



Subsurface Consultants, Inc.

ENVIRONMENTAL
PROTECTION
00 SEP 25 AM 9:21

September 18, 2000
SCI 1206.002

Ms. Diane Heinze, PE
Port of Oakland
530 Water Street
Oakland, California

**Results of Environmental Sampling
Inner Harbor Turning Basin Project
Oakland, California**

Dear Ms. Heinze:

With this letter, Subsurface Consultants, Inc. (SCI) presents the results of chemical analyses performed on certain soil samples collected as part of our geotechnical investigation for the above-referenced Project. The environmental soil sampling was completed in accordance with our proposal dated May 18, 2000. SCI also analyzed a groundwater sample from one existing groundwater monitoring well (MW-2), located near a former diesel fuel underground storage tank (UST).

BACKGROUND

At the request of the Port of Oakland (Port), SCI collected soil samples during geotechnical drilling activities associated with the Port's plans to enlarge the Inner Harbor Turning Basin (IHTB). Samples were collected to evaluate the following soil types: (1) surface soil, (2) shallow fill from the capillary fringe, (3) a Marsh Crust layer potentially located at the interface of the fill and the underlying Young Bay Mud, (4) Young Bay Mud, and (5) San Antonio Formation Merritt sand that may be encountered during the planned construction activities. Details regarding our geotechnical findings will be presented in a separate report.

At the request of the Port, and with the verbal approval from Alameda Gateway, SCI also located and sampled monitoring well MW-2 to help evaluate groundwater quality in the vicinity of the Port's planned excavation for the Inner Harbor Turning Basin project.

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FIELD INVESTIGATION

Investigation-derived waste generated during this investigation was placed into labeled, 55-gallon drums pending disposal by the Port's waste subcontractor. Soil and groundwater samples were delivered under chain-of-custody documentation to the Port's analytical subcontractor, Curtis & Tompkins, a State-certified chemical testing laboratory. The following summarizes the soil and groundwater field investigation activities.

Soil Investigation

Between May 22 and 26, SCI completed geotechnical borings B-1 through B-5 at the Site (Plate 1) to depths of at least 100'. Drilling was completed using mud rotary methodology. SCI's field geologist observed drilling operations and prepared detailed logs of the borings. Soils were classified in accordance with the Unified Soil Classification System (USCS). Due to changes in the Port's project description, only borings B-4 and B-5 and test pit TP-1 are currently relevant for the proposed project. Logs for B-4, B-5, and TP-1 are attached.

To reduce intrusion of drilling fluids into the sampler, the bottom of the sampler was covered with sheet plastic, which was displaced when the sampler was driven into the soil. During drilling, samples were collected using a modified California split spoon sampler and clean stainless steel tubes. The samples were labeled, capped with Teflon sheeting and plastic end caps, and promptly chilled on-site in an ice chest pending delivery to the laboratory. The sampler was decontaminated in the field using soapy water and rinsed with deionized water prior to each use.

Soil samples were screened in the field using an organic vapor monitor (OVM). Except for 65 parts per million in TP-1, field screening detected no organic vapors in soil samples collected from B-4, B-5, and TP-1.

No Marsh Crust layer material was observed in samples collected from borings B-1 through B-4. Sampling activities recovered no sample from the Marsh Crust layer in B-5. However, during excavation of nearby test pit TP-1 (Plate 1) on June 2, SCI detected strong hydrocarbon odors, (65 ppm on the OVM). Based on these observations, SCI collected Sample TP-1@11.5' for chemical analyses. TP-1@11.5' was comprised of dark gray fat clay collected from the Marsh Crust layer.

Groundwater Investigation

On August 2, 2000, SCI located monitoring well MW-2, checked wellhead conditions, checked for free product, measured depth to water, and collected a groundwater sample for chemical analyses. MW-2 is located between Buildings 72 and 133 near the former diesel fuel UST. A copy of the well construction detail for MW-2 is attached.

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SCI observed that the wellhead was intact. The well contained approximately 1 inch of floating free product, and the depth to water was 5.8 feet bgs. Using a clean-disposable bailer, SCI removed the free product along with approximately 10 gallons of water. Groundwater samples were retained in laboratory-provided bottles, labeled, and promptly chilled on-site in an ice chest pending delivery to the laboratory.

ANALYTICAL TESTING

Soil Samples

A total of nine soil samples from B-4, B-5, and TP-1 were analyzed. Samples of (1) surface soil, (2) capillary fringe soil, and (3) Marsh Crust Layer were tested for the following:

- Total extractable hydrocarbons as diesel fuel (TEHd) and motor oil (TEHo), EPA Method 8015 modified (due to laboratory quality control difficulties, no soil samples were using silica gel cleanup),
- 17 Title 22 metals, EPA Method 6010/7000,
- Semi-volatile organic compounds (SVOCs), EPA Method 8270, and
- Organochlorine pesticides and polychlorinated biphenyls (PCBs), EPA Method 8080. Samples of (2) capillary fringe and (3) Marsh Crust layer samples were also tested for:
- Total volatile hydrocarbons as gasoline (TVHg), EPA Method 8015M, and
- Volatile organic compounds (VOCs), EPA Method 8260.

Soil samples collected from (4) Young Bay Mud and (5) Merritt sand were collected and archived.

Groundwater Sample

The groundwater sample from MW-2 was tested for VOCs, SVOCs, and TVHg as described above. The sample was also tested for TEHd and TEHo using methods described above, including silica gel cleanup prior to testing.

ANALYTICAL RESULTS

Results of analyses for the samples collected within the IHTB project area are described below and are summarized in Tables 1 and 2. These samples include nine soil samples from B-4, B-5, and TP-1 and one groundwater sample from MW-2. Analytical reports are attached.

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Soil Samples

Except for 1.2 milligrams per kilogram (mg/kg) in B-4@11', analyses detected no TVHg concentrations in the samples tested. Analyses detected TEHd concentrations ranging up to 140 mg/kg (B-4@2.5'), TEHo concentrations ranging up to 650 mg/kg (B-4@2.5'), and Bunker C concentrations ranging up to 54 mg/kg (B-4@17').

Analyses detected no VOC, pesticides, or PCB analytes in the four samples tested.

Analyses detected no SVOCs analytes in the six samples from B-4 and B-5. Detected SVOC concentrations included 3.4 mg/kg of phenanthrene and 0.94 mg/kg of flourene in TP-1@11.5'.

Except for 88 mg/kg of arsenic in B-5@3.0', detected metals were less than 10 times the respective Soluble Threshold Limit Concentrations in the six samples tested.

Groundwater Sample

Analyses detected no MTBE, BTEX, or VOC concentrations. Analyses detected 660 micrograms per liter ($\mu\text{g/l}$) of TVHg and 140,000 $\mu\text{g/l}$ of TEHd. Except for 6.7 $\mu\text{g/l}$ of acenaphthene, 29 $\mu\text{g/l}$ of flourene, and 7.2 $\mu\text{g/l}$ of phenanthrene, no SVOCs were detected.

CLOSING STATEMENT

We believe this provides the information required at this time. If you have any questions, please call either of the undersigned.

Yours very truly,

Subsurface Consultants, Inc.



Emily Silverman
Staff Geologist



Glenn S. Young, RG
Associate Geologist

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Port of Oakland
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5 copies submitted

Attachments:

Table 1 – Summary of Analytical Data – Soil Samples
Table 2 – Summary of Analytical Data – Groundwater Sample
Plate 1 – Site Plan
Plate 2 – Log of Test Pit TP-1
Boring Logs with Unified Soil Classification System Key
Log of Test Boring 2 (MW-2) dated 8/26/92
Analytical Reports with Chain-of-Custody Documentation

cc: Mr. Brad Porter, PE
Moffatt & Nichol Engineers
160 Franklin Street, Suite 300
Oakland, California

TABLE 1
SUMMARY OF ANALYTICAL DATA - SOIL SAMPLES
INNER HARBOR TURNING BASIN PROJECT
ALAMEDA, CALIFORNIA

Subsurface Consultants, Inc.

		PRGs (mg/kg)												
Analyte	Units	B-4 @2.5	B-4 @4.0	B-4 @11	B-4 @17	B-5 @3.0	B-5 @5.0	B-5 @7.5	B-5 @15.5	TP-1 @11.5	TTLG (mg/kg)	STLC (mg/L)	Residential	Industrial
Hydrocarbons														
TVHg	mg/kg	-	<1.0	1.2	<.92	-	<0.96	<1.0	<.99	-	NE	NE	NE	NE
TEHd	mg/kg	140	<0.99	110	4.3	100	<1.0	14	4.9	-	NE	NE	NE	NE
TEHo	mg/kg	650	<5.0	130	21	540	<5.0	33	20	-	NE	NE	NE	NE
Bunker C	mg/kg	--	--	--	54	--	--	--	51	--	NE	NE	NE	NE
MTBE	mg/kg	--	<4.7	<5.0	--	--	<4.7	<4.8	--	--	NE	NE	NE	NE
Benzene	mg/kg	--	<4.7	<5.0	--	--	<4.7	<4.8	--	--	NE	NE	0.67	1.5
Toluene	mg/kg	--	<4.7	<5.0	--	--	<4.7	<4.8	--	--	NE	NE	NE	NE
Ethylbenzene	mg/kg	--	<4.7	<5.0	--	--	<4.7	<4.8	--	--	NE	NE	230	230
Xylenes	mg/kg	--	<4.7	<5.0	--	--	<4.7	<4.8	--	--	NE	NE	210	210
VOCs	mg/kg	-	ND	ND	-	-	ND	ND	-	-				
SVOCs														
Phenanthrene	mg/kg	ND	ND	ND	--	ND	ND	ND	ND	ND	NE	NE	NE	NE
Fluorene	mg/kg	<3.300	<0.340	<1.700	--	<12.000	<0.330	<0.330	<0.330	3.40 J	NE	NE	2,600	33,000
Pesticides / PCBs	mg/kg	ND	ND	--	--	ND	ND	--	--	--				
Metals														
Antimony	mg/kg	<2.9	<2.9	<2.9	--	<3.0	<3.0	<3.0	--	--	500	15	31	820
Arsenic	mg/kg	3.3	1.2	2.2	--	88	7.2	16	--	--	500	5.0	0.39	3
Barium	mg/kg	34	12	41	--	83	43	67	--	--	10,000	100	5,400	100,000
Beryllium	mg/kg	0.11	<0.098	0.14	--	0.22	0.17	0.22	--	--	75	0.75	150	2,200
Cadmium	mg/kg	1.1	0.46	0.67	--	2.2	1.4	1.8	--	--	100	1.0	9	810
Chromium	mg/kg	18	13	15	--	9.4	29	20	--	--	2,500	5	210	450
Cobalt	mg/kg	4.0	2.4	2.9	--	6.4	6.6	12	--	--	8,000	80	4,700	100,000
Copper	mg/kg	12	1.9	12	--	.66	13	34	--	--	2,500	25	2,900	76,000
Lead	mg/kg	23	1.8	7.0	--	81	4.2	32	--	--	1,000	5.0	400	1,000
Mercury	mg/kg	0.11	<0.040	<0.039	--	0.23	<0.039	0.14	--	--	20	0.2	23	610
Molybdenum	mg/kg	<0.98	<0.98	<0.98	--	<1.0	<1.0	1.1	--	--	3,500	350	390	100,000
Nickel	mg/kg	23	13	16	--	21	45	35	--	--	2,000	20	150	41,000
Selenium	mg/kg	.44	<0.24	<0.24	--	<0.25	<0.25	<0.25	--	--	100	1.0	390	10,000
Silver	mg/kg	<0.24	<0.24	<0.24	--	<0.25	<0.25	<0.25	--	--	500	5	390	10,000
Thallium	mg/kg	0.3	<0.24	<0.24	--	0.88	0.55	0.4	--	--	700	7.0	6	150
Vanadium	mg/kg	16	8.1	11	--	24	14	29	--	--	2,400	24	550	14,000
Zinc	mg/kg	37	7.4	18	--	96	29	59	--	--	5,000	250	23,000	100,000

Notes:

Detected concentrations are shown in bold.

mg/L = milligrams per liter

mg/kg = milligrams per kilogram

<50 = not detected at or above listed reporting limit

NE = not established

-- = not analyzed

J = Estimated value

ND = analytes not detected at or above respective analytical reporting limit except as listed below

TTLG = total threshold limit concentration

STLC = soluble threshold limit concentration

TPHg/d/b = total petroleum hydrocarbons as gasoline/diesel/motor oil

VOCs = volatile organic compounds

SVOCs = semi-volatile organic compounds

PRG = 1999 Preliminary Remediation Goals Established by Region 9 of USEPA

TABLE 2
SUMMARY OF ANALYTICAL DATA - GROUNDWATER SAMPLE
INNER HARBOR TURNING BASIN PROJECT
ALAMEDA, CALIFORNIA
August 2000

Analyte	Units	MW-2
Hydrocarbons		
TVHg	ug/l	660
TEHd*	ug/l	140,000
TEHo*	ug/l	<3,000
MTBE	ug/l	<5.0
Benzene	ug/l	<5.0
Toluene	ug/l	<5.0
Ethylbenzene	ug/l	<5.0
Xylenes	ug/l	<5.0
VOCs		ug/l
		ND (<5 to <50)
SVOCs		
Phenanthrene	ug/l	ND
Fluorene	ug/l	7.2
Acenaphthene	ug/l	29
Total PAHs	ug/l	6.7
		42.9

Notes:

Detected concentrations are shown in bold.

ug/l = micrograms per liter

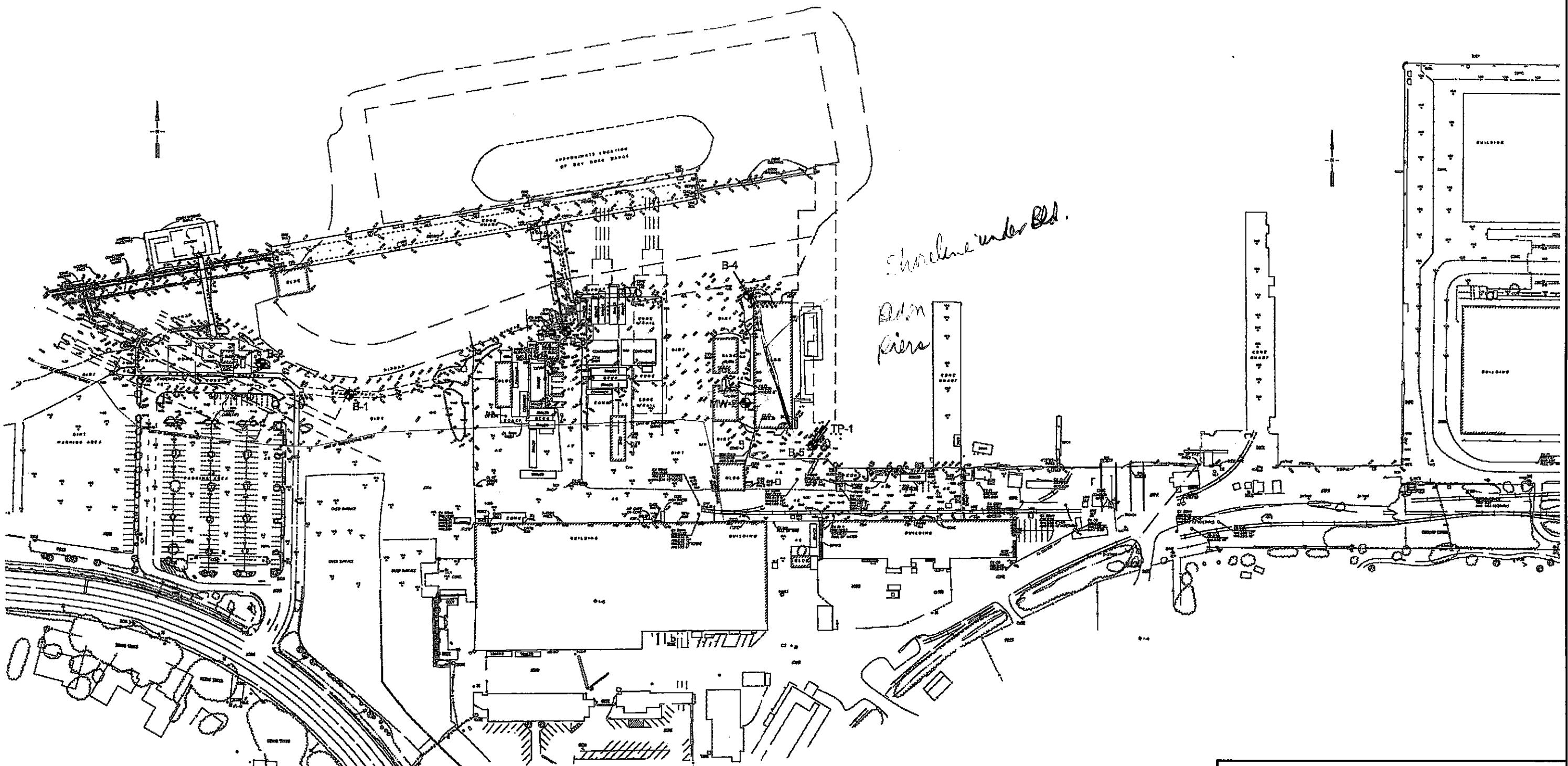
<5.0 = not detected at or above listed reporting limit

ND = not detected except for analytes listed below.

* = including silica gel cleanup

PAH = Polynuclear aromatic hydrocarbons

Raw about filtering? / No filtering



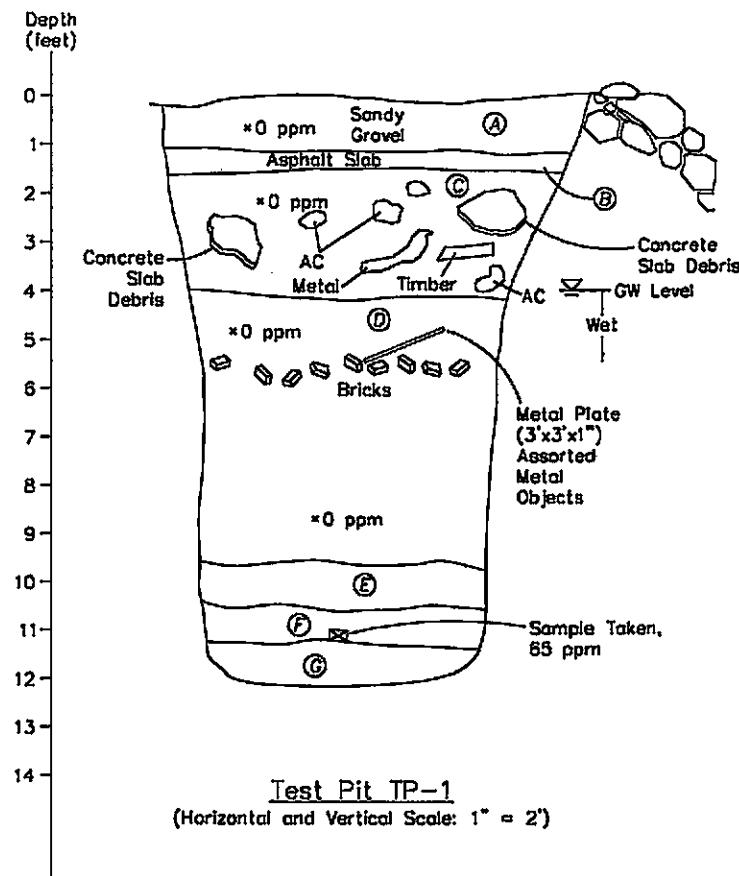
- Explanation:**
- B-1 • Approximate Location of Soil Boring
 - TP-1 • Approximate Location of Test Pit
 - MW-2 • Approximate Location of Monitoring Well

Reference:
Site Plan based on survey dated 1/11/00 provided by Port of Oakland.



APPROXIMATE SCALE IN FEET
0 160 320

SITE PLAN	
INNER HARBOR TURNING BASIN PORT OF OAKLAND, CALIFORNIA	
JOB NUMBER 1206.002	DATE 07/00
SCI Subsurface Consultants, Inc. <small>Geotechnical & Environmental Engineers</small>	
PLATE 1	



- A. SANDY GRAVEL WITH DEBRIS (GM). LIGHT OLIVE BROWN (10YR 5/4), MEDIUM DENSE TO DENSE.
- B. ASPHALT SLAB - 4 INCHES THICK.
- C. SILTY SAND WITH DEBRIS, COBBLES AND BOULDERS OF CONCRETE. DARK BROWN (10YR 3/3), MEDIUM DENSE, MOIST. DEBRIS CONSISTS OF METAL LATHE, PIPING, CONCRETE AND ASPHALT FRAGMENTS. ASPHALT TO 10 INCHES DIAMETER. CONCRETE TO 28 INCHES DIAMETER. SCATTERED BRICK FRAGMENTS, WOOD TIMBERS, WIRE. 30 % DEBRIS.
- D. SANDY GRAVEL WITH DEBRIS (GM/SM). DARK REDDISH BROWN (7.5YR 6/4). METAL RODS, METAL SHEETS, BOLTS, BRICKS.
- E. FAT CLAY WITH DEBRIS (CH). DARK GREENISH GRAY (SG 3/1) AND BLACK (N 2.5/1). MEDIUM STIFF, MOIST, WITH QUARRY ROCK.
- F. FAT CLAY WITH ORGANIC MATERIAL (CH). BLACK (2.5N), STRONG HYDROCARBON ODOR (65PPM). MEDIUM STIFF, WET, WITH ROOTS AND REEDS, INTERBEDDED.
- G. FAT CLAY AND CLAYEY SAND (SC). DARK GREENISH GRAY (SG 3/1). SOFT, LOOSE, WET, SAND FINE GRAINED.

LOG OF TEST PIT TP-1

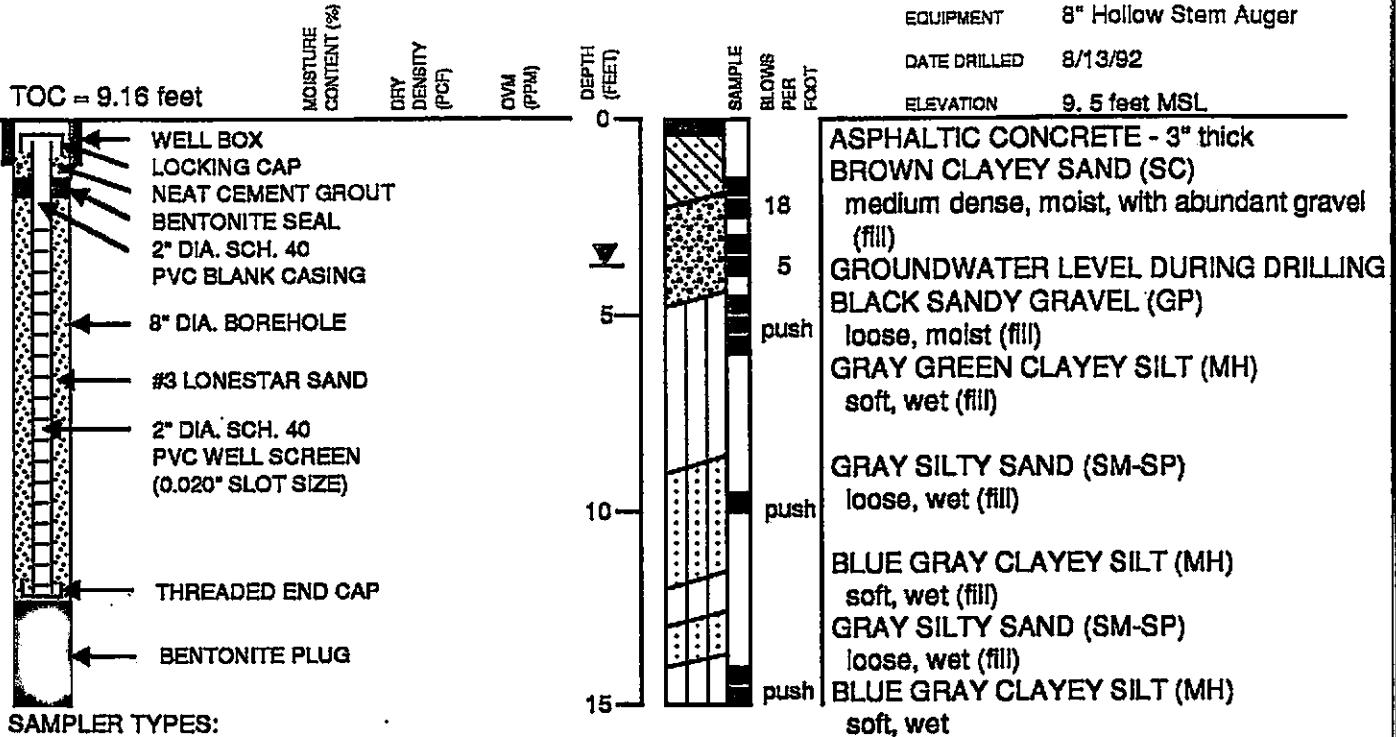
INNER HARBOR TURNING BASIN
PORT OF OAKLAND, CALIFORNIA



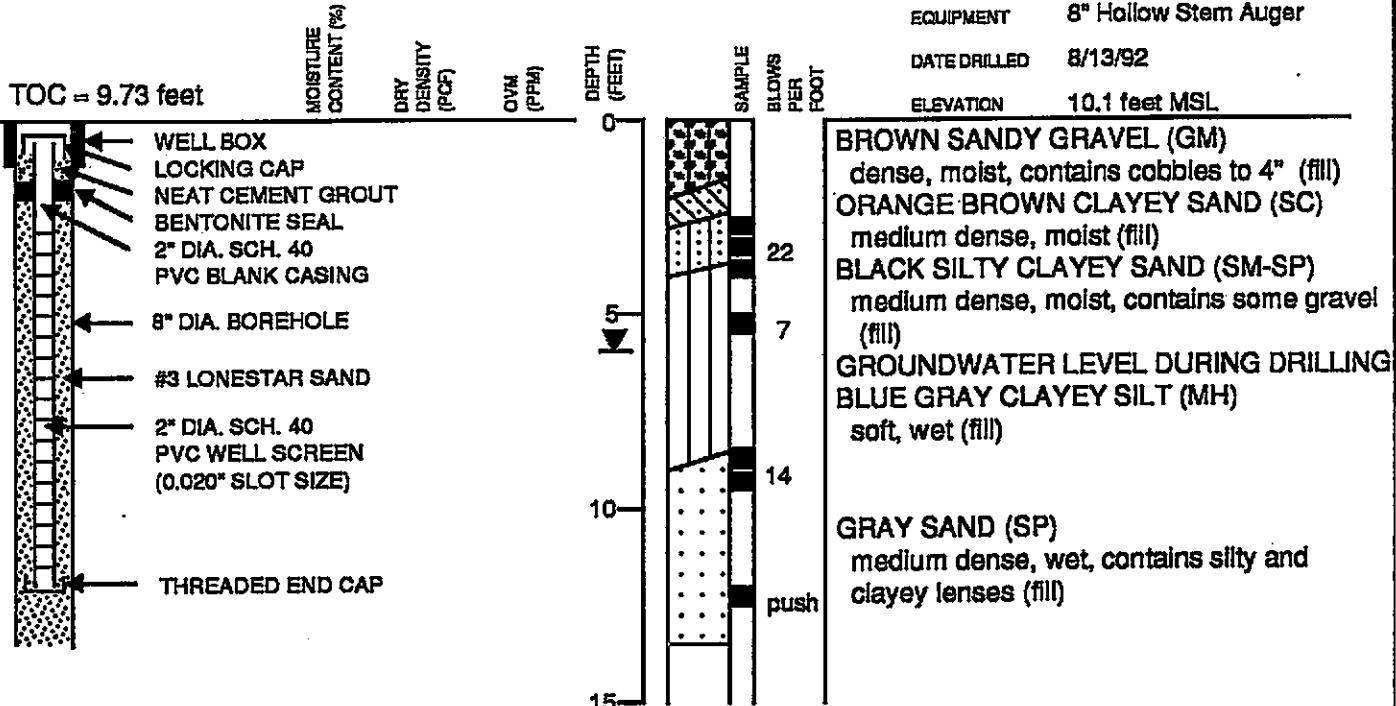
Subsurface Consultants, Inc.
Geotechnical & Environmental Engineers

DRAWN BY: CFY	DATE 09/18/00	PLATE 2
JOB NUMBER 1206.002	FILE NUMBER: A1206.002.01	

LOG OF TEST BORING 1



LOG OF TEST BORING 2



Subsurface Consultants

2900 MAIN STREET - ALAMEDA, CA

JOB NUMBER
554.007

DATE
8/26/92

APPROVED

PLATE
3

UNIFIED SOIL CLASSIFICATION SYSTEM (ASTM D2487-93)

MAJOR DIVISIONS			GROUP NAMES		
COARSE-GRAINED SOILS More than 50% retained on the No. 200 sieve	GRAVELS MORE THAN 50% OF COARSE FRACTION RETAINED ON NO. 4 SIEVE	Clean gravels less than 5% fines	GW		Well-graded gravel, Well-graded gravel with sand
			GP		Poorly graded gravel, Poorly graded gravel with sand
		Gravels with more than 12% fines	GM		Silty gravel, Silty gravel with sand
			GC		Clayey gravel, Clayey gravel with sand
	SANDS MORE THAN 50% OF COARSE FRACTION PASSING ON NO. 4 SIEVE	Clean sand less than 5% fines	SW		Well-graded sand, Well-graded sand with gravel
			SP		Poorly graded sand, Poorly graded sand with gravel
		Sands with more than 12% fines	SM		Silty sand, Silty sand with gravel
			SC		Clayey sand, Clayey sand with gravel
	SILTS AND CLAYS Liquid Limit Less than 50%		ML		Silt, Silt with sand or gravel, Sandy or gravelly silt, Sandy or gravelly silt with gravel or sand
			CL		Lean clay, Lean clay with sand or gravel, Sandy or gravelly lean clay, Sandy or gravelly lean clay with gravel or sand
			OL		Organic silt or clay, Organic silt or clay with sand or gravel, Sandy or gravelly organic silt or clay, Sandy or gravelly organic silt or clay with gravel or sand
			MH		Elastic silt, Elastic silt with sand or gravel, Sandy or gravelly elastic silt, Sandy or gravelly elastic silt with gravel or sand
			CH		Fat clay, Fat clay with sand or gravel, Sandy or gravelly fat clay, Sandy or gravelly fat clay with gravel or sand
			OH		Organic silt or clay, Organic silt or clay with sand or gravel, Sandy or gravelly organic silt or clay, Sandy or gravelly organic silt or clay with gravel or sand
HIGHLY ORGANIC SOILS			PT		Peat

For definition of dual and borderline symbols, see ASTM D2487-93.

KEY TO TEST DATA AND SYMBOLS

Perm	- Permeability	Shear Strength (psf)	Confining Pressure (psf)	
Consol	- Consolidation	TxUU	3200 (2600)	Unconsolidated-Undrained Triaxial Shear
LL	- Liquid Limit	TxCU	3200 (2600)	Consolidated-Undrained Triaxial Shear
PI	- Plasticity Index	TxCD	3200 (2600)	Consolidated-Drained Triaxial Shear
Gs	- Specific Gravity	SSCU	3200 (2600)	Consolidated-Undrained Simple Shear
MA	- Particle Size Analysis	SSCD	3200 (2600)	Consolidated-Drained Simple Shear
-200	- Percent Passing No. 200 Sieve	DSCD	2700 (2000)	Consolidated-Drained Direct Shear
ND	- Not Detected	UC	470	Unconfined Compression
■	- Tube Sample	LVS	700	Laboratory Vane Shear
☒	- Bag or Bulk Sample	FV	300	Field Vane Shear
☒	- Lost Sample	RFV		
☒	- First Groundwater	TV	800	Torvane Shear
☒	- Stabilized Groundwater	PP	400	Pocket Penetrometer (actual reading divided by 2)



Project Name & Location: Inner Harbor Turning Basin Alameda, California					Ground Surface Elevation: +9.5 feet		
					Elevation Datum: POO		
Drilling Coordinates: not surveyed			Start Date 5/25/00	Time 13:40	Finish Date 5/26/00		
Drilling Company & Driller: Pitcher, Ron-Baker			Time 09:00				
Rig Type & Drilling Method: Falling 1500 / Mud Rotary Wash			Drilling Fluid: Bentonite Mud	Hole Diameter: 3.7"			
Sampler A) SPT (2" O.D., 1.4" I.D.) Type(s): B) Modified California (3" O.D., 2.5" I.D.) C) Shelby Tube			Logged By: GYN	During Drilling 5			
Sampling A) 140 lb hammer with 30" drop (Rope and Cathead) Method(s): B) 140 lb hammer with 30" drop (Rope and Cathead) C) Hydraulic Push			Backfill Method: Cement Grout	Date: 5/25/00			
Depth (feet)	Sampler Type	Blows/6 inches or Pressure	Blows/12 inches	Sample Interval	Graphic Log	SOIL DESCRIPTIONS	LABORATORY DATA
0						GROUP NAME (GROUP SYMBOL) color, consistency/density, moisture condition, other descriptions (Local Name or Material Type)	Moisture Content (%) Dry Density (pcf)
0						ASPHALT - 3-inches thick CLAYEY GRAVEL (GC) dark yellowish brown (10YR 5/8), medium dense, dry	OVM = 0
2	B	4-600	7	14		POORLY GRADED SAND (SP) brown (7.5 YR 4/3), medium dense, moist, fine to medium-grained	OVM = 0
4	B	4-600	10			thin layer of black clay at 2.76 feet grades to dark yellowish (10YR 5/8) brown at 3.6 feet. grades to greenish black (5GY 2.5/1) at 4.5 feet	OVM = 0
6							
8	A	3-4	8			grades to clayey gravelly fill with wood debris and black particles from 7.5 to 8.5 feet	OVM = 0
10	B	3-2	4			FAT CLAY (CH) dark greenish gray (5GY 3/1), soft, wet, with shell and concrete fragments (Young Bay Mud)	OVM = 0
12							
15	B	1-0	0			FAT CLAY (CH) dark greenish gray (10GY 3/1), very soft, moist, with shell fragments	OVM = 0
18							
20	C	0 psi	0 psi			grades to soft at 20 feet.	
22						50 psi from 22.5 to 23 feet.	
25	B	0 psi	1				
28	B	0 psi	3				
30							
35	C	0 psi	0 psi			50 psi from 37.5 to 38 feet.	
38							
40							
Continued							
LOG OF BORING 1206-002.GPJ GEO-ENV.SDT 7/12/00	Subsurface Consultants, Inc. Geotechnical & Environmental Engineers			Inner Harbor Turning Basin Alameda, California			BORING
	JOB NUMBER 1206.002			DATE 7/00			B4

Project Name & Location: Inner Harbor Turning Basin Alameda, California						Start Date: 5/25/00	Logged By: GYN			
Depth (feet)	Sampler Type	Blows/6 Inches or Pressure	Blows/12 Inches	Sample Interval	Graphic Log	SOIL DESCRIPTIONS		LABORATORY DATA		
						GROUP NAME (GROUP SYMBOL) color, consistency/density, moisture condition, other descriptions (Local Name or Material Type)		Moisture Content (%)	Dry Density (pcf)	Other
46	B	228 50/4"	48			POORLY GRADED SAND with CLAY (SP-SC) grayish green (10GY 5/1), dense, wet, fine-grained (San Antonio Formation) CLAYEY SAND (SC) grayish green (10GY 5/1), dense, moist, fine-grained				
48	B	13 50/4"	30			SANDY LEAN CLAY (CL) mottled light yellowish brown (2.5Y 8/4) and greenish gray (10Y 6/1), very stiff, moist				
50	B	23 50/4"	35/10"			POORLY GRADED SAND (SP) olive (5Y 5/1), very dense, moist, fine-grained grades to dark orangish brown from 50.5 to 51 feet.				
55	A	25 50/4"	45			CLAYEY SAND (SC) grayish green (10GY 5/1), dense, wet, fine-grained FAT CLAY (CH) dark greenish gray (10GY 4/1), very stiff, moist				
60	A	4 50/4"	19							
65	B	28 50/4"	61			POORLY GRADED SAND with CLAY (SP-SC) dark greenish gray (10GY 4/1), very dense, moist, fine-grained, with interbedded sandy clay				
70	A	13 50/4"	28							
75	B	70 50/4"	87/11"							
80	A	25 50/4"	75/10"			grades to greensih black (5GY 2.5/1) at 78 feet. POORLY GRADED SAND with CLAY (SP-SC) greensih black (5GY 2.5/1), very dense, wet, fine-grained				
85	A	4 50/4"	12			FAT CLAY (CH) dark greenish gray (5G 4/1), stiff, moist (Old Bay Mud)				
90	B	10 50/4"				grades to very stiff and abundant shells at 90 feet.				
Continued										
LOG OF BORING 1206-002.GPJ GEO-ENV.GDT 7/12/00	Subsurface Consultants, Inc. Geotechnical & Environmental Engineers			Inner Harbor Turning Basin Alameda, California			BORING B4			
			JOB NUMBER 1206.002			DATE 7/00				

Project Name & Location: Inner Harbor Turning Basin Alameda, California						Start Date: 5/25/00			
						Logged By: GYN			
Depth (feet)	Sampler Type	Blows/6 inches or Pressure	Blows/12 inches	Sample Interval	Graphits Log	SOIL DESCRIPTIONS	LABORATORY DATA		
						GROUP NAME (GROUP SYMBOL) color, consistency/density, moisture condition, other descriptions (Local Name or Material Type)	Moisture Content (%)	Dry Density (pcf)	Other
81	B	16	29			sands present at 81 feet. FAT CLAY (CH) dark greenish gray (5G 4/1), stiff, moist (Old Bay Mud)			
96	B	13	23			pockets of sand at 96 feet.			
100	B	13	26						
105									
110									
115									
120									
125									
130									
135									
140									
LOG OF BORING 1206-002.GPJ GEO-ENV.edit 7/12/00		Inner Harbor Turning Basin Alameda, California			BORING B4				
SCI Subsurface Consultants, Inc. Geotechnical & Environmental Engineers		JOB NUMBER	DATE		1206.002	7/00			

Project Name & Location: Inner Harbor Turning Basin Alameda, California						Ground Surface Elevation: +10.0 feet					
						Elevation Datum: POO					
Drilling Coordinates: not surveyed						Start Date 5/26/00	Time 10:30	Finish Date 5/26/00	Time 16:30		
Drilling Company & Driller: Pitcher, Ron Baker						Drilling Fluid:		Hole Diameter:			
Rig Type & Drilling Method: Falling 1500 / Mud Rotary Wash						Bentonite Mud		3.7"			
Sampler A) SPT (2" O.D., 1.4" I.D.) Type(s): B) Modified California (3" O.D., 2.5" I.D.) C) Shelby Tube						Logged By: GYN	During Drilling				
Sampling A) 140 lb hammer with 30" drop (Rope and Cathead) Method(s): B) 140 lb hammer with 30" drop (Rope and Cathead) C) Hydraulic Push						Backfill Method: Cement Grout	Date: 5/26/00				
Depth (feet)	Sampler Type	Blows/6 inches or Pressure	Blows/12 inches	Sample Interval	Graphic Log	SOIL DESCRIPTIONS		LABORATORY DATA			
						GROUP NAME (GROUP SYMBOL): color, consistency/density, moisture condition, other descriptions (Local Name or Material Type)		Moisture Content (%)	Dry Density (psf)	Other	
0						ASPHALT - 8-inches thick					
5	B	17 11	28			AGGREGATE BASEROCK - 16-Inches thick					
7	B	3 7	12			POORLY GRADED GRAVEL with SAND (GP) dark yellowish brown (10YR 5/8), medium dense, moist (FII) black oily staining at 3 feet. coarse gravel at 4 feet.		OVM = 0			
10	B	1 2	3			CLAYEY GRAVEL with SAND (GC) dark greenish gray (10Y 4/1), loose, wet, coarse, medium-grained (FII) grades to wet at 6.5 feet. black sand stringer at 7.5 feet.		OVM = 0			
12						Increasing sands and decreasing gravels at 8 feet.					
15	B	0 2	3			FAT CLAY (CH) dark greenish gray (6GY 3/1), soft, wet, with shell fragments (Young Bay Mud)		OVM = 0			
20	B	0 1	1					TV = 280			
25	C	0 psi	0 psi			50 psi from 26 to 28 feet. abundent shells at 27 feet.					
30	B	0 psi	3					TV = 300			
35	B	0 2	3			no shells at 35 feet.					
40											

Continued



Project Name & Location: Inner Harbor Turning Basin Alameda, California							Start Date: 5/26/00	Logged By: GYN		
Depth (feet)	Sampler Type	Blows/5 inches or Pressure	Blows/12 inches	Sample Interval	Grapho Log	SOIL DESCRIPTIONS		LABORATORY DATA		
						GROUP NAME (GROUP SYMBOL) color, consistency/density, moisture condition, other descriptions (Local Name or Material Type)		Moisture Content (%)	Dry Density (pcf)	Other
40	C	20	0 psf			300 psf from 41 to 41.5 feet. CLAYEY SAND (SC) dark grayish green (5G 3/1), medium dense, wet, fine-grained (San Antonio Formation)				
45	B	19 50/5"	69/12"			POORLY GRADED SAND (SP) dark yellowish brown (10YR 5/8), very dense, wet, fine-grained				OVM = 0
50	A	17 56/5"	88			with lean clay stringer at 54 feet.				
55	B	33 50/4"	83/10"			LEAN CLAY (CL) light yellowish brown, (2.5Y 6/4), very stiff, moist				
60	A	8 14/6"	30			grades to grayish brown (2.5Y 6/2) at 65 feet.				
65	B	12 39/5"	66			POORLY GRADED SAND (SP) dark greenish gray (5GY 3/1), dense, wet, fine-grained				
70	B	23 46/5"	82			POORLY GRADED SAND with CALY (SP-SC) dark greenish gray (5GY 3/1), medium dense, wet, fine-grained				
75	A	12 12/5"	18			FAT CLAY with SAND (CH) dark greenish gray (5G 3/1), very stiff, moist				
80	B	21 50/3"	23			Increasing sands at 83 feet.				
85	A	30	71/5"			FAT CLAY (CH) dark greenish gray (5G 4/1), stiff, moist (Old Bay Mud)				
90	B	16 12/5"	8							
Continued										
Subsurface Consultants, Inc. Geotechnical & Environmental Engineers					Inner Harbor Turning Basin Alameda, California			BORING B5		
JOB NUMBER 1206.002					DATE 7/00			BORING B5		



Project Name & Location: Inner Harbor Turning Basin Alameda, California						Start Date:	5/26/00			
						Logged By:	GYN			
Depth (feet)	Sampler Type	Blows/6 inches or Pressure	Blows/12 Inches	Sample Interval	Graphic Log	SOIL DESCRIPTIONS		LABORATORY DATA		
						GROUP NAME (GROUP SYMBOL) Color, consistency/density, moisture condition, other descriptions (Local Name or Material Type)		Moisture Content (%)	Dry Density (pcf)	Other
85	B	13	28			grades to very stiff at 91 feet, FAT CLAY (CH) dark greenish gray (SG 4/1), stiff, moist (Old Bay Mud)				
95.8		13	21			pockets of sand present at 95.8 feet.				
100	B	4	30							
105										
110										
115										
120										
125										
130										
135										
140										
LOG OF BORING 1206-002.drp GEO-ENV/GDT 7/12/00						Inner Harbor Turning Basin Alameda, California			BORING	
SCI			Subsurface Consultants, Inc. Geotechnical & Environmental Engineers			JOB NUMBER	DATE		B5	
			1206.002				7/00			



Curtis & Tompkins, Ltd., Analytical Laboratories, Since 1878

2323 Fifth Street, Berkeley, CA 94710, Phone (510) 486-0900

A N A L Y T I C A L R E P O R T

Prepared for:

Subsurface Consultants
3736 Mt. Diablo Blvd.
Suite 200
Lafayette, CA 94549

Date: 06-JUL-00
Lab Job Number: 145844
Project ID: 99.574
Location: Inner Harbor Turning Basin

This data package has been reviewed for technical correctness and completeness. Release of this data has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signatures. The results contained in this report meet all requirements of NELAC and pertain only to those samples which were submitted for analysis.

