Applied P & Ch Laboratory
13760 Magnolia Ave. Chino CA 91710
Tel: (909) 590-1828 Fax: (909) 590-1498

APCL Analytical Report

Submitted to:
Tetra Tech EM Inc.
Attention: Rammeen Noezzi
135 Main Street, Ste 1800
San Francisco CA 94105
Tel: (415)543-4880 Fax: (415)543-5480

Service ID #: 801-004574
Collected by:
Collected on: 08/31/00

Received: 09/01/00
Extracted: 09/01-07/00
Tested: 09/01-08/00
Reported: 09/08/00

Sample Description: Water and Soil from Hunters Point
Project Description: G0069-005B05030S Parcel E Data Gaps

Analysis of Water and Soil Samples

I. Analysis of Water Samples

Component Analyzed	Method	Unit	PQL	Analysis Result 109-IR01/21-WC001 00-04574-5	109-IR01/21-WC002 00-04574-6
CORROSIVITY (PH)	9045	pH unit	0.01	7.37	7.31
IGNITABILITY (FLASHPOINT)	1010	°C	0.5 [a]	>100	>100
OIL AND GREASE	413.2	mg/L	1	0.7J	2
REACTIVITY: CYANIDE	SW§7.3.3	mg/L	10	<10	<10
REACTIVITY: SULFIDE	SW§7.3.4	mg/L	10	<10	<10
METALS, TOTAL					
Dilution Factor				3	3
ALUMINUM	SW6010B	µg/L	100	4,900	10,400
ANTIMONY	SW6010B	µg/L	6	66.9	105
ARSENIC	SW6010B	µg/L	3	155	219
BARIUM	SW6010B	µg/L	10	1,280	2,280
BERYLLIUM	SW6010B	µg/L	2	<6	<6
CADMIUM	SW6010B	µg/L	2	10.5	19.5
CALCIUM	SW6010B	µg/L	200	1,160,000	1,220,000
CHROMIUM	SW6010B	µg/L	5	132	268
COBALT	SW6010B	µg/L	5	27.7	41.7
COPPER	SW6010B	µg/L	10	340	530
IRON	SW6010B	µg/L	50	21,300	39,000
LEAD	SW6010B	µg/L	3	3,980	8,840
MAGNESIUM	SW6010B	µg/L	100	133,000	138,000
MANGANESE	SW6010B	µg/L	5	3,380	4,270
Dilution Factor				1	1
MERCURY	SW7470A	µg/L	0.2	1.6	2.3
Dilution Factor				3	3
MOLYBDENUM	SW6010B	µg/L	5	132	128
NICKEL	SW6010B	µg/L	5	153	206
POTASSIUM	SW6010B	µg/L	400	64,600	64,300
SELENIUM	SW6010B	µg/L	5	16.3	<15
SILVER	SW6010B	µg/L	10	<30	<30
SODIUM	SW6010B	µg/L	2000	147,000	132,000
THALLIUM	SW6010B	µg/L	2	<6	<6
VANADIUM	SW6010B	µg/L	10	46.3	69.2
ZINC	SW6010B	µg/L	10	3,060	6,380
Dilution Factor				10	10
GASOLINE RANGE ORGANICS	SW8015B	mg/L	0.05	0.3JZ [b]	0.2J [b]
Dilution Factor				10	1
DIESEL RANGE ORGANICS	SW8015B	mg/L	0.5	15Z [c]	7.0Z [c]
Dilution Factor				10	1
MOTOR OIL RANGE ORGANICS	SW8015B	mg/L	0.5	<5	2.0

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Component Analyzed	Method	Unit	PQL	Analysis Result 109-IR01/21-WC001 00-04574-5	109-IR01/21-WC002 00-04574-6
SEMI-VOC					
Dilution Factor				1	1
ACENAPHTHENE	SW8270C	µg/L	10	<10	<10
ACENAPHTHYLENE	SW8270C	µg/L	10	<10	<10
ANTHRACENE	SW8270C	µg/L	10	<10	<10
BENZOIC ACID	SW8270C	µg/L	50	5,330 (d)	5,620 (d)
BENZ(A)ANTHRACENE	SW8270C	µg/L	10	<10	<10
BENZO(A)PYRENE	SW8270C	µg/L	10	<10	<10
BENZO(B)FLUORANTHENE	SW8270C	µg/L	10	<10	<10
BENZO(G,H,I)PERYLENE	SW8270C	µg/L	10	<10	<10
BENZO(K)FLUORANTHENE	SW8270C	µg/L	10	<10	<10
BIS(2-CHLOROETHOXY) METHANE	SW8270C	µg/L	10	<10	<10
BIS(2-CHLOROETHYL) ETHER	SW8270C	µg/L	5	<5	<5
BIS(2-CHLOROISOPROPYL) ETHER	SW8270C	µg/L	5	<5	<5
BIS(2-ETHYLHEXYL) PHTHALATE	SW8270C	µg/L	5	<5	<5
4-BROMOPHENYL PHENYL ETHER	SW8270C	µg/L	10	<10	<10
BUTYL BENZYL PHTHALATE (BBP)	SW8270C	µg/L	10	<10	<10
CARBAZOLE	SW8270C	µg/L	10	<10	<10
4-CHLORO-3-METHYLPHENOL	SW8270C	µg/L	20	<20	<20
4-CHLOROANILINE	SW8270C	µg/L	20	<20	<20
2-CHLORONAPHTHALENE	SW8270C	µg/L	10	<10	<10
2-CHLOROPHENOL	SW8270C	µg/L	10	<10	<10
4-CHLOROPHENYL PHENYL ETHER	SW8270C	µg/L	10	<10	<10
CHRYSENE	SW8270C	µg/L	10	<10	<10
DI-N-BUTYL PHTHALATE (DBP)	SW8270C	µg/L	10	<10	<10
DI-N-OCTYL PHTHALATE (DOP)	SW8270C	µg/L	10	<10	<10
DIBENZ(A,H)ANTHRACENE	SW8270C	µg/L	10	<10	<10
DIBENZOFURAN	SW8270C	µg/L	10	<10	<10
1,2-DICHLOROBENZENE	SW8270C	µg/L	10	<10	<10
1,3-DICHLOROBENZENE	SW8270C	µg/L	10	<10	<10
1,4-DICHLOROBENZENE	SW8270C	µg/L	5	<5	<5
3,3'-DICHLOROBENZIDINE	SW8270C	µg/L	10	<10	<10
2,4-DICHLOROPHENOL	SW8270C	µg/L	10	<10	<10
DIETHYL PHTHALATE (DEP)	SW8270C	µg/L	10	<10	<10
DIMETHYL PHTHALATE (DMP)	SW8270C	µg/L	10	<10	<10
2,4-DIMETHYLPHENOL	SW8270C	µg/L	10	9J	9J
4,6-DINITRO-2-METHYLPHENOL	SW8270C	µg/L	50	<50	<50
2,4-DINITROPHENOL	SW8270C	µg/L	50	<50	<50
2,4-DINITROTOLUENE	SW8270C	µg/L	10	<10	<10
2,6-DINITROTOLUENE	SW8270C	µg/L	10	<10	<10
FLUORANTHENE	SW8270C	µg/L	10	<10	<10
FLUORENE	SW8270C	µg/L	10	<10	<10
HEXACHLOROBENZENE	SW8270C	µg/L	5	<5	<5
HEXACHLOROBUTADIENE	SW8270C	µg/L	5	<5	<5
HEXACHLOROCYCLOPENTADIENE	SW8270C	µg/L	10	<10	<10
HEXACHLOROETHANE	SW8270C	µg/L	5	<5	<5
INDENO(1,2,3-CD)PYRENE	SW8270C	µg/L	10	<10	<10

