GROUNDWATER INVESTIGATION
MARINER SQUARE
ALAMEDA, CALIFORNIA
SCI 554.005

Prepared For:

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November 13, 1992

James P. Bowers, PE
R. William Rudolph, Jr., PE

LETTER OF TRANSMITTAL

TO: Mr. Ronald W. Doll
Attorney-at-Law
c/o Mariner Square Associates
2236 Mariner Square
Alameda, California 94501

DATE: November 13, 1992
PROJECT: Mariner Square/Groundwater Investigation
SCI JOB NUMBER: 554.005

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- [ ] an executed contract
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REMARKS:

COPIES TO:

(1) Mr. Rich Hiett, Regional Water Quality Control Board, 2101 Webster Street, Suite #500, Oakland, CA 94612

✓(1) Ms. Juliet Shin, Alameda County Health Care Services Agency, 80 Swan Way, Room 350, Oakland, CA 94662-0901

BY: Sean Carson (cad)
Sean O. Carson

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I INTRODUCTION

This report presents the results of a groundwater investigation conducted by Subsurface Consultants, Inc. (SCI) at Mariner Square in Alameda, California. The site is located on the south shore of the Oakland Inner Harbor Channel, as shown on the Vicinity Map on Plate 1.

The site presently consists of office space and yacht brokerages, which includes a maintenance and repair facility. Review of available data indicates that the site was previously operated as a crude oil storage and processing facility by Tidewater Associated Oil Company.

SCI previously provided consulting services for the removal of an underground gasoline storage tank at the approximate location shown on Plate 1. SCI's services during tank removal are recorded in a letter dated February 20, 1991.

SCI was retained in July 1992 to perform a groundwater quality assessment to evaluate the impacts of hydrocarbon contamination. To date, SCI's services have consisted of:

1. Obtaining a permit to install wells from the Alameda County Flood Control and Water Conservation District, Zone 7,
2. Obtaining utility clearances for drilling locations,
3. Drilling five test borings about 15 feet deep,
4. Constructing a groundwater monitoring well in each of the test borings,

5. Developing, purging, and sampling the wells in accordance with Regional Water Quality Control Board guidelines,

6. Performing analytical tests on soil and groundwater samples from the test borings/monitoring wells,

7. Performing a level survey to establish relative elevations for the wellheads,

8. Performing a tidal influence study, and

9. Preparing this report.

II FIELD INVESTIGATION

A. Review of Available Data

Available data pertaining to the area was reviewed by SCI. This information included Sanborn Maps, geologic maps, sewer and storm drain plans, historical shoreline plans and the results of previous environmental investigations conducted at the site. A complete list of references is presented in Appendix C. The results of analytical tests performed on soil and groundwater during the previous investigations are presented in Table 1. The analytical test reports are enclosed in Appendix B. The location of the previous samples/borings are shown on Plate 1.

B. Subsurface Investigation

SCI investigated subsurface conditions by drilling 5 test borings about 15 feet deep and completing them as groundwater monitoring wells. The locations of the monitoring wells are shown on Plate 1. The logs of the test borings/monitoring wells are shown on Plates 2 through 4. Soils were described in accordance

with the criteria presented on Plate 5. Details regarding sampling and monitoring well installation are presented in Appendix A.

Groundwater levels were measured in the wells using a well sounder and/or a steel tape with water sensitive paste. A level survey was performed to determine the top of casing (TOC) elevation for the wells. The elevation reference is a United States Geological Survey Monument situated on Mariner Square Drive, across from Mitchell Street. The benchmark has a reported elevation of +5.88 feet, mean sea level (MSL) datum.

A tidal study was conducted to evaluate any tidal influence that may occur on the groundwater beneath the site. Tidal influences were evaluated by observing changes in well water levels during a 4.5 foot tide change, over a 12 hour period. A detailed discussion of our field procedures is provided in Appendix A.

III SITE CONDITIONS

A. Local Setting

The site is located on the north side of Alameda, an island located south of the Oakland Inner Harbor Channel. In the early 1800s, about one third of the northern portion of Alameda was marshland, traversed by meandering tidal channels. The Mariner Square site is entirely located within the area of former marshland. Reclamation of the marshland by filling began in the late 1800s. The current configuration of the shoreline in the area was completed in the early to mid 1900s.

B. **Surface Conditions**

The site is approximately square in shape. The north boundary is separated from the Oakland Inner Harbor Channel by an interlocking concrete sheet pile wall. Beyond this wall are several floating docks with moored boats attached, a boat loading/unloading dock and a restaurant supported on wooden piles.

Landward of the wall are several buildings and railroad box cars used mostly as office space. The west-center portion of the site is primarily used for boat storage. The previous oil storage area is defined by concrete containment walls. The containment walls enclose an area of approximately 170 feet by 300 feet and are shown on Plate 1. We understand that they are supported on a concrete pile cap and timber piles. The concrete pile cap extends below water. A 30,000 barrel above ground steel storage tank remains near the southwest portion of the site, within the containment area. This tank is currently being used for boat and equipment storage. Two underground tanks exist at the location shown on Plate 1. These tanks are to be removed in the near future. The remainder of the site is predominantly covered by asphalt and concrete driveways and parking areas. The area adjacent to the bulkhead wall is partially landscaped.

As shown on Plate 1, the site is located just west of the Webster Street Tube which runs beneath the Oakland Inner Harbor Channel. The tunnel was constructed in the early 1960s. The area east of the site was excavated to a depth of about 50 feet. A sheet pile wall with a 10 foot deep continuous concrete cap was

constructed along the east side of the Mariner Square property line. The cap was tied back to deadman anchors beneath the parking lot along the east side of the property. Upon completion of construction, the excavation was backfilled with sand.

C. Subsurface Conditions

Our interpretation of subsurface conditions at the site is shown on the Generalized Subsurface Profile, Plate 6. The test borings indicate that the site is blanketed by about 7 to 13 feet of fill. In general, the fill consists of clean, clayey and silty sands. The majority of the fill is most likely "hydraulic fill". In general, the fill is relatively uniform in composition and does not contain appreciable debris.

The fill is underlain by a soft clayey silt containing occasional layers of sandy silt, silty sand and peat. The soft silty soils are highly organic, compressible and are locally referred to as Bay Mud. Available data in the area suggest that the bottom of the Bay Mud dips to the south and extends to depths of about 20 to 45 feet.

D. Groundwater Conditions

Groundwater level data obtained during the investigation is presented in Table 2. The data indicates that groundwater exists approximately 5 to 7 feet below existing grades. The groundwater levels generally correspond to about elevation +2.85 to +2.17 feet, MSL datum. However, the groundwater elevation in MW-1 was anomalously low, being situated near elevation -1.42 MSL datum.

During the tidal study, little or no change in water elevations was recorded, indicating minimal tidal influence. The tidal influence study data is presented in Table 3.

IV ANALYTICAL TESTING

Selected soil and groundwater samples were analyzed by Curtis & Tompkins, Ltd., a laboratory certified by the DHS for hazardous waste and water testing. Chain-of-Custody Records are presented in Appendix B.

The analyses performed on selected soil and groundwater samples included total extractable hydrocarbons (TEH), benzene, toluene, xylene, and ethylbenzene (BTXE), oil and grease (O&G), and volatile halocarbons. The results are presented in Tables 4 and 5. Sample preparation and analytical test methods for the analyses are summarized in Appendix B.

V CONCLUSIONS

A. Groundwater Contamination

The results of this and previous investigations confirm that petroleum hydrocarbon releases have occurred at the site. Total extractable hydrocarbons (TEH) exist in groundwater in the 5 monitoring wells installed during this study, at concentrations varying from 580 to 2200 ug/l. Aromatic hydrocarbons (BTXE) were detected at concentrations varying up to 49 ug/l (see Table 5).

Very low concentrations of freon (4 ug/l), and vinyl chloride (9 ug/l) were detected in groundwater from Monitoring Wells 2 and 4, respectively.

B. Soil Contamination

Soil contamination at the site appears to be limited to soils above the groundwater level, which generally exists at depths of 5 to 7 feet. The impacted soils include the unsaturated zone beneath the previous tanks and a thin zone just above groundwater in areas away from the source of the hydrocarbon release. The approximate extent of soil contamination is shown on Plate 8.

C. Groundwater Flow

Groundwater flow in the area likely occurs within the thin sand fill which blankets the site. Because subsurface conditions are complex, SCI is unable to draw definite conclusions regarding groundwater flow patterns based on the available data; however, review of the groundwater elevation data suggests that groundwater gradients in the area are relatively flat. Groundwater exists at elevations varying from about +2 to +3 feet MSL datum. However, the groundwater level near Well MW-1 appears to be depressed, possibly due to the presence of stormdrain and/or sanitary sewers in the area, as subsequently discussed.

Review of the tidal influence study data indicates that the concrete sheet pile wall along the waterfront is an effective barrier to groundwater migration into the Oakland Inner Harbor. Groundwater levels in Monitoring Wells 2 and 3, which are situated within 20 feet of the bulkhead wall, changed less than 0.08 feet

during a 4.5 foot tidal level change, confirming that little water flow occurs through the wall. As previously mentioned, it is believed that a concrete sheet pile wall exists below grade along the east boundary of the property. Although specific details are uncertain at this time, this wall most probably represents a hydraulic barrier to flow toward the east. It is also likely that continuous foundation walls extend below the groundwater level at the location of the oil tank containment walls. Such walls would also impede groundwater flow in the area.

As previously discussed, the groundwater level in MW-1 was depressed several feet relative to the other monitoring wells and with respect to mean sea level. This would suggest that groundwater flows inland, away from the Oakland Inner Harbor, at a grade line extending below mean sea level. Since this did not appear reasonable at first, SCI conducted a search of potential causes of a depressed groundwater level near MW-1. In this regard, SCI obtained maps showing storm drain and sanitary sewer details in the area from the City of Alameda. The plans indicate that the storm drain and sanitary sewer systems have pipeline invert elevations between -1 and -7 feet MSL, respectively. These utility lines flow by gravity to nearby pump/lift stations. The location of stormdrain and sanitary sewer improvements near the site are shown on Plates 1 and 7. SCI suspects that infiltration of groundwater into one or both of these systems may be responsible for the depressed groundwater levels near MW-1. The influence of infiltration on groundwater flow patterns is currently unknown.

VI MONITORING

Groundwater should be monitored on a quarterly basis. Monitoring should include analysis of total extractable hydrocarbons, (EPA 8015/3550), BTEX (EPA 8020) and VOCs (EPA 8010).

VII LIMITATIONS

This groundwater assessment was intended to provide a preliminary means of checking the site for significant soil and/or groundwater contamination.

The conclusions drawn from this assessment are an expression of SCI's professional opinion, and do not constitute a warranty or guaranty, either expressed or implied. Additional investigative work, if undertaken, may modify the conclusions presented herein, as additional information is generated.

SCI has performed this assessment in accordance with generally accepted standards of care which exist in Northern California at the time of this study. Please recognize that the definition and evaluation of environmental conditions is difficult and inexact. Judgements leading to conclusions and recommendations are generally made with incomplete knowledge of the subsurface and/or historic conditions applicable to the site. In addition, the conclusions recorded herein reflect site conditions at the time of the investigation. These conditions may change with time and as such, SCI's conclusions may also change.

The conclusions and opinions presented herein may also be affected by rapid changes in the field of environmental engineering and the laws governing hazardous waste. The reader is advised to consult with SCI prior to acting upon the information provided.

Illustrations:

Plate 1	Site Plan
Plate 2 thru 4	Logs of Test Borings/Monitoring Wells
Plate 5	Unified Soil Classification System
Plate 6	Generalized Subsurface Profile
Plate 7	Groundwater Conditions 8/3/92
Plate 8	Soil Contaminant Concentrations

Tables:

Table 1	Contaminant Concentrations from Previous Study
Table 2	Groundwater Elevation Data
Table 3	Tidal Influence Study Data
Table 4	Contaminants Concentrations in Soil
Table 5	Contaminants Concentrations in Water

Appendices:

A	Investigation protocol
B	Analytical Testing
C	References

Distribution:

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OAKLAND INNER HARBOUR

PROFILE A – A'
(SEE PLATE 6)

TIDAL GAUGE

CONCRETE SHEETPILE WALL

PUMP STATION

MW-2
MW-3
MS-7
MS-8
T-1
MS-9
MW-5
MS-22
MS-10
PREVIOUS UNDERGROUND STORAGE TANK REMOVED 1991
MS-15
MS-14
MS-16
MS-17
MS-23
MS-18
MS-13
MS-19
MS-11
MS-3
EXISTING 30,000 Bbl TANK
MS-12
MS-4
MS-20
MW-1
MS-2
MS-1
MS-21
MS-5
MS-6
MW-4

STORM DRAIN

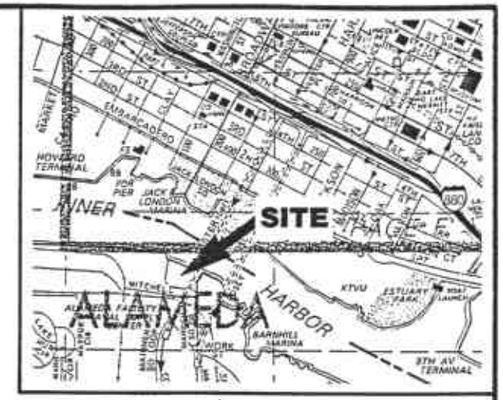
SANITARY SEWER

MARINER SQUARE DRIVE

WEBSTER STREET TUBE

SHEETPILE AND CONCRETE BULKHEAD INSTALLED DURING TUBE CONSTRUCTION

MITCHELL AVENUE



VICINITY MAP

- MONITORING WELL
- BORING BY OTHERS
- CONCRETE CONTAINMENT WALL
- APPROXIMATE PROPERTY BOUNDARY
- EXISTING STRUCTURES
- APPROXIMATE EXTENT OF EXCAVATION DURING TUBE CONSTRUCTION
- PREVIOUS TANK
- T-2 EXISTING UNDERGROUND STORAGE TANK

N
REFERENCE NORTH

APPROXIMATE SCALE (feet)
0 60 120

SOURCE: AIRPHOTO, PAS 8822 12-19-88.

SITE PLAN

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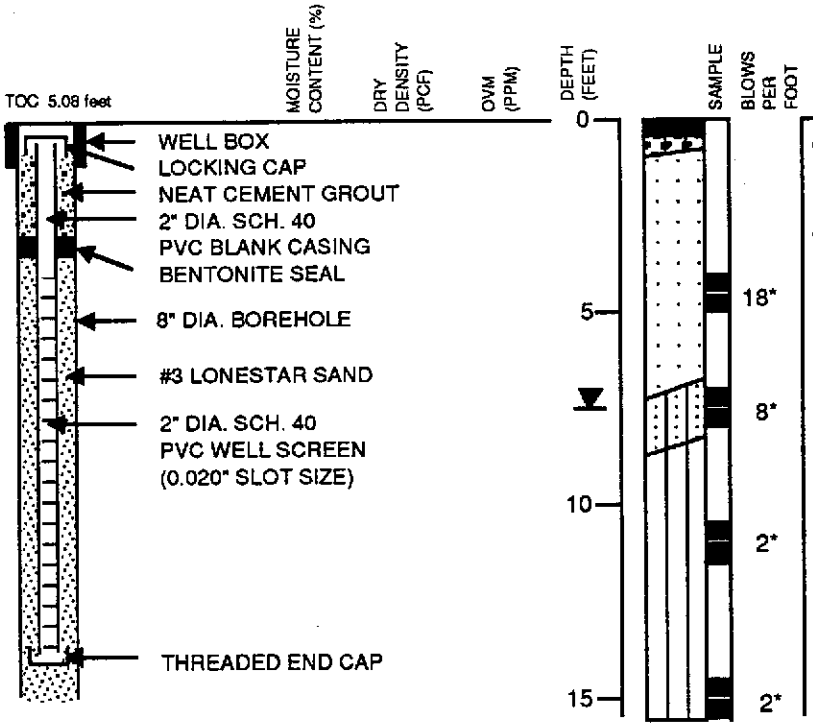
554.005	9/23/92	

PLATE 1

LOG OF TEST BORING 1

EQUIPMENT 8" Hollow Stem Auger
DATE DRILLED 7/22/92
ELEVATION 5.6 feet



ASPHALTIC CONCRETE - 4" thick
BROWN SANDY GRAVEL (GM)
medium dense, moist, base rock
GRAY BROWN SAND (SP)
loose, moist, medium grained sand, well sorted, with occasional coarse grained sand and shell fragments (fill)

GROUNDWATER LEVEL DURING DRILLING
BLUE GRAY SILTY SAND (SM)
loose, wet, sand fine to medium grained, with some clay and shell fragments
BLUE GRAY CLAYEY SILT (MH)
soft, wet (Bay Mud)
contains lenses of fine grained sand

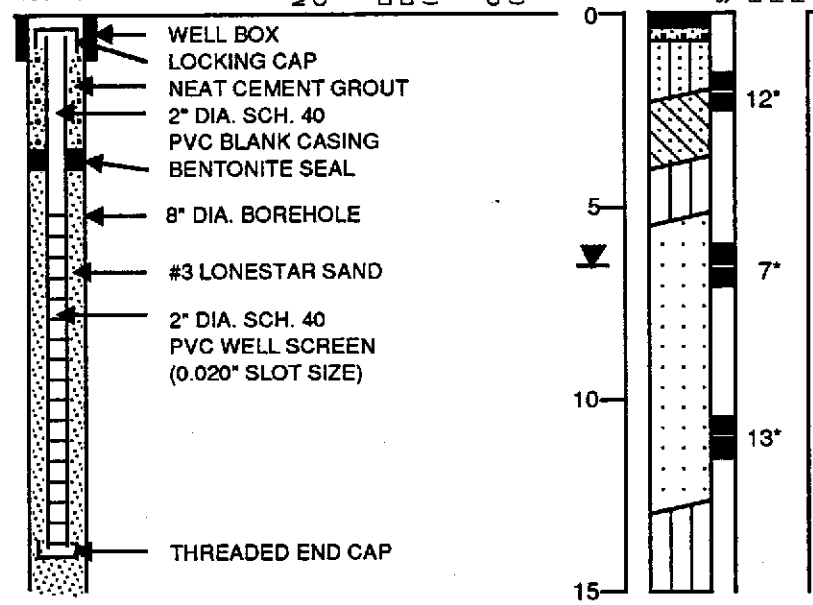
TOC = Top of Casing Elevation
MSL Datum

HAMMER WEIGHT: 140 pounds
HAMMER DROP: 30 inches

SAMPLER TYPES:
MODIFIED CALIFORNIA DRIVE
O.D.: 3.0 inches
I.D.: 2.5 inches
*CALIFORNIA DRIVE
O.D.: 2.5 inches
I.D.: 2.0 inches

LOG OF TEST BORING 2

EQUIPMENT 8" Hollow Stem Auger
DATE DRILLED 7/22/92
ELEVATION 8.6 feet



ASPHALTIC CONCRETE - 2" thick
CONCRETE SLAB - 8" thick
BROWN SILTY SAND (SM)
loose, moist
BROWN CLAYEY SAND (SC)
medium dense, moist
BLUE GRAY CLAYEY SILT (ML)
soft, moist (fill)
GROUNDWATER LEVEL DURING DRILLING
BLUE GRAY SAND (SP)
loose, wet, with shell fragments (fill)
contains clayey lenses
heaving sands

BLUE GRAY CLAYEY SILT (MH)
soft, wet (Bay Mud)

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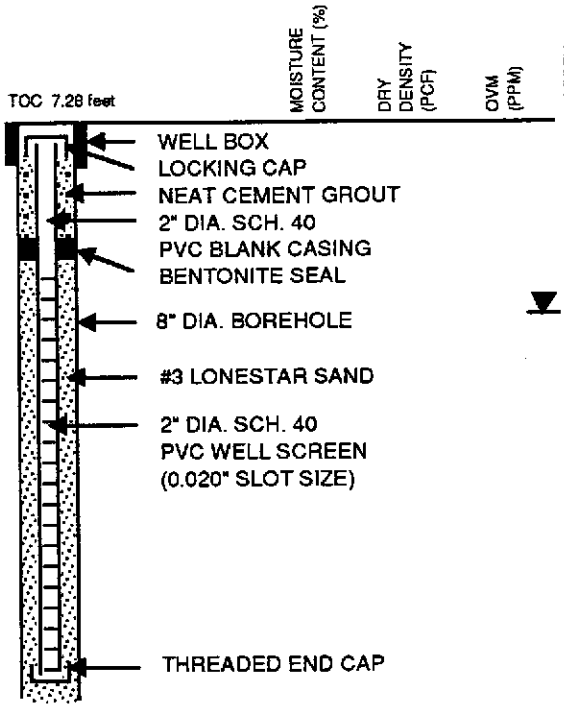
PLATE 2

LOG OF TEST BORING 3

EQUIPMENT 8" Hollow Stem Auger
DATE DRILLED 7/29/92
ELEVATION 8.1 feet



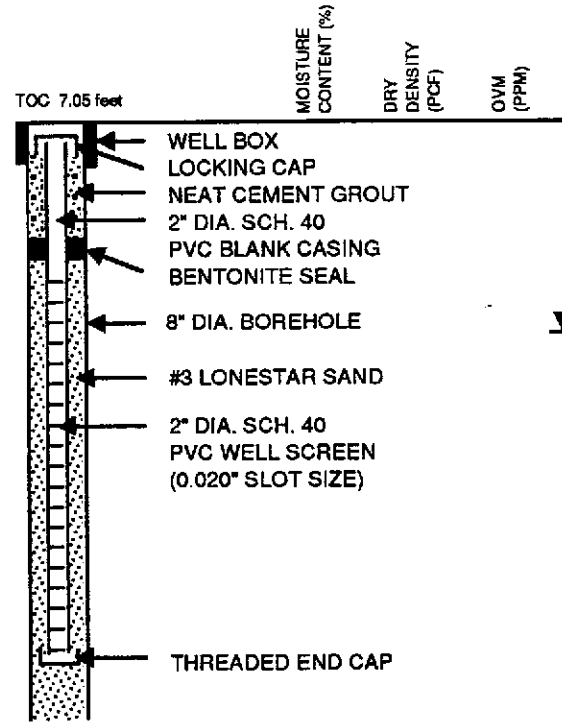
ASPHALTIC CONCRETE - 3" thick
BROWN SILTY SAND (SM)
medium dense, moist, with shell fragments (fill)

GROUNDWATER LEVEL DURING DRILLING
GRAY SAND (SP)
loose, wet, with shell fragments (fill)
occasional thin layers of clay

GRAY AND BLACK CLAYEY SILT (MH)
soft, wet (Bay Mud)

LOG OF TEST BORING 4

EQUIPMENT 8" Hollow Stem Auger
DATE DRILLED 7/23/92
ELEVATION 7.3 feet



CONCRETE SLAB - 8" thick
BROWN CLAYEY SAND (SC)
medium dense, moist
GRAY BROWN CLAYEY SAND (SC)
medium dense, moist, with abundant shell fragments (fill)
GROUNDWATER LEVEL DURING DRILLING
GRAY BROWN SAND (SP)
loose, moist (fill)
DARK GRAY SILTY SAND (SM)
loose, wet
DARK GRAY CLAYEY SILT (MH)
soft, wet, with abundant peat

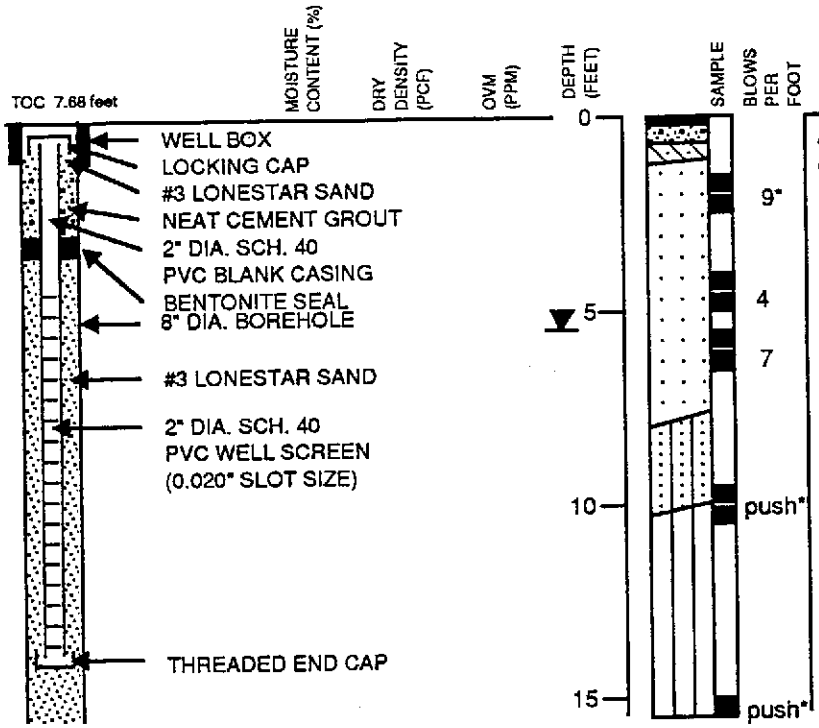
Subsurface Consultants	2415 MARINER SQUARE - OAKLAND, CA			PLATE 3
	JOB NUMBER 554.005	DATE 7/31/92	APPROVED	