Reviewed by: 
Project Manager

Reviewed by: 
Operations Manager

This package may be reproduced only in its entirety.

CA ELAP # 1459

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Curtis & Tompkins, Ltd.

Laboratory Number: 145844
Client: Subsurface Consultants
Location: Inner Harbor Turning Basin
Project#: 99.574

Receipt Date: 5/26/00

CASE NARRATIVE

This hardcopy data package contains sample and QC results for four soil samples that were received on May 26, 2000. All samples were received cold and intact.

Sample B4@17' was archived as requested on the Chain-of-Custody. All analyses for sample B4@7.5' were cancelled as requested by fax on May 30th.

TVH/BTXE: No analytical problems were encountered.

Total Extractable Hydrocarbons: All extracts were treated with silica gel prior to analysis. Sample B4@2.5' was analyzed at a dilution causing the surrogate to be diluted out. No other analytical problems were encountered.

Volatile Organics: No analytical problems were encountered.

Semivolatile Organics: No analytical problems were encountered.

Metals: No analytical problems were encountered.

Pesticides/PCBs: All samples were sub-contracted to Calscience Environmental Laboratories, Inc. No analytical problems were encountered.

CHAIN OF CUSTODY FORM

PROJECT NAME: Inner Harbor Turning Basin Project W.O. 103902

JOB NUMBER: 99-574

PROJECT CONTACT: Glenn Young TURNAROUND: STANDARD

SAMPLED BY: John Lafe (Sue)

SAMPLED BY: John Wong / Gene Ng REQUESTED BY: Glen Young

CHAIN OF CUSTODY RECORD

RELEASED BY: (Signature)

DATE / TIME

RECEIVED BY: (Signature)

DATE / TIME

RELEASER BY: (Signature)

DATE / TIME

RECEIVED BY: (Signature)

DATE / TIME

RELEASED BY: (Signature)

DATE / TIME

RECEIVED BY: (Signature)

DATE / TIME

RELEASER BY: (Signature)

DATE / TIME

RECEIVED BY: (Signature)

DATE / TIME

SCI

Subsurface Consultants, Inc.
171 - 12th Street, Suite 202, Oakland, CA 94607
(510) 268-0461 - FAX: (510) 268-0137
3736 Mt. Diablo Blvd., Ste. 200, Lafayette, CA 94549
(925) 299-7960 - (925) 299-7970

CHAIN OF CUSTODY FORM

PROJECT NAME: Inner Harbor Turning Basin Project W.O. 103902

JOB NUMBER: 99-574

LAB: Curtis & Tompkins

PROJECT CONTACT: Glenn Yancey

TURNAROUND: STANDARD

SAMPLED BY: John Wolfe / Gene NY

REQUESTED BY: Glen Young

CHAIN OF CUSTODY RECORD				COMMENTS & NOTES:
RELEASED BY: (Signature)	DATE / TIME	RECEIVED BY: (Signature)	DATE / TIME	
<i>Edwin P. Woo</i>	5/26/00 1100	<i>B. Lumbra</i>	5/26/00 1100	
RELEASED BY: (Signature)	DATE / TIME	RECEIVED BY: (Signature)	DATE / TIME	
RELEASED BY: (Signature)	DATE / TIME	RECEIVED BY: (Signature)	DATE / TIME	
RELEASED BY: (Signature)	DATE / TIME	RECEIVED BY: (Signature)	DATE / TIME	

SCI

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CURTIS & TOMPKINS, LTD. BERKELEY

LOGIN CHANGE FORM

Reason for change:



Client Request: By: John Wolf SCIPM
Login Review Data Review

Date/Time: 3/20/00

Initials

Login Review

Data Review



Curtis & Tompkins, Ltd



Curtis & Tompkins, Ltd.

Gasoline by GC/FID CA LUFT

Lab #:	145844	Location:	Inner Harbor Turning Basin
Client:	Subsurface Consultants	Prep:	EPA 5030
Project#:	99.574	Analysis:	EPA 8015M
Matrix:	Soil	Batch#:	56182
Units:	mg/Kg	Sampled:	05/25/00
Basis:	wet	Received:	05/26/00
Diln Fac:	1.000	Analyzed:	05/30/00

Field ID: B4@4' Lab ID: 145844-002
Type: SAMPLE

Analyte	Result	RL
Gasoline C7-C12	ND	1.0
<hr/>		
Surrogate	%REC	Limits
Trifluorotoluene (FID)	106	62-138
Bromofluorobenzene (FID)	110	46-150

Field ID: B4@7.5' Lab ID: 145844-003
Type: SAMPLE

Analyte	Result	RL
Gasoline C7-C12	ND	1.0
<hr/>		
Surrogate	%REC	Limits
Trifluorotoluene (FID)	106	62-138
Bromofluorobenzene (FID)	110	46-150

Type: BLANK Lab ID: QC116984

Analyte	Result	RL
Gasoline C7-C12	ND	1.0
<hr/>		
Surrogate	%REC	Limits
Trifluorotoluene (FID)	104	62-138
Bromofluorobenzene (FID)	108	46-150

ND = Not Detected

RL = Reporting Limit

Page 1 of 1



Curtis & Tompkins, Ltd.

Gasoline by GC/FID CA LUFT

Lab #:	145844	Location:	Inner Harbor Turning Basin
Client:	Subsurface Consultants	Prep:	EPA 5030
Project#:	99.574	Analysis:	EPA 8015M
Type:	LCS	Basis:	wet
Lab ID:	QC116985	Diln Fac:	1.000
Matrix:	Soil	Batch#:	56182
Units:	mg/Kg	Analyzed:	05/30/00

Analyte	Spiked	Result	SRLC	Dem Sec
Gasoline C7-C12	10.00	10.39	104	75-123

Surrogate	SRLC	Limits
Trifluorotoluene (FID)	114	62-138
Bromofluorobenzene (FID)	114	46-150



Curtis & Tompkins, Ltd.

Gasoline by GC/FID CA LUFT

Lab #:	145844	Location:	Inner Harbor Turning Basin
Client:	Subsurface Consultants	Prep:	EPA 5030
Project#:	99.574	Analysis:	EPA 8015M
Field ID:	ZZZZZZZZZZ	Diln Fac:	1.000
MSS Lab ID:	145840-001	Batch#:	56182
Matrix:	Soil	Sampled:	05/26/00
Units:	mg/Kg	Received:	05/26/00
Basis:	wet	Analyzed:	05/30/00

Type: MS Lab ID: QC116987

Analyte	MSS Result	Spiked	Result	%REC	Limits
Gasoline C7-C12	ND	10.00	9.563	96	41-132
<hr/>					
Surrogate					
Trifluorotoluene (FID)	114	62-138			
Bromofluorobenzene (FID)	112	46-150			

Type: MSD Lab ID: QC116988

Analyte	Spiked	Result	%REC	Limits	RPD	Unit
Gasoline C7-C12	10.00	10.02	100	41-132	5	25
<hr/>						
Surrogate						
Trifluorotoluene (FID)	115	62-138				
Bromofluorobenzene (FID)	114	46-150				

ND = Not Detected

RPD= Relative Percent Difference

Page 1 of 1



Curtis & Tompkins, Ltd.

Total Extractable Hydrocarbons

Lab #:	145844	Location:	Inner Harbor Turning Basin
Client:	Subsurface Consultants	Prep:	SHAKER TABLE
Project#:	99.574	Analysis:	EPA 8015M
Matrix:	Soil	Sampled:	05/25/00
Units:	mg/Kg	Received:	05/26/00
Basis:	wet	Prepared:	05/30/00
Batch#:	56196	Analyzed:	06/19/00

Field ID: B4@2.5' Lab ID: 145844-001
Type: SAMPLE Diln Fac: 10.00

Analyte	Result	RI
Diesel C10-C24	140 H Y	10
Motor Oil C24-C36	650	50

Surrogate	SPEC	Limits
Hexacosane	DO	60-136

Field ID: B4@4' Lab ID: 145844-002
Type: SAMPLE Diln Fac: 1.000

Analyte	Result	RI
Diesel C10-C24	ND	0.99
Motor Oil C24-C36	ND	5.0

Surrogate	SPEC	Limits
Hexacosane	103	60-136

Type: BLANK Diln Fac: 1.000
Lab ID: QC117034

Analyte	Result	RI
Diesel C10-C24	ND	1.0
Motor Oil C24-C36	ND	5.0

Surrogate	SPEC	Limits
Hexacosane	86	60-136

H = Heavier hydrocarbons contributed to the quantitation
I = Sample exhibits fuel pattern which does not resemble standard
DO = Diluted Out
D = Not Detected
L = Reporting Limit
Page 1 of 1

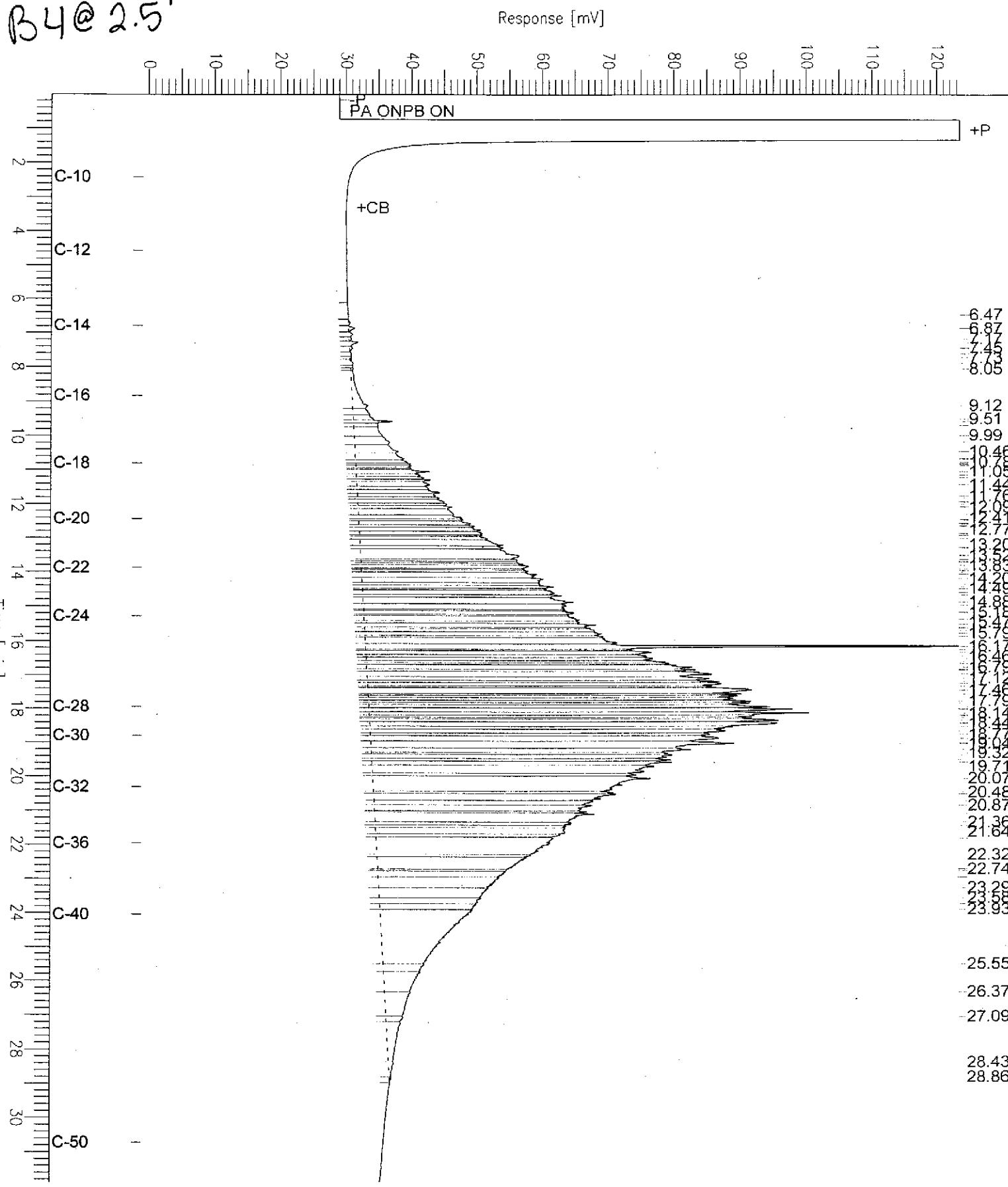
Chromatogram

Sample Name : 145844-001,56196
FileName : G:\GC13\CHB\170B026.RAW
Method : BTEM164.MTH
Start Time : 0.01 min End Time : 31.91 min
Scale Factor: 0.0 Plot Offset: -1 mV

Sample #: 56196 Date : 06/19/2000 10:35 AM
Time of Injection: 06/19/2000 04:42 AM
Low Point : -0.92 mV High Point : 123.48 mV
Plot Scale: 124.4 mV

Page 1 of 1

B4@2.5'



Total Extractable Hydrocarbons

Lab #:	145844	Location:	Inner Harbor Turning Basin
Client:	Subsurface Consultants	Prep:	SHAKER TABLE
Project#:	99.574	Analysis:	EPA 8015M
Type:	LCS	Diln Fac:	1.000
Lab ID:	QC117035	Batch#:	56196
Matrix:	Soil	Prepared:	05/30/00
Units:	mg/Kg	Analyzed:	06/09/00
Basis:	wet		

Analyte	Spiked	Result	GRPC	Limits
Diesel C10-C24	46.72	40.22	86	67-121

Surrogate	GRPC	Limits
Hexacosane	110	60-136



Curtis & Tompkins, Ltd.

Total Extractable Hydrocarbons

Lab #:	145844	Location:	Inner Harbor Turning Basin
Client:	Subsurface Consultants	Prep:	SHAKER TABLE
Project#:	99.574	Analysis:	EPA 8015M
Field ID:	ZZZZZZZZZ	Batch#:	56196
MSS Lab ID:	145831-003	Sampled:	05/24/00
Matrix:	Soil	Received:	05/25/00
Units:	mg/Kg	Prepared:	05/30/00
Basis:	wet	Analyzed:	06/19/00
Diln Fac:	1.000		

Type: MS Lab ID: QC117036

Analyte	MSS Result	Spiked	Result	%REC	Limits
Diesel C10-C24	54.87	46.74	73.07	39	35-146

Surrogate	%REC	Limits
Hexacosane	81	60-136

Type: MSD Lab ID: QC117037

Analyte	Spiked	Result	%REC	Limits	RBD	Lim
Diesel C10-C24	46.52	81.60	57	35-146	11	48

Surrogate	%REC	Limits
Hexacosane	107	60-136



Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	145844	Location:	Inner Harbor Turning Basin
Client:	Subsurface Consultants	Prep:	EPA 5030
Project#:	99.574	Analysis:	EPA 8260B
Field ID:	B404'	Diln Fac:	0.9434
Lab ID:	145844-002	Batch#:	56278
Matrix:	Soil	Sampled:	05/25/00
Units:	ug/Kg	Received:	05/26/00
Basis:	wet	Analyzed:	06/02/00

Analyte	Result	RL
Freon 12	ND	9.4
Chloromethane	ND	9.4
Vinyl Chloride	ND	9.4
Bromomethane	ND	9.4
Chloroethane	ND	9.4
Trichlorofluoromethane	ND	4.7
Acetone	ND	19
Freon 113	ND	4.7
1,1-Dichloroethene	ND	4.7
Methylene Chloride	ND	19
Carbon Disulfide	ND	4.7
MTBE	ND	4.7
trans-1,2-Dichloroethene	ND	4.7
Vinyl Acetate	ND	47
1,1-Dichloroethane	ND	4.7
2-Butanone	ND	9.4
cis-1,2-Dichloroethene	ND	4.7
2,2-Dichloropropane	ND	4.7
Chloroform	ND	4.7
Bromoform	ND	4.7
1,1,1-Trichloroethane	ND	4.7
1,1-Dichloropropene	ND	4.7
Carbon Tetrachloride	ND	4.7
1,2-Dichloroethane	ND	4.7
Benzene	ND	4.7
Trichloroethene	ND	4.7
1,2-Dichloropropane	ND	4.7
Bromodichloromethane	ND	4.7
Dibromomethane	ND	4.7
4-Methyl-2-Pentanone	ND	9.4
cis-1,3-Dichloropropene	ND	4.7
Toluene	ND	4.7
trans-1,3-Dichloropropene	ND	4.7
1,1,2-Trichloroethane	ND	4.7
2-Hexanone	ND	9.4
1,3-Dichloropropane	ND	4.7
Tetrachloroethene	ND	4.7

ND = Not Detected

RL = Reporting Limit

Page 1 of 2



Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	145844	Location:	Inner Harbor Turning Basin
Client:	Subsurface Consultants	Prep:	EPA 5030
Project#:	99.574	Analysis:	EPA 8260B
Field ID:	B4@4'	Diln Fac:	0.9434
Lab ID:	145844-002	Batch#:	56278
Matrix:	Soil	Sampled:	05/25/00
Units:	ug/Kg	Received:	05/26/00
Basis:	wet	Analyzed:	06/02/00

Analyte	Result	RT
Dibromochloromethane	ND	4.7
1,2-Dibromoethane	ND	4.7
Chlorobenzene	ND	4.7
1,1,1,2-Tetrachloroethane	ND	4.7
Ethylbenzene	ND	4.7
m,p-Xylenes	ND	4.7
o-Xylene	ND	4.7
Styrene	ND	4.7
Bromoform	ND	4.7
Isopropylbenzene	ND	4.7
1,1,2,2-Tetrachloroethane	ND	4.7
1,2,3-Trichloropropane	ND	4.7
Propylbenzene	ND	4.7
Bromobenzene	ND	4.7
1,3,5-Trimethylbenzene	ND	4.7
2-Chlorotoluene	ND	4.7
4-Chlorotoluene	ND	4.7
tert-Butylbenzene	ND	4.7
1,2,4-Trimethylbenzene	ND	4.7
sec-Butylbenzene	ND	4.7
para-Isopropyl Toluene	ND	4.7
1,3-Dichlorobenzene	ND	4.7
1,4-Dichlorobenzene	ND	4.7
n-Butylbenzene	ND	4.7
1,2-Dichlorobenzene	ND	4.7
1,2-Dibromo-3-Chloropropane	ND	4.7
1,2,4-Trichlorobenzene	ND	4.7
Hexachlorobutadiene	ND	4.7
Naphthalene	ND	4.7
1,2,3-Trichlorobenzene	ND	4.7

Surrogate	#REC	Limits
Dibromofluoromethane	99	63-133
1,2-Dichloroethane-d4	96	76-127
Toluene-d8	100	80-111
Bromofluorobenzene	98	77-126

ND = Not Detected

RL = Reporting Limit

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Purgeable Organics by GC/MS

Lab #:	145844	Location:	Inner Harbor Turning Basin
Client:	Subsurface Consultants	Prep:	EPA 5030
Project#:	99.574	Analysis:	EPA 8260B
Type:	BLANK	Basis:	wet
Lab ID:	QC117354	Diln Fac:	1.000
Matrix:	Soil	Batch#:	56278
Units:	ug/Kg	Analyzed:	06/02/00

Analyte	Result	RL
Freon 12	ND	10
Chloromethane	ND	10
Vinyl Chloride	ND	10
Bromomethane	ND	10
Chloroethane	ND	10
Trichlorofluoromethane	ND	5.0
Acetone	ND	20
Freon 113	ND	5.0
1,1-Dichloroethene	ND	5.0
Methylene Chloride	ND	20
Carbon Disulfide	ND	5.0
MTBE	ND	5.0
trans-1,2-Dichloroethene	ND	5.0
Vinyl Acetate	ND	50
1,1-Dichloroethane	ND	5.0
2-Butanone	ND	10
cis-1,2-Dichloroethene	ND	5.0
2,2-Dichloropropane	ND	5.0
Chloroform	ND	5.0
Bromoform	ND	5.0
1,1,1-Trichloroethane	ND	5.0
1,1-Dichloropropene	ND	5.0
Carbon Tetrachloride	ND	5.0
1,2-Dichloroethane	ND	5.0
Benzene	ND	5.0
Trichloroethene	ND	5.0
1,2-Dichloropropane	ND	5.0
Bromodichloromethane	ND	5.0
Dibromomethane	ND	5.0
4-Methyl-2-Pentanone	ND	10
cis-1,3-Dichloropropene	ND	5.0
Toluene	ND	5.0
trans-1,3-Dichloropropene	ND	5.0
1,1,2-Trichloroethane	ND	5.0
2-Hexanone	ND	10
1,3-Dichloropropane	ND	5.0
Tetrachloroethene	ND	5.0
Dibromochloromethane	ND	5.0

ND = Not Detected

RL = Reporting Limit

Page 1 of 2



Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	145844	Location:	Inner Harbor Turning Basin
Client:	Subsurface Consultants	Prep:	EPA 5030
Project#:	99.574	Analysis:	EPA 8260B
Type:	BLANK	Basis:	wet
Lab ID:	QC117354	Diln Fac:	1.000
Matrix:	Soil	Batch#:	56278
Units:	ug/Kg	Analyzed:	06/02/00

Analyte	Result	RI
1,2-Dibromoethane	ND	5.0
Chlorobenzene	ND	5.0
1,1,1,2-Tetrachloroethane	ND	5.0
Ethylbenzene	ND	5.0
m,p-Xylenes	ND	5.0
o-Xylene	ND	5.0
Styrene	ND	5.0
Bromoform	ND	5.0
Isopropylbenzene	ND	5.0
1,1,2,2-Tetrachloroethane	ND	5.0
1,2,3-Trichloropropane	ND	5.0
Propylbenzene	ND	5.0
Bromobenzene	ND	5.0
1,3,5-Trimethylbenzene	ND	5.0
2-Chlorotoluene	ND	5.0
4-Chlorotoluene	ND	5.0
tert-Butylbenzene	ND	5.0
1,2,4-Trimethylbenzene	ND	5.0
sec-Butylbenzene	ND	5.0
para-Isopropyl Toluene	ND	5.0
1,3-Dichlorobenzene	ND	5.0
1,4-Dichlorobenzene	ND	5.0
n-Butylbenzene	ND	5.0
1,2-Dichlorobenzene	ND	5.0
1,2-Dibromo-3-Chloropropane	ND	5.0
1,2,4-Trichlorobenzene	ND	5.0
Hexachlorobutadiene	ND	5.0
Naphthalene	ND	5.0
1,2,3-Trichlorobenzene	ND	5.0

Surrogate	REC	Limits
Dibromofluoromethane	95	63-133
1,2-Dichloroethane-d4	96	76-127
Toluene-d8	100	80-111
Bromofluorobenzene	98	77-126

ND = Not Detected

RL = Reporting Limit

Page 2 of 2

Purgeable Organics by GC/MS

Lab #:	145844	Location:	Inner Harbor Turning Basin
Client:	Subsurface Consultants	Prep:	EPA 5030
Project#:	99.574	Analysis:	EPA 8260B
Type:	LCS	Basis:	wet
Lab ID:	QC117353	Diln Fac:	1.000
Matrix:	Soil	Batch#:	56278
Units:	ug/Kg	Analyzed:	06/02/00

Analyte	Soiled	Result	REC	limits
1,1-Dichloroethene	50.00	47.02	94	66-138
Benzene	50.00	49.33	99	76-121
Trichloroethene	50.00	50.94	102	75-124
Toluene	50.00	51.23	102	75-124
Chlorobenzene	50.00	50.75	102	78-115

Surrogate	REC	Limits
Dibromofluoromethane	91	63-133
1,2-Dichloroethane-d4	92	76-127
Toluene-d8	97	80-111
Bromofluorobenzene	91	77-126



Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	145844	Location:	Inner Harbor Turning Basin
Client:	Subsurface Consultants	Prep:	EPA 5030
Project#:	99.574	Analysis:	EPA 8260B
Field ID:	B306.0	Diln Fac:	0.9434
MSS Lab ID:	145827-002	Batch#:	56278
Matrix:	Soil	Sampled:	05/24/00
Units:	ug/Kg	Received:	05/25/00
Basis:	wet	Analyzed:	06/02/00

Type: MS Lab ID: QC117355

Analyte	MSS Result	Spiked	Result	RREC	Limits
1,1-Dichloroethene	<4.717	47.17	38.02	81	42-145
Benzene	<4.717	47.17	37.97	81	50-133
Trichloroethene	<4.717	47.17	35.55	75	33-133
Toluene	<4.717	47.17	37.63	80	45-134
Chlorobenzene	<4.717	47.17	33.63	71	38-137

Surrogate	RREC	Limits
Dibromofluoromethane	99	63-133
1,2-Dichloroethane-d4	98	76-127
Toluene-d8	100	80-111
Bromofluorobenzene	94	77-126

Type: MSD Lab ID: QC117356

Analyte	Spiked	Result	RREC	Limits	RPD	Lim
1,1-Dichloroethene	47.17	39.22	83	42-145	3	31
Benzene	47.17	38.52	82	50-133	1	29
Trichloroethene	47.17	37.03	79	33-133	4	30
Toluene	47.17	38.68	82	45-134	3	29
Chlorobenzene	47.17	34.03	72	38-137	1	31

Surrogate	RREC	Limits
Dibromofluoromethane	97	63-133
1,2-Dichloroethane-d4	97	76-127
Toluene-d8	100	80-111
Bromofluorobenzene	94	77-126

Semivolatile Organics by GC/MS

Lab #:	145844	Location:	Inner Harbor Turning Basin
Client:	Subsurface Consultants	Prep:	EPA 3550
Project#:	99.574	Analysis:	EPA 8270B
Field ID:	B4@2.5'	Batch#:	56313
Lab ID:	145844-001	Sampled:	05/25/00
Matrix:	Soil	Received:	05/26/00
Units:	ug/Kg	Prepared:	06/05/00
Basis:	wet	Analyzed:	06/14/00
Diln Fac:	10.00		

Analyte	Reported	RL
N-Nitrosodimethylamine	ND	3,300
Phenol	ND	3,300
bis(2-Chloroethyl)ether	ND	3,300
2-Chlorophenol	ND	3,300
1,3-Dichlorobenzene	ND	3,300
1,4-Dichlorobenzene	ND	3,300
Benzyl alcohol	ND	3,300
1,2-Dichlorobenzene	ND	3,300
2-Methylphenol	ND	3,300
bis(2-Chloroisopropyl) ether	ND	3,300
3-,4-Methylphenol	ND	3,300
N-Nitroso-di-n-propylamine	ND	3,300
Hexachloroethane	ND	3,300
Nitrobenzene	ND	3,300
Isophorone	ND	3,300
2-Nitrophenol	ND	17,000
2,4-Dimethylphenol	ND	3,300
Benzoic acid	ND	17,000
bis(2-Chloroethoxy)methane	ND	3,300
2,4-Dichlorophenol	ND	3,300
1,2,4-Trichlorobenzene	ND	3,300
Naphthalene	ND	3,300
4-Chloroaniline	ND	3,300
Hexachlorobutadiene	ND	3,300
4-Chloro-3-methylphenol	ND	3,300
2-Methylnaphthalene	ND	3,300
Hexachlorocyclopentadiene	ND	17,000
2,4,6-Trichlorophenol	ND	3,300
2,4,5-Trichlorophenol	ND	3,300
2-Chloronaphthalene	ND	3,300
2-Nitroaniline	ND	17,000
Dimethylphthalate	ND	3,300
Acenaphthylene	ND	3,300
2,6-Dinitrotoluene	ND	3,300
3-Nitroaniline	ND	17,000
Acenaphthene	ND	3,300
2,4-Dinitrophenol	ND	17,000
4-Nitrophenol	ND	17,000
Dibenzofuran	ND	3,300
2,4-Dinitrotoluene	ND	3,300
Diethylphthalate	ND	3,300
Fluorene	ND	3,300
4-Chlorophenyl-phenylether	ND	3,300
4-Nitroaniline	ND	17,000
4,6-Dinitro-2-methylphenol	ND	17,000
N-Nitrosodiphenylamine	ND	3,300
Azobenzene	ND	3,300
4-Bromophenyl-phenylether	ND	3,300
Hexachlorobenzene	ND	3,300
Pentachlorophenol	ND	17,000
Phenanthrene	ND	3,300
Anthracene	ND	3,300
Di-n-butylphthalate	ND	3,300
Fluoranthene	ND	3,300

ND = Not Detected

RL = Reporting Limit

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Curtis & Tompkins, Ltd.

Semivolatile Organics by GC/MS

Lab #:	145844	Location:	Inner Harbor Turning Basin
Client:	Subsurface Consultants	Prep:	EPA 3550
Project#:	99.574	Analysis:	EPA 8270B
Field ID:	B402.5'	Batch#:	56313
Lab ID:	145844-001	Sampled:	05/25/00
Matrix:	Soil	Received:	05/26/00
Units:	ug/Kg	Prepared:	06/05/00
Basis:	wet	Analyzed:	06/14/00
Diln Fac:	10.00		

Analyst	Result	RL
Pyrene	ND	3,300
Butylbenzylphthalate	ND	3,300
3,3'-Dichlorobenzidine	ND	17,000
Benzo(a)anthracene	ND	3,300
Chrysene	ND	3,300
bis(2-Ethylhexyl)phthalate	ND	3,300
Di-n-octylphthalate	ND	3,300
Benzo(b,k)fluoranthene	ND	3,300
Benzo(a)pyrene	ND	3,300
Indeno(1,2,3-cd)pyrene	ND	3,300
Dibenz(a,h)anthracene	ND	3,300
Benzo(g,h,i)perylene	ND	3,300

Surrogate	IRV%	RL%
2-Fluorophenol	71	40-134
Phenol-d5	72	39-135
2,4,6-Tribromophenol	94	16-131
Nitrobenzene-d5	59	38-131
2-Fluorobiphenyl	92	45-129
Terphenyl-d14	98	41-140

ND = Not Detected

RL = Reporting Limit

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Curtis & Tompkins, Ltd.

Semivolatile Organics by GC/MS

Lab #:	145844	Location:	Inner Harbor Turning Basin
Client:	Subsurface Consultants	Prep:	EPA 3550
Project#:	99.574	Analysis:	EPA 8270B
Field ID:	B4@4'	Batch#:	56313
Lab ID:	145844-002	Sampled:	05/25/00
Matrix:	Soil	Received:	05/26/00
Units:	ug/Kg	Prepared:	06/05/00
Basis:	wet	Analyzed:	06/06/00
Diln Fac:	1.000		

ANALYTE	REPORTED	RL
N-Nitrosodimethylamine	ND	340
Phenol	ND	340
bis(2-Chloroethyl)ether	ND	340
2-Chlorophenol	ND	340
1,3-Dichlorobenzene	ND	340
1,4-Dichlorobenzene	ND	340
Benzyl alcohol	ND	340
1,2-Dichlorobenzene	ND	340
2-Methylphenol	ND	340
bis(2-Chloroisopropyl) ether	ND	340
3-,4-Methylphenol	ND	340
N-Nitroso-di-n-propylamine	ND	340
Hexachloroethane	ND	340
Nitrobenzene	ND	340
Isophorone	ND	340
2-Nitrophenol	ND	1,700
2,4-Dimethylphenol	ND	340
Benzoic acid	ND	1,700
bis(2-Chloroethoxy)methane	ND	340
2,4-Dichlorophenol	ND	340
1,2,4-Trichlorobenzene	ND	340
Naphthalene	ND	340
4-Chloroaniline	ND	340
Hexachlorobutadiene	ND	340
4-Chloro-3-methylphenol	ND	340
2-Methylnaphthalene	ND	340
Hexachlorocyclopentadiene	ND	1,700
2,4,6-Trichlorophenol	ND	340
2,4,5-Trichlorophenol	ND	340
2-Chloronaphthalene	ND	340
2-Nitroaniline	ND	1,700
Dimethylphthalate	ND	340
Acenaphthylene	ND	340
2,6-Dinitrotoluene	ND	340
3-Nitroaniline	ND	1,700
Acenaphthene	ND	340
2,4-Dinitrophenol	ND	1,700
4-Nitrophenol	ND	1,700
Dibenzofuran	ND	340
2,4-Dinitrotoluene	ND	340
Diethylphthalate	ND	340
Fluorene	ND	340
4-Chlorophenyl-phenylether	ND	340
4-Nitroaniline	ND	1,700
4,6-Dinitro-2-methylphenol	ND	1,700
N-Nitrosodiphenylamine	ND	340
Azobenzene	ND	340
4-Bromophenyl-phenylether	ND	340
Hexachlorobenzene	ND	340
Pentachlorophenol	ND	1,700
Phenanthrene	ND	340
Anthracene	ND	340
Di-n-butylphthalate	ND	340
Fluoranthene	ND	340

ND = Not Detected

RL = Reporting Limit

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Curtis & Tompkins, Ltd.