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Component Analyzed	Method	Unit	PQL	Analysis Result 109-IR01/21-WC001 00-04574-5	109-IR01/21-WC002 00-04574-6
ISOPHORONE	SW8270C	µg/L	10	<10	<10
2-METHYLNAPHTHALENE	SW8270C	µg/L	10	<10	<10
3/4-METHYLPHENOL (M/P-CRESOL)	SW8270C	µg/L	10	36	37
2-METHYLPHENOL (O-CRESOL)	SW8270C	µg/L	10	18	18
NAPHTHALENE	SW8270C	µg/L	10	<10	<10
2-NITROANILINE	SW8270C	µg/L	50	<50	<50
3-NITROANILINE	SW8270C	µg/L	50	<50	<50
4-NITROANILINE	SW8270C	µg/L	50	<50	<50
NITROBENZENE	SW8270C	µg/L	5	<5	<5
2-NITROPHENOL	SW8270C	µg/L	10	<10	<10
4-NITROPHENOL	SW8270C	µg/L	50	<50	<50
N-NITROSODIPHENYLAMINE	SW8270C	µg/L	10	<10	<10
PENTACHLOROPHENOL (PCP)	SW8270C	µg/L	50	<50	<50
PHENANTHRENE	SW8270C	µg/L	10	<10	<10
PHENOL	SW8270C	µg/L	10	46	50
PYRENE	SW8270C	µg/L	10	<10	<10
1,2,4-TRICHLOROBENZENE	SW8270C	µg/L	10	<10	<10
2,4,5-TRICHLOROPHENOL	SW8270C	µg/L	50	<50	<50
2,4,6-TRICHLOROPHENOL	SW8270C	µg/L	5	<5	<5
ORGANOCHLORINE PESTICIDES & PCBS					
Dilution Factor				1	1
ALDRIN	SW8081A	µg/L	0.05	<0.05	<0.05
BETA-BHC	SW8081A	µg/L	0.05	<0.05	<0.05
ALPHA-BHC	SW8081A	µg/L	0.05	<0.05	<0.05
DELTA-BHC	SW8081A	µg/L	0.05	<0.05	<0.05
GAMMA-BHC (LINDANE)	SW8081A	µg/L	0.05	<0.05	<0.05
CHLORDANE	SW8081A	µg/L	2	<2	<2
4,4'-DDD	SW8081A	µg/L	0.1	<0.1	<0.1
4,4'-DDE	SW8081A	µg/L	0.1	<0.1	<0.1
4,4'-DDT	SW8081A	µg/L	0.1	<0.1	<0.1
DIELDRIN	SW8081A	µg/L	0.1	<0.1	<0.1
ENDOSULFAN I	SW8081A	µg/L	0.05	<0.05	<0.05
ENDOSULFAN II	SW8081A	µg/L	0.1	<0.1	<0.1
ENDOSULFAN SULFATE	SW8081A	µg/L	0.5	<0.5	<0.5
ENDRIN	SW8081A	µg/L	0.1	<0.1	<0.1
ENDRIN ALDEHYDE	SW8081A	µg/L	0.1	<0.1	<0.1
ENDRIN KETONE	SW8081A	µg/L	0.1	<0.1	<0.1
HEPTACHLOR	SW8081A	µg/L	0.05	<0.05	<0.05
HEPTACHLOR EPOXIDE	SW8081A	µg/L	0.05	<0.05	<0.05
METHOXYCHLOR	SW8081A	µg/L	2	<2	<2
TOXAPHENE	SW8081A	µg/L	5	<5	<5
AROCLOR-1016 (PCB-1016)	SW8082	µg/L	2	<2	<2
AROCLOR-1221 (PCB-1221)	SW8082	µg/L	5	<5	<5
AROCLOR-1232 (PCB-1232)	SW8082	µg/L	2	<2	<2
AROCLOR-1242 (PCB-1242)	SW8082	µg/L	2	<2	<2
AROCLOR-1248 (PCB-1248)	SW8082	µg/L	2	<2	<2
AROCLOR-1254 (PCB-1254)	SW8082	µg/L	1	<1	<1
AROCLOR-1260 (PCB-1260)	SW8082	µg/L	1	<1	<1

