8 Laboratory	5	µg/L	EPA 8270D
4-Bromophenyl phenyl ether	101-55-3	EPA R8 Laboratory	0.5	µg/L	EPA 8270D
4-Chloro-3-methylphenol	59-50-7	EPA R8 Laboratory	0.5	µg/L	EPA 8270D
4-Chloroaniline	106-47-8	EPA R8 Laboratory	0.5	µg/L	EPA 8270D
4-Chlorophenyl phenyl ether	7005-72-3	EPA R8 Laboratory	0.5	µg/L	EPA 8270D
4-Nitroaniline	100-01-6	EPA R8 Laboratory	0.5	µg/L	EPA 8270D
4-Nitrophenol	100-02-7	EPA R8 Laboratory	5	µg/L	EPA 8270D
Acenaphthene	83-32-9	EPA R8 Laboratory	0.5	µg/L	EPA 8270D

Table 7
Pavillion Groundwater Plume Investigation ESI Analytes

Analyte	CAS Number	Laboratory Name	Reporting Limit	Reporting Limit Units	Method
Acenaphthylene	208-96-8	EPA R8 Laboratory	0.5	µg/L	EPA 8270D
Anthracene	120-12-7	EPA R8 Laboratory	0.5	µg/L	EPA 8270D
Azobenzene	103-33-3	EPA R8 Laboratory	0.5	µg/L	EPA 8270D
Benzo (a) anthracene	56-55-3	EPA R8 Laboratory	0.5	µg/L	EPA 8270D
Benzo (a) pyrene	50-32-8	EPA R8 Laboratory	0.5	µg/L	EPA 8270D
Benzo (g,h,i) perylene	191-24-2	EPA R8 Laboratory	0.5	µg/L	EPA 8270D
Benzo (k) fluoranthene	207-08-9	EPA R8 Laboratory	0.5	µg/L	EPA 8270D
Benzo(b)fluoranthene	205-99-2	EPA R8 Laboratory	0.5	µg/L	EPA 8270D
Bis(2-chloroethoxy)methane	111-91-1	EPA R8 Laboratory	0.5	µg/L	EPA 8270D
Bis(2-chloroethyl)ether	111-44-4	EPA R8 Laboratory	0.5	µg/L	EPA 8270D
Bis(2-chloroisopropyl)ether	39638-32-9	EPA R8 Laboratory	0.5	µg/L	EPA 8270D
Bis(2-ethylhexyl)phthalate	117-81-7	EPA R8 Laboratory	0.5	µg/L	EPA 8270D
Butyl benzyl phthalate	85-68-7	EPA R8 Laboratory	0.5	µg/L	EPA 8270D
Carbazole	86-74-8	EPA R8 Laboratory	0.5	µg/L	EPA 8270D
Chrysene	218-01-9	EPA R8 Laboratory	0.5	µg/L	EPA 8270D
Dibenz (a,h) anthracene	53-70-3	EPA R8 Laboratory	0.5	µg/L	EPA 8270D
Dibenzofuran	132-64-9	EPA R8 Laboratory	0.5	µg/L	EPA 8270D
Diethyl phthalate	84-66-2	EPA R8 Laboratory	0.5	µg/L	EPA 8270D
Dimethyl phthalate	131-11-3	EPA R8 Laboratory	0.5	µg/L	EPA 8270D
Di-n-butyl phthalate	84-74-2	EPA R8 Laboratory	0.5	µg/L	EPA 8270D
Di-n-octyl phthalate	117-84-0	EPA R8 Laboratory	0.5	µg/L	EPA 8270D
Fluoranthene	206-44-0	EPA R8 Laboratory	0.5	µg/L	EPA 8270D
Fluorene	86-73-7	EPA R8 Laboratory	0.5	µg/L	EPA 8270D
Hexachlorobenzene	118-74-1	EPA R8 Laboratory	0.5	µg/L	EPA 8270D
Hexachlorobutadiene	87-68-3	EPA R8 Laboratory	0.5	µg/L	EPA 8270D
Hexachlorocyclopentadiene	77-47-4	EPA R8 Laboratory	0.5	µg/L	EPA 8270D
Hexachloroethane	67-72-1	EPA R8 Laboratory	0.5	µg/L	EPA 8270D
Indeno (1,2,3-cd) pyrene	193-39-5	EPA R8 Laboratory	0.5	µg/L	EPA 8270D
Isophorone	78-59-1	EPA R8 Laboratory	0.5	µg/L	EPA 8270D
Naphthalene	91-20-3	EPA R8 Laboratory	0.5	µg/L	EPA 8270D
Nitrobenzene	98-95-3	EPA R8 Laboratory	0.5	µg/L	EPA 8270D
N-Nitrosodi-n-propylamine	621-64-7	EPA R8 Laboratory	0.5	µg/L	EPA 8270D
Pentachlorophenol	87-86-5	EPA R8 Laboratory	0.5	µg/L	EPA 8270D
Phenanthrene	85-01-8	EPA R8 Laboratory	0.5	µg/L	EPA 8270D
Phenol	108-95-2	EPA R8 Laboratory	0.5	µg/L	EPA 8270D
Pyrene	129-00-0	EPA R8 Laboratory	0.5	µg/L	EPA 8270D
(R)-(+)-Limonene	5989-27-5	EPA R8 Laboratory	0.2	µg/L	EPA 8270D
1,3-Dimethyl adamantane	702-79-4	EPA R8 Laboratory	0.2	µg/L	EPA 8270D
2-Butoxyethanol	111-76-2	EPA R8 Laboratory	0.25	µg/L	EPA 8270D
Tris (2-butoxyethyl) phosphate	78-51-3	EPA R8 Laboratory	0.3	µg/L	EPA 8270D
Adamantane	281-23-2	EPA R8 Laboratory	0.2	µg/L	EPA 8270D
Terpiniol	8000-41-7	EPA R8 Laboratory	0.2	µg/L	EPA 8270D
Alkalinity	NA	EPA R8 Laboratory	5.0	µg/L	EPA 310.1
Chloride	16887-00-6	EPA R8 Laboratory	0.5	µg/L	EPA 300.0

Table 7
Pavillion Groundwater Plume Investigation ESI Analytes

Analyte	CAS Number	Laboratory Name	Reporting Limit	Reporting Limit Units	Method
Fluoride	16984-48-8	EPA R8 Laboratory	0.2	µg/L	EPA 300.0
Nitrate as N	NA	EPA R8 Laboratory	0.5	µg/L	EPA 300.0
Nitrite as N	NA	EPA R8 Laboratory	0.5	µg/L	EPA 300.0
Sulfate as SO4	148-08-798	EPA R8 Laboratory	5.0	µg/L	EPA 300.0
Ammonia	148-08-798	EPA R8 Laboratory	5.0	µg/L	EPA 300.0
Total Phosphorus	148-08-798	EPA R8 Laboratory	5.0	µg/L	EPA 300.0
Methane	74-82-8	EPA R8 Laboratory	5.0	µg/L	EPA 524.2
Pentane	74-82-8	EPA R8 Laboratory	5.0	µg/L	EPA 524.2
Butane	NA	EPA R8 Laboratory	5.0	µg/L	EPA 524.2
MS/TOF Scan	NA	EPA R8 Laboratory	TBD	µg/L	MS/ TOF
Isobutane	NA	Zymax Forensics	1.0	µg/L	C3-C10 Hydrocarbons by GC/MS
Isobutene	NA	Zymax Forensics	1.0	µg/L	C3-C10 Hydrocarbons by GC/MS
Butane	NA	Zymax Forensics	1.0	µg/L	C3-C10 Hydrocarbons by GC/MS
3-Methyl-1-butene	NA	Zymax Forensics	1.0	µg/L	C3-C10 Hydrocarbons by GC/MS
Isopentane	NA	Zymax Forensics	1.0	µg/L	C3-C10 Hydrocarbons by GC/MS
1-Pentene	NA	Zymax Forensics	1.0	µg/L	C3-C10 Hydrocarbons by GC/MS
2-Methyl-1-butene	NA	Zymax Forensics	1.0	µg/L	C3-C10 Hydrocarbons by GC/MS
Pentane	NA	Zymax Forensics	1.0	µg/L	C3-C10 Hydrocarbons by GC/MS
trans-2-Pentene	NA	Zymax Forensics	1.0	µg/L	C3-C10 Hydrocarbons by GC/MS
cis-2-Pentene	NA	Zymax Forensics	1.0	µg/L	C3-C10 Hydrocarbons by GC/MS
2-Methyl-2-butene	NA	Zymax Forensics	1.0	µg/L	C3-C10 Hydrocarbons by GC/MS
2,2-Dimethylbutane	NA	Zymax Forensics	1.0	µg/L	C3-C10 Hydrocarbons by GC/MS
Cyclopentene	NA	Zymax Forensics	1.0	µg/L	C3-C10 Hydrocarbons by GC/MS
4-Methyl-1-pentene	NA	Zymax Forensics	1.0	µg/L	C3-C10 Hydrocarbons by GC/MS
Cyclopentane	NA	Zymax Forensics	1.0	µg/L	C3-C10 Hydrocarbons by GC/MS
2,3-Dimethylbutane	NA	Zymax Forensics	1.0	µg/L	C3-C10 Hydrocarbons by GC/MS
2-Methylpentane	NA	Zymax Forensics	1.0	µg/L	C3-C10 Hydrocarbons by GC/MS
3-Methylpentane	NA	Zymax Forensics	1.0	µg/L	C3-C10 Hydrocarbons by GC/MS
Hexane	NA	Zymax Forensics	1.0	µg/L	C3-C10 Hydrocarbons by GC/MS
trans-2-Hexene	NA	Zymax Forensics	1.0	µg/L	C3-C10 Hydrocarbons by GC/MS
2-Methyl-2-pentene	NA	Zymax Forensics	1.0	µg/L	C3-C10 Hydrocarbons by GC/MS
3-Methylcyclopentene	NA	Zymax Forensics	1.0	µg/L	C3-C10 Hydrocarbons by GC/MS
3-Methyl-2-pentene	NA	Zymax Forensics	1.0	µg/L	C3-C10 Hydrocarbons by GC/MS
cis-2-Hexene	NA	Zymax Forensics	1.0	µg/L	C3-C10 Hydrocarbons by GC/MS
2,2-Dimethylpentane	NA	Zymax Forensics	1.0	µg/L	C3-C10 Hydrocarbons by GC/MS
1,2-Dichloroethane (EDC)	NA	Zymax Forensics	1.0	µg/L	C3-C10 Hydrocarbons by GC/MS
Methylcyclopentane	NA	Zymax Forensics	1.0	µg/L	C3-C10 Hydrocarbons by GC/MS
2,4-Dimethylpentane	NA	Zymax Forensics	1.0	µg/L	C3-C10 Hydrocarbons by GC/MS
1-Methylcyclopentene	NA	Zymax Forensics	1.0	µg/L	C3-C10 Hydrocarbons by GC/MS
Benzene	NA	Zymax Forensics	1.0	µg/L	C3-C10 Hydrocarbons by GC/MS
5-Methyl-1-hexene	NA	Zymax Forensics	1.0	µg/L	C3-C10 Hydrocarbons by GC/MS
4,4-Dimethyl-2-pentene	NA	Zymax Forensics	1.0	µg/L	C3-C10 Hydrocarbons by GC/MS
3,3-Dimethylpentane	NA	Zymax Forensics	1.0	µg/L	C3-C10 Hydrocarbons by GC/MS
Thiophene	NA	Zymax Forensics	1.0	µg/L	C3-C10 Hydrocarbons by GC/MS