LOG OF TEST BORING 5

EQUIPMENT 8" Hollow Stem Auger

DATE DRILLED 7/23/92

ELEVATION 8.0 feet



ASPHALTIC CONCRETE - 2" thick

CONCRETE SLAB - 8" thick

BROWN CLAYEY SAND (SC)
medium dense, moist

GRAY SAND (SP)
loose, moist, with some clayey lenses (fill)

GROUNDWATER LEVEL DURING DRILLING

BLACK SILTY SAND (ML/SM)
soft, wet

BLUE GRAY CLAYEY SILT (MH)
soft, wet, with abundant peat (Bay Mud)

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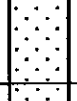
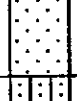
GENERAL SOIL CATEGORIES			SYMBOLS		TYPICAL SOIL TYPES
COARSE GRAINED SOILS More than half is larger than No. 200 seive	GRAVEL More than half coarse fraction is larger than No. 4 seive size	Clean Gravel with little or no fines	GW		Well Graded Gravel, Gravel-Sand Mixtures
			GP		Poorly Graded Gravel, Gravel-Sand Mixtures
		Gravel with more than 12% fines	GM		Silty Gravel, Poorly Graded Gravel-Sand-Silt Mixtures
			GC		Clayey Gravel, Poorly Graded Gravel-Sand-Clay Mixtures
	SAND More than half coarse fraction is smaller than No. 4 seive size	Clean Sand with little or no fines	SW		Well Graded Sand, Gravelly Sand
			SP		Poorly Graded Sand, Gravelly Sand
		Sand with more than 12% fines	SM		Silty Sand, Poorly Graded Sand-Silt Mixtures
			SC		Clayey Sand, Poorly Graded Sand-Clay Mixtures
FINE GRAINED SOILS More than half is smaller than No. 200 seive	SILT AND CLAY Liquid Limit Less than 50%		ML		Inorganic Silt and Very Fine Sand, Rock Flour, Silty or Clayey Fine Sand, or Clayey Silt with Slight Plasticity
			CL		Inorganic Clay of Low to Medium Plasticity, Gravelly Clay, Sandy Clay, Silty Clay, Lean Clay
			OL		Organic Clay and Organic Silty Clay of Low Plasticity
	SILT AND CLAY Liquid Limit Greater than 50%		MH		Inorganic Silt, Micaceous or Diatomaceous Fine Sandy or Silty Soils, Elastic Silt
			CH		Inorganic Clay of High Plasticity, Fat Clay
			OH		Organic Clay of Medium to High Plasticity, Organic Silt
HIGHLY ORGANIC SOILS			PT		Peat and Other Highly Organic Soils

UNIFIED SOIL CLASSIFICATION SYSTEM

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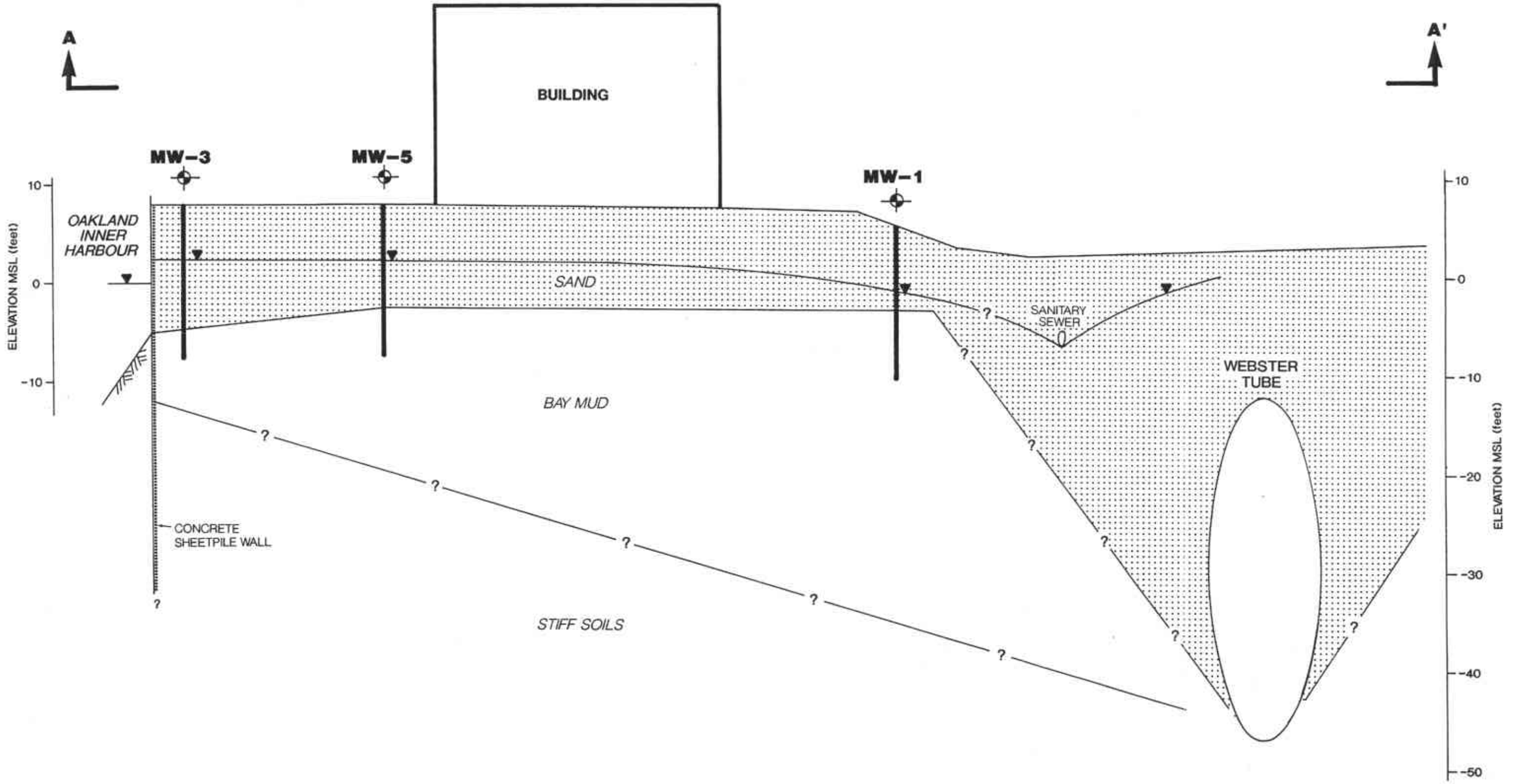
PLATE 5



HORIZONTAL SCALE: 1" = 60'
VERTICAL SCALE: 1" = 10'

GENERALIZED SUBSURFACE PROFILE

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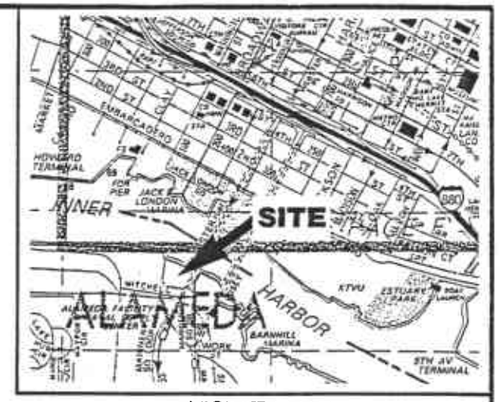
PLATE 6



VICINITY MAP

TEH	TOTAL EXTRACTABLE HYDROCARBONS EPA 8015/3550 (ug/L)
O & G	OIL & GREASE (mg/L)
BTEX	BENZENE, TOLUENE, ETHYLBENZENE, XYLENES (ug/L)
VOCs	VOLATILE ORGANIC HYDROCARBONS EPA 8010 (ug/L)
VC	VINYL CHLORIDE (ug/L)
ND	NONE DETECTED
	MONITORING WELL
	BORING BY OTHERS
	CONCRETE CONTAINMENT WALL
	APPROXIMATE PROPERTY BOUNDARY
	EXISTING STRUCTURES
	APPROXIMATE GROUNDWATER CONTOUR (feet MSL)
	UNCERTAIN (dashed)

MW-3
TEH 1000
O&G ND
B ND
T 1
E ND
X 2.4
VOCs ND

MW-2
TEH 2200
O&G ND
B ND
T 6.5
E 3.2
X 5.3
FREON 4

MS-7
TRPH ND
BTEX ND

PUMP STATION

T-1

T-2

TEH 2200
O&G ND
B 9
T 6
E 49
X 11
VOCs ND
MW-5

STORM DRAIN

MARINER SQUARE DRIVE

SANITARY SEWER

WEBSTER STREET TUBE

MS-18
TRPH 1200
BTEX ND

MS-13
TRPH 23
BTEX ND

MW-1
TEH 580
O&G ND
BTEX ND
VOCs ND

MS-1
TRPH ND
BTEX ND

TEH 1300
O&G ND
B 16
T 2.6
E 0.6
X 2.7
VC 9
MW-4

STORM DRAIN

SANITARY SEWER

MITCHELL AVENUE

2.5'
1.0'
0
-1.5'
2.0'

N
REFERENCE NORTH

APPROXIMATE SCALE (feet)
0 60 120

SOURCE: AIRPHOTO, PAS 8822 12-19-88.

GROUNDWATER CONDITIONS 8/3/92

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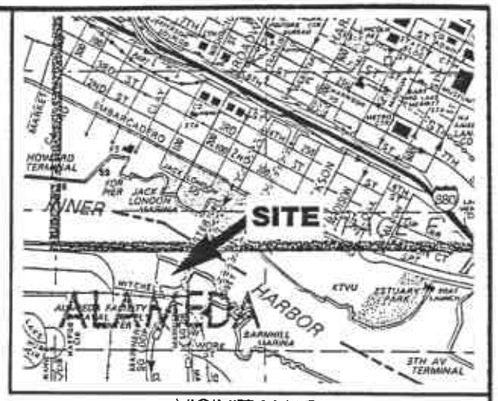
PLATE 7



VICINITY MAP

MW-3
@4.5'
TEH ND
O&G ND
BTEX ND
VOCs ND

MW-2
TEH 40
O&G 66
B <.8
T <.8
E 21
X 10
VOCs ND

MS-7
TRPH 290
BTEX ND

MS-8
TRPH 48
BTEX ND

MW-5
TEH 220
O&G ND
B <.4
T .5
E 1.6
X 1.4
VOCs ND

MS-9
TRPH 12
BTEX ND

MS-10
TRPH 37
BTEX ND

MS-22
TRPH ND
BTEX ND

MS-15
TRPH 6400
BTEX ND

MS-14
TRPH 6300
BTEX ND

MS-16
TRPH 27
BTEX ND

MS-23
TRPH 6200
BTEX ND

MS-17
TRPH 3300
BT ND
E 1600
X 8400

MS-13
TRPH 4900
BTEX ND

MS-11
TRPH 3000
BTEX ND

MS-18
TRPH 11,000
BTEX ND

MS-19
TRPH 3900
BTEX ND

MS-3
TRPH 870
BT ND
E 27
X 54

MS-20
TRPH 970
BTEX ND

MS-12
TRPH 3200
BT ND
E 140
X 270

MS-4
TRPH 13,000
BT ND
E 1000
X 1200

MW-1
@7.0'
TEH ND
O&G ND
BTEX ND
VOCs ND

MS-1
TRPH ND
BTEX ND

MS-2

MS-21
TRPH 39
BTEX ND

MS-5
TRPH 170
BTEX ND

MS-6
TRPH 520
BTEX ND

MW-4
@4.0'
TEH ND
O&G ND
BTEX ND
VOCs ND

T-1

T-2

100ppm

1000ppm

1000ppm

1000ppm

MARINER SQUARE DRIVE

WEBSTER STREET TUBE

MITCHELL AVENUE

	SCI MONITORING WELL
	BORING BY OTHERS
	CONCRETE CONTAINMENT WALL
	APPROXIMATE PROPERTY BOUNDARY
TRPH	TOTAL PETROLEUM HYDROCARBON-IR (mg/kg)
TEH	TOTAL EXTRACTABLE HYDROCARBONS (mg/kg)
O&G	OIL & GREASE (mg/kg)
BTEX	BENZENE, TOLUENE, ETHYLBENZENE, XYLENES (ug/kg)
VOCs	VOLATILE ORGANIC HYDROCARBONS (ug/kg)
ND	NONE DETECTED
	TRPH CONCENTRATION CONTOUR

APPROXIMATE SCALE (feet)
0 60 120

SOURCE: AIRPHOTO, PAS 8822 12-19-88.

SOIL CONTAMINANT CONCENTRATIONS

Subsurface Consultants

2415 MARINER SQUARE – ALAMEDA, CA

JOB NUMBER	DATE	APPROVED
554.005	9/23/92	

PLATE 8

Table 1.
Contaminant Concentrations from Previous Study

Soil

Location	Depth (Feet)	TRPH mg/kg	Benzene ug/kg	Toluene ug/kg	Ethylbenzene ug/kg	Xylenes ug/kg	Other VOCs ug/kg
MS-1	4.5	ND	ND	ND	ND	ND	ND
MS-2	4.5	NA	NA	NA	NA	NA	NA
MS-3	4.5	870	ND	ND	27	54	ND
MS-4	4.5	13000	ND	ND	1000	1200	ND
MS-5	4.5	170	ND	ND	ND	ND	ND
MS-6	4.5	520	ND	ND	ND	ND	ND
MS-7	4.5	290	ND	ND	ND	ND	ND
MS-8	4.5	46	ND	ND	ND	ND	ND
MS-9	4.5	12	ND	ND	ND	ND	ND
MS-10	4.5	37	ND	ND	ND	ND	ND
MS-11	4.5	3000	ND	ND	ND	ND	ND
MS-12	4.5	3200	ND	ND	140	270	ND
MS-13	4.5	4900	ND	ND	ND	ND	ND
MS-14	4.5	6300	ND	ND	ND	ND	ND
MS-15	4.5	6400	ND	ND	ND	ND	ND
MS-16	4.5	27	ND	ND	ND	ND	ND
MS-17	4.5	3300	ND	ND	1600	8400	ND
MS-18	4.5	11000	ND	ND	ND	ND	ND
MS-19	4.5	3900	ND	ND	ND	ND	ND
MS-20	4.5	970	ND	ND	ND	ND	ND
MS-21	4.5	39	ND	ND	ND	ND	ND
MS-22	4.5	ND	ND	ND	ND	ND	ND
MS-23	4.5	6200	ND	ND	ND	ND	ND

Groundwater

Location	TRPH mg/l	Benzene ug/l	Toluene ug/l	Ethylbenzene ug/l	Xylene ug/l	Other VOCs ug/l
MS-1	ND	ND	ND	ND	ND	ND
MS-7	ND	ND	ND	ND	ND	ND
MS-13	23	ND	ND	ND	ND	ND
MS-18	1200	ND	ND	ND	ND	ND

TRPH = Total Recoverable Petroleum Hydrocarbons, EPA 418.1
ND - Not detected
Sample depth was assumed.
VOCs = Volatile Organic Compounds, EPA 8240

Table 2.
Groundwater Elevation Data

Well	Date	TOC Elev (ft)	Groundwater Depth (ft)	Groundwater Elevation (ft)
MW-1	7/30/92	5.08	6.41	-1.33
	7/31/92		6.41	-1.33
	8/3/92		6.50	-1.42
	8/5/92		6.50	-1.42
MW-2	7/30/92	8.30	5.98	2.32
	7/31/92		6.07	2.23
	8/3/92		6.11	2.19
	8/5/92		6.18	2.12
MW-3	7/30/92	7.28	4.97	2.31
	7/31/92		5.05	2.23
	8/3/92		4.43	2.85
	8/5/92		5.06	2.22
MW-4	7/30/92	7.05	4.81	2.24
	7/31/92		4.88	2.17
	8/5/92		4.96	2.09
MW-5	7/30/92	7.68	5.30	2.38
	7/31/92		5.42	2.26
	8/3/92		5.40	2.28
	8/5/92		5.47	2.21

TOC = Top of Casing
Elevation with respect to Mean Sea Level

Table 3.
Tidal Influence Study
8/5/92

	Elevations (feet, msl datum)												
Event	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**
Start Time	**0800**	**0900**	**1000**	**1100**	**1200**	**1300**	**1400**	**1500**	**1600**	**1702**	**1802**	**1900**	**2000**
Station													
Tidal[1] Gage	1.16	0.32	-0.31	-0.88	-0.88	-0.44	0.17	1.37	2.31	3.28	3.62	3.53	3.30
MW-1	-1.42	-1.42	-1.43	-1.42	-1.42	-1.43	-1.42	-1.43	-1.43	-1.43	-1.42	-1.43	-1.43
MW-4	2.09	2.09	2.09	2.09	2.09	2.10	2.11	2.11	2.12	2.12	2.12	2.13	2.13
MW-5	2.21	2.21	2.21	2.21	2.22	2.23	2.23	2.23	2.24	2.25	2.26	2.25	2.25
MW-3	2.22	2.22	2.22	2.22	2.22	2.22	2.22	2.23	2.24	2.25	2.25	2.25	2.25
MW-2	2.12	2.10	2.09	2.09	2.10	2.12	2.14	2.14	2.15	2.17	2.15	2.14	2.14
Tidal[2] Gage	0.47	0.02	-0.49	-1.03	-0.86	-0.20	0.91	1.73	2.52	3.42	3.64	3.22	3.26
Stop Time	**0826**	**0926**	**1025**	**1125**	**1222**	**1324**	**1431**	**1524**	**1622**	**1723**	**1824**	**1924**	**2031**

[1] = initial gage reading
[2] = final gage reading
MSL = Mean Sea Level

Table 4.
Contaminant Concentrations in Soil

Sample ID	Oil and Grease mg/kg	TEH mg/kg	Benzene ug/kg	Toluene ug/kg	Ethyl-Benzene ug/kg	Xylenes ug/kg	Volatile Halocarbons ug/kg
1 @ 7.0'	ND (50)	ND(1)	ND (5)	ND (5)	ND (5)	ND (5)	ND (10)
2 @ 6.0'	66	40	ND (800)	ND (800)	21,000	10,000	ND (10)
3 @ 4.5'	ND (50)	ND(1)	ND (5)	ND (5)	ND (5)	ND(5)	ND (10)
4 @ 4.0'	ND (50)	ND(1)	ND (5)	ND (5)	ND (5)	ND (5)	ND (10)
5 @ 4.5'	ND (50)	220	ND (400)	500	1600	1400	ND (10)

Table 5.
Contaminant Concentrations in Groundwater

Sample ID	Oil and Grease mg/l	TEH ug/l	Benzene ug/l	Toluene ug/l	Ethyl-Benzene ug/l	Xylenes ug/l	Volatile Halocarbons ug/L
MW-1	ND (5)	580	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (5-20)
MW-2	ND (5)	2200	ND (0.5)	6.5	3.2	5.3	4-Freon 113
MW-3	ND (5)	1000	ND (0.5)	1.0	ND (0.5)	2.4	ND
MW-4	ND (5)	1300	16	2.6	0.6	2.7	9-Vinyl Chloride
MW-5	ND (5)	2200	9	6	49	11	ND (5-20)

TEH = total extractable hydrocarbons, EPA 8015/3550
mg/kg = milligrams per kilogram or parts per million (ppm)
ug/kg = micrograms per kilogram or parts per billion (ppb)
mg/l = milligrams per liter or parts per billion (ppb)
ug/l = micrograms per liter or parts per billion (ppb)
ND = None detected above reporting limits indicated in parentheses.

Appendix A

Investigation Protocol

APPENDIX A

INVESTIGATION PROTOCOL

A. Test Borings

The test borings were drilled using a truck-mounted drill rig equipped with 8-inch diameter hollow stem augers. Our field geologist observed drilling operations, prepared detailed logs of the test borings and obtained undisturbed samples of the materials encountered. The test boring logs are presented on Plates 2 through 4. Soils are classified in accordance with the Unified Soil Classification System described on Plate 5.

A Modified California Sampler (outside diameter of 3.0 inches, inside diameter of 2.5 inches) and California Drive Sampler (outside diameter of 2.5 inches, inside diameter of 2.0 inches) were used to obtain soil samples. The number of blows required to drive the sampler the final 12 inches of each 18-inch penetration was recorded and are presented on the test boring logs. Drilling and sampling equipment was thoroughly steam-cleaned prior to each use to reduce the likelihood of cross-contamination between samples and/or borings.

Soil samples were retained in 2.0-inch and 2.5-inch-diameter brass liners. Teflon sheeting was placed over the ends of the soil liners; the liners were subsequently capped and sealed with duct tape. The shoe sample from each drive was retained in a plastic bag and screened for volatile organics using an Organic Vapor Meter (OVM). The sealed liners were placed in ice-filled coolers and

remained iced until delivery to the analytical laboratory. Chain-of-custody records accompanied the samples.

Soil cuttings generated during drilling were stockpiled on-site. Waste water generated during steam cleaning was collected and placed in 55 gallon drums and left on site.

B. Groundwater Monitoring Wells

At the completion of drilling, a monitoring well was installed in each test boring. Well schematics are shown on the respective test boring logs. In general, the wells consist of 2-inch diameter, Schedule 40 PVC well casing having flush-threaded joints. The well casing was steam-cleaned prior to being placed in the borehole.

The lower 10 feet of each well consists of machine-slotted well screen having 0.020-inch slots. The remaining portion of the well consists of blank pipe. Each well is provided with a threaded bottom cap and locking top cap. The well screen is encased in a filter composed of Lonestar No. 3 washed sand. The filter sand was placed by carefully pouring it through the annulus between the hollow stem of the auger and the well casing. Periodically, the augers were raised to allow the sand to fill the annulus between the casing and the borehole. The filter extends from just below the bottom of the well to at least one half foot above the top of the screened section. Bentonite pellets were placed to approximately 6 inches above the sand filter. The annulus above the bentonite pellets was backfilled with cement grout. The grout mixture consists of Portland cement mixed with clean water. Each

monitoring well was completed below grade and is protected by a traffic-rated valve box.

The wells were developed after the grout seal had hardened. The depth to water was measured below the top of the well casing using an electric sounder and/or steel tape with water sensitive paste. The wells were then developed by removing water with a new disposable bailer. Approximately 30 to 55 gallons of water were removed from each well. The wells were sampled 24 hours after development. Prior to sampling the wells were purged of about five gallons of water. When the wells had recharged to within 80 percent of their initial levels they were sampled with a new disposable bailer. Well development and purge water were replaced in a 55 gallon drums and left on-site for later disposal by others. Well development and sampling forms are attached.

Groundwater samples were retained in chilled, pre-cleaned containers supplied by the laboratory. Water samples were placed in ice-filled coolers and remained iced until delivery to the analytical laboratory. Chain-of-custody records accompanied the samples to the laboratory.

C. Tidal Study

The tidal study was performed by measuring water levels in the wells and at a tidal gauge over a twelve hour period.

The tidal gauge was constructed by placing 2 inch diameter, PVC well screen in the Oakland Estuary adjacent to the building near MW-2 as shown on Plate 1. The elevation of the top of gauge

casing was measured with respect to the other well casings during our level survey.

The tide level and groundwater level were measured using an electronic well sounder. The measuring events were conducted over a period of time from 8 a.m. to 8 p.m. Each event started approximately on the hour with an initial reading of the tidal gauge. The water levels in the wells were measured in a predetermined order. A final tidal gauge reading of each event was also taken. The duration of each measuring event was approximately 25 minutes.