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II . Analysis of Soil Samples

Component Analyzed	Method	Unit	PQL	Analysis Result 109-IR01/21-SC001 00-04574-1	109-IR01/21-SC002 00-04574-2
MOISTURE, PERCENT	ASTM-D2216	%Moisture	0.5	25.8	50.6
CORROSIVITY (PH)	9045	pH unit	0.01	7.81	7.69
IGNITABILITY (FLASHPOINT)	1010	°C	0.5 [a]	>100	>100
OIL AND GREASE	413.2	mg/kg	10	1,200	320
REACTIVITY: CYANIDE	SW§7.3.3	mg/kg	250	<340	<510
REACTIVITY: SULFIDE	SW§7.3.4	mg/kg	50	<67	<100
METALS, TOTAL					
ALUMINUM	SW6010B	mg/kg	5	9,370	11,500
ANTIMONY	SW6010B	mg/kg	5	12.1	12.1
ARSENIC	SW6010B	mg/kg	0.3	30.7	48.8
BARIUM	SW6010B	mg/kg	1	1,160	1,450
BERYLLIUM	SW6010B	mg/kg	0.2	<0.27	<0.40
CADMIUM	SW6010B	mg/kg	0.2	4.5	8.7
CALCIUM	SW6010B	mg/kg	10	42,400	62,500
CHROMIUM	SW6010B	mg/kg	0.5	129	217
COBALT	SW6010B	mg/kg	0.5	18.7	40.6
COPPER	SW6010B	mg/kg	0.5	401	255
IRON	SW6010B	mg/kg	3	33,400	46,700
LEAD	SW6010B	mg/kg	0.3	2,920	3,620
MAGNESIUM	SW6010B	mg/kg	10	13,300	27,900
MANGANESE	SW6010B	mg/kg	0.5	557	1,280
MERCURY	SW7471A	mg/kg	0.05	0.29	0.85
MOLYBDENUM	SW6010B	mg/kg	0.5	1.2	1.4
NICKEL	SW6010B	mg/kg	0.3	154	380
POTASSIUM	SW6010B	mg/kg	20	1,810	2,090
SELENIUM	SW6010B	mg/kg	0.5	<0.67	0.78J
SILVER	SW6010B	mg/kg	0.5	0.16J	0.11J
SODIUM	SW6010B	mg/kg	100	1,580	2,820
THALLIUM	SW6010B	mg/kg	0.5	<0.67	<1.0
VANADIUM	SW6010B	mg/kg	0.5	40.0	59.6
ZINC	SW6010B	mg/kg	0.5	1,680	3,190
Dilution Factor				1.22	1.11
GASOLINE RANGE ORGANICS	SW8015B	mg/kg	1	<1.6	<2.2
Dilution Factor				10	1
DIESEL RANGE ORGANICS	SW8015B	mg/kg	10	150 [c]	89 [c]
Dilution Factor				10	1
MOTOR OIL RANGE ORGANICS	SW8015B	mg/kg	10	690M	240M

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Component Analyzed	Method	Unit	PQL	Analysis Result 109-IR01/21-SC001 00-04574-1	109-IR01/21-SC002 00-04574-2
SEMI-VOC					
Dilution Factor				4	2
ACENAPHTHENE	SW8270C	µg/kg	500	<2700	<2000
ACENAPHTHYLENE	SW8270C	µg/kg	500	<2700	<2000
ANTHRACENE	SW8270C	µg/kg	500	<2700	<2000
BENZOIC ACID	SW8270C	µg/kg	1700	<9200	<6900
BENZ(A)ANTHRACENE	SW8270C	µg/kg	500	<2700	<2000
BENZO(A)PYRENE	SW8270C	µg/kg	500	<2700	<2000
BENZO(B)FLUORANTHENE	SW8270C	µg/kg	500	<2700	<2000
BENZO(G,H,I)PERYLENE	SW8270C	µg/kg	500	<2700	<2000
BENZO(K)FLUORANTHENE	SW8270C	µg/kg	500	<2700	<2000
BIS(2-CHLOROETHOXY) METHANE	SW8270C	µg/kg	170	<890	<670
BIS(2-CHLOROETHYL) ETHER	SW8270C	µg/kg	330	<1800	<1300
BIS(2-CHLOROISOPROPYL) ETHER	SW8270C	µg/kg	330	<1800	<1300
BIS(2-ETHYLHEXYL) PHTHALATE	SW8270C	µg/kg	330	460J	<1300
4-BROMOPHENYL PHENYL ETHER	SW8270C	µg/kg	330	<1800	<1300
BUTYL BENZYL PHTHALATE (BBP)	SW8270C	µg/kg	330	<1800	<1300
CARBAZOLE	SW8270C	µg/kg	330	<1800	<1300
4-CHLORO-3-METHYLPHENOL	SW8270C	µg/kg	660	<3600	<2700
4-CHLOROANILINE	SW8270C	µg/kg	660	<3600	<2700
2-CHLORONAPHTHALENE	SW8270C	µg/kg	330	<1800	<1300
2-CHLOROPHENOL	SW8270C	µg/kg	330	<1800	<1300
4-CHLOROPHENYL PHENYL ETHER	SW8270C	µg/kg	330	<1800	<1300
CHRYSENE	SW8270C	µg/kg	330	<1800	<1300
DI-N-BUTYL PHTHALATE (DBP)	SW8270C	µg/kg	330	<1800	<1300
DI-N-OCTYL PHTHALATE (DOP)	SW8270C	µg/kg	330	<1800	<1300
DIBENZ(A,H)ANTHRACENE	SW8270C	µg/kg	330	<1800	<1300
DIBENZOFURAN	SW8270C	µg/kg	330	<1800	<1300
1,2-DICHLOROBENZENE	SW8270C	µg/kg	330	<1800	<1300
1,3-DICHLOROBENZENE	SW8270C	µg/kg	330	<1800	<1300
1,4-DICHLOROBENZENE	SW8270C	µg/kg	330	<1800	<1300
3,3'-DICHLOROBENZIDINE	SW8270C	µg/kg	660	<3600	<2700
2,4-DICHLOROPHENOL	SW8270C	µg/kg	330	<1800	<1300
DIETHYL PHTHALATE (DEP)	SW8270C	µg/kg	330	<1800	<1300
DIMETHYL PHTHALATE (DMP)	SW8270C	µg/kg	330	<1800	<1300
2,4-DIMETHYLPHENOL	SW8270C	µg/kg	330	530J	<1300
4,6-DINITRO-2-METHYLPHENOL	SW8270C	µg/kg	1700	<8900	<6700
2,4-DINITROPHENOL	SW8270C	µg/kg	1700	<8900	<6700
2,4-DINITROTOLUENE	SW8270C	µg/kg	330	<1800	<1300
2,6-DINITROTOLUENE	SW8270C	µg/kg	330	<1800	<1300
FLUORANTHENE	SW8270C	µg/kg	330	<1800	<1300
FLUORENE	SW8270C	µg/kg	330	<1800	<1300
HEXACHLOROBENZENE	SW8270C	µg/kg	170	<890	<670
HEXACHLOROBUTADIENE	SW8270C	µg/kg	330	<1800	<1300
HEXACHLOROCYCLOPENTADIENE	SW8270C	µg/kg	330	<1800	<1300
HEXACHLOROETHANE	SW8270C	µg/kg	330	<1800	<1300
INDENO(1,2,3-CD)PYRENE	SW8270C	µg/kg	330	<1800	<1300