Table 7
Pavillion Groundwater Plume Investigation ESI Analytes

Analyte	CAS Number	Laboratory Name	Reporting Limit	Reporting Limit Units	Method
Cyclohexane	NA	Zymax Forensics	1.0	µg/L	C3-C10 Hydrocarbons by GC/MS
2-Methylhexane	NA	Zymax Forensics	1.0	µg/L	C3-C10 Hydrocarbons by GC/MS
2,3-Dimethylpentane	NA	Zymax Forensics	1.0	µg/L	C3-C10 Hydrocarbons by GC/MS
3-Methylhexane	NA	Zymax Forensics	1.0	µg/L	C3-C10 Hydrocarbons by GC/MS
trans-1,3-Dimethylcyclopentane	NA	Zymax Forensics	1.0	µg/L	C3-C10 Hydrocarbons by GC/MS
cis-1,3-Dimethylcyclopentane	NA	Zymax Forensics	1.0	µg/L	C3-C10 Hydrocarbons by GC/MS
2-Methyl-1-hexene	NA	Zymax Forensics	1.0	µg/L	C3-C10 Hydrocarbons by GC/MS
1,2-Dimethylcyclopentane	NA	Zymax Forensics	1.0	µg/L	C3-C10 Hydrocarbons by GC/MS
2,2,4-Trimethylpentane	NA	Zymax Forensics	1.0	µg/L	C3-C10 Hydrocarbons by GC/MS
Heptane	NA	Zymax Forensics	1.0	µg/L	C3-C10 Hydrocarbons by GC/MS
trans-2-Heptene	NA	Zymax Forensics	1.0	µg/L	C3-C10 Hydrocarbons by GC/MS
Methylcyclohexane	NA	Zymax Forensics	1.0	µg/L	C3-C10 Hydrocarbons by GC/MS
2,5-Dimethylhexane	NA	Zymax Forensics	1.0	µg/L	C3-C10 Hydrocarbons by GC/MS
2,4-Dimethylhexane	NA	Zymax Forensics	1.0	µg/L	C3-C10 Hydrocarbons by GC/MS
2,3,4-Trimethylpentane	NA	Zymax Forensics	1.0	µg/L	C3-C10 Hydrocarbons by GC/MS
2,3-Dimethylhexane	NA	Zymax Forensics	1.0	µg/L	C3-C10 Hydrocarbons by GC/MS
1,2-Dibromoethane (EDB)	NA	Zymax Forensics	1.0	µg/L	C3-C10 Hydrocarbons by GC/MS
2-Methylheptane	NA	Zymax Forensics	1.0	µg/L	C3-C10 Hydrocarbons by GC/MS
4-Methylheptane	NA	Zymax Forensics	1.0	µg/L	C3-C10 Hydrocarbons by GC/MS
Toluene	NA	Zymax Forensics	1.0	µg/L	C3-C10 Hydrocarbons by GC/MS
2,3,3-Trimethylpentane	NA	Zymax Forensics	1.0	µg/L	C3-C10 Hydrocarbons by GC/MS
3,4-Dimethylhexane	NA	Zymax Forensics	1.0	µg/L	C3-C10 Hydrocarbons by GC/MS
2-Methylthiophene	NA	Zymax Forensics	1.0	µg/L	C3-C10 Hydrocarbons by GC/MS
3-Ethyl-3-methylpentane	NA	Zymax Forensics	1.0	µg/L	C3-C10 Hydrocarbons by GC/MS
3-Methylthiophene	NA	Zymax Forensics	1.0	µg/L	C3-C10 Hydrocarbons by GC/MS
3-Methylheptane	NA	Zymax Forensics	1.0	µg/L	C3-C10 Hydrocarbons by GC/MS
trans-1,4-Dimethylcyclohexane	NA	Zymax Forensics	1.0	µg/L	C3-C10 Hydrocarbons by GC/MS
2-Methyl-1-heptene	NA	Zymax Forensics	1.0	µg/L	C3-C10 Hydrocarbons by GC/MS
trans-1,2-Dimethylcyclohexane	NA	Zymax Forensics	1.0	µg/L	C3-C10 Hydrocarbons by GC/MS
1-Octene	NA	Zymax Forensics	1.0	µg/L	C3-C10 Hydrocarbons by GC/MS
Octane	NA	Zymax Forensics	1.0	µg/L	C3-C10 Hydrocarbons by GC/MS
2,2-Dimethylheptane	NA	Zymax Forensics	1.0	µg/L	C3-C10 Hydrocarbons by GC/MS
2,4,4-Trimethylhexane	NA	Zymax Forensics	1.0	µg/L	C3-C10 Hydrocarbons by GC/MS
2,4-Dimethylheptane	NA	Zymax Forensics	1.0	µg/L	C3-C10 Hydrocarbons by GC/MS
2,6-Dimethylheptane	NA	Zymax Forensics	1.0	µg/L	C3-C10 Hydrocarbons by GC/MS
Ethylcyclohexane	NA	Zymax Forensics	1.0	µg/L	C3-C10 Hydrocarbons by GC/MS
2,5-Dimethylheptane	NA	Zymax Forensics	1.0	µg/L	C3-C10 Hydrocarbons by GC/MS
Ethylbenzene	NA	Zymax Forensics	1.0	µg/L	C3-C10 Hydrocarbons by GC/MS
2-Ethylthiophene	NA	Zymax Forensics	1.0	µg/L	C3-C10 Hydrocarbons by GC/MS
m,p-Xylenes	NA	Zymax Forensics	1.0	µg/L	C3-C10 Hydrocarbons by GC/MS
3-Ethylheptane	NA	Zymax Forensics	1.0	µg/L	C3-C10 Hydrocarbons by GC/MS
3-Methyloctane	NA	Zymax Forensics	1.0	µg/L	C3-C10 Hydrocarbons by GC/MS
2,3-Dimethylheptane	NA	Zymax Forensics	1.0	µg/L	C3-C10 Hydrocarbons by GC/MS
4-Methyloctane	NA	Zymax Forensics	1.0	µg/L	C3-C10 Hydrocarbons by GC/MS

Table 7
Pavillion Groundwater Plume Investigation ESI Analytes

Analyte	CAS Number	Laboratory Name	Reporting Limit	Reporting Limit Units	Method
1,2,4-Trimethylcyclohexane	NA	Zymax Forensics	1.0	µg/L	C3-C10 Hydrocarbons by GC/MS
Styrene	NA	Zymax Forensics	1.0	µg/L	C3-C10 Hydrocarbons by GC/MS
2-Methyloctane	NA	Zymax Forensics	1.0	µg/L	C3-C10 Hydrocarbons by GC/MS
1,1,2-Trimethylcyclohexane	NA	Zymax Forensics	1.0	µg/L	C3-C10 Hydrocarbons by GC/MS
o-Xylene	NA	Zymax Forensics	1.0	µg/L	C3-C10 Hydrocarbons by GC/MS
1-Nonene	NA	Zymax Forensics	1.0	µg/L	C3-C10 Hydrocarbons by GC/MS
Nonane	NA	Zymax Forensics	1.0	µg/L	C3-C10 Hydrocarbons by GC/MS
3,3,5-Trimethylheptane	NA	Zymax Forensics	1.0	µg/L	C3-C10 Hydrocarbons by GC/MS
Isopropylbenzene	NA	Zymax Forensics	1.0	µg/L	C3-C10 Hydrocarbons by GC/MS
Isopropylcyclohexane	NA	Zymax Forensics	1.0	µg/L	C3-C10 Hydrocarbons by GC/MS
2,2-Dimethyloctane	NA	Zymax Forensics	1.0	µg/L	C3-C10 Hydrocarbons by GC/MS
3-Methylnonane	NA	Zymax Forensics	1.0	µg/L	C3-C10 Hydrocarbons by GC/MS
3,3-Dimethyloctane	NA	Zymax Forensics	1.0	µg/L	C3-C10 Hydrocarbons by GC/MS
n-Propylbenzene	NA	Zymax Forensics	1.0	µg/L	C3-C10 Hydrocarbons by GC/MS
1-Methyl-3-ethylbenzene	NA	Zymax Forensics	1.0	µg/L	C3-C10 Hydrocarbons by GC/MS
1-Methyl-4-ethylbenzene	NA	Zymax Forensics	1.0	µg/L	C3-C10 Hydrocarbons by GC/MS
1,3,5-Trimethylbenzene	NA	Zymax Forensics	1.0	µg/L	C3-C10 Hydrocarbons by GC/MS
3,3,4-Trimethylheptane	NA	Zymax Forensics	1.0	µg/L	C3-C10 Hydrocarbons by GC/MS
1-Methyl-2-ethylbenzene	NA	Zymax Forensics	1.0	µg/L	C3-C10 Hydrocarbons by GC/MS
1,2,4-Trimethylbenzene	NA	Zymax Forensics	1.0	µg/L	C3-C10 Hydrocarbons by GC/MS
1-Decene	NA	Zymax Forensics	1.0	µg/L	C3-C10 Hydrocarbons by GC/MS
1-Methyl-3-isopropylbenzene	NA	Zymax Forensics	1.0	µg/L	C3-C10 Hydrocarbons by GC/MS
Decane	NA	Zymax Forensics	1.0	µg/L	C3-C10 Hydrocarbons by GC/MS
sec-Butylbenzene	NA	Zymax Forensics	1.0	µg/L	C3-C10 Hydrocarbons by GC/MS
1,2,3-Trimethylbenzene	NA	Zymax Forensics	1.0	µg/L	C3-C10 Hydrocarbons by GC/MS
Indane	NA	Zymax Forensics	1.0	µg/L	C3-C10 Hydrocarbons by GC/MS
Indene	NA	Zymax Forensics	1.0	µg/L	C3-C10 Hydrocarbons by GC/MS
1,3-Diethylbenzene	NA	Zymax Forensics	1.0	µg/L	C3-C10 Hydrocarbons by GC/MS
n-Butylbenzene	NA	Zymax Forensics	1.0	µg/L	C3-C10 Hydrocarbons by GC/MS
1,3-Dimethyl-5-ethylbenzene	NA	Zymax Forensics	1.0	µg/L	C3-C10 Hydrocarbons by GC/MS
1,4-Diethylbenzene	NA	Zymax Forensics	1.0	µg/L	C3-C10 Hydrocarbons by GC/MS
1-Methyl-2-propylbenzene	NA	Zymax Forensics	1.0	µg/L	C3-C10 Hydrocarbons by GC/MS
1,4-Dimethyl-2-ethylbenzene	NA	Zymax Forensics	1.0	µg/L	C3-C10 Hydrocarbons by GC/MS
1,3-Dimethyl-4-ethylbenzene	NA	Zymax Forensics	1.0	µg/L	C3-C10 Hydrocarbons by GC/MS
1,2-Dimethyl-4-ethylbenzene	NA	Zymax Forensics	1.0	µg/L	C3-C10 Hydrocarbons by GC/MS
1,3-Dimethyl-2-ethylbenzene	NA	Zymax Forensics	1.0	µg/L	C3-C10 Hydrocarbons by GC/MS
Undecane	NA	Zymax Forensics	1.0	µg/L	C3-C10 Hydrocarbons by GC/MS
1,2,4,5-Tetramethylbenzene	NA	Zymax Forensics	1.0	µg/L	C3-C10 Hydrocarbons by GC/MS
1,2,3,5-Tetramethylbenzene	NA	Zymax Forensics	1.0	µg/L	C3-C10 Hydrocarbons by GC/MS
1,2,3,4-Tetramethylbenzene	NA	Zymax Forensics	1.0	µg/L	C3-C10 Hydrocarbons by GC/MS
Naphthalene	NA	Zymax Forensics	1.0	µg/L	C3-C10 Hydrocarbons by GC/MS
2-Methylnaphthalene	NA	Zymax Forensics	1.0	µg/L	C3-C10 Hydrocarbons by GC/MS
1-Methylnaphthalene	NA	Zymax Forensics	1.0	µg/L	C3-C10 Hydrocarbons by GC/MS
Benzothiophene	NA	Zymax Forensics	1.0	µg/L	C3-C10 Hydrocarbons by GC/MS

Table 7
Pavillion Groundwater Plume Investigation ESI Analytes

Analyte	CAS Number	Laboratory Name	Reporting Limit	Reporting Limit Units	Method
n-Pentylbenzene	NA	Zymax Forensics	1.0	µg/L	C3-C10 Hydrocarbons by GC/MS
δ^{13}C Stable Carbon Isotopes - methane	NA	Zymax Forensics	0.32	1σ	Stable Isotope Analysis CH4
δD - Stable Hydrogen Isotopes - methane	NA	Zymax Forensics	0.52	1σ	Stable Isotope Analysis CH4
n-Pentane / n-Heptane	NA	Zymax Forensics	Ratio	NA	Evaporation
2-Methylpentane / 2-Methylheptane	NA	Zymax Forensics	Ratio	NA	Evaporation
Benzene / Cyclohexane	NA	Zymax Forensics	Ratio	NA	Waterwashing
Toluene / Methylcyclohexane	NA	Zymax Forensics	Ratio	NA	Waterwashing
Aromatics / Total Paraffins (n+iso+cyc)	NA	Zymax Forensics	Ratio	NA	Waterwashing
Aromatics / Naphthenes	NA	Zymax Forensics	Ratio	NA	Waterwashing
Olefins	NA	Zymax Forensics	Ratio	NA	Biodegredation
3-Methylhexane / n-Heptane	NA	Zymax Forensics	Ratio	NA	Biodegredation
Methylcyclohexane / n-Heptane	NA	Zymax Forensics	Ratio	NA	Biodegredation
Isoparaffins + Naphthenes / Paraffins	NA	Zymax Forensics	Ratio	NA	Biodegredation
Methylcyclohexane	NA	Zymax Forensics	Ratio	NA	Octane Rating
% Paraffinic	NA	Zymax Forensics	0.01	%	PIANO Relative Percentage
% Isoparaffinic	NA	Zymax Forensics	0.01	%	PIANO Relative Percentage
% Aromatic	NA	Zymax Forensics	0.01	%	PIANO Relative Percentage
% Naphthenic	NA	Zymax Forensics	0.01	%	PIANO Relative Percentage
% Olefinic	NA	Zymax Forensics	0.01	%	PIANO Relative Percentage
Propane	NA	Zymax Forensics	0.01	%	C3-C44 Hydrocarbons by GC/MS
Isobutane	NA	Zymax Forensics	0.01	%	C3-C44 Hydrocarbons by GC/MS
Isobutene	NA	Zymax Forensics	0.01	%	C3-C44 Hydrocarbons by GC/MS
Butane/Methanol	NA	Zymax Forensics	0.01	%	C3-C44 Hydrocarbons by GC/MS
trans-2-Butene	NA	Zymax Forensics	0.01	%	C3-C44 Hydrocarbons by GC/MS
cis-2-Butene	NA	Zymax Forensics	0.01	%	C3-C44 Hydrocarbons by GC/MS
3-Methyl-1-butene	NA	Zymax Forensics	0.01	%	C3-C44 Hydrocarbons by GC/MS
Isopentane	NA	Zymax Forensics	0.01	%	C3-C44 Hydrocarbons by GC/MS
1-Pentene	NA	Zymax Forensics	0.01	%	C3-C44 Hydrocarbons by GC/MS
2-Methyl-1-butene	NA	Zymax Forensics	0.01	%	C3-C44 Hydrocarbons by GC/MS
Pentane	NA	Zymax Forensics	0.01	%	C3-C44 Hydrocarbons by GC/MS
trans-2-Pentene	NA	Zymax Forensics	0.01	%	C3-C44 Hydrocarbons by GC/MS
cis-2-Pentene/t-Butanol	NA	Zymax Forensics	0.01	%	C3-C44 Hydrocarbons by GC/MS
2-Methyl-2-butene	NA	Zymax Forensics	0.01	%	C3-C44 Hydrocarbons by GC/MS
2,2-Dimethylbutane	NA	Zymax Forensics	0.01	%	C3-C44 Hydrocarbons by GC/MS
Cyclopentane	NA	Zymax Forensics	0.01	%	C3-C44 Hydrocarbons by GC/MS
2,3-Dimethylbutane/MTBE	NA	Zymax Forensics	0.01	%	C3-C44 Hydrocarbons by GC/MS
2-Methylpentane	NA	Zymax Forensics	0.01	%	C3-C44 Hydrocarbons by GC/MS
3-Methylpentane	NA	Zymax Forensics	0.01	%	C3-C44 Hydrocarbons by GC/MS
Hexane	NA	Zymax Forensics	0.01	%	C3-C44 Hydrocarbons by GC/MS
trans-2-Hexene	NA	Zymax Forensics	0.01	%	C3-C44 Hydrocarbons by GC/MS
3-Methylcyclopentene	NA	Zymax Forensics	0.01	%	C3-C44 Hydrocarbons by GC/MS
3-Methyl-2-pentene	NA	Zymax Forensics	0.01	%	C3-C44 Hydrocarbons by GC/MS
cis-2-Hexene	NA	Zymax Forensics	0.01	%	C3-C44 Hydrocarbons by GC/MS
3-Methyl-trans-2-pentene	NA	Zymax Forensics	0.01	%	C3-C44 Hydrocarbons by GC/MS