Semivolatile Organics by GC/MS

Lab #:	145844	Location:	Inner Harbor Turning Basin
Client:	Subsurface Consultants	Prep:	EPA 3550
Project#:	99.574	Analysis:	EPA 8270B
Field ID:	B4@4'	Batch#:	56313
Lab ID:	145844-002	Sampled:	05/25/00
Matrix:	Soil	Received:	05/26/00
Units:	ug/Kg	Prepared:	06/05/00
Basis:	wet	Analyzed:	06/06/00
Diln Fac:	1.000		

Analite	Result	RL
Pyrene	ND	340
Butylbenzylphthalate	ND	340
3,3'-Dichlorobenzidine	ND	1,700
Benzo(a)anthracene	ND	340
Chrysene	ND	340
bis(2-Ethylhexyl)phthalate	ND	340
Di-n-octylphthalate	ND	340
Benzo(b,k)fluoranthene	ND	340
Benzo(a)pyrene	ND	340
Indeno(1,2,3-cd)pyrene	ND	340
Dibenz(a,h)anthracene	ND	340
Benzo(g,h,i)perylene	ND	340

Surrogate	REC	RLimits
2-Fluorophenol	78	40-134
Phenol-d5	79	39-135
2,4,6-Tribromophenol	67	16-131
Nitrobenzene-d5	82	38-131
2-Fluorobiphenyl	85	45-129
Terphenyl-d14	86	41-140

ND = Not Detected

RL = Reporting Limit

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Semivolatile Organics by GC/MS

Lab #:	145844	Location:	Inner Harbor Turning Basin
Client:	Subsurface Consultants	Prep:	EPA 3550
Project#:	99.574	Analysis:	EPA 8270B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC117491	Batch#:	56313
Matrix:	Soil	Prepared:	06/05/00
Units:	ug/Kg	Analyzed:	06/06/00
Basis:	wet		

Analyte	Result	RL
N-Nitrosodimethylamine	ND	340
Phenol	ND	340
bis(2-Chloroethyl)ether	ND	340
2-Chlorophenol	ND	340
1,3-Dichlorobenzene	ND	340
1,4-Dichlorobenzene	ND	340
Benzyl alcohol	ND	340
1,2-Dichlorobenzene	ND	340
2-Methylphenol	ND	340
bis(2-Chloroisopropyl) ether	ND	340
3-,4-Methylphenol	ND	340
N-Nitroso-di-n-propylamine	ND	340
Hexachloroethane	ND	340
Nitrobenzene	ND	340
Isophorone	ND	340
2-Nitrophenol	ND	1,700
2,4-Dimethylphenol	ND	340
Benzoic acid	ND	1,700
bis(2-Chloroethoxy)methane	ND	340
2,4-Dichlorophenol	ND	340
1,2,4-Trichlorobenzene	ND	340
Naphthalene	ND	340
4-Chloroaniline	ND	340
Hexachlorobutadiene	ND	340
4-Chloro-3-methylphenol	ND	340
2-Methylnaphthalene	ND	340
Hexachlorocyclopentadiene	ND	1,700
2,4,6-Trichlorophenol	ND	340
2,4,5-Trichlorophenol	ND	340
2-Chloronaphthalene	ND	340
2-Nitroaniline	ND	1,700
Dimethylphthalate	ND	340
Acenaphthylene	ND	340
2,6-Dinitrotoluene	ND	340
3-Nitroaniline	ND	1,700
Acenaphthene	ND	340
2,4-Dinitrophenol	ND	1,700

ND = Not Detected

RL = Reporting Limit

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Curtis & Tompkins, Ltd.

Semivolatile Organics by GC/MS

Lab #:	145844	Location:	Inner Harbor Turning Basin
Client:	Subsurface Consultants	Prep:	EPA 3550
Project#:	99.574	Analysis:	EPA 8270B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC117491	Batch#:	56313
Matrix:	Soil	Prepared:	06/05/00
Units:	ug/Kg	Analyzed:	06/06/00
Basis:	wet		

Analyte	Result	RL
4-Nitrophenol	ND	1,700
Dibenzofuran	ND	340
2,4-Dinitrotoluene	ND	340
Diethylphthalate	ND	340
Fluorene	ND	340
4-Chlorophenyl-phenylether	ND	340
4-Nitroaniline	ND	1,700
4,6-Dinitro-2-methylphenol	ND	1,700
N-Nitrosodiphenylamine	ND	340
Azobenzene	ND	340
4-Bromophenyl-phenylether	ND	340
Hexachlorobenzene	ND	340
Pentachlorophenol	ND	1,700
Phenanthrene	ND	340
Anthracene	ND	340
Di-n-butylphthalate	ND	340
Fluoranthene	ND	340
Pyrene	ND	340
Butylbenzylphthalate	ND	340
3,3'-Dichlorobenzidine	ND	1,700
Benzo(a)anthracene	ND	340
Chrysene	ND	340
bis(2-Ethylhexyl)phthalate	ND	340
Di-n-octylphthalate	ND	340
Benzo(b,k)fluoranthene	ND	340
Benzo(a)pyrene	ND	340
Indeno(1,2,3-cd)pyrene	ND	340
Dibenz(a,h)anthracene	ND	340
Benzo(g,h,i)perylene	ND	340

Surrogate	REC	Limits
2-Fluorophenol	78	40-134
Phenol-d5	79	39-135
2,4,6-Tribromophenol	68	16-131
Nitrobenzene-d5	84	38-131
2-Fluorobiphenyl	82	45-129
Terphenyl-d14	88	41-140

ND = Not Detected

RL = Reporting Limit

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Curtis & Tompkins, Ltd.

Semivolatile Organics by GC/MS

Lab #:	145844	Location:	Inner Harbor Turning Basin
Client:	Subsurface Consultants	Prep:	EPA 3550
Project#:	99.574	Analysis:	EPA 8270B
Type:	LCS	Diln Fac:	1.000
Lab ID:	QC117492	Batch#:	56313
Matrix:	Soil	Prepared:	06/05/00
Units:	ug/Kg	Analyzed:	06/06/00
Basis:	wet		

Analyte	Spiked	Result	REC	Limits
Phenol	3,385	2,575	76	39-128
2-Chlorophenol	3,385	2,917	86	45-137
1,4-Dichlorobenzene	1,693	1,326	78	41-127
N-Nitroso-di-n-propylamine	1,693	1,395	82	40-140
1,2,4-Trichlorobenzene	1,693	1,392	82	46-128
4-Chloro-3-methylphenol	3,385	2,772	82	45-130
Acenaphthene	1,693	1,451	86	47-124
4-Nitrophenol	3,385	2,389	71	36-110
2,4-Dinitrotoluene	1,693	1,312	78	42-123
Pentachlorophenol	3,385	1,546	46	15-110
Pyrene	1,693	1,406	83	44-123

Surrogate	REC	Limits
2-Fluorophenol	78	40-134
Phenol-d5	78	39-135
2,4,6-Tribromophenol	76	16-131
Nitrobenzene-d5	82	38-131
2-Fluorobiphenyl	81	45-129
Terphenyl-d14	87	41-140



Curtis & Tompkins, Ltd.

Semivolatile Organics by GC/MS

Lab #:	145844	Location:	Inner Harbor Turning Basin
Client:	Subsurface Consultants	Prep:	EPA 3550
Project#:	99.574	Analysis:	EPA 8270B
Field ID:	ZZZZZZZZZ	Batch#:	56313
MSS Lab ID:	145748-001	Sampled:	05/22/00
Matrix:	Soil	Received:	05/22/00
Units:	ug/Kg	Prepared:	06/05/00
Basis:	wet	Analyzed:	06/06/00
Diln Fac:	1.000		

Type: MS Lab ID: QC117493

Analyst	Sample	Result	REC	Min	Max
Phenol	<336.6	3,348	2,513	75	38-133
2-Chlorophenol	<336.6	3,348	2,796	84	34-146
1,4-Dichlorobenzene	<336.6	1,674	1,197	71	43-124
N-Nitroso-di-n-propylamine	<336.6	1,674	1,370	82	48-130
1,2,4-Trichlorobenzene	<336.6	1,674	1,345	80	53-128
4-Chloro-3-methylphenol	<336.6	3,348	2,764	83	37-132
Acenaphthene	<50.49	1,674	1,468	88	55-122
4-Nitrophenol	<1,683	3,348	2,500	75	24-112
2,4-Dinitrotoluene	<336.6	1,674	1,287	77	37-122
Pentachlorophenol	<1,683	3,348	1,254	37	15-110
Pyrene	<50.49	1,674	1,450	87	30-134

Surrogate	INR	Limits
2-Fluorophenol	77	40-134
Phenol-d5	78	39-135
2,4,6-Tribromophenol	74	16-131
Nitrobenzene-d5	81	38-131
2-Fluorobiphenyl	85	45-129
Terphenyl-d14	89	41-140

Type: MSD Lab ID: QC117494

Analyst	Sample	Result	REC	Min	Max	RPD	%
Phenol	3,365	2,665	79	38-133	5	33	
2-Chlorophenol	3,365	2,998	89	34-146	6	34	
1,4-Dichlorobenzene	1,682	1,301	77	43-124	8	26	
N-Nitroso-di-n-propylamine	1,682	1,452	86	48-130	5	43	
1,2,4-Trichlorobenzene	1,682	1,430	85	53-128	6	24	
4-Chloro-3-methylphenol	3,365	2,840	84	37-132	2	35	
Acenaphthene	1,682	1,520	90	55-122	3	26	
4-Nitrophenol	3,365	2,575	77	24-112	2	47	
2,4-Dinitrotoluene	1,682	1,337	79	37-122	3	33	
Pentachlorophenol	3,365	1,248	37	15-110	1	50	
Pyrene	1,682	1,471	87	30-134	1	32	

Surrogate	INR	Limits
2-Fluorophenol	81	40-134
Phenol-d5	81	39-135
2,4,6-Tribromophenol	75	16-131
Nitrobenzene-d5	84	38-131
2-Fluorobiphenyl	88	45-129
Terphenyl-d14	91	41-140

California Title 26 Metals

Lab #:	145844	Project#:	99.574
Client:	Subsurface Consultants	Location:	Inner Harbor Turning Basin
Field ID:	B4@2.5'	Diln Fac:	1.000
Lab ID:	145844-001	Sampled:	05/25/00
Matrix:	Soil	Received:	05/26/00
Units:	mg/Kg	Analyzed:	06/01/00
Basis:	wet		

Analyte	Result	RL	Batch#	Prepared	Prep	Analysis
Antimony	ND	2.9	56206	05/30/00	EPA 3050	EPA 6010B
Arsenic	3.3	0.25	56206	05/30/00	EPA 3050	EPA 6010B
Barium	34	0.49	56206	05/30/00	EPA 3050	EPA 6010B
Beryllium	0.11	0.098	56206	05/30/00	EPA 3050	EPA 6010B
Cadmium	1.1	0.25	56206	05/30/00	EPA 3050	EPA 6010B
Chromium	18	0.49	56206	05/30/00	EPA 3050	EPA 6010B
Cobalt	4.0	0.98	56206	05/30/00	EPA 3050	EPA 6010B
Copper	12	0.49	56206	05/30/00	EPA 3050	EPA 6010B
Lead	23	0.15	56206	05/30/00	EPA 3050	EPA 6010B
Mercury	0.11	0.038	56226	05/31/00	METHOD	EPA 7471
Molybdenum	ND	0.98	56206	05/30/00	EPA 3050	EPA 6010B
Nickel	23	0.98	56206	05/30/00	EPA 3050	EPA 6010B
Selenium	0.44	0.25	56206	05/30/00	EPA 3050	EPA 6010B
Silver	ND	0.25	56206	05/30/00	EPA 3050	EPA 6010B
Thallium	0.30	0.25	56206	05/30/00	EPA 3050	EPA 6010B
Vanadium	16	0.49	56206	05/30/00	EPA 3050	EPA 6010B
Zinc	37	0.98	56206	05/30/00	EPA 3050	EPA 6010B

ND = Not Detected

RL = Reporting Limit

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Curtis & Tompkins, Ltd.

California Title 26 Metals

Lab #:	145844	Project#:	99.574
Client:	Subsurface Consultants	Location:	Inner Harbor Turning Basin
Field ID:	B4@4'	Diln Fac:	1.000
Lab ID:	145844-002	Sampled:	05/25/00
Matrix:	Soil	Received:	05/26/00
Units:	mg/Kg	Analyzed:	06/01/00
Basis:	wet		

Analyte	Result	RL	Batch#	Prepared	Prep	Analysis
Antimony	ND	2.9	56206	05/30/00	EPA 3050	EPA 6010B
Arsenic	1.2	0.24	56206	05/30/00	EPA 3050	EPA 6010B
Barium	12	0.49	56206	05/30/00	EPA 3050	EPA 6010B
Beryllium	ND	0.098	56206	05/30/00	EPA 3050	EPA 6010B
Cadmium	0.46	0.24	56206	05/30/00	EPA 3050	EPA 6010B
Chromium	13	0.49	56206	05/30/00	EPA 3050	EPA 6010B
Cobalt	2.4	0.98	56206	05/30/00	EPA 3050	EPA 6010B
Copper	1.9	0.49	56206	05/30/00	EPA 3050	EPA 6010B
Lead	1.8	0.15	56206	05/30/00	EPA 3050	EPA 6010B
Mercury	ND	0.040	56226	05/31/00	METHOD	EPA 7471
Molybdenum	ND	0.98	56206	05/30/00	EPA 3050	EPA 6010B
Nickel	13	0.98	56206	05/30/00	EPA 3050	EPA 6010B
Selenium	ND	0.24	56206	05/30/00	EPA 3050	EPA 6010B
Silver	ND	0.24	56206	05/30/00	EPA 3050	EPA 6010B
Thallium	ND	0.24	56206	05/30/00	EPA 3050	EPA 6010B
Vanadium	8.1	0.49	56206	05/30/00	EPA 3050	EPA 6010B
Zinc	7.4	0.98	56206	05/30/00	EPA 3050	EPA 6010B

ND = Not Detected

RL = Reporting Limit

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Curtis & Tompkins, Ltd.

California Title 26 Metals

Lab #:	145844	Location:	Inner Harbor Turning Basin
Client:	Subsurface Consultants	Prep:	EPA 3050
Project#:	99.574	Analysis:	EPA 6010B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC117068	Batch#:	56206
Matrix:	Soil	Prepared:	05/30/00
Units:	mg/Kg	Analyzed:	06/01/00
Basis:	wet		

Analyte	Result	RL
Antimony	ND	3.0
Arsenic	ND	0.25
Barium	ND	0.50
Beryllium	ND	0.10
Cadmium	ND	0.25
Chromium	ND	0.50
Cobalt	ND	1.0
Copper	ND	0.50
Lead	ND	0.15
Molybdenum	ND	1.0
Nickel	ND	1.0
Selenium	ND	0.25
Silver	ND	0.25
Thallium	ND	0.25
Vanadium	ND	0.50
Zinc	ND	1.0

ND = Not Detected

RL = Reporting Limit

Page 1 of 1



Curtis & Tompkins, Ltd.

California Title 26 Metals

Lab #:	145844	Location:	Inner Harbor Turning Basin
Client:	Subsurface Consultants	Prep:	METHOD
Project#:	99.574	Analysis:	EPA 7471
Analyte:	Mercury	Basis:	wet
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC117149	Batch#:	56226
Matrix:	Soil	Prepared:	05/31/00
Units:	mg/Kg	Analyzed:	06/01/00

Result	RL
ND	0.040

ND = Not Detected

RL = Reporting Limit

Page 1 of 1



Curtis & Tompkins, Ltd.

California Title 26 Metals

Lab #:	145844	Location:	Inner Harbor Turning Basin
Client:	Subsurface Consultants	Prep:	EPA 3050
Project#:	99.574	Analysis:	EPA 6010B
Matrix:	Soil	Batch#:	56206
Units:	mg/Kg	Prepared:	05/30/00
Basis:	wet	Analyzed:	06/01/00
Diln Fac:	1.000		

Type: BS Lab ID: QC117069

Analyte	Spiked	Result	REC	Limits
Antimony	100.0	106.5	107	73-111
Arsenic	50.00	47.90	96	74-110
Barium	100.0	95.50	96	76-110
Beryllium	2.500	2.415	97	77-110
Cadmium	10.00	9.250	93	75-112
Chromium	100.0	94.00	94	73-111
Cobalt	25.00	23.45	94	74-110
Copper	12.50	11.95	96	75-111
Lead	100.0	93.00	93	70-110
Molybdenum	20.00	19.55	98	75-110
Nickel	25.00	23.50	94	74-111
Selenium	50.00	47.65	95	73-111
Silver	10.00	9.650	97	70-115
Thallium	50.00	46.00	92	75-110
Vanadium	25.00	24.00	96	74-110
Zinc	25.00	23.15	93	68-110

Type: BSD Lab ID: QC117070

Analyte	Spiked	Result	REC	Limits	RPD	Exam
Antimony	100.0	105.0	105	73-111	1	20
Arsenic	50.00	47.05	94	74-110	2	20
Barium	100.0	95.00	95	76-110	1	23
Beryllium	2.500	2.355	94	77-110	3	20
Cadmium	10.00	9.000	90	75-112	3	20
Chromium	100.0	92.00	92	73-111	2	23
Cobalt	25.00	22.85	91	74-110	3	24
Copper	12.50	11.90	95	75-111	0	22
Lead	100.0	90.50	91	70-110	3	20
Molybdenum	20.00	19.15	96	75-110	2	20
Nickel	25.00	22.90	92	74-111	3	21
Selenium	50.00	46.90	94	73-111	2	20
Silver	10.00	9.450	95	70-115	2	39
Thallium	50.00	45.05	90	75-110	2	20
Vanadium	25.00	23.55	94	74-110	2	20
Zinc	25.00	22.55	90	68-110	3	22

RPD= Relative Percent Difference

Page 1 of 1



Curtis & Tompkins, Ltd.

California Title 26 Metals

Lab #:	145844	Location:	Inner Harbor Turning Basin
Client:	Subsurface Consultants	Prep:	EPA 3050
Project#:	99.574	Analysis:	EPA 6010B
Field ID:	B4@2.5'	Diln Fac:	1.000
Type:	SSPIKE	Batch#:	56206
MSS Lab ID:	145844-001	Sampled:	05/25/00
Lab ID:	QC117072	Received:	05/26/00
Matrix:	Soil	Prepared:	05/30/00
Units:	mg/Kg	Analyzed:	06/01/00
Basis:	wet		

Analyte	MSS Result	Spiked	Result	%REC	Limits
Antimony	ND	97.09	64.56	67	15-112
Arsenic	3.270	48.54	40.44	77	51-114
Barium	34.46	97.09	98.54	66	29-149
Beryllium	0.1118	2.427	2.058	80	56-116
Cadmium	1.088	9.709	8.204	73	35-128
Chromium	18.24	97.09	90.78	75	23-141
Cobalt	3.961	24.27	21.89	74	45-115
Copper	12.16	12.14	19.42	60	36-132
Lead	23.19	97.09	93.69	73	31-133
Molybdenum	0.2049	19.42	15.15	77	34-121
Nickel	23.28	24.27	37.38	58	32-132
Selenium	0.4387	48.54	36.89	75	40-118
Silver	0.007549	9.709	7.718	79	36-137
Thallium	0.3015	48.54	36.36	74	55-109
Vanadium	15.69	24.27	32.18	68	22-142
Zinc	36.67	24.27	48.45	49	30-132

California Title 26 Metals

Lab #:	145844	Location:	Inner Harbor Turning Basin
Client:	Subsurface Consultants	Prep:	METHOD
Project#:	99.574	Analysis:	EPA 7471
Analyte:	Mercury	Diln Fac:	1.000
Matrix:	Soil	Batch#:	56226
Units:	mg/Kg	Prepared:	05/31/00
Basis:	wet	Analyzed:	06/01/00

Type	Lab ID	Spiked	Result	%REC	Limits	RPD	Lim
BS	QC117150	1.000	0.9900	99	80-120		
BSD	QC117151	1.000	1.016	102	80-120	3	35



Curtis & Tompkins, Ltd.

California Title 26 Metals

Lab #:	145844	Location:	Inner Harbor Turning Basin
Client:	Subsurface Consultants	Prep:	METHOD
Project#:	99.574	Analysis:	EPA 7471
Analyte:	Mercury	Basis:	wet
Field ID:	ZZZZZZZZZZ	Diln Fac:	1.000
Type:	SDUP	Batch#:	56226
MSS Lab ID:	145859-021	Sampled:	05/27/00
Lab ID:	QC117152	Received:	05/30/00
Matrix:	Soil	Prepared:	05/31/00
Units:	mg/Kg	Analyzed:	06/01/00

MSS Result	Result	RL	RPD	LIM
<0.03704	0.05291	0.036	NC	35

NC = Not Calculated

RL = Reporting Limit

RPD= Relative Percent Difference

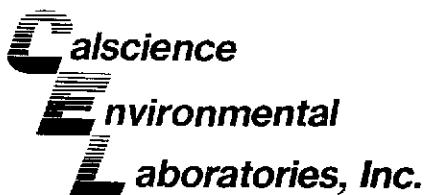
Page 1 of 1

California Title 26 Metals

Lab #:	145844	Location:	Inner Harbor Turning Basin
Client:	Subsurface Consultants	Prep:	METHOD
Project#:	99.574	Analysis:	EPA 7471
Analyte:	Mercury	Diln Fac:	1.000
Field ID:	ZZZZZZZZZZ	Batch#:	56226
MSS Lab ID:	145859-021	Sampled:	05/27/00
Matrix:	Soil	Received:	05/30/00
Units:	mg/Kg	Prepared:	05/31/00
Basis:	wet	Analyzed:	06/01/00

Type	Lab ID	MSS Result	Spiked	Result	%REC	Limits	RPD	Lim
MS	QC117153	0.002407	0.9804	0.9569	97	65-135		
MSD	QC117154		0.9091	0.8927	98	65-135	1	35

RPD= Relative Percent Difference
 Page 1 of 1



June 06, 2000

Steve Stanley
Curtis & Tompkins, Ltd.
2323 Fifth Street
Berkeley, CA 94710

Subject: Calscience Work Order No.: 00-05-1082
Client Reference: 145844

Dear Client:

Enclosed is an analytical report for the above-referenced project. The samples included in this report were received 05/31/00 and analyzed in accordance with the attached chain-of-custody.

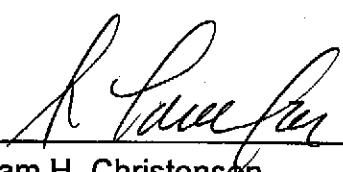
The results in this analytical report are limited to the samples tested and any reproduction of this report must be made in its entirety.

If you have any questions regarding this report, require sampling supplies or field services, or information on our analytical services, please feel free to call me at (714) 895-5494.

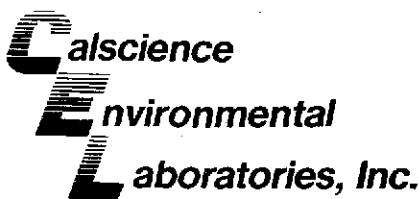
Sincerely,



Calscience Environmental
Laboratories, Inc.
Jody McInerney
Project Manager



William H. Christensen
Quality Assurance Manager



ANALYTICAL REPORT

Curtis & Tompkins, Ltd.
2323 Fifth Street
Berkeley, CA 94710

Date Received: 05/31/00
Work Order No: 00-05-1082
Preparation: EPA 3550A
Method: EPA 8081A/8082

Project: 145844

Page 1 of 2

Client Sample Number:	Lab Sample Number:	Date Collected:	Matrix:	Date Prepared:	Date Analyzed:	QC Batch ID:
B4@2.5	00-05-1082-1	05/25/00	Solid	05/31/00	05/31/00	0005304

Parameter	Result	RL	DF	Qual	Units	Parameter	Result	RL	DF	Qual	Units
Alpha-BHC	ND	5.0	1		ug/kg	4,4'-DDT	ND	5.0	1		ug/kg
Gamma-BHC	ND	5.0	1		ug/kg	Endosulfan Sulfate	ND	5.0	1		ug/kg
Beta-BHC	ND	5.0	1		ug/kg	Methoxychlor	ND	5.0	1		ug/kg
Heptachlor	ND	5.0	1		ug/kg	Chlordane	ND	50	1		ug/kg
Delta-BHC	ND	5.0	1		ug/kg	Toxaphene	ND	100	1		ug/kg
Aldrin	ND	5.0	1		ug/kg	Aroclor-1016	ND	50	1		ug/kg
Heptachlor Epoxide	ND	5.0	1		ug/kg	Aroclor-1221	ND	50	1		ug/kg
Endosulfan I	ND	5.0	1		ug/kg	Aroclor-1232	ND	50	1		ug/kg
Dieldrin	ND	5.0	1		ug/kg	Aroclor-1242	ND	50	1		ug/kg
4,4'-DDE	ND	5.0	1		ug/kg	Aroclor-1248	ND	50	1		ug/kg
Endrin	ND	5.0	1		ug/kg	Aroclor-1254	ND	50	1		ug/kg
Endrin Aldehyde	ND	5.0	1		ug/kg	Aroclor-1260	ND	50	1		ug/kg
4,4'-DDD	ND	5.0	1		ug/kg	Aroclor-1262	ND	50	1		ug/kg
Endosulfan II	ND	5.0	1		ug/kg	Endrin Ketone	ND	5.0	1		ug/kg
<u>Surrogates:</u>		<u>REC (%)</u>	<u>Control Limits</u>	<u>Qual</u>		<u>Surrogates:</u>		<u>REC (%)</u>	<u>Control Limits</u>	<u>Qual</u>	
Decachlorobiphenyl		69	50-130			2,4,5,6-Tetrachloro-m-Xylene		54	50-130		

Parameter	Result	RL	DF	Qual	Units	Parameter	Result	RL	DF	Qual	Units
Alpha-BHC	ND	5.0	1		ug/kg	4,4'-DDT	ND	5.0	1		ug/kg
Gamma-BHC	ND	5.0	1		ug/kg	Endosulfan Sulfate	ND	5.0	1		ug/kg
Beta-BHC	ND	5.0	1		ug/kg	Methoxychlor	ND	5.0	1		ug/kg
Heptachlor	ND	5.0	1		ug/kg	Chlordane	ND	50	1		ug/kg
Delta-BHC	ND	5.0	1		ug/kg	Toxaphene	ND	100	1		ug/kg
Aldrin	ND	5.0	1		ug/kg	Aroclor-1016	ND	50	1		ug/kg
Heptachlor Epoxide	ND	5.0	1		ug/kg	Aroclor-1221	ND	50	1		ug/kg
Endosulfan I	ND	5.0	1		ug/kg	Aroclor-1232	ND	50	1		ug/kg
Dieldrin	ND	5.0	1		ug/kg	Aroclor-1242	ND	50	1		ug/kg
4,4'-DDE	ND	5.0	1		ug/kg	Aroclor-1248	ND	50	1		ug/kg
Endrin	ND	5.0	1		ug/kg	Aroclor-1254	ND	50	1		ug/kg
Endrin Aldehyde	ND	5.0	1		ug/kg	Aroclor-1260	ND	50	1		ug/kg
4,4'-DDD	ND	5.0	1		ug/kg	Aroclor-1262	ND	50	1		ug/kg
Endosulfan II	ND	5.0	1		ug/kg	Endrin Ketone	ND	5.0	1		ug/kg
<u>Surrogates:</u>		<u>REC (%)</u>	<u>Control Limits</u>	<u>Qual</u>		<u>Surrogates:</u>		<u>REC (%)</u>	<u>Control Limits</u>	<u>Qual</u>	
Decachlorobiphenyl		116	50-130			2,4,5,6-Tetrachloro-m-Xylene		81	50-130		

RL - Reporting Limit DF - Dilution Factor Qual - Qualifiers

7440 Lincoln Way, Garden Grove, CA 92841-1432 • TEL: (714) 895-5494 • FAX: (714) 894-7501



ANALYTICAL REPORT

Curtis & Tompkins, Ltd.
2323 Fifth Street
Berkeley, CA 94710

Date Received: 05/31/00
Work Order No: 00-05-1082
Preparation: EPA 3550A
Method: EPA 8081A/8082

Project: 145844

Page 2 of 2

Client Sample Number:	Lab Sample Number:	Date Collected:	Matrix:	Date Prepared:	Date Analyzed:	QC Batch ID:
Method Blank	095-01-014-1,882	N/A	Solid	05/31/00	05/31/00	0005304

Parameter	Result	RL	DF	Qual	Units	Parameter	Result	RL	DF	Qual	Units
Alpha-BHC	ND	5.0	1		ug/kg	4,4'-DDT	ND	5.0	1		ug/kg
Gamma-BHC	ND	5.0	1		ug/kg	Endosulfan Sulfate	ND	5.0	1		ug/kg
Beta-BHC	ND	5.0	1		ug/kg	Methoxychlor	ND	5.0	1		ug/kg
Heptachlor	ND	5.0	1		ug/kg	Chlordane	ND	50	1		ug/kg
Delta-BHC	ND	5.0	1		ug/kg	Toxaphene	ND	100	1		ug/kg
Aldrin	ND	5.0	1		ug/kg	Aroclor-1016	ND	50	1		ug/kg
Heptachlor Epoxide	ND	5.0	1		ug/kg	Aroclor-1221	ND	50	1		ug/kg
Endosulfan I	ND	5.0	1		ug/kg	Aroclor-1232	ND	50	1		ug/kg
Dieldrin	ND	5.0	1		ug/kg	Aroclor-1242	ND	50	1		ug/kg
4,4'-DDE	ND	5.0	1		ug/kg	Aroclor-1248	ND	50	1		ug/kg
Endrin	ND	5.0	1		ug/kg	Aroclor-1254	ND	50	1		ug/kg
Endrin Aldehyde	ND	5.0	1		ug/kg	Aroclor-1260	ND	50	1		ug/kg
4,4'-DDD	ND	5.0	1		ug/kg	Aroclor-1262	ND	50	1		ug/kg
Endosulfan II	ND	5.0	1		ug/kg	Endrin Ketone	ND	5.0	1		ug/kg

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
Decachlorobiphenyl	120	50-130		2,4,5,6-Tetrachloro-m-Xylene	106	50-130	

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

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Quality Control - LCS/LCS Duplicate

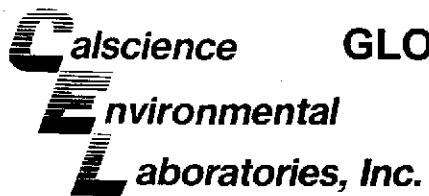
Curtis & Tompkins, Ltd.
2323 Fifth Street
Berkeley, CA 94710

Date Received: 05/31/00
Work Order No: 00-05-1082
Preparation: EPA 3550A
Method: EPA 8081A/8082

Project: 145844

LCS Sample Number	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
095-01-014-1682	Solid	GC 17	05/30/00	05/31/00	0005304

Parameter	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Gamma-BHC	94	93	50-135	1	0-25	
Heptachlor	102	100	50-135	2	0-25	
Endosulfan I	97	93	50-135	4	0-25	
Dieldrin	97	93	50-135	4	0-25	
Endrin	105	105	50-135	0	0-25	
4,4'-DDT	108	104	50-135	4	0-25	
Aroclor-1260	94	96	50-135	2	0-25	



GLOSSARY OF TERMS AND QUALIFIERS

Work Order Number: 00-05-1082

<u>Qualifier</u>	<u>Definition</u>
ND	Not detected at indicated reporting limit.



Curtis & Tompkins, Ltd., Analytical Laboratories, Since 1878

2323 Fifth Street, Berkeley, CA 94710, Phone (510) 486-0900

A N A L Y T I C A L R E P O R T

Prepared for:

Subsurface Consultants
3736 Mt. Diablo Blvd.
Suite 200
Lafeyette, CA 94549

Date: 06-JUL-00
Lab Job Number: 145881
Project ID: 99.574
Location: Inner Harbor Turning Basin

This data package has been reviewed for technical correctness and completeness. Release of this data has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signatures. The results contained in this report meet all requirements of NELAC and pertain only to those samples which were submitted for analysis.

Reviewed by:

Anna Payne
Project Manager

Reviewed by:

Operations Manager

This package may be reproduced only in its entirety.



Curtis & Tompkins, Ltd.

Laboratory Number: 145881
Client: Subsurface Consultants
Location: Inner Harbor Turning Basin
Project#: 99.574

Receipt Date: 5/30/00

CASE NARRATIVE

This hardcopy data package contains sample and QC results for seven soil samples that were received on May 30, 2000. All samples were received cold and intact.

Samples B5@15.5', B5@45', and B4@65.5' were archived as requested on the Chain-of-Custody.

TVH/BTXE: No analytical problems were encountered.

Total Extractable Hydrocarbons: No analytical problems were encountered.

Volatile Organics: No analytical problems were encountered.

Semivolatile Organics: Due to the dark and viscous nature of the extract, sample B5@3' was analyzed at a dilution. This dilution caused the surrogates to be diluted out. No other analytical problems were encountered.

Metals: No analytical problems were encountered.

Pesticides/PCBs: All samples were sub-contracted to Calscience Environmental Laboratories, Inc. No analytical problems were encountered.

CHAIN OF CUSTODY FORM

PROJECT NAME: Inner Harbor Turning Basin Project W.O. 103902

JOB NUMBER: 99-574

LAB: Curtis & Tompkins

PROJECT CONTACT: Glenn Young

TURNAROUND: STANDARD

SAMPLED BY: John Wolfe / Gene N.Y.

REQUESTED BY: Glen Young

CHAIN OF CUSTODY RECORD

RELEASED BY: (Signature)

DATE / TIME

RECEIVED BY: (Signature)

DATE / TIME

John Wolfe 5.

55 | 114

D. S. Saka

10 | Page

RELEASER SIGNATURE

DATE / TIME

RECEIVED BY: (Signature)

DATE / TIME

RELEASED BY: (Signature)

DATE / TIME

RECEIVED BY: (Signature)

DATE / TIME

COMMENTS & NOTES:

- ① Do not test previously submitted sample B4 c 7.5'. Replace with B4 c 11'.



Subsurface Consultants, Inc.
171 - 12th Street, Suite 202, Oakland, CA 94607
(510) 268-0481 - FAX: (510) 268-0137
3736 Mt. Diablo Blvd., Ste. 200, Lafayette, CA 94549
(925) 299-7860 - (925) 299-7870



Curtis & Tompkins, Ltd.

Gasoline by GC/FID CA LUFT

Lab #:	145881	Location:	Inner Harbor Turning Basin
Client:	Subsurface Consultants	Prep:	EPA 5030
Project#:	99.574	Analysis:	EPA 8015M
Matrix:	Soil	Diln Fac:	1.000
Units:	mg/Kg	Batch#:	56285
Basis:	wet	Received:	05/30/00

Field ID: B5@5' Sampled: 05/26/00
Type: SAMPLE Analyzed: 06/03/00
Lab ID: 145881-002

Analyte	Result	RI
Gasoline C7-C12	ND	0.96

Surrogate	REC	Limits
Trifluorotoluene (FID)	108	62-138
Bromofluorobenzene (FID)	112	46-150

Field ID: B5@7.5' Sampled: 05/26/00
Type: SAMPLE Analyzed: 06/03/00
Lab ID: 145881-003

Analyte	Result	RI
Gasoline C7-C12	ND	1.0

Surrogate	REC	Limits
Trifluorotoluene (FID)	109	62-138
Bromofluorobenzene (FID)	112	46-150

Field ID: B4@11' Sampled: 05/25/00
Type: SAMPLE Analyzed: 06/03/00
Lab ID: 145881-006

Analyte	Result	RI
Gasoline C7-C12	1.2 H Y	0.94

Surrogate	REC	Limits
Trifluorotoluene (FID)	108	62-138
Bromofluorobenzene (FID)	115	46-150

Type: BLANK Analyzed: 06/02/00
Lab ID: QC117383

Analyte	Result	RI
Gasoline C7-C12	ND	1.0

Surrogate	REC	Limits
Trifluorotoluene (FID)	107	62-138
Bromofluorobenzene (FID)	105	46-150

H = Heavier hydrocarbons contributed to the quantitation

Y = Sample exhibits fuel pattern which does not resemble standard

ND = Not Detected

RL = Reporting Limit

Page 1 of 1

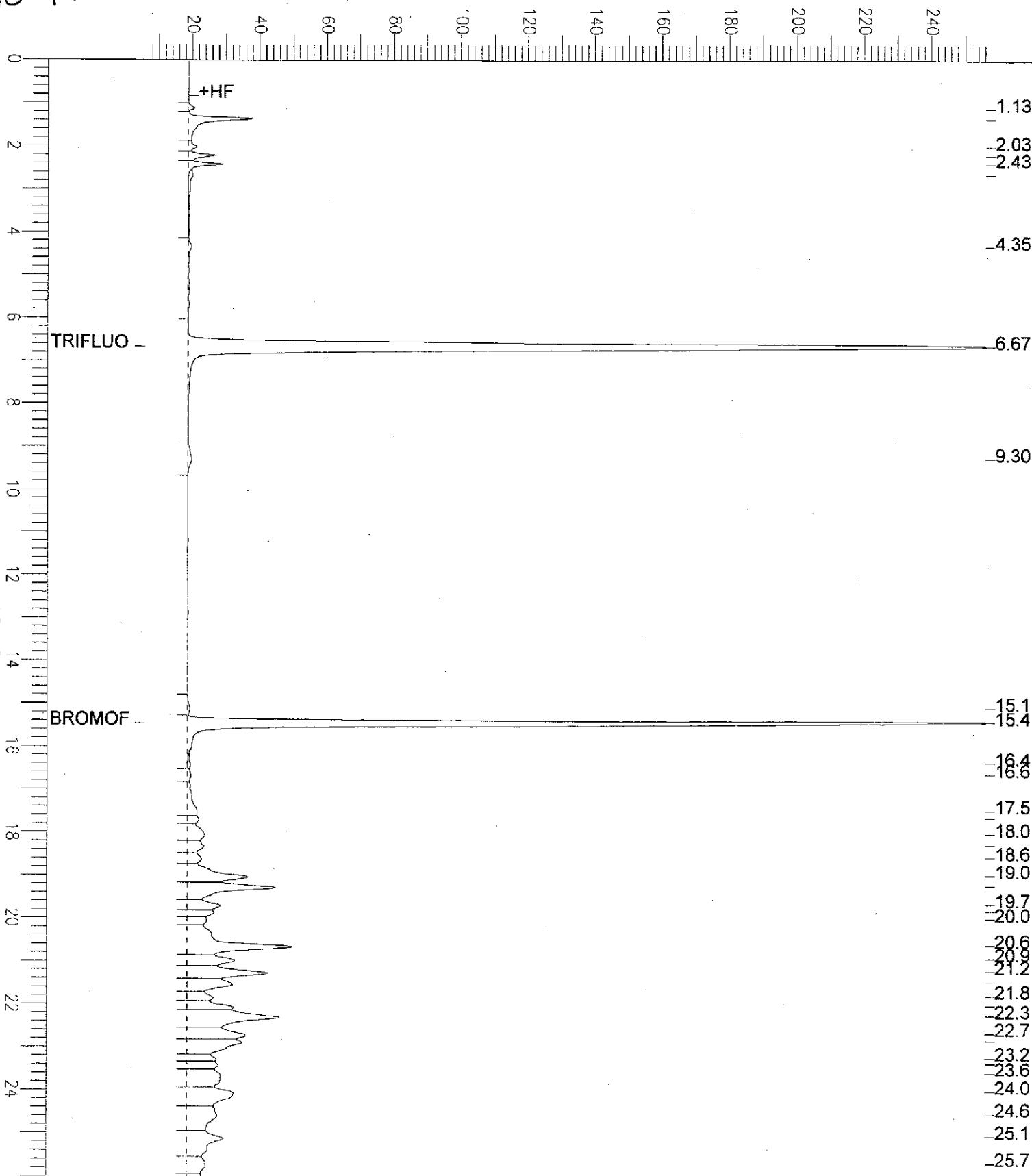
GC07 TVH 'A' Data File RTX 502

Sample Name : 145881-006,56285,TVH ONLY
FileName : G:\GC07\DATA\154A024.raw
Method : TVHBTXE
Start Time : 0.00 min End Time : 26.00 min
Scale Factor: -1.0 Plot Offset: 6 mV

Sample #: A Page 1 of 1
Date : 6/5/00 03:28 PM
Time of Injection: 6/3/00 06:34 AM
Low Point : 6.14 mV High Point : 256.14 mV
Plot Scale: 250.0 mV

BL@11'

Response [mV]





Curtis & Tompkins, Ltd.