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Component Analyzed	Method	Unit	PQL	Analysis Result 109-IR01/21-SC001 00-04574-1	109-IR01/21-SC002 00-04574-2
ISOPHORONE	SW8270C	µg/kg	330	<1800	<1300
2-METHYLNAPHTHALENE	SW8270C	µg/kg	330	<1800	<1300
3/4-METHYLPHENOL (M/P-CRESOL)	SW8270C	µg/kg	330	930J	1,000J
2-METHYLPHENOL (O-CRESOL)	SW8270C	µg/kg	330	430J	310J
NAPHTHALENE	SW8270C	µg/kg	330	<1800	<1300
2-NITROANILINE	SW8270C	µg/kg	1700	<8900	<6700
3-NITROANILINE	SW8270C	µg/kg	1700	<8900	<6700
4-NITROANILINE	SW8270C	µg/kg	1700	<8900	<6700
NITROBENZENE	SW8270C	µg/kg	330	<1800	<1300
2-NITROPHENOL	SW8270C	µg/kg	330	<1800	<1300
4-NITROPHENOL	SW8270C	µg/kg	1700	<8900	<6700
N-NITROSODIPHENYLAMINE	SW8270C	µg/kg	330	<1800	<1300
PENTACHLOROPHENOL (PCP)	SW8270C	µg/kg	1700	<8900	<6700
PHENANTHRENE	SW8270C	µg/kg	330	<1800	<1300
PHENOL	SW8270C	µg/kg	330	410J	750J
PYRENE	SW8270C	µg/kg	330	<1800	<1300
1,2,4-TRICHLOROBENZENE	SW8270C	µg/kg	330	<1800	<1300
2,4,5-TRICHLOROPHENOL	SW8270C	µg/kg	1700	<8900	<6700
2,4,6-TRICHLOROPHENOL	SW8270C	µg/kg	330	<1800	<1300
ORGANOCHLORINE PESTICIDES & PCBS					
Dilution Factor				5	1
ALDRIN	SW8081A	µg/kg	1	<6.7	<2.0
BETA-BHC	SW8081A	µg/kg	1	<6.7	42
ALPHA-BHC	SW8081A	µg/kg	1	<6.7	<2.0
DELTA-BHC	SW8081A	µg/kg	1	<6.7	<2.0
GAMMA-BHC (LINDANE)	SW8081A	µg/kg	1	<6.7	<2.0
CHLORDANE	SW8081A	µg/kg	50	<340	<100
4,4'-DDD	SW8081A	µg/kg	2	<13	<4.0
4,4'-DDE	SW8081A	µg/kg	2	<13	<4.0
4,4'-DDT	SW8081A	µg/kg	2	<13	<4.0
DIELDRIN	SW8081A	µg/kg	2	<13	<4.0
ENDOSULFAN I	SW8081A	µg/kg	1	<6.7	<2.0
ENDOSULFAN II	SW8081A	µg/kg	2	<13	<4.0
ENDOSULFAN SULFATE	SW8081A	µg/kg	5	<34	<10
ENDRIN	SW8081A	µg/kg	2	<13	<4.0
ENDRIN ALDEHYDE	SW8081A	µg/kg	2	<13	<4.0
ENDRIN KETONE	SW8081A	µg/kg	2	<13	<4.0
HEPTACHLOR	SW8081A	µg/kg	1	<6.7	<2.0
HEPTACHLOR EPOXIDE	SW8081A	µg/kg	1	<6.7	<2.0
METHOXYCHLOR	SW8081A	µg/kg	10	<67	<20
TOXAPHENE	SW8081A	µg/kg	100	<670	<200
AROCLOR-1016 (PCB-1016)	SW8082	µg/kg	50	<340	<100
AROCLOR-1221 (PCB-1221)	SW8082	µg/kg	100	<670	<200
AROCLOR-1232 (PCB-1232)	SW8082	µg/kg	50	<340	<100
AROCLOR-1242 (PCB-1242)	SW8082	µg/kg	50	<340	<100
AROCLOR-1248 (PCB-1248)	SW8082	µg/kg	50	<340	<100
AROCLOR-1254 (PCB-1254)	SW8082	µg/kg	25	<170	<51
AROCLOR-1260 (PCB-1260)	SW8082	µg/kg	25	<170	<51