Appendix B

Analytical Testing

APPENDIX B

ANALYTICAL TESTING

Analytical testing services were provided by Curtis and Tompkins, a State of California Department of Health Services (DHS) certified laboratory for hazardous waste and water testing. The analytical tests were performed on individual samples. A summary of sample preparation and test methods are presented below.

Test Analysis	Sample Preparation Method	Analysis Method
Total Extractable Hydrocarbons	EPA 3550	EPA 8015 modified
Benzene, Toluene, Ethylbenzene, and Xylene	EPA 5030	EPA 8020
Purgeable Halocarbons	EPA 5030	EPA 8010
Oil and Grease	EPA 3550	EPA 8015

Test results are summarized in Tables 4 and 5. Analytical test reports and Chain-of-Custody records are attached.

Curtis & Tompkins, Ltd., Analytical Laboratories, Since 1878
2323 Fifth Street, Berkeley, CA 94710, Phone (415) 486-0900

DATE RECEIVED: 07/30/92
DATE REPORTED: 08/11/92

LABORATORY NUMBER: 108114

CLIENT: SUBSURFACE CONSULTANTS

PROJECT ID: 554.005

LOCATION: MARINER SQUARE

RESULTS: SEE ATTACHED

Revilewed By

Reviewed By

Curtis & Tompkins, Ltd.

LABORATORY NUMBER: 108114
CLIENT: SUBSURFACE CONSULTANTS
PROJECT ID: 554.005
LOCATION: MARINER SQUARE

DATE SAMPLED: 07/22-29/9
DATE RECEIVED: 07/30/92
DATE EXTRACTED: 07/31/92
DATE ANALYZED: 08/01/92
DATE REPORTED: 08/11/92

Extractable Petroleum Hydrocarbons in Soils & Wastes
California DOHS Method
LUFT Manual October 1989

LAB ID	SAMPLE ID	KEROSENE RANGE (mg/Kg)	DIESEL RANGE (mg/Kg)	REPORTING LIMIT* (mg/Kg)
108114-1	1 @ 7.0'	ND	ND	1
108114-2	2 @ 6.0'	**	40	1
108114-3	3 @ 4.5'	ND	ND	1
108114-4	4 @ 4.0'	ND	ND	1
108114-5	5 @ 4.5'	220	***	10

ND = Not Detected at or above reporting limit.

*Reporting limit applies to all analytes.

** Quantitated as Diesel Range.
*** Quantitated as Kerosene Range.

QA/QC SUMMARY

RPD, %	12
RECOVERY, %	81

Curtis & Tompkins, Ltd.

LABORATORY NUMBER: 108114
CLIENT: SUBSURFACE CONSULTANTS
PROJECT ID: 554.005
LOCATION: MARINER SQUARE

DATE SAMPLED: 07/22-29/92
DATE RECEIVED: 07/30/92
DATE ANALYZED: 08/04-05/92
DATE REPORTED: 08/11/92

Benzene, Toluene, Ethyl Benzene, Xylenes by EPA 8020
Extraction by EPA 5030 Purge and Trap

LAB ID	SAMPLE ID	BENZENE (ug/Kg)	TOLUENE (ug/Kg)	ETHYL BENZENE (ug/Kg)	TOTAL XYLENES (ug/Kg)	REPORTING LIMIT * (ug/Kg)
108114-1	1 @ 7.0'	ND	ND	ND	ND	5
108114-3	3 @ 4.5'	ND	ND	ND	ND	5
108114-4	4 @ 4.0'	ND	ND	ND	ND	5

ND = Not detected at or above reporting limit.

* Reporting Limit applies to all analytes.

QA/QC SUMMARY

RPD, %	1
RECOVERY, %	116

Curtis & Tompkins, Ltd.

LABORATORY NUMBER: 108114
CLIENT: SUBSURFACE CONSULTANTS
PROJECT ID: 554.005
LOCATION: MARINER SQUARE

DATE SAMPLED: 07/22-23/92
DATE RECEIVED: 07/30/92
DATE ANALYZED: 08/05/92
DATE REPORTED: 08/11/92

Benzene, Toluene, Ethyl Benzene, Xylenes by EPA 8020
Extraction by EPA 5030 Purge and Trap

LAB ID	SAMPLE ID	BENZENE (ug/Kg)	TOLUENE (ug/Kg)	ETHYL BENZENE (ug/Kg)	TOTAL XYLENES (ug/Kg)	REPORTING LIMIT * (ug/Kg)
108114-2	2 @ 6.0'	ND	ND	21,000	10,000	800
108114-5	5 @ 4.5'	ND	500	1,600	1,400	400

ND = Not detected at or above reporting limit.

* Reporting Limit applies to all analytes.

QA/QC SUMMARY

RPD, %	2
RECOVERY, %	101

Curtis & Tompkins, Ltd.

LABORATORY NUMBER: 108114-1
CLIENT: SUBSURFACE CONSULTANTS
PROJECT ID: 554.005
LOCATION: MARINER SQUARE
SAMPLE ID: 1 @ 7.0'

DATE SAMPLED: 07/22/92
DATE RECEIVED: 07/30/92
DATE REQUESTED: 08/03/92
DATE ANALYZED: 08/05/92
DATE REPORTED: 08/11/92

EPA 8010: Volatile Halocarbons in Soil & Wastes
Extraction Method: EPA 5030 - Purge & Trap

Compound	RESULT ug/Kg	REPORTING LIMIT ug/Kg
Chloromethane	ND	10
Bromomethane	ND	10
Vinyl chloride	ND	10
Chloroethane	ND	10
Methylene chloride	ND	20
Trichlorofluoromethane	ND	5
1,1-Dichloroethene	ND	5
1,1-Dichloroethane	ND	5
cis-1,2-Dichloroethene	ND	5
trans-1,2-Dichloroethene	ND	5
Chloroform	ND	5
Freon 113	ND	5
1,2-Dichloroethane	ND	5
1,1,1-Trichloroethane	ND	5
Carbon tetrachloride	ND	5
Bromodichloromethane	ND	5
1,2-Dichloropropane	ND	5
cis-1,3-Dichloropropene	ND	5
Trichloroethylene	ND	5
1,1,2-Trichloroethane	ND	5
trans-1,3-Dichloropropene	ND	5
Dibromochloromethane	ND	5
2-Chloroethylvinyl ether	ND	10
Bromoform	ND	10
Tetrachloroethene	ND	5
1,1,2,2-Tetrachloroethane	ND	5
Chlorobenzene	ND	5
1,3-Dichlorobenzene	ND	5
1,4-Dichlorobenzene	ND	5
1,2-Dichlorobenzene	ND	5

ND = Not detected at or above reporting limit.

QA/QC SUMMARY

Surrogate Recovery, %	108

Curtis & Tompkins, Ltd.

LABORATORY NUMBER: 108114-2
CLIENT: SUBSURFACE CONSULTANTS
PROJECT ID: 554.005
LOCATION: MARINER SQUARE
SAMPLE ID: 2 @ 6.0'

DATE SAMPLED: 07/22/92
DATE RECEIVED: 07/30/92
DATE REQUESTED: 08/03/92
DATE ANALYZED: 08/05/92
DATE REPORTED: 08/11/92

EPA 8010: Volatile Halocarbons in Soil & Wastes
Extraction Method: EPA 5030 - Purge & Trap

Compound	RESULT ug/Kg	REPORTING LIMIT ug/Kg
Chloromethane	ND	50
Bromomethane	ND	50
Vinyl chloride	ND	50
Chloroethane	ND	50
Methylene chloride	ND	100
Trichlorofluoromethane	ND	25
1,1-Dichloroethene	ND	25
1,1-Dichloroethane	ND	25
cis-1,2-Dichloroethene	ND	25
trans-1,2-Dichloroethene	ND	25
Chloroform	ND	25
Freon 113	ND	25
1,2-Dichloroethane	ND	25
1,1,1-Trichloroethane	ND	25
Carbon tetrachloride	ND	25
Bromodichloromethane	ND	25
1,2-Dichloropropane	ND	25
cis-1,3-Dichloropropene	ND	25
Trichloroethylene	ND	25
1,1,2-Trichloroethane	ND	25
trans-1,3-Dichloropropene	ND	25
Dibromochloromethane	ND	25
2-Chloroethylvinyl ether	ND	50
Bromoform	ND	50
Tetrachloroethene	ND	25
1,1,2,2-Tetrachloroethane	ND	25
Chlorobenzene	ND	25
1,3-Dichlorobenzene	ND	25
1,4-Dichlorobenzene	ND	25
1,2-Dichlorobenzene	ND	25

ND = Not detected at or above reporting limit.

QA/QC SUMMARY

Surrogate Recovery, %	110

Curtis & Tompkins, Ltd.

LABORATORY NUMBER: 108114-3
CLIENT: SUBSURFACE CONSULTANTS
PROJECT ID: 554.005
LOCATION: MARINER SQUARE
SAMPLE ID: 3 @ 4.5'

DATE SAMPLED: 07/29/92
DATE RECEIVED: 07/30/92
DATE REQUESTED: 08/03/92
DATE ANALYZED: 08/05/92
DATE REPORTED: 08/11/92

EPA 8010: Volatile Halocarbons in Soil & Wastes
Extraction Method: EPA 5030 - Purge & Trap

Compound	RESULT ug/Kg	REPORTING LIMIT ug/Kg
Chloromethane	ND	10
Bromomethane	ND	10
Vinyl chloride	ND	10
Chloroethane	ND	10
Methylene chloride	ND	20
Trichlorofluoromethane	ND	5
1,1-Dichloroethene	ND	5
1,1-Dichloroethane	ND	5
cis-1,2-Dichloroethene	ND	5
trans-1,2-Dichloroethene	ND	5
Chloroform	ND	5
Freon 113	ND	5
1,2-Dichloroethane	ND	5
1,1,1-Trichloroethane	ND	5
Carbon tetrachloride	ND	5
Bromodichloromethane	ND	5
1,2-Dichloropropane	ND	5
cis-1,3-Dichloropropene	ND	5
Trichloroethylene	ND	5
1,1,2-Trichloroethane	ND	5
trans-1,3-Dichloropropene	ND	5
Dibromochloromethane	ND	5
2-Chloroethylvinyl ether	ND	10
Bromoform	ND	10
Tetrachloroethene	ND	5
1,1,2,2-Tetrachloroethane	ND	5
Chlorobenzene	ND	5
1,3-Dichlorobenzene	ND	5
1,4-Dichlorobenzene	ND	5
1,2-Dichlorobenzene	ND	5

ND = Not detected at or above reporting limit.

QA/QC SUMMARY

Surrogate Recovery, %	114

Curtis & Tompkins, Ltd.

LABORATORY NUMBER: 108114-4
CLIENT: SUBSURFACE CONSULTANTS
PROJECT ID: 554.005
LOCATION: MARINER SQUARE
SAMPLE ID: 4 @ 4.0'

DATE SAMPLED: 07/22/92
DATE RECEIVED: 07/30/92
DATE REQUESTED: 08/03/92
DATE ANALYZED: 08/05/92
DATE REPORTED: 08/11/92

EPA 8010: Volatile Halocarbons in Soil & Wastes
Extraction Method: EPA 5030 - Purge & Trap

Compound	RESULT ug/Kg	REPORTING LIMIT ug/Kg
Chloromethane	ND	10
Bromomethane	ND	10
Vinyl chloride	ND	10
Chloroethane	ND	10
Methylene chloride	ND	20
Trichlorofluoromethane	ND	5
1,1-Dichloroethene	ND	5
1,1-Dichloroethane	ND	5
cis-1,2-Dichloroethene	ND	5
trans-1,2-Dichloroethene	ND	5
Chloroform	ND	5
Freon 113	ND	5
1,2-Dichloroethane	ND	5
1,1,1-Trichloroethane	ND	5
Carbon tetrachloride	ND	5
Bromodichloromethane	ND	5
1,2-Dichloropropane	ND	5
cis-1,3-Dichloropropene	ND	5
Trichloroethylene	ND	5
1,1,2-Trichloroethane	ND	5
trans-1,3-Dichloropropene	ND	5
Dibromochloromethane	ND	5
2-Chloroethylvinyl ether	ND	10
Bromoform	ND	10
Tetrachloroethene	ND	5
1,1,2,2-Tetrachloroethane	ND	5
Chlorobenzene	ND	5
1,3-Dichlorobenzene	ND	5
1,4-Dichlorobenzene	ND	5
1,2-Dichlorobenzene	ND	5

ND = Not detected at or above reporting limit.

QA/QC SUMMARY

Surrogate Recovery, %	109

Curtis & Tompkins, Ltd.

LABORATORY NUMBER: 108114-5
CLIENT: SUBSURFACE CONSULTANTS
PROJECT ID: 554.005
LOCATION: MARINER SQUARE
SAMPLE ID: 5 @ 4.5'

DATE SAMPLED: 07/23/92
DATE RECEIVED: 07/30/92
DATE REQUESTED: 08/03/92
DATE ANALYZED: 08/05/92
DATE REPORTED: 08/11/92

EPA 8010: Volatile Halocarbons in Soil & Wastes
Extraction Method: EPA 5030 - Purge & Trap

Compound	RESULT ug/Kg	REPORTING LIMIT ug/Kg
Chloromethane	ND	50
Bromomethane	ND	50
Vinyl chloride	ND	50
Chloroethane	ND	50
Methylene chloride	ND	100
Trichlorofluoromethane	ND	25
1,1-Dichloroethene	ND	25
1,1-Dichloroethane	ND	25
cis-1,2-Dichloroethene	ND	25
trans-1,2-Dichloroethene	ND	25
Chloroform	ND	25
Freon 113	ND	25
1,2-Dichloroethane	ND	25
1,1,1-Trichloroethane	ND	25
Carbon tetrachloride	ND	25
Bromodichloromethane	ND	25
1,2-Dichloropropane	ND	25
cis-1,3-Dichloropropene	ND	25
Trichloroethylene	ND	25
1,1,2-Trichloroethane	ND	25
trans-1,3-Dichloropropene	ND	25
Dibromochloromethane	ND	25
2-Chloroethylvinyl ether	ND	50
Bromoform	ND	50
Tetrachloroethene	ND	25
1,1,2,2-Tetrachloroethane	ND	25
Chlorobenzene	ND	25
1,3-Dichlorobenzene	ND	25
1,4-Dichlorobenzene	ND	25
1,2-Dichlorobenzene	ND	25

ND = Not detected at or above reporting limit.

QA/QC SUMMARY

Surrogate Recovery, %	111

Curtis & Tompkins, Ltd.

LABORATORY NUMBER: 108114
CLIENT: SUBSURFACE CONSULTANTS
PROJECT ID: 554.005
LOCATION: MARINER SQUARE
SAMPLE ID: METHOD BLANK

DATE ANALYZED: 08/05/92
DATE REPORTED: 08/11/92

EPA 8010: Volatile Halocarbons in Soil & Wastes
Extraction Method: EPA 5030 - Purge & Trap

Compound	RESULT ug/Kg	REPORTING LIMIT ug/Kg
Chloromethane	ND	10
Bromomethane	ND	10
Vinyl chloride	ND	10
Chloroethane	ND	10
Methylene chloride	ND	20
Trichlorofluoromethane	ND	5
1,1-Dichloroethene	ND	5
1,1-Dichloroethane	ND	5
cis-1,2-Dichloroethene	ND	5
trans-1,2-Dichloroethene	ND	5
Chloroform	ND	5
Freon 113	ND	5
1,2-Dichloroethane	ND	5
1,1,1-Trichloroethane	ND	5
Carbon tetrachloride	ND	5
Bromodichloromethane	ND	5
1,2-Dichloropropane	ND	5
cis-1,3-Dichloropropene	ND	5
Trichloroethylene	ND	5
1,1,2-Trichloroethane	ND	5
trans-1,3-Dichloropropene	ND	5
Dibromochloromethane	ND	5
2-Chloroethylvinyl ether	ND	10
Bromoform	ND	10
Tetrachloroethene	ND	5
1,1,2,2-Tetrachloroethane	ND	5
Chlorobenzene	ND	5
1,3-Dichlorobenzene	ND	5
1,4-Dichlorobenzene	ND	5
1,2-Dichlorobenzene	ND	5

ND = Not detected at or above reporting limit.

QA/QC SUMMARY

Surrogate Recovery, %	105

Curtis & Tompkins, Ltd.

Client: Subsurface Consultants

Laboratory Login Number: 108114

Project Name: Mariner Square
Project Number: 554.005

Report Date: 11 August 92

ANALYSIS: Hydrocarbon Oil & Grease (Gravimetric) **METHOD:** SMWW 17:5520EF

Lab ID	Sample ID	Matrix	Sampled	Received	Analyzed	Result	Units	RL	Analyst	QC Batch
108114-001	1 @ 7.0'	Soil	22-JUL-92	30-JUL-92	05-AUG-92	ND	mg/Kg	50	TR	6146
108114-002	2 @ 6.0'	Soil	22-JUL-92	30-JUL-92	05-AUG-92	66.	mg/Kg	50	TR	6146
108114-003	3 @ 4.5'	Soil	29-JUL-92	30-JUL-92	05-AUG-92	ND	mg/Kg	50	TR	6146
108114-004	4 @ 4.0'	Soil	22-JUL-92	30-JUL-92	05-AUG-92	ND	mg/Kg	50	TR	6146
108114-005	5 @ 4.5'	Soil	23-JUL-92	30-JUL-92	05-AUG-92	ND	mg/Kg	50	TR	6146

ND = Not Detected at or above Reporting Limit (RL).

Curtis & Tompkins, Ltd.

Q C B a t c h R e p o r t

Client: Subsurface Consultants
Project Name: Mariner Square
Project Number: 554.005

Laboratory Login Number: 108114
Report Date: 11 August 92

ANALYSIS: Hydrocarbon Oil & Grease (Gravimetric) **QC Batch Number: 6146**

Blank Results

Sample ID	Result	MDL	Units	Method	Date Analyzed
BLANK	ND	50	mg/Kg	SMWW 17:5520EF	05-AUG-92

Spike/Duplicate Results

Sample ID	Recovery	Method	Date Analyzed
BS	83%	SMWW 17:5520EF	05-AUG-92
BSD	85%	SMWW 17:5520EF	05-AUG-92

		Control Limits
Average Spike Recovery	84%	80% - 120%
Relative Percent Difference	2.2%	< 20%

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

DATE RECEIVED: 8/04/92
DATE REPORTED: 8/18/92

LABORATORY NUMBER: 108162

CLIENT: SUBSURFACE CONSULTANTS

PROJECT ID: 554.005

LOCATION: MARINER SQUARE

RESULTS: SEE ATTACHED

Reviewed By

Curtis & Tompkins, Ltd.

LABORATORY NUMBER: 108162
CLIENT: SUBSURFACE CONSULTANTS
PROJECT ID: 554.005
LOCATION: MARINER SQUARE

DATE SAMPLED: 8/02/92
DATE RECEIVED: 8/04/92
DATE ANALYZED: 8/07/92
DATE REPORTED: 8/18/92

Benzene, Toluene, Ethyl Benzene, Xylenes by EPA 8020
Extraction by EPA 5030 Purge and Trap

LAB ID	SAMPLE ID	BENZENE (ug/L)	TOLUENE (ug/L)	ETHYL BENZENE (ug/L)	TOTAL XYLENES (ug/L)	REPORTING LIMIT (ug/L)
108162-001	MW-1	ND	ND	ND	ND	0.5
108162-005	MW-5	9	6	49	11	5

ND = Not detected at or above reporting limit. Reporting limit applies to all analytes.

QA/QC SUMMARY

RPD, %	5
RECOVERY, %	92

Curtis & Tompkins, Ltd.

LABORATORY NUMBER: 108162
CLIENT: SUBSURFACE CONSULTANTS
PROJECT ID: 554.005
LOCATION: MARINER SQUARE

DATE SAMPLED: 8/02/92
DATE RECEIVED: 8/04/92
DATE ANALYZED: 8/11/92
DATE REPORTED: 8/18/92

Benzene, Toluene, Ethyl Benzene, Xylenes by EPA 8020
Extraction by EPA 5030 Purge and Trap

LAB ID	SAMPLE ID	BENZENE (ug/L)	TOLUENE (ug/L)	ETHYL BENZENE (ug/L)	TOTAL XYLENES (ug/L)	REPORTING LIMIT (ug/L)
108162-002	MW-2	ND	6.5	3.2	5.3	0.5
108162-003	MW-3	ND	1.0	ND	2.4	0.5
108162-004	MW-4	16	2.6	0.6	2.7	0.5

ND = Not detected at or above reporting limit. Reporting limit applies to all analytes.

QA/QC SUMMARY

RPD, %	3
RECOVERY, %	103

Curtis & Tompkins, Ltd.

LABORATORY NUMBER: 108162
CLIENT: SUBSURFACE CONSULTANTS
PROJECT ID: 554.005
LOCATION: MARINER SQUARE

DATE SAMPLED: 8/02/92
DATE RECEIVED: 8/04/92
DATE EXTRACTED: 8/07/92
DATE ANALYZED: 8/7,8/92
DATE REPORTED: 8/11/92

Extractable Petroleum Hydrocarbons in Aqueous Solutions
California DOHS Method
LUFT Manual October 1989

LAB ID	CLIENT ID	KEROSENE RANGE (ug/L)	DIESEL RANGE (ug/L)	REPORTING LIMIT* (ug/L)
108162-001	MW-1	**	580	50
108162-002	MW-2	**	2,200	50
108162-003	MW-3	**	1,000	50
108162-004	MW-4	**	1,300	50
108162-005	MW-5	**	2,200	50

* Reporting limit applies to all analytes.
** Quantitated as diesel range. Kerosene range not reported.

QA/QC SUMMARY

RPD, %	8
RECOVERY, %	123

Curtis & Tompkins, Ltd.

Client: Subsurface Consultants

Laboratory Login Number: 108162

Project Name: Mariner Square
Project Number: 554.005

Report Date: 11 August 92

ANALYSIS: Hydrocarbon Oil & Grease (Gravimetric) **METHOD:** SMWW 17:5520BF

Lab ID	Sample ID	Matrix	Sampled	Received	Analyzed	Result	Units	RL	Analyst	QC Batch
108162-001	MW-1	Water	02-AUG-92	04-AUG-92	06-AUG-92	ND	mg/L	5	TR	6155
108162-002	MW-2	Water	02-AUG-92	04-AUG-92	06-AUG-92	ND	mg/L	5	TR	6155
108162-003	MW-3	Water	02-AUG-92	04-AUG-92	06-AUG-92	ND	mg/L	5	TR	6155
108162-004	MW-4	Water	02-AUG-92	04-AUG-92	06-AUG-92	ND	mg/L	5	TR	6155
108162-005	MW-5	Water	02-AUG-92	04-AUG-92	06-AUG-92	ND	mg/L	5	TR	6155

ND = Not Detected at or above Reporting Limit (RL).

Curtis & Tompkins, Ltd.

Q C B a t c h R e p o r t

Client: Subsurface Consultants
Project Name: Mariner Square
Project Number: 554.005

Laboratory Login Number: 108162
Report Date: 11 August 92

ANALYSIS: Hydrocarbon Oil & Grease (Gravimetric) **QC Batch Number: 6155**

Blank Results

Sample ID	Result	MDL	Units	Method	Date Analyzed
BLANK	ND	5	mg/L	SMWW 17:5520BF	06-AUG-92

Spike/Duplicate Results

Sample ID	Recovery	Method	Date Analyzed
BS	92%	SMWW 17:5520BF	06-AUG-92
BSD	86%	SMWW 17:5520BF	06-AUG-92

		Control Limits
Average Spike Recovery	89%	80% - 120%
Relative Percent Difference	6.0%	< 20%

Curtis & Tompkins, Ltd.