Gasoline by GC/FID CA LUPT

Lab #:	145881	Location:	Inner Harbor Turning Basin
Client:	Subsurface Consultants	Prep:	EPA 5030
Project#:	99.574	Analysis:	EPA 8015M
Type:	LCS	Basis:	wet
Lab ID:	QC117384	Diln Fac:	1.000
Matrix:	Soil	Batch#:	56285
Units:	mg/Kg	Analyzed:	06/02/00

Analyte	Spiked	Result	EREG	Limits
Gasoline C7-C12	10.00	10.21	102	75-123

Surrogate	EREG	Limits
Trifluorotoluene (FID)	122	62-138
Bromofluorobenzene (FID)	109	46-150



Curtis & Tompkins, Ltd.

Gasoline by GC/FID CA LUFT

Lab #:	145881	Location:	Inner Harbor Turning Basin
Client:	Subsurface Consultants	Prep:	EPA 5030
Project#:	99.574	Analysis:	EPA 8015M
Field ID:	ZZZZZZZZZZ	Diln Fac:	1.000
MSS Lab ID:	145882-008	Batch#:	56285
Matrix:	Soil	Sampled:	05/26/00
Units:	mg/Kg	Received:	05/30/00
Basis:	wet	Analyzed:	06/02/00

Type: MS Lab ID: QC117386

Analyte	MSS Rec'd	Spiked	Result	SREC	Limits
Gasoline C7-C12	0.02222	10.00	10.27	102	41-132

Surrogate	SREC	Limits
Trifluorotoluene (FID)	121	62-138
Bromofluorobenzene (FID)	114	46-150

Type: MSD Lab ID: QC117387

Analyte	Spiked	Result	SREC	Limits	RPD	Lim
Gasoline C7-C12	10.00	10.36	103	41-132	1	25

Surrogate	SREC	Limits
Trifluorotoluene (FID)	124	62-138
Bromofluorobenzene (FID)	115	46-150



Curtis & Tompkins, Ltd.

Total Extractable Hydrocarbons

Lab #:	145881	Location:	Inner Harbor Turning Basin
Client:	Subsurface Consultants	Prep:	SHAKER TABLE
Project#:	99.574	Analysis:	EPA 8015M
Matrix:	Soil	Batch#:	56408
Units:	mg/Kg	Received:	05/30/00
Basis:	wet	Prepared:	06/08/00

ield ID: B5@3' Diln Fac: 2.000
ype: SAMPLE Sampled: 05/26/00
ab ID: 145881-001 Analyzed: 06/15/00

Analyte	Result	RL
Diesel C10-C24	100 H Y	2.0
Motor Oil C24-C36	540 H	10

Surrogate	SRBC	Limits
Hexacosane	95	60-136

ield ID: B5@5' Diln Fac: 1.000
ype: SAMPLE Sampled: 05/26/00
ab ID: 145881-002 Analyzed: 06/15/00

Analyte	Result	RL
Diesel C10-C24	ND	1.0
Motor Oil C24-C36	ND	5.0

Surrogate	SRBC	Limits
Hexacosane	136	60-136

H = Heavier hydrocarbons contributed to the quantitation
L = Lighter hydrocarbons contributed to the quantitation
F = Sample exhibits fuel pattern which does not resemble standard
ND = Not Detected
RL = Reporting Limit
Page 1 of 2



Curtis & Tompkins, Ltd.

Total Extractable Hydrocarbons

Lab #:	145881	Location:	Inner Harbor Turning Basin
Client:	Subsurface Consultants	Prep:	SHAKER TABLE
Project#:	99.574	Analysis:	EPA 8015M
Matrix:	Soil	Batch#:	56408
Units:	mg/Kg	Received:	05/30/00
Basis:	wet	Prepared:	06/08/00

Field ID: B5@7.5' Diln Fac: 1.000
Type: SAMPLE Sampled: 05/26/00
Lab ID: 145881-003 Analyzed: 06/15/00

Analyte	Result	RI
Diesel C10-C24	14 H	1.0
Motor Oil C24-C36	33 H	5.0

Surrogate	REC	Limits
Hexacosane	113	60-136

Field ID: B4@11' Diln Fac: 1.000
Type: SAMPLE Sampled: 05/25/00
Lab ID: 145881-006 Analyzed: 06/15/00

Analyte	Result	RI
Diesel C10-C24	110 H L Y	1.0
Motor Oil C24-C36	130 H	5.0

Surrogate	REC	Limits
Hexacosane	111	60-136

Type: BLANK Diln Fac: 1.000
Lab ID: QC117819 Analyzed: 06/14/00

Analyte	Result	RI
Diesel C10-C24	ND	1.0
Motor Oil C24-C36	ND	5.0

Surrogate	REC	Limits
Hexacosane	99	60-136

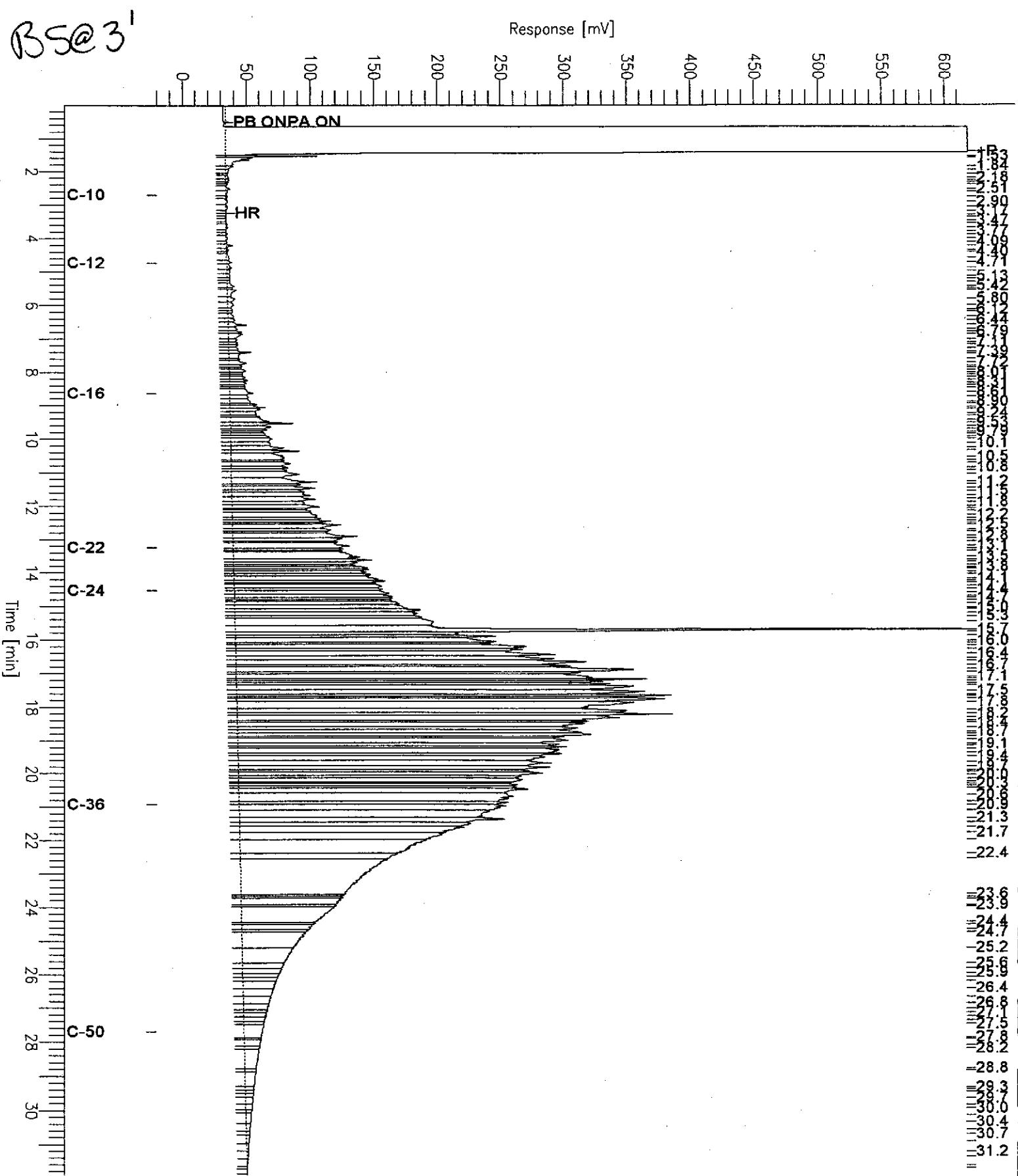
H = Heavier hydrocarbons contributed to the quantitation
L = Lighter hydrocarbons contributed to the quantitation
Y = Sample exhibits fuel pattern which does not resemble standard
ND = Not Detected
RL = Reporting Limit
Page 2 of 2

Chromatogram

Sample Name : 145881-001sg, 56408
FileName : G:\GC15\CHB\166B020.RAW
Method : BTEH159.MTH
Start Time : 0.01 min End Time : 31.91 min
Scale Factor: 0.0 Plot Offset: -21 mV

Sample #: 56408
Date : 06/15/2000 09:21 AM
Time of Injection: 06/15/2000 02:27 AM
Low Point : -20.53 mV High Point : 618.46 mV
Plot Scale: 639.0 mV

Page 1 of 1

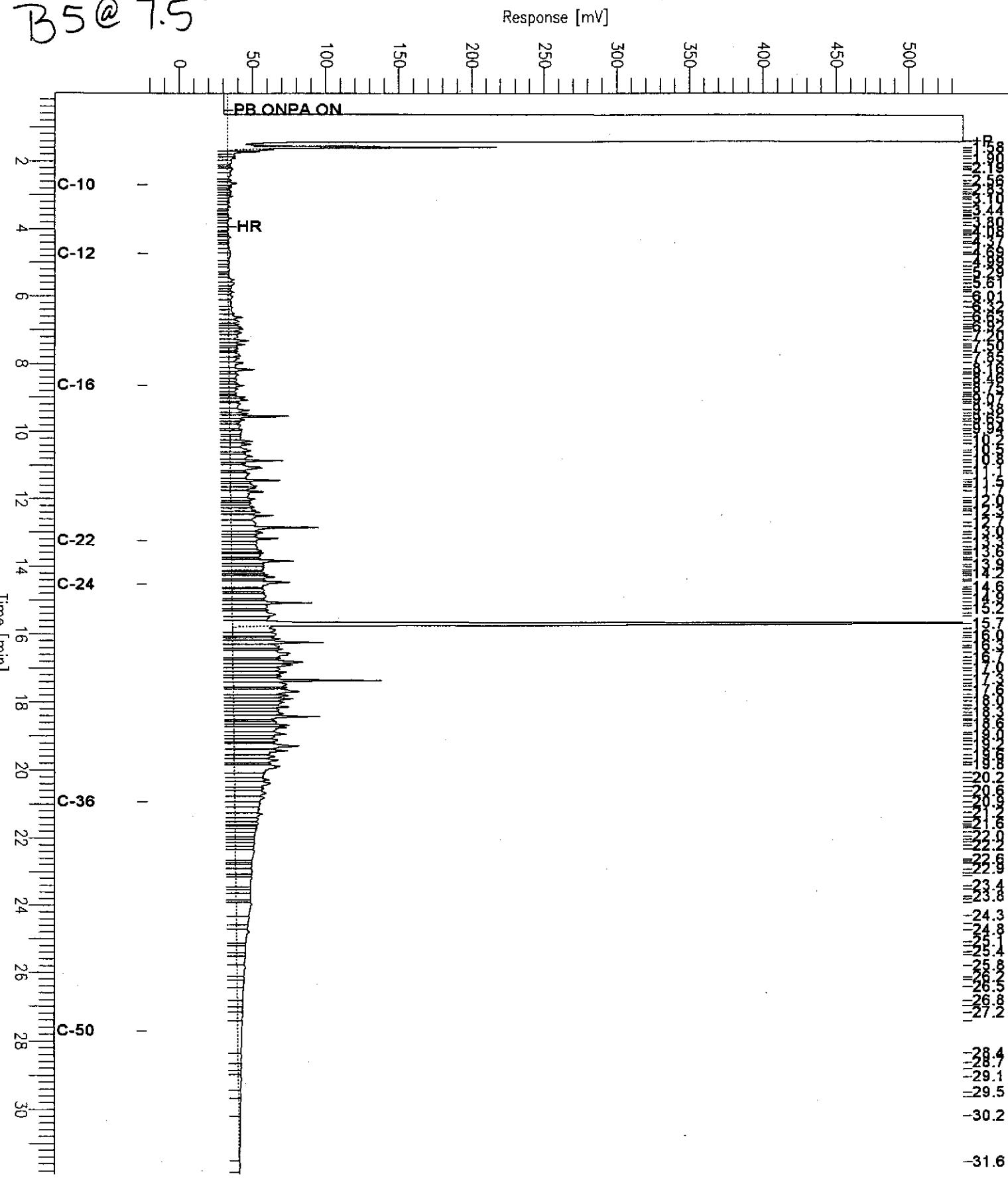


Chromatogram

Sample Name : 145881-003sg, 56408
FileName : G:\GC15\CHB\166B022.RAW
Method : BTEH159.MTH
Start Time : 0.01 min End Time : 31.91 min
Scale Factor: 0.0 Plot Offset: -22 mV

Sample #: 56408 Page 1 of 1
Date : 06/15/2000 09:23 AM
Time of Injection: 06/15/2000 03:54 AM
Low Point : -21.73 mV High Point : 537.54 mV
Plot Scale: 559.3 mV

B5 @ 7.5'

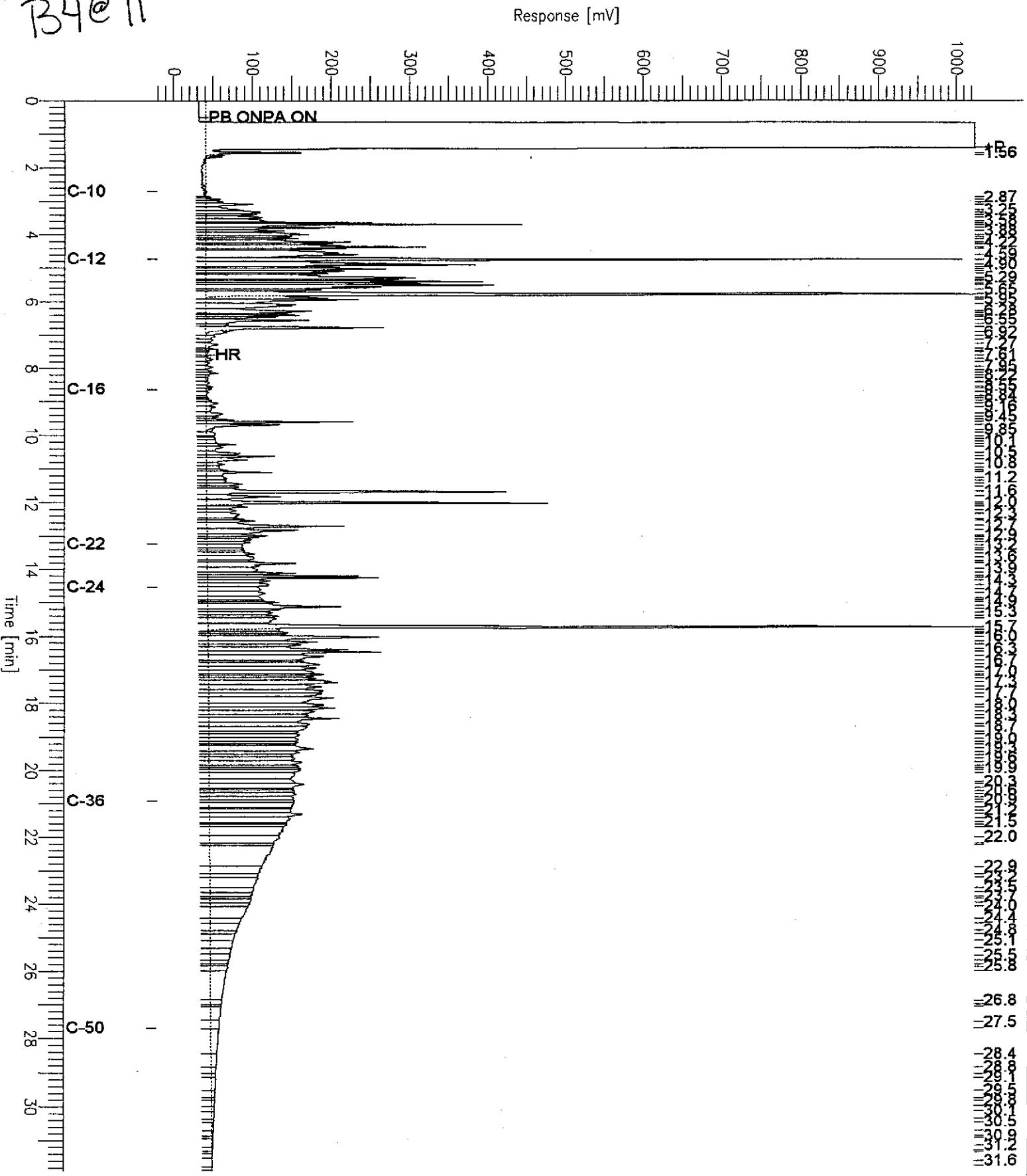


Chromatogram

Sample Name : 145881-006sg, 56408
FileName : G:\GC15\CHB\166B023.RAW
Method : BTEH159.MTH
Start Time : 0.00 min End Time : 31.90 min
Scale Factor: 0.0 Plot Offset: -21 mV

Sample #: 56408 Page 1 of 1
Date : 06/15/2000 09:24 AM
Time of Injection: 06/15/2000 04:37 AM
Low Point : -20.99 mV High Point : 1024.00 mV
Plot Scale: 1045.0 mV

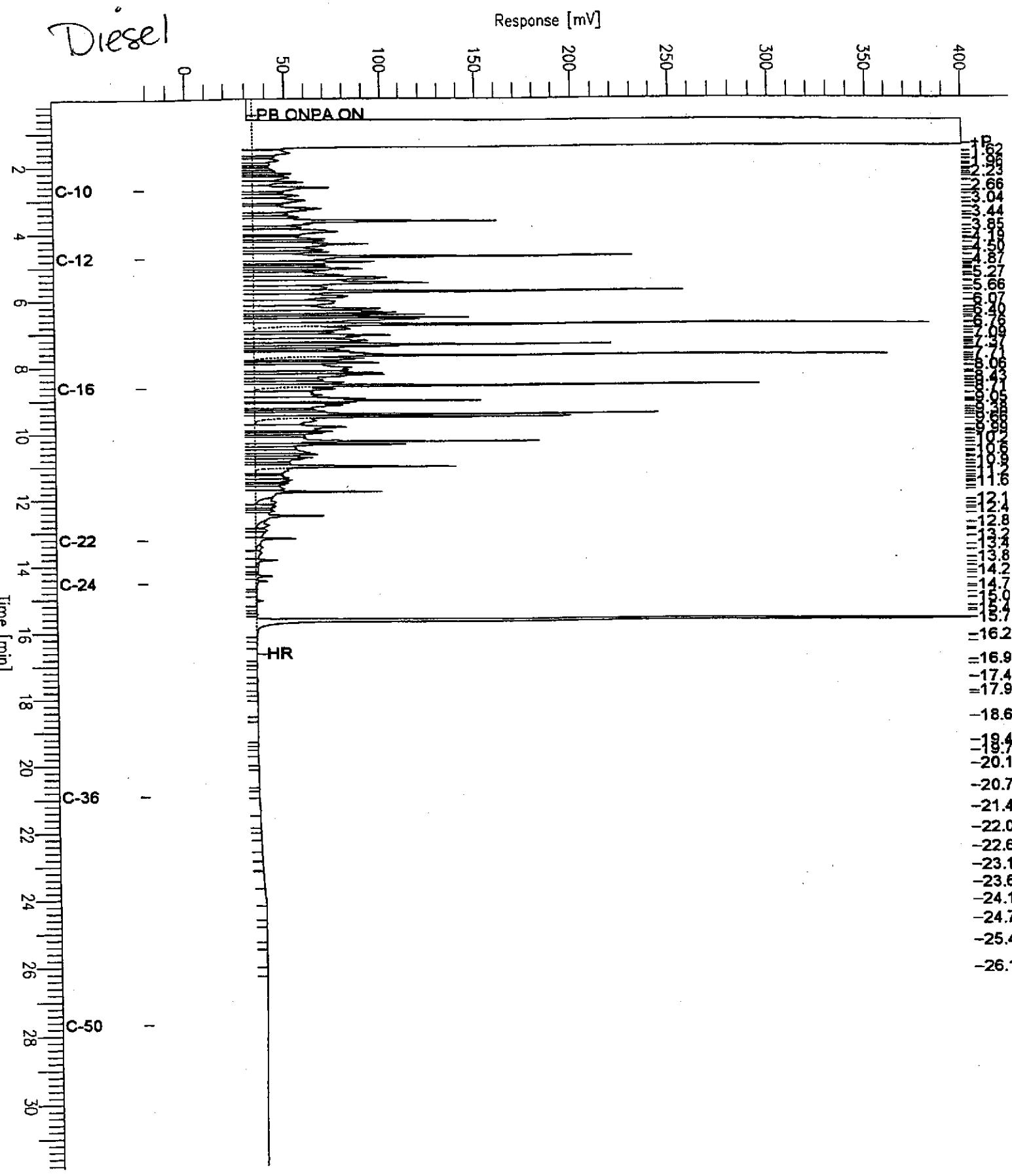
B4@11'



Sample Name : ccv_00ws9255.dsl
FileName : G:\GC15\CHB\166B002.RAW
Method : BTEH159.MTH
Start Time : 0.01 min End Time : 31.87 min
Scale Factor: 0.0 Plot Offset: -21 mV

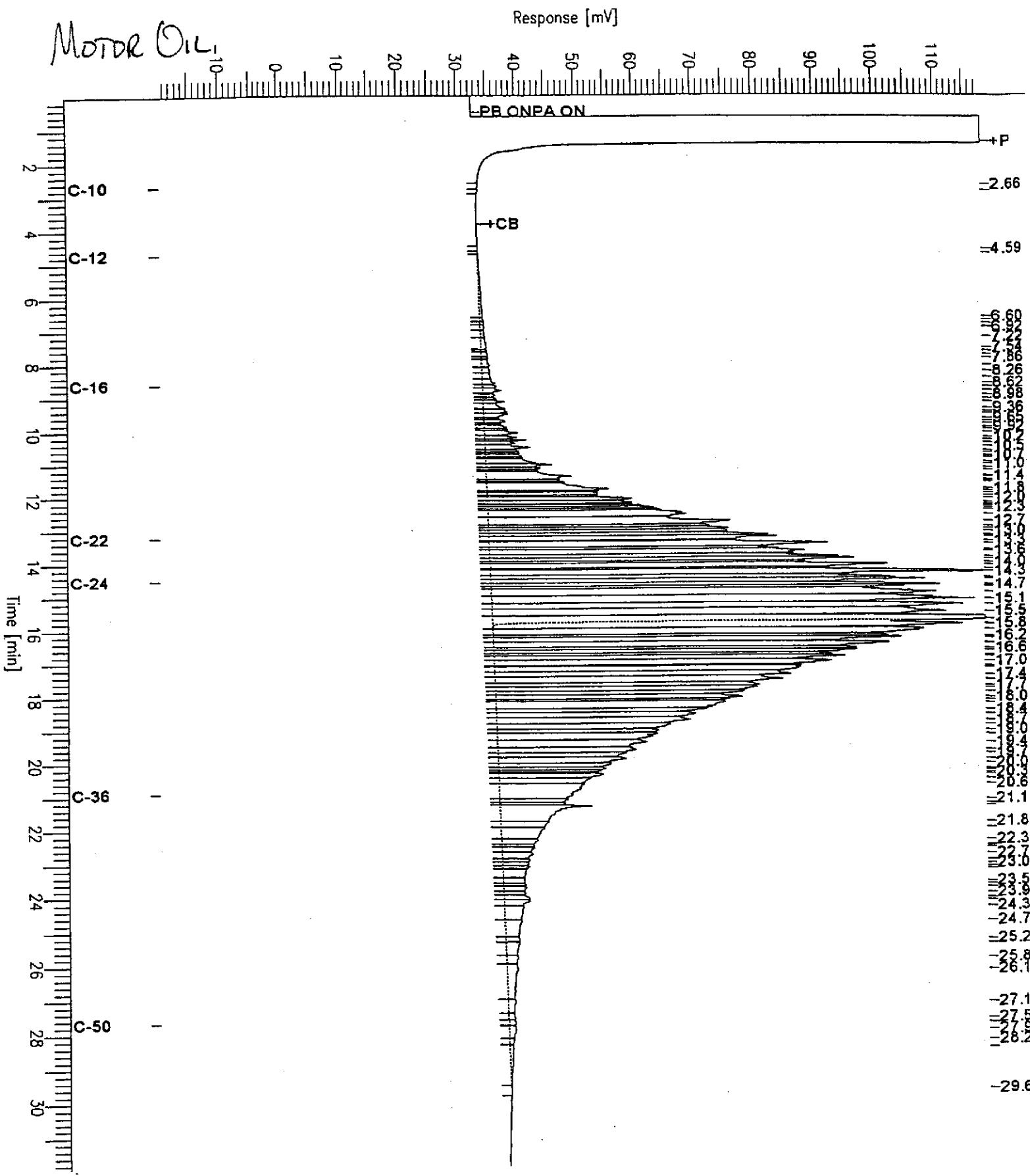
Sample #: 500mg/l Page 1 of 1
Date : 06/14/2000 04:20 PM
Time of Injection: 06/14/2000 01:21 PM
Low Point : -20.97 mV High Point : 400.06 mV
Plot Scale: 421.0 mV

Diesel



Sample Name : ccv_00ws9267.mo
File Name : G:\GC15\CHB\166B001.RAW
Method : BTEH159.MTH
Start Time : 0.01 min End Time : 31.91 min
Scale Factor: 0.0 Plot Offset: -20 mV

Sample #: 500mg/l Page 1 of 1
Date : 06/14/2000 01:48 PM
Time of Injection: 06/14/2000 11:35 AM
Low Point : -19.62 mV High Point : 117.99 mV
Plot Scale: 137.6 mV



Total Extractable Hydrocarbons

Lab #:	145881	Location:	Inner Harbor Turning Basin
Client:	Subsurface Consultants	Prep:	SHAKER TABLE
Project#:	99.574	Analysis:	EPA 8015M
Type:	LCS	Diln Fac:	1.000
Lab ID:	QC117820	Batch#:	56408
Matrix:	Soil	Prepared:	06/08/00
Units:	mg/Kg	Analyzed:	06/14/00
Basis:	wet		

Analyte	Spiked	Result	GREG	Limits
Diesel C10-C24	47.17	35.71	76	67-121

Surrogate	GREG	Limits
Hexacosane	106	60-136



Curtis & Tompkins, Ltd.

Total Extractable Hydrocarbons

Lab #:	145881	Location:	Inner Harbor Turning Basin
Client:	Subsurface Consultants	Prep:	SHAKER TABLE
Project#:	99.574	Analysis:	EPA 8015M
Field ID:	ZZZZZZZZZZ	Batch#:	56408
MSS Lab ID:	145619-021	Sampled:	05/11/00
Matrix:	Soil	Received:	05/11/00
Units:	mg/Kg	Prepared:	06/08/00
Basis:	wet	Analyzed:	06/15/00
Diln Fac:	1.000		

Type: MS Lab ID: QC117821

Analyte	MSS Result	Spiked	Result	%REC	Limits
Diesel C10-C24	8.588	47.17	27.77	41	35-146
Surrogate %REC Limits					
Hexacosane	84	60-136			

Type: MSD Lab ID: QC117822

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Diesel C10-C24	46.70	30.02	46	35-146	9	48
Surrogate %REC Limits						
Hexacosane	100	60-136				

RPD= Relative Percent Difference

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Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	145881	Location:	Inner Harbor Turning Basin
Client:	Subsurface Consultants	Prep:	EPA 5030
Project#:	99.574	Analysis:	EPA 8260B
Field ID:	B5@5'	Diln Fac:	0.9434
Lab ID:	145881-002	Batch#:	56278
Matrix:	Soil	Sampled:	05/26/00
Units:	ug/Kg	Received:	05/30/00
Basis:	wet	Analyzed:	06/02/00

Analyte	Result	RL
Freon 12	ND	9.4
Chloromethane	ND	9.4
Vinyl Chloride	ND	9.4
Bromomethane	ND	9.4
Chloroethane	ND	9.4
Trichlorofluoromethane	ND	4.7
Acetone	ND	19
Freon 113	ND	4.7
1,1-Dichloroethene	ND	4.7
Methylene Chloride	ND	19
Carbon Disulfide	ND	4.7
MTBE	ND	4.7
trans-1,2-Dichloroethene	ND	4.7
Vinyl Acetate	ND	47
1,1-Dichloroethane	ND	4.7
2-Butanone	ND	9.4
cis-1,2-Dichloroethene	ND	4.7
2,2-Dichloropropane	ND	4.7
Chloreform	ND	4.7
Bromo-chloromethane	ND	4.7
1,1,1-Trichloroethane	ND	4.7
1,1-Dichloropropene	ND	4.7
Carbon Tetrachloride	ND	4.7
1,2-Dichloroethane	ND	4.7
Benzene	ND	4.7
Trichloroethene	ND	4.7
1,2-Dichloropropane	ND	4.7
Bromodichloromethane	ND	4.7
Dibromomethane	ND	4.7
4-Methyl-2-Pentanone	ND	9.4
cis-1,3-Dichloropropene	ND	4.7
Toluene	ND	4.7
trans-1,3-Dichloropropene	ND	4.7
1,1,2-Trichloroethane	ND	4.7
2-Hexanone	ND	9.4
1,3-Dichloropropane	ND	4.7
Tetrachloroethene	ND	4.7

ND = Not Detected

RL = Reporting Limit

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Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	145881	Location:	Inner Harbor Turning Basin
Client:	Subsurface Consultants	Prep:	EPA 5030
Project#:	99.574	Analysis:	EPA 8260B
Field ID:	B505'	Diln Fac:	0.9434
Lab ID:	145881-002	Batch#:	56278
Matrix:	Soil	Sampled:	05/26/00
Units:	ug/Kg	Received:	05/30/00
Basis:	wet	Analyzed:	06/02/00

Analyte	Result	RL
Dibromochloromethane	ND	4.7
1,2-Dibromoethane	ND	4.7
Chlorobenzene	ND	4.7
1,1,1,2-Tetrachloroethane	ND	4.7
Ethylbenzene	ND	4.7
m,p-Xylenes	ND	4.7
o-Xylene	ND	4.7
Styrene	ND	4.7
Bromoform	ND	4.7
Isopropylbenzene	ND	4.7
1,1,2,2-Tetrachloroethane	ND	4.7
1,1,3-Trichloropropane	ND	4.7
Propylbenzene	ND	4.7
Bromobenzene	ND	4.7
1,3,5-Trimethylbenzene	ND	4.7
2-Chlorotoluene	ND	4.7
4-Chlorotoluene	ND	4.7
tert-Butylbenzene	ND	4.7
1,2,4-Trimethylbenzene	ND	4.7
sec-Butylbenzene	ND	4.7
para-Isopropyl Toluene	ND	4.7
1,3-Dichlorobenzene	ND	4.7
1,4-Dichlorobenzene	ND	4.7
n-Butylbenzene	ND	4.7
1,2-Dichlorobenzene	ND	4.7
1,2-Dibromo-3-Chloropropane	ND	4.7
1,2,4-Trichlorobenzene	ND	4.7
Hexachlorobutadiene	ND	4.7
Naphthalene	ND	4.7
1,2,3-Trichlorobenzene	ND	4.7

Surrogate	REC	Limits
Dibromofluoromethane	98	63-133
1,2-Dichloroethane-d4	95	76-127
Toluene-d8	100	80-111
Bromofluorobenzene	100	77-126

ND = Not Detected

RL = Reporting Limit



Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	145881	Location:	Inner Harbor Turning Basin
Client:	Subsurface Consultants	Prep:	EPA 5030
Project#:	99.574	Analysis:	EPA 8260B
Field ID:	B5@7.5'	Diln Fac:	0.9615
Lab ID:	145881-003	Batch#:	56278
Matrix:	Soil	Sampled:	05/26/00
Units:	ug/Kg	Received:	05/30/00
Basis:	wet	Analyzed:	06/02/00

Analyte	Result	RL
Freon 12	ND	9.6
Chloromethane	ND	9.6
Vinyl Chloride	ND	9.6
Bromomethane	ND	9.6
Chloroethane	ND	9.6
Trichlorofluoromethane	ND	4.8
Acetone	ND	19
Freon 113	ND	4.8
1,1-Dichloroethene	ND	4.8
Methylene Chloride	ND	19
Carbon Disulfide	ND	4.8
MTBE	ND	4.8
trans-1,2-Dichloroethene	ND	4.8
Vinyl Acetate	ND	48
1,1-Dichloroethane	ND	4.8
2-Butanone	ND	9.6
cis-1,2-Dichloroethene	ND	4.8
2,2-Dichloropropane	ND	4.8
Chloroform	ND	4.8
Bromoform	ND	4.8
Bromochloromethane	ND	4.8
1,1,1-Trichloroethane	ND	4.8
1,1-Dichloropropene	ND	4.8
Carbon Tetrachloride	ND	4.8
1,2-Dichloroethane	ND	4.8
Benzene	ND	4.8
Trichloroethene	ND	4.8
1,2-Dichloropropane	ND	4.8
Bromodichloromethane	ND	4.8
Dibromomethane	ND	4.8
4-Methyl-2-Pentanone	ND	9.6
cis-1,3-Dichloropropene	ND	4.8
Toluene	ND	4.8
trans-1,3-Dichloropropene	ND	4.8
1,1,2-Trichloroethane	ND	4.8
2-Hexanone	ND	9.6
1,3-Dichloropropane	ND	4.8
Tetrachloroethene	ND	4.8

ND = Not Detected

RL = Reporting Limit

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Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	145881	Location:	Inner Harbor Turning Basin
Client:	Subsurface Consultants	Prep:	EPA 5030
Project#:	99.574	Analysis:	EPA 8260B
Field ID:	B5@7.5'	Diln Fac:	0.9615
Lab ID:	145881-003	Batch#:	56278
Matrix:	Soil	Sampled:	05/26/00
Units:	ug/Kg	Received:	05/30/00
Basis:	wet	Analyzed:	06/02/00

Analyte	Result	RL
Dibromochloromethane	ND	4.8
1,2-Dibromoethane	ND	4.8
Chlorobenzene	ND	4.8
1,1,1,2-Tetrachloroethane	ND	4.8
Ethylbenzene	ND	4.8
m,p-Xylenes	ND	4.8
o-Xylene	ND	4.8
Styrene	ND	4.8
Bromoform	ND	4.8
Isopropylbenzene	ND	4.8
1,1,2,2-Tetrachloroethane	ND	4.8
1,2,3-Trichloropropane	ND	4.8
Propylbenzene	ND	4.8
Bromobenzene	ND	4.8
1,3,5-Trimethylbenzene	ND	4.8
2-Chlorotoluene	ND	4.8
4-Chlorotoluene	ND	4.8
tert-Butylbenzene	ND	4.8
1,2,4-Trimethylbenzene	ND	4.8
sec-Butylbenzene	ND	4.8
para-Isopropyl Toluene	ND	4.8
1,3-Dichlorobenzene	ND	4.8
1,4-Dichlorobenzene	ND	4.8
n-Butylbenzene	ND	4.8
1,2-Dichlorobenzene	ND	4.8
1,2-Dibromo-3-Chloropropane	ND	4.8
1,2,4-Trichlorobenzene	ND	4.8
Hexachlorobutadiene	ND	4.8
Naphthalene	ND	4.8
1,2,3-Trichlorobenzene	ND	4.8

Surrogate	REC	Limits
Dibromofluoromethane	99	63-133
1,2-Dichloroethane-d4	98	76-127
Toluene-d8	101	80-111
Bromofluorobenzene	99	77-126

ND = Not Detected

RL = Reporting Limit

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Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	145881	Location:	Inner Harbor Turning Basin
Client:	Subsurface Consultants	Prep:	EPA 5030
Project#:	99.574	Analysis:	EPA 8260B
Field ID:	B4@11'	Diln Fac:	1.000
Lab ID:	145881-006	Batch#:	56278
Matrix:	Soil	Sampled:	05/25/00
Units:	ug/Kg	Received:	05/30/00
Basis:	wet	Analyzed:	06/02/00

Analyte	Result	RL
Freon 12	ND	10
Chloromethane	ND	10
Vinyl Chloride	ND	10
Bromomethane	ND	10
Chloroethane	ND	10
Trichlorofluoromethane	ND	5.0
Acetone	ND	20
Freon 113	ND	5.0
1,1-Dichloroethene	ND	5.0
Methylene Chloride	ND	20
Carbon Disulfide	ND	5.0
MTBE	ND	5.0
trans-1,2-Dichloroethene	ND	5.0
Vinyl Acetate	ND	50
1,1-Dichloroethane	ND	5.0
2-Butanone	ND	10
cis-1,2-Dichloroethene	ND	5.0
2,2-Dichloropropane	ND	5.0
Chloroform	ND	5.0
Bromoform	ND	5.0
Bromochloromethane	ND	5.0
1,1,1-Trichloroethane	ND	5.0
1,1-Dichloropropene	ND	5.0
Carbon Tetrachloride	ND	5.0
1,2-Dichloroethane	ND	5.0
Benzene	ND	5.0
Trichloroethene	ND	5.0
1,2-Dichloropropane	ND	5.0
Bromodichloromethane	ND	5.0
Dibromomethane	ND	5.0
4-Methyl-2-Pentanone	ND	10
cis-1,3-Dichloropropene	ND	5.0
Toluene	ND	5.0
trans-1,3-Dichloropropene	ND	5.0
1,1,2-Trichloroethane	ND	5.0
2-Hexanone	ND	10
1,3-Dichloropropane	ND	5.0
Tetrachloroethene	ND	5.0

ND = Not Detected

RL = Reporting Limit

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Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	145881	Location:	Inner Harbor Turning Basin
Client:	Subsurface Consultants	Prep:	EPA 5030
Project#:	99.574	Analysis:	EPA 8260B
Field ID:	B4@11'	Diln Fac:	1.000
Lab ID:	145881-006	Batch#:	56278
Matrix:	Soil	Sampled:	05/25/00
Units:	ug/Kg	Received:	05/30/00
Basis:	wet	Analyzed:	06/02/00

Analyte	Result	RL
Dibromochloromethane	ND	5.0
1,2-Dibromoethane	ND	5.0
Chlorobenzene	ND	5.0
1,1,1,2-Tetrachloroethane	ND	5.0
Ethylbenzene	ND	5.0
m,p-Xylenes	ND	5.0
o-Xylene	ND	5.0
Styrene	ND	5.0
Bromoform	ND	5.0
Isopropylbenzene	ND	5.0
1,1,2,2-Tetrachloroethane	ND	5.0
1,2,3-Trichloropropane	ND	5.0
Propylbenzene	ND	5.0
Bromoethene	ND	5.0
1,3,5-Trimethylbenzene	ND	5.0
2-Chlorotoluene	ND	5.0
4-Chlorotoluene	ND	5.0
tert-Butylbenzene	ND	5.0
1,2,4-Trimethylbenzene	ND	5.0
sec-Butylbenzene	ND	5.0
para-Isopropyl Toluene	ND	5.0
1,3-Dichlorobenzene	ND	5.0
1,4-Dichlorobenzene	ND	5.0
n-Butylbenzene	ND	5.0
1,2-Dichlorobenzene	ND	5.0
1,2-Dibromo-3-Chloropropane	ND	5.0
1,2,4-Trichlorobenzene	ND	5.0
Hexachlorobutadiene	ND	5.0
Naphthalene	ND	5.0
1,2,3-Trichlorobenzene	ND	5.0