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APCL Analytical Report

Component Analyzed	Method	Unit	PQL	Analysis Result 109-IR01/21-SC003 00-04574-3	109-IR01/21-SC004 00-04574-4
MOISTURE, PERCENT	ASTM-D2216	%Moisture	0.5	33.4	38.6
CORROSIVITY (PH)	9045	pH unit	0.01	7.65	7.52
IGNITABILITY (FLASHPOINT)	1010	°C	0.5 [a]	>100	>100
OIL AND GREASE	413.2	mg/kg	10	35	150
REACTIVITY: CYANIDE	SW§7.3.3	mg/kg	250	<380	<410
REACTIVITY: SULFIDE	SW§7.3.4	mg/kg	50	<75	<81
METALS, TOTAL					
ALUMINUM	SW6010B	mg/kg	5	10,800	12,700
ANTIMONY	SW6010B	mg/kg	5	2.7J	12.6
ARSENIC	SW6010B	mg/kg	0.3	17.6	51.7
BARIUM	SW6010B	mg/kg	1	377	2,410
BERYLLIUM	SW6010B	mg/kg	0.2	<0.30	<0.33
CADMIUM	SW6010B	mg/kg	0.2	1.3	9.0
CALCIUM	SW6010B	mg/kg	10	19,800	35,600
CHROMIUM	SW6010B	mg/kg	0.5	84.3	166
COBALT	SW6010B	mg/kg	0.5	27.4	24.3
COPPER	SW6010B	mg/kg	0.5	214	208
IRON	SW6010B	mg/kg	3	29,000	30,500
LEAD	SW6010B	mg/kg	0.3	826	5,290
MAGNESIUM	SW6010B	mg/kg	10	7,140	10,000
MANGANESE	SW6010B	mg/kg	0.5	2,190	1,470
MERCURY	SW7471A	mg/kg	0.05	0.53	0.56
MOLYBDENUM	SW6010B	mg/kg	0.5	0.76	1.5
NICKEL	SW6010B	mg/kg	0.3	72.6	110
POTASSIUM	SW6010B	mg/kg	20	2,140	1,800
SELENIUM	SW6010B	mg/kg	0.5	1.2	0.83
SILVER	SW6010B	mg/kg	0.5	<0.75	0.76J
SODIUM	SW6010B	mg/kg	100	651	2,090
THALLIUM	SW6010B	mg/kg	0.5	<0.75	<0.81
VANADIUM	SW6010B	mg/kg	0.5	70.3	47.9
ZINC	SW6010B	mg/kg	0.5	688	2,950
Dilution Factor				1	1.2
GASOLINE RANGE ORGANICS	SW8015B	mg/kg	1	<1.5	<2.0
Dilution Factor				1	1
DIESEL RANGE ORGANICS	SW8015B	mg/kg	10	62 [e]	79 [e]
Dilution Factor				1	1
MOTOR OIL RANGE ORGANICS	SW8015B	mg/kg	10	98M	100M

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APCL Analytical Report

Component Analyzed	Method	Unit	PQL	Analysis Result 109-IR01/21-SC003 00-04574-3	109-IR01/21-SC004 00-04574-4
SEMI-VOC					
Dilution Factor				1	2
ACENAPHTHENE	SW8270C	µg/kg	500	<750	<1600
ACENAPHTHYLENE	SW8270C	µg/kg	500	<750	<1600
ANTHRACENE	SW8270C	µg/kg	500	<750	<1600
BENZOIC ACID	SW8270C	µg/kg	1700	<2600	<5500
BENZ(A)ANTHRACENE	SW8270C	µg/kg	500	<750	<1600
BENZO(A)PYRENE	SW8270C	µg/kg	500	<750	<1600
BENZO(B)FLUORANTHENE	SW8270C	µg/kg	500	<750	<1600
BENZO(G,H,I)PERYLENE	SW8270C	µg/kg	500	<750	<1600
BENZO(K)FLUORANTHENE	SW8270C	µg/kg	500	<750	<1600
BIS(2-CHLOROETHOXY) METHANE	SW8270C	µg/kg	170	<250	<540
BIS(2-CHLOROETHYL) ETHER	SW8270C	µg/kg	330	<500	<1100
BIS(2-CHLOROISOPROPYL) ETHER	SW8270C	µg/kg	330	<500	<1100
BIS(2-ETHYLHEXYL) PHTHALATE	SW8270C	µg/kg	330	<500	<1100
4-BROMOPHENYL PHENYL ETHER	SW8270C	µg/kg	330	<500	<1100
BUTYL BENZYL PHTHALATE (BBP)	SW8270C	µg/kg	330	<500	<1100
CARBAZOLE	SW8270C	µg/kg	330	<500	<1100
4-CHLORO-3-METHYLPHENOL	SW8270C	µg/kg	660	<990	<2100
4-CHLOROANILINE	SW8270C	µg/kg	660	<990	<2100
2-CHLORONAPHTHALENE	SW8270C	µg/kg	330	<500	<1100
2-CHLOROPHENOL	SW8270C	µg/kg	330	<500	<1100
4-CHLOROPHENYL PHENYL ETHER	SW8270C	µg/kg	330	<500	<1100
CHRYSENE	SW8270C	µg/kg	330	<500	<1100
DI-N-BUTYL PHTHALATE (DBP)	SW8270C	µg/kg	330	<500	<1100
DI-N-OCTYL PHTHALATE (DOP)	SW8270C	µg/kg	330	<500	<1100
DIBENZ(A,H)ANTHRACENE	SW8270C	µg/kg	330	<500	<1100
DIBENZOFURAN	SW8270C	µg/kg	330	<500	<1100
1,2-DICHLOROBENZENE	SW8270C	µg/kg	330	<500	<1100
1,3-DICHLOROBENZENE	SW8270C	µg/kg	330	<500	<1100
1,4-DICHLOROBENZENE	SW8270C	µg/kg	330	<500	<1100
3,3'-DICHLOROBENZIDINE	SW8270C	µg/kg	660	<990	<2100
2,4-DICHLOROPHENOL	SW8270C	µg/kg	330	<500	<1100
DIETHYL PHTHALATE (DEP)	SW8270C	µg/kg	330	<500	<1100
DIMETHYL PHTHALATE (DMP)	SW8270C	µg/kg	330	<500	<1100
2,4-DIMETHYLPHENOL	SW8270C	µg/kg	330	<500	250J
4,6-DINITRO-2-METHYLPHENOL	SW8270C	µg/kg	1700	<2500	<5400
2,4-DINITROPHENOL	SW8270C	µg/kg	1700	<2500	<5400
2,4-DINITROTOLUENE	SW8270C	µg/kg	330	<500	<1100
2,6-DINITROTOLUENE	SW8270C	µg/kg	330	<500	<1100
FLUORANTHENE	SW8270C	µg/kg	330	<500	<1100