LABORATORY NUMBER: 108162-001
CLIENT: SUBSURFACE CONSULTANTS
PROJECT ID: 554.005
LOCATION: MARINER SQUARE
SAMPLE ID: MW-1

DATE SAMPLED: 8/02/92
DATE RECEIVED: 8/04/92
DATE ANALYZED: 8/06/92
DATE REPORTED: 8/11/92

EPA 8010
Purgeable Halocarbons in Water

Compound	Result ug/L	Reporting Limit ug/L
Chloromethane	ND	2
Bromomethane	ND	2
Vinyl chloride	ND	2
Chloroethane	ND	2
Methylene chloride	ND	20
Trichlorofluoromethane	ND	1
1,1-Dichloroethene	ND	1
1,1-Dichloroethane	ND	1
cis-1,2-Dichloroethene	ND	1
trans-1,2-Dichloroethene	ND	1
Chloroform	ND	1
Freon 113	ND	1
1,2-Dichloroethane	ND	1
1,1,1-Trichloroethane	ND	1
Carbon tetrachloride	ND	1
Bromodichloromethane	ND	1
1,2-Dichloropropane	ND	1
cis-1,3-Dichloropropene	ND	1
Trichloroethene	ND	1
1,1,2-Trichloroethane	ND	1
trans-1,3-Dichloropropene	ND	1
Dibromochloromethane	ND	1
2-Chloroethylvinyl ether	ND	2
Bromoform	ND	2
Tetrachloroethene	ND	1
1,1,2,2-Tetrachloroethane	ND	1
Chlorobenzene	ND	1
1,3-Dichlorobenzene	ND	1
1,4-Dichlorobenzene	ND	1
1,2-Dichlorobenzene	ND	1

ND = Not detected at or above reporting limit.

QA/QC SUMMARY

Surrogate Recovery, %	106

Curtis & Tompkins, Ltd.

LABORATORY NUMBER: 108162-002
CLIENT: SUBSURFACE CONSULTANTS
PROJECT ID: 554.005
LOCATION: MARINER SQUARE
SAMPLE ID: MW-2

DATE SAMPLED: 8/02/92
DATE RECEIVED: 8/04/92
DATE ANALYZED: 8/06/92
DATE REPORTED: 8/11/92

EPA 8010
Purgeable Halocarbons in Water

Compound	Result ug/L	Reporting Limit ug/L
Chloromethane	ND	2
Bromomethane	ND	2
Vinyl chloride	ND	2
Chloroethane	ND	2
Methylene chloride	ND	20
Trichlorofluoromethane	ND	1
1,1-Dichloroethene	ND	1
1,1-Dichloroethane	ND	1
cis-1,2-Dichloroethene	ND	1
trans-1,2-Dichloroethene	ND	1
Chloroform	ND	1
Freon 113	(4)	1
1,2-Dichloroethane	ND	1
1,1,1-Trichloroethane	ND	1
Carbon tetrachloride	ND	1
Bromodichloromethane	ND	1
1,2-Dichloropropane	ND	1
cis-1,3-Dichloropropene	ND	1
Trichloroethene	ND	1
1,1,2-Trichloroethane	ND	1
trans-1,3-Dichloropropene	ND	1
Dibromochloromethane	ND	1
2-Chloroethylvinyl ether	ND	2
Bromoform	ND	1
Tetrachloroethene	ND	1
1,1,2,2-Tetrachloroethane	ND	1
Chlorobenzene	ND	1
1,3-Dichlorobenzene	ND	1
1,4-Dichlorobenzene	ND	1
1,2-Dichlorobenzene	ND	1

ND = Not detected at or above reporting limit.

QA/QC SUMMARY

Surrogate Recovery, %	102

Curtis & Tompkins, Ltd.

LABORATORY NUMBER: 108162-003
CLIENT: SUBSURFACE CONSULTANTS
PROJECT ID: 554.005
LOCATION: MARINER SQUARE
SAMPLE ID: MW-3

DATE SAMPLED: 8/02/92
DATE RECEIVED: 8/04/92
DATE ANALYZED: 8/07/92
DATE REPORTED: 8/11/92

EPA 8010
Purgeable Halocarbons in Water

Compound	Result ug/L	Reporting Limit ug/L
Chloromethane	ND	2
Bromomethane	ND	2
Vinyl chloride	ND	2
Chloroethane	ND	2
Methylene chloride	ND	20
Trichlorofluoromethane	ND	1
1,1-Dichloroethene	ND	1
1,1-Dichloroethane	ND	1
cis-1,2-Dichloroethene	ND	1
trans-1,2-Dichloroethene	ND	1
Chloroform	ND	1
Freon 113	ND	1
1,2-Dichloroethane	ND	1
1,1,1-Trichloroethane	ND	1
Carbon tetrachloride	ND	1
Bromodichloromethane	ND	1
1,2-Dichloropropane	ND	1
cis-1,3-Dichloropropene	ND	1
Trichloroethene	ND	1
1,1,2-Trichloroethane	ND	1
trans-1,3-Dichloropropene	ND	1
Dibromochloromethane	ND	1
2-Chloroethylvinyl ether	ND	2
Bromoform	ND	2
Tetrachloroethene	ND	1
1,1,2,2-Tetrachloroethane	ND	1
Chlorobenzene	ND	1
1,3-Dichlorobenzene	ND	1
1,4-Dichlorobenzene	ND	1
1,2-Dichlorobenzene	ND	1

ND = Not detected at or above reporting limit.

QA/QC SUMMARY

Surrogate Recovery, %	105

Curtis & Tompkins, Ltd.

LABORATORY NUMBER: 108162-004
CLIENT: SUBSURFACE CONSULTANTS
PROJECT ID: 554.005
LOCATION: MARINER SQUARE
SAMPLE ID: MW-4

DATE SAMPLED: 8/02/92
DATE RECEIVED: 8/04/92
DATE ANALYZED: 8/07/92
DATE REPORTED: 8/11/92

EPA 8010
Purgeable Halocarbons in Water

Compound	Result ug/L	Reporting Limit ug/L
Chloromethane	ND	2
Bromomethane	ND	2
Vinyl chloride	9	2
Chloroethane	ND	2
Methylene chloride	ND	20
Trichlorofluoromethane	ND	1
1,1-Dichloroethene	ND	1
1,1-Dichloroethane	ND	1
cis-1,2-Dichloroethene	ND	1
trans-1,2-Dichloroethene	ND	1
Chloroform	ND	1
Freon 113	ND	1
1,2-Dichloroethane	ND	1
1,1,1-Trichloroethane	ND	1
Carbon tetrachloride	ND	1
Bromodichloromethane	ND	1
1,2-Dichloropropane	ND	1
cis-1,3-Dichloropropene	ND	1
Trichloroethene	ND	1
1,1,2-Trichloroethane	ND	1
trans-1,3-Dichloropropene	ND	1
Dibromochloromethane	ND	1
2-Chloroethylvinyl ether	ND	2
Bromoform	ND	2
Tetrachloroethene	ND	1
1,1,2,2-Tetrachloroethane	ND	1
Chlorobenzene	ND	1
1,3-Dichlorobenzene	ND	1
1,4-Dichlorobenzene	ND	1
1,2-Dichlorobenzene	ND	1

ND = Not detected at or above reporting limit.

QA/QC SUMMARY

Surrogate Recovery, %	102

Curtis & Tompkins, Ltd.

LABORATORY NUMBER: 108162-005
CLIENT: SUBSURFACE CONSULTANTS
PROJECT ID: 554.005
LOCATION: MARINER SQUARE
SAMPLE ID: MW-5

DATE SAMPLED: 8/02/92
DATE RECEIVED: 8/04/92
DATE ANALYZED: 8/07/92
DATE REPORTED: 8/11/92

EPA 8010
Purgeable Halocarbons in Water

Compound	Result ug/L	Reporting Limit ug/L
Chloromethane	ND	2
Bromomethane	ND	2
Vinyl chloride	ND	2
Chloroethane	ND	2
Methylene chloride	ND	20
Trichlorofluoromethane	ND	1
1,1-Dichloroethene	ND	1
1,1-Dichloroethane	ND	1
cis-1,2-Dichloroethene	ND	1
trans-1,2-Dichloroethene	ND	1
Chloroform	ND	1
Freon 113	ND	1
1,2-Dichloroethane	ND	1
1,1,1-Trichloroethane	ND	1
Carbon tetrachloride	ND	1
Bromodichloromethane	ND	1
1,2-Dichloropropane	ND	1
cis-1,3-Dichloropropene	ND	1
Trichloroethene	ND	1
1,1,2-Trichloroethane	ND	1
trans-1,3-Dichloropropene	ND	1
Dibromochloromethane	ND	1
2-Chloroethylvinyl ether	ND	2
Bromoform	ND	2
Tetrachloroethene	ND	1
1,1,2,2-Tetrachloroethane	ND	1
Chlorobenzene	ND	1
1,3-Dichlorobenzene	ND	1
1,4-Dichlorobenzene	ND	1
1,2-Dichlorobenzene	ND	1

ND = Not detected at or above reporting limit.

QA/QC SUMMARY

Surrogate Recovery, %	106

Curtis & Tompkins, Ltd.

LABORATORY NUMBER: METHOD BLANK
CLIENT: SUBSURFACE CONSULTANTS
PROJECT ID: 554.005
LOCATION: MARINER SQUARE

DATE ANALYZED: 8/06/92
DATE REPORTED: 8/11/92

EPA 8010
Purgeable Halocarbons in Water

Compound	Result ug/L	Reporting Limit ug/L
Chloromethane	ND	2
Bromomethane	ND	2
Vinyl chloride	ND	2
Chloroethane	ND	2
Methylene chloride	ND	20
Trichlorofluoromethane	ND	1
1,1-Dichloroethene	ND	1
1,1-Dichloroethane	ND	1
cis-1,2-Dichloroethene	ND	1
trans-1,2-Dichloroethene	ND	1
Chloroform	ND	1
Freon 113	ND	1
1,2-Dichloroethane	ND	1
1,1,1-Trichloroethane	ND	1
Carbon tetrachloride	ND	1
Bromodichloromethane	ND	1
1,2-Dichloropropane	ND	1
cis-1,3-Dichloropropene	ND	1
Trichloroethene	ND	1
1,1,2-Trichloroethane	ND	1
trans-1,3-Dichloropropene	ND	1
Dibromochloromethane	ND	1
2-Chloroethylvinyl ether	ND	2
Bromoform	ND	2
Tetrachloroethene	ND	1
1,1,2,2-Tetrachloroethane	ND	1
Chlorobenzene	ND	1
1,3-Dichlorobenzene	ND	1
1,4-Dichlorobenzene	ND	1
1,2-Dichlorobenzene	ND	1

ND = Not detected at or above reporting limit.

QA/QC SUMMARY

Surrogate Recovery, %	103

Curtis & Tompkins, Ltd.

LABORATORY NUMBER: 108162-METHOD BLANK
CLIENT: SUBSURFACE CONSULTANTS
PROJECT ID: 554.005
LOCATION: MARINER SQUARE

DATE ANALYZED: 8/06/92
DATE REPORTED: 8/11/92

EPA 8010
Purgeable Halocarbons in Water

Compound	Result ug/L	Reporting Limit ug/L
Chloromethane	ND	2
Bromomethane	ND	2
Vinyl chloride	ND	2
Chloroethane	ND	2
Methylene chloride	ND	20
Trichlorofluoromethane	ND	1
1,1-Dichloroethene	ND	1
1,1-Dichloroethane	ND	1
cis-1,2-Dichloroethene	ND	1
trans-1,2-Dichloroethene	ND	1
Chloroform	ND	1
Freon 113	ND	1
1,2-Dichloroethane	ND	1
1,1,1-Trichloroethane	ND	1
Carbon tetrachloride	ND	1
Bromodichloromethane	ND	1
1,2-Dichloropropane	ND	1
cis-1,3-Dichloropropene	ND	1
Trichloroethene	ND	1
1,1,2-Trichloroethane	ND	1
trans-1,3-Dichloropropene	ND	1
Dibromochloromethane	ND	1
2-Chloroethylvinyl ether	ND	2
Bromoform	ND	2
Tetrachloroethene	ND	1
1,1,2,2-Tetrachloroethane	ND	1
Chlorobenzene	ND	1
1,3-Dichlorobenzene	ND	1
1,4-Dichlorobenzene	ND	1
1,2-Dichlorobenzene	ND	1

ND = Not detected at or above reporting limit.

QA/QC SUMMARY

Surrogate Recovery, %	103

Curtis & Tompkins, Ltd.

LABORATORY CONTROL SAMPLE SUMMARY SHEET FOR EPA 8010

Laboratory Number: 108162
Analysis date: 08/06/92
Sample type: Water LCS file: 219w/x002

LCS SPIKE DATA (spiked at 20 ppb)

8010 COMPOUNDS	READING	RECOVERY	STATUS	LIMITS
1,1-Dichloroethene	21.83	109 %	OK	78 - 132
Trichloroethene	23.38	117 %	OK	85 - 124
Chlorobenzene	20.84	104 %	OK	70 - 128
SURROGATES				
Bromobenzene	101.46	101 %	OK	98 - 121

Curtis & Tompkins, Ltd.

MS/MSD SUMMARY SHEET FOR EPA 8010

Laboratory Number: 108162
Analysis date: 08/07/92
Sample type: Water

Spike file: 219w/x012
Spike dup file: 219w/x013

8010 MS/MSD DATA (spiked at 20 ppb)

SPIKE COMPOUNDS	READING	RECOVERY	STATUS	LIMITS
1,1-Dichloroethene	21.05	105 %	OK	61 - 145
Trichloroethene	22.47	112 %	OK	71 - 120
Chlorobenzene	20.31	102 %	OK	75 - 130
SPIKE DUP COMPOUNDS				
1,1-Dichloroethene	22.33	112 %	OK	61 - 145
Trichloroethene	23.22	116 %	OK	71 - 120
Chlorobenzene	21.00	105 %	OK	75 - 130
SURROGATES				
Bromobenzene (MS)	103.00	103 %	OK	75 - 115
Bromobenzene (MSD)	104.15	104 %	OK	75 - 115

RPD DATA

8010 COMPOUNDS	SPIKE	SPIKE DUP	RPD	STATUS	LIMITS
1,1-Dichloroethene	21.05	22.33	6 %	OK	<= 14
Trichloroethene	22.47	23.22	3 %	OK	<= 14
Chlorobenzene	20.31	21.00	3 %	OK	<= 13

CHAIN OF CUSTODY FORM

PAGE 1 OF 1

PROJECT NAME: Mariner Square

JOB NUMBER: 554.005 LAB: Curtis + Tompkins

PROJECT CONTACT: Sean Carson TURNAROUND: Normal

SAMPLED BY: Jose Bermudez REQUESTED BY: Sean Carson

LABORATORY I.D. NUMBER	SCI SAMPLE NUMBER	MATRIX: WATER	SOIL	WASTE	AIR			CONTAINERS: VOA	LITER	PINT	TUBE			METHOD PRESERVED: HCL	H_2SO_4	HNO_3	ICE	NONE	SAMPLING DATE: MONTH	DAY	YEAR	TIME	NOTES	ANALYSIS REQUESTED: TEH/BTEX	OTG	VOCs (EPA 8010)
	MW-1	X						5	2					X			X		08	02	92			X	X	X
	MW-2	X						5	2					X			X							X	X	X
	MW-3	X						5	2					X			X							X	X	X
	MW-4	X						5	2					X			X							X	X	X
	MW-5	X						5	2					X			X							X	X	X

COMMENTS & NOTES:

CHAIN OF CUSTODY RECORD

RELEASED BY: (Signature)	DATE/TIME	RECEIVED BY: (Signature)	DATE/TIME
[signature]	8/4/92 1720		
RELEASED BY: (Signature)	DATE/TIME	RECEIVED BY: (Signature)	DATE/TIME
RELEASED BY: (Signature)	DATE/TIME	RECEIVED BY: (Signature)	DATE/TIME
		Teresa C. Morrow	8/4/1720

Subsurface Consultants, Inc.

171 12TH STREET, SUITE 201, OAKLAND, CALIFORNIA 94607

(510) 268-0461 · FAX: 510-268-0137

CHAIN OF CUSTODY FORM

PAGE 1 OF 1

PROJECT NAME: MARINER SQARE

JOB NUMBER: 554.005 LAB: Curtis and Tomptkins

PROJECT CONTACT: Sean Carson TURNAROUND: Normal

SAMPLED BY: John Wolfe REQUESTED BY: Sean Carson

LABORATORY I.D. NUMBER	SCI SAMPLE NUMBER	MATRIX: WATER	SOIL	WASTE	AIR			CONTAINERS: VOA	LITER	PINT	TUBE			METHOD PRESERVED: HCL	H_2SO_4	HNO_3	ICE	NONE	SAMPLING DATE: MONTH	DAY	YEAR	TIME				NOTES	ANALYSIS REQUESTED: Oil & Grease	TEH/BTEX
	1 @ 7.0'		X								X						X		07	22	92						X	X
	2 @ 6.0'		X								X						X		07	22	92						X	X
	3 @ 4.5'		X								X						X		07	29	92						X	X
	4 @ 4.0'		X								X						X		07	23	92						X	X
	5 @ 4.5'		X								X						X		07	23	92						X	X

COMMENTS & NOTES:

CHAIN OF CUSTODY RECORD

RELEASED BY: (Signature)	DATE/TIME	RECEIVED BY: (Signature)	DATE/TIME
[signature]	07/30/92 16:45		
RELEASED BY: (Signature)	DATE/TIME	RECEIVED BY: (Signature)	DATE/TIME
RELEASED BY: (Signature)	DATE/TIME	RECEIVED BY: (Signature)	DATE/TIME
		[signature]	7/30/92 1645

Subsurface Consultants, Inc.

171 12TH STREET, SUITE 201, OAKLAND, CALIFORNIA 94607

(510) 268-0461 · FAX: 510-268-0137

L8042

Chain of Custody Form

AllWest

AllWest Environmental, Inc.
Consultants in Real Estate Finance

303 Second Street Suite 680
San Francisco, CA 94107-1317

Job Description: Mariner Square
Job Number: 9287.23
Client Contact: Long Ching

Samplers: Gary Farling, Marvin Snapp
Recorder: M. Snapp

Matrix: Water	Matrix: Soil	Matrix: Waste	Matrix: Oil	# Containers	Method Preserved: H_2SO_4	Method Preserved: HNO_3	Method Preserved: Ice	Method Preserved: None	Method Preserved: Other	Sample Number	Sampling Date: Yr	Sampling Date: Mo	Sampling Date: Dy	Sampling Date: Time	Sample Notes	Analysis Requested: 418.1 (Soil)	Analysis Requested: 8240 (Soil)	Analysis Requested: 418.1 (H2O)	Analysis Requested: 624 (H2O)
	X			1			X			MS-1	92	04	07	1015	4' Depth OVM-0	X	X		
X		X		3			X			MW-1	92	04	07	1045	4'10" Depth OVM-0			X	X
	X			1			X			MS-2	92	04	07	1030	4' Depth OVM-0	X	X		
	X			1			X			MS-3	92	04	07	1140	4' Depth OVM 147	X	X		
	X			1			X			MS-4	92	04	07	1215	4' Depth OVM 50	X*	X		
	X			1			X			MS-5	92	04	07	1340	4' Depth OVM-0	X	X		
	X			1			X			MS-6	92	04	07	1400	4' Depth OVM-0	X	X		
	X			1			X			MS-7	92	04	07	1507	4' Depth OVM-0	X	X		
X							X			MW-7	92	04	07	1535	6'6" Depth OVM-0			X	X
	X						X			MS-8	92	04	07	1553	4' Depth OVM-0	X	X		
	X						X			MS-9	92	04	07	1620	4' Depth OVM-15	X	X		

Laboratory Notes:
Extract from base end of each sample.
Do NOT TEST MS-2 UNTIL ALLWEST OKs.

* DISTURBED -

Chain of Custody Record

Relinquished by: (signature) Date/Hr	Received by (signature)
[illegible] 04/07/92	[illegible]
[illegible] 4-7-92 1930	

Dispatched by: (signature) Date/Hr	Received for Lab by (signature)
	[illegible]

Chain of Custody Form

AllWest

AllWest Environmental, Inc.
Consultants in Real Estate Finance

303 Second Street Suite 680
San Francisco, CA 94107-1317

Job Description: Mariner Square

Job Number: 91281.23

Client Contact: Long Chung

Samplers: Gary Fentley

Recorder: Gary Fentley

Matrix: Water	Matrix: Soil	Matrix: Waste	Matrix: Oil			# Containers	Method Preserved: H_2SO_4	HNO_3	Ice	None	Other	Sample Number	Sampling Date Yr	Mo	Dy	Time	SAMPLE NOTES	ANALYSIS REQUESTED: 418.1 (Soil)	8240 (Soil)
	X					1			X			MS-12	92	04	07	1628	4' Depth Over ...	X	X

Laboratory Notes:
Extract from base end of sample.

Chain of Custody Record

Relinquished by: (signature) Date/Hr	Received by: (signature)
Gary Fentley 4/7/92 1646	[signature]
Relinquished by: (signature) Date/Hr: [signature] 4-7-92 1930	Received by (signature)
Relinquished by: (signature) Date/Hr	Received by (signature)
Relinquished by: (signature) Date/Hr	Received by (signature)
Dispatched by: (signature) Date/Hr	Received for Lab by (signature): [signature]

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.

04/22/92

AllWest Environmental
One Sutter Street
Suite 600
San Francisco, CA 94104

Attention: Long Ching

Reference: Analytical Results

Project Name: Mariner Square
Project No.: 91287.23
Date Received: 04/07/92
Chain Of Custody: NO NUMBER

AELC ID No.: L8642
AELC Job No.: 798642

The following analyses were performed on the above referenced project:

No. of Samples	*Turnaround Time*	*Analysis Description*
11	7 Days	Total Recoverable Petroleum Hydrocarbons
2	7 Days	Volatile Organics by EPA Method 624
9	7 Days	Volatile Organic Compounds by GC/MS

Elevated Method 8240 reporting limits for samples "MS-4" and "MS-6" are due to the presence of significant concentrations of hydrocarbons in these samples. Furthermore, complete surrogate standard recovery data could not be generated for samples "MS-3" and "MS-4" due to matrix interference.

These samples were received by American Environmental Laboratories in a chilled, intact state and accompanied by a valid chain of custody document.

Analytical results are attached to this letter. Please call if we can provide additional assistance.

Sincerely,

George Hampton
Laboratory Director

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.

CA DOHS ELAP Accreditation/Registration Number 1233

Analysis Report: Total Recoverable Petroleum Hydrocarbons, EPA Method 418.1
Shaker, DOHS LUFT Method

Client: AllWest Environmental
One Sutter Street
San Francisco, CA 94104

Project: Mariner Square

Date Sampled: 04/07/92
Date Received: 04/07/92
Date Extracted: 04/09/92
Date Analyzed: 04/15/92
Date Reported: 04/21/92

Project No.: 91287.23
Contact: Long Ching
Phone: (415) 391-2510

AELC Contact: Mark Smith
Job No.: 798642
COC Log No.: NO NUMBER
AELC ID No.: L8642
Batch No.: 9075
Matrix: SOIL

ANALYTE

Sample I.D. Client	AELC	Total Recoverable Hydrocarbons (mg/kg)
MS-1	1A	ND
MS-3	4A	870
MS-4	5A	13000
MS-5	6A	170
MS-6	7A	520
MS-7	8A	290
MS-8	10A	46
MS-9	11A	12
MS-10	12A	37
Rep. Limit		10

ND = Not detected at or above indicated Reporting Limit
Rep. Limit = Reporting Limit unless otherwise indicated in parentheses.

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.

CA DOHS ELAP Accreditation/Registration Number 1233

Analysis Report: Total Recoverable Petroleum Hydrocarbons, EPA Method 418.1 Shaker, DOHS LUFT Method

Client: AllWest Environmental
One Sutter Street
San Francisco, CA 94104

Project: Mariner Square

Date Extracted: 04/09/92
Date Analyzed: 04/15/92
Date Reported: 04/16/92

Project No.: 91287.23
Contact: Long Ching
Phone: (415) 391-2510

AELC Contact: Mark Smith
Job No.: 798642
COC Log No.: NO NUMBER
AELC ID No.: L8642
Batch No.: 9075
Matrix: SOIL

METHOD BLANK

Analyte	CAS No.	Results (mg/kg)	Rep. Limit (mg/kg)
Total Recoverable Hydrocarbons	N/A	ND	10

ND = Not detected at or above indicated Reporting Limit
Rep. Limit = Reporting Limit unless otherwise indicated in parentheses.

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.