Surrogate	REC	Limits
Dibromofluoromethane	97	63-133
1,2-Dichloroethane-d4	98	76-127
Toluene-d8	101	80-111
Bromofluorobenzene	97	77-126

ND = Not Detected

RL = Reporting Limit



Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	145881	Location:	Inner Harbor Turning Basin
Client:	Subsurface Consultants	Prep:	EPA 5030
Project#:	99.574	Analysis:	EPA 8260B
Type:	BLANK	Basis:	wet
Lab ID:	QC117354	Diln Fac:	1.000
Matrix:	Soil	Batch#:	56278
Units:	ug/Kg	Analyzed:	06/02/00

Analyte	Result	RL
Freon 12	ND	10
Chloromethane	ND	10
Vinyl Chloride	ND	10
Bromomethane	ND	10
Chloroethane	ND	10
Trichlorofluoromethane	ND	5.0
Acetone	ND	20
Freon 113	ND	5.0
1,1-Dichloroethene	ND	5.0
Methylene Chloride	ND	20
Carbon Disulfide	ND	5.0
MTBE	ND	5.0
trans-1,2-Dichloroethene	ND	5.0
Vinyl Acetate	ND	50
1,1-Dichloroethane	ND	5.0
2-Butanone	ND	10
cis-1,2-Dichloroethene	ND	5.0
2,2-Dichloropropane	ND	5.0
Chloroform	ND	5.0
Bromoform	ND	5.0
1,1,1-Trichloroethane	ND	5.0
1,1-Dichloropropene	ND	5.0
Carbon Tetrachloride	ND	5.0
1,2-Dichloroethane	ND	5.0
Benzene	ND	5.0
Trichloroethene	ND	5.0
1,2-Dichloropropane	ND	5.0
Bromodichloromethane	ND	5.0
Dibromomethane	ND	5.0
4-Methyl-2-Pentanone	ND	10
cis-1,3-Dichloropropene	ND	5.0
Toluene	ND	5.0
trans-1,3-Dichloropropene	ND	5.0
1,1,2-Trichloroethane	ND	5.0
2-Hexanone	ND	10
1,3-Dichloropropane	ND	5.0
Tetrachloroethene	ND	5.0
Dibromochloromethane	ND	5.0

ND = Not Detected

RL = Reporting Limit

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Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	145881	Location:	Inner Harbor Turning Basin
Client:	Subsurface Consultants	Prep:	EPA 5030
Project#:	99.574	Analysis:	EPA 8260B
Type:	BLANK	Basis:	wet
Lab ID:	QC117354	Diln Fac:	1.000
Matrix:	Soil	Batch#:	56278
Units:	ug/Kg	Analyzed:	06/02/00

Analyte	Result	RL
1,2-Dibromoethane	ND	5.0
Chlorobenzene	ND	5.0
1,1,1,2-Tetrachloroethane	ND	5.0
Ethylbenzene	ND	5.0
m,p-Xylenes	ND	5.0
o-Xylene	ND	5.0
Styrene	ND	5.0
Bromoform	ND	5.0
Isopropylbenzene	ND	5.0
1,1,2,2-Tetrachloroethane	ND	5.0
1,1,2-Trichloropropane	ND	5.0
Propylbenzene	ND	5.0
Bromobenzene	ND	5.0
1,3,5-Trimethylbenzene	ND	5.0
2-Chlorotoluene	ND	5.0
4-Chlorotoluene	ND	5.0
tert-Butylbenzene	ND	5.0
1,2,4-Trimethylbenzene	ND	5.0
sec-Butylbenzene	ND	5.0
para-Isopropyl Toluene	ND	5.0
1,3-Dichlorobenzene	ND	5.0
1,4-Dichlorobenzene	ND	5.0
n-Butylbenzene	ND	5.0
1,2-Dichlorobenzene	ND	5.0
1,2-Dibromo-3-Chloropropane	ND	5.0
1,2,4-Trichlorobenzene	ND	5.0
Hexachlorobutadiene	ND	5.0
Naphthalene	ND	5.0
1,2,3-Trichlorobenzene	ND	5.0

Surrogate	#REC	Limits
Dibromofluoromethane	95	63-133
1,2-Dichloroethane-d4	96	76-127
Toluene-d8	100	80-111
Bromofluorobenzene	98	77-126

ND = Not Detected

RL = Reporting Limit

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Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	145881	Location:	Inner Harbor Turning Basin
Client	Subsurface Consultants	Prep:	EPA 5030
Project#:	99.574	Analysis:	EPA 8260B
Type:	LCS	Basis:	wet
Lab ID:	QC117353	Diln Fac:	1.000
Matrix:	Soil	Batch#:	56278
Units:	ug/Kg	Analyzed:	06/02/00

Analyte	Spiked	Result	RREC	Limits
1,1-Dichloroethene	50.00	47.02	94	66-138
Benzene	50.00	49.33	99	76-121
Trichloroethene	50.00	50.94	102	75-124
Toluene	50.00	51.23	102	75-124
Chlorobenzene	50.00	50.75	102	78-115

Surrogate	RREC	Limits
Dibromofluoromethane	91	63-133
1,2-Dichloroethane-d4	92	76-127
Toluene-d8	97	80-111
Bromofluorobenzene	91	77-126



Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	145881	Location:	Inner Harbor Turning Basin
Client:	Subsurface Consultants	Prep:	EPA 5030
Project#:	99.574	Analysis:	EPA 8260B
Field ID:	B3@6.0	Diln Fac:	0.9434
MSS Lab ID:	145827-002	Batch#:	56278
Matrix:	Soil	Sampled:	05/24/00
Units:	ug/Kg	Received:	05/25/00
Basis:	wet	Analyzed:	06/02/00

Type: MS Lab ID: QC117355

Analyte	MSS Result	Spiked	Result	RREC	Limits
1,1-Dichloroethene	<4.717	47.17	38.02	81	42-145
Benzene	<4.717	47.17	37.97	81	50-133
Trichloroethene	<4.717	47.17	35.55	75	33-133
Toluene	<4.717	47.17	37.63	80	45-134
Chlorobenzene	<4.717	47.17	33.63	71	38-137

Surrogate	RREC	Limits
Dibromofluoromethane	99	63-133
1,2-Dichloroethane-d4	98	76-127
Toluene-d8	100	80-111
Bromofluorobenzene	94	77-126

Type: MSD Lab ID: QC117356

Analyte	Spiked	Result	RREC	Limits	RPD Lim
1,1-Dichloroethene	47.17	39.22	83	42-145	3 31
Benzene	47.17	38.52	82	50-133	1 29
Trichloroethene	47.17	37.03	79	33-133	4 30
Toluene	47.17	38.68	82	45-134	3 29
Chlorobenzene	47.17	34.03	72	38-137	1 31

Surrogate	RREC	Limits
Dibromofluoromethane	97	63-133
1,2-Dichloroethane-d4	97	76-127
Toluene-d8	100	80-111
Bromofluorobenzene	94	77-126



Curtis & Tompkins, Ltd.

Semivolatile Organics by GC/MS

Lab #:	145881	Location:	Inner Harbor Turning Basin
Client:	Subsurface Consultants	Prep:	EPA 3550
Project#:	99.574	Analysis:	EPA 8270B
Field ID:	B503'	Batch#:	56410
Lab ID:	145881-001	Sampled:	05/26/00
Matrix:	Soil	Received:	05/30/00
Units:	ug/Kg	Prepared:	06/08/00
Basis:	wet	Analyzed:	06/21/00
Diln Fac:	5.000		

Chemical	Conc.	PPM
N-Nitrosodimethylamine	ND	12,000
Phenol	ND	12,000
bis(2-Chloroethyl)ether	ND	12,000
2-Chlorophenol	ND	12,000
1,3-Dichlorobenzene	ND	12,000
1,4-Dichlorobenzene	ND	12,000
Benzyl alcohol	ND	12,000
1,2-Dichlorobenzene	ND	12,000
2-Methylphenol	ND	12,000
bis(2-Chloroisopropyl) ether	ND	12,000
3-,4-Methylphenol	ND	12,000
N-Nitroso-di-n-propylamine	ND	12,000
Hexachloroethane	ND	12,000
Nitrobenzene	ND	12,000
Isophorone	ND	12,000
2-Nitrophenol	ND	58,000
2,4-Dimethylphenol	ND	12,000
Benzoic acid	ND	58,000
bis(2-Chloroethoxy)methane	ND	12,000
2,4-Dichlorophenol	ND	12,000
1,2,4-Trichlorobenzene	ND	12,000
Naphthalene	ND	12,000
4-Chloroaniline	ND	12,000
Hexachlorobutadiene	ND	12,000
4-Chloro-3-methylphenol	ND	12,000
2-Methylnaphthalene	ND	12,000
Hexachlorocyclopentadiene	ND	58,000
2,4,6-Trichlorophenol	ND	12,000
2,4,5-Trichlorophenol	ND	12,000
2-Chloronaphthalene	ND	12,000
2-Nitroaniline	ND	58,000
Dimethylphthalate	ND	12,000
Acenaphthylene	ND	12,000
2,6-Dinitrotoluene	ND	12,000
3-Nitroaniline	ND	58,000
Acenaphthene	ND	12,000
2,4-Dinitrophenol	ND	58,000
4-Nitrophenol	ND	58,000
Dibenzofuran	ND	12,000
2,4-Dinitrotoluene	ND	12,000
Diethylphthalate	ND	12,000
Fluorene	ND	12,000
4-Chlorophenyl-phenylether	ND	12,000
4-Nitroaniline	ND	58,000
4,6-Dinitro-2-methylphenol	ND	58,000
N-Nitrosodiphenylamine	ND	12,000
Azobenzene	ND	12,000
4-Bromophenyl-phenylether	ND	12,000
Hexachlorobenzene	ND	12,000
Pentachlorophenol	ND	58,000
Phenanthrene	ND	12,000
Anthracene	ND	12,000
Di-n-butylphthalate	ND	12,000

DO = Diluted Out

ND = Not Detected

RL = Reporting Limit

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Curtis & Tompkins, Ltd.

Semivolatile organics by GC/MS

Lab #:	145881	Location:	Inner Harbor Turning Basin
Client:	Subsurface Consultants	Prep:	EPA 3550
Project#:	99.574	Analysis:	EPA 8270B
Field ID:	B5@3'	Batch#:	56410
Lab ID:	145881-001	Sampled:	05/26/00
Matrix:	Soil	Received:	05/30/00
Units:	ug/Kg	Prepared:	06/08/00
Basis:	wet	Analyzed:	06/21/00
Diln Fac:	5.000		

Analyte	Recovery	PPM
Fluoranthene	ND	12,000
Pyrene	ND	12,000
Butylbenzylphthalate	ND	12,000
3,3'-Dichlorobenzidine	ND	58,000
Benzo(a)anthracene	ND	12,000
Chrysene	ND	12,000
bis(2-Ethylhexyl)phthalate	ND	12,000
Di-n-octylphthalate	ND	12,000
Benzo(b,k)fluoranthene	ND	12,000
Benzo(a)pyrene	ND	12,000
Indeno(1,2,3-cd)pyrene	ND	12,000
Dibenz(a,h)anthracene	ND	12,000
Benzo(g,h,i)perylene	ND	12,000

STRUCTURE	PPM	PPM RL
2-Fluorophenol	DO	40-134
Phenol-d5	DO	39-135
2,4,6-Tribromophenol	DO	16-131
Nitrobenzene-d5	DO	38-131
2-Fluorobiphenyl	DO	45-129
Terphenyl-d14	DO	41-140

DO = Diluted Out

ND = Not Detected

RL = Reporting Limit

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Curtis & Tompkins, Ltd.

Semivolatile Organics by GC/MS

Lab #:	145881	Location:	Inner Harbor Turning Basin
Client:	Subsurface Consultants	Prep:	EPA 3550
Project#:	99.574	Analysis:	EPA 8270B
Field ID:	B5@5'	Batch#:	56410
Lab ID:	145881-002	Sampled:	05/26/00
Matrix:	Soil	Received:	05/30/00
Units:	ug/Kg	Prepared:	06/08/00
Basis:	wet	Analyzed:	06/16/00
Diln Fac:	1.000		

Analite	Result	RL
N-Nitrosodimethylamine	ND	330
Phenol	ND	330
bis(2-Chloroethyl)ether	ND	330
2-Chlorophenol	ND	330
1,3-Dichlorobenzene	ND	330
1,4-Dichlorobenzene	ND	330
Benzyl alcohol	ND	330
1,2-Dichlorobenzene	ND	330
2-Methylphenol	ND	330
bis(2-Chloroisopropyl) ether	ND	330
3-,4-Methylphenol	ND	330
N-Nitroso-di-n-propylamine	ND	330
Hexachloroethane	ND	330
Nitrobenzene	ND	330
Isophorone	ND	330
2-Nitrophenol	ND	1,600
2,4-Dimethylphenol	ND	330
Benzoic acid	ND	1,600
bis(2-Chloroethoxy)methane	ND	330
2,4-Dichlorophenol	ND	330
1,2,4-Trichlorobenzene	ND	330
Naphthalene	ND	330
4-Chloroaniline	ND	330
Hexachlorobutadiene	ND	330
4-Chloro-3-methylphenol	ND	330
2-Methylnaphthalene	ND	330
Hexachlorocyclopentadiene	ND	1,600
2,4,6-Trichlorophenol	ND	330
2,4,5-Trichlorophenol	ND	330
2-Chloronaphthalene	ND	330
2-Nitroaniline	ND	1,600
Dimethylphthalate	ND	330
Acenaphthylene	ND	330
2,6-Dinitrotoluene	ND	330
3-Nitroaniline	ND	1,600
Acenaphthene	ND	330
2,4-Dinitrophenol	ND	1,600
4-Nitrophenol	ND	1,600
Dibenzofuran	ND	330
2,4-Dinitrotoluene	ND	330
Diethylphthalate	ND	330
Fluorene	ND	330
4-Chlorophenyl-phenylether	ND	330
4-Nitroaniline	ND	1,600
4,6-Dinitro-2-methylphenol	ND	1,600
N-Nitrosodiphenylamine	ND	330
Azobenzene	ND	330
4-Bromophenyl-phenylether	ND	330
Hexachlorobenzene	ND	330
Pentachlorophenol	ND	1,600
Phenanthrene	ND	330
Anthracene	ND	330
Di-n-butylphthalate	ND	330
Fluoranthene	ND	330

ND = Not Detected

RL = Reporting Limit

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Curtis & Tompkins, Ltd.

Semivolatile Organics by GC/MS

Lab #:	145881	Location:	Inner Harbor Turning Basin
Client:	Subsurface Consultants	Prep:	EPA 3550
Project#:	99.574	Analysis:	EPA 8270B
Field ID:	B5@5'	Batch#:	56410
Lab ID:	145881-002	Sampled:	05/26/00
Matrix:	Soil	Received:	05/30/00
Units:	ug/Kg	Prepared:	06/08/00
Basis:	wet	Analyzed:	06/16/00
Diln Fac:	1.000		

Analyte	Report#	DL
Pyrene	ND	330
Butylbenzylphthalate	ND	330
3,3'-Dichlorobenzidine	ND	1,600
Benzo(a)anthracene	ND	330
Chrysene	ND	330
bis(2-Ethylhexyl)phthalate	ND	330
Di-n-octylphthalate	ND	330
Benzo(b,k)fluoranthene	ND	330
Benzo(a)pyrene	ND	330
Indeno(1,2,3-cd)pyrene	ND	330
Dibenz(a,h)anthracene	ND	330
Benzo(q,h,i)perylene	ND	330

Surrogate	IR#	DL
2-Fluorophenol	71	40-134
Phenol-d5	71	39-135
2,4,6-Tribromophenol	73	16-131
Nitrobenzene-d5	78	38-131
2-Fluorobiphenyl	83	45-129
Terphenyl-d14	86	41-140

Semivolatile Organics by GC/MS

Lab #:	145881	Location:	Inner Harbor Turning Basin
Client:	Subsurface Consultants	Prep:	EPA 3550
Project#:	99.574	Analysis:	EPA 8270B
Field ID:	B5@7.5'	Batch#:	56410
Lab ID:	145881-003	Sampled:	05/26/00
Matrix:	Soil	Received:	05/30/00
Units:	ug/Kg	Prepared:	06/08/00
Basis:	wet	Analyzed:	06/16/00
Diln Fac:	1.000		

ANALYTE	ND/RL	PPM
N-Nitrosodimethylamine	ND	330
Phenol	ND	330
bis(2-Chloroethyl)ether	ND	330
2-Chlorophenol	ND	330
1,3-Dichlorobenzene	ND	330
1,4-Dichlorobenzene	ND	330
Benzyl alcohol	ND	330
1,2-Dichlorobenzene	ND	330
2-Methylphenol	ND	330
bis(2-Chloroisopropyl) ether	ND	330
3-,4-Methylphenol	ND	330
N-Nitroso-di-n-propylamine	ND	330
Hexachloroethane	ND	330
Nitrobenzene	ND	330
Isophorone	ND	330
2-Nitrophenol	ND	1,700
2,4-Dimethylphenol	ND	330
Benzoic acid	ND	1,700
bis(2-Chloroethoxy)methane	ND	330
2,4-Dichlorophenol	ND	330
1,2,4-Trichlorobenzene	ND	330
Naphthalene	ND	330
4-Chloroaniline	ND	330
Hexachlorobutadiene	ND	330
4-Chloro-3-methylphenol	ND	330
2-Methylnaphthalene	ND	330
Hexachlorocyclopentadiene	ND	1,700
2,4,6-Trichlorophenol	ND	330
2,4,5-Trichlorophenol	ND	330
2-Chloronaphthalene	ND	330
2-Nitroaniline	ND	1,700
Dimethylphthalate	ND	330
Acenaphthylene	ND	330
2,6-Dinitrotoluene	ND	330
3-Nitroaniline	ND	1,700
Acenaphthene	ND	330
2,4-Dinitrophenol	ND	1,700
4-Nitrophenol	ND	1,700
Dibenzofuran	ND	330
2,4-Dinitrotoluene	ND	330
Diethylphthalate	ND	330
Fluorene	ND	330
4-Chlorophenyl-phenylether	ND	330
4-Nitroaniline	ND	1,700
4,6-Dinitro-2-methylphenol	ND	1,700
N-Nitrosodiphenylamine	ND	330
Azobenzene	ND	330
4-Bromophenyl-phenylether	ND	330
Hexachlorobenzene	ND	330
Pentachlorophenol	ND	1,700
Phenanthrene	ND	330
Anthracene	ND	330
Di-n-butylphthalate	ND	330
Fluoranthene	ND	330

ND = Not Detected

RL = Reporting Limit

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Curtis & Tompkins, Ltd.

Semivolatile Organics by GC/MS

Lab #:	145881	Location:	Inner Harbor Turning Basin
Client:	Subsurface Consultants	Prep:	EPA 3550
Project#:	99.574	Analysis:	EPA 8270B
Field ID:	B507.5'	Batch#:	56410
Lab ID:	145881-003	Sampled:	05/26/00
Matrix:	Soil	Received:	05/30/00
Units:	ug/Kg	Prepared:	06/08/00
Basis:	wet	Analyzed:	06/16/00
Diln Fac:	1.000		

ANALYTE	RESULT	RL
Pyrene	ND	330
Butylbenzylphthalate	ND	330
3,3'-Dichlorobenzidine	ND	1,700
Benzo(a)anthracene	ND	330
Chrysene	ND	330
bis(2-Ethylhexyl)phthalate	ND	330
Di-n-octylphthalate	ND	330
Benzo(b,k)fluoranthene	ND	330
Benzo(a)pyrene	ND	330
Indeno(1,2,3-cd)pyrene	ND	330
Dibenz(a,h)anthracene	ND	330
Benzo(g,h,i)perylene	ND	330

SURROGATE	SRPC	LIMITS
2-Fluorophenol	75	40-134
Phenol-d5	73	39-135
2,4,6-Tribromophenol	69	16-131
Nitrobenzene-d5	80	38-131
2-Fluorobiphenyl	87	45-129
Terphenyl-d14	87	41-140



Curtis & Tompkins, Ltd.

Semivolatile Organics by GC/MS

Lab #:	145881	Location:	Inner Harbor Turning Basin
Client:	Subsurface Consultants	Prep:	EPA 3550
Project#:	99.574	Analysis:	EPA 8270B
Field ID:	B4@11'	Batch#:	56410
Lab ID:	145881-006	Sampled:	05/25/00
Matrix:	Soil	Received:	05/30/00
Units:	ug/Kg	Prepared:	06/08/00
Basis:	wet	Analyzed:	06/20/00
Diln Fac:	5.000		

Analysis	Conc.	Unit
N-Nitrosodimethylamine	ND	1,700
Phenol	ND	1,700
bis(2-Chloroethyl)ether	ND	1,700
2-Chlorophenol	ND	1,700
1,3-Dichlorobenzene	ND	1,700
1,4-Dichlorobenzene	ND	1,700
Benzyl alcohol	ND	1,700
1,2-Dichlorobenzene	ND	1,700
2-Methylphenol	ND	1,700
bis(2-Chloroisopropyl) ether	ND	1,700
3-,4-Methylphenol	ND	1,700
N-Nitroso-di-n-propylamine	ND	1,700
Hexachloroethane	ND	1,700
Nitrobenzene	ND	1,700
Isophorone	ND	1,700
2-Nitrophenol	ND	8,400
2,4-Dimethylphenol	ND	1,700
Benzoic acid	ND	8,400
bis(2-Chloroethoxy)methane	ND	1,700
2,4-Dichlorophenol	ND	1,700
1,2,4-Trichlorobenzene	ND	1,700
Naphthalene	ND	1,700
4-Chloroaniline	ND	1,700
Hexachlorobutadiene	ND	1,700
4-Chloro-3-methylphenol	ND	1,700
2-Methylnaphthalene	ND	1,700
Hexachlorocyclopentadiene	ND	8,400
2,4,6-Trichlorophenol	ND	1,700
2,4,5-Trichlorophenol	ND	1,700
2-Chloronaphthalene	ND	1,700
2-Nitroaniline	ND	8,400
Dimethylphthalate	ND	1,700
Acenaphthylene	ND	1,700
2,6-Dinitrotoluene	ND	1,700
3-Nitroaniline	ND	8,400
Acenaphthene	ND	1,700
2,4-Dinitrophenol	ND	8,400
4-Nitrophenol	ND	8,400
Dibenzofuran	ND	1,700
2,4-Dinitrotoluene	ND	1,700
Diethylphthalate	ND	1,700
Fluorene	ND	1,700
4-Chlorophenyl-phenylether	ND	1,700
4-Nitroaniline	ND	8,400
4,6-Dinitro-2-methylphenol	ND	8,400
N-Nitrosodiphenylamine	ND	1,700
Azobenzene	ND	1,700
4-Bromophenyl-phenylether	ND	1,700
Hexachlorobenzene	ND	1,700
Pentachlorophenol	ND	8,400
Phenanthrene	ND	1,700
Anthracene	ND	1,700
Di-n-butylphthalate	ND	1,700
Fluoranthene	ND	1,700

ND = Not Detected

RL = Reporting Limit

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Curtis & Tompkins, Ltd.

Semivolatile Organics by GC/MS

Lab #:	145881	Location:	Inner Harbor Turning Basin
Client:	Subsurface Consultants	Prep:	EPA 3550
Project#:	99.574	Analysis:	EPA 8270B
Field ID:	B4@11'	Batch#:	56410
Lab ID:	145881-006	Sampled:	05/25/00
Matrix:	Soil	Received:	05/30/00
Units:	ug/Kg	Prepared:	06/08/00
Basis:	wet	Analyzed:	06/20/00
Diln Fac:	5.000		

Analyte	Result	RL
Pyrene	ND	1,700
Butylbenzylphthalate	ND	1,700
3,3'-Dichlorobenzidine	ND	8,400
Benzo(a)anthracene	ND	1,700
Chrysene	ND	1,700
bis(2-Ethylhexyl)phthalate	ND	1,700
Di-n-octylphthalate	ND	1,700
Benzo(b,k)fluoranthene	ND	1,700
Benzo(a)pyrene	ND	1,700
Indeno(1,2,3-cd)pyrene	ND	1,700
Dibenz(a,h)anthracene	ND	1,700
Benzo(g,h,i)perylene	ND	1,700

SURROGATE	PPM	RL(PPM)
2-Fluorophenol	78	40-134
Phenol-d5	79	39-135
2,4,6-Tribromophenol	91	16-131
Nitrobenzene-d5	68	38-131
2-Fluorobiphenyl	92	45-129
Terphenyl-d14	94	41-140

ND = Not Detected

RL = Reporting Limit

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Semivolatile Organics by GC/MS

Lab #:	145881	Location:	Inner Harbor Turning Basin
Client:	Subsurface Consultants	Prep:	EPA 3550
Project#:	99.574	Analysis:	EPA 8270B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC117830	Batch#:	56410
Matrix:	Soil	Prepared:	06/08/00
Units:	ug/Kg	Analyzed:	06/19/00
Basis:	wet		

Analyte	Result	RL
N-Nitrosodimethylamine	ND	330
Phenol	ND	330
bis(2-Chloroethyl)ether	ND	330
2-Chlorophenol	ND	330
1,3-Dichlorobenzene	ND	330
1,4-Dichlorobenzene	ND	330
Benzyl alcohol	ND	330
1,2-Dichlorobenzene	ND	330
2-Methylphenol	ND	330
bis(2-Chloroisopropyl) ether	ND	330
3-,4-Methylphenol	ND	330
N-Nitroso-di-n-propylamine	ND	330
Hexachloroethane	ND	330
Nitrobenzene	ND	330
Isophorone	ND	330
2-Nitrophenol	ND	1,700
2,4-Dimethylphenol	ND	330
Benzoic acid	ND	1,700
bis(2-Chloroethoxy)methane	ND	330
2,4-Dichlorophenol	ND	330
1,2,4-Trichlorobenzene	ND	330
Naphthalene	ND	330
4-Chloroaniline	ND	330
Hexachlorobutadiene	ND	330
4-Chloro-3-methylphenol	ND	330
2-Methylnaphthalene	ND	330
Hexachlorocyclopentadiene	ND	1,700
2,4,6-Trichlorophenol	ND	330
2,4,5-Trichlorophenol	ND	330
2-Chloronaphthalene	ND	330
2-Nitroaniline	ND	1,700
Dimethylphthalate	ND	330
Acenaphthylene	ND	330
2,6-Dinitrotoluene	ND	330
3-Nitroaniline	ND	1,700
Acenaphthene	ND	330
2,4-Dinitrophenol	ND	1,700

ND = Not Detected

RL = Reporting Limit

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Curtis & Tompkins, Ltd.

Semivolatile Organics by GC/MS

Lab #:	145881	Location:	Inner Harbor Turning Basin
Client:	Subsurface Consultants	Prep:	EPA 3550
Project#:	99.574	Analysis:	EPA 8270B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC117830	Batch#:	56410
Matrix:	Soil	Prepared:	06/08/00
Units:	ug/Kg	Analyzed:	06/19/00
Basis:	wet		

Analyte	Result	RL
4-Nitrophenol	ND	1,700
Dibenzofuran	ND	330
2,4-Dinitrotoluene	ND	330
Diethylphthalate	ND	330
Fluorene	ND	330
4-Chlorophenyl-phenylether	ND	330
4-Nitroaniline	ND	1,700
4,6-Dinitro-2-methylphenol	ND	1,700
N-Nitrosodiphenylamine	ND	330
Azobenzene	ND	330
4-Bromophenyl-phenylether	ND	330
Hexachlorobenzene	ND	330
Pentachlorophenol	ND	1,700
Phanthrene	ND	330
Anthracene	ND	330
Di-n-butylphthalate	ND	330
Fluoranthene	ND	330
Pyrene	ND	330
Butylbenzylphthalate	ND	330
3,3'-Dichlorobenzidine	ND	1,700
Benzo(a)anthracene	ND	330
Chrysene	ND	330
bis(2-Ethylhexyl)phthalate	ND	330
Di-n-octylphthalate	ND	330
Benzo(b,k)fluoranthene	ND	330
Benzo(a)pyrene	ND	330
Indeno(1,2,3-cd)pyrene	ND	330
Dibenz(a,h)anthracene	ND	330
Benzo(g,h,i)perylene	ND	330

Surrogate	SHRC	Limits
2-Fluorophenol	79	40-134
Phenol-d5	80	39-135
2,4,6-Tribromophenol	74	16-131
Nitrobenzene-d5	88	38-131
2-Fluorobiphenyl	90	45-129
Terphenyl-d14	93	41-140

ND = Not Detected

RL = Reporting Limit

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Curtis & Tompkins, Ltd.

Semivolatile Organics by GC/MS

Lab #:	145881	Location:	Inner Harbor Turning Basin
Client:	Subsurface Consultants	Prep:	EPA 3550
Project#:	99.574	Analysis:	EPA 8270B
Type:	LCS	Diln Fac:	1.000
Lab ID:	QC117831	Batch#:	56410
Matrix:	Soil	Prepared:	06/08/00
Units:	ug/Kg	Analyzed:	06/19/00
Basis:	wet		

Analyte	Spiked	Result	RREC	limits
Phenol	3,352	2,942	88	39-128
2-Chlorophenol	3,352	3,338	100	45-137
1,4-Dichlorobenzene	1,676	1,513	90	41-127
N-Nitroso-di-n-propylamine	1,676	1,533	91	40-140
1,2,4-Trichlorobenzene	1,676	1,602	96	46-128
4-Chloro-3-methylphenol	3,352	3,085	92	45-130
Acenaphthene	1,676	1,625	97	47-124
4-Nitrophenol	3,352	2,620	78	36-110
2,4-Dinitrotoluene	1,676	1,533	91	42-123
Pentachlorophenol	3,352	2,105	63	15-110
Pyrene	1,676	1,615	96	44-123

Surrogate	RREC	limits
2-Fluorophenol	84	40-134
Phenol-d5	85	39-135
2,4,6-Tribromophenol	88	16-131
Nitrobenzene-d5	87	38-131
2-Fluorobiphenyl	91	45-129
Terphenyl-d14	98	41-140



Curtis & Tompkins, Ltd.

Semivolatile Organics by GC/MS

Lab #:	145881	Location:	Inner Harbor Turning Basin
Client:	Subsurface Consultants	Prep:	EPA 3550
Project#:	99.574	Analysis:	EPA 8270B
Field ID:	ZZZZZZZZZ	Batch#:	56410
MSS Lab ID:	145813-007	Sampled:	05/25/00
Matrix:	Soil	Received:	05/25/00
Units:	ug/Kg	Prepared:	06/08/00
Basis:	wet	Analyzed:	06/19/00
Diln Fac:	1.000		

Type: MS Lab ID: QC117832

Analyte	Split	Result	Split	Result	RPD	PPM
Phenol	<335.3	3,323	2,975	90	38-133	
2-Chlorophenol	<335.3	3,323	3,436	103	34-146	
1,4-Dichlorobenzene	<335.3	1,662	1,474	89	43-124	
N-Nitroso-di-n-propylamine	<335.3	1,662	1,555	94	48-130	
1,2,4-Trichlorobenzene	<335.3	1,662	1,629	98	53-128	
4-Chloro-3-methylphenol	<335.3	3,323	3,171	95	37-132	
Acenaphthene	<50.30	1,662	1,665	100	55-122	
4-Nitrophenol	<1,677	3,323	2,833	85	24-112	
2,4-Dinitrotoluene	<335.3	1,662	1,558	94	37-122	
Pentachlorophenol	<1,677	3,323	1,747	53	15-110	
Pyrene	<50.30	1,662	1,650	99	30-134	

Substrate	REC	PPM
2-Fluorophenol	88	40-134
Phenol-d5	88	39-135
2,4,6-Tribromophenol	86	16-131
Nitrobenzene-d5	91	38-131
2-Fluorobiphenyl	97	45-129
Terphenyl-d14	101	41-140

Type: MSD Lab ID: QC117833

Analyte	Split	Result	Split	Result	REC	PPM	RPD	PPM
Phenol	3,366	3,101	92	38-133	3	33		
2-Chlorophenol	3,366	3,610	107	34-146	4	34		
1,4-Dichlorobenzene	1,683	1,597	95	43-124	7	26		
N-Nitroso-di-n-propylamine	1,683	1,640	97	48-130	4	43		
1,2,4-Trichlorobenzene	1,683	1,734	103	53-128	5	24		
4-Chloro-3-methylphenol	3,366	3,353	100	37-132	4	35		
Acenaphthene	1,683	1,756	104	55-122	4	26		
4-Nitrophenol	3,366	2,984	89	24-112	4	47		
2,4-Dinitrotoluene	1,683	1,637	97	37-122	4	33		
Pentachlorophenol	3,366	2,144	64	15-110	19	50		
Pyrene	1,683	1,716	102	30-134	3	32		

Substrate	REC	PPM
2-Fluorophenol	95	40-134
Phenol-d5	93	39-135
2,4,6-Tribromophenol	94	16-131
Nitrobenzene-d5	98	38-131
2-Fluorobiphenyl	103	45-129
Terphenyl-d14	106	41-140

RPD= Relative Percent Difference

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California Title 26 Metals

Lab #:	145881	Project#:	99.574
Client:	Subsurface Consultants	Location:	Inner Harbor Turning Basin
Field ID:	B5@3'	Diln Fac:	1.000
Lab ID:	145881-001	Sampled:	05/26/00
Matrix:	Soil	Received:	05/30/00
Units:	mg/Kg	Analyzed:	06/02/00
Basis:	wet		

Analyte	Result	RL	Batch#	Prepared	Prep	Analysis
Antimony	ND	3.0	56262	06/01/00	EPA 3050	EPA 6010B
Arsenic	88	0.25	56262	06/01/00	EPA 3050	EPA 6010B
Barium	83	0.50	56262	06/01/00	EPA 3050	EPA 6010B
Beryllium	0.22	0.10	56262	06/01/00	EPA 3050	EPA 6010B
Cadmium	2.2	0.25	56262	06/01/00	EPA 3050	EPA 6010B
Chromium	9.4	0.50	56262	06/01/00	EPA 3050	EPA 6010B
Cobalt	6.4	1.0	56262	06/01/00	EPA 3050	EPA 6010B
Copper	66	0.50	56262	06/01/00	EPA 3050	EPA 6010B
Lead	81	0.15	56262	06/01/00	EPA 3050	EPA 6010B
Mercury	0.23	0.038	56272	06/02/00	METHOD	EPA 7471
Molybdenum	ND	1.0	56262	06/01/00	EPA 3050	EPA 6010B
Nickel	21	1.0	56262	06/01/00	EPA 3050	EPA 6010B
Selenium	ND	0.25	56262	06/01/00	EPA 3050	EPA 6010B
Silver	ND	0.25	56262	06/01/00	EPA 3050	EPA 6010B
Thallium	0.88	0.25	56262	06/01/00	EPA 3050	EPA 6010B
Vanadium	24	0.50	56262	06/01/00	EPA 3050	EPA 6010B
Zinc	96	1.0	56262	06/01/00	EPA 3050	EPA 6010B

ND = Not Detected

RL = Reporting Limit

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Curtis & Tompkins, Ltd.

California Title 26 Metals

Lab #:	145881	Project#:	99.574
Client:	Subsurface Consultants	Location:	Inner Harbor Turning Basin
Field ID:	B5@5'	Diln Fac:	1.000
Lab ID:	145881-002	Sampled:	05/26/00
Matrix:	Soil	Received:	05/30/00
Units:	mg/Kg	Analyzed:	06/02/00
Basis:	wet		

Analyte	Result	RL	Batch#	Prepared	Prep	Analysis
Antimony	ND	3.0	56262	06/01/00	EPA 3050	EPA 6010B
Arsenic	7.2	0.25	56262	06/01/00	EPA 3050	EPA 6010B
Barium	43	0.50	56262	06/01/00	EPA 3050	EPA 6010B
Beryllium	0.17	0.10	56262	06/01/00	EPA 3050	EPA 6010B
Cadmium	1.4	0.25	56262	06/01/00	EPA 3050	EPA 6010B
Chromium	29	0.50	56262	06/01/00	EPA 3050	EPA 6010B
Cobalt	6.6	1.0	56262	06/01/00	EPA 3050	EPA 6010B
Copper	13	0.50	56262	06/01/00	EPA 3050	EPA 6010B
Lead	4.2	0.15	56262	06/01/00	EPA 3050	EPA 6010B
Mercury	ND	0.039	56272	06/02/00	METHOD	EPA 7471
Molybdenum	ND	1.0	56262	06/01/00	EPA 3050	EPA 6010B
Nickel	45	1.0	56262	06/01/00	EPA 3050	EPA 6010B
Selenium	ND	0.25	56262	06/01/00	EPA 3050	EPA 6010B
Silver	ND	0.25	56262	06/01/00	EPA 3050	EPA 6010B
Thallium	0.55	0.25	56262	06/01/00	EPA 3050	EPA 6010B
Vanadium	14	0.50	56262	06/01/00	EPA 3050	EPA 6010B
Zinc	29	1.0	56262	06/01/00	EPA 3050	EPA 6010B

ND = Not Detected

RL = Reporting Limit

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California Title 26 Metals

Lab #:	145881	Project#:	99.574
Client:	Subsurface Consultants	Location:	Inner Harbor Turning Basin
Field ID:	B5@7.5'	Diln Fac:	1.000
Lab ID:	145881-003	Sampled:	05/26/00
Matrix:	Soil	Received:	05/30/00
Units:	mg/Kg	Analyzed:	06/02/00
Basis:	wet		

Analyte	Result	RL	Batch#	Prepared	Prep	Analysis
Antimony	ND	3.0	56262	06/01/00	EPA 3050	EPA 6010B
Arsenic	16	0.25	56262	06/01/00	EPA 3050	EPA 6010B
Barium	67	0.50	56262	06/01/00	EPA 3050	EPA 6010B
Beryllium	0.22	0.10	56262	06/01/00	EPA 3050	EPA 6010B
Cadmium	1.8	0.25	56262	06/01/00	EPA 3050	EPA 6010B
Chromium	20	0.50	56262	06/01/00	EPA 3050	EPA 6010B
Cobalt	12	1.0	56262	06/01/00	EPA 3050	EPA 6010B
Copper	34	0.50	56262	06/01/00	EPA 3050	EPA 6010B
Lead	32	0.15	56262	06/01/00	EPA 3050	EPA 6010B
Mercury	0.14	0.038	56272	06/02/00	METHOD	EPA 7471
Molybdenum	1.1	1.0	56262	06/01/00	EPA 3050	EPA 6010B
Nickel	35	1.0	56262	06/01/00	EPA 3050	EPA 6010B
Selenium	ND	0.25	56262	06/01/00	EPA 3050	EPA 6010B
Silver	ND	0.25	56262	06/01/00	EPA 3050	EPA 6010B
Thallium	0.40	0.25	56262	06/01/00	EPA 3050	EPA 6010B
Vanadium	29	0.50	56262	06/01/00	EPA 3050	EPA 6010B
Zinc	59	1.0	56262	06/01/00	EPA 3050	EPA 6010B

ND = Not Detected

RL = Reporting Limit

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Curtis & Tompkins, Ltd.