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APCL Analytical Report

Component Analyzed	Method	Unit	PQL	Analysis Result 109-IR01/21-SC003 00-04574-3	109-IR01/21-SC004 00-04574-4
FLUORENE	SW8270C	µg/kg	330	<500	<1100
HEXACHLOROBENZENE	SW8270C	µg/kg	170	<250	<540
HEXACHLOROBUTADIENE	SW8270C	µg/kg	330	<500	<1100
HEXACHLOROCYCLOPENTADIENE	SW8270C	µg/kg	330	<500	<1100
HEXACHLOROETHANE	SW8270C	µg/kg	330	<500	<1100
INDENO(1,2,3-CD)PYRENE	SW8270C	µg/kg	330	<500	<1100
ISOPHORONE	SW8270C	µg/kg	330	<500	<1100
2-METHYLNAPHTHALENE	SW8270C	µg/kg	330	<500	<1100
3/4-METHYLPHENOL (M/P-CRESOL)	SW8270C	µg/kg	330	<500	420J
2-METHYLPHENOL (O-CRESOL)	SW8270C	µg/kg	330	<500	<1100
NAPHTHALENE	SW8270C	µg/kg	330	120J	<1100
2-NITROANILINE	SW8270C	µg/kg	1700	<2500	<5400
3-NITROANILINE	SW8270C	µg/kg	1700	<2500	<5400
4-NITROANILINE	SW8270C	µg/kg	1700	<2500	<5400
NITROBENZENE	SW8270C	µg/kg	330	<500	<1100
2-NITROPHENOL	SW8270C	µg/kg	330	<500	<1100
4-NITROPHENOL	SW8270C	µg/kg	1700	<2500	<5400
N-NITROSODIPHENYLAMINE	SW8270C	µg/kg	330	<500	<1100
PENTACHLOROPHENOL (PCP)	SW8270C	µg/kg	1700	<2500	<5400
PHENANTHRENE	SW8270C	µg/kg	330	120J	<1100
PHENOL	SW8270C	µg/kg	330	250J	<1100
PYRENE	SW8270C	µg/kg	330	<500	<1100
1,2,4-TRICHLOROBENZENE	SW8270C	µg/kg	330	<500	<1100
2,4,5-TRICHLOROPHENOL	SW8270C	µg/kg	1700	<2500	<5400
2,4,6-TRICHLOROPHENOL	SW8270C	µg/kg	330	<500	<1100
ORGANOCHLORINE PESTICIDES & PCBS					
Dilution Factor				1	1
ALDRIN	SW8081A	µg/kg	1	<1.5	<1.6
BETA-BHC	SW8081A	µg/kg	1	<1.5	55
ALPHA-BHC	SW8081A	µg/kg	1	<1.5	<1.6
DELTA-BHC	SW8081A	µg/kg	1	<1.5	<1.6
GAMMA-BHC (LINDANE)	SW8081A	µg/kg	1	<1.5	<1.6
CHLORDANE	SW8081A	µg/kg	50	<75	<81
4,4'-DDD	SW8081A	µg/kg	2	<3.0	<3.3
4,4'-DDE	SW8081A	µg/kg	2	<3.0	<3.3
4,4'-DDT	SW8081A	µg/kg	2	<3.0	<3.3
DIELDRIN	SW8081A	µg/kg	2	<3.0	2J
ENDOSULFAN I	SW8081A	µg/kg	1	<1.5	<1.6
ENDOSULFAN II	SW8081A	µg/kg	2	<3.0	<3.3
ENDOSULFAN SULFATE	SW8081A	µg/kg	5	<7.5	<8.1
ENDRIN	SW8081A	µg/kg	2	<3.0	<3.3

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APCL Analytical Report

Component Analyzed	Method	Unit	PQL	Analysis Result 109-IR01/21-SC003 00-04574-3	109-IR01/21-SC004 00-04574-4
ENDRIN ALDEHYDE	SW8081A	µg/kg	2	<3.0	1J
ENDRIN KETONE	SW8081A	µg/kg	2	<3.0	<3.3
HEPTACHLOR	SW8081A	µg/kg	1	<1.5	<1.6
HEPTACHLOR EPOXIDE	SW8081A	µg/kg	1	<1.5	<1.6
METHOXYCHLOR	SW8081A	µg/kg	10	5J	3J
TOXAPHENE	SW8081A	µg/kg	100	<150	<160
AROCLOR-1016 (PCB-1016)	SW8082	µg/kg	50	<75	<81
AROCLOR-1221 (PCB-1221)	SW8082	µg/kg	100	<150	<160
AROCLOR-1232 (PCB-1232)	SW8082	µg/kg	50	<75	<81
AROCLOR-1242 (PCB-1242)	SW8082	µg/kg	50	<75	<81
AROCLOR-1248 (PCB-1248)	SW8082	µg/kg	50	<75	<81
AROCLOR-1254 (PCB-1254)	SW8082	µg/kg	25	<38	<41
AROCLOR-1260 (PCB-1260)	SW8082	µg/kg	25	<38	<41

PQL: Practical Quantitation Limit. MDL: Method Detection Limit. CRDL: Contract Required Detection Limit

N.D.: Not Detected or less than the practical quantitation limit. "-": Analysis is not required.