CA DOHS ELAP Accreditation/Registration Number 1233

Analysis Report: Total Recoverable Petroleum Hydrocarbons, EPA Method 418.1
Shaker, DOHS LUFT Method

Client: AllWest Environmental
One Sutter Street
San Francisco, CA 94104

Project: Mariner Square

Date Extracted: 04/09/92
Date Analyzed: 04/15/92
Date Reported: 04/16/92

Project No.: 91287.23
Contact: Long Ching
Phone: (415) 391-2510

AELC Contact: Mark Smith
Job No.: 798642
COC Log No.: NO NUMBER
AELC ID No.: L8642
Batch No.: 9075
Matrix: SOIL

MB SPIKE

Analyte	CAS No.	MBS Conc. (mg/kg)	MBS Recovery (percent)
Total Recoverable Hydrocarbons	N/A	60	102

MB SPIKE DUPLICATE

Analyte	CAS No.	MBSD Conc. (mg/kg)	MBSD Recovery (percent)
Total Recoverable Hydrocarbons	N/A	60	103

MB SPIKE RPD

Analyte	CAS No.	MBS Relative Percent Difference (percent)
Total Recoverable Hydrocarbons	N/A	1

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.

CA DOHS ELAP Accreditation/Registration Number 1233

Analysis Report: Total Recoverable Petroleum Hydrocarbons, EPA Method 418.1
Separatory Funnel, EPA Method 3510

Client: AllWest Environmental
One Sutter Street
San Francisco, CA 94104

Project: Mariner Square

Date Sampled: 04/07/92
Date Received: 04/07/92
Date Extracted: 04/11/92
Date Analyzed: 04/14/92
Date Reported: 04/15/92

Project No.: 91287.23
Contact: Long Ching
Phone: (415) 391-2510

AELC Contact: Mark Smith
Job No.: 798642
COC Log No.: NO NUMBER
AELC ID No.: L8642
Batch No.: 9079
Matrix: WATER

ANALYTE

Sample I.D. Client	AELC	Total Recoverable Hydrocarbons (mg/L)
MW-1	2A	ND
MW-7	9A	ND
Rep. Limit		1

ND = Not detected at or above indicated Reporting Limit
Rep. Limit = Reporting Limit unless otherwise indicated in parentheses.

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.

CA DOHS ELAP Accreditation/Registration Number 1233

Analysis Report: Total Recoverable Petroleum Hydrocarbons, EPA Method 418.1
Separatory Funnel, EPA Method 3510

Client: AllWest Environmental
One Sutter Street
San Francisco, CA 94104

Project: Mariner Square

Date Extracted: 04/11/92
Date Analyzed: 04/14/92
Date Reported: 04/15/92

Project No.: 91287.23
Contact: Long Ching
Phone: (415) 391-2510

AELC Contact: Mark Smith
Job No.: 798642
COC Log No.: NO NUMBER
AELC ID No.: L8642
Batch No.: 9079
Matrix: WATER

METHOD BLANK

Analyte	CAS No.	Results (mg/L)	Rep. Limit (mg/L)
Total Recoverable Hydrocarbons	N/A	ND	1

ND = Not detected at or above indicated Reporting Limit
Rep. Limit = Reporting Limit unless otherwise indicated in parentheses.

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.

CA DOHS ELAP Accreditation/Registration Number 1233

Analysis Report: Total Recoverable Petroleum Hydrocarbons, EPA Method 418.1
Separatory Funnel, EPA Method 3510

Client: AllWest Environmental
One Sutter Street
San Francisco, CA 94104

Project: Mariner Square

Date Extracted: 04/11/92
Date Analyzed: 04/14/92
Date Reported: 04/15/92

Project No.: 91287.23
Contact: Long Ching
Phone: (415) 391-2510

AELC Contact: Mark Smith
Job No.: 798642
COC Log No.: NO NUMBER
AELC ID No.: L8642
Batch No.: 9079
Matrix: WATER

MB SPIKE

Analyte	CAS No.	MBS Conc. (mg/L)	MBS Recovery (percent)
Total Recoverable Hydrocarbons	N/A	60	88

MB SPIKE DUPLICATE

Analyte	CAS No.	MBSD Conc. (mg/L)	MBSD Recovery (percent)
Total Recoverable Hydrocarbons	N/A	60	92

MB SPIKE RPD

Analyte	CAS No.	MBS Relative Percent Difference (percent)
Total Recoverable Hydrocarbons	N/A	4

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.

CA DOHS ELAP Accreditation/Registration Number 1233

Analysis Report: Volatile Organic Compounds by GC/MS, EPA Method 8240

Client: AllWest Environmental
One Sutter Street
San Francisco, CA 94104

Project: Mariner Square

Date Sampled: 04/07/92
Date Received: 04/07/92
Date Extracted: 04/08/92
Date Analyzed: 04/08/92
Date Reported: 04/13/92
Client ID No.: MS-1

Project No.: 91287.23
Contact: Long Ching
Phone: (415) 391-2510

AELC Contact: Mark Smith
Job No.: 798642
COC Log No.: NO NUMBER
AELC ID No.: L8642-1A
Batch No.: 9060
Matrix: SOIL

SURROGATE

Analyte	CAS No.	Surr Conc. (ug/kg)	Surrogate Recovery (percent)
1,2-Dichloroethane-d4	N/A	100	98
Toluene-d8	N/A	100	100
p-Bromofluorobenzene	460-00-4	100	96

Sample: MS-1

Analyte	CAS No.	Results (ug/kg)	Rep. Limit (ug/kg)
Acetone	67-64-1	ND	100
Benzene	71-43-2	ND	5
Bromodichloromethane	75-27-4	ND	5
Bromoform	75-25-2	ND	5
Bromomethane	74-83-9	ND	10
2-Butanone	78-93-3	ND	100
Carbon disulfide	75-15-0	ND	5
Carbon tetrachloride	56-23-5	ND	5
Chlorobenzene	108-90-7	ND	5
Chloroethane	75-00-3	ND	10
2-Chloroethyl vinyl ether	110-75-8	ND	50
Chloroform	67-66-3	ND	5
Chloromethane	74-87-3	ND	10
Dibromochloromethane	124-48-1	ND	5
Dibromomethane	74-95-3	ND	5
1,2-Dichlorobenzene	95-50-1	ND	5
1,3-Dichlorobenzene	541-73-1	ND	5
1,4-Dichlorobenzene	106-46-7	ND	5
Dichlorodifluoromethane	75-71-8	ND	10
1,1-Dichloroethane	75-34-3	ND	5
1,2-Dichloroethane	107-06-2	ND	5
1,1-Dichloroethene	75-35-4	ND	5
1,2-Dichloroethene, total	540-59-0	ND	5
1,2-Dichloropropane	78-87-5	ND	5
cis-1,3-Dichloropropene	10061-01-5	ND	5
trans-1,3-Dichloropropene	10061-02-6	ND	5
Ethylbenzene	100-41-4	ND	5
2-Hexanone	591-78-6	ND	50
Methylene chloride	75-09-2	ND	5
4-Methyl-2-pentanone	108-10-1	ND	50
Styrene	100-42-5	ND	5
1,1,2,2-Tetrachloroethane	79-34-5	ND	5
Tetrachloroethene	127-18-4	ND	5

ND = Not detected at or above indicated Reporting Limit
Rep. Limit = Reporting Limit unless otherwise indicated in parentheses.

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.

CA DOHS ELAP Accreditation/Registration Number 1233

Analysis Report: Volatile Organic Compounds by GC/MS, EPA Method 8240

Client: AllWest Environmental
One Sutter Street
San Francisco, CA 94104

Project: Mariner Square

Date Sampled: 04/07/92
Date Received: 04/07/92
Date Extracted: 04/08/92
Date Analyzed: 04/08/92
Date Reported: 04/13/92
Client ID No.: MS-1

Project No.: 91287.23
Contact: Long Ching
Phone: (415) 391-2510

AELC Contact: Mark Smith
Job No.: 798642
COC Log No.: NO NUMBER
AELC ID No.: L8642-1A
Batch No.: 9060
Matrix: SOIL

Sample: MS-1(cont.)

Analyte	CAS No.	Results (ug/kg)	Rep. Limit (ug/kg)
Toluene	108-88-3	ND	5
1,1,1-Trichloroethane	71-55-6	ND	5
1,1,2-Trichloroethane	79-00-5	ND	5
Trichloroethene	79-01-6	ND	5
Trichlorofluoromethane	75-69-4	ND	5
1,1,2-Trichlorotrifluoroethane	79-13-1	ND	5
Vinyl acetate	108-05-4	ND	50
Vinyl chloride	75-01-4	ND	10
Xylenes, total	1330-20-7	ND	10

ND = Not detected at or above indicated Reporting Limit
Rep. Limit = Reporting Limit unless otherwise indicated in parentheses.

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.

CA DOHS ELAP Accreditation/Registration Number 1233

Analysis Report: Volatile Organic Compounds by GC/MS, EPA Method 8240

Client: AllWest Environmental
One Sutter Street
San Francisco, CA 94104

Project: Mariner Square

Date Sampled: 04/07/92
Date Received: 04/07/92
Date Extracted: 04/08/92
Date Analyzed: 04/08/92
Date Reported: 04/13/92
Client ID No.: MS-3

Project No.: 91287.23
Contact: Long Ching
Phone: (415) 391-2510

AELC Contact: Mark Smith
Job No.: 798642
COC Log No.: NO NUMBER
AELC ID No.: L8642-4A
Batch No.: 9060
Matrix: SOIL

SURROGATE

Analyte	CAS No.	Surr Conc. (ug/kg)	Surrogate Recovery (percent)
1,2-Dichloroethane-d4	N/A	100	108
Toluene-d8	N/A	100	93
p-Bromofluorobenzene	460-00-4	100	NR

Sample: MS-3

Analyte	CAS No.	Results (ug/kg)	Rep. Limit (ug/kg)
Acetone	67-64-1	ND	100
Benzene	71-43-2	ND	5
Bromodichloromethane	75-27-4	ND	5
Bromoform	75-25-2	ND	5
Bromomethane	74-83-9	ND	10
2-Butanone	78-93-3	ND	100
Carbon disulfide	75-15-0	ND	5
Carbon tetrachloride	56-23-5	ND	5
Chlorobenzene	108-90-7	ND	5
Chloroethane	75-00-3	ND	10
2-Chloroethyl vinyl ether	110-75-8	ND	50
Chloroform	67-66-3	ND	5
Chloromethane	74-87-3	ND	10
Dibromochloromethane	124-48-1	ND	5
Dibromomethane	74-95-3	ND	5
1,2-Dichlorobenzene	95-50-1	ND	5
1,3-Dichlorobenzene	541-73-1	ND	5
1,4-Dichlorobenzene	106-46-7	ND	5
Dichlorodifluoromethane	75-71-8	ND	10
1,1-Dichloroethane	75-34-3	ND	5
1,2-Dichloroethane	107-06-2	ND	5
1,1-Dichloroethene	75-35-4	ND	5
1,2-Dichloroethene, total	540-59-0	ND	5
1,2-Dichloropropane	78-87-5	ND	5
cis-1,3-Dichloropropene	10061-01-5	ND	5
trans-1,3-Dichloropropene	10061-02-6	ND	5
Ethylbenzene	100-41-4	27	5
2-Hexanone	591-78-6	ND	50
Methylene chloride	75-09-2	ND	5
4-Methyl-2-pentanone	108-10-1	ND	50
Styrene	100-42-5	ND	5
1,1,2,2-Tetrachloroethane	79-34-5	ND	5
Tetrachloroethene	127-18-4	ND	5

ND = Not detected at or above indicated Reporting Limit
Rep. Limit = Reporting Limit unless otherwise indicated in parentheses.

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.

CA DOHS ELAP Accreditation/Registration Number 1233

Analysis Report: Volatile Organic Compounds by GC/MS, EPA Method 8240

Client: AllWest Environmental
One Sutter Street
San Francisco, CA 94104

Project: Mariner Square

Date Sampled: 04/07/92
Date Received: 04/07/92
Date Extracted: 04/08/92
Date Analyzed: 04/08/92
Date Reported: 04/13/92
Client ID No.: MS-3

Project No.: 91287.23
Contact: Long Ching
Phone: (415) 391-2510

AELC Contact: Mark Smith
Job No.: 798642
COC Log No.: NO NUMBER
AELC ID No.: L8642-4A
Batch No.: 9060
Matrix: SOIL

Sample: MS-3(cont.)

Analyte	CAS No.	Results (ug/kg)	Rep. Limit (ug/kg)
Toluene	108-88-3	ND	5
1,1,1-Trichloroethane	71-55-6	ND	5
1,1,2-Trichloroethane	79-00-5	ND	5
Trichloroethene	79-01-6	ND	5
Trichlorofluoromethane	75-69-4	ND	5
1,1,2-Trichlorotrifluoroethane	79-13-1	ND	5
Vinyl acetate	108-05-4	ND	50
Vinyl chloride	75-01-4	ND	10
Xylenes, total	1330-20-7	54	10

ND = Not detected at or above indicated Reporting Limit
Rep. Limit = Reporting Limit unless otherwise indicated in parentheses.

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.

CA DOHS ELAP Accreditation/Registration Number 1233

Analysis Report: Volatile Organic Compounds by GC/MS, EPA Method 8240

Client: AllWest Environmental
One Sutter Street
San Francisco, CA 94104

Project: Mariner Square

Date Sampled: 04/07/92
Date Received: 04/07/92
Date Extracted: 04/08/92
Date Analyzed: 04/08/92
Date Reported: 04/13/92
Client ID No.: MS-4

Project No.: 91287.23
Contact: Long Ching
Phone: (415) 391-2510

AELC Contact: Mark Smith
Job No.: 798642
COC Log No.: NO NUMBER
AELC ID No.: L8642-5A
Batch No.: 9060
Matrix: SOIL

SURROGATE

Analyte	CAS No.	Surr Conc. (ug/kg)	Surrogate Recovery (percent)
1,2-Dichloroethane-d4	N/A	10000	76
Toluene-d8	N/A	10000	NR
p-Bromofluorobenzene	460-00-4	10000	NR

Sample: MS-4

Analyte	CAS No.	Results (ug/kg)	Rep. Limit (ug/kg)
Acetone	67-64-1	ND	10000
Benzene	71-43-2	ND	500
Bromodichloromethane	75-27-4	ND	500
Bromoform	75-25-2	ND	500
Bromomethane	74-83-9	ND	1000
2-Butanone	78-93-3	ND	10000
Carbon disulfide	75-15-0	ND	500
Carbon tetrachloride	56-23-5	ND	500
Chlorobenzene	108-90-7	ND	500
Chloroethane	75-00-3	ND	1000
2-Chloroethyl vinyl ether	110-75-8	ND	5000
Chloroform	67-66-3	ND	500
Chloromethane	74-87-3	ND	1000
Dibromochloromethane	124-48-1	ND	500
Dibromomethane	74-95-3	ND	500
1,2-Dichlorobenzene	95-50-1	ND	500
1,3-Dichlorobenzene	541-73-1	ND	500
1,4-Dichlorobenzene	106-46-7	ND	500
Dichlorodifluoromethane	75-71-8	ND	1000
1,1-Dichloroethane	75-34-3	ND	500
1,2-Dichloroethane	107-06-2	ND	500
1,1-Dichloroethene	75-35-4	ND	500
1,2-Dichloroethene, total	540-59-0	ND	500
1,2-Dichloropropane	78-87-5	ND	500
cis-1,3-Dichloropropene	10061-01-5	ND	500
trans-1,3-Dichloropropene	10061-02-6	ND	500
Ethylbenzene	100-41-4	1000	500
2-Hexanone	591-78-6	ND	5000
Methylene chloride	75-09-2	ND	500
4-Methyl-2-pentanone	108-10-1	ND	5000
Styrene	100-42-5	ND	500
1,1,2,2-Tetrachloroethane	79-34-5	ND	500
Tetrachloroethene	127-18-4	ND	500

ND = Not detected at or above indicated Reporting Limit
Rep. Limit = Reporting Limit unless otherwise indicated in parentheses.

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.

CA DOHS ELAP Accreditation/Registration Number 1233

Analysis Report: Volatile Organic Compounds by GC/MS, EPA Method 8240

Client: AllWest Environmental
One Sutter Street
San Francisco, CA 94104

Project: Mariner Square

Date Sampled: 04/07/92
Date Received: 04/07/92
Date Extracted: 04/08/92
Date Analyzed: 04/08/92
Date Reported: 04/13/92
Client ID No.: MS-4

Project No.: 91287.23
Contact: Long Ching
Phone: (415) 391-2510

AELC Contact: Mark Smith
Job No.: 798642
COC Log No.: NO NUMBER
AELC ID No.: L8642-5A
Batch No.: 9060
Matrix: SOIL

Sample: MS-4(cont.)

Analyte	CAS No.	Results (ug/kg)	Rep. Limit (ug/kg)
Toluene	108-88-3	ND	500
1,1,1-Trichloroethane	71-55-6	ND	500
1,1,2-Trichloroethane	79-00-5	ND	500
Trichloroethene	79-01-6	ND	500
Trichlorofluoromethane	75-69-4	ND	500
1,1,2-Trichlorotrifluoroethane	79-13-1	ND	500
Vinyl acetate	108-05-4	ND	5000
Vinyl chloride	75-01-4	ND	1000
Xylenes, total	1330-20-7	1200	1000

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AMERICAN
ENVIRONMENTAL LABORATORIES CORP.

CA DOHS ELAP Accreditation/Registration Number 1233

Analysis Report: Volatile Organic Compounds by GC/MS, EPA Method 8240

Client: AllWest Environmental
One Sutter Street
San Francisco, CA 94104

Project: Mariner Square

Date Sampled: 04/07/92
Date Received: 04/07/92
Date Extracted: 04/08/92
Date Analyzed: 04/08/92
Date Reported: 04/13/92
Client ID No.: MS-5

Project No.: 91287.23
Contact: Long Ching
Phone: (415) 391-2510

AELC Contact: Mark Smith
Job No.: 798642
COC Log No.: NO NUMBER
AELC ID No.: L8642-6A
Batch No.: 9060
Matrix: SOIL

SURROGATE

Analyte	CAS No.	Surr Conc. (ug/kg)	Surrogate Recovery (percent)
1,2-Dichloroethane-d4	N/A	100	104
Toluene-d8	N/A	100	99
p-Bromofluorobenzene	460-00-4	100	114

Sample: MS-5

Analyte	CAS No.	Results (ug/kg)	Rep. Limit (ug/kg)
Acetone	67-64-1	ND	100
Benzene	71-43-2	ND	5
Bromodichloromethane	75-27-4	ND	5
Bromoform	75-25-2	ND	5
Bromomethane	74-83-9	ND	10
2-Butanone	78-93-3	ND	100
Carbon disulfide	75-15-0	ND	5
Carbon tetrachloride	56-23-5	ND	5
Chlorobenzene	108-90-7	ND	5
Chloroethane	75-00-3	ND	10
2-Chloroethyl vinyl ether	110-75-8	ND	50
Chloroform	67-66-3	ND	5
Chloromethane	74-87-3	ND	10
Dibromochloromethane	124-48-1	ND	5
Dibromomethane	74-95-3	ND	5
1,2-Dichlorobenzene	95-50-1	ND	5
1,3-Dichlorobenzene	541-73-1	ND	5
1,4-Dichlorobenzene	106-46-7	ND	5
Dichlorodifluoromethane	75-71-8	ND	10
1,1-Dichloroethane	75-34-3	ND	5
1,2-Dichloroethane	107-06-2	ND	5
1,1-Dichloroethene	75-35-4	ND	5
1,2-Dichloroethene, total	540-59-0	ND	5
1,2-Dichloropropane	78-87-5	ND	5
cis-1,3-Dichloropropene	10061-01-5	ND	5
trans-1,3-Dichloropropene	10061-02-6	ND	5
Ethylbenzene	100-41-4	ND	5
2-Hexanone	591-78-6	ND	50
Methylene chloride	75-09-2	ND	5
4-Methyl-2-pentanone	108-10-1	ND	50
Styrene	100-42-5	ND	5
1,1,2,2-Tetrachloroethane	79-34-5	ND	5
Tetrachloroethene	127-18-4	ND	5

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AMERICAN
ENVIRONMENTAL LABORATORIES CORP.

CA DOHS ELAP Accreditation/Registration Number 1233

Analysis Report: Volatile Organic Compounds by GC/MS, EPA Method 8240

Client: AllWest Environmental
One Sutter Street
San Francisco, CA 94104

Project: Mariner Square

Date Sampled: 04/07/92
Date Received: 04/07/92
Date Extracted: 04/08/92
Date Analyzed: 04/08/92
Date Reported: 04/13/92
Client ID No.: MS-5

Project No.: 91287.23
Contact: Long Ching
Phone: (415) 391-2510

AELC Contact: Mark Smith
Job No.: 798642
COC Log No.: NO NUMBER
AELC ID No.: L8642-6A
Batch No.: 9060
Matrix: SOIL

Sample: MS-5(cont.)

Analyte	CAS No.	Results (ug/kg)	Rep. Limit (ug/kg)
Toluene	108-88-3	ND	5
1,1,1-Trichloroethane	71-55-6	ND	5
1,1,2-Trichloroethane	79-00-5	ND	5
Trichloroethene	79-01-6	ND	5
Trichlorofluoromethane	75-69-4	ND	5
1,1,2-Trichlorotrifluoroethane	79-13-1	ND	5
Vinyl acetate	108-05-4	ND	50
Vinyl chloride	75-01-4	ND	10
Xylenes, total	1330-20-7	ND	10

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AMERICAN
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Analysis Report: Volatile Organic Compounds by GC/MS, EPA Method 8240

Client: AllWest Environmental
One Sutter Street
San Francisco, CA 94104

Project: Mariner Square

Date Sampled: 04/07/92
Date Received: 04/07/92
Date Extracted: 04/08/92
Date Analyzed: 04/08/92
Date Reported: 04/13/92
Client ID No.: MS-6

Project No.: 91287.23
Contact: Long Ching
Phone: (415) 391-2510

AELC Contact: Mark Smith
Job No.: 798642
COC Log No.: NO NUMBER
AELC ID No.: L8642-7A
Batch No.: 9060
Matrix: SOIL

SURROGATE

Analyte	CAS No.	Surr Conc. (ug/kg)	Surrogate Recovery (percent)
1,2-Dichloroethane-d4	N/A	2000	92
Toluene-d8	N/A	2000	101
p-Bromofluorobenzene	460-00-4	2000	95

Sample: MS-6

Analyte	CAS No.	Results (ug/kg)	Rep. Limit (ug/kg)
Acetone	67-64-1	ND	2000
Benzene	71-43-2	ND	100
Bromodichloromethane	75-27-4	ND	100
Bromoform	75-25-2	ND	100
Bromomethane	74-83-9	ND	200
2-Butanone	78-93-3	ND	2000
Carbon disulfide	75-15-0	ND	100
Carbon tetrachloride	56-23-5	ND	100
Chlorobenzene	108-90-7	ND	100
Chloroethane	75-00-3	ND	200
2-Chloroethyl vinyl ether	110-75-8	ND	1000
Chloroform	67-66-3	ND	100
Chloromethane	74-87-3	ND	200
Dibromochloromethane	124-48-1	ND	100
Dibromomethane	74-95-3	ND	100
1,2-Dichlorobenzene	95-50-1	ND	100
1,3-Dichlorobenzene	541-73-1	ND	100
1,4-Dichlorobenzene	106-46-7	ND	100
Dichlorodifluoromethane	75-71-8	ND	200
1,1-Dichloroethane	75-34-3	ND	100
1,2-Dichloroethane	107-06-2	ND	100
1,1-Dichloroethene	75-35-4	ND	100
1,2-Dichloroethene, total	540-59-0	ND	100
1,2-Dichloropropane	78-87-5	ND	100
cis-1,3-Dichloropropene	10061-01-5	ND	100
trans-1,3-Dichloropropene	10061-02-6	ND	100
Ethylbenzene	100-41-4	ND	100
2-Hexanone	591-78-6	ND	1000
Methylene chloride	75-09-2	ND	100
4-Methyl-2-pentanone	108-10-1	ND	1000
Styrene	100-42-5	ND	100
1,1,2,2-Tetrachloroethane	79-34-5	ND	100
Tetrachloroethene	127-18-4	ND	100

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Analysis Report: Volatile Organic Compounds by GC/MS, EPA Method 8240

Client: AllWest Environmental
One Sutter Street
San Francisco, CA 94104

Project: Mariner Square

Date Sampled: 04/07/92
Date Received: 04/07/92
Date Extracted: 04/08/92
Date Analyzed: 04/08/92
Date Reported: 04/13/92
Client ID No.: MS-6

Project No.: 91287.23
Contact: Long Ching
Phone: (415) 391-2510

AELC Contact: Mark Smith
Job No.: 798642
COC Log No.: NO NUMBER
AELC ID No.: L8642-7A
Batch No.: 9060
Matrix: SOIL

Sample: MS-6(cont.)