Table 7
Pavillion Groundwater Plume Investigation ESI Analytes

Analyte	CAS Number	Laboratory Name	Reporting Limit	Reporting Limit Units	Method
Methylcyclopentane	NA	Zymax Forensics	0.01	%	C3-C44 Hydrocarbons by GC/MS
2,4-Dimethylpentane	NA	Zymax Forensics	0.01	%	C3-C44 Hydrocarbons by GC/MS
Benzene	NA	Zymax Forensics	0.01	%	C3-C44 Hydrocarbons by GC/MS
5-Methyl-1-hexene	NA	Zymax Forensics	0.01	%	C3-C44 Hydrocarbons by GC/MS
Cyclohexane	NA	Zymax Forensics	0.01	%	C3-C44 Hydrocarbons by GC/MS
2-Methylhexane/TAME	NA	Zymax Forensics	0.01	%	C3-C44 Hydrocarbons by GC/MS
2,3-Dimethylpentane	NA	Zymax Forensics	0.01	%	C3-C44 Hydrocarbons by GC/MS
3-Methylhexane	NA	Zymax Forensics	0.01	%	C3-C44 Hydrocarbons by GC/MS
1-trans-3-Dimethylcyclopentane	NA	Zymax Forensics	0.01	%	C3-C44 Hydrocarbons by GC/MS
1-cis-3-Dimethylcyclopentane	NA	Zymax Forensics	0.01	%	C3-C44 Hydrocarbons by GC/MS
2,2,4-Trimethylpentane	NA	Zymax Forensics	0.01	%	C3-C44 Hydrocarbons by GC/MS
n-Heptane	NA	Zymax Forensics	0.01	%	C3-C44 Hydrocarbons by GC/MS
Methylcyclohexane	NA	Zymax Forensics	0.01	%	C3-C44 Hydrocarbons by GC/MS
2,5-Dimethylhexane	NA	Zymax Forensics	0.01	%	C3-C44 Hydrocarbons by GC/MS
2,4-Dimethylhexane	NA	Zymax Forensics	0.01	%	C3-C44 Hydrocarbons by GC/MS
2,3,4-Trimethylpentane	NA	Zymax Forensics	0.01	%	C3-C44 Hydrocarbons by GC/MS
Toluene/2,3,3-Trimethylpentane	NA	Zymax Forensics	0.01	%	C3-C44 Hydrocarbons by GC/MS
2,3,3-Trimethylpentane	NA	Zymax Forensics	0.01	%	C3-C44 Hydrocarbons by GC/MS
2,3-Dimethylhexane	NA	Zymax Forensics	0.01	%	C3-C44 Hydrocarbons by GC/MS
2-Methylheptane	NA	Zymax Forensics	0.01	%	C3-C44 Hydrocarbons by GC/MS
4-Methylheptane	NA	Zymax Forensics	0.01	%	C3-C44 Hydrocarbons by GC/MS
3,4-Dimethylhexane	NA	Zymax Forensics	0.01	%	C3-C44 Hydrocarbons by GC/MS
3-Ethyl-3-methylpentane	NA	Zymax Forensics	0.01	%	C3-C44 Hydrocarbons by GC/MS
1,4-Dimethylcyclohexane	NA	Zymax Forensics	0.01	%	C3-C44 Hydrocarbons by GC/MS
3-Methylheptane	NA	Zymax Forensics	0.01	%	C3-C44 Hydrocarbons by GC/MS
2,2,5-Trimethylhexane	NA	Zymax Forensics	0.01	%	C3-C44 Hydrocarbons by GC/MS
n-Octane	NA	Zymax Forensics	0.01	%	C3-C44 Hydrocarbons by GC/MS
2,2-Dimethylheptane	NA	Zymax Forensics	0.01	%	C3-C44 Hydrocarbons by GC/MS
2,4-Dimethylheptane	NA	Zymax Forensics	0.01	%	C3-C44 Hydrocarbons by GC/MS
Ethylcyclohexane	NA	Zymax Forensics	0.01	%	C3-C44 Hydrocarbons by GC/MS
2,6-Dimethylheptane	NA	Zymax Forensics	0.01	%	C3-C44 Hydrocarbons by GC/MS
Ethylbenzene	NA	Zymax Forensics	0.01	%	C3-C44 Hydrocarbons by GC/MS
m+p Xylenes	NA	Zymax Forensics	0.01	%	C3-C44 Hydrocarbons by GC/MS
4-Methyloctane	NA	Zymax Forensics	0.01	%	C3-C44 Hydrocarbons by GC/MS
2-Methyloctane	NA	Zymax Forensics	0.01	%	C3-C44 Hydrocarbons by GC/MS
3-Ethylheptane	NA	Zymax Forensics	0.01	%	C3-C44 Hydrocarbons by GC/MS
3-Methyloctane	NA	Zymax Forensics	0.01	%	C3-C44 Hydrocarbons by GC/MS
o-Xylene	NA	Zymax Forensics	0.01	%	C3-C44 Hydrocarbons by GC/MS
1-Nonene	NA	Zymax Forensics	0.01	%	C3-C44 Hydrocarbons by GC/MS
n-Nonane	NA	Zymax Forensics	0.01	%	C3-C44 Hydrocarbons by GC/MS
Isopropylbenzene	NA	Zymax Forensics	0.01	%	C3-C44 Hydrocarbons by GC/MS
3,3,5-Trimethylheptane	NA	Zymax Forensics	0.01	%	C3-C44 Hydrocarbons by GC/MS
2,4,5-Trimethylheptane	NA	Zymax Forensics	0.01	%	C3-C44 Hydrocarbons by GC/MS
n-Propylbenzene	NA	Zymax Forensics	0.01	%	C3-C44 Hydrocarbons by GC/MS

Table 7
Pavillion Groundwater Plume Investigation ESI Analytes

Analyte	CAS Number	Laboratory Name	Reporting Limit	Reporting Limit Units	Method
1-Methyl-3-ethylbenzene	NA	Zymax Forensics	0.01	%	C3-C44 Hydrocarbons by GC/MS
1-Methyl-4-ethylbenzene	NA	Zymax Forensics	0.01	%	C3-C44 Hydrocarbons by GC/MS
1,3,5-Trimethylbenzene	NA	Zymax Forensics	0.01	%	C3-C44 Hydrocarbons by GC/MS
3,3,4-Trimethylheptane	NA	Zymax Forensics	0.01	%	C3-C44 Hydrocarbons by GC/MS
1-Methyl-2-ethylbenzene	NA	Zymax Forensics	0.01	%	C3-C44 Hydrocarbons by GC/MS
3-Methylnonane	NA	Zymax Forensics	0.01	%	C3-C44 Hydrocarbons by GC/MS
1,2,4-Trimethylbenzene	NA	Zymax Forensics	0.01	%	C3-C44 Hydrocarbons by GC/MS
Isobutylbenzene	NA	Zymax Forensics	0.01	%	C3-C44 Hydrocarbons by GC/MS
sec-Butylbenzene	NA	Zymax Forensics	0.01	%	C3-C44 Hydrocarbons by GC/MS
n-Decane	NA	Zymax Forensics	0.01	%	C3-C44 Hydrocarbons by GC/MS
1,2,3-Trimethylbenzene	NA	Zymax Forensics	0.01	%	C3-C44 Hydrocarbons by GC/MS
Indan	NA	Zymax Forensics	0.01	%	C3-C44 Hydrocarbons by GC/MS
1,3-Diethylbenzene	NA	Zymax Forensics	0.01	%	C3-C44 Hydrocarbons by GC/MS
1,4-Diethylbenzene	NA	Zymax Forensics	0.01	%	C3-C44 Hydrocarbons by GC/MS
n-Butylbenzene	NA	Zymax Forensics	0.01	%	C3-C44 Hydrocarbons by GC/MS
1,3-Dimethyl-5-ethylbenzene	NA	Zymax Forensics	0.01	%	C3-C44 Hydrocarbons by GC/MS
1,4-Dimethyl-2-ethylbenzene	NA	Zymax Forensics	0.01	%	C3-C44 Hydrocarbons by GC/MS
1,3-Dimethyl-4-ethylbenzene	NA	Zymax Forensics	0.01	%	C3-C44 Hydrocarbons by GC/MS
1,2-Dimethyl-4-ethylbenzene	NA	Zymax Forensics	0.01	%	C3-C44 Hydrocarbons by GC/MS
Undecene	NA	Zymax Forensics	0.01	%	C3-C44 Hydrocarbons by GC/MS
1,2,4,5-Tetramethylbenzene	NA	Zymax Forensics	0.01	%	C3-C44 Hydrocarbons by GC/MS
1,2,3,5-Tetramethylbenzene	NA	Zymax Forensics	0.01	%	C3-C44 Hydrocarbons by GC/MS
1,2,3,4-Tetramethylbenzene	NA	Zymax Forensics	0.01	%	C3-C44 Hydrocarbons by GC/MS
Naphthalene	NA	Zymax Forensics	0.01	%	C3-C44 Hydrocarbons by GC/MS
2-Methyl-naphthalene	NA	Zymax Forensics	0.01	%	C3-C44 Hydrocarbons by GC/MS
1-Methyl-naphthalene	NA	Zymax Forensics	0.01	%	C3-C44 Hydrocarbons by GC/MS
Oxygen	NA	Zymax Forensics	0.01	%	C3-C44 Hydrocarbons by GC/MS
Nitrogen	NA	Zymax Forensics	0.01	%	C3-C44 Hydrocarbons by GC/MS
Carbon Disulfide	NA	Zymax Forensics	0.01	%	C3-C44 Hydrocarbons by GC/MS
Hydrogen Sulfide	NA	Zymax Forensics	0.01	%	C3-C44 Hydrocarbons by GC/MS
Methane	NA	Zymax Forensics	0.01	%	Gas Analysis ASTM D 1945/3588
Ethane	NA	Zymax Forensics	0.01	%	Gas Analysis ASTM D 1945/3588
Propane	NA	Zymax Forensics	0.01	%	Gas Analysis ASTM D 1945/3588
i-Butane	NA	Zymax Forensics	0.01	%	Gas Analysis ASTM D 1945/3588
n-Butane	NA	Zymax Forensics	0.01	%	Gas Analysis ASTM D 1945/3588
neo-Pentane	NA	Zymax Forensics	0.01	%	Gas Analysis ASTM D 1945/3588
i-Pentane	NA	Zymax Forensics	0.01	%	Gas Analysis ASTM D 1945/3588
n-Pentane	NA	Zymax Forensics	0.01	%	Gas Analysis ASTM D 1945/3588
2,2-Dimethylbutane	NA	Zymax Forensics	0.01	%	Gas Analysis ASTM D 1945/3588
2,3-Dimethylbutane	NA	Zymax Forensics	0.01	%	Gas Analysis ASTM D 1945/3588
2-Methylpentane	NA	Zymax Forensics	0.01	%	Gas Analysis ASTM D 1945/3588
3-Methylpentane	NA	Zymax Forensics	0.01	%	Gas Analysis ASTM D 1945/3588
n-Hexane	NA	Zymax Forensics	0.01	%	Gas Analysis ASTM D 1945/3588
Methane	NA	Zymax Forensics	0.05	ppm v/v	Gas Analysis EPA Method 18

Table 7
Pavillion Groundwater Plume Investigation ESI Analytes

Analyte	CAS Number	Laboratory Name	Reporting Limit	Reporting Limit Units	Method
Ethane	NA	Zymax Forensics	0.05	ppm v/v	Gas Analysis EPA Method 18
Propanes	NA	Zymax Forensics	0.05	ppm v/v	Gas Analysis EPA Method 18
Butanes	NA	Zymax Forensics	0.05	ppm v/v	Gas Analysis EPA Method 18
Pentanes	NA	Zymax Forensics	0.05	ppm v/v	Gas Analysis EPA Method 18
Hexanes	NA	Zymax Forensics	0.05	ppm v/v	Gas Analysis EPA Method 18
Heptanes	NA	Zymax Forensics	0.05	ppm v/v	Gas Analysis EPA Method 18
Octanes	NA	Zymax Forensics	0.05	ppm v/v	Gas Analysis EPA Method 18
Nonanes	NA	Zymax Forensics	0.05	ppm v/v	Gas Analysis EPA Method 18
Decanes	NA	Zymax Forensics	0.05	ppm v/v	Gas Analysis EPA Method 18