J: Reported between PQL and MDL.

† All results are reported on dry basis for soil samples.

Listed Dilution Factors (DF) are relative to the method default DF. All unlisted DFs are 1.0

(a) Corresponds to the minimum reading of the thermometer used.

(b) Sample was diluted due to foaming.

(c) Unknown mixture in Diesel range.

(d) Analzyzed with a dilution factor of 20

(e) Mixture in Jet Fuel and Diesel range.

Respectfully submitted,

Dominic Lau
Laboratory Director
Applied P & Ch Laboratory

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APCL Analytical Report

Submitted to:
Tetra Tech EM Inc.
Attention: Rameen Moezzi
135 Main Street, Ste 1800
San Francisco CA 94105
Tel: (415)543-4880 Fax: (415)543-5480

Service ID #: 801-004680
Collected by: R. Morrow
Collected on: 08/30/00

Received: 09/12/00
Extracted: 09/12/00
Tested: 09/12-14/00
Reported: 09/14/00

Sample Description: Soil
Project Description: G0069.005.B050305 Parcel Data Gaps

Analysis of Soil Samples

Component Analyzed	Method	Unit	PQL	Analysis Result 0038R001 00-04680-1
MOISTURE, PERCENT	ASTM-D2216	%Moisture	0.5	13.5
CORROSIVITY (PH)	9040	pH unit	0.01	7.70
IGNITABILITY (FLASHPOINT)	1010	°C	0.5 [a]	>100
OIL AND GREASE	413.2	mg/kg	10	35,600
REACTIVITY: CYANIDE	SW§7.3.3	mg/kg	10	<12
REACTIVITY: SULFIDE	SW§7.3.4	mg/kg	50	<58
METALS, TOTAL				
Dilution Factor				4
ALUMINUM	SW6010B	mg/kg	5	4,880
ANTIMONY	SW6010B	mg/kg	5	3.9J
ARSENIC	SW6010B	mg/kg	0.3	6.8
BARIUM	SW6010B	mg/kg	1	916
BERYLLIUM	SW6010B	mg/kg	0.2	<0.93
CADMIUM	SW6010B	mg/kg	0.2	4.4
CALCIUM	SW6010B	mg/kg	10	18,600
CHROMIUM	SW6010B	mg/kg	0.5	46.6
COBALT	SW6010B	mg/kg	0.5	12.5
COPPER	SW6010B	mg/kg	0.5	61.3
IRON	SW6010B	mg/kg	3	16,200
LEAD	SW6010B	mg/kg	0.3	1,910
MAGNESIUM	SW6010B	mg/kg	10	9,400
MANGANESE	SW6010B	mg/kg	0.5	293
Dilution Factor				1
MERCURY	SW7471A	mg/kg	0.05	0.53
Dilution Factor				4
NICKEL	SW6010B	mg/kg	0.3	119
POTASSIUM	SW6010B	mg/kg	20	557
SELENIUM	SW6010B	mg/kg	0.5	<2.3
SILVER	SW6010B	mg/kg	0.5	0.39J
SODIUM	SW6010B	mg/kg	100	543
THALLIUM	SW6010B	mg/kg	0.5	<2.3
VANADIUM	SW6010B	mg/kg	0.5	42.9
ZINC	SW6010B	mg/kg	0.5	1,480
Dilution Factor				1
GASOLINE RANGE ORGANICS	SW8015B	mg/kg	1	UG
Dilution Factor				100
DIESEL RANGE ORGANICS	SW8015B	mg/kg	10	4,700 [b]
Dilution Factor				100
MOTOR OIL RANGE ORGANICS	SW8015B	mg/kg	10	19,000M

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APCL Analytical Report

Component Analyzed	Method	Unit	PQL	Analysis Result 0038R001 00-04680-1
SEMI-VOC				
Dilution Factor				200
ACENAPHTHENE	SW8270C	µg/kg	500	<120000
ACENAPHTHYLENE	SW8270C	µg/kg	500	<120000
ANTHRACENE	SW8270C	µg/kg	500	<120000
BENZ(A)ANTHRACENE	SW8270C	µg/kg	500	<120000
BENZO(A)PYRENE	SW8270C	µg/kg	500	<120000
BENZO(B)FLUORANTHENE	SW8270C	µg/kg	500	9,000J
BENZO(G,H,I)PERYLENE	SW8270C	µg/kg	500	<120000
BENZO(K)FLUORANTHENE	SW8270C	µg/kg	500	<120000
BIS(2-CHLOROETHOXY) METHANE	SW8270C	µg/kg	170	<38000
BIS(2-CHLOROETHYL) ETHER	SW8270C	µg/kg	330	<76000
BIS(2-CHLOROISOPROPYL) ETHER	SW8270C	µg/kg	330	<76000
BIS(2-ETHYLHEXYL) PHTHALATE	SW8270C	µg/kg	330	<76000
4-BROMOPHENYL PHENYL ETHER	SW8270C	µg/kg	330	<76000
BUTYL BENZYL PHTHALATE (BBP)	SW8270C	µg/kg	330	<76000
4-CHLORO-3-METHYLPHENOL	SW8270C	µg/kg	660	<150000
4-CHLOROANILINE	SW8270C	µg/kg	660	<150000
2-CHLORONAPHTHALENE	SW8270C	µg/kg	330	<76000
2-CHLOROPHENOL	SW8270C	µg/kg	330	<76000
4-CHLOROPHENYL PHENYL ETHER	SW8270C	µg/kg	330	<76000
CHRYSENE	SW8270C	µg/kg	330	<76000
DI-N-BUTYL PHTHALATE (DBP)	SW8270C	µg/kg	330	<76000
DI-N-OCTYL PHTHALATE (DOP)	SW8270C	µg/kg	330	<76000
DIBENZ(A,H)ANTHRACENE	SW8270C	µg/kg	330	<76000
DIBENZOFURAN	SW8270C	µg/kg	330	<76000
1,2-DICHLOROBENZENE	SW8270C	µg/kg	330	<76000
1,3-DICHLOROBENZENE	SW8270C	µg/kg	330	<76000
1,4-DICHLOROBENZENE	SW8270C	µg/kg	330	<76000
3,3'-DICHLOROBENZIDINE	SW8270C	µg/kg	660	<150000
2,4-DICHLOROPHENOL	SW8270C	µg/kg	330	<76000
DIETHYL PHTHALATE (DEP)	SW8270C	µg/kg	330	<76000
DIMETHYL PHTHALATE (DMP)	SW8270C	µg/kg	330	<76000
2,4-DIMETHYLPHENOL	SW8270C	µg/kg	330	<76000
4,6-DINITRO-2-METHYLPHENOL	SW8270C	µg/kg	1700	<380000
2,4-DINITROPHENOL	SW8270C	µg/kg	1700	<380000
2,4-DINITROTOLUENE	SW8270C	µg/kg	330	<76000
2,6-DINITROTOLUENE	SW8270C	µg/kg	330	<76000
FLUORANTHENE	SW8270C	µg/kg	330	9,900J
FLUORENE	SW8270C	µg/kg	330	<76000
HEXACHLOROBENZENE	SW8270C	µg/kg	170	<38000