Analyte	CAS No.	Results (ug/kg)	Rep. Limit (ug/kg)
Toluene	108-88-3	ND	100
1,1,1-Trichloroethane	71-55-6	ND	100
1,1,2-Trichloroethane	79-00-5	ND	100
Trichloroethene	79-01-6	ND	100
Trichlorofluoromethane	75-69-4	ND	100
1,1,2-Trichlorotrifluoroethane	79-13-1	ND	100
Vinyl acetate	108-05-4	ND	1000
Vinyl chloride	75-01-4	ND	200
Xylenes, total	1330-20-7	ND	200

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Analysis Report: Volatile Organic Compounds by GC/MS, EPA Method 8240

Client: AllWest Environmental
One Sutter Street
San Francisco, CA 94104

Project: Mariner Square

Date Sampled: 04/07/92
Date Received: 04/07/92
Date Extracted: 04/08/92
Date Analyzed: 04/08/92
Date Reported: 04/13/92
Client ID No.: MS-7

Project No.: 91287.23
Contact: Long Ching
Phone: (415) 391-2510

AELC Contact: Mark Smith
Job No.: 798642
COC Log No.: NO NUMBER
AELC ID No.: L8642-8A
Batch No.: 9060
Matrix: SOIL

SURROGATE

Analyte	CAS No.	Surr Conc. (ug/kg)	Surrogate Recovery (percent)
1,2-Dichloroethane-d4	N/A	100	114
Toluene-d8	N/A	100	99
p-Bromofluorobenzene	460-00-4	100	111

Sample: MS-7

Analyte	CAS No.	Results (ug/kg)	Rep. Limit (ug/kg)
Acetone	67-64-1	ND	100
Benzene	71-43-2	ND	5
Bromodichloromethane	75-27-4	ND	5
Bromoform	75-25-2	ND	5
Bromomethane	74-83-9	ND	10
2-Butanone	78-93-3	ND	100
Carbon disulfide	75-15-0	ND	5
Carbon tetrachloride	56-23-5	ND	5
Chlorobenzene	108-90-7	ND	5
Chloroethane	75-00-3	ND	10
2-Chloroethyl vinyl ether	110-75-8	ND	50
Chloroform	67-66-3	ND	5
Chloromethane	74-87-3	ND	10
Dibromochloromethane	124-48-1	ND	5
Dibromomethane	74-95-3	ND	5
1,2-Dichlorobenzene	95-50-1	ND	5
1,3-Dichlorobenzene	541-73-1	ND	5
1,4-Dichlorobenzene	106-46-7	ND	5
Dichlorodifluoromethane	75-71-8	ND	10
1,1-Dichloroethane	75-34-3	ND	5
1,2-Dichloroethane	107-06-2	ND	5
1,1-Dichloroethene	75-35-4	ND	5
1,2-Dichloroethene, total	540-59-0	ND	5
1,2-Dichloropropane	78-87-5	ND	5
cis-1,3-Dichloropropene	10061-01-5	ND	5
trans-1,3-Dichloropropene	10061-02-6	ND	5
Ethylbenzene	100-41-4	ND	5
2-Hexanone	591-78-6	ND	50
Methylene chloride	75-09-2	ND	5
4-Methyl-2-pentanone	108-10-1	ND	50
Styrene	100-42-5	ND	5
1,1,2,2-Tetrachloroethane	79-34-5	ND	5
Tetrachloroethene	127-18-4	ND	5

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AMERICAN
ENVIRONMENTAL LABORATORIES CORP.

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Analysis Report: Volatile Organic Compounds by GC/MS, EPA Method 8240

Client: AllWest Environmental
One Sutter Street
San Francisco, CA 94104

Project: Mariner Square

Date Sampled: 04/07/92
Date Received: 04/07/92
Date Extracted: 04/08/92
Date Analyzed: 04/08/92
Date Reported: 04/13/92
Client ID No.: MS-7

Project No.: 91287.23
Contact: Long Ching
Phone: (415) 391-2510

AELC Contact: Mark Smith
Job No.: 798642
COC Log No.: NO NUMBER
AELC ID No.: L8642-8A
Batch No.: 9060
Matrix: SOIL

Sample: MS-7(cont.)

Analyte	CAS No.	Results (ug/kg)	Rep. Limit (ug/kg)
Toluene	108-88-3	ND	5
1,1,1-Trichloroethane	71-55-6	ND	5
1,1,2-Trichloroethane	79-00-5	ND	5
Trichloroethene	79-01-6	ND	5
Trichlorofluoromethane	75-69-4	ND	5
1,1,2-Trichlorotrifluoroethane	79-13-1	ND	5
Vinyl acetate	108-05-4	ND	50
Vinyl chloride	75-01-4	ND	10
Xylenes, total	1330-20-7	ND	10

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AMERICAN
ENVIRONMENTAL LABORATORIES CORP.

CA DOHS ELAP Accreditation/Registration Number 1233

Analysis Report: Volatile Organic Compounds by GC/MS, EPA Method 8240

Client: AllWest Environmental
One Sutter Street
San Francisco, CA 94104

Project: Mariner Square

Date Sampled: 04/07/92
Date Received: 04/07/92
Date Extracted: 04/08/92
Date Analyzed: 04/08/92
Date Reported: 04/13/92
Client ID No.: MS-8

Project No.: 91287.23
Contact: Long Ching
Phone: (415) 391-2510

AELC Contact: Mark Smith
Job No.: 798642
COC Log No.: NO NUMBER
AELC ID No.: L8642-10A
Batch No.: 9060
Matrix: SOIL

SURROGATE

Analyte	CAS No.	Surr Conc. (ug/kg)	Surrogate Recovery (percent)
1,2-Dichloroethane-d4	N/A	100	110
Toluene-d8	N/A	100	103
p-Bromofluorobenzene	460-00-4	100	101

Sample: MS-8

Analyte	CAS No.	Results (ug/kg)	Rep. Limit (ug/kg)
Acetone	67-64-1	ND	100
Benzene	71-43-2	ND	5
Bromodichloromethane	75-27-4	ND	5
Bromoform	75-25-2	ND	5
Bromomethane	74-83-9	ND	10
2-Butanone	78-93-3	ND	100
Carbon disulfide	75-15-0	ND	5
Carbon tetrachloride	56-23-5	ND	5
Chlorobenzene	108-90-7	ND	5
Chloroethane	75-00-3	ND	10
2-Chloroethyl vinyl ether	110-75-8	ND	50
Chloroform	67-66-3	ND	5
Chloromethane	74-87-3	ND	10
Dibromochloromethane	124-48-1	ND	5
Dibromomethane	74-95-3	ND	5
1,2-Dichlorobenzene	95-50-1	ND	5
1,3-Dichlorobenzene	541-73-1	ND	5
1,4-Dichlorobenzene	106-46-7	ND	5
Dichlorodifluoromethane	75-71-8	ND	10
1,1-Dichloroethane	75-34-3	ND	5
1,2-Dichloroethane	107-06-2	ND	5
1,1-Dichloroethene	75-35-4	ND	5
1,2-Dichloroethene, total	540-59-0	ND	5
1,2-Dichloropropane	78-87-5	ND	5
cis-1,3-Dichloropropene	10061-01-5	ND	5
trans-1,3-Dichloropropene	10061-02-6	ND	5
Ethylbenzene	100-41-4	ND	5
2-Hexanone	591-78-6	ND	50
Methylene chloride	75-09-2	ND	5
4-Methyl-2-pentanone	108-10-1	ND	50
Styrene	100-42-5	ND	5
1,1,2,2-Tetrachloroethane	79-34-5	ND	5
Tetrachloroethene	127-18-4	ND	5

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AMERICAN
ENVIRONMENTAL LABORATORIES CORP.

CA DOHS ELAP Accreditation/Registration Number 1233

Analysis Report: Volatile Organic Compounds by GC/MS, EPA Method 8240

Client: AllWest Environmental
One Sutter Street
San Francisco, CA 94104

Project: Mariner Square

Date Sampled: 04/07/92
Date Received: 04/07/92
Date Extracted: 04/08/92
Date Analyzed: 04/08/92
Date Reported: 04/13/92
Client ID No.: MS-8

Project No.: 91287.23
Contact: Long Ching
Phone: (415) 391-2510

AELC Contact: Mark Smith
Job No.: 798642
COC Log No.: NO NUMBER
AELC ID No.: L8642-10A
Batch No.: 9060
Matrix: SOIL

Sample: MS-8(cont.)

Analyte	CAS No.	Results (ug/kg)	Rep. Limit (ug/kg)
Toluene	108-88-3	ND	5
1,1,1-Trichloroethane	71-55-6	ND	5
1,1,2-Trichloroethane	79-00-5	ND	5
Trichloroethene	79-01-6	ND	5
Trichlorofluoromethane	75-69-4	ND	5
1,1,2-Trichlorotrifluoroethane	79-13-1	ND	5
Vinyl acetate	108-05-4	ND	50
Vinyl chloride	75-01-4	ND	10
Xylenes, total	1330-20-7	ND	10

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AMERICAN
ENVIRONMENTAL LABORATORIES CORP.

CA DOHS ELAP Accreditation/Registration Number 1233

Analysis Report: Volatile Organic Compounds by GC/MS, EPA Method 8240

Client: AllWest Environmental
One Sutter Street
San Francisco, CA 94104

Project: Mariner Square

Date Sampled: 04/07/92
Date Received: 04/07/92
Date Extracted: 04/08/92
Date Analyzed: 04/08/92
Date Reported: 04/13/92
Client ID No.: MS-9

Project No.: 91287.23
Contact: Long Ching
Phone: (415) 391-2510

AELC Contact: Mark Smith
Job No.: 798642
COC Log No.: NO NUMBER
AELC ID No.: L8642-11A
Batch No.: 9060
Matrix: SOIL

SURROGATE

Analyte	CAS No.	Surr Conc. (ug/kg)	Surrogate Recovery (percent)
1,2-Dichloroethane-d4	N/A	100	106
Toluene-d8	N/A	100	103
p-Bromofluorobenzene	460-00-4	100	95

Sample: MS-9

Analyte	CAS No.	Results (ug/kg)	Rep. Limit (ug/kg)
Acetone	67-64-1	ND	100
Benzene	71-43-2	ND	5
Bromodichloromethane	75-27-4	ND	5
Bromoform	75-25-2	ND	5
Bromomethane	74-83-9	ND	10
2-Butanone	78-93-3	ND	100
Carbon disulfide	75-15-0	ND	5
Carbon tetrachloride	56-23-5	ND	5
Chlorobenzene	108-90-7	ND	5
Chloroethane	75-00-3	ND	10
2-Chloroethyl vinyl ether	110-75-8	ND	50
Chloroform	67-66-3	ND	5
Chloromethane	74-87-3	ND	10
Dibromochloromethane	124-48-1	ND	5
Dibromomethane	74-95-3	ND	5
1,2-Dichlorobenzene	95-50-1	ND	5
1,3-Dichlorobenzene	541-73-1	ND	5
1,4-Dichlorobenzene	106-46-7	ND	5
Dichlorodifluoromethane	75-71-8	ND	10
1,1-Dichloroethane	75-34-3	ND	5
1,2-Dichloroethane	107-06-2	ND	5
1,1-Dichloroethene	75-35-4	ND	5
1,2-Dichloroethene, total	540-59-0	ND	5
1,2-Dichloropropane	78-87-5	ND	5
cis-1,3-Dichloropropene	10061-01-5	ND	5
trans-1,3-Dichloropropene	10061-02-6	ND	5
Ethylbenzene	100-41-4	ND	5
2-Hexanone	591-78-6	ND	50
Methylene chloride	75-09-2	ND	5
4-Methyl-2-pentanone	108-10-1	ND	50
Styrene	100-42-5	ND	5
1,1,2,2-Tetrachloroethane	79-34-5	ND	5
Tetrachloroethene	127-18-4	ND	5

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AMERICAN
ENVIRONMENTAL LABORATORIES CORP.

CA DOHS ELAP Accreditation/Registration Number 1233

Analysis Report: Volatile Organic Compounds by GC/MS, EPA Method 8240

Client: AllWest Environmental
One Sutter Street
San Francisco, CA 94104

Project: Mariner Square

Date Extracted: 04/08/92
Date Analyzed: 04/08/92
Date Reported: 04/13/92

Project No.: 91287.23
Contact: Long Ching
Phone: (415) 391-2510

AELC Contact: Mark Smith
Job No.: 798642
COC Log No.: NO NUMBER
AELC ID No.: L8642
Batch No.: 9060
Matrix: SOIL

RELATIVE % DIFFERENCE

Analyte	CAS No.	Relative Percent Difference (percent)
Benzene	71-43-2	4
Chlorobenzene	108-90-7	3
1,1-Dichloroethene	75-35-4	5
Toluene	108-88-3	4
Trichloroethene	79-01-6	6

AMERICAN
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Analysis Report: Volatile Organic Compounds by GC/MS, EPA Method 8240

Client: AllWest Environmental
One Sutter Street
San Francisco, CA 94104

Project: Mariner Square

Date Sampled: 04/07/92
Date Received: 04/07/92
Date Extracted: 04/08/92
Date Analyzed: 04/08/92
Date Reported: 04/13/92
Client ID No.: MS-9

Project No.: 91287.23
Contact: Long Ching
Phone: (415) 391-2510

AELC Contact: Mark Smith
Job No.: 798642
COC Log No.: NO NUMBER
AELC ID No.: L8642-11A
Batch No.: 9060
Matrix: SOIL

Sample: MS-9(cont.)

Analyte	CAS No.	Results (ug/kg)	Rep. Limit (ug/kg)
Toluene	108-88-3	ND	5
1,1,1-Trichloroethane	71-55-6	ND	5
1,1,2-Trichloroethane	79-00-5	ND	5
Trichloroethene	79-01-6	ND	5
Trichlorofluoromethane	75-69-4	ND	5
1,1,2-Trichlorotrifluoroethane	79-13-1	ND	5
Vinyl acetate	108-05-4	ND	50
Vinyl chloride	75-01-4	ND	10
Xylenes, total	1330-20-7	ND	10

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Rep. Limit = Reporting Limit unless otherwise indicated in parentheses.

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CA DOHS ELAP Accreditation/Registration Number 1233

Analysis Report: Volatile Organic Compounds by GC/MS, EPA Method 8240

Client: AllWest Environmental
One Sutter Street
San Francisco, CA 94104

Project: Mariner Square

Date Sampled: 04/07/92
Date Received: 04/07/92
Date Extracted: 04/08/92
Date Analyzed: 04/08/92
Date Reported: 04/13/92
Client ID No.: MS-10

Project No.: 91287.23
Contact: Long Ching
Phone: (415) 391-2510

AELC Contact: Mark Smith
Job No.: 798642
COC Log No.: NO NUMBER
AELC ID No.: L8642-12A
Batch No.: 9060
Matrix: SOIL

SURROGATE

Analyte	CAS No.	Surr Conc. (ug/kg)	Surrogate Recovery (percent)
1,2-Dichloroethane-d4	N/A	100	105
Toluene-d8	N/A	100	103
p-Bromofluorobenzene	460-00-4	100	95

Sample: MS-10

Analyte	CAS No.	Results (ug/kg)	Rep. Limit (ug/kg)
Acetone	67-64-1	ND	100
Benzene	71-43-2	ND	5
Bromodichloromethane	75-27-4	ND	5
Bromoform	75-25-2	ND	5
Bromomethane	74-83-9	ND	10
2-Butanone	78-93-3	ND	100
Carbon disulfide	75-15-0	ND	5
Carbon tetrachloride	56-23-5	ND	5
Chlorobenzene	108-90-7	ND	5
Chloroethane	75-00-3	ND	10
2-Chloroethyl vinyl ether	110-75-8	ND	50
Chloroform	67-66-3	ND	5
Chloromethane	74-87-3	ND	10
Dibromochloromethane	124-48-1	ND	5
Dibromomethane	74-95-3	ND	5
1,2-Dichlorobenzene	95-50-1	ND	5
1,3-Dichlorobenzene	541-73-1	ND	5
1,4-Dichlorobenzene	106-46-7	ND	5
Dichlorodifluoromethane	75-71-8	ND	10
1,1-Dichloroethane	75-34-3	ND	5
1,2-Dichloroethane	107-06-2	ND	5
1,1-Dichloroethene	75-35-4	ND	5
1,2-Dichloroethene, total	540-59-0	ND	5
1,2-Dichloropropane	78-87-5	ND	5
cis-1,3-Dichloropropene	10061-01-5	ND	5
trans-1,3-Dichloropropene	10061-02-6	ND	5
Ethylbenzene	100-41-4	ND	5
2-Hexanone	591-78-6	ND	50
Methylene chloride	75-09-2	ND	5
4-Methyl-2-pentanone	108-10-1	ND	50
Styrene	100-42-5	ND	5
1,1,2,2-Tetrachloroethane	79-34-5	ND	5
Tetrachloroethene	127-18-4	ND	5

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AMERICAN
ENVIRONMENTAL LABORATORIES CORP.

CA DOHS ELAP Accreditation/Registration Number 1233

Analysis Report: Volatile Organic Compounds by GC/MS, EPA Method 8240

Client: AllWest Environmental
One Sutter Street
San Francisco, CA 94104

Project: Mariner Square

Date Sampled: 04/07/92
Date Received: 04/07/92
Date Extracted: 04/08/92
Date Analyzed: 04/08/92
Date Reported: 04/13/92
Client ID No.: MS-10

Project No.: 91287.23
Contact: Long Ching
Phone: (415) 391-2510

AELC Contact: Mark Smith
Job No.: 798642
COC Log No.: NO NUMBER
AELC ID No.: L8642-12A
Batch No.: 9060
Matrix: SOIL

Sample: MS-10(cont.)

Analyte	CAS No.	Results (ug/kg)	Rep. Limit (ug/kg)
Toluene	108-88-3	ND	5
1,1,1-Trichloroethane	71-55-6	ND	5
1,1,2-Trichloroethane	79-00-5	ND	5
Trichloroethene	79-01-6	ND	5
Trichlorofluoromethane	75-69-4	ND	5
1,1,2-Trichlorotrifluoroethane	79-13-1	ND	5
Vinyl acetate	108-05-4	ND	50
Vinyl chloride	75-01-4	ND	10
Xylenes, total	1330-20-7	ND	10

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ENVIRONMENTAL LABORATORIES CORP.

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Analysis Report: Volatile Organic Compounds by GC/MS, EPA Method 8240

Client: AllWest Environmental
One Sutter Street
San Francisco, CA 94104

Project: Mariner Square

Date Extracted: 04/08/92
Date Analyzed: 04/08/92
Date Reported: 04/13/92

Project No.: 91287.23
Contact: Long Ching
Phone: (415) 391-2510

AELC Contact: Mark Smith
Job No.: 798642
COC Log No.: NO NUMBER
AELC ID No.: L8642
Batch No.: 9060
Matrix: SOIL

MB SURROGATE

Analyte	CAS No.	Surr Conc. (ug/kg)	MB Surrogate Recovery (percent)
1,2-Dichloroethane-d4	N/A	100	95
Toluene-d8	N/A	100	101
p-Bromofluorobenzene	460-00-4	100	96

METHOD BLANK

Analyte	CAS No.	Results (ug/kg)	Rep. Limit (ug/kg)
Acetone	67-64-1	ND	100
Benzene	71-43-2	ND	5
Bromodichloromethane	75-27-4	ND	5
Bromoform	75-25-2	ND	5
Bromomethane	74-83-9	ND	10
2-Butanone	78-93-3	ND	100
Carbon disulfide	75-15-0	ND	5
Carbon tetrachloride	56-23-5	ND	5
Chlorobenzene	108-90-7	ND	5
Chloroethane	75-00-3	ND	10
2-Chloroethyl vinyl ether	110-75-8	ND	50
Chloroform	67-66-3	ND	5
Chloromethane	74-87-3	ND	10
Dibromochloromethane	124-48-1	ND	5
Dibromomethane	74-95-3	ND	5
1,2-Dichlorobenzene	95-50-1	ND	5
1,3-Dichlorobenzene	541-73-1	ND	5
1,4-Dichlorobenzene	106-46-7	ND	5
Dichlorodifluoromethane	75-71-8	ND	10
1,1-Dichloroethane	75-34-3	ND	5
1,2-Dichloroethane	107-06-2	ND	5
1,1-Dichloroethene	75-35-4	ND	5
1,2-Dichloroethene, total	540-59-0	ND	5
1,2-Dichloropropane	78-87-5	ND	5
cis-1,3-Dichloropropene	10061-01-5	ND	5
trans-1,3-Dichloropropene	10061-02-6	ND	5
Ethylbenzene	100-41-4	ND	5
2-Hexanone	591-78-6	ND	50
Methylene chloride	75-09-2	ND	5
4-Methyl-2-pentanone	108-10-1	ND	50
Styrene	100-42-5	ND	5
1,1,2,2-Tetrachloroethane	79-34-5	ND	5
Tetrachloroethene	127-18-4	ND	5
Toluene	108-88-3	ND	5

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AMERICAN
ENVIRONMENTAL LABORATORIES CORP.

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Analysis Report: Volatile Organic Compounds by GC/MS, EPA Method 8240

Client: AllWest Environmental
One Sutter Street
San Francisco, CA 94104

Project: Mariner Square

Date Extracted: 04/08/92
Date Analyzed: 04/08/92
Date Reported: 04/13/92

Project No.: 91287.23
Contact: Long Ching
Phone: (415) 391-2510

AELC Contact: Mark Smith
Job No.: 798642
COC Log No.: NO NUMBER
AELC ID No.: L8642
Batch No.: 9060
Matrix: SOIL

METHOD BLANK(cont.)

Analyte	CAS No.	Results (ug/kg)	Rep. Limit (ug/kg)
1,1,1-Trichloroethane	71-55-6	ND	5
1,1,2-Trichloroethane	79-00-5	ND	5
Trichloroethene	79-01-6	ND	5
Trichlorofluoromethane	75-69-4	ND	5
1,1,2-Trichlorotrifluoroethane	79-13-1	ND	5
Vinyl acetate	108-05-4	ND	50
Vinyl chloride	75-01-4	ND	10
Xylenes, total	1330-20-7	ND	10

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Project No.: 91287.23
Contact: Long Ching
Phone: (415) 391-2510

AELC Contact: Mark Smith
Job No.: 798642
COC Log No.: NO NUMBER
AELC ID No.: L8642
Batch No.: 9060
Matrix: SOIL

MS SURROGATE

Analyte	CAS No.	MS Surr. Conc. (ug/kg)	MS Surrogate Recovery (percent)
1,2-Dichloroethane-d4	N/A	100	102
Toluene-d8	N/A	100	102
p-Bromofluorobenzene	460-00-4	100	98

MATRIX SPIKE

Analyte	CAS No.	MS Conc. (ug/kg)	MS Recovery (percent)
Benzene	71-43-2	50	118
Chlorobenzene	108-90-7	50	102
1,1-Dichloroethene	75-35-4	50	111
Toluene	108-88-3	50	119
Trichloroethene	79-01-6	50	107

MSD SURROGATE

Analyte	CAS No.	Surr. Conc. (ug/kg)	MSD Surrogate Recovery (percent)
1,2-Dichloroethane-d4	N/A	100	101
Toluene-d8	N/A	100	102
p-Bromofluorobenzene	460-00-4	100	96

MATRIX SPIKE DUPLICATE

Analyte	CAS No.	MSD Conc. (ug/kg)	MSD Recovery (percent)
Benzene	71-43-2	50	113
Chlorobenzene	108-90-7	50	99
1,1-Dichloroethene	75-35-4	50	106
Toluene	108-88-3	50	114
Trichloroethene	79-01-6	50	101

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One Sutter Street
San Francisco, CA 94104

Project: Mariner Square

Date Reported: 04/13/92

Project No.: 91287.23
Contact: Long Ching
Phone: (415) 391-2510

AELC Contact: Mark Smith
Job No.: 798642
COC Log No.: NO NUMBER
AELC ID No.: L8642
Batch No.: 9060
Matrix: SOIL

LAB CONTROL STANDARD

Analyte	CAS No.	LCS Conc. (ug/L)	LCS Recovery (percent)
Benzene	71-43-2	50	111
Chlorobenzene	108-90-7	50	94
1,1-Dichloroethene	75-35-4	50	102
Toluene	108-88-3	50	106
Trichloroethene	79-01-6	50	98

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.