Table 8
Samples, Locations, and Sample Type

Sample ID	Sample Type	Latitude	Longitude
PGDW03	Drinking Water Sample	43.2271843	-108.658371
PGDW04	Drinking Water Sample	43.22790909	-108.6541901
PGDW05	Drinking Water Sample	43.25884628	-108.6126556
PGDW10	Drinking Water Sample	43.2358284	-108.6565018
PGDW20	Drinking Water Sample	43.25230026	-108.5915756
PGDW22	Drinking Water Sample	43.2444191	-108.598175
PGDW23	Drinking Water Sample	43.2486496	-108.6225891
PGDW25	Drinking Water Sample	43.24312592	-108.6672058
PGDW30	Drinking Water Sample	43.25754547	-108.6225662
PGDW32	Drinking Water Sample	43.24074936	-108.5941391
PGDW39	Drinking Water Sample	43.23750687	-108.5781708
PGDW40	Drinking Water Sample	43.26156616	-108.6198273
PGDW41	Drinking Water Sample	43.262146	-108.6378479
PGDW42	Drinking Water Sample	43.25574493	-108.647316
PGDW43	Drinking Water Sample	43.25749207	-108.64151
PGDW44	Drinking Water Sample	43.25086975	-108.6261292
PGDW45	Drinking Water Sample	43.25888062	-108.6130142
PGDW46	Drinking Water Sample	43.24651337	-108.6157684
PGDW47	Drinking Water Sample	43.24520493	-108.6319885
PGDW48	Drinking Water Sample	43.2299881	-108.6235733
PGDW49	Drinking Water Sample	43.25505829	-108.6178741
PGMW01	Monitoring Well	43.26122665	-108.6316147
PGMW02	Monitoring Well	43.24616241	-108.613205
PGMW03	Monitoring Well	43.25263977	-108.6020584
PGPP01	Gas/Product Sample	43.24578857	-108.6356735
PGPP02	Gas/Product Sample	43.2486496	-108.6274796
PGPP03	N2 Field Blank	43.2486496	-108.6274796
PGPP04	Gas/Product Sample	43.25984955	-108.6116409
PGPP05	Gas/Product Sample	43.2486496	-108.6274796
PGPP06	Gas/Product Sample	43.26016998	-108.6165009
PGPW01	Public Water Sample	43.24678802	-108.6879349
PGPW02	Public Water Sample	43.24697113	-108.6840515
PGSE01	Sediment Sample	43.29878235	-108.6962433
PGSE02	Sediment Sample	43.26332474	-108.6277313
PGSE03	Sediment Sample	43.25877762	-108.6137314
PGSE04	Sediment Sample	43.25296783	-108.5916977
PGSE05	Sediment Sample	43.2463913	-108.5588455
PGSO01	Soil Sample	43.26117325	-108.6316071
PGSO02	Soil Sample	43.24636841	-108.6135254
PGSO03	Soil Sample	43.2527504	-108.6022339
PGSW01	Surface Water Sample	43.29878235	-108.6962433
PGSW02	Surface Water Sample	43.26332474	-108.6277313
PGSW03	Surface Water Sample	43.25877762	-108.6137314
PGSW04	Surface Water Sample	43.25296783	-108.5916977
PGSW05	Surface Water Sample	43.2463913	-108.5588455

Table 9
SVOA, TPH/DRO, Pesticide, and PCB Results

Analyte	Laboratory Name	SCDM (Drinking Water) MCL (µg/L)	RDSC (µg/L)	CRSC (µg/L)	PGDW03 µg/L	PGDW04 µg/L	PGDW05 µg/L	PGDW05D µg/L	PGDW10 µg/L	PGDW20 µg/L	PGDW22 µg/L	PGDW23 µg/L	PGDW25 µg/L	PGDW30 µg/L	PGDW32 µg/L	PGDW39 µg/L	PGDW40 µg/L	PGDW41 µg/L	PGDW42 µg/L	PGDW43 µg/L	PGDW44 µg/L	PGDW45 µg/L	PGDW46 µg/L	PGDW47 µg/L	PGDW48 µg/L	PGDW49 µg/L	PGPW01 µg/L	PGPW02 µg/L
Semi-Volatiles																												
1,1'-Biphenyl	CLP																											
2,4,5-Trichlorophenol	CLP									0.19 J																		
2,4,5-Trichlorophenol	U.S. EPA R8																											
2,4-Dimethylphenol	CLP		730																									
2,4-Dimethylphenol	U.S. EPA R8		730																									
2,6-Dinitrotoluene	CLP																											
2,6-Dinitrotoluene	U.S. EPA R8				0.12																							
Tris (2-butoxyethyl) phosphate	U.S. EPA R8				1.64 J [9]			0.56 J [1,9]	1.84 J [1,9]	0.63 J [1,9]						2.1 J [1,9]			0.55 J [1,9]		1.16 J [1,9]		1.83 J [9]	1.5 J [1,9]	0.65 J [9]	0.57 J [9]		
2-Chlorophenol	CLP																				0.34 J	0.61 J						
2-Chlorophenol	U.S. EPA R8																											
2-Methylnaphthalene	CLP																				0.31 J							
2-Methylnaphthalene	U.S. EPA R8																				0.37 J [1]							
2-Methylphenol	CLP																											
2-Methylphenol	U.S. EPA R8																											
3 & 4-Methylphenol	U.S. EPA R8		180																									
4-Chloro-3-methylphenol	CLP									0.19 J											0.27 J	0.42 J						
4-Chloro-3-methylphenol	U.S. EPA R8																											
4-Methylphenol	CLP		180																									
Acenaphthene	CLP		2,200																		0.43 J	0.24 J						
Acenaphthene	U.S. EPA R8		2,200																									
Acenaphthylene	CLP																			0.21 J								
Acenaphthylene	U.S. EPA R8																			0.21								
Acetophenone	CLP																											
Benzaldehyde	CLP																											
Bis(2-ethylhexyl)phthalate	CLP	6	730	6.1			U	U	U	U/U		U/U		U		U U		11	U	U	U	U	U	U		U U		U
Bis(2-ethylhexyl)phthalate	U.S. EPA R8	6	730	6.1	22U [2]			U	22		2	2	2222				2	7.4 J [4,8]	U	2	2	2	2	2	2	2	2	2
Butyl benzyl phthalate	U.S. EPA R8		7,300									0.18 J [1,8]	0.15 J [8]	0.13 J [1,8]	0.14 J [8]	0.16 J [1,8]			0.19 J [1,8]		0.13 J [1,8]							
Butylbenzylphthalate	CLP		7,300																								0.23 J	0.23 J
Caprolactam	CLP							0.95 J			0.98 J	0.63 J	0.27 J		0.54 J	0.22 J			0.92 J		0.49 J		0.3 J				0.29 J	3.8 J
Diethyl phthalate	U.S. EPA R8		29,000																									
Diethylphthalate	CLP		29,000							U				U U											U			
Di-n-butyl phthalate	U.S. EPA R8		3,700					2				2	2	2	2	2			2									
Di-n-butylphthalate	CLP		3,700								0.16 J			0.18 J		0.15 J								0.17 J				
Di-n-octyl phthalate	U.S. EPA R8		730		2		2		2							2		6 J [8]										
Di-n-octyl phthalate	CLP		730																									
Fluorene	CLP	0.1		1,500																	0.18 J							
Fluorene	U.S. EPA R8	0.1		1,500																	0.15 J [1]							
Naphthalene	CLP	0.1		1,500																0.25 J								
Naphthalene	U.S. EPA R8	0.1		1,500																0.3 J [1]								
Phenol	CLP			11,000																	0.3 J	0.55 J				0.68 J		
Phenol	U.S. EPA R8			11,000																U								
TEH, DRO																												
TPH as Diesel (DRO)	Energy																	850										
TPH as Diesel (DRO)	U.S. EPA R8						75.3	76.4		21.7	154		27.8	35		30	32.6	479	21.6	49.7	44.3	41.3	25.5	26.6		130		23.1
TPH Total Extractable Hydrocarbons	Energy																	1300								400		
Pesticides/Aroclor																												
4,4'-DDE	CLP			0.25																								
alpha-BHC	CLP			0.014																								
Aroclor-1016	CLP																				0.29 J							
beta-BHC	CLP			0.047																						0.00081 JP		
Dieldrin	CLP		1.8	0.0053																								
Endosulfan I	CLP		220							0.0015 J																		
gamma-BHC (Lindane)	CLP	0.2	11	0.066																								
gamma-Chlordane	CLP		18	0.24													0.0016 J											
Heptachlor	CLP	0.4	18	0.019																	0.0072 J							
Methoxychlor	CLP	40	180																									

1 - Exceeded holding time.
2 - Compound found in method blank; detection is above 10x method blank value.
3 - Low recovery of surrogate; potentially biased low.
4 - High recovery of surrogate; potentially biased high.
5 - Exceeded upper linear calibration range; biased low.
6 - High recoveries for the compound in the corresponding spike sample.
7 - Variability of samples outside QC limits for matrix spike.
8 - Recoveries below control limits for initial calibration verification or continuing calibration verification; potentially biased low.
9 - Recoveries above control limits for initial calibration verification or continuing calibration verification; potentially biased high.
10 - Low recovery for the compound in the corresponding spike sample.

The sample was not analyzed for this analyte.
(Blank Cell) Non Detect for this analyte.

J (J without footnotes) - Estimated as below Contract Required Quantitation Limit but above Method Detection Limit.
P - Greater than 10% difference for detected concentrations between the two GC columns.
U - Compound found in field blank, for phthalate compounds, concentration in the sample is below 10x the concentration in the field blank. For other compounds, concentration in the sample is below 5x the concentration in the field blank. Thus, these compounds are NOT used for Risk Assessment per Risk Assessment Guidance for Superfund (Chapter 5 - Data Evaluation); 10x is the multiplier because phthalate esters are considered a common lab contaminant.

Table 9
SVOA, TPH/DRO, Pesticide, and PCB Results

Analyte	Laboratory Name	SCDM (Drinking Water) MCL (µg/L)	RDSC (µg/L)	CRSC (µg/L)	PGFB01 µg/L	PGFM20 µg/L	PGMW01 µg/L	PGMW01D µg/L	PGMW02 µg/L	PGMW03 µg/L	PGPP01 µg/L	PGPP04P µg/L	PGPP05 µg/L	PGPP06 µg/L	PGSE01 µg/kg	PGSE02 µg/kg	PGSE02D µg/kg	PGSE03 µg/kg	PGSE04 µg/kg	PGSE05 µg/kg	PGSO01 µg/kg	PGSO02 µg/kg	PGSO03 µg/kg	PGSW01 µg/L	PGSW02 µg/L	PGSW02D µg/L	PGSW03 µg/L	PGSW04 µg/L	PGSW05 µg/L
Semi-Volatiles																													
1,1'-Biphenyl	CLP						0.86 J	1 J		0.76 J																			
2,4,5-Trichlorophenol	CLP																												
2,4,5-Trichlorophenol	U.S. EPA R8																												
2,4-Dimethylphenol	CLP		730				1.6 J	5.6 J	39 J	5 J																			
2,4-Dimethylphenol	U.S. EPA R8		730						12.7					3000 J [1]															
2,6-Dinitrotoluene	CLP																												
2,6-Dinitrotoluene	U.S. EPA R8																												
Tris (2-butoxyethyl) phosphate	U.S. EPA R8					10						10	10	10															
2-Chlorophenol	CLP																												
2-Chlorophenol	U.S. EPA R8																												
2-Methylnaphthalene	CLP						2.4 J	8.8	74	13																			
2-Methylnaphthalene	U.S. EPA R8						10.8	1	17.1	17		5400 J [1]	110000 J [1]																
2-Methylphenol	CLP								4.2 J	0.38 J																			
2-Methylphenol	U.S. EPA R8								4.8					7760 J [1]															
3 & 4-Methylphenol	U.S. EPA R8		180						12.8					6760 J [1, 8]															
4-Chloro-3-methylphenol	CLP																												
4-Chloro-3-methylphenol	U.S. EPA R8																												
4-Methylphenol	CLP		180				0.39 J		24 J	3.5 J																			
Acenaphthene	CLP		2,200																										
Acenaphthene	U.S. EPA R8		2,200																										
Acenaphthylene	CLP																												
Acenaphthylene	U.S. EPA R8																												
Acetophenone	CLP														41 J	73 J	34 J	64 J	66 J	54 J									
Benzaldehyde	CLP														18 J	44 J		23 J	30 J	22 J									
Bis(2-ethylhexyl)phthalate	CLP	6	730	6.1	0.64 J		U	U	U	U														U U					U
Bis(2-ethylhexyl)phthalate	U.S. EPA R8	6	730	6.1	0.58 J [1,8]	500 J [1,8]	6.5 J [8]	7.46 J [8]	U	28.8 J [8]														22		2	10.3 J [8]	U	U
Butyl benzyl phthalate	U.S. EPA R8		7,300																					0.15 J [1,8]					0.16 J [8]
Butylbenzylphthalate	CLP		7,300																							0.21 J			
Caprolactam	CLP																							0.89 J		2.3 J			
Diethyl phthalate	U.S. EPA R8		29,000																										0.18
Diethylphthalate	CLP		29,000		0.36 J																						U	U	U
Di-n-butyl phthalate	U.S. EPA R8		3,700			220 J [1,8]																		0.15 J [1]					0.14 J
Di-n-butylphthalate	CLP		3,700																								0.22 J		
Di-n-octyl phthalate	U.S. EPA R8		730																										
Di-n-octyl phthalate	CLP		730			440 J [1,8]																						0.14 J [8]	
Fluorene	CLP	0.1		1,500																									
Fluorene	U.S. EPA R8	0.1		1,500																									
Naphthalene	CLP	0.1		1,500			7.1	14	170	61						10 J													
Naphthalene	U.S. EPA R8	0.1		1,500			2.2	2.15 J [5]	179 J [1]	57.5 J [5]	3430 J [1]	30000 J [1]	37800 J [1]	210 J [3]															
Phenol	CLP			11,000			12	15	41 J	2.3 J					17 J	56 J		23 J	29 J	24 J									
Phenol	U.S. EPA R8			11,000	0.13 J [1]		5.6	7.13 J [5]	22.5					6960 J [1]															
TEH, DRO																													
TPH as Diesel (DRO)	Energy						1200	600	39000	5200											1760000	841000	178000						
TPH as Diesel (DRO)	U.S. EPA R8				26.5 J [1, 8]	752	638 J [2]	1230 J [5]	62100	4830 J [4]											1720	538	151	108	103	207 J [2]	102	90	86.6
TPH Total Extractable Hydrocarbons	Energy						1600	810	42000	5900						49000	53000			17000	2340000	1440000	243000						
Pesticides/Aroclor																													
4,4'-DDE	CLP			0.25											0.13 J	0.17 J			0.15 J	0.12 J									
alpha-BHC	CLP			0.014														0.016 J											
Aroclor-1016	CLP																												
beta-BHC	CLP			0.047			0.016 J	0.029 J	0.019 J	0.0065 J					0.065 J		0.14 J	0.17 J	0.41 J	0.4 J									
Dieldrin	CLP		1.8	0.0053					0.002 J																				
Endosulfan I	CLP		220																										
gamma-BHC (Lindane)	CLP	0.2	11	0.066						0.0056 J																			
gamma-Chlordane	CLP		18	0.24																									
Heptachlor	CLP	0.4	18	0.019															0.16 J										
Methoxychlor	CLP	40	180																	1.1 J									