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APCL Analytical Report

Component Analyzed	Method	Unit	PQL	Analysis Result 0038R001 00-04680-1
HEXACHLOROBUTADIENE	SW8270C	µg/kg	330	< 76000
HEXACHLOROCYCLOPENTADIENE	SW8270C	µg/kg	330	< 76000
HEXACHLOROETHANE	SW8270C	µg/kg	330	< 76000
INDENO(1,2,3-CD)PYRENE	SW8270C	µg/kg	330	< 76000
ISOPHORONE	SW8270C	µg/kg	330	< 76000
2-METHYLNAPHTHALENE	SW8270C	µg/kg	330	< 76000
3/4-METHYLPHENOL (M/P-CRESOL)	SW8270C	µg/kg	330	14,000J
2-METHYLPHENOL (O-CRESOL)	SW8270C	µg/kg	330	7,500J
NAPHTHALENE	SW8270C	µg/kg	330	8,100J
2-NITROANILINE	SW8270C	µg/kg	1700	< 380000
3-NITROANILINE	SW8270C	µg/kg	1700	< 380000
4-NITROANILINE	SW8270C	µg/kg	1700	< 380000
NITROBENZENE	SW8270C	µg/kg	330	< 76000
2-NITROPHENOL	SW8270C	µg/kg	330	< 76000
4-NITROPHENOL	SW8270C	µg/kg	1700	< 380000
N-NITROSODIPHENYLAMINE	SW8270C	µg/kg	330	< 76000
PENTACHLOROPHENOL (PCP)	SW8270C	µg/kg	1700	< 380000
PHENANTHRENE	SW8270C	µg/kg	330	9,200J
PHENOL	SW8270C	µg/kg	330	< 76000
PYRENE	SW8270C	µg/kg	330	11,000J
1,2,4-TRICHLOROBENZENE	SW8270C	µg/kg	330	< 76000
2,4,5-TRICHLOROPHENOL	SW8270C	µg/kg	1700	< 380000
2,4,6-TRICHLOROPHENOL	SW8270C	µg/kg	330	< 76000
ORGANOCHLORINE PESTICIDES & PCBS				
Dilution Factor				50
ALDRIN	8081	µg/kg	1	< 58
BETA-BHC	8081	µg/kg	1	< 58
ALPHA-BHC	8081	µg/kg	1	< 58
DELTA-BHC	8081	µg/kg	1	< 58
GAMMA-BHC (LINDANE)	8081	µg/kg	1	< 58
CHLORDANE	8081	µg/kg	50	< 2900
4,4'-DDD	8081	µg/kg	2	48J
4,4'-DDE	8081	µg/kg	2	22J
4,4'-DDT	8081	µg/kg	2	200
DIELDRIN	8081	µg/kg	2	38J
ENDOSULFAN I	8081	µg/kg	1	< 58
ENDOSULFAN II	8081	µg/kg	2	< 120
ENDOSULFAN SULFATE	8081	µg/kg	5	< 290
ENDRIN	8081	µg/kg	2	< 120
ENDRIN ALDEHYDE	8081	µg/kg	2	< 120
ENDRIN KETONE	8081	µg/kg	2	< 120

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APCL Analytical Report

Component Analyzed	Method	Unit	PQL	Analysis Result 0038R001 00-04680-1
HEPTACHLOR	8081	μg/kg	1	<58
HEPTACHLOR EPOXIDE	8081	μg/kg	1	<58
METHOXYCHLOR	8081	μg/kg	10	<580
TOXAPHENE	8081	μg/kg	100	<5800
Dilution Factor				2.5
AROCLOR-1016 (PCB-1016)	8082	μg/kg	17 [c]	<49
AROCLOR-1221 (PCB-1221)	8082	μg/kg	21 [c]	<61
AROCLOR-1232 (PCB-1232)	8082	μg/kg	16	<46
AROCLOR-1242 (PCB-1242)	8082	μg/kg	16	<46
AROCLOR-1248 (PCB-1248)	8082	μg/kg	16	<46
AROCLOR-1254 (PCB-1254)	8082	μg/kg	16	<46
AROCLOR-1260 (PCB-1260)	8082	μg/kg	16	96

PQL: Practical Quantitation Limit. MDL: Method Detection Limit. CRDL: Contract Required Detection Limit

N.D.: Not Detected or less than the practical quantitation limit. "-": Analysis is not required.

J: Reported between PQL and MDL.

† All results are reported on dry basis for soil samples.

Listed Dilution Factors (DF) are relative to the method default DF. All unlisted DFs are 1.0

[a] Corresponds to the minimum reading of the thermometer used.

[b] Mixture in Jet Fuel and Diesel range.

[c] MDL reported.

Respectfully submitted,

Dominic Lau
Laboratory Director
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