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Analysis Report: Volatile Organic Compounds by GC/MS - EPA Method 624

Client: AllWest Environmental
One Sutter Street
San Francisco, CA 94104

Project: Mariner Square

Date Sampled: 04/07/92
Date Received: 04/07/92
Date Extracted: 04/08/92
Date Analyzed: 04/08/92
Date Reported: 04/13/92
Client ID No.: MW-1

Project No.: 91287.23
Contact: Long Ching
Phone: (415) 391-2510

AELC Contact: Mark Smith
Job No.: 798642
COC Log No.: NO NUMBER
AELC ID No.: L8642-2B
Batch No.: 9067
Matrix: WATER

SURROGATE

Analyte	CAS No.	Surr Conc. (ug/L)	Surrogate Recovery (percent)
1,2-Dichloroethane-d4	N/A	100	104
Toluene-d8	N/A	100	105
p-Bromofluorobenzene	460-00-4	100	95

Sample: MW-1

Analyte	CAS No.	Results (ug/L)	Rep. Limit (ug/L)
Acetone	67-64-1	ND	100
Benzene	71-43-2	ND	5
Bromodichloromethane	75-27-4	ND	5
Bromoform	75-25-2	ND	5
Bromomethane	74-83-9	ND	10
2-Butanone	78-93-3	ND	100
Carbon disulfide	75-15-0	ND	5
Carbon tetrachloride	56-23-5	ND	5
Chlorobenzene	108-90-7	ND	5
Chloroethane	75-00-3	ND	10
2-Chloroethyl vinyl ether	110-75-8	ND	50
Chloroform	67-66-3	ND	5
Chloromethane	74-87-3	ND	10
Dibromochloromethane	124-48-1	ND	5
Dibromomethane	74-95-3	ND	5
1,2-Dichlorobenzene	95-50-1	ND	5
1,3-Dichlorobenzene	541-73-1	ND	5
1,4-Dichlorobenzene	106-46-7	ND	5
Dichlorodifluoromethane	75-71-8	ND	10
1,1-Dichloroethane	75-34-3	ND	5
1,2-Dichloroethane	107-06-2	ND	5
1,1-Dichloroethene	75-35-4	ND	5
1,2-Dichloroethene, total	540-59-0	ND	5
1,2-Dichloropropane	78-87-5	ND	5
cis-1,3-Dichloropropene	10061-01-5	ND	5
trans-1,3-Dichloropropene	10061-02-6	ND	5
Ethylbenzene	100-41-4	ND	5
2-Hexanone	591-78-6	ND	50
Methylene chloride	75-09-2	ND	5
4-Methyl-2-pentanone	108-10-1	ND	50
Styrene	100-42-5	ND	5
1,1,2,2-Tetrachloroethane	79-34-5	ND	5
Tetrachloroethene	127-18-4	ND	5

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Client: AllWest Environmental
One Sutter Street
San Francisco, CA 94104

Project: Mariner Square

Date Sampled: 04/07/92
Date Received: 04/07/92
Date Extracted: 04/08/92
Date Analyzed: 04/08/92
Date Reported: 04/13/92
Client ID No.: MW-1

Project No.: 91287.23
Contact: Long Ching
Phone: (415) 391-2510

AELC Contact: Mark Smith
Job No.: 798642
COC Log No.: NO NUMBER
AELC ID No.: L8642-2B
Batch No.: 9067
Matrix: WATER

Sample: MW-1(cont.)

Analyte	CAS No.	Results (ug/L)	Rep. Limit (ug/L)
Toluene	108-88-3	ND	5
1,1,1-Trichloroethane	71-55-6	ND	5
1,1,2-Trichloroethane	79-00-5	ND	5
Trichloroethene	79-01-6	ND	5
Trichlorofluoromethane	75-69-4	ND	5
1,1,2-Trichlorotrifluoroethane	79-13-1	ND	5
Vinyl acetate	108-05-4	ND	50
Vinyl chloride	75-01-4	ND	10
Xylenes, total	1330-20-7	ND	10

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AMERICAN
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Analysis Report: Volatile Organic Compounds by GC/MS - EPA Method 624

Client: AllWest Environmental
One Sutter Street
San Francisco, CA 94104

Project: Mariner Square

Date Sampled: 04/07/92
Date Received: 04/07/92
Date Extracted: 04/08/92
Date Analyzed: 04/08/92
Date Reported: 04/13/92
Client ID No.: MW-7

Project No.: 91287.23
Contact: Long Ching
Phone: (415) 391-2510

AELC Contact: Mark Smith
Job No.: 798642
COC Log No.: NO NUMBER
AELC ID No.: L8642-9B
Batch No.: 9067
Matrix: WATER

SURROGATE

Analyte	CAS No.	Surr Conc. (ug/L)	Surrogate Recovery (percent)
1,2-Dichloroethane-d4	N/A	100	99
Toluene-d8	N/A	100	101
p-Bromofluorobenzene	460-00-4	100	110

Sample: MW-7

Analyte	CAS No.	Results (ug/L)	Rep. Limit (ug/L)
Acetone	67-64-1	ND	100
Benzene	71-43-2	ND	5
Bromodichloromethane	75-27-4	ND	5
Bromoform	75-25-2	ND	5
Bromomethane	74-83-9	ND	10
2-Butanone	78-93-3	ND	100
Carbon disulfide	75-15-0	ND	5
Carbon tetrachloride	56-23-5	ND	5
Chlorobenzene	108-90-7	ND	5
Chloroethane	75-00-3	ND	10
2-Chloroethyl vinyl ether	110-75-8	ND	50
Chloroform	67-66-3	ND	5
Chloromethane	74-87-3	ND	10
Dibromochloromethane	124-48-1	ND	5
Dibromomethane	74-95-3	ND	5
1,2-Dichlorobenzene	95-50-1	ND	5
1,3-Dichlorobenzene	541-73-1	ND	5
1,4-Dichlorobenzene	106-46-7	ND	5
Dichlorodifluoromethane	75-71-8	ND	10
1,1-Dichloroethane	75-34-3	ND	5
1,2-Dichloroethane	107-06-2	ND	5
1,1-Dichloroethene	75-35-4	ND	5
1,2-Dichloroethene, total	540-59-0	ND	5
1,2-Dichloropropane	78-87-5	ND	5
cis-1,3-Dichloropropene	10061-01-5	ND	5
trans-1,3-Dichloropropene	10061-02-6	ND	5
Ethylbenzene	100-41-4	ND	5
2-Hexanone	591-78-6	ND	50
Methylene chloride	75-09-2	ND	5
4-Methyl-2-pentanone	108-10-1	ND	50
Styrene	100-42-5	ND	5
1,1,2,2-Tetrachloroethane	79-34-5	ND	5
Tetrachloroethene	127-18-4	ND	5

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Client: AllWest Environmental
One Sutter Street
San Francisco, CA 94104

Project: Mariner Square

Date Sampled: 04/07/92
Date Received: 04/07/92
Date Extracted: 04/08/92
Date Analyzed: 04/08/92
Date Reported: 04/13/92
Client ID No.: MW-7

Project No.: 91287.23
Contact: Long Ching
Phone: (415) 391-2510

AELC Contact: Mark Smith
Job No.: 798642
COC Log No.: NO NUMBER
AELC ID No.: L8642-9B
Batch No.: 9067
Matrix: WATER

Sample: MW-7(cont.)

Analyte	CAS No.	Results (ug/L)	Rep. Limit (ug/L)
Toluene	108-88-3	ND	5
1,1,1-Trichloroethane	71-55-6	ND	5
1,1,2-Trichloroethane	79-00-5	ND	5
Trichloroethene	79-01-6	ND	5
Trichlorofluoromethane	75-69-4	ND	5
1,1,2-Trichlorotrifluoroethane	79-13-1	ND	5
Vinyl acetate	108-05-4	ND	50
Vinyl chloride	75-01-4	ND	10
Xylenes, total	1330-20-7	ND	10

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Project: Mariner Square

Date Extracted: 04/08/92
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Date Reported: 04/13/92

Project No.: 91287.23
Contact: Long Ching
Phone: (415) 391-2510

AELC Contact: Mark Smith
Job No.: 798642
COC Log No.: NO NUMBER
AELC ID No.: L8642
Batch No.: 9067
Matrix: WATER

MB SURROGATE

Analyte	CAS No.	Surr Conc. (ug/L)	MB Surrogate Recovery (percent)
1,2-Dichloroethane-d4	N/A	100	95
Toluene-d8	N/A	100	101
p-Bromofluorobenzene	460-00-4	100	96

METHOD BLANK

Analyte	CAS No.	Results (ug/L)	Rep. Limit (ug/L)
Acetone	67-64-1	ND	100
Benzene	71-43-2	ND	5
Bromodichloromethane	75-27-4	ND	5
Bromoform	75-25-2	ND	5
Bromomethane	74-83-9	ND	10
2-Butanone	78-93-3	ND	100
Carbon disulfide	75-15-0	ND	5
Carbon tetrachloride	56-23-5	ND	5
Chlorobenzene	108-90-7	ND	5
Chloroethane	75-00-3	ND	10
2-Chloroethyl vinyl ether	110-75-8	ND	50
Chloroform	67-66-3	ND	5
Chloromethane	74-87-3	ND	10
Dibromochloromethane	124-48-1	ND	5
Dibromomethane	74-95-3	ND	5
1,2-Dichlorobenzene	95-50-1	ND	5
1,3-Dichlorobenzene	541-73-1	ND	5
1,4-Dichlorobenzene	106-46-7	ND	5
Dichlorodifluoromethane	75-71-8	ND	10
1,1-Dichloroethane	75-34-3	ND	5
1,2-Dichloroethane	107-06-2	ND	5
1,1-Dichloroethene	75-35-4	ND	5
1,2-Dichloroethene, total	540-59-0	ND	5
1,2-Dichloropropane	78-87-5	ND	5
cis-1,3-Dichloropropene	10061-01-5	ND	5
trans-1,3-Dichloropropene	10061-02-6	ND	5
Ethylbenzene	100-41-4	ND	5
2-Hexanone	591-78-6	ND	50
Methylene chloride	75-09-2	ND	5
4-Methyl-2-pentanone	108-10-1	ND	50
Styrene	100-42-5	ND	5
1,1,2,2-Tetrachloroethane	79-34-5	ND	5
Tetrachloroethene	127-18-4	ND	5
Toluene	108-88-3	ND	5

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One Sutter Street
San Francisco, CA 94104

Project: Mariner Square

Date Extracted: 04/08/92
Date Analyzed: 04/08/92
Date Reported: 04/13/92

Project No.: 91287.23
Contact: Long Ching
Phone: (415) 391-2510

AELC Contact: Mark Smith
Job No.: 798642
COC Log No.: NO NUMBER
AELC ID No.: L8642
Batch No.: 9067
Matrix: WATER

METHOD BLANK(cont.)

Analyte	CAS No.	Results (ug/L)	Rep. Limit (ug/L)
1,1,1-Trichloroethane	71-55-6	ND	5
1,1,2-Trichloroethane	79-00-5	ND	5
Trichloroethene	79-01-6	ND	5
Trichlorofluoromethane	75-69-4	ND	5
1,1,2-Trichlorotrifluoroethane	79-13-1	ND	5
Vinyl acetate	108-05-4	ND	50
Vinyl chloride	75-01-4	ND	10
Xylenes, total	1330-20-7	ND	10

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Project: Mariner Square

Date Extracted: 04/08/92
Date Analyzed: 04/08/92
Date Reported: 04/13/92

Project No.: 91287.23
Contact: Long Ching
Phone: (415) 391-2510

AELC Contact: Mark Smith
Job No.: 798642
COC Log No.: NO NUMBER
AELC ID No.: L8642
Batch No.: 9067
Matrix: WATER

MS SURROGATE

Analyte	CAS No.	MS Surr. Conc. (ug/L)	MS Surrogate Recovery (percent)
1,2-Dichloroethane-d4	N/A	100	98
Toluene-d8	N/A	100	102
p-Bromofluorobenzene	460-00-4	100	93

MATRIX SPIKE

Analyte	CAS No.	MS Conc. (ug/L)	MS Recovery (percent)
Benzene	71-43-2	50	111
Chlorobenzene	108-90-7	50	95
1,1-Dichloroethene	75-35-4	50	102
Toluene	108-88-3	50	113
Trichloroethene	79-01-6	50	100

MSD SURROGATE

Analyte	CAS No.	Surr. Conc. (ug/L)	MSD Surrogate Recovery (percent)
1,2-Dichloroethane-d4	N/A	100	98
Toluene-d8	N/A	100	101
p-Bromofluorobenzene	460-00-4	100	95

MATRIX SPIKE DUPLICATE

Analyte	CAS No.	MSD Conc. (ug/L)	MSD Recovery (percent)
Benzene	71-43-2	50	115
Chlorobenzene	108-90-7	50	99
1,1-Dichloroethene	75-35-4	50	109
Toluene	108-88-3	50	116
Trichloroethene	79-01-6	50	103

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.

CA DOHS ELAP Accreditation/Registration Number 1233

Analysis Report: Volatile Organic Compounds by GC/MS - EPA Method 624

Client: AllWest Environmental
One Sutter Street
San Francisco, CA 94104

Project: Mariner Square

Date Extracted: 04/08/92
Date Analyzed: 04/08/92
Date Reported: 04/13/92

Project No.: 91287.23
Contact: Long Ching
Phone: (415) 391-2510

AELC Contact: Mark Smith
Job No.: 798642
COC Log No.: NO NUMBER
AELC ID No.: L8642
Batch No.: 9067
Matrix: WATER

RELATIVE % DIFFERENCE

Analyte	CAS No.	Relative Percent Difference (percent)
Benzene	71-43-2	4
Chlorobenzene	108-90-7	4
1,1-Dichloroethene	75-35-4	7
Toluene	108-88-3	3
Trichloroethene	79-01-6	3

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.

CA DOHS ELAP Accreditation/Registration Number 1233

Analysis Report: Volatile Organic Compounds by GC/MS - EPA Method 624

Client: AllWest Environmental
One Sutter Street
San Francisco, CA 94104

Project: Mariner Square

Date Reported: 04/13/92

Project No.: 91287.23
Contact: Long Ching
Phone: (415) 391-2510

AELC Contact: Mark Smith
Job No.: 798642
COC Log No.: NO NUMBER
AELC ID No.: L8642
Batch No.: 9067
Matrix: WATER

LAB CONTROL STANDARD

Analyte	CAS No.	LCS Conc. (ug/L)	LCS Recovery (percent)
Benzene	71-43-2	50	111
Chlorobenzene	108-90-7	50	94
1,1-Dichloroethene	75-35-4	50	102
Toluene	108-88-3	50	106
Trichloroethene	79-01-6	50	98

L8646

Chain of Custody Form

AllWest

AllWest Environmental, Inc.
Consultants in Real Estate Finance
303 Second Street Suite 680
San Francisco, CA 94107-1317

Samplers: [illegible] MAMASOL
Long Ching

Job Description: Mariner Square
Job Number: 9,287.23
Client Contact: Long Ching
Recorder: Long Ching

Matrix						# Containers	Method Preserved					Sample Number	Sampling Date				SAMPLE NOTES	ANALYSIS REQUESTED			
Water	Soil	Waste	Oil				H_2SO_4	HNO3	Ice	None	Other		Yr	Mo	Dy	Time		418.1 Soil	8240 Soil	418.1 Water	624 Water
	X					1			X			MS-11	92	04	08	0915	Depth: 3-4 OVM 199 ppm	X	X		
	X					1			X			MS-12	92	04	08	0916	Depth 3-4 OVM 199 ppm	X	X		
	X					1			X			MS-13	92	04	08	1035	3'-4', OVM 102,	X	X		
	X					1			X			MS-14	92	04	08	1105	3'-4' OVM 33,	X	X		
	X					1			X			MS-15	92	04	08	1119	3'-4' OVM 0,	X	X		
	X					1			X			MS-16	92	04	08	1140	3'-4', OVM 0	X	X		
	X					1			X			MS-17	92	04	08	1405	1'-2' OVM 560 ppm in situ	X	X		
	X					1			X			MS-18	92	04	08	1455	3'-4' OVM 79 ppm	X	X		
	X					1			X			MS-19	92	04	08	1515	3'-4' OVM 62 ppm	X	X		
	X					1			X			MS-20	92	04	08	1520	3'-4' OVM 0 ppm	X	X		

Laboratory Notes:

ENTRACT From Base (TIP)
Please fax the chain of custody record to AllWest.

5-day turnaround

Chain of Custody Record

Relinquished by: (signature) Date/Hr	Received by (signature)
Long Ching 4/8/92	[signature]
Relinquished by: (signature) Date/Hr	Received by (signature)
[signature] 4/8/92 1830	
Relinquished by: (signature) Date/Hr	Received by (signature)
Relinquished by: (signature) Date/Hr	Received by (signature)
Dispatched by: (signature) Date/Hr	Received for Lab by (signature)
	[signature]

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.

04/20/92

AllWest Environmental
One Sutter Street
Suite 600
San Francisco, CA 94104

Attention: Long Ching

Reference: Analytical Results

Project Name: Mariner Square
Project No.: 91287.23
Date Received: 04/08/92
Chain Of Custody: NO NUMBER

AELC ID No.: L8646
AELC Job No.: 798646

The following analyses were performed on the above referenced project:

No. of Samples	*Turnaround Time*	*Analysis Description*
10	7 Days	Total Recoverable Petroleum Hydrocarbons
10	7 Days	Volatile Organic Compounds by GC/MS

The initial Method 8240 analysis of a number of samples associated with this project produced surrogate standard recovery data that did not satisfy laboratory QA/QC criteria. Re-analysis of the samples produced similar results, thereby substantiating a "matrix effect" per EPA Contract Lab protocol. It was also necessary to elevate Method 8240 reporting limits for some of these samples due to matrix interference.

These samples were received by American Environmental Laboratories in a chilled, intact state and accompanied by a valid chain of custody document.

Analytical results are attached to this letter. Please call if we can provide additional assistance.

Sincerely,

George Hampton
Laboratory Director

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.

CA DOHS ELAP Accreditation/Registration Number 1233

Analysis Report: Total Recoverable Petroleum Hydrocarbons, EPA Method 418.1 Shaker, DOHS LUFT Method

Client: AllWest Environmental
One Sutter Street
San Francisco, CA 94104

Project: Mariner Square

Date Sampled: 04/08/92
Date Received: 04/08/92
Date Extracted: 04/09/92
Date Analyzed: 04/16/92
Date Reported: 04/16/92

Project No.: 91287.23
Contact: Long Ching
Phone: (415) 391-2510

AELC Contact: Mark Smith
Job No.: 798646
COC Log No.: NO NUMBER
AELC ID No.: L8646
Batch No.: 9076
Matrix: SOIL

ANALYTE

Sample I.D. Client	AELC	Total Recoverable Hydrocarbons (mg/kg)
MS-11	1A	3000
MS-12	2A	3200
MS-13	3A	4900
MS-14	4A	6300
MS-15	5A	6400
MS-16	6A	27
MS-17	7A	3300
MS-18	8A	11000
MS-19	9A	3900
MS-20	10A	970
Rep. Limit		10

ND = Not detected at or above indicated Reporting Limit
Rep. Limit = Reporting Limit unless otherwise indicated in parentheses.

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.

CA DOHS ELAP Accreditation/Registration Number 1233

Analysis Report: Total Recoverable Petroleum Hydrocarbons, EPA Method 418.1
Shaker, DOHS LUFT Method

Client: AllWest Environmental
One Sutter Street
San Francisco, CA 94104

Project: Mariner Square

Date Extracted: 04/09/92
Date Analyzed: 04/16/92
Date Reported: 04/16/92

Project No.: 91287.23
Contact: Long Ching
Phone: (415) 391-2510

AELC Contact: Mark Smith
Job No.: 798646
COC Log No.: NO NUMBER
AELC ID No.: L8646
Batch No.: 9076
Matrix: SOIL

METHOD BLANK

Analyte	CAS No.	Results (mg/kg)	Rep. Limit (mg/kg)
Total Recoverable Hydrocarbons	N/A	ND	10

ND = Not detected at or above indicated Reporting Limit
Rep. Limit = Reporting Limit unless otherwise indicated in parentheses.

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.

CA DOHS ELAP Accreditation/Registration Number 1233

Analysis Report: Total Recoverable Petroleum Hydrocarbons, EPA Method 418.1
Shaker, DOHS LUFT Method

Client: AllWest Environmental
One Sutter Street
San Francisco, CA 94104

Project: Mariner Square

Date Extracted: 04/09/92
Date Analyzed: 04/16/92
Date Reported: 04/16/92

Project No.: 91287.23
Contact: Long Ching
Phone: (415) 391-2510

AELC Contact: Mark Smith
Job No.: 798646
COC Log No.: NO NUMBER
AELC ID No.: L8646
Batch No.: 9076
Matrix: SOIL

MB SPIKE

Analyte	CAS No.	MBS Conc. (mg/kg)	MBS Recovery (percent)
Total Recoverable Hydrocarbons	N/A	60	110

MB SPIKE DUPLICATE

Analyte	CAS No.	MBSD Conc. (mg/kg)	MBSD Recovery (percent)
Total Recoverable Hydrocarbons	N/A	60	111

MB SPIKE RPD

Analyte	CAS No.	MBS Relative Percent Difference (percent)
Total Recoverable Hydrocarbons	N/A	1

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.

CA DOHS ELAP Accreditation/Registration Number 1233

Analysis Report: Volatile Organic Compounds by GC/MS, EPA Method 8240

Client: AllWest Environmental
One Sutter Street
San Francisco, CA 94104

Project: Mariner Square

Date Sampled: 04/08/92
Date Received: 04/08/92
Date Extracted: 04/10/92
Date Analyzed: 04/10/92
Date Reported: 04/16/92
Client ID No.: MS-11

Project No.: 91287.23
Contact: Long Ching
Phone: (415) 391-2510

AELC Contact: Mark Smith
Job No.: 798646
COC Log No.: NO NUMBER
AELC ID No.: L8646-1A
Batch No.: 9080
Matrix: SOIL

SURROGATE

Analyte	CAS No.	Surr Conc. (ug/kg)	Surrogate Recovery (percent)
1,2-Dichloroethane-d4	N/A	100	108
Toluene-d8	N/A	100	84
p-Bromofluorobenzene	460-00-4	100	NR

Sample: MS-11

Analyte	CAS No.	Results (ug/kg)	Rep. Limit (ug/kg)
Acetone	67-64-1	ND	100
Benzene	71-43-2	ND	5
Bromodichloromethane	75-27-4	ND	5
Bromoform	75-25-2	ND	5
Bromomethane	74-83-9	ND	10
2-Butanone	78-93-3	ND	100
Carbon disulfide	75-15-0	ND	5
Carbon tetrachloride	56-23-5	ND	5
Chlorobenzene	108-90-7	ND	5
Chloroethane	75-00-3	ND	10
2-Chloroethyl vinyl ether	110-75-8	ND	50
Chloroform	67-66-3	ND	5
Chloromethane	74-87-3	ND	10
Dibromochloromethane	124-48-1	ND	5
Dibromomethane	74-95-3	ND	5
1,2-Dichlorobenzene	95-50-1	ND	5
1,3-Dichlorobenzene	541-73-1	ND	5
1,4-Dichlorobenzene	106-46-7	ND	5
Dichlorodifluoromethane	75-71-8	ND	10
1,1-Dichloroethane	75-34-3	ND	5
1,2-Dichloroethane	107-06-2	ND	5
1,1-Dichloroethene	75-35-4	ND	5
1,2-Dichloroethene, total	540-59-0	ND	5
1,2-Dichloropropane	78-87-5	ND	5
cis-1,3-Dichloropropene	10061-01-5	ND	5
trans-1,3-Dichloropropene	10061-02-6	ND	5
Ethylbenzene	100-41-4	ND	5
2-Hexanone	591-78-6	ND	50
Methylene chloride	75-09-2	ND	5
4-Methyl-2-pentanone	108-10-1	ND	50
Styrene	100-42-5	ND	5
1,1,2,2-Tetrachloroethane	79-34-5	ND	5
Tetrachloroethene	127-18-4	ND	5

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AMERICAN
ENVIRONMENTAL LABORATORIES CORP.