Table 10
VOA and TPH/GRO Results

Analyte	Laboratory Name	SCDM (Drinking Water) MCL (µg/L)	RDSC (µg/L)	CRSC (µg/L)	PGDW03 µg/L	PGDW04 µg/L	PGDW05 µg/L	PGDW05D µg/L	PGDW10 µg/L	PGDW20 µg/L	PGDW22 µg/L	PGDW23 µg/L	PGDW25 µg/L	PGDW30 µg/L	PGDW32 µg/L	PGDW39 µg/L	PGDW40 µg/L	PGDW41 µg/L	PGDW42 µg/L	PGDW43 µg/L	PGDW44 µg/L	PGDW45 µg/L	PGDW46 µg/L	PGDW47 µg/L	PGDW48 µg/L
Volatile Organic Analysis																									
1,1,2-Trichloro-1,2,2-trifluoroethane	CLP																			0.38 J					
1,2,4-Trimethylbenzene	U.S. EPA R8																								
1,3,5-Trimethylbenzene	U.S. EPA R8																								
1,3-Dimethyl adamantane	U.S. EPA R8						1.74 J [1]	1.71 J [1]						1.81 J [1]			0.36 J [1]								
2-Butanone (MEK)	CLP		22,000																						
Acetone	CLP		33,000																						
Adamantane	U.S. EPA R8						0.21 J [1]	0.21 J [1]							0.3 J [1,4]										
Benzene	CLP	5	150	1.5																					
Benzene	U.S. EPA R8	5	150	1.5																0.54 J [1]					
Carbon disulfide	CLP		3,700																						
Carbon disulfide	U.S. EPA R8		3,700																						
Chloroform	CLP		360																						
Chloroform	U.S. EPA R8		360															0.24 J [1]							
Chloromethane	CLP																	0.27 J							
Chloromethane	U.S. EPA R8																								
Cyclohexane	CLP																								
Ethane	U.S. EPA R8									10.9															
Ethylbenzene	CLP	700	3,700																						
Ethylbenzene	U.S. EPA R8	700	3,700																						
Isopropylbenzene	CLP		3,700																						
Isopropylbenzene	U.S. EPA R8		3,700																						
m,p-Xylene	CLP	10,000	73,000																						
m,p-Xylene	U.S. EPA R8	10,000	73,000																						
Methane	U.S. EPA R8						5.44 J [1]	[1]	[1]	172	[1]	149 J [1]		808 J [1]	36.3		98.9		60		[1]	[1]			
Methylcyclohexane	CLP																								
Methylene chloride	CLP	5	2,200	11																					
Methylene chloride	U.S. EPA R8	5	2,200	11																					
n-Butyl Benzene	U.S. EPA R8																								
n-Propyl Benzene	U.S. EPA R8																								
o-Xylene	CLP	10,000	73,000																						
o-Xylene	U.S. EPA R8	10,000	73,000																						
p-Isopropyltoluene	U.S. EPA R8																								
Propane	U.S. EPA R8																								
sec-Butylbenzene	U.S. EPA R8																								
Styrene	CLP	100	7,300																						
Styrene	U.S. EPA R8	100	7,300														0.14 J [1]								
tert-Butylbenzene	U.S. EPA R8																								
Toluene	CLP	1,000	7,300															0.51							
Toluene	U.S. EPA R8	1,000	7,300																						
TPH, GRO																									
TPH as Gasoline (GRO)	Energy																								
TPH as Gasoline (GRO)	U.S. EPA R8						26.3	31.1							22.6										
TPH Total Purgeable Hydrocarbons	Energy						49	47						36											

1 - Exceeded holding time.
2 - Compound found in method blank; detection is above 10x method blank value.
3 - Low recovery of surrogate; potentially biased low.
4 - High recovery of surrogate; potentially biased high.
5 - Exceeded upper linear calibration range; biased low.
6 - High recoveries for the compound in the corresponding spike sample.
7 - Variability of samples outside QC limits for matrix spike.
8 - Recoveries below control limits for initial calibration verification or continuing calibration verification; potentially biased low.
9 - Recoveries above control limits for initial calibration verification or continuing calibration verification; potentially biased high.
10 - Low recovery for the compound in the corresponding spike sample.
The sample was not analyzed for this analyte.
(Blank Cell) Non Detect for this analyte.
D - Diluted.
J - Estimated as below Contract Required Quantitation Limit but above Method Detection Limit.

Table 10
VOA and TPH/GRO Results

Analyte	Laboratory Name	SCDM (Drinking Water)			PGDW49 µg/L	PGPW01 µg/L	PGPW02 µg/L	PGFB01 µg/L	PGFM20 µg/L	PGMW01 µg/L	PGMW01D µg/L	PGMW02 µg/L	PGMW03 µg/L	PGPP01 µg/L	PGPP04P µg/L	PGPP05 µg/L	PGPP06 µg/L	PGSE01 µg/kg	PGSE02 µg/kg	PGSE02D µg/kg	PGSE03 µg/kg	PGSE04 µg/kg	PGSE05 µg/kg
		MCL (µg/L)	RDSC (µg/L)	CRSC (µg/L)																			
Volatile Organic Analysis																							
1,1,2-Trichloro-1,2,2-trifluoroethane	CLP																						
1,2,4-Trimethylbenzene	U.S. EPA R8												14.1 J [1]	31600 J [1]	8730000 J [1]	1770 J [1]	765 J [1]						
1,3,5-Trimethylbenzene	U.S. EPA R8									2.6 J [1]	4.22 J [1]	12 J [1]	19.7 J [1]	18600 J [1]	6250000 J [1]	818 J [1]	414 J [1]						
1,3-Dimethyl adamantane	U.S. EPA R8								2960 J [1]	0.33 J [1]	0.33 J [1]	0.64 J [1]	0.29 J [1]	460 J [1]	9800 J [1]	8200 J [1]							
2-Butanone (MEK)	CLP		22,000																	11 J			
Acetone	CLP		33,000															13 J	16 J	38			
Adamantane	U.S. EPA R8								420 J [1]	2.1 J [1]	1.78 J [1]	3.86 J [1]	2.38 J [1]	520 J [1]	74000 J [1]	6400 J [1]							
Benzene	CLP	5	150	1.5						110 D	310 D	390 D	5.3 D										
Benzene	U.S. EPA R8	5	150	1.5						95 J [1]	91.6 J [1]	130 J [1]	3.06 J [1]	8020 J [1]	860000 J [1]	306 J [1]	3020 J [1]						
Carbon disulfide	CLP		3,700							1.6 JDB	6 JDB	8.2 JDB	1.6 JDB										
Carbon disulfide	U.S. EPA R8		3,700									0.33 J [1]											
Chloroform	CLP		360																				
Chloroform	U.S. EPA R8		360																				
Chloromethane	CLP																						
Chloromethane	U.S. EPA R8																						
Cyclohexane	CLP									110 D	140 D	68 D	100 D										
Ethane	U.S. EPA R8											299											
Ethylbenzene	CLP	700	3,700							15 D J [4]	39 D	93 D	44 D										
Ethylbenzene	U.S. EPA R8	700	3,700									1.6 J [1]	5.25 J [1]	26600 J [1]	4410000 J [1]	476 J [1]	542 J [1]						
Isopropylbenzene	CLP		3,700							8.3 J [4]	26 D	53 D	26 D										
Isopropylbenzene	U.S. EPA R8		3,700										1.14 J [1]	11400 J [1]	948000 J [1]	202 J [1]	58 J [1]						
m,p-Xylene	CLP	10,000	73,000							77 D	150 D	32 D	110 D								0.27 J		
m,p-Xylene	U.S. EPA R8	10,000	73,000							0.2 J [1]	0.1 J [1]	1.26 J [1]	51.1 J [1]	298000 J [1]	4.6E+07 J [1]	2180 J [1]	4760 J [1]						
Methane	U.S. EPA R8									474	708	361	528										
Methylcyclohexane	CLP									120 D	140 D	56 D	90 D										
Methylene chloride	CLP	5	2,200	11																			
Methylene chloride	U.S. EPA R8	5	2,200	11	0.33									510 J [1,2]									
n-Butyl Benzene	U.S. EPA R8													1060 J [1]	162000 J [1]	218 J [1]							
n-Propyl Benzene	U.S. EPA R8												0.14 J [1]	3640 J [1]	1290000 J [1]	198 J [1]	70 J [1]						
o-Xylene	CLP	10,000	73,000							1.4 JD [4]	2.2	0.62 J	1.3 JD [4]								0.36 J		
o-Xylene	U.S. EPA R8	10,000	73,000							1.24 J [1]	0.62 J [1]	0.78 J [1]	1.28 J [1]	73600 J [1]	9430000 J [1]	797 J [1]	1370 J [1]						
p-Isopropyltoluene	U.S. EPA R8											0.61 J [1]	1.52 J [1]	1640 J [1]	334000 J [1]	222 J [1]							
Propane	U.S. EPA R8											43.8											
sec-Butylbenzene	U.S. EPA R8													950 J [1]	270000 J [1]	243 J [1]							
Styrene	CLP	100	7,300																				
Styrene	U.S. EPA R8	100	7,300																				
tert-Butylbenzene	U.S. EPA R8									2.05 J [1]	1.6 J [1]	9.68 J [1]	5.79 J [1]	250 J [1]	86000 J [1]								
Toluene	CLP	1,000	7,300									0.61 J	0.16 J [4]										
Toluene	U.S. EPA R8	1,000	7,300									0.16 J [1]	0.1 J [1]	97500 J [1]	1.68E+07 J [1]	774 J [1]	9070 J [1]						
TPH, GRO																							
TPH as Gasoline (GRO)	Energy									1300	2720	2450	1420										
TPH as Gasoline (GRO)	U.S. EPA R8									389 J [7]	322	2210	1060										
TPH Total Purgeable Hydrocarbons	Energy									1700	3430	3790	1980										

Table 10
VOA and TPH/GRO Results

Analyte	Laboratory Name	SCDM (Drinking Water)			PGSO01 µg/kg	PGSO02 µg/kg	PGSO03 µg/kg	PGSW01 µg/L	PGSW02 µg/L	PGSW02D µg/L	PGSW03 µg/L	PGSW04 µg/L	PGSW05 µg/L
		MCL (µg/L)	RDSC (µg/L)	CRSC (µg/L)									
Volatile Organic Analysis													
1,1,2-Trichloro-1,2,2-trifluoroethane	CLP												
1,2,4-Trimethylbenzene	U.S. EPA R8												
1,3,5-Trimethylbenzene	U.S. EPA R8												
1,3-Dimethyl adamantane	U.S. EPA R8												
2-Butanone (MEK)	CLP		22,000										
Acetone	CLP		33,000										
Adamantane	U.S. EPA R8												
Benzene	CLP	5	150	1.5									
Benzene	U.S. EPA R8	5	150	1.5									
Carbon disulfide	CLP		3,700										
Carbon disulfide	U.S. EPA R8		3,700										
Chloroform	CLP		360										
Chloroform	U.S. EPA R8		360										
Chloromethane	CLP												
Chloromethane	U.S. EPA R8												
Cyclohexane	CLP												
Ethane	U.S. EPA R8												
Ethylbenzene	CLP	700	3,700										
Ethylbenzene	U.S. EPA R8	700	3,700										
Isopropylbenzene	CLP		3,700										
Isopropylbenzene	U.S. EPA R8		3,700										
m,p-Xylene	CLP	10,000	73,000										
m,p-Xylene	U.S. EPA R8	10,000	73,000										
Methane	U.S. EPA R8												
Methylcyclohexane	CLP												
Methylene chloride	CLP	5	2,200	11									
Methylene chloride	U.S. EPA R8	5	2,200	11									
n-Butyl Benzene	U.S. EPA R8												
n-Propyl Benzene	U.S. EPA R8												
o-Xylene	CLP	10,000	73,000										
o-Xylene	U.S. EPA R8	10,000	73,000										
p-Isopropyltoluene	U.S. EPA R8												
Propane	U.S. EPA R8												
sec-Butylbenzene	U.S. EPA R8												
Styrene	CLP	100	7,300										
Styrene	U.S. EPA R8	100	7,300										
tert-Butylbenzene	U.S. EPA R8												
Toluene	CLP	1,000	7,300										
Toluene	U.S. EPA R8	1,000	7,300										
TPH, GRO													
TPH as Gasoline (GRO)	Energy				4600000	2490000	496000						
TPH as Gasoline (GRO)	U.S. EPA R8				5010000	888000	444000						
TPH Total Purgeable Hydrocarbons	Energy				6660000	3700000	940000						

Table 11
Wet Chemistry and Bacteriological Results

Analyte	Laboratory Name	PGDW03	PGDW04	PGDW05	PGDW05D	PGDW10	PGDW20	PGDW22	PGDW23	PGDW25	PGDW30	PGDW32	PGDW39	PGDW40
Bacteriological														
Bacteria, Heterotrophic (MPN/ml)	Energy	2		45		6		230	510				2	50
Bacteria, Iron Related	Energy	Present	Absent	Present		Present	Absent	Present	Present	Absent	Absent	Absent	Absent	Present
Bacteria, Approximate Iron Related Bacteria Population (CFU/ml)	Energy	500	Not Aggressive	9,000		9,000	Not Aggressive	9,000	2,300	Not aggressive	Not aggressive	Not Aggressive	Not Aggressive	9,000
Bacteria, Sulfate Reducing	Energy	Absent	Absent	Present		Absent	Absent	Absent	Absent	Absent	Present	Absent	Present	Present
Bacteria, Approximate Sulfate Reducing Bacteria Population (CFU/ml)	Energy	0	0	10 - 100		0	cc	0	0	c	10 - 100	0	10 - 100	10 - 100
Wet Chemistry (mg/L)														
Alkalinity (ppm)	U.S. EPA R8	28	38.3	88.4	89.1	147	67.9	337	54.2	295	94	31.5	129	86.3
Sulfate as SO4 (ppm)	U.S. EPA R8	570	532	287	287	293	1270	2780	368	441	333	368	3640	426
Fluoride (ppm)	U.S. EPA R8	0.8	0.9	0.9	1	0.9	0.8		1.5		0.9	2.4	0.3	
Chloride (ppm)	U.S. EPA R8	20.7	23.3	16.5	16.9	7.5	32.6	74.6	19.7	9.5	15.5	21.4	52.9	13.1
Nitrate as N (ppm)	U.S. EPA R8	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	40.7	<0.3	1.7	<0.3	<0.3	<0.3	<0.3
Nitrite as N (ppm)	U.S. EPA R8	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3

1 - Exceeded holding time.
2 - Compound found in method blank; detection is above 10x method blank value.
3 - Low recovery of surrogate; potentially biased low.
4 - High recovery of surrogate; potentially biased high.
5 - Exceeded upper linear calibration range; biased low.
6 - High recoveries for the compound in the corresponding spike sample.
7 - Variability of samples outside QC limits for matrix spike.
8 - Recoveries below control limits for initial calibration verification or continuing calibration verification; potentially biased low.
9 - Recoveries above control limits for initial calibration verification or continuing calibration verification; potentially biased high.
10 - Low recovery for the compound in the corresponding spike sample.