California Title 26 Metals

Lab #:	145881	Project#:	99.574
Client:	Subsurface Consultants	Location:	Inner Harbor Turning Basin
Field ID:	B4@11'	Diln Fac:	1.000
Lab ID:	145881-006	Sampled:	05/25/00
Matrix:	Soil	Received:	05/30/00
Units:	mg/Kg	Analyzed:	06/02/00
Basis:	wet		

Analyte	Result	RL	Batch#	Prepared	Prep	Analysis
Antimony	ND	2.9	56262	06/01/00	EPA 3050	EPA 6010B
Arsenic	2.2	0.24	56262	06/01/00	EPA 3050	EPA 6010B
Barium	41	0.49	56262	06/01/00	EPA 3050	EPA 6010B
Beryllium	0.14	0.098	56262	06/01/00	EPA 3050	EPA 6010B
Cadmium	0.67	0.24	56262	06/01/00	EPA 3050	EPA 6010B
Chromium	15	0.49	56262	06/01/00	EPA 3050	EPA 6010B
Cobalt	2.9	0.98	56262	06/01/00	EPA 3050	EPA 6010B
Copper	12	0.49	56262	06/01/00	EPA 3050	EPA 6010B
Lead	7.0	0.15	56262	06/01/00	EPA 3050	EPA 6010B
Mercury	ND	0.039	56272	06/02/00	METHOD	EPA 7471
Molybdenum	ND	0.98	56262	06/01/00	EPA 3050	EPA 6010B
Nickel	16	0.98	56262	06/01/00	EPA 3050	EPA 6010B
Selenium	ND	0.24	56262	06/01/00	EPA 3050	EPA 6010B
Silver	ND	0.24	56262	06/01/00	EPA 3050	EPA 6010B
Thallium	ND	0.24	56262	06/01/00	EPA 3050	EPA 6010B
Vanadium	11	0.49	56262	06/01/00	EPA 3050	EPA 6010B
Zinc	18	0.98	56262	06/01/00	EPA 3050	EPA 6010B

ND = Not Detected

RL = Reporting Limit

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California Title 26 Metals

Lab #:	145881	Location:	Inner Harbor Turning Basin
Client:	Subsurface Consultants	Prep:	EPA 3050
Project#:	99.574	Analysis:	EPA 6010B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC117300	Batch#:	56262
Matrix:	Soil	Prepared:	06/01/00
Units:	mg/Kg	Analyzed:	06/02/00
Basis:	wet		

Analyte	Result	RL
Antimony	ND	3.0
Arsenic	ND	0.25
Barium	ND	0.50
Beryllium	ND	0.10
Cadmium	ND	0.25
Chromium	ND	0.50
Cobalt	ND	1.0
Copper	ND	0.50
Lead	ND	0.15
Molybdenum	ND	1.0
Nickel	ND	1.0
Selenium	ND	0.25
Silver	ND	0.25
Thallium	ND	0.25
Vanadium	ND	0.50
Zinc	ND	1.0

ND = Not Detected

RL = Reporting Limit

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Curtis & Tompkins, Ltd.

California Title 26 Metals

Lab #:	145881	Location:	Inner Harbor Turning Basin
Client:	Subsurface Consultants	Prep:	METHOD
Project#:	99.574	Analysis:	EPA 7471
Analyte:	Mercury	Basis:	wet
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC117337	Batch#:	56272
Matrix:	Soil	Prepared:	06/02/00
Units:	mg/Kg	Analyzed:	06/02/00

Result

RL

ND	0.040
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ND = Not Detected

RL = Reporting Limit

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Curtis & Tompkins, Ltd.

Semivolatile Organics by GC/MS

Lab #:	146895	Location:	IHTB
Client:	Subsurface Consultants	Prep:	EPA 3520
Project#:	STANDARD	Analysis:	EPA 8270C
Type:	LCS	Diln Fac:	1.000
Lab ID:	QC122269	Batch#:	57549
Matrix:	Water	Prepared:	08/08/00
Units:	ug/L	Analyzed:	08/10/00

Analyst	Spiked	Result	REC	Limits
Phenol	100.0	60.85	61	32-110
2-Chlorophenol	100.0	70.80	71	35-116
1,4-Dichlorobenzene	50.00	26.85	54	25-110
N-Nitroso-di-n-propylamine	50.00	38.73	77	37-130
1,2,4-Trichlorobenzene	50.00	33.50	67	28-110
4-Chloro-3-methylphenol	100.0	71.36	71	39-114
Acenaphthene	50.00	41.21	82	42-113
4-Nitrophenol	100.0	64.18	64	32-110
2,4-Dinitrotoluene	50.00	41.45	83	40-114
Pentachlorophenol	100.0	69.59	70	18-110
Pyrene	50.00	40.58	81	42-116

Surrogate	REC	Limits
2-Fluorophenol	54	17-119
Phenol-d5	61	18-129
2,4,6-Tribromophenol	81	19-136
Nitrobenzene-d5	74	34-126
2-Fluorobiphenyl	76	30-121
Terphenyl-d14	83	15-142

Semivolatile Organics by GC/MS

Lab #:	146895	Location:	IHTB
Client:	Subsurface Consultants	Prep:	EPA 3520
Project#:	STANDARD	Analysis:	EPA 8270C
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC122268	Batch#:	57549
Matrix:	Water	Prepared:	08/08/00
Units:	ug/L	Analyzed:	08/10/00

Analyte	Result	RL
Dibenzofuran	ND	10
2,4-Dinitrotoluene	ND	10
Diethylphthalate	ND	10
Fluorene	ND	10
4-Chlorophenyl-phenylether	ND	10
4-Nitroaniline	ND	50
4,6-Dinitro-2-methylphenol	ND	50
N-Nitrosodiphenylamine	ND	10
Azobenzene	ND	10
4-Bromophenyl-phenylether	ND	10
Hexachlorobenzene	ND	10
Pentachlorophenol	ND	50
Phenanthrene	ND	10
Anthracene	ND	10
Di-n-butylphthalate	ND	10
Fluoranthene	ND	10
Pyrene	ND	10
Butylbenzylphthalate	ND	10
3,3'-Dichlorobenzidine	ND	50
Benzo(a)anthracene	ND	10
Chrysene	ND	10
bis(2-Ethylhexyl)phthalate	ND	10
Di-n-octylphthalate	ND	10
Benzo(b)fluoranthene	ND	10
Benzo(k)fluoranthene	ND	10
Benzo(a)pyrene	ND	10
Indeno(1,2,3-cd)pyrene	ND	10
Dibenz(a,h)anthracene	ND	10
Benzo(g,h,i)perylene	ND	10

Surrogate	TREC	limits
2-Fluorophenol	62	17-119
Phenol-d5	66	18-129
2,4,6-Tribromophenol	84	19-136
Nitrobenzene-d5	75	34-126
2-Fluorobiphenyl	78	30-121
Terphenyl-d14	82	15-142

ND = Not Detected

RL = Reporting Limit

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Curtis & Tompkins, Ltd.

Semivolatile Organics by GC/MS

Lab #:	146895	Location:	IHTB
Client:	Subsurface Consultants	Prep:	EPA 3520
Project#:	STANDARD	Analysis:	EPA 8270C
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC122268	Batch#:	57549
Matrix:	Water	Prepared:	08/08/00
Units:	ug/L	Analyzed:	08/10/00

Analyte	Result	RL
N-Nitrosodimethylamine	ND	10
Phenol	ND	10
bis(2-Chloroethyl)ether	ND	10
2-Chlorophenol	ND	10
1,3-Dichlorobenzene	ND	10
1,4-Dichlorobenzene	ND	10
Benzyl alcohol	ND	10
1,2-Dichlorobenzene	ND	10
2-Methylphenol	ND	10
bis(2-Chloroisopropyl) ether	ND	10
3-,4-Methylphenol	ND	10
N-Nitroso-di-n-propylamine	ND	10
Hexachloroethane	ND	10
Nitrobenzene	ND	10
Isophorone	ND	10
2-Nitrophenol	ND	50
2,4-Dimethylphenol	ND	10
Benzoic acid	ND	50
bis(2-Chloroethoxy)methane	ND	10
2,4-Dichlorophenol	ND	10
1,2,4-Trichlorobenzene	ND	10
Naphthalene	ND	10
4-Chloroaniline	ND	10
Hexachlorobutadiene	ND	10
4-Chloro-3-methylphenol	ND	10
2-Methylnaphthalene	ND	10
Hexachlorocyclopentadiene	ND	50
2,4,6-Trichlorophenol	ND	10
2,4,5-Trichlorophenol	ND	10
2-Chloronaphthalene	ND	10
2-Nitroaniline	ND	50
Dimethylphthalate	ND	10
Acenaphthylene	ND	10
2,6-Dinitrotoluene	ND	10
3-Nitroaniline	ND	50
Acenaphthene	ND	10
2,4-Dinitrophenol	ND	50
4-Nitrophenol	ND	50

ND = Not Detected

RL = Reporting Limit

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Curtis & Tompkins, Ltd.

Semivolatile Organics by GC/MS

Lab #:	146895	Location:	IHTB
Client:	Subsurface Consultants	Prep:	EPA 3520
Project#:	STANDARD	Analysis:	EPA 8270C
Field ID:	MW-2	Batch#:	57549
Lab ID:	146895-001	Sampled:	08/02/00
Matrix:	Water	Received:	08/03/00
Units:	ug/L	Prepared:	08/08/00
Diln Fac:	1.000	Analyzed:	08/10/00

Compound	Reference	RL
Pyrene	ND	11
Butylbenzylphthalate	ND	11
3,3'-Dichlorobenzidine	ND	54
Benzo(a)anthracene	ND	11
Chrysene	ND	11
bis(2-Ethylhexyl)phthalate	ND	11
Di-n-octylphthalate	ND	11
Benzo(b)fluoranthene	ND	11
Benzo(k)fluoranthene	ND	11
Benzo(a)pyrene	ND	11
Indeno(1,2,3-cd)pyrene	ND	11
Dibenz(a,h)anthracene	ND	11
Benzo(g,h,i)perylene	ND	11

Compound	RTFC	RL
2-Fluorophenol	60	17-119
Phenol-d5	69	18-129
2,4,6-Tribromophenol	94	19-136
Nitrobenzene-d5	106	34-126
2-Fluorobiphenyl	82	30-121
Terphenyl-d14	55	15-142

J = Estimated value

ND = Not Detected

RL = Reporting Limit

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Curtis & Tompkins, Ltd.

Semivolatile Organics by GC/MS

Lab #:	146895	Location:	IHTB
Client:	Subsurface Consultants	Prep:	EPA 3520
Project#:	STANDARD	Analysis:	EPA 8270C
Field ID:	MW-2	Batch#:	57549
Lab ID:	146895-001	Sampled:	08/02/00
Matrix:	Water	Received:	08/03/00
Units:	ug/L	Prepared:	08/08/00
Diln Fac:	1.000	Analyzed:	08/10/00

Chemical	Result	RL
N-Nitrosodimethylamine	ND	11
Phenol	ND	11
bis(2-Chloroethyl)ether	ND	11
2-Chlorophenol	ND	11
1,3-Dichlorobenzene	ND	11
1,4-Dichlorobenzene	ND	11
Benzyl alcohol	ND	11
1,2-Dichlorobenzene	ND	11
2-Methylphenol	ND	11
bis(2-Chloroisopropyl) ether	ND	11
3-,4-Methylphenol	ND	11
N-Nitroso-di-n-propylamine	ND	11
Hexachloroethane	ND	11
Nitrobenzene	ND	11
Isophorone	ND	11
2-Nitrophenol	ND	54
2,4-Dimethylphenol	ND	11
Benzoic acid	ND	54
bis(2-Chloroethoxy)methane	ND	11
2,4-Dichlorophenol	ND	11
1,2,4-Trichlorobenzene	ND	11
Naphthalene	ND	11
4-Chloroaniline	ND	11
Hexachlorobutadiene	ND	11
4-Chloro-3-methylphenol	ND	11
2-Methylnaphthalene	ND	11
Hexachlorocyclopentadiene	ND	54
2,4,6-Trichlorophenol	ND	11
2,4,5-Trichlorophenol	ND	11
2-Chloronaphthalene	ND	11
2-Nitroaniline	ND	54
Dimethylphthalate	ND	11
Acenaphthylene	ND	11
2,6-Dinitrotoluene	ND	11
3-Nitroaniline	ND	54
Acenaphthene		11
2,4-Dinitrophenol	ND	54
4-Nitrophenol	ND	54
Dibenzofuran	ND	11
2,4-Dinitrotoluene	ND	11
Diethylphthalate	ND	11
Fluorene		11
4-Chlorophenyl-phenylether	ND	11
4-Nitroaniline	ND	54
4,6-Dinitro-2-methylphenol	ND	54
N-Nitrosodiphenylamine	ND	11
Azobenzene	ND	11
4-Bromophenyl-phenylether	ND	11
Hexachlorobenzene	ND	11
Pentachlorophenol	ND	54
Phenanthrene		11
Anthracene	ND	11
Di-n-butylphthalate	ND	11
Fluoranthene	ND	11

J = Estimated value

ND = Not Detected

RL = Reporting Limit

Page 1 of 2

Purgeable Organics by GC/MS

Lab #:	146895	Location:	IHTB
Client:	Subsurface Consultants	Prep:	EPA 5030
Project#:	STANDARD	Analysis:	EPA 8260B
Matrix:	Water	Batch#:	57594
Units:	ug/L	Analyzed:	08/10/00
Diln Fac:	1.000		

Type: BS Lab ID: QC122438

Analyte	Spiked	Result	IREC	Limits	RPD	Time
1,1-Dichloroethene	50.00	56.51	113	74-132		
Benzene	50.00	56.73	113	80-116		
Trichloroethene	50.00	57.78	116	80-119		
Toluene	50.00	56.91	114	80-120		
Chlorobenzene	50.00	55.86	112	80-117		

Surrogate	IREC	Limits	RPD	Time
Dibromofluoromethane	111	80-122		
1,2-Dichloroethane-d4	109	78-123		
Toluene-d8	98	80-110		
Bromofluorobenzene	90	80-115		

Type: BSD Lab ID: QC122439

Analyte	Spiked	Result	IREC	Limits	RPD	Time
1,1-Dichloroethene	50.00	54.40	109	74-132	4	20
Benzene	50.00	55.21	110	80-116	3	20
Trichloroethene	50.00	56.16	112	80-119	3	20
Toluene	50.00	55.96	112	80-120	2	20
Chlorobenzene	50.00	54.09	108	80-117	3	20

Surrogate	IREC	Limits	RPD	Time
Dibromofluoromethane	110	80-122		
1,2-Dichloroethane-d4	109	78-123		
Toluene-d8	98	80-110		
Bromofluorobenzene	91	80-115		



Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	146895	Location:	IHTB
Client:	Subsurface Consultants	Prep:	EPA 5030
Project#:	STANDARD	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC122440	Batch#:	57594
Matrix:	Water	Analyzed:	08/10/00
Units:	ug/L		

Analyte	Result	RL
1,2-Dibromoethane	ND	5.0
Chlorobenzene	ND	5.0
1,1,1,2-Tetrachloroethane	ND	5.0
Ethylbenzene	ND	5.0
m,p-Xylenes	ND	5.0
c-Xylene	ND	5.0
Styrene	ND	5.0
Bromoform	ND	5.0
Isopropylbenzene	ND	5.0
1,1,2,2-Tetrachloroethane	ND	5.0
1,2,3-Trichloropropane	ND	5.0
Propylbenzene	ND	5.0
Bromobenzene	ND	5.0
1,3,5-Trimethylbenzene	ND	5.0
2-Chlorotoluene	ND	5.0
4-Chlorotoluene	ND	5.0
tert-Butylbenzene	ND	5.0
1,2,4-Trimethylbenzene	ND	5.0
sec-Butylbenzene	ND	5.0
para-Isopropyl Toluene	ND	5.0
1,3-Dichlorobenzene	ND	5.0
1,4-Dichlorobenzene	ND	5.0
n-Butylbenzene	ND	5.0
1,2-Dichlorobenzene	ND	5.0
1,2-Dibromo-3-Chloropropane	ND	5.0
1,2,4-Trichlorobenzene	ND	5.0
Hexachlorobutadiene	ND	5.0
Naphthalene	ND	5.0
1,2,3-Trichlorobenzene	ND	5.0

Surrogate	IRPC	Limits
Dibromofluoromethane	117	80-122
1,2-Dichloroethane-d4	115	78-123
Toluene-d8	99	80-110
Bromofluorobenzene	102	80-115

ND = Not Detected

RL = Reporting Limit

Page 2 of 2



Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	146895	Location:	IHTB
Client:	Subsurface Consultants	Prep:	EPA 5030
Project#:	STANDARD	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC122440	Batch#:	57594
Matrix:	Water	Analyzed:	08/10/00
Units:	ug/L		

Analyte	Result	RL
Freon 12	ND	10
Chloromethane	ND	10
Vinyl Chloride	ND	10
Bromomethane	ND	10
Chloroethane	ND	10
Trichlorofluoromethane	ND	5.0
Acetone	ND	20
Freon 113	ND	5.0
1,1-Dichloroethene	ND	5.0
Methylene Chloride	ND	20
Carbon Disulfide	ND	5.0
MTBE	ND	5.0
trans-1,2-Dichloroethene	ND	5.0
Vinyl Acetate	ND	50
1,1-Dichloroethane	ND	5.0
2-Butanone	ND	10
cis-1,2-Dichloroethene	ND	5.0
2,2-Dichloropropane	ND	5.0
Chloroform	ND	5.0
Bromochloromethane	ND	10
1,1,1-Trichloroethane	ND	5.0
1,1-Dichloropropene	ND	5.0
Carbon Tetrachloride	ND	5.0
1,2-Dichloroethane	ND	5.0
Benzene	ND	5.0
Trichloroethene	ND	5.0
1,2-Dichloropropane	ND	5.0
Bromodichloromethane	ND	5.0
Dibromomethane	ND	5.0
4-Methyl-2-Pentanone	ND	10
cis-1,3-Dichloropropene	ND	5.0
Toluene	ND	5.0
trans-1,3-Dichloropropene	ND	5.0
1,1,2-Trichloroethane	ND	5.0
2-Hexanone	ND	10
1,3-Dichloropropane	ND	5.0
Tetrachloroethene	ND	5.0
Dibromochloromethane	ND	5.0

ND = Not Detected

RL = Reporting Limit

Page 1 of 2



Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	146895	Location:	IHTB
Client:	Subsurface Consultants	Prep:	EPA 5030
Project#:	STANDARD	Analysis:	EPA 8260B
Field ID:	MW-2	Batch#:	57594
Lab ID:	146895-001	Sampled:	08/02/00
Matrix:	Water	Received:	08/03/00
Units:	ug/L	Analyzed:	08/10/00
Diln Fac:	1.000		

ANALYTE	REPORTED	RL
tert-Butylbenzene	ND	5.0
1,2,4-Trimethylbenzene	ND	5.0
sec-Butylbenzene	ND	5.0
para-Isopropyl Toluene	ND	5.0
1,3-Dichlorobenzene	ND	5.0
1,4-Dichlorobenzene	ND	5.0
n-Butylbenzene	ND	5.0
1,2-Dichlorobenzene	ND	5.0
1,2-Dibromo-3-Chloropropane	ND	5.0
1,2,4-Trichlorobenzene	ND	5.0
Hexachlorobutadiene	ND	5.0
Naphthalene	ND	5.0
1,2,3-Trichlorobenzene	ND	5.0

SUBSTANTIAL	REPORTED	RL
Dibromofluoromethane	128 *	80-122
1,2-Dichloroethane-d4	121	78-123
Toluene-d8	102	80-110
Bromofluorobenzene	96	80-115

* = Value outside of QC limits; see narrative

ND = Not Detected

RL = Reporting Limit

Page 2 of 2



Curtis & Tompkins, Ltd.

Purgeable Organics by GC/MS

Lab #:	146895	Location:	IHTB
Client:	Subsurface Consultants	Prep:	EPA 5030
Project#:	STANDARD	Analysis:	EPA 8260B
Field ID:	MW-2	Batch#:	57594
Lab ID:	146895-001	Sampled:	08/02/00
Matrix:	Water	Received:	08/03/00
Units:	ug/L	Analyzed:	08/10/00
Diln Fac:	1.000		

Analysis	Result	RL
Freon 12	ND	10
Chloromethane	ND	10
Vinyl Chloride	ND	10
Bromomethane	ND	10
Chloroethane	ND	10
Trichlorofluoromethane	ND	5.0
Acetone	ND	20
Freon 113	ND	5.0
1,1-Dichloroethene	ND	5.0
Methylene Chloride	ND	20
Carbon Disulfide	ND	5.0
MTBE	ND	5.0
trans-1,2-Dichloroethene	ND	5.0
Vinyl Acetate	ND	50
1,1-Dichloroethane	ND	5.0
2-Butanone	ND	10
cis-1,2-Dichloroethene	ND	5.0
2,2-Dichloropropane	ND	5.0
Chloroform	ND	5.0
Bromochloromethane	ND	10
1,1,1-Trichloroethane	ND	5.0
1,1-Dichloropropene	ND	5.0
Carbon Tetrachloride	ND	5.0
1,2-Dichloroethane	ND	5.0
Benzene	ND	5.0
Trichloroethene	ND	5.0
1,2-Dichloropropane	ND	5.0
Bromodichloromethane	ND	5.0
Dibromomethane	ND	5.0
4-Methyl-2-Pentanone	ND	10
cis-1,3-Dichloropropene	ND	5.0
Toluene	ND	5.0
trans-1,3-Dichloropropene	ND	5.0
1,1,2-Trichloroethane	ND	5.0
2-Hexanone	ND	10
1,3-Dichloropropane	ND	5.0
Tetrachloroethene	ND	5.0
Dibromochloromethane	ND	5.0
1,2-Dibromoethane	ND	5.0
Chlorobenzene	ND	5.0
1,1,1,2-Tetrachloroethane	ND	5.0
Ethylbenzene	ND	5.0
m,p-Xylenes	ND	5.0
c-Xylene	ND	5.0
Styrene	ND	5.0
Bromoform	ND	5.0
Isopropylbenzene	ND	5.0
1,1,2,2-Tetrachloroethane	ND	5.0
1,2,3-Trichloropropane	ND	5.0
Propylbenzene	ND	5.0
Bromobenzene	ND	5.0
1,3,5-Trimethylbenzene	ND	5.0
2-Chlorotoluene	ND	5.0
4-Chlorotoluene	ND	5.0

* = Value outside of QC limits; see narrative

ND = Not Detected

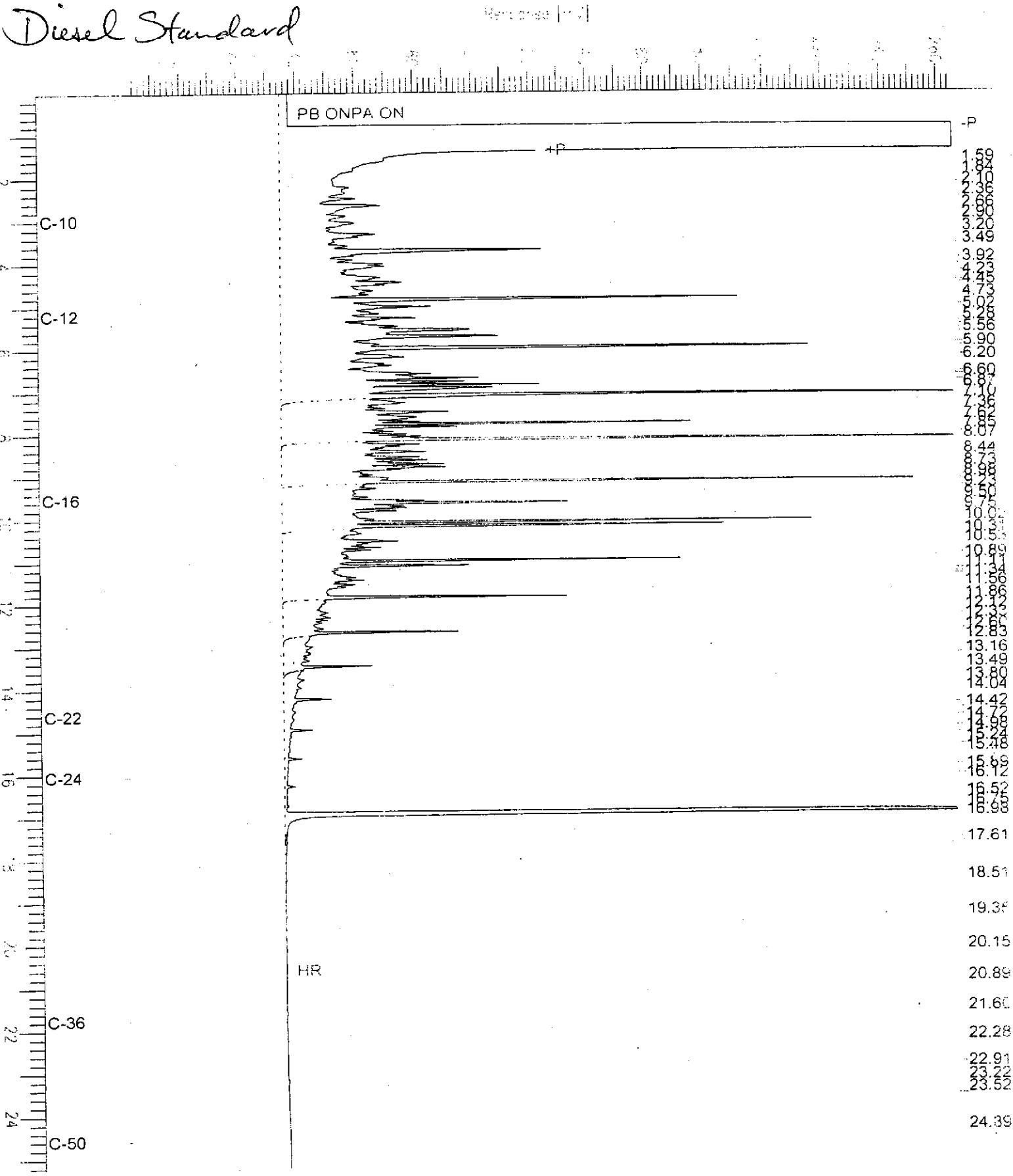
RL = Reporting Limit

Chromatogram

Sample Name : ccv_00ws9475.ds1
File Name : G:\GC11\CHA\221A002.RAW
Method : ATEH206.MTH
Start Time : 0.01 min End Time : 25.25 min
Scale Factor: 0.0 Plot Offset: -17 mV

Sample #: 500mg/l Page 1 of 1
Date : 8/8/00 12:06 PM
Time of Injection: 8/8/00 11:40 AM
Low Point : -17.24 mV High Point : 265.35 mV
Plot Scale: 262.6 mV

Diesel Standard





Curtis & Tompkins, Ltd.

Total Extractable Hydrocarbons

Lab #:	146895	Location:	IHTB
Client:	Subsurface Consultants	Prep:	EPA 3520
Project#:	STANDARD	Analysis:	EPA 8015M
Matrix:	Water	Batch#:	57543
Units:	ug/L	Prepared:	08/08/00
Diln Fac:	1.000	Analyzed:	08/10/00

Type: BS Lab ID: QC122247

Analyte	Spiked	Result	%REC	Limits
Diesel C10-C24	2,339	1,826	78	45-110

Surrogate	%REC	Limits
Hexacosane	100	44-121

Type: BSD Lab ID: QC122248

Analyte	Spiked	Result	%REC	Limits	RPD	Item
Diesel C10-C24	2,339	1,899	81	45-110	4	22

Surrogate	%REC	Limits
Hexacosane	102	44-121

California Title 26 Metals

Lab #:	145881	Location:	Inner Harbor Turning Basin
Client:	Subsurface Consultants	Prep:	EPA 3050
Project#:	99.574	Analysis:	EPA 6010B
Matrix:	Soil	Batch#:	56262
Units:	mg/Kg	Prepared:	06/01/00
Basis:	wet	Analyzed:	06/02/00
Diln Fac:	1.000		

Type: BS Lab ID: QC117301

Analyte	Spiked	Result	%REC	Limits
Antimony	100.0	97.00	97	73-111
Arsenic	50.00	43.10	86	74-110
Barium	100.0	87.00	87	76-110
Beryllium	2.500	2.260	90	77-110
Cadmium	10.00	8.400	84	75-112
Chromium	100.0	87.00	87	73-111
Cobalt	25.00	21.35	85	74-110
Copper	12.50	11.05	88	75-111
Lead	100.0	84.00	84	70-110
Molybdenum	20.00	17.95	90	75-110
Nickel	25.00	21.55	86	74-111
Selenium	50.00	41.80	84	73-111
Silver	10.00	8.700	87	70-115
Thallium	50.00	41.85	84	75-110
Vanadium	25.00	22.05	88	74-110
Zinc	25.00	21.00	84	68-110

Type: BSD Lab ID: QC117302

Analyte	Spiked	Result	%REC	Limits	RPD	Span
Antimony	100.0	99.00	99	73-111	2	20
Arsenic	50.00	44.85	90	74-110	4	20
Barium	100.0	88.50	89	76-110	2	23
Beryllium	2.500	2.335	93	77-110	3	20
Cadmium	10.00	8.750	88	75-112	4	20
Chromium	100.0	89.50	90	73-111	3	23
Cobalt	25.00	22.05	88	74-110	3	24
Copper	12.50	11.20	90	75-111	1	22
Lead	100.0	87.00	87	70-110	4	20
Molybdenum	20.00	18.50	93	75-110	3	20
Nickel	25.00	22.25	89	74-111	3	21
Selenium	50.00	42.95	86	73-111	3	20
Silver	10.00	8.900	89	70-115	2	39
Thallium	50.00	43.50	87	75-110	4	20
Vanadium	25.00	22.65	91	74-110	3	20
Zinc	25.00	21.60	86	68-110	3	22



Curtis & Tompkins, Ltd.

California Title 26 Metals

Lab #:	145881	Location:	Inner Harbor Turning Basin
Client:	Subsurface Consultants	Prep:	METHOD
Project#:	99.574	Analysis:	EPA 7471
Analyte:	Mercury	Diln Fac:	1.000
Matrix:	Soil	Batch#:	56272
Units:	mg/Kg	Prepared:	06/02/00
Basis:	wet	Analyzed:	06/02/00

Type	Lab ID	Spiked	Result	%REC	Limits	RPD	Lim
BS	QC117338	1.000	1.068	107	80-120		
BSD	QC117339	1.000	1.012	101	80-120	5	35

California Title 26 Metals

Lab #:	145881	Location:	Inner Harbor Turning Basin
Client:	Subsurface Consultants	Prep:	METHOD
Project#:	99.574	Analysis:	EPA 7471
Analyte:	Mercury	Basis:	wet
Field ID:	B5@3'	Diln Fac:	1.000
Type:	SDUP	Batch#:	56272
MSS Lab ID:	145881-001	Sampled:	05/26/00
Lab ID:	QC117340	Received:	05/30/00
Matrix:	Soil	Prepared:	06/02/00
Units:	mg/Kg	Analyzed:	06/02/00

MSS Result	Result	RL	RPD	Lim
0.2269	0.2333	0.039	3	35

RL = Reporting Limit

RPD= Relative Percent Difference

Page 1 of 1



Curtis & Tompkins, Ltd.

California Title 26 Metals

Lab #:	145881	Location:	Inner Harbor Turning Basin
Client:	Subsurface Consultants	Prep:	METHOD
Project#:	99.574	Analysis:	EPA 7471
Analyte:	Mercury	Basis:	wet
Field ID:	B5@3'	Diln Fac:	1.000
Type:	SSPIKE	Batch#:	56272
MSS Lab ID:	145881-001	Sampled:	05/26/00
Lab ID:	QC117341	Received:	05/30/00
Matrix:	Soil	Prepared:	06/02/00
Units:	mg/Kg	Analyzed:	06/02/00

MSS Result	Spiked	Result	%REC	Limits
0.2269	0.9804	1.033	82	65-135



June 06, 2000

Anna Pajarillo
Curtis & Tompkins, Ltd.
2323 Fifth Street
Berkeley, CA 94710

Subject: Calscience Work Order No.: 00-06-0003
Client Reference: 145881

Dear Client:

Enclosed is an analytical report for the above-referenced project. The samples included in this report were received 06/01/00 and analyzed in accordance with the attached chain-of-custody.

The results in this analytical report are limited to the samples tested and any reproduction of this report must be made in its entirety.

If you have any questions regarding this report, require sampling supplies or field services, or information on our analytical services, please feel free to call me at (714) 895-5494.

Sincerely,

A handwritten signature in black ink that reads "Jody McInerney".

Calscience Environmental
Laboratories, Inc.
Jody McInerney
Project Manager

A handwritten signature in black ink that reads "William H. Christensen".

William H. Christensen
Quality Assurance Manager



ANALYTICAL REPORT

Curtis & Tompkins, Ltd.
2323 Fifth Street
Berkeley, CA 94710

Date Received: 06/01/00
Work Order No: 00-06-0003
Preparation: EPA 3550A
Method: EPA 8081A/8082

Project: 145881

Page 1 of 2

Client Sample Number:	Lab Sample Number:	Date Collected:	Matrix:	Date Prepared:	Date Analyzed:	QC Batch ID:
B5@3	00-06-0003-1	05/26/00	Solid	06/01/00	06/02/00	0006012

Parameter	Result	RL	DF	Qual	Units	Parameter	Result	RL	DF	Qual	Units
Alpha-BHC	ND	5.0	1		ug/kg	4,4'-DDT	ND	5.0	1		ug/kg
Gamma-BHC	ND	5.0	1		ug/kg	Endosulfan Sulfate	ND	5.0	1		ug/kg
Beta-BHC	ND	5.0	1		ug/kg	Methoxychlor	ND	5.0	1		ug/kg
Heptachlor	ND	5.0	1		ug/kg	Chlordane	ND	50	1		ug/kg
Delta-BHC	ND	5.0	1		ug/kg	Toxaphene	ND	100	1		ug/kg
Aldrin	ND	5.0	1		ug/kg	Aroclor-1016	ND	50	1		ug/kg
Heptachlor Epoxide	ND	5.0	1		ug/kg	Aroclor-1221	ND	50	1		ug/kg
Endosulfan I	ND	5.0	1		ug/kg	Aroclor-1232	ND	50	1		ug/kg
Dieldrin	ND	5.0	1		ug/kg	Aroclor-1242	ND	50	1		ug/kg
4,4'-DDE	ND	5.0	1		ug/kg	Aroclor-1248	ND	50	1		ug/kg
Endrin	ND	5.0	1		ug/kg	Aroclor-1254	ND	50	1		ug/kg
Endrin Aldehyde	ND	5.0	1		ug/kg	Aroclor-1260	ND	50	1		ug/kg
4,4'-DDD	ND	5.0	1		ug/kg	Aroclor-1262	ND	50	1		ug/kg
Endosulfan II	ND	5.0	1		ug/kg	Endrin Ketone	ND	5.0	1		ug/kg

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
Decachlorobiphenyl	88	50-130		2,4,5,6-Tetrachloro-m-Xylene	55	50-130	

B5@5	00-06-0003-2	05/26/00	Solid	06/01/00	06/02/00	0006012
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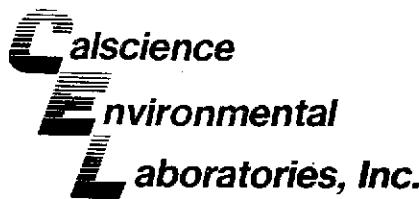
Parameter	Result	RL	DF	Qual	Units	Parameter	Result	RL	DF	Qual	Units
Alpha-BHC	ND	5.0	1		ug/kg	4,4'-DDT	ND	5.0	1		ug/kg
Gamma-BHC	ND	5.0	1		ug/kg	Endosulfan Sulfate	ND	5.0	1		ug/kg
Beta-BHC	ND	5.0	1		ug/kg	Methoxychlor	ND	5.0	1		ug/kg
Heptachlor	ND	5.0	1		ug/kg	Chlordane	ND	50	1		ug/kg
Delta-BHC	ND	5.0	1		ug/kg	Toxaphene	ND	100	1		ug/kg
Aldrin	ND	5.0	1		ug/kg	Aroclor-1016	ND	50	1		ug/kg
Heptachlor Epoxide	ND	5.0	1		ug/kg	Aroclor-1221	ND	50	1		ug/kg
Endosulfan I	ND	5.0	1		ug/kg	Aroclor-1232	ND	50	1		ug/kg
Dieldrin	ND	5.0	1		ug/kg	Aroclor-1242	ND	50	1		ug/kg
4,4'-DDE	ND	5.0	1		ug/kg	Aroclor-1248	ND	50	1		ug/kg
Endrin	ND	5.0	1		ug/kg	Aroclor-1254	ND	50	1		ug/kg
Endrin Aldehyde	ND	5.0	1		ug/kg	Aroclor-1260	ND	50	1		ug/kg
4,4'-DDD	ND	5.0	1		ug/kg	Aroclor-1262	ND	50	1		ug/kg
Endosulfan II	ND	5.0	1		ug/kg	Endrin Ketone	ND	5.0	1		ug/kg

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
Decachlorobiphenyl	83	50-130		2,4,5,6-Tetrachloro-m-Xylene	83	50-130	

RL - Reporting Limit

DF - Dilution Factor

Qual - Qualifiers



ANALYTICAL REPORT

Curtis & Tompkins, Ltd.
2323 Fifth Street
Berkeley, CA 94710

Date Received: 06/01/00
Work Order No: 00-06-0003
Preparation: EPA 3550A
Method: EPA 8081A/8082

Project: 145881

Page 2 of 2

Client Sample Number:	Lab Sample Number:	Date Collected:	Matrix:	Date Prepared:	Date Analyzed:	QC Batch ID:
Method Blank	095-01-014-1,685	N/A	Solid	06/01/00	06/01/00	0006012

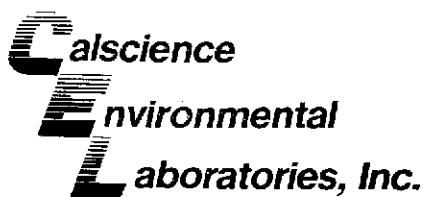
Parameter	Result	RL	DF	Qual	Units	Parameter	Result	RL	DF	Qual	Units
Alpha-BHC	ND	5.0	1		ug/kg	4,4'-DDT	ND	5.0	1		ug/kg
Gamma-BHC	ND	5.0	1		ug/kg	Endosulfan Sulfate	ND	5.0	1		ug/kg
Beta-BHC	ND	5.0	1		ug/kg	Methoxychlor	ND	5.0	1		ug/kg
Heptachlor	ND	5.0	1		ug/kg	Chlordane	ND	50	1		ug/kg
Delta-BHC	ND	5.0	1		ug/kg	Toxaphene	ND	100	1		ug/kg
Aldrin	ND	5.0	1		ug/kg	Aroclor-1016	ND	50	1		ug/kg
Heptachlor Epoxide	ND	5.0	1		ug/kg	Aroclor-1221	ND	50	1		ug/kg
Endosulfan I	ND	5.0	1		ug/kg	Aroclor-1232	ND	50	1		ug/kg
Dieldrin	ND	5.0	1		ug/kg	Aroclor-1242	ND	50	1		ug/kg
4,4'-DDE	ND	5.0	1		ug/kg	Aroclor-1248	ND	50	1		ug/kg
Endrin	ND	5.0	1		ug/kg	Aroclor-1254	ND	50	1		ug/kg
Endrin Aldehyde	ND	5.0	1		ug/kg	Aroclor-1260	ND	50	1		ug/kg
4,4'-DDD	ND	5.0	1		ug/kg	Aroclor-1262	ND	50	1		ug/kg
Endosulfan II	ND	5.0	1		ug/kg	Endrin Ketone	ND	5.0	1		ug/kg

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
Decachlorobiphenyl	102	50-130		2,4,5,6-Tetrachloro-m-Xylene	107	50-130	

RL - Reporting Limit

DF - Dilution Factor

Qual - Qualifiers



Quality Control - Spike/Spike Duplicate

Curtis & Tompkins, Ltd.
2323 Fifth Street
Berkeley, CA 94710

Date Received: 06/01/00
Work Order No: 00-06-0003
Preparation: EPA 3550A
Method: EPA 8081A/8082

Project: 145881

Spiked Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
BS@5'	Solid	GC 17	06/01/00	06/01/00	000600032

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Gamma-BHC	65	62	50-135	4	0-25	
Heptachlor	92	91	50-135	1	0-25	
Endosulfan I	82	79	50-135	3	0-25	
Dieldrin	82	80	50-135	3	0-25	
Endrin	92	107	50-135	16	0-25	
4,4'-DDT	88	89	50-135	1	0-25	

Calscience

Environmental Quality Control - Laboratory Control Sample
Laboratories, Inc.