The sample was not analyzed for this analyte.
(Blank Cell) Non Detect for this analyte.

Table 11
Wet Chemistry and Bacteriological Results

Analyte	Laboratory Name	PGDW41	PGDW42	PGDW43	PGDW44	PGDW45	PGDW46	PGDW47	PGDW48	PGDW49	PGPW01	PGPW02	PGFB01	PGFM20	PGMW01
Bacteriological															
Bacteria, Heterotrophic (MPN/ml)	Energy	74	2	48	4					240					
Bacteria, Iron Related	Energy	Present	Present	Present	Present	Present	Present	Present	Absent	Present	Absent	Absent			Absent
Bacteria, Approximate Iron Related Bacteria Population (CFU/ml)	Energy	150	150	2,300	500	9,000	9,000	150	Not Aggressive	36,000	Not Aggressive	Not Aggressive			Not Aggressive
Bacteria, Sulfate Reducing	Energy	Present	Absent	Present	Present	Present	Absent	Present	Absent	Present	Absent	Absent			Present
Bacteria, Approximate Sulfate Reducing Bacteria Population (CFU/ml)	Energy	1 - 10	0	10 - 100	1 - 10	1 - 10	0	1 - 10	0	100,000 - 1,000,000	0	0			1 - 10
Wet Chemistry (mg/L)															
Alkalinity (ppm)	U.S. EPA R8	108	88.5	113	100	379	329	44.1	89.8	243	74.7	82.8			440
Sulfate as SO4 (ppm)	U.S. EPA R8	2670	311	2470	2880	213	126	330	1840	3160	300	847			1010
Fluoride (ppm)	U.S. EPA R8	0.5	1	0.4	0.3	1.9	0.5	1.5	0.3	0.4	1.2	0.5			0.4
Chloride (ppm)	U.S. EPA R8	31.4	13.2	38.4	39.5	14.5	8.4	21.6	24.1	64.3	15.3	8.5			3.5
Nitrate as N (ppm)	U.S. EPA R8	<0.3	<0.3	<0.3	<0.3	0.3	2.3	<0.3	<0.3	7.7	<0.3	<0.3			<0.3
Nitrite as N (ppm)	U.S. EPA R8	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3			<0.3

Table 11
Wet Chemistry and Bacteriological Results

Analyte	Laboratory Name	PGMW01D	PGMW02	PGMW03	PGPP01	PGPP04P	PGPP05	PGPP06	PGSE01	PGSE02	PGSE02d	PGSE03	PGSE04	PGSE05
Bacteriological														
Bacteria, Heterotrophic (MPN/ml)	Energy	4	13,000	16,000										
Bacteria, Iron Related	Energy	Absent	Present	Present										
Bacteria, Approximate Iron Related Bacteria Population (CFU/ml)	Energy	25	140,000	140,000										
Bacteria, Sulfate Reducing	Energy	Present	Present	Present										
Bacteria, Approximate Sulfate Reducing Bacteria Population (CFU/ml)	Energy	1 - 10	1 - 10	1 - 10										
Wet Chemistry (mg/L)														
Alkalinity (ppm)	U.S. EPA R8	438	2750	536				653						
Sulfate as SO4 (ppm)	U.S. EPA R8	1040	108	28.4										
Fluoride (ppm)	U.S. EPA R8	0.6	0.2	1.4				3.2						
Chloride (ppm)	U.S. EPA R8	3.9	265	6.4				203						
Nitrate as N (ppm)	U.S. EPA R8	<0.3	1.9	<0.3				<300						
Nitrite as N (ppm)	U.S. EPA R8	<0.3	<0.3	<0.3				<300						

Table 12
Metals Data

Analyte	CLP Limits - Water (µg/L)		SCDM (Drinking Water)			PGDW03 µg/L	PGDW04 µg/L	PGDW05 µg/L	PGDW05D µg/L	PGDW10 µg/L	PGDW20 µg/L	PGDW22 µg/L	PGDW23 µg/L	PGDW25 µg/L	PGDW30 µg/L	PGDW32 µg/L	PGDW39 µg/L	PGDW40 µg/L	PGDW41 µg/L	PGDW42 µg/L	PGDW43 µg/L
		MCLG (µg/L)	MCL (µg/L)	RDSC (µg/L)	CRSC (µg/L)																
ALUMINUM	200	00				200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U	741	200 U	200 U
ANTIMONY	2	66		15		2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2.1 U
ARSENIC	1	0	10	11	0.057	0.42 J	0.32 J	0.36 J	1 U	1 U	0.5 J	0.47 J	1 U	0.46 J	1 U	0.53 J	0.32 J	1 U	0.89 J	1 U	1.3
BARIUM	10	2,000	2,000	2,600		6.7 J	6 J	11.1	10.3	9.1 J	9.3 J	6.3 J	8.9 J	14	6.8 J	9.6 J	6.9 J	11.7	9.6 J	7.9 J	5.4 J
BERYLLIUM	1	44		73		1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	0.29 J
CADMIUM	1	55		18		1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	0.36 J
CALCIUM	5000					16300	15500	3330 J	3150 J	5760	71700	397000	5820	70100	4050 J	6890	389000	6570 J	270000 J	5060	208000 J
CHROMIUM	2	100	100	110		2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	1.7 J	2 U	0.45 J
COBALT	1					1 U	1 U	1 U	1 U	1 U	1 U	0.33 J	1 U	1 U	1 U	1 U	0.42 J	1 U	0.51 J	1 U	0.57 J
COPPER	2	1,300	1,300			4.4 J	3.9 J	7.7 U	4.7 J	2.7 J	8.8 J	16.3 J	4.3 J	4.3 J	3.9 J	3 J	16.7 J	3.1 U	201 J	5.5 J	19.4 J
IRON	100					100 U	100 U	66.6 J	64.7 J	100 U	300	100 U	100 U	100 U	44.1 J	125	330	1260	1880	96.6 J	403
LEAD	1	01	5			1 U	1 U	0.42 J	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	0.91 J	38.3	1 U	0.81 J
MAGNESIUM	5000					5000 U	5000 U	5000 U	5000 U	5000 U	8140	130000	5000 U	9630	5000 U	5000 U	147000	5000 U	57500	5000 U	13700
MANGANESE	1			5,100		1.7	2.8	2.2	1.8	3.8	31.3	3	2.8	20.9	2.2	3.2	174	32.8	222	3	84.4
MERCURY	0.2	22		11		0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
NICKEL	1			730		0.38 J	0.26 J	0.48 J	0.21 J	0.4 J	0.46 J	1.9	0.23 J	1 J	0.83 J	0.61 J	1.3	0.49 J	3.6	0.42 J	2.4
POTASSIUM	5000					5000 U	5000 U	5000 U	5000 U	5000 U	5000 U	5830	5000 U	5000 U	5000 U	5000 U	5280	5000 U	2680 J	5000 U	5000 U
SELENIUM	5	50	50	180		5 U	5 U	5 U	5 U	5 U	0.98 J	3.9 J	5 U	1.3 J	5 U	5 U	1.2 J	5 U	1.4 J	5 U	3.9 J
SILVER	1			180		1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	0.3 J
SODIUM	5000					251000	265000	189000	181000	195000	550000	908000	194000	269000	195000	193000	1110000	244000	1030000	181000	911000
THALLIUM	1	0.5	2			1 U	1 U	0.23 J	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	0.76 J
VANADIUM	5			260		5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	2.7 J	5 U	1 J
ZINC	2			11,000		2.5	1.1 J	1.4 J	2 U	2	7.6	2.7	2 U	15.1	1.2 J	23.9	26.8	211	32.5	1.2 J	17.5

MCLG	Maximum Contaminant Level Goal. A non-enforceable health goal that is set at a level at which no known or anticipated adverse effect on the health of persons occurs and which allows an adequate margin of safety.
MCL	Maximum contaminant Level. The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLG as feasible using the best available analytical and treatment technologies and taking cost into consideration. MCLs are enforceable standards.
SCDM	Superfund Chemical Data Matrix
RDSC	Reference Dose Screening Concentration
CRSC	Cancer Risk Screening Concentration
CRDL	Contract Required Detection Limit
J	Estimated as below Contract Required Quantitation Limit but above Method Detection Limit.
U	Non-Detect

Table 12
Metals Data

Analyte	CLP Limits - Water (µg/L)		SCDM (Drinking Water)			Sample ID															
		MCLG (µg/L)	MCL (µg/L)	RDSC (µg/L)	CRSC (µg/L)	PGDW44 µg/L	PGDW45 µg/L	PGDW46 µg/L	PGDW47 µg/L	PGDW48 µg/L	PGDW49 µg/L	PGPW01 µg/L	PGPW02 µg/L	PGMW01 µg/L	PGMW01D µg/L	PGMW02 µg/L	PGMW03 µg/L	PGSE01 µg/kg	PGSE02 µg/kg	PGSE02D µg/kg	PGSE03 µg/kg
ALUMINUM	200	00				200 U	200 U	200 U	200 U	200 U	81.8 J	200 U	200 U	200 U	200 U	565	200 U	6830	4680	5350	1740
ANTIMONY	2	66		15		2 U	2 U	0.43 J	2 U	2 U	0.34 J	2 U	2 U	2 U	2 U	0.43 J	0.34 J	7.1 U	8.5 U	8.2 U	6.6 U
ARSENIC	1	0	10	11	0.057	0.48 J	0.46 J	0.32 J	0.32 J	0.41 J	0.71 J	0.31 J	0.24 J	14.3	20.3	41.8	3.6	1.2 U	3	3.1	5
BARIUM	10	2,000	2,000	2,600		8 J	37	75.1	7.6 J	8.4 J	8.2 J	4.1 J	7.6 J	139	226	707	215	46	218	251	390
BERYLLIUM	1	44		73		1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	0.39 J	0.28 J	0.31 J	0.21 J
CADMIUM	1	55		18		1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	0.59 U	0.71 U	0.69 U	0.34 J
CALCIUM	5000					259000	138000	90300 J	6870	147000	486000 J	5700 J	34400 J	337000 J	336000 J	195000 J	150000 J	10000	28200	30000	41800
CHROMIUM	2	100	100	110		2 U	2 U	2 U	2 U	2 U	0.52 J	2 U	2 U	2 U	2 U	1.2 U	2 U	19.3	8.9	9.7	3.5
COBALT	1					1 U	1 U	1 U	1 U	1 U	0.5 J	1 U	1 U	0.84 J	0.64 J	0.79 J	1.9	7	4.1 J	4.3 J	3.2 J
COPPER	2	1,300	1,300			40 J	4.5 UJ	13.6 J	2.6 UJ	9.8 J	57.3 J	2 U	3.1 U	5.1 U	5.3 J	60.6 U	2 J	8.3 J	6.7 J	7 J	4.2 J
IRON	100					2070	100 U	100 U	100 U	49.1 J	11400	112	255	10400	10800	1220	3720	10500	8110	8760	9870
LEAD	1	01	5			1 U	0.21 J	1.3	1 U	1 U	2.2	1 U	1 U	1 U	0.22 J	0.58 J	0.44 J	6.2	7.5	7.9	6
MAGNESIUM	5000					28300	31200	9890	5000 U	4350 J	153000	5000 U	5000 U	61700	65500	91800	24700	5220	6080	6540	3600
MANGANESE	1			5,100		213	0.32 J	0.31 J	1.6	85.7	158	7.1	9.6	3350	3640	379	1170	133	289	287	603
MERCURY	0.2	22		11		0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.053 J	0.14 U	0.13 U	0.11 U
NICKEL	1			730		0.2 J	1.3	1.3	0.42 J	1.2	3.5	0.22 J	0.4 J	2.2	1.9	2.4	2.3	15.9	9.3	9.9	6.4
POTASSIUM	5000					5000 U	2610 J	1810 J	5000 U	5000 U	11400	5000 U	5000 U	3710 J	4150 J	3860 J	2930 J	1860	1270	1420	347 J
SELENIUM	5	50	50	180		2.2 J	5.1	2.6 J	5 U	1 J	2.3 J	5 U	5 U	5 U	5 U	1.8 J	5 U	4.2 U	4.9 U	4.8 U	3.9 U
SILVER	1			180		1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.2 U	1.4 U	1.4 U	1.1 U
SODIUM	5000					994000	59400	91100	183000	725000	1210000	173000	393000	128000	133000	1020000	26900	594 U	508 J	759	307 J
THALLIUM	1	0.5	2			1 U	1 U	1 U	1 U	1 U	0.24 J	1 U	1 U	1 U	1 U	1 U	1 U	3 U	3.5 U	3.4 U	2.8 U
VANADIUM	5			260		5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	8.7	5 U	21.8	11.5	12.5	8.5
ZINC	2			11,000		6.3	4	32.7	2.2	2.3	18.7	2 U	2 U	2 U	2.3	1.4 J	1.5 J	36.5	30.1	32	22.2

Table 12
Metals Data

Analyte	CLP Limits - Water (µg/L)		SCDM (Drinking Water)										
		MCLG (µg/L)	MCL (µg/L)	RDSC (µg/L)	CRSC (µg/L)	PGSE04 µg/kg	PGSE05 µg/kg	PGSW01 µg/L	PGSW02 µg/L	PGSW02D µg/L	PGSW03 µg/L	PGSW04 µg/L	PGSW05 µg/L
ALUMINUM	200	00				1680	3290	200 U	93.6 J	200 U	90.2 J	99.9245 J	109 J
ANTIMONY	2	66		15		7.5 U	8.1 U	2 U	0.37 J	2 U	0.43 J	2 U	0.34 J
ARSENIC	1	0	10	11	0.057	3.9	2.5	0.44 J	0.48 J	0.46 J	0.53 J	0.39 J	0.59 J
BARIUM	10	2,000	2,000	2,600		356	162	36.4	33.1	32.3	33.8	30.7	31.7
BERYLLIUM	1	44		73		0.63 U	0.67 U	1 U	1 U	1 U	1 U	1 U	1 U
CADMIUM	1	55		18		0.63 U	0.67 U	1 U	1 U	1 U	1 U	1 U	1 U
CALCIUM	5000					40400	28100	316000	313000 J	316000 J	345000 J	295000 J	289000 J
CHROMIUM	2	100	100	110		4.5	7.3	2 U	2 U	2 U	2 U	2 U	2 U
COBALT	1					2.2 J	3.1 J	0.54 J	0.46 J	0.54 J	0.52 J	0.44 J	0.45 J
COPPER	2	1,300	1,300			2.6 J	3.7 J	2.7 UJ	2.7 U	2.4 U	2.3 U	2.2 U	2.6 U
IRON	100					6360	6290	68.1 J	81.8 J	72 J	79.3 J	114	114
LEAD	1	01	5			5.7	5.5	1 U	0.24 J	0.2 J	0.23 J	0.34 J	0.33 J
MAGNESIUM	5000					2500	3710	94600	91100	90100	99000	86100	83100
MANGANESE	1			5,100		367	252	246	147	145	155	129	126
MERCURY	0.2	22		11		0.13 U	0.07 J	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
NICKEL	1			730		4.2 J	6.3	2.4	3.2	2.9	2.9	2.9	2.6
POTASSIUM	5000					384 J	820	11800	10500	10200	11300	9160	8830
SELENIUM	5	50	50	180		4.4 U	4.7 U	5 U	2.1 J	2.1 J	2.4 J	2.7 J	3.2 J
SILVER	1			180		1.3 U	1.3 U	1 U	1 U	1 U	1 U	1 U	1 U
SODIUM	5000					293 J	396 J	184000	262000	258000	286000	251000	265000
THALLIUM	1	0.5	2			3.1 U	3.4 U	1 U	1 U	1 U	1 U	1 U	1 U
VANADIUM	5			260		6.5	9.4	5 U	5 U	5 U	5 U	5 U	5 U
ZINC	2			11,000		14.2	21.6	2 U	1.1 J	1.2 J	2 U	1.4 J	1.4 J

Table 13
Fixed and Light Gases in Natural Gas from Production Wells and Domestic Water Wells

Analyte	Laboratory Name	PGDW03	PGDW04	PGDW05	PGDW05D	PGDW10	PGDW20	PGDW22	PGDW23	PGDW25	PGDW30
Methane	ZymaX		5.2		53		1300		820		6300
Ethane	ZymaX						52		1.7		1.8
Propanes	ZymaX						5.8				
Butanes	ZymaX				7.3		6.9		12		3.1
Pentanes	ZymaX				11		1.3		2.3		3.9
Hexanes	ZymaX				4.7				2.4		0.77
Heptanes	ZymaX				2.5				0.5		0.79
Octanes	ZymaX				4.1		1.9		2.4		2.9
Nonanes	ZymaX										
Decanes	ZymaX										
Total	ZymaX		5.2		82		1368		841		6313

The concentrations represent ppm of the gas hydrocarbons in the headspace created above the water in the 1 litre bottle.
These are not concentrations in the water of the analyte.

The sample was not analyzed for this analyte.
(Blank Cell) Non Detect for this analyte.

Table 13
Fixed and Light Gases in Natural Gas from Production Wells and Domestic Water Wells

Analyte	Laboratory Name	PGDW32	PGDW39	PGDW40	PGDW41	PGDW42	PGDW43	PGDW44	PGDW45	PGDW46	PGDW47
Methane	ZymaX			270	12			5.4			
Ethane	ZymaX						1.4				
Propanes	ZymaX										
Butanes	ZymaX										
Pentanes	ZymaX				3.7			1.8			
Hexanes	ZymaX				0.75			0.54			
Heptanes	ZymaX				2.8			0.47			
Octanes	ZymaX							2.1			
Nonanes	ZymaX										
Decanes	ZymaX										
Total	ZymaX			270	19		1.4	10			

Table 13
Fixed and Light Gases in Natural Gas from Production Wells and Domestic Water Wells

Analyte	Laboratory Name	PGDW48	PGDW49	PGPW01	PGPW02
Methane	ZymaX				
Ethane	ZymaX				
Propanes	ZymaX				
Butanes	ZymaX				
Pentanes	ZymaX				
Hexanes	ZymaX				
Heptanes	ZymaX				
Octanes	ZymaX				
Nonanes	ZymaX				
Decanes	ZymaX				
Total	ZymaX				

Table 14
Isotopic Analysis

Sample ID	$\delta^{13}C$ % VPDB CH_4	δD % VSMOW CH_4
PGDW04	-63.91	[a]-219.56
PGDW05D	-40.63	-179.79
PGDW20	-40.61	-182.61
PGDW23	-24.21	-178.65
PGDW30	-14.46	-168.16
PGDW40	-30.93	-175.39
PGDW41	-19.39	[a]-154.35
PGDW43		
PGDW44	-14.87	[a]-142.87
PGPP01	-28.54	-200.38
PGPP02	-28.99	-204.03
PGPP03		
PGPP04P	-28.39	-196.66
PGPP05	-27.49	-198.69
PGPP06	-28.43	-194.96

VPDB Vienna PeeDee Belemnite
VSMOW Vienna Standard Mean Ocean water

[a]Estimate results of δD at low concentrations.

The sample was not analyzed for this analyte.

(Blank Cell) Non Detect for this analyte.

Table 15-A
Gas Analysis by Chromatography – ASTMD 1945

Sample ID:	PGPP01			PGPP02			PGPP03			PGPP04P			PGPP05			PGPP06		
Analyte:	**Mole %**	**Weight %**	**G/MCF**	**Mole %**	**Weight %**	**G/MCF**	**Mole %**	**Weight %**	**G/MCF**	**Mole %**	**Weight %**	**G/MCF**	**Mole %**	**Weight %**	**G/MCF**	**Mole %**	**Weight %**	**G/MCF**
Oxygen	0.00	0.00		0.00	0.00		0.00	0.00		0.02	0.04		2.2	3.78		0.07	0.12	
Nitrogen	0.71	1.11		0.69	1.13		100	100.00		0.61	0.91		7.92	11.9		0.71	1.13	
Carbon Dioxide	0.04	0.1		0.49	1.27		0.00	0.00		0.12	0.28		0.59	1.4		0.06	0.14	
Hydrogen Sulfide																		
Methane	92.45	83.14		94.5	88.67		0.00	0.00		90	75.98		84.73	72.9		93.09	84.89	
Ethane	4.1	6.91	1.044	3.52	6.19	0.897	0.00	0.00	0.00	4.67	7.4	1.191	3.31	5.34	0.843	3.98	6.81	1.015
Propane	1.22	3.02	0.337	0.36	0.92	0.099	0.00	0.00	0.00	1.47	3.41	0.406	0.34	0.81	0.095	0.91	2.29	0.252
i-Butane	0.41	1.34	0.135	0.14	0.48	0.047	0.00	0.00	0.00	0.58	1.76	0.189	0.12	0.38	0.04	0.33	1.09	0.108
n-Butane	0.37	1.2	0.116	0.07	0.23	0.021	0.00	0.00	0.00	0.51	1.56	0.162	0.06	0.18	0.018	0.26	0.84	0.081
neo-Pentane	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.06	0.006	0.00	0.00	0.00	0.00	0.00	0.00
i-Pentane	0.19	0.77	0.07	0.05	0.23	0.02	0.00	0.00	0.00	0.35	1.32	0.127	0.04	0.15	0.014	0.16	0.64	0.057
n-Pentane	0.12	0.47	0.042	0.02	0.09	0.008	0.00	0.00	0.00	0.22	0.84	0.08	0.01	0.05	0.004	0.09	0.39	0.034
2,2-Dimethylbutane	0.01	0.05	0.004	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.09	0.007	0.00	0.00	0.00	0.01	0.05	0.004
2,3-Dimethylbutane	0.06	0.3	0.023	0.03	0.14	0.01	0.00	0.00	0.00	0.21	0.94	0.075	0.00	0.00	0.00	0.06	0.31	0.023
2-Methylpentane	0.1	0.46	0.034	0.03	0.14	0.01	0.00	0.00	0.00	0.26	1.17	0.094	0.03	0.16	0.012	0.09	0.46	0.034
3-Methylpentane	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
n-Hexane	0.04	0.18	0.016	0.02	0.08	0.007	0.00	0.00	0.00	0.13	0.57	0.053	0.02	0.09	0.008	0.05	0.24	0.021
Hexanes Plus	0.2	0.95	0.082	0.08	0.42	0.035	0.00	0.00	0.00	0.81	3.66	0.339	0.62	2.86	0.26	0.12	0.58	0.05
Totals	100	100	1.903	100	100	1.152	0.00	100.00	0.00	100	100	2.728	100	100	1.295	100	100	1.679

The sample was not analyzed for this analyte.
G/MCF: Gallons/Thousand Cubic Feet

Table 15-B
Gas Analysis by Chromatography – ASTMD 3588

Sample ID:	PGPP01	PGPP02	PGPP03	PGPP04P	PGPP05	PGPP06
Specific Gravity, Calculated	0.6159	0.5903	0.9672	0.6561	0.6437	0.6074
Compressibility (Z) factor	0.9975	0.9978	0.9997	0.9971	0.9979	0.9976
Gross Calorific Value						
BTU/ft^3 dry	1093.7	1042.9	0.0	1155	962.7	1078.9
BTU/ft^3 wet	1074.7	1024.8	0.0	1134.9	946.0	1060.1
Net Calorific Value						
BTU/ft^3 dry	987.8	940.5	0.0	1045	868.8	974.0
BTU/ft^3 wet	970.6	924.1	0.0	1026.8	853.7	957.0
CHONS	**Weight %**	**Weight %**	**Weight %**	**Weight %**	**Weight %**	**Weight %**
Carbon	75.02	73.94	0.0	75.64	63.12	74.74
Hydrogen	23.8	24	0.0	23.21	20.18	23.9
Oxygen	0.07	0.93	0.0	0.25	4.8	0.23
Nitrogen	1.11	1.13	100.0	0.91	11.9	1.13
Sulfur	0.0	0.0	0.0	0.0	0.0	0.0
EPA 'F' Factor (60°F, 1ATM)	8513.2	8508	*	8516.1	8618.2	8509.1

* Out of range
BTU British Thermal Unit

Sample ID:	PGPP01	PGPP04P
Analyte:		
Evaporation		
n-Pentane/n-Heptane	0.12	0.16
2-Methylpentane/2-Methylheptane	0.39	0.49
Waterwashing		
Benzene/Cyclohexane	0	0
Toluene/Methylcyclohexane	0.3	0.2
Aromatics/Total Paraffins (n + iso + cyc)	0.49	0.29
Aromatics/Naphthenes	1.37	0.81
Biodegradation		
(C4-C8 Para + Isopara)/C4-C8 Olefins	9.72	7.66
3-Methylhexane/n-Heptane	0.33	0.37
Methylcyclohexane/n-Heptane	3.52	3.48
Isoparaffins + Naphthenes/Paraffins	2.18	2.41
Octane Rating		
2,2,4,-Trimethylpentane/Methylcyclohexane	0	0
Relative Percentages-Bulk hydrocarbon composition as PIANO		
% Paraffinic	20.38	21.47
% Isoparaffinic	21.34	25.51
% Aromatic	31.55	21.22
% Naphthenic	23.1	26.28
% Olefinic	3.63	5.51

Table 17
C3-C10 Gasoline Range Compounds from Production Wells and Domestic Wells
(ug/L)