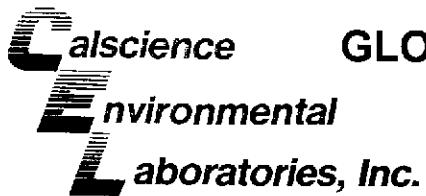
Curtis & Tompkins, Ltd.
2323 Fifth Street
Berkeley, CA 94710

Date Received: 06/01/00
Work Order No: 00-06-0003
Preparation: EPA 3550A
Method: EPA 8081A/8082

Project: 145881

LCS Sample Number	Matrix	Instrument	Date Analyzed	Lab File ID	LCS Batch Number
095-01-014-1,685	Solid	GC 17	06/01/00	NONE	0006012

Parameter	Conc Added	Conc Recovered	%Rec	%Rec CL	Qualifiers
Gamma-BHC	25	25.4	102	50-135	
Heptachlor	25	27.2	109	50-135	
Endosulfan I	25	25.1	100	50-135	
Dieldrin	25	25.0	100	50-135	
Endrin	25	27.3	109	50-135	
4,4'-DDT	25	26.3	105	50-135	
Aroclor-1260	100	94	94	50-135	



GLOSSARY OF TERMS AND QUALIFIERS

Work Order Number: 00-06-0003

<u>Qualifier</u>	<u>Definition</u>
ND	Not detected at indicated reporting limit.

Curtis & Tompkins, Ltd.
Analytical Laboratories, Since 1878
2323 Fifth Street
Berkeley, CA 94710
(510) 486-0900 ph
(510) 486-0532 fx

0003

Project Number: 145881

Subcontract Lab:

Cal Science
7440 Lincoln Way
Garden Grove, CA 92641-1432
(714) 895-5494

Please send report to: Anna M. Pajarillo

Turnaround Time: Standard

Report Level: II

Sample ID	Date Sampled	Matrix	Analysis	C&T Lab #
B5@3'	26-MAY-00	Soil	8080	145881-001
B5@5'	26-MAY-00	Soil	8080	145881-002

***Please report using Sample ID instead of C&T Lab #.

Notes:	RELINQUISHED BY:	RECEIVED BY:
	<i>On behalf of 5/31/00</i> Date/Time	Date/Time
	Date/Time	<i>Rehakel 6/1/00</i> Date/Time
		<i>1000</i>

Signature on this form constitutes a firm Purchase Order for the services requested above.



Curtis & Tompkins, Ltd., Analytical Laboratories, Since 1878

2323 Fifth Street, Berkeley, CA 94710, Phone (510) 486-0900

A N A L Y T I C A L R E P O R T

Prepared for:

Subsurface Consultants
3736 Mt. Diablo Blvd.
Suite 200
Lafayette, CA 94549

Date: 06-JUL-00
Lab Job Number: 145970
Project ID: 1206.002.2.2
Location: Inner Harbor Turning Basin

This data package has been reviewed for technical correctness and completeness. Release of this data has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signatures. The results contained in this report meet all requirements of NELAC and pertain only to those samples which were submitted for analysis.

Reviewed by:

Anna Lyons
Project Manager

Reviewed by:

Operations Manager

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Curtis & Tompkins, Ltd.

Laboratory Number: 145970
Client: Subsurface Consultants
Location: Inner Harbor Turning Basin
Project#: 1206.002.2.2

Receipt Date: 6/02/00

CASE NARRATIVE

This hardcopy data package contains sample and QC results for one soil sample that was received on June 02, 2000. The sample was received cold and intact.

Semivolatile Organics: During the extraction process, it was observed that the extract could not be concentrated to the standard 1mL. The extract was very dark and viscous. Because of this, the sample required a 10X dilution before analysis. This dilution caused the surrogate to be diluted out.

The chromatogram exhibits heavy hydrocarbon interferences. Qualitatively, the heavy hydrocarbon pattern could likely be a combination of diesel, motor oil, or bunker C.

On July 11th, the client requested that any analyte concentrations above the Method Detection Level (MDL) be reported. Two analytes are reported as estimated values (J flagged). Fluorene and phenanthrene were detected, but below the reporting limit.

No other analytical problems were encountered.

CHAIN OF CUSTODY FORM

145970

PAGE

1 OF 1

PROJECT NAME: Inner Harbor Turning Basin

JOB NUMBER: 1206.002.2.2

LAB:

C&T

PROJECT CONTACT: GLENN YOUNG / Diana Henner

TURNAROUND: STAMPED

SAMPLED BY: John Wolfe

REQUESTED BY: G. S. Young

CHAIN OF CUSTODY RECORD				COMMENTS & NOTES:
RELEASED BY: (Signature)	DATE / TIME	RECEIVED BY: (Signature)	DATE / TIME	
<i>John Wolfe</i>	6.2.00 1200	<i>Hank</i>	6/6/00 0200	
RELEASED BY: (Signature)	DATE / TIME	RECEIVED BY: (Signature)	DATE / TIME	
RELEASED BY: (Signature)	DATE / TIME	RECEIVED BY: (Signature)	DATE / TIME	
RELEASED BY: (Signature)	DATE / TIME	RECEIVED BY: (Signature)	DATE / TIME	
RELEASED BY: (Signature)	DATE / TIME	RECEIVED BY: (Signature)	DATE / TIME	



Curtis & Tompkins, Ltd.

Semivolatile Organics by GC/MS

Lab #:	145970	Location:	Inner Harbor Turning Basin
Client:	Subsurface Consultants	Prep:	EPA 3550
Project#:	1206.002.2.2	Analysis:	EPA 8270B
Field ID:	TP-1 @ 11.5	Batch#:	56471
Lab ID:	145970-001	Sampled:	06/01/00
Matrix:	Soil	Received:	06/06/00
Units:	ug/Kg	Prepared:	06/13/00
Basis:	wet	Analyzed:	06/20/00
Diln Fac:	10.00		

Analyte	Result	RL
N-Nitrosodimethylamine	ND	6,700
Phenol	ND	6,700
bis(2-Chloroethyl)ether	ND	6,700
2-Chlorophenol	ND	6,700
1,3-Dichlorobenzene	ND	6,700
1,4-Dichlorobenzene	ND	6,700
Benzyl alcohol	ND	6,700
1,2-Dichlorobenzene	ND	6,700
2-Methylphenol	ND	6,700
bis(2-Chloroisopropyl) ether	ND	6,700
3-,4-Methylphenol	ND	6,700
N-Nitroso-di-n-propylamine	ND	6,700
Hexachloroethane	ND	6,700
Nitrobenzene	ND	6,700
Isophorone	ND	6,700
2-Nitrophenol	ND	34,000
2,4-Dimethylphenol	ND	6,700
Benzoic acid	ND	34,000
bis(2-Chloroethoxy)methane	ND	6,700
2,4-Dichlorophenol	ND	6,700
1,2,4-Trichlorobenzene	ND	6,700
Naphthalene	ND	6,700
4-Chloroaniline	ND	6,700
Hexachlorobutadiene	ND	6,700
4-Chloro-3-methylphenol	ND	6,700
2-Methylnaphthalene	ND	6,700
Hexachlorocyclopentadiene	ND	34,000
2,4,6-Trichlorophenol	ND	6,700
2,4,5-Trichlorophenol	ND	6,700
2-Chloronaphthalene	ND	6,700
2-Nitroaniline	ND	34,000
Dimethylphthalate	ND	6,700
Acenaphthylene	ND	6,700
2,6-Dinitrotoluene	ND	6,700
3-Nitroaniline	ND	34,000
Acenaphthene	ND	6,700
2,4-Dinitrophenol	ND	34,000
4-Nitrophenol	ND	34,000
Dibenzofuran	ND	6,700
2,4-Dinitrotoluene	ND	6,700
Diethylphthalate	ND	6,700
Fluorene	940 J	6,700
4-Chlorophenyl-phenylether	ND	6,700
4-Nitroaniline	ND	34,000
4,6-Dinitro-2-methylphenol	ND	34,000
N-Nitrosodiphenylamine	ND	6,700
Azobenzene	ND	6,700
4-Bromophenyl-phenylether	ND	6,700
Hexachlorobenzene	ND	6,700
Pentachlorophenol	ND	34,000
Phenanthrene	3,400 J	6,700
Anthracene	ND	6,700

J = Estimated value

DO = Diluted Out

ND = Not Detected

RL = Reporting Limit

Page 1 of 2

Semivolatile Organics by GC/MS

Lab #:	145970	Location:	Inner Harbor Turning Basin
Client:	Subsurface Consultants	Prep:	EPA 3550
Project#:	1206.002.2.2	Analysis:	EPA 8270B
Field ID:	TP-1 @ 11.5	Batch#:	56471
Lab ID:	145970-001	Sampled:	06/01/00
Matrix:	Soil	Received:	06/06/00
Units:	ug/Kg	Prepared:	06/13/00
Basis:	wet	Analyzed:	06/20/00
Diln Fac:	10.00		

Analyte	Result	RL
Di-n-butylphthalate	ND	6,700
Fluoranthene	ND	6,700
Pyrene	ND	6,700
Butylbenzylphthalate	ND	6,700
3,3'-Dichlorobenzidine	ND	34,000
Benzo(a)anthracene	ND	6,700
Chrysene	ND	6,700
bis(2-Ethylhexyl)phthalate	ND	6,700
Di-n-octylphthalate	ND	6,700
Benzo(b,k)fluoranthene	ND	6,700
Benzo(a)pyrene	ND	6,700
Indeno(1,2,3-cd)pyrene	ND	6,700
Dibenz(a,h)anthracene	ND	6,700
Benzo(g,h,i)perylene	ND	6,700

Surrogate	%REC	Limits
2-Fluorophenol	DO	40-134
Phenol-d5	DO	39-135
2,4,6-Tribromophenol	DO	16-131
Nitrobenzene-d5	DO	38-131
2-Fluorobiphenyl	DO	45-129
Terphenyl-d14	DO	41-140

J = Estimated value

DO = Diluted Out

ND = Not Detected

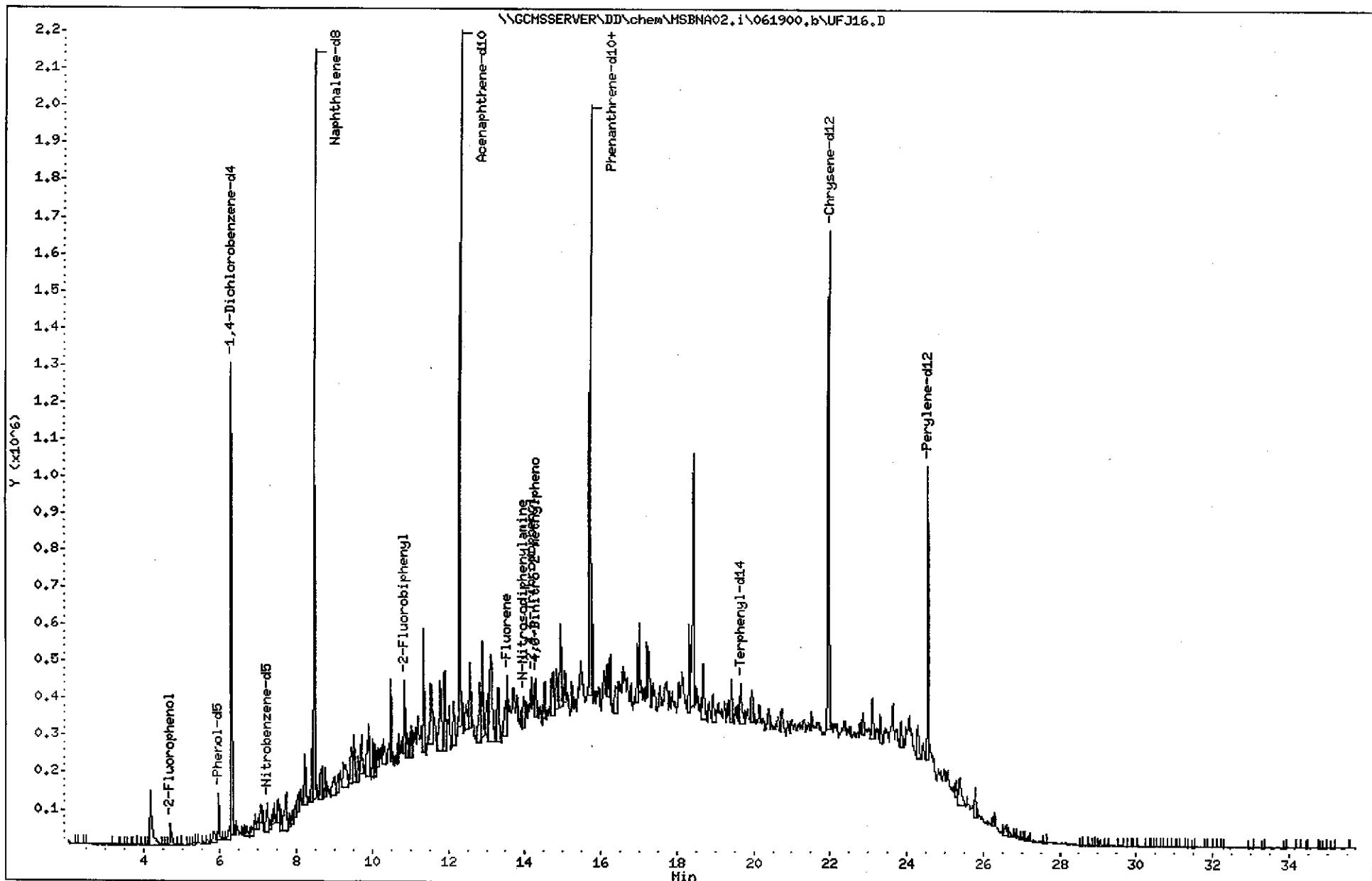
RL = Reporting Limit

Page 2 of 2

Data File: \\GCMSSERVER\DD\chem\MSBNA02.i\061900.b\UFJ16.D
Date : 20-JUN-2000 02:32
Client ID: CURTIS&TOPPKINS
Sample Info: S,145960-001
Volume Injected (uL): 1.0
Column phase: Xti 5 x .5 u

Instrument: MSBNA02.i
Operator: DSH
Column diameter: 0.25

TP-1 @ 11.5





Curtis & Tompkins, Ltd.

Semivolatile Organics by GC/MS

Lab #:	145970	Location:	Inner Harbor Turning Basin
Client:	Subsurface Consultants	Prep:	EPA 3550
Project#:	1206.002.2.2	Analysis:	EPA 8270B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC118086	Batch#:	56471
Matrix:	Soil	Prepared:	06/13/00
Units:	ug/Kg	Analyzed:	06/15/00
Basis:	wet		

Analyte	Result	RL
N-Nitrosodimethylamine	ND	330
Phenol	ND	330
bis(2-Chloroethyl)ether	ND	330
2-Chlorophenol	ND	330
1,3-Dichlorobenzene	ND	330
1,4-Dichlorobenzene	ND	330
Benzyl alcohol	ND	330
1,2-Dichlorobenzene	ND	330
2-Methylphenol	ND	330
bis(2-Chloroisopropyl) ether	ND	330
3-,4-Methylphenol	ND	330
N-Nitroso-di-n-propylamine	ND	330
Hexachloroethane	ND	330
Nitrobenzene	ND	330
Isophorone	ND	330
2-Nitrophenol	ND	1,700
2,4-Dimethylphenol	ND	330
Benzoic acid	ND	1,700
bis(2-Chloroethoxy)methane	ND	330
2,4-Dichlorophenol	ND	330
1,2,4-Trichlorobenzene	ND	330
Naphthalene	ND	330
4-Chloroaniline	ND	330
Hexachlorobutadiene	ND	330
4-Chloro-3-methylphenol	ND	330
2-Methylnaphthalene	ND	330
Hexachlorocyclopentadiene	ND	1,700
2,4,6-Trichlorophenol	ND	330
2,4,5-Trichlorophenol	ND	330
2-Chloronaphthalene	ND	330
2-Nitroaniline	ND	1,700
Dimethylphthalate	ND	330
Acenaphthylene	ND	330
2,6-Dinitrotoluene	ND	330
3-Nitroaniline	ND	1,700
Acenaphthene	ND	330
2,4-Dinitrophenol	ND	1,700

ND = Not Detected

RL = Reporting Limit

Page 1 of 2



Curtis & Tompkins, Ltd.

Semivolatile Organics by GC/MS

Lab #:	145970	Location:	Inner Harbor Turning Basin
Client:	Subsurface Consultants	Prep:	EPA 3550
Project#:	1206.002.2.2	Analysis:	EPA 8270B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC118086	Batch#:	56471
Matrix:	Soil	Prepared:	06/13/00
Units:	ug/Kg	Analyzed:	06/15/00
Basis:	wet		

Analyte	Result	RL
4-Nitrophenol	ND	1,700
Dibenzofuran	ND	330
2,4-Dinitrotoluene	ND	330
Diethylphthalate	ND	330
Fluorene	ND	330
4-Chlorophenyl-phenylether	ND	330
4-Nitroaniline	ND	1,700
4,6-Dinitro-2-methylphenol	ND	1,700
N-Nitrosodiphenylamine	ND	330
Azobenzene	ND	330
4-Bromophenyl-phenylether	ND	330
Hexachlorobenzene	ND	330
Pentachlorophenol	ND	1,700
Phenanthrene	ND	330
Anthracene	ND	330
Di-n-butylphthalate	ND	330
Fluoranthene	ND	330
Pyrene	ND	330
Butylbenzylphthalate	ND	330
3,3'-Dichlorobenzidine	ND	1,700
Benzo(a)anthracene	ND	330
Chrysene	ND	330
bis(2-Ethylhexyl)phthalate	ND	330
Di-n-octylphthalate	ND	330
Benzo(b,k)fluoranthene	ND	330
Benzo(a)pyrene	ND	330
Indeno(1,2,3-cd)pyrene	ND	330
Dibenz(a,h)anthracene	ND	330
Benzo(g,h,i)perylene	ND	330

Surrogate	IRFC	Limits
2-Fluorophenol	81	40-134
Phenol-d5	78	39-135
2,4,6-Tribromophenol	67	16-131
Nitrobenzene-d5	86	38-131
2-Fluorobiphenyl	89	45-129
Terphenyl-d14	93	41-140

ND = Not Detected

RL = Reporting Limit

Page 2 of 2



Curtis & Tompkins, Ltd.

Semivolatile Organics by GC/MS

Lab #:	145970	Location:	Inner Harbor Turning Basin
Client:	Subsurface Consultants	Prep:	EPA 3550
Project#:	1206.002.2.2	Analysis:	EPA 8270B
Type:	LCS	Diln Fac:	1.000
Lab ID:	QC118087	Batch#:	56471
Matrix:	Soil	Prepared:	06/13/00
Units:	ug/Kg	Analyzed:	06/15/00
Basis:	wet		

Analyte	Spiked	Result	REC	Limits
Phenol	3,339	2,609	78	39-128
2-Chlorophenol	3,339	2,995	90	45-137
1,4-Dichlorobenzene	1,669	1,362	82	41-127
N-Nitroso-di-n-propylamine	1,669	1,337	80	40-140
1,2,4-Trichlorobenzene	1,669	1,488	89	46-128
4-Chloro-3-methylphenol	3,339	2,848	85	45-130
Acenaphthene	1,669	1,488	89	47-124
4-Nitrophenol	3,339	2,346	70	36-110
2,4-Dinitrotoluene	1,669	1,379	83	42-123
Pentachlorophenol	3,339	1,597	48	15-110
Pyrene	1,669	1,426	85	44-123

Surrogate	REC	Limits
2-Fluorophenol	86	40-134
Phenol-d5	84	39-135
2,4,6-Tribromophenol	87	16-131
Nitrobenzene-d5	88	38-131
2-Fluorobiphenyl	92	45-129
Terphenyl-d14	95	41-140



Curtis & Tompkins, Ltd.

Semivolatile Organics by GC/MS

Lab #:	145970	Location:	Inner Harbor Turning Basin
Client:	Subsurface Consultants	Prep:	EPA 3550
Project#:	1206.002.2.2	Analysis:	EPA 8270B
Field ID:	ZZZZZZZZZZ	Batch#:	56471
MSS Lab ID:	145866-008	Sampled:	05/30/00
Matrix:	Soil	Received:	05/30/00
Units:	ug/Kg	Prepared:	06/13/00
Basis:	wet	Analyzed:	06/15/00
Diln Fac:	1.000		

Type: MS Lab ID: QC118088

Analyst	NSF Result	Spiked	Result	REC	Limits
Phenol	<328.0	3,364	2,824	84	38-133
2-Chlorophenol	<328.0	3,364	3,207	95	34-146
1,4-Dichlorobenzene	<328.0	1,682	1,372	82	43-124
N-Nitroso-di-n-propylamine	199.4	1,682	1,443	74	48-130
1,2,4-Trichlorobenzene	<328.0	1,682	1,558	93	53-128
4-Chloro-3-methylphenol	<328.0	3,364	3,077	91	37-132
Acenaphthene	<328.0	1,682	1,616	96	55-122
4-Nitrophenol	<1,640	3,364	2,080	62	24-112
2,4-Dinitrotoluene	<328.0	1,682	1,454	86	37-122
Pentachlorophenol	<1,640	3,364	618.7	18	15-110
Pyrene	<328.0	1,682	1,588	94	30-134

Surrogate	REC	Limits
2-Fluorophenol	91	40-134
Phenol-d5	90	39-135
2,4,6-Tribromophenol	81	16-131
Nitrobenzene-d5	94	38-131
2-Fluorobiphenyl	96	45-129
Terphenyl-d14	103	41-140

Type: MSD Lab ID: QC118089

Analyst	Spiked	Result	REC	Limits	RPD	Min
Phenol	3,333	2,474	74	38-133	12	33
2-Chlorophenol	3,333	2,818	85	34-146	12	34
1,4-Dichlorobenzene	1,667	1,150	69	43-124	17	26
N-Nitroso-di-n-propylamine	1,667	1,279	65	48-130	11	43
1,2,4-Trichlorobenzene	1,667	1,351	81	53-128	13	24
4-Chloro-3-methylphenol	3,333	2,685	81	37-132	13	35
Acenaphthene	1,667	1,402	84	55-122	13	26
4-Nitrophenol	3,333	1,760	53	24-112	16	47
2,4-Dinitrotoluene	1,667	1,230	74	37-122	16	33
Pentachlorophenol	3,333	515.2	15	15-110	17	50
Pyrene	1,667	1,370	82	30-134	14	32

Surrogate	REC	Limits
2-Fluorophenol	80	40-134
Phenol-d5	79	39-135
2,4,6-Tribromophenol	69	16-131
Nitrobenzene-d5	82	38-131
2-Fluorobiphenyl	87	45-129
Terphenyl-d14	90	41-140



Curtis & Tompkins, Ltd., Analytical Laboratories, Since 1878

2323 Fifth Street, Berkeley, CA 94710, Phone (510) 486-0900

A N A L Y T I C A L R E P O R T

Prepared for:

Subsurface Consultants
3736 Mt. Diablo Blvd.
Suite 200
Lafayette, CA 94549

Date: 28-JUL-00
Lab Job Number: 146569
Project ID: 99.574
Location: Inner Harbor Turning Basin

This data package has been reviewed for technical correctness and completeness. Release of this data has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signatures. The results contained in this report meet all requirements of NELAC and pertain only to those samples which were submitted for analysis.

Reviewed by:

Linda J. Gable
Project Manager

Reviewed by:

John W. Smith
Operations Manager

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CA ELAP # 1459

Page 1 of 18

SCI POD

CURTIS & TOMPKINS, LTD. BERKELEY

LOGIN CHANGE FORM

Reason for change:

*

Client Request: By: Diane Heinze
Login Review Data Review

Date/Time: 7/17/00

Initials: A



Curtis & Tompkins, Ltd.

Gasoline by GC/FID CA LUFT

Lab #:	146569	Location:	Inner Harbor Turning Basin
Client:	Subsurface Consultants	Prep:	EPA 5030
Project#:	99.574	Analysis:	EPA 8015M
Matrix:	Soil	Diln Fac:	1.000
Units:	mg/Kg	Batch#:	57074
Basis:	wet	Analyzed:	07/18/00

Field ID: B4@17' Sampled: 05/25/00
 Type: SAMPLE Received: 05/26/00
 Lab ID: 146569-001

Analyte	Result	RL
Gasoline C7-C12	ND	0.92

Surrogate	TREC	Limits
Trifluorotoluene (FID)	109	62-138
Bromofluorobenzene (FID)	118	46-150

Field ID: B5@15.5' Sampled: 05/26/00
 Type: SAMPLE Received: 05/30/00
 Lab ID: 146569-002

Analyte	Result	RL
Gasoline C7-C12	ND	0.99

Surrogate	TREC	Limits
Trifluorotoluene (FID)	101	62-138
Bromofluorobenzene (FID)	109	46-150

Type: BLANK Lab ID: QC120391

Analyte	Result	RL
Gasoline C7-C12	ND	1.0

Surrogate	TREC	Limits
Trifluorotoluene (FID)	106	62-138
Bromofluorobenzene (FID)	111	46-150

ND = Not Detected

RL = Reporting Limit

Page 1 of 1



Curtis & Tompkins, Ltd.

Gasoline by GC/FID CA LUFT

Lab #:	146569	Location:	Inner Harbor Turning Basin
Client:	Subsurface Consultants	Prep:	EPA 5030
Project#:	99.574	Analysis:	EPA 8015M
Type:	LCS	Basis:	wet
Lab ID:	QC120392	Diln Fac:	1.000
Matrix:	Soil	Batch#:	57074
Units:	mg/Kg	Analyzed:	07/18/00

Analyte	Spiked	Result	%REC	Limits
Gasoline C7-C12	10.00	10.18	102	75-123

Surrogate	%REC	Limits
Trifluorotoluene (FID)	121	62-138
Bromofluorobenzene (FID)	111	46-150



Curtis & Tompkins, Ltd.

Gasoline by GC/FID CA LUFT

Lab #:	146569	Location:	Inner Harbor Turning Basin
Client:	Subsurface Consultants	Prep:	EPA 5030
Project#:	99.574	Analysis:	EPA 8015M
Field ID:	B5@15.5'	Diln Fac:	1.000
MSS Lab ID:	146569-002	Batch#:	57074
Matrix:	Soil	Sampled:	05/26/00
Units:	mg/Kg	Received:	05/30/00
Basis:	wet	Analyzed:	07/18/00

Type: MS Lab ID: OC120395

Analyte	MSS Result	Spiked	Result	%REC	Limits
Gasoline C7-C12	0.04248	9.901	8.805	88	41-132
Surrogate	%REC	Limits			
Trifluorotoluene (FID)	124	62-138			
Bromofluorobenzene (FID)	121	46-150			

Type: MSD Lab ID: QC120396

Analyte	Spotted	Result	%REC	Limits	RPD	Lim
Gasoline C7-C12	9.901	8.795	88	41-132	0	25
Surrogate	%REC	Limits				
Trifluorotoluene (FID)	114	62-138				
Bromofluorobenzene (FID)	112	46-150				

RPD= Relative Percent Difference

Page 1 of 1



Curtis & Tompkins, Ltd.

Total Extractable Hydrocarbons

Lab #:	146569	Location:	Inner Harbor Turning Basin
Client:	Subsurface Consultants	Prep:	SHAKER TABLE
Project#:	99.574	Analysis:	EPA 8015M
Matrix:	Soil	Diln Fac:	1.000
Units:	mg/Kg	Batch#:	57145
Basis:	wet	Prepared:	07/20/00

Field ID: B4@17' Sampled: 05/25/00
Type: SAMPLE Received: 05/26/00
Lab ID: 146569-001 Analyzed: 07/23/00

Analyte	Result	RL
Diesel C10-C24	4.3 H Y	1.0
Motor Oil C24-C36	21 Y	5.0
Bunker C C12-50	54 H Y	5.0

Surrogate	%REC	Limits
Hexacosane	100	60-136

Field ID: B5@15.5' Sampled: 05/26/00
Type: SAMPLE Received: 05/30/00
Lab ID: 146569-002 Analyzed: 07/23/00

Analyte	Result	RL
Diesel C10-C24	4.9 H Y	0.99
Motor Oil C24-C36	20 Y	5.0
Bunker C C12-50	51 H Y	5.0

Surrogate	%REC	Limits
Hexacosane	99	60-136

Type: BLANK Analyzed: 07/25/00
Lab ID: QC120669

Analyte	Result	RL
Diesel C10-C24	ND	1.0
Motor Oil C24-C36	ND	5.0
Bunker C C12-50	ND	5.0

Surrogate	%REC	Limits
Hexacosane	82	60-136

H = Heavier hydrocarbons contributed to the quantitation

Y = Sample exhibits fuel pattern which does not resemble standard

ND = Not Detected

RL = Reporting Limit

Page 1 of 1

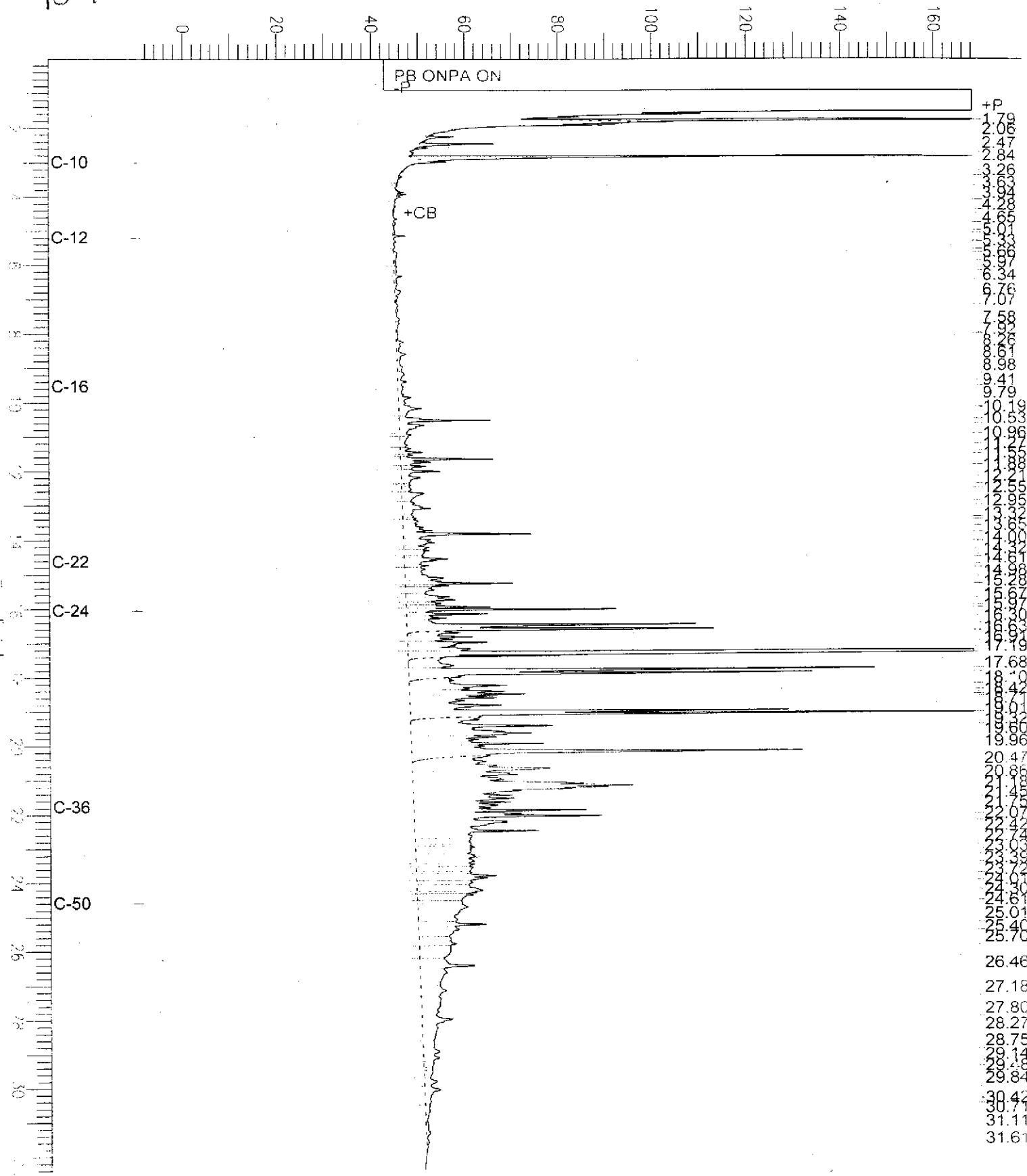
Chromatogram

Sample Name : 146569-001,57145
FileName : G:\GC11\CHA\205A009.RAW
Method : ATEH206.MTH
Start Time : 0.01 min End Time : 32.41 min
Scale Factor: 0.0 Plot Offset: -9 mV

Sample #: 57145 Page 1 of 1
Date : 7/24/00 11:24 AM
Time of Injection: 7/23/00 04:45 PM
Low Point : -8.86 mV High Point : 168.27 mV
Plot Scale: 177.1 mV

B4@17'

Response [mV]



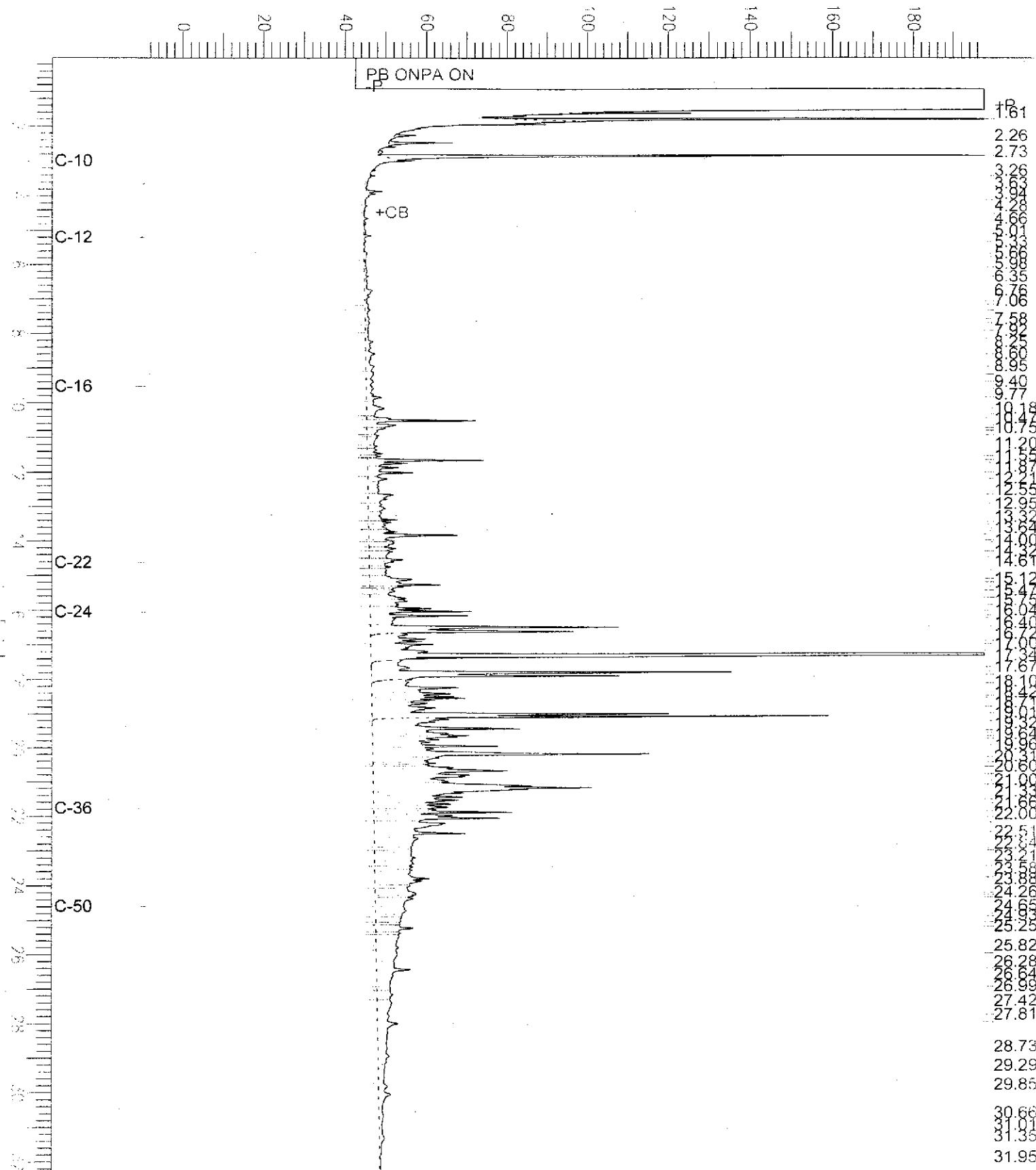
Chromatogram

Sample Name : 146569-002,57145
FileName : G:\GC11\CHA\205A010.RAW
Method : ATEH206.MTH
Start Time : 0.01 min End Time : 32.41 min
Scale Factor: 0.0 Plot Offset: -9 mV

Sample #: 57145 Page 1 of 1
Date : 7/24/00 11:25 AM
Time of Injection: 7/23/00 05:25 PM
Low Point : -9.11 mV High Point : 197.58 mV
Plot Scale: 206.7 mV

B5@15.5'

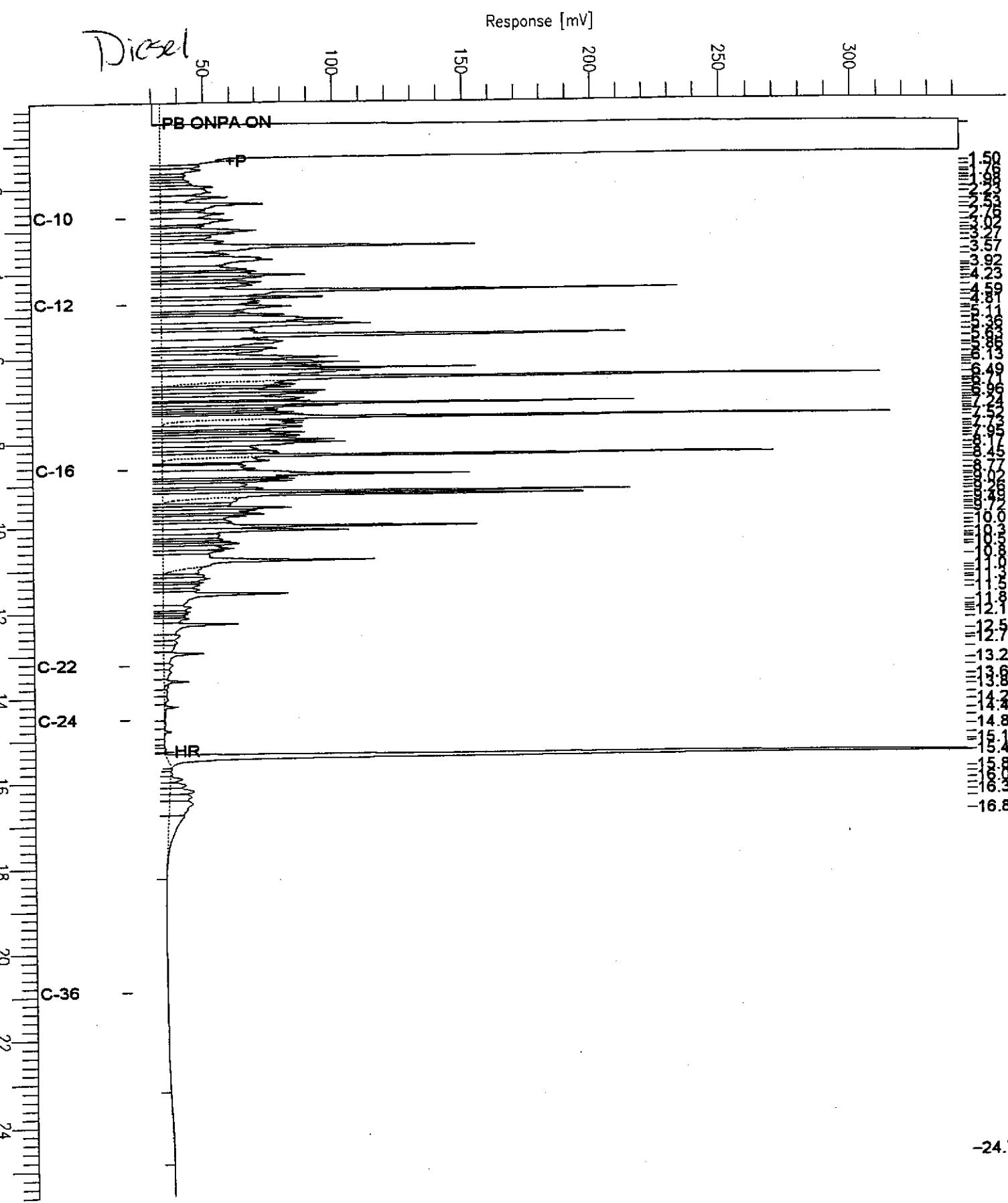
Response [mV]



Chromatogram

Sample Name : ccv_00ws9382.ds1
FileName : G:\GC15\CHB\207B003.RAW
Method : BT EH180.MTH
Start Time : 0.01 min End Time : 25.60 min
Scale Factor: 0.0 Plot Offset: 20 mV

Sample #: 500mg/l Page 1 of 1
Date : 07/26/2000 09:31 AM
Time of Injection: 07/25/2000 04:24 PM
Low Point : 20.26 mV High Point : 342.05 mV
Plot Scale: 321.8 mV

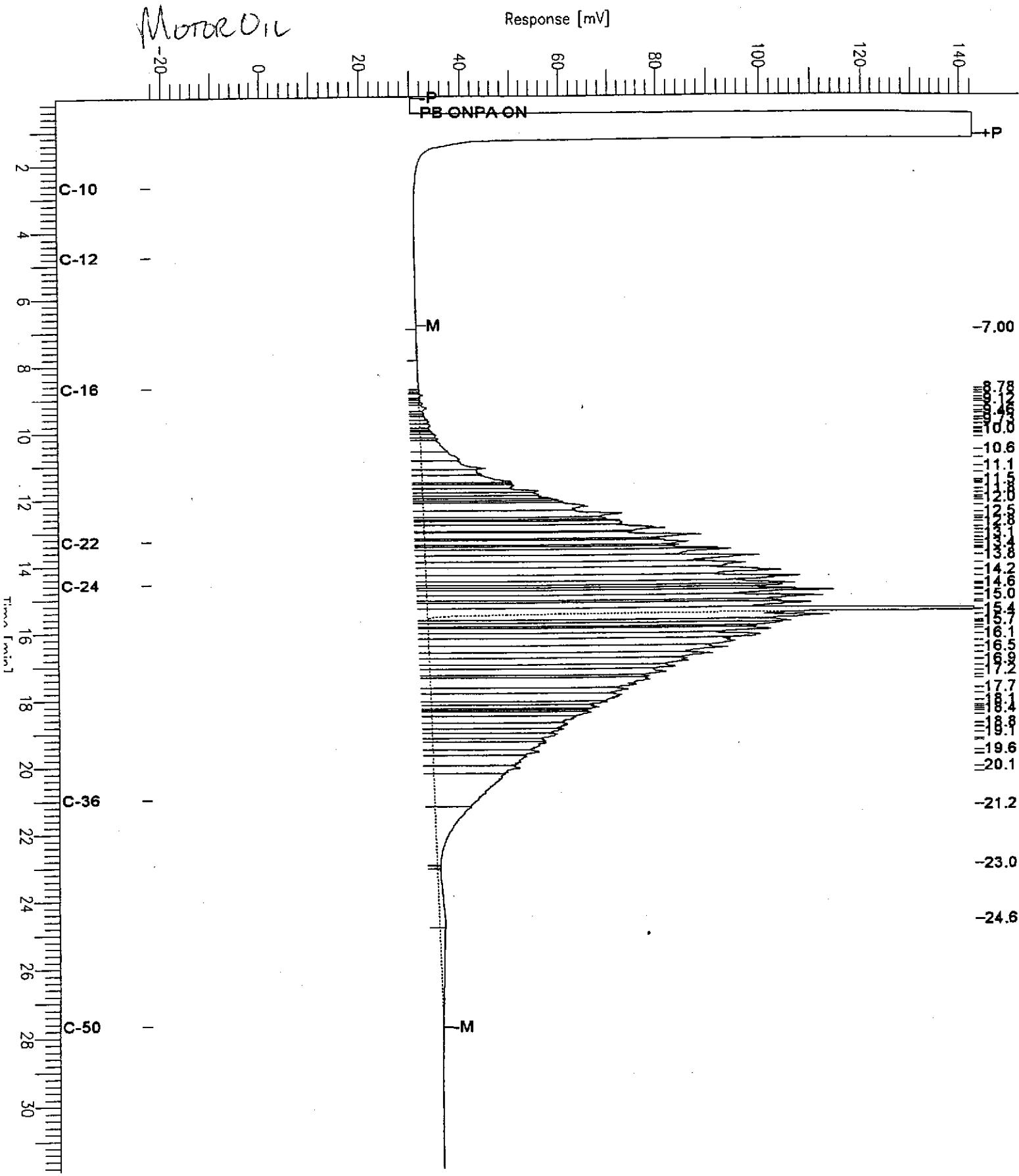


Chromatogram

Sample Name : ccv_00ws9383.mo
.eName : G:\GC15\CHB\207B005.RAW
Method : BTEH108.MTH
Start Time : 0.01 min End Time : 31.91 min
Plot Offset: -22 mV
Scale Factor: 0.0

Sample #: Page 1 of 1
Date : 07/25/2000 06:13 PM
Time of Injection: 07/25/2000 05:41 PM
Low Point : -22.10 mV High Point : 142.62 mV
Plot Scale: 164.7 mV

MOTOR OIL



Total Extractable Hydrocarbons

Lab #:	146569	Location:	Inner Harbor Turning Basin
Client:	Subsurface Consultants	Prep:	SHAKER TABLE
Project#:	99.574	Analysis:	EPA 8015M
Type:	LCS	Diln Fac:	1.000
Lab ID:	QC120670	Batch#:	57145
Matrix:	Soil	Prepared:	07/20/00
Units:	mg/Kg	Analyzed:	07/25/00
Basis:	wet		

Analyte	Spiked	Result	%REC	Limits
Diesel C10-C24	47.08	38.90	83	67-121

Surrogate	%REC	Limits
Hexacosane	84	60-136



Curtis & Tompkins, Ltd.

Total Extractable Hydrocarbons

Lab #:	146569	Location:	Inner Harbor Turning Basin
Client:	Subsurface Consultants	Prep:	SHAKER TABLE
Project#:	99.574	Analysis:	EPA 8015M
Field ID:	ZZZZZZZZZZ	Batch#:	57145
MSS Lab ID:	146575-006	Sampled:	07/17/00
Matrix:	Soil	Received:	07/17/00
Units:	mg/Kg	Prepared:	07/20/00
Basis:	wet	Analyzed:	07/25/00
Diln Fac:	1.000		

Type: MS Lab ID: QC120671

Analyte	MSS Result	Spiked	Result	%REC	Limits
Diesel C10-C24	0.4533	47.20	43.77	92	35-146
<hr/>					
Surrogate	%REC	Limits			
Hexacosane	101	60-136			

Type: MSD Lab ID: QC120672

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Diesel C10-C24	47.16	42.18	88	35-146	4	48
<hr/>						
Surrogate	%REC	Limits				
Hexacosane	101	60-136				



Curtis & Tompkins, Ltd.

Semivolatile Organics by GC/MS

Lab #:	146569	Location:	Inner Harbor Turning Basin
Client:	Subsurface Consultants	Prep:	EPA 3550
Project#:	99.574	Analysis:	EPA 8270C
Field ID:	B5@15.5'	Batch#:	57201
Lab ID:	146569-002	Sampled:	05/26/00
Matrix:	Soil	Received:	05/30/00
Units:	ug/Kg	Prepared:	07/24/00
Basis:	wet	Analyzed:	07/26/00
Diln Fac:	1.000		

Analyte	Result	RL
N-Nitrosodimethylamine	ND	330
Phenol	ND	330
bis(2-Chloroethyl)ether	ND	330
2-Chlorophenol	ND	330
1,3-Dichlorobenzene	ND	330
1,4-Dichlorobenzene	ND	330
Benzyl alcohol	ND	330
1,2-Dichlorobenzene	ND	330
2-Methylphenol	ND	330
bis(2-Chloroisopropyl) ether	ND	330
3-,4-Methylphenol	ND	330
N-Nitroso-di-n-propylamine	ND	330
Hexachloroethane	ND	330
Nitrobenzene	ND	330
Isophorone	ND	330
2-Nitrophenol	ND	1,700
2,4-Dimethylphenol	ND	330
Benzoic acid	ND	1,700
bis(2-Chloroethoxy)methane	ND	330
2,4-Dichlorophenol	ND	330
1,2,4-Trichlorobenzene	ND	330
Naphthalene	ND	330
4-Chloroaniline	ND	330
Hexachlorobutadiene	ND	330
4-Chloro-3-methylphenol	ND	330
2-Methylnaphthalene	ND	330
Hexachlorocyclopentadiene	ND	1,700
2,4,6-Trichlorophenol	ND	330
2,4,5-Trichlorophenol	ND	330
2-Chloronaphthalene	ND	330
2-Nitroaniline	ND	1,700
Dimethylphthalate	ND	330
Acenaphthylene	ND	330
2,6-Dinitrotoluene	ND	330
3-Nitroaniline	ND	1,700
Acenaphthene	ND	330
2,4-Dinitrophenol	ND	1,700
4-Nitrophenol	ND	1,700
Dibenzofuran	ND	330
2,4-Dinitrotoluene	ND	330
Diethylphthalate	ND	330
Fluorene	ND	330
4-Chlorophenyl-phenylether	ND	330
4-Nitroaniline	ND	1,700
4,6-Dinitro-2-methylphenol	ND	1,700
N-Nitrosodiphenylamine	ND	330
Azobenzene	ND	330
4-Bromophenyl-phenylether	ND	330
Hexachlorobenzene	ND	330
Pentachlorophenol	ND	1,700
Phenanthrene	ND	330
Anthracene	ND	330
Di-n-butylphthalate	ND	330
Fluoranthene	ND	330

ND = Not Detected

RL = Reporting Limit

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Curtis & Tompkins, Ltd.

Semivolatile Organics by GC/MS

Lab #:	146569	Location:	Inner Harbor Turning Basin
Client:	Subsurface Consultants	Prep:	EPA 3550
Project#:	99.574	Analysis:	EPA 8270C
Field ID:	B5@15.5'	Batch#:	57201
Lab ID:	146569-002	Sampled:	05/26/00
Matrix:	Soil	Received:	05/30/00
Units:	ug/Kg	Prepared:	07/24/00
Basis:	wet	Analyzed:	07/26/00
Diln Fac:	1.000		

Chemical	Result	Units
Pyrene	ND	330
Butylbenzylphthalate	ND	330
3,3'-Dichlorobenzidine	ND	1,700
Benzo(a)anthracene	ND	330
Chrysene	ND	330
bis(2-Ethylhexyl)phthalate	ND	330
Di-n-octylphthalate	ND	330
Benzo(b)fluoranthene	ND	330
Benzo(k)fluoranthene	ND	330
Benzo(a)pyrene	ND	330
Indeno(1,2,3-cd)pyrene	ND	330
Dibenz(a,h)anthracene	ND	330
Benzo(q,h,i)perylene	ND	330

Surrogate	Result	Units
2-Fluorophenol	71	40-134
Phenol-d5	69	39-135
2,4,6-Tribromophenol	58	16-131
Nitrobenzene-d5	69	38-131
2-Fluorobiphenyl	79	45-129
Terphenyl-d14	70	41-140



Curtis & Tompkins, Ltd.

Semivolatile Organics by GC/MS

Lab #:	146569	Location:	Inner Harbor Turning Basin
Client:	Subsurface Consultants	Prep:	EPA 3550
Project#:	99.574	Analysis:	EPA 8270C
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC120887	Batch#:	57201
Matrix:	Soil	Prepared:	07/24/00
Units:	ug/Kg	Analyzed:	07/25/00
Basis:	wet		

Analyses	Retention	RL
N-Nitrosodimethylamine	ND	340
Phenol	ND	340
bis(2-Chloroethyl)ether	ND	340
2-Chlorophenol	ND	340
1,3-Dichlorobenzene	ND	340
1,4-Dichlorobenzene	ND	340
Benzyl alcohol	ND	340
1,2-Dichlorobenzene	ND	340
2-Methylphenol	ND	340
bis(2-Chloroisopropyl) ether	ND	340
3-,4-Methylphenol	ND	340
N-Nitroso-di-n-propylamine	ND	340
Hexachloroethane	ND	340
Nitrobenzene	ND	340
Isophorone	ND	340
2-Nitrophenol	ND	1,700
2,4-Dimethylphenol	ND	340
Benzoic acid	ND	1,700
bis(2-Chloroethoxy)methane	ND	340
2,4-Dichlorophenol	ND	340
1,2,4-Trichlorobenzene	ND	340
Naphthalene	ND	340
4-Chloroaniline	ND	340
Hexachlorobutadiene	ND	340
4-Chloro-3-methylphenol	ND	340
2-Methylnaphthalene	ND	340
Hexachlorocyclopentadiene	ND	1,700
2,4,6-Trichlorophenol	ND	340
2,4,5-Trichlorophenol	ND	340
2-Chloronaphthalene	ND	340
2-Nitroaniline	ND	1,700
Dimethylphthalate	ND	340
Acenaphthylene	ND	340
2,6-Dinitrotoluene	ND	340
3-Nitroaniline	ND	1,700
Acenaphthene	ND	340
2,4-Dinitrophenol	ND	1,700
4-Nitrophenol	ND	1,700
Dibenzofuran	ND	340
2,4-Dinitrotoluene	ND	340
Diethylphthalate	ND	340
Fluorene	ND	340
4-Chlorophenyl-phenylether	ND	340
4-Nitroaniline	ND	1,700
4,6-Dinitro-2-methylphenol	ND	1,700
N-Nitrosodiphenylamine	ND	340
Azobenzene	ND	340
4-Bromophenyl-phenylether	ND	340
Hexachlorobenzene	ND	340
Pentachlorophenol	ND	1,700
Phenanthrene	ND	340
Anthracene	ND	340
Di-n-butylphthalate	ND	340
Fluoranthene	ND	340
Pyrene	ND	340

ND = Not Detected

RL = Reporting Limit

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Curtis & Tompkins, Ltd.

Semivolatile Organics by GC/MS

Lab #:	146569	Location:	Inner Harbor Turning Basin
Client:	Subsurface Consultants	Prep:	EPA 3550
Project#:	99.574	Analysis:	EPA 8270C
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC120887	Batch#:	57201
Matrix:	Soil	Prepared:	07/24/00
Units:	ug/Kg	Analyzed:	07/25/00
Basis:	wet		

Analyst	Result	RL
Butylbenzylphthalate	ND	340
3,3'-Dichlorobenzidine	ND	1,700
Benzo(a)anthracene	ND	340
Chrysene	ND	340
bis(2-Ethylhexyl)phthalate	ND	340
Di-n-octylphthalate	ND	340
Benzo(b)fluoranthene	ND	340
Benzo(k)fluoranthene	ND	340
Benzo(a)pyrene	ND	340
Indeno(1,2,3-cd)pyrene	ND	340
Dibenz(a,h)anthracene	ND	340
Benzo(q,h,i)perylene	ND	340

Substance	REC	Limits
2-Fluorophenol	78	40-134
Phenol-d5	79	39-135
2,4,6-Tribromophenol	69	16-131
Nitrobenzene-d5	79	38-131
2-Fluorobiphenyl	82	45-129
Terphenyl-d14	80	41-140



Curtis & Tompkins, Ltd.

Semivolatile Organics by GC/MS

Lab #:	146569	Location:	Inner Harbor Turning Basin
Client:	Subsurface Consultants	Prep:	EPA 3550
Project#:	99.574	Analysis:	EPA 8270C
Type:	LCS	Diln Fac:	1.000
Lab ID:	QC120888	Batch#:	57201
Matrix:	Soil	Prepared:	07/24/00
Units:	ug/Kg	Analyzed:	07/25/00
Basis:	wet		

Analyte	Spiked	Result	REC	Limits
Phenol	3,294	2,804	85	39-128
2-Chlorophenol	3,294	3,230	98	45-137
1,4-Dichlorobenzene	1,647	1,395	85	41-127
N-Nitroso-di-n-propylamine	1,647	1,432	87	40-140
1,2,4-Trichlorobenzene	1,647	1,416	86	46-128
4-Chloro-3-methylphenol	3,294	2,675	81	45-130
Acenaphthene	1,647	1,504	91	47-124
4-Nitrophenol	3,294	1,952	59	36-110
2,4-Dinitrotoluene	1,647	1,473	89	42-123
Pentachlorophenol	3,294	1,894	57	15-110
Pyrene	1,647	1,404	85	44-123

Surrogate	REC	Limits
2-Fluorophenol	85	40-134
Phenol-d5	84	39-135
2,4,6-Tribromophenol	82	16-131
Nitrobenzene-d5	82	38-131
2-Fluorobiphenyl	86	45-129
Terphenyl-d14	87	41-140



Curtis & Tompkins, Ltd.

Semivolatile Organics by GC/MS

Lab #:	146569	Location:	Inner Harbor Turning Basin
Client:	Subsurface Consultants	Prep:	EPA 3550
Project#:	99.574	Analysis:	EPA 8270C
Field ID:	ZZZZZZZZZZ	Batch#:	57201
MSS Lab ID:	146552-001	Sampled:	07/14/00
Matrix:	Soil	Received:	07/14/00
Units:	ug/Kg	Prepared:	07/24/00
Basis:	wet	Analyzed:	07/26/00
Diln Fac:	1.000		

Type: MS Lab ID: QC120889

Analyst	MSS Result	SD (Kg)	Result	ENCL	Units
Phenol	<339.0	3,368	3,098	92	38-133
2-Chlorophenol	<339.0	3,368	3,447	102	34-146
1,4-Dichlorobenzene	<0.5085	1,684	1,719	102	43-124
N-Nitroso-di-n-propylamine	191.3	1,684	1,600	84	48-130
1,2,4-Trichlorobenzene	<339.0	1,684	1,845	110	53-128
4-Chloro-3-methylphenol	<339.0	3,368	3,291	98	37-132
Acenaphthene	<50.85	1,684	1,859	110	55-122
4-Nitrophenol	35.94	3,368	2,646	78	24-112
2,4-Dinitrotoluene	<339.0	1,684	1,655	98	37-122
Pentachlorophenol	<1,695	3,368	2,013	60	15-110
Pyrene	<50.85	1,684	1,788	106	30-134

Surrogate	PPC	Units
2-Fluorophenol	85	40-134
Phenol-d5	95	39-135
2,4,6-Tribromophenol	98	16-131
Nitrobenzene-d5	99	38-131
2-Fluorobiphenyl	103	45-129
Terphenyl-d14	109	41-140

Type: MSD Lab ID: QC120890

Analyst	Spiked	Result	ENCL	Units	PPC	Units
Phenol	3,322	2,628	79	38-133	15	33
2-Chlorophenol	3,322	3,009	91	34-146	12	34
1,4-Dichlorobenzene	1,661	1,498	90	43-124	12	26
N-Nitroso-di-n-propylamine	1,661	1,385	72	48-130	13	43
1,2,4-Trichlorobenzene	1,661	1,570	95	53-128	15	24
4-Chloro-3-methylphenol	3,322	2,695	81	37-132	19	35
Acenaphthene	1,661	1,577	95	55-122	15	26
4-Nitrophenol	3,322	2,102	62	24-112	22	47
2,4-Dinitrotoluene	1,661	1,301	78	37-122	23	33
Pentachlorophenol	3,322	1,654	50	15-110	18	50
Pyrene	1,661	1,506	91	30-134	16	32

Surrogate	PPC	Units
2-Fluorophenol	74	40-134
Phenol-d5	83	39-135
2,4,6-Tribromophenol	80	16-131
Nitrobenzene-d5	86	38-131
2-Fluorobiphenyl	92	45-129
Terphenyl-d14	97	41-140



Curtis & Tompkins, Ltd., Analytical Laboratories, Since 1878

2323 Fifth Street, Berkeley, CA 94710, Phone (510) 486-0900

A N A L Y T I C A L R E P O R T

Prepared for:

Subsurface Consultants
3736 Mt. Diablo Blvd.
Suite 200
Lafeyette, CA 94549

Date: 21-AUG-00
Lab Job Number: 146895
Project ID: N/A
Location: IHTB

This data package has been reviewed for technical correctness and completeness. Release of this data has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signatures. The results contained in this report meet all requirements of NELAC and pertain only to those samples which were submitted for analysis.

Reviewed by:


Project Manager

Reviewed by:


Operations Manager

This package may be reproduced only in its entirety.

CA ELAP # 1459

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Curtis & Tompkins, Ltd.

Laboratory Number: **146895**

Receipt Date: **08/03/00**

Client: **Subsurface Consultants, Inc.**

Project Name: **IHTB**

CASE NARRATIVE

This hardcopy data package contains sample results and batch QC results for one water sample received from the above referenced project. The sample was received cold and intact.

Total Volatile Hydrocarbons: No analytical problems were encountered.

Total Extractable Hydrocarbons: No analytical problems were encountered.

Volatile Organic Compounds: The dibromofluoromethane surrogate recovery was above acceptance limits. No target compounds were detected in the associated sample. No other analytical problems were encountered.

Semi-Volatile Organic Compounds: The blank spike duplicate extract was lost during sample preparation. The associated blank spike was extracted successfully and analyzed as a laboratory control sample (LCS). The LCS recoveries were acceptable. No other analytical problems were encountered.

CHAIN OF CUSTODY FORM

146895

PROJECT NAME: IHTB

JOB NUMBER: 1206.002.2.6

PROJECT CONTACT: G. Young

SAMPLED BY: E. Silverman

LAB: Curtis & Tomphinis

TURNAROUND: Standard

REQUESTED BY: E. Silverman

CHAIN OF CUSTODY RECORD

RELEASED BY: (Signature)

DATE / TIME

RECEIVED BY: (Signature)

DATE / TIME

Elmerae

DATE / TIME

RECEIVED BY: (Signature)

DATE / TIME

RELEASED BY: (Signature)

DATE / TIME

RECEIVED BY: (Signature)

DATE / TIME

RELEASED BY: (Signature)

DATE / TIME

RECEIVED BY: (Signature)

DATE / TIME

SCI

Subsurface Consultants, Inc.

171 - 12th Street, Suite 202, Oakland, CA 94607

(510) 268-0461 - FAX: (510) 268-0137

3736 Mt. Diablo Blvd., Ste. 200, Lafayette, CA 94549

(925) 299-7960 - (925) 299-7979

* RECEIVED CANNED FROM FRIG. PLACED IN COOLER.



Curtis & Tompkins, Ltd.

Gasoline by GC/FID CA LUFT

Lab #:	146895	Location:	IHTB
Client:	Subsurface Consultants	Prep:	EPA 5030
Project#:	STANDARD	Analysis:	EPA 8015M
Field ID:	MW-2	Batch#:	57498
Matrix:	Water	Sampled:	08/02/00
Units:	ug/L	Received:	08/03/00
Diln Fac:	1.000		

Type: SAMPLE Analyzed: 08/08/00
Lab ID: 146895-001

Analyte	Result	RL
Gasoline C7-C12	660 H Y	50
<hr/>		
Surrogate	%REC	Limits
Trifluorotoluene (FID)	108	59-135
Bromofluorobenzene (FID)	114	60-140

Type: BLANK Analyzed: 08/07/00
Lab ID: QC122064

Analyte	Result	RL
Gasoline C7-C12	ND	50
<hr/>		
Surrogate	%REC	Limits
Trifluorotoluene (FID)	103	59-135
Bromofluorobenzene (FID)	101	60-140

H = Heavier hydrocarbons contributed to the quantitation

Y = Sample exhibits fuel pattern which does not resemble standard

ND = Not Detected

RL = Reporting Limit

Page 1 of 1

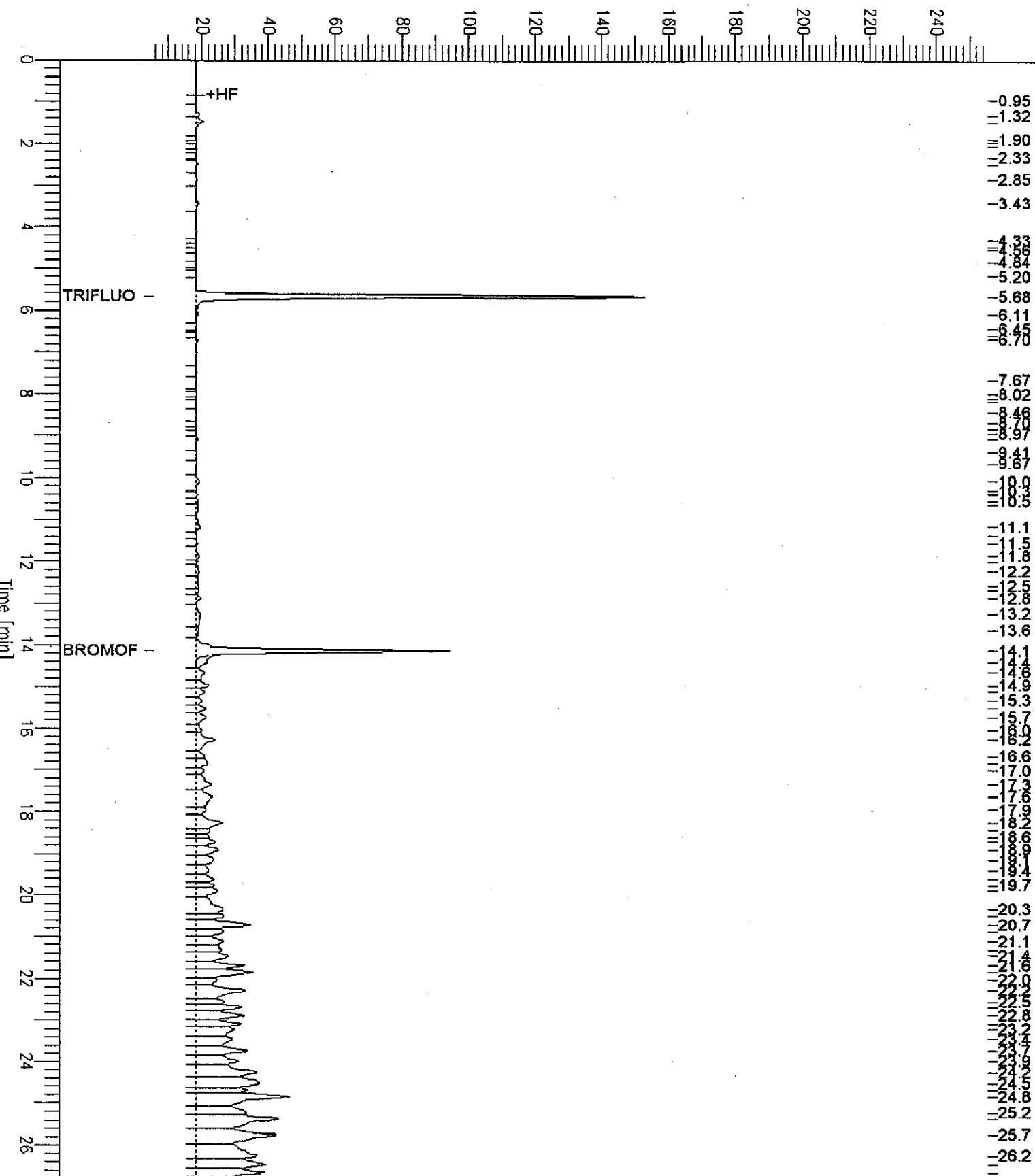
GC19 TVH 'X' Data File (FID)

Sample Name : 146895-001,57498,TVH ONLY
 FileName : G:\GC19\DATA\220X028.raw
 Method : TVHBTXE
 Start Time : 0.00 min End Time : 26.80 min
 Scale Factor: -1.0 Plot Offset: 6 mV

Sample #: Page 1 of 1
 Date : 8/8/00 03:21 PM
 Time of Injection: 8/8/00 04:03 AM
 Low Point : 5.50 mV High Point : 255.50 mV
 Plot Scale: 250.0 mV

MW-2

Response [mV]



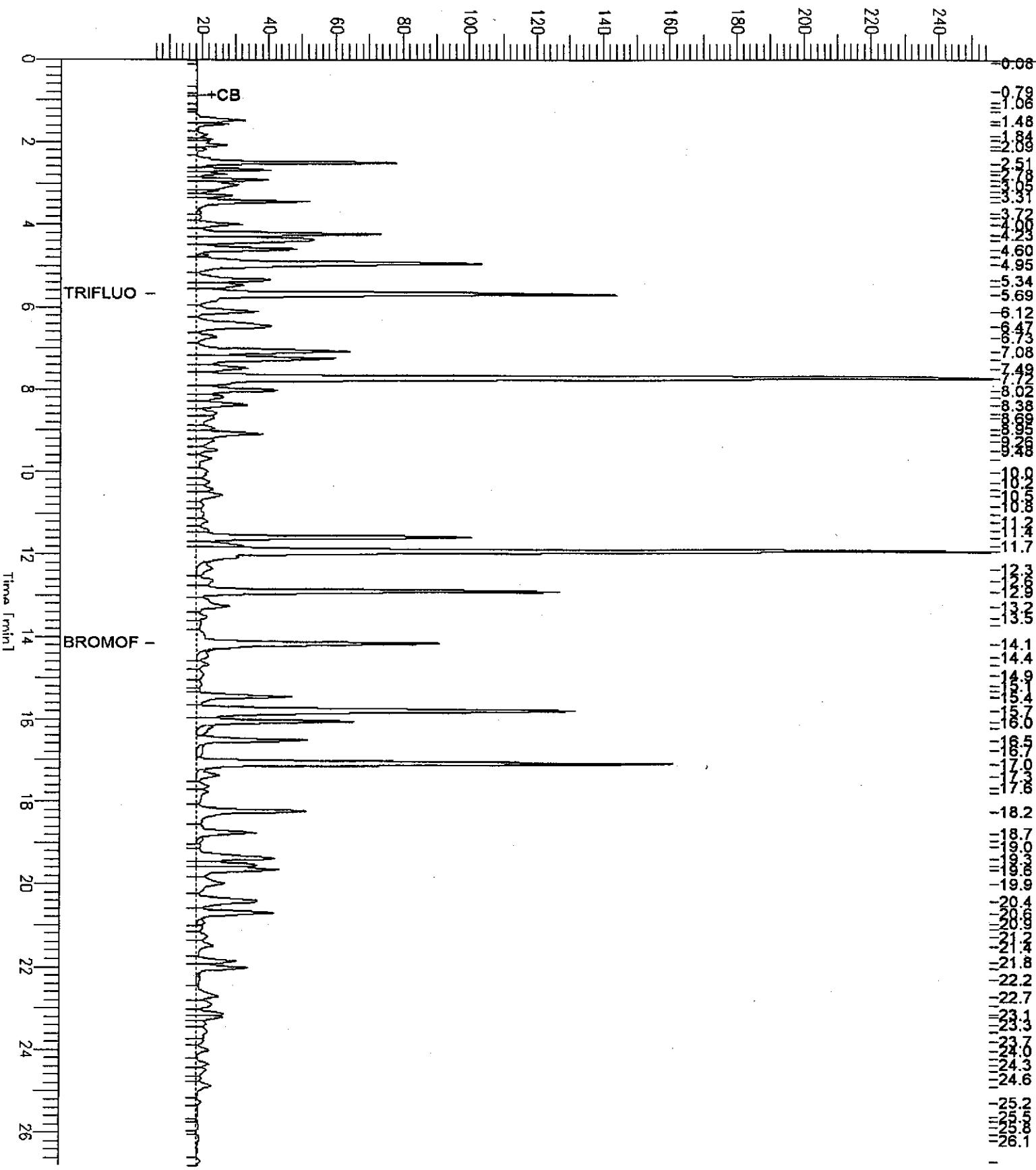
GC19 TVH 'X' Data File (FID)

Sample Name : CCV/LCS, QC122062, 57498, 00WS9465, 5/5000
File Name : G:\GC19\DATA\220X004.raw
Method : TVHBTXE
Start Time : 0.00 min End Time : 26.80 min
Scale Factor: -1.0 Plot Offset: 6 mV

Sample #: GAS Page 1 of 1
Date : 8/7/00 01:31 PM
Time of Injection: 8/7/00 01:04 PM
Low Point : 5.58 mV High Point : 255.58 mV
Plot Scale: 250.0 mV

Gasoline Standard

Response [mV]



Gasoline by GC/FID CA LUFT

Lab #:	146895	Location:	IHTB
Client:	Subsurface Consultants	Prep:	EPA 5030
Project#:	STANDARD	Analysis:	EPA 8015M
Type:	LCS	Diln Fac:	1.000
Lab ID:	QC122062	Batch#:	57498
Matrix:	Water	Analyzed:	08/07/00
Units:	ug/L		

Analyte	Spiked	Result	%REC	Limits
Gasoline C7-C12	2,000	1,878	94	73-121

Surrogate	%REC	Limits
Trifluorotoluene (FID)	113	59-135
Bromofluorobenzene (FID)	125	60-140



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Gasoline by GC/FID CA LUFT

Lab #:	146895	Location:	IHTB
Client:	Subsurface Consultants	Prep:	EPA 5030
Project#:	STANDARD	Analysis:	EPA 8015M
Field ID:	ZZZZZZZZZZ	Batch#:	57498
MSS Lab ID:	146704-003	Sampled:	07/24/00
Matrix:	Water	Received:	07/25/00
Units:	ug/L	Analyzed:	08/07/00
Diln Fac:	1.000		

Type: MS Lab ID: QC122065

Analyte	MSS Result	Spiked	Result	%REC	Limits
Gasoline C7-C12	41.86	2,000	1,900	93	65-131
Surrogate	%REC	Limits			
Trifluorotoluene (FID)	126	59-135			
Bromofluorobenzene (FID)	137	60-140			

Type: **MSD** Lab ID: **QC122066**

Analyte	Spiked	Result	%REC	Limits	RPD	FPE
Gasoline C7-C12	2,000	1,945	95	65-131	2	20
Surrogate	%REC	Limits				
Trifluorotoluene (FID)	128	59-135				
Bromofluorobenzene (FID)	139	60-140				



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Total Extractable Hydrocarbons

Lab #:	146895	Location:	IHTB
Client:	Subsurface Consultants	Prep:	EPA 3520
Project#:	STANDARD	Analysis:	EPA 8015M
Field ID:	MW-2	Sampled:	08/02/00
Matrix:	Water	Received:	08/03/00
Units:	ug/L	Prepared:	08/08/00
Batch#:	57543		

Type: SAMPLE Diln Fac: 10.00
Lab ID: 146895-001 Analyzed: 08/14/00

Analyte	Result	RL
Diesel C10-C24	140,000	500
Motor Oil C24-C36	ND	3,000

Surrogate	*REC	Limits
Hexacosane	DO	44-121

Type: BLANK Diln Fac: 1.000
Lab ID: QC122246 Analyzed: 08/10/00

Analyte	Result	RL
Diesel C10-C24	ND	50
Motor Oil C24-C36	ND	300

Surrogate	*REC	Limits
Hexacosane	94	44-121

DO = Diluted Out

ND = Not Detected

RL = Reporting Limit

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Chromatogram

Sample Name : 146895-001sg, 57543
FileName : G:\GC15\CHB\226B045.RAW
Method : BTEH216.MTH
Start Time : 0.01 min End Time : 31.91 min
Scale Factor: 0.0 Plot Offset: -20 mV

Sample #: 57543 Date : 08/15/2000 10:50 AM
Time of Injection: 08/14/2000 11:12 PM
Low Point : -20.40 mV High Point : 1024.00 mV
Plot Scale: 1044.4 mV

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MW-2

Response [mV]