Analyte	Laboratory Name	PGMWO1D	PGMW02	PGMW03	PGPP01	PGPP04W	PGPP05	PGPP06	PGSW01	PGSW02	PGSW02D	PGSW03	PGSW04	PGSW05	PGDW03	PGDW04	PGDW05	PGDW05D	PGDW10	PGDW20	PGDW22	PGDW23	PGDW25	PGDW30
Isobutane	ZymaX					1363.4	1808.6	723.0												2.6		8.9		
Isobutene	ZymaX					116.1																		
Butane	ZymaX					1379.9	1079.9	703.6																
3-Methyl-1-butene	ZymaX																							
Isopentane	ZymaX					1017.3	2685.2	422.6																
1-Pentene	ZymaX																							
2-Methyl-1-butene	ZymaX																							
Pentane	ZymaX					2483.9	1212.9	48778.4																
trans-2-Pentene	ZymaX					8.6																		
cis-2-Pentene	ZymaX																							
2-Methyl-2-butene	ZymaX					46.8																		
2,2-Dimethylbutane	ZymaX					42.6	646.9																	
Cyclopentene	ZymaX					6.1																		
4-Methyl-1-pentene	ZymaX																							
Cyclopentane	ZymaX					240.3	191.3	186.0																
2,3-Dimethylbutane	ZymaX					97.9	1389.2	70.8																
2-Methylpentane	ZymaX					256.7	2002.4	147.1																
3-Methylpentane	ZymaX					178	1322.5	97.9																
Hexane	ZymaX					301.4	1407.6	153.7																
trans-2-Hexene	ZymaX																							
2-Methyl-2-pentene	ZymaX					66.8																		
3-Methylcyclopentene	ZymaX																							
3-Methyl-2-pentene	ZymaX																							
cis-2-Hexene	ZymaX																							
2,2-Dimethylpentane	ZymaX																							
1,2-Dichloroethane (EDC)	ZymaX																							
Methylcyclopentane	ZymaX					720.5	1184.7	490.6																
2,4-Dimethylpentane	ZymaX						1070.6	81.4																
1-Methylcyclopentene	ZymaX					6.2																		
Benzene	ZymaX					2052.5	379.1	1953.0																
5-Methyl-1-hexene	ZymaX																							
4,4-Dimethyl-2-pentene	ZymaX																							
3,3-Dimethylpentane	ZymaX						161																	
Thiophene	ZymaX																							
Cyclohexane	ZymaX					1139	1527.9	728.6																
2-Methylhexane	ZymaX					72.2	2095.0	142.1																
2,3-Dimethylpentane	ZymaX					7.4	320.8																	
3-Methylhexane	ZymaX					92	2201.3	158.8																
trans-1,3-Dimethylcyclopentane	ZymaX					74.6	822.8	63.8																
cis-1,3-Dimethylcyclopentane	ZymaX					87.2	921.7	70.7																
2-Methyl-1-hexene	ZymaX																							
1,2-Dimethylcyclopentane	ZymaX					125.5	702.6	85.2																
2,2,4-Trimethylpentane	ZymaX						62.6																	
Heptane	ZymaX					227.9	2844.4																	
trans-2-Heptene	ZymaX																							
Methylcyclohexane	ZymaX					1799.9	5934.7	1089.0																
2,5-Dimethylhexane	ZymaX					14.8	1414.1	103.4																
2,4-Dimethylhexane	ZymaX					17.4	1478.7	112.3																
2,3,4-Trimethylpentane	ZymaX						76.3																	
2,3-Dimethylhexane	ZymaX					24	1898.5	135.9																
1,2-Dibromoethane (EDB)	ZymaX																							
2-Methylheptane	ZymaX						2390.8	204.4																
4-Methylheptane	ZymaX					54	1860.8	144.3																
Toluene	ZymaX					11329.2	1284.8	7288.4																
2,3,3-Trimethylpentane	ZymaX						111																	
3,4-Dimethylhexane	ZymaX						2167.4	189.2																
2-Methylthiophene	ZymaX																							
3-Ethyl-3-methylpentane	ZymaX						157.9																	
3-Methylthiophene	ZymaX																							
3-Methylheptane	ZymaX					85.5	3145.6	253.0																
trans-1,4-Dimethylcyclohexane	ZymaX					526.9	10460.3	928.2																
2-Methyl-1-heptene	ZymaX																							
trans-1,2-Dimethylcyclohexane	ZymaX					193.1	5670.5	421.0																
1-Octene	ZymaX																							
Octane	ZymaX					208.5	3030.2	267.2																

Table 17
C3-C10 Gasoline Range Compounds from Production Wells and Domestic Wells
(ug/L)

Analyte	Laboratory Name	PGMWO1D	PGMW02	PGMW03	PGPP01	PGPP04W	PGPP05	PGPP06	PGSW01	PGSW02	PGSW02D	PGSW03	PGSW04	PGSW05	PGDW03	PGDW04	PGDW05	PGDW05D	PGDW10	PGDW20	PGDW22	PGDW23	PGDW25	PGDW30
2,2-Dimethylheptane	ZymaX					8.7	1299.8	97.7																
2,4,4-Trimethylhexane	ZymaX					59.4	4870.1	425.8																
2,4-Dimethylheptane	ZymaX					10.7	1699.7	132.4																
2,6-Dimethylheptane	ZymaX					38.3	2787.2	239.2																
Ethylcyclohexane	ZymaX					184.2	5016.4	440.8																
2,5-Dimethylheptane	ZymaX					48.2	5706.2	512.0																
Ethylbenzene	ZymaX					631.6	579.2	262.0																
2-Ethylthiophene	ZymaX																							
m,p-Xylenes	ZymaX					11512.9	3684.8	4291.9																
3-Ethylheptane	ZymaX					16.6	2047.9	188.4																
3-Methyloctane	ZymaX					81.2	10753.8	828.1																
2,3-Dimethylheptane	ZymaX						449.7																	
4-Methyloctane	ZymaX					44.1	3917.7	316.4																
1,2,4-Trimethylcyclohexane	ZymaX						358.8																	
Styrene	ZymaX					22.1																		
2-Methyloctane	ZymaX					36.4	3219.3	300.2																
1,1,2-Trimethylcyclohexane	ZymaX					34.8	4720.3	387.6																
o-Xylene	ZymaX					2639.9	1306.9	1099.5																
1-Nonene	ZymaX																							
Nonane	ZymaX					142.6	3916.8	377.2																
3,3,5-Trimethylheptane	ZymaX						3729.6	294.7																
Isopropylbenzene	ZymaX					541.8	3427.3	336.5																
Isopropylcyclohexane	ZymaX					19.4	4876.7	434.9																
2,2-Dimethyloctane	ZymaX						105.3																	
3-Methylnonane	ZymaX					20.3	5908.1	637.9																
3,3-Dimethyloctane	ZymaX					39.7	1458.9	126.3																
n-Propylbenzene	ZymaX					129.5	802.7	110.2																
1-Methyl-3-ethylbenzene	ZymaX					579.7	1652	412.6																
1-Methyl-4-ethylbenzene	ZymaX					192.3	793.6	154.9																
1,3,5-Trimethylbenzene	ZymaX					464.5	1566	365.9																
3,3,4-Trimethylheptane	ZymaX						2139.6																	
1-Methyl-2-ethylbenzene	ZymaX					164	674.4	159.7																
1,2,4-Trimethylbenzene	ZymaX					694.7	2620.7	632.1																
1-Decene	ZymaX																							
1-Methyl-3-isopropylbenzene	ZymaX					44.7	1082.9	107.3																
Decane	ZymaX					73.7	4153.3	407.8																
sec-Butylbenzene	ZymaX					7	655.3	61.5																
1,2,3-Trimethylbenzene	ZymaX					155	903.7	170.3																
Indane	ZymaX					9.1	358.8																	
Indene	ZymaX						79.1																	
1,3-Diethylbenzene	ZymaX						626.3	63.6																
n-Butylbenzene	ZymaX						178.9																	
1,3-Dimethyl-5-ethylbenzene	ZymaX																							
1,4-Diethylbenzene	ZymaX						256.1																	
1-Methyl-2-propylbenzene	ZymaX						133.2																	
1,4-Dimethyl-2-ethylbenzene	ZymaX																							
1,3-Dimethyl-4-ethylbenzene	ZymaX							81.4																
1,2-Dimethyl-4-ethylbenzene	ZymaX																							
1,3-Dimethyl-2-ethylbenzene	ZymaX																							
Undecane	ZymaX						312.3	373.7																
1,2,4,5-Tetramethylbenzene	ZymaX																							
1,2,3,5-Tetramethylbenzene	ZymaX																							
1,2,3,4-Tetramethylbenzene	ZymaX																							
Naphthalene	ZymaX																							
2-Methylnaphthalene	ZymaX																							
1-Methylnaphthalene	ZymaX																							
Benzothiophene	ZymaX																							
n-Pentylbenzene	ZymaX																							

The sample was not analyzed for this analyte.
(Blank Cell) Non Detect for this analyte.

Table 17
C3-C10 Gasoline Range Compounds from Production Wells and Domestic Wells
(ug/L)

Analyte	Laboratory Name	PGDW32	PGDW39	PGDW40	PGDW41	PGDW42	PGDW43	PGDW44	PGDW45	PGDW46	PGDW47	PGDW48	PGDW49	PGPW01	PGPW02	PGFB01	PGFM20	PGMW01
Isobutane	ZymaX																	
Isobutene	ZymaX																	
Butane	ZymaX																	
3-Methyl-1-butene	ZymaX																	
Isopentane	ZymaX																	
1-Pentene	ZymaX																	
2-Methyl-1-butene	ZymaX																	
Pentane	ZymaX																	
trans-2-Pentene	ZymaX																	
cis-2-Pentene	ZymaX																	
2-Methyl-2-butene	ZymaX																	
2,2-Dimethylbutane	ZymaX																	
Cyclopentene	ZymaX																	
4-Methyl-1-pentene	ZymaX																	
Cyclopentane	ZymaX																	
2,3-Dimethylbutane	ZymaX																	
2-Methylpentane	ZymaX																	
3-Methylpentane	ZymaX																	
Hexane	ZymaX																	
trans-2-Hexene	ZymaX																	
2-Methyl-2-pentene	ZymaX																	
3-Methylcyclopentene	ZymaX																	
3-Methyl-2-pentene	ZymaX																	
cis-2-Hexene	ZymaX																	
2,2-Dimethylpentane	ZymaX																	
1,2-Dichloroethane (EDC)	ZymaX																	
Methylcyclopentane	ZymaX																	
2,4-Dimethylpentane	ZymaX																	
1-Methylcyclopentene	ZymaX																	
Benzene	ZymaX																	
5-Methyl-1-hexene	ZymaX																	
4,4-Dimethyl-2-pentene	ZymaX																	
3,3-Dimethylpentane	ZymaX																	
Thiophene	ZymaX																	
Cyclohexane	ZymaX																	
2-Methylhexane	ZymaX																	
2,3-Dimethylpentane	ZymaX																	
3-Methylhexane	ZymaX																	
trans-1,3-Dimethylcyclopentane	ZymaX																	
cis-1,3-Dimethylcyclopentane	ZymaX																	
2-Methyl-1-hexene	ZymaX																	
1,2-Dimethylcyclopentane	ZymaX																	
2,2,4-Trimethylpentane	ZymaX																	
Heptane	ZymaX																	
trans-2-Heptene	ZymaX																	
Methylcyclohexane	ZymaX																	
2,5-Dimethylhexane	ZymaX																	
2,4-Dimethylhexane	ZymaX																	
2,3,4-Trimethylpentane	ZymaX																	
2,3-Dimethylhexane	ZymaX																	
1,2-Dibromoethane (EDB)	ZymaX																	
2-Methylheptane	ZymaX																	
4-Methylheptane	ZymaX																	
Toluene	ZymaX																	
2,3,3-Trimethylpentane	ZymaX																	
3,4-Dimethylhexane	ZymaX																	
2-Methylthiophene	ZymaX																	
3-Ethyl-3-methylpentane	ZymaX																	
3-Methylthiophene	ZymaX																	
3-Methylheptane	ZymaX																	
trans-1,4-Dimethylcyclohexane	ZymaX																	
2-Methyl-1-heptene	ZymaX																	
trans-1,2-Dimethylcyclohexane	ZymaX																	
1-Octene	ZymaX																	
Octane	ZymaX																	

Table 17
C3-C10 Gasoline Range Compounds from Production Wells and Domestic Wells
(ug/L)

Analyte	Laboratory Name	PGDW32	PGDW39	PGDW40	PGDW41	PGDW42	PGDW43	PGDW44	PGDW45	PGDW46	PGDW47	PGDW48	PGDW49	PGPW01	PGPW02	PGFB01	PGFM20	PGMW01
2,2-Dimethylheptane	ZymaX																	
2,4,4-Trimethylhexane	ZymaX																	
2,4-Dimethylheptane	ZymaX																	
2,6-Dimethylheptane	ZymaX																	
Ethylcyclohexane	ZymaX																	
2,5-Dimethylheptane	ZymaX																	
Ethylbenzene	ZymaX																	
2-Ethylthiophene	ZymaX																	
m,p-Xylenes	ZymaX																	
3-Ethylheptane	ZymaX																	
3-Methyloctane	ZymaX																	
2,3-Dimethylheptane	ZymaX																	
4-Methyloctane	ZymaX																	
1,2,4-Trimethylcyclohexane	ZymaX																	
Styrene	ZymaX																	
2-Methyloctane	ZymaX																	
1,1,2-Trimethylcyclohexane	ZymaX																	
o-Xylene	ZymaX																	
1-Nonene	ZymaX																	
Nonane	ZymaX																	
3,3,5-Trimethylheptane	ZymaX																	
Isopropylbenzene	ZymaX																	
Isopropylcyclohexane	ZymaX																	
2,2-Dimethyloctane	ZymaX																	
3-Methylnonane	ZymaX																	
3,3-Dimethyloctane	ZymaX																	
n-Propylbenzene	ZymaX																	
1-Methyl-3-ethylbenzene	ZymaX																	
1-Methyl-4-ethylbenzene	ZymaX																	
1,3,5-Trimethylbenzene	ZymaX																	
3,3,4-Trimethylheptane	ZymaX																	
1-Methyl-2-ethylbenzene	ZymaX																	
1,2,4-Trimethylbenzene	ZymaX																	
1-Decene	ZymaX																	
1-Methyl-3-isopropylbenzene	ZymaX																	
Decane	ZymaX																	
sec-Butylbenzene	ZymaX																	
1,2,3-Trimethylbenzene	ZymaX																	
Indane	ZymaX																	
Indene	ZymaX																	
1,3-Diethylbenzene	ZymaX																	
n-Butylbenzene	ZymaX																	
1,3-Dimethyl-5-ethylbenzene	ZymaX																	
1,4-Diethylbenzene	ZymaX																	
1-Methyl-2-propylbenzene	ZymaX																	
1,4-Dimethyl-2-ethylbenzene	ZymaX																	
1,3-Dimethyl-4-ethylbenzene	ZymaX																	
1,2-Dimethyl-4-ethylbenzene	ZymaX																	
1,3-Dimethyl-2-ethylbenzene	ZymaX																	
Undecane	ZymaX																	
1,2,4,5-Tetramethylbenzene	ZymaX																	
1,2,3,5-Tetramethylbenzene	ZymaX																	
1,2,3,4-Tetramethylbenzene	ZymaX																	
Naphthalene	ZymaX																	
2-Methylnaphthalene	ZymaX																	
1-Methylnaphthalene	ZymaX																	
Benzothiophene	ZymaX																	
n-Pentylbenzene	ZymaX																	