CA DOHS ELAP Accreditation/Registration Number 1233

Analysis Report: Volatile Organic Compounds by GC/MS, EPA Method 8240

Client: AllWest Environmental
One Sutter Street
San Francisco, CA 94104

Project: Mariner Square

Date Sampled: 04/08/92
Date Received: 04/08/92
Date Extracted: 04/10/92
Date Analyzed: 04/10/92
Date Reported: 04/16/92
Client ID No.: MS-11

Project No.: 91287.23
Contact: Long Ching
Phone: (415) 391-2510

AELC Contact: Mark Smith
Job No.: 798646
COC Log No.: NO NUMBER
AELC ID No.: L8646-1A
Batch No.: 9080
Matrix: SOIL

Sample: MS-11(cont.)

Analyte	CAS No.	Results (ug/kg)	Rep. Limit (ug/kg)
Toluene	108-88-3	ND	5
1,1,1-Trichloroethane	71-55-6	ND	5
1,1,2-Trichloroethane	79-00-5	ND	5
Trichloroethene	79-01-6	ND	5
Trichlorofluoromethane	75-69-4	ND	5
1,1,2-Trichlorotrifluoroethane	79-13-1	ND	5
Vinyl acetate	108-05-4	ND	50
Vinyl chloride	75-01-4	ND	10
Xylenes, total	1330-20-7	ND	10

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AMERICAN
ENVIRONMENTAL LABORATORIES CORP.

CA DOHS ELAP Accreditation/Registration Number 1233

Analysis Report: Volatile Organic Compounds by GC/MS, EPA Method 8240

Client: AllWest Environmental
One Sutter Street
San Francisco, CA 94104

Project: Mariner Square

Date Sampled: 04/08/92
Date Received: 04/08/92
Date Extracted: 04/10/92
Date Analyzed: 04/10/92
Date Reported: 04/16/92
Client ID No.: MS-12

Project No.: 91287.23
Contact: Long Ching
Phone: (415) 391-2510

AELC Contact: Mark Smith
Job No.: 798646
COC Log No.: NO NUMBER
AELC ID No.: L8646-2A
Batch No.: 9080
Matrix: SOIL

SURROGATE

Analyte	CAS No.	Surr Conc. (ug/kg)	Surrogate Recovery (percent)
1,2-Dichloroethane-d4	N/A	2000	91
Toluene-d8	N/A	2000	96
p-Bromofluorobenzene	460-00-4	2000	103

Sample: MS-12

Analyte	CAS No.	Results (ug/kg)	Rep. Limit (ug/kg)
Acetone	67-64-1	ND	2000
Benzene	71-43-2	ND	100
Bromodichloromethane	75-27-4	ND	100
Bromoform	75-25-2	ND	100
Bromomethane	74-83-9	ND	200
2-Butanone	78-93-3	ND	2000
Carbon disulfide	75-15-0	ND	100
Carbon tetrachloride	56-23-5	ND	100
Chlorobenzene	108-90-7	ND	100
Chloroethane	75-00-3	ND	200
2-Chloroethyl vinyl ether	110-75-8	ND	1000
Chloroform	67-66-3	ND	100
Chloromethane	74-87-3	ND	200
Dibromochloromethane	124-48-1	ND	100
Dibromomethane	74-95-3	ND	100
1,2-Dichlorobenzene	95-50-1	ND	100
1,3-Dichlorobenzene	541-73-1	ND	100
1,4-Dichlorobenzene	106-46-7	ND	100
Dichlorodifluoromethane	75-71-8	ND	200
1,1-Dichloroethane	75-34-3	ND	100
1,2-Dichloroethane	107-06-2	ND	100
1,1-Dichloroethene	75-35-4	ND	100
1,2-Dichloroethene, total	540-59-0	ND	100
1,2-Dichloropropane	78-87-5	ND	100
cis-1,3-Dichloropropene	10061-01-5	ND	100
trans-1,3-Dichloropropene	10061-02-6	ND	100
Ethylbenzene	100-41-4	140	100
2-Hexanone	591-78-6	ND	1000
Methylene chloride	75-09-2	ND	100
4-Methyl-2-pentanone	108-10-1	ND	1000
Styrene	100-42-5	ND	100
1,1,2,2-Tetrachloroethane	79-34-5	ND	100
Tetrachloroethene	127-18-4	ND	100

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AMERICAN
ENVIRONMENTAL LABORATORIES CORP.

CA DOHS ELAP Accreditation/Registration Number 1233

Analysis Report: Volatile Organic Compounds by GC/MS, EPA Method 8240

Client: AllWest Environmental
One Sutter Street
San Francisco, CA 94104

Project: Mariner Square

Date Sampled: 04/08/92
Date Received: 04/08/92
Date Extracted: 04/10/92
Date Analyzed: 04/10/92
Date Reported: 04/16/92
Client ID No.: MS-12

Project No.: 91287.23
Contact: Long Ching
Phone: (415) 391-2510

AELC Contact: Mark Smith
Job No.: 798646
COC Log No.: NO NUMBER
AELC ID No.: L8646-2A
Batch No.: 9080
Matrix: SOIL

Sample: MS-12(cont.)

Analyte	CAS No.	Results (ug/kg)	Rep. Limit (ug/kg)
Toluene	108-88-3	ND	100
1,1,1-Trichloroethane	71-55-6	ND	100
1,1,2-Trichloroethane	79-00-5	ND	100
Trichloroethene	79-01-6	ND	100
Trichlorofluoromethane	75-69-4	ND	100
1,1,2-Trichlorotrifluoroethane	79-13-1	ND	100
Vinyl acetate	108-05-4	ND	1000
Vinyl chloride	75-01-4	ND	200
Xylenes, total	1330-20-7	270	200

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AMERICAN
ENVIRONMENTAL LABORATORIES CORP.

CA DOHS ELAP Accreditation/Registration Number 1233

Analysis Report: Volatile Organic Compounds by GC/MS, EPA Method 8240

Client: AllWest Environmental
One Sutter Street
San Francisco, CA 94104

Project: Mariner Square

Date Sampled: 04/08/92
Date Received: 04/08/92
Date Extracted: 04/10/92
Date Analyzed: 04/10/92
Date Reported: 04/16/92
Client ID No.: MS-13

Project No.: 91287.23
Contact: Long Ching
Phone: (415) 391-2510

AELC Contact: Mark Smith
Job No.: 798646
COC Log No.: NO NUMBER
AELC ID No.: L8646-3A
Batch No.: 9080
Matrix: SOIL

SURROGATE

Analyte	CAS No.	Surr Conc. (ug/kg)	Surrogate Recovery (percent)
1,2-Dichloroethane-d4	N/A	2000	95
Toluene-d8	N/A	2000	101
p-Bromofluorobenzene	460-00-4	2000	NR

Sample: MS-13

Analyte	CAS No.	Results (ug/kg)	Rep. Limit (ug/kg)
Acetone	67-64-1	ND	2000
Benzene	71-43-2	ND	100
Bromodichloromethane	75-27-4	ND	100
Bromoform	75-25-2	ND	100
Bromomethane	74-83-9	ND	200
2-Butanone	78-93-3	ND	2000
Carbon disulfide	75-15-0	ND	100
Carbon tetrachloride	56-23-5	ND	100
Chlorobenzene	108-90-7	ND	100
Chloroethane	75-00-3	ND	200
2-Chloroethyl vinyl ether	110-75-8	ND	1000
Chloroform	67-66-3	ND	100
Chloromethane	74-87-3	ND	200
Dibromochloromethane	124-48-1	ND	100
Dibromomethane	74-95-3	ND	100
1,2-Dichlorobenzene	95-50-1	ND	100
1,3-Dichlorobenzene	541-73-1	ND	100
1,4-Dichlorobenzene	106-46-7	ND	100
Dichlorodifluoromethane	75-71-8	ND	200
1,1-Dichloroethane	75-34-3	ND	100
1,2-Dichloroethane	107-06-2	ND	100
1,1-Dichloroethene	75-35-4	ND	100
1,2-Dichloroethene, total	540-59-0	ND	100
1,2-Dichloropropane	78-87-5	ND	100
cis-1,3-Dichloropropene	10061-01-5	ND	100
trans-1,3-Dichloropropene	10061-02-6	ND	100
Ethylbenzene	100-41-4	ND	100
2-Hexanone	591-78-6	ND	1000
Methylene chloride	75-09-2	ND	100
4-Methyl-2-pentanone	108-10-1	ND	1000
Styrene	100-42-5	ND	100
1,1,2,2-Tetrachloroethane	79-34-5	ND	100
Tetrachloroethene	127-18-4	ND	100

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AMERICAN
ENVIRONMENTAL LABORATORIES CORP.

CA DOHS ELAP Accreditation/Registration Number 1233

Analysis Report: Volatile Organic Compounds by GC/MS, EPA Method 8240

Client: AllWest Environmental
One Sutter Street
San Francisco, CA 94104

Project: Mariner Square

Date Sampled: 04/08/92
Date Received: 04/08/92
Date Extracted: 04/10/92
Date Analyzed: 04/10/92
Date Reported: 04/16/92
Client ID No.: MS-13

Project No.: 91287.23
Contact: Long Ching
Phone: (415) 391-2510

AELC Contact: Mark Smith
Job No.: 798646
COC Log No.: NO NUMBER
AELC ID No.: L8646-3A
Batch No.: 9080
Matrix: SOIL

Sample: MS-13(cont.)

Analyte	CAS No.	Results (ug/kg)	Rep. Limit (ug/kg)
Toluene	108-88-3	ND	100
1,1,1-Trichloroethane	71-55-6	ND	100
1,1,2-Trichloroethane	79-00-5	ND	100
Trichloroethene	79-01-6	ND	100
Trichlorofluoromethane	75-69-4	ND	100
1,1,2-Trichlorotrifluoroethane	79-13-1	ND	100
Vinyl acetate	108-05-4	ND	1000
Vinyl chloride	75-01-4	ND	200
Xylenes, total	1330-20-7	ND	200

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Rep. Limit = Reporting Limit unless otherwise indicated in parentheses.

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.

CA DOHS ELAP Accreditation/Registration Number 1233

Analysis Report: Volatile Organic Compounds by GC/MS, EPA Method 8240

Client: AllWest Environmental
One Sutter Street
San Francisco, CA 94104

Project: Mariner Square

Date Sampled: 04/08/92
Date Received: 04/08/92
Date Extracted: 04/10/92
Date Analyzed: 04/10/92
Date Reported: 04/16/92
Client ID No.: MS-14

Project No.: 91287.23
Contact: Long Ching
Phone: (415) 391-2510

AELC Contact: Mark Smith
Job No.: 798646
COC Log No.: NO NUMBER
AELC ID No.: L8646-4A
Batch No.: 9080
Matrix: SOIL

SURROGATE

Analyte	CAS No.	Surr Conc. (ug/kg)	Surrogate Recovery (percent)
1,2-Dichloroethane-d4	N/A	100	99
Toluene-d8	N/A	100	88
p-Bromofluorobenzene	460-00-4	100	NR

Sample: MS-14

Analyte	CAS No.	Results (ug/kg)	Rep. Limit (ug/kg)
Acetone	67-64-1	ND	100
Benzene	71-43-2	ND	5
Bromodichloromethane	75-27-4	ND	5
Bromoform	75-25-2	ND	5
Bromomethane	74-83-9	ND	10
2-Butanone	78-93-3	ND	100
Carbon disulfide	75-15-0	ND	5
Carbon tetrachloride	56-23-5	ND	5
Chlorobenzene	108-90-7	ND	5
Chloroethane	75-00-3	ND	10
2-Chloroethyl vinyl ether	110-75-8	ND	50
Chloroform	67-66-3	ND	5
Chloromethane	74-87-3	ND	10
Dibromochloromethane	124-48-1	ND	5
Dibromomethane	74-95-3	ND	5
1,2-Dichlorobenzene	95-50-1	ND	5
1,3-Dichlorobenzene	541-73-1	ND	5
1,4-Dichlorobenzene	106-46-7	ND	5
Dichlorodifluoromethane	75-71-8	ND	10
1,1-Dichloroethane	75-34-3	ND	5
1,2-Dichloroethane	107-06-2	ND	5
1,1-Dichloroethene	75-35-4	ND	5
1,2-Dichloroethene, total	540-59-0	ND	5
1,2-Dichloropropane	78-87-5	ND	5
cis-1,3-Dichloropropene	10061-01-5	ND	5
trans-1,3-Dichloropropene	10061-02-6	ND	5
Ethylbenzene	100-41-4	ND	5
2-Hexanone	591-78-6	ND	50
Methylene chloride	75-09-2	ND	5
4-Methyl-2-pentanone	108-10-1	ND	50
Styrene	100-42-5	ND	5
1,1,2,2-Tetrachloroethane	79-34-5	ND	5
Tetrachloroethene	127-18-4	ND	5

ND = Not detected at or above indicated Reporting Limit
Rep. Limit = Reporting Limit unless otherwise indicated in parentheses.

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.

CA DOHS ELAP Accreditation/Registration Number 1233

Analysis Report: Volatile Organic Compounds by GC/MS, EPA Method 8240

Client: AllWest Environmental
One Sutter Street
San Francisco, CA 94104

Project: Mariner Square

Date Sampled: 04/08/92
Date Received: 04/08/92
Date Extracted: 04/10/92
Date Analyzed: 04/10/92
Date Reported: 04/16/92
Client ID No.: MS-14

Project No.: 91287.23
Contact: Long Ching
Phone: (415) 391-2510

AELC Contact: Mark Smith
Job No.: 798646
COC Log No.: NO NUMBER
AELC ID No.: L8646-4A
Batch No.: 9080
Matrix: SOIL

Sample: MS-14(cont.)

Analyte	CAS No.	Results (ug/kg)	Rep. Limit (ug/kg)
Toluene	108-88-3	ND	5
1,1,1-Trichloroethane	71-55-6	ND	5
1,1,2-Trichloroethane	79-00-5	ND	5
Trichloroethene	79-01-6	ND	5
Trichlorofluoromethane	75-69-4	ND	5
1,1,2-Trichlorotrifluoroethane	79-13-1	ND	5
Vinyl acetate	108-05-4	ND	50
Vinyl chloride	75-01-4	ND	10
Xylenes, total	1330-20-7	ND	10

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Project: Mariner Square

Date Sampled: 04/08/92
Date Received: 04/08/92
Date Extracted: 04/10/92
Date Analyzed: 04/10/92
Date Reported: 04/16/92
Client ID No.: MS-15

Project No.: 91287.23
Contact: Long Ching
Phone: (415) 391-2510

AELC Contact: Mark Smith
Job No.: 798646
COC Log No.: NO NUMBER
AELC ID No.: L8646-5A
Batch No.: 9080
Matrix: SOIL

SURROGATE

Analyte	CAS No.	Surr Conc. (ug/kg)	Surrogate Recovery (percent)
1,2-Dichloroethane-d4	N/A	100	NR
Toluene-d8	N/A	100	88
p-Bromofluorobenzene	460-00-4	100	NR

Sample: MS-15

Analyte	CAS No.	Results (ug/kg)	Rep. Limit (ug/kg)
Acetone	67-64-1	ND	100
Benzene	71-43-2	ND	5
Bromodichloromethane	75-27-4	ND	5
Bromoform	75-25-2	ND	5
Bromomethane	74-83-9	ND	10
2-Butanone	78-93-3	ND	100
Carbon disulfide	75-15-0	ND	5
Carbon tetrachloride	56-23-5	ND	5
Chlorobenzene	108-90-7	ND	5
Chloroethane	75-00-3	ND	10
2-Chloroethyl vinyl ether	110-75-8	ND	50
Chloroform	67-66-3	ND	5
Chloromethane	74-87-3	ND	10
Dibromochloromethane	124-48-1	ND	5
Dibromomethane	74-95-3	ND	5
1,2-Dichlorobenzene	95-50-1	ND	5
1,3-Dichlorobenzene	541-73-1	ND	5
1,4-Dichlorobenzene	106-46-7	ND	5
Dichlorodifluoromethane	75-71-8	ND	10
1,1-Dichloroethane	75-34-3	ND	5
1,2-Dichloroethane	107-06-2	ND	5
1,1-Dichloroethene	75-35-4	ND	5
1,2-Dichloroethene, total	540-59-0	ND	5
1,2-Dichloropropane	78-87-5	ND	5
cis-1,3-Dichloropropene	10061-01-5	ND	5
trans-1,3-Dichloropropene	10061-02-6	ND	5
Ethylbenzene	100-41-4	ND	5
2-Hexanone	591-78-6	ND	50
Methylene chloride	75-09-2	ND	5
4-Methyl-2-pentanone	108-10-1	ND	50
Styrene	100-42-5	ND	5
1,1,2,2-Tetrachloroethane	79-34-5	ND	5
Tetrachloroethene	127-18-4	ND	5

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Project: Mariner Square

Date Sampled: 04/08/92
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Date Extracted: 04/10/92
Date Analyzed: 04/10/92
Date Reported: 04/16/92
Client ID No.: MS-15

Project No.: 91287.23
Contact: Long Ching
Phone: (415) 391-2510

AELC Contact: Mark Smith
Job No.: 798646
COC Log No.: NO NUMBER
AELC ID No.: L8646-5A
Batch No.: 9080
Matrix: SOIL

Sample: MS-15(cont.)

Analyte	CAS No.	Results (ug/kg)	Rep. Limit (ug/kg)
Toluene	108-88-3	ND	5
1,1,1-Trichloroethane	71-55-6	ND	5
1,1,2-Trichloroethane	79-00-5	ND	5
Trichloroethene	79-01-6	ND	5
Trichlorofluoromethane	75-69-4	ND	5
1,1,2-Trichlorotrifluoroethane	79-13-1	ND	5
Vinyl acetate	108-05-4	ND	50
Vinyl chloride	75-01-4	ND	10
Xylenes, total	1330-20-7	ND	10

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Project: Mariner Square

Date Sampled: 04/08/92
Date Received: 04/08/92
Date Extracted: 04/10/92
Date Analyzed: 04/10/92
Date Reported: 04/16/92
Client ID No.: MS-16

Project No.: 91287.23
Contact: Long Ching
Phone: (415) 391-2510

AELC Contact: Mark Smith
Job No.: 798646
COC Log No.: NO NUMBER
AELC ID No.: L8646-6A
Batch No.: 9080
Matrix: SOIL

SURROGATE

Analyte	CAS No.	Surr Conc. (ug/kg)	Surrogate Recovery (percent)
1,2-Dichloroethane-d4	N/A	100	106
Toluene-d8	N/A	100	104
p-Bromofluorobenzene	460-00-4	100	97

Sample: MS-16

Analyte	CAS No.	Results (ug/kg)	Rep. Limit (ug/kg)
Acetone	67-64-1	ND	100
Benzene	71-43-2	ND	5
Bromodichloromethane	75-27-4	ND	5
Bromoform	75-25-2	ND	5
Bromomethane	74-83-9	ND	10
2-Butanone	78-93-3	ND	100
Carbon disulfide	75-15-0	ND	5
Carbon tetrachloride	56-23-5	ND	5
Chlorobenzene	108-90-7	ND	5
Chloroethane	75-00-3	ND	10
2-Chloroethyl vinyl ether	110-75-8	ND	50
Chloroform	67-66-3	ND	5
Chloromethane	74-87-3	ND	10
Dibromochloromethane	124-48-1	ND	5
Dibromomethane	74-95-3	ND	5
1,2-Dichlorobenzene	95-50-1	ND	5
1,3-Dichlorobenzene	541-73-1	ND	5
1,4-Dichlorobenzene	106-46-7	ND	5
Dichlorodifluoromethane	75-71-8	ND	10
1,1-Dichloroethane	75-34-3	ND	5
1,2-Dichloroethane	107-06-2	ND	5
1,1-Dichloroethene	75-35-4	ND	5
1,2-Dichloroethene, total	540-59-0	ND	5
1,2-Dichloropropane	78-87-5	ND	5
cis-1,3-Dichloropropene	10061-01-5	ND	5
trans-1,3-Dichloropropene	10061-02-6	ND	5
Ethylbenzene	100-41-4	ND	5
2-Hexanone	591-78-6	ND	50
Methylene chloride	75-09-2	ND	5
4-Methyl-2-pentanone	108-10-1	ND	50
Styrene	100-42-5	ND	5
1,1,2,2-Tetrachloroethane	79-34-5	ND	5
Tetrachloroethene	127-18-4	ND	5

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Project: Mariner Square

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Date Extracted: 04/10/92
Date Analyzed: 04/10/92
Date Reported: 04/16/92
Client ID No.: MS-16

Project No.: 91287.23
Contact: Long Ching
Phone: (415) 391-2510

AELC Contact: Mark Smith
Job No.: 798646
COC Log No.: NO NUMBER
AELC ID No.: L8646-6A
Batch No.: 9080
Matrix: SOIL

Sample: MS-16(cont.)

Analyte	CAS No.	Results (ug/kg)	Rep. Limit (ug/kg)
Toluene	108-88-3	ND	5
1,1,1-Trichloroethane	71-55-6	ND	5
1,1,2-Trichloroethane	79-00-5	ND	5
Trichloroethene	79-01-6	ND	5
Trichlorofluoromethane	75-69-4	ND	5
1,1,2-Trichlorotrifluoroethane	79-13-1	ND	5
Vinyl acetate	108-05-4	ND	50
Vinyl chloride	75-01-4	ND	10
Xylenes, total	1330-20-7	ND	10

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Project: Mariner Square

Date Sampled: 04/08/92
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Date Extracted: 04/10/92
Date Analyzed: 04/10/92
Date Reported: 04/16/92
Client ID No.: MS-17

Project No.: 91287.23
Contact: Long Ching
Phone: (415) 391-2510

AELC Contact: Mark Smith
Job No.: 798646
COC Log No.: NO NUMBER
AELC ID No.: L8646-7A
Batch No.: 9080
Matrix: SOIL

SURROGATE

Analyte	CAS No.	Surr Conc. (ug/kg)	Surrogate Recovery (percent)
1,2-Dichloroethane-d4	N/A	10000	92
Toluene-d8	N/A	10000	94
p-Bromofluorobenzene	460-00-4	10000	104

Sample: MS-17

Analyte	CAS No.	Results (ug/kg)	Rep. Limit (ug/kg)
Acetone	67-64-1	ND	10000
Benzene	71-43-2	ND	500
Bromodichloromethane	75-27-4	ND	500
Bromoform	75-25-2	ND	500
Bromomethane	74-83-9	ND	1000
2-Butanone	78-93-3	ND	10000
Carbon disulfide	75-15-0	ND	500
Carbon tetrachloride	56-23-5	ND	500
Chlorobenzene	108-90-7	ND	500
Chloroethane	75-00-3	ND	1000
2-Chloroethyl vinyl ether	110-75-8	ND	5000
Chloroform	67-66-3	ND	500
Chloromethane	74-87-3	ND	1000
Dibromochloromethane	124-48-1	ND	500
Dibromomethane	74-95-3	ND	500
1,2-Dichlorobenzene	95-50-1	ND	500
1,3-Dichlorobenzene	541-73-1	ND	500
1,4-Dichlorobenzene	106-46-7	ND	500
Dichlorodifluoromethane	75-71-8	ND	1000
1,1-Dichloroethane	75-34-3	ND	500
1,2-Dichloroethane	107-06-2	ND	500
1,1-Dichloroethene	75-35-4	ND	500
1,2-Dichloroethene, total	540-59-0	ND	500
1,2-Dichloropropane	78-87-5	ND	500
cis-1,3-Dichloropropene	10061-01-5	ND	500
trans-1,3-Dichloropropene	10061-02-6	ND	500
Ethylbenzene	100-41-4	1600	500
2-Hexanone	591-78-6	ND	5000
Methylene chloride	75-09-2	ND	500
4-Methyl-2-pentanone	108-10-1	ND	5000
Styrene	100-42-5	ND	500
1,1,2,2-Tetrachloroethane	79-34-5	ND	500
Tetrachloroethene	127-18-4	ND	500

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One Sutter Street
San Francisco, CA 94104

Project: Mariner Square

Date Sampled: 04/08/92
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Date Extracted: 04/10/92
Date Analyzed: 04/10/92
Date Reported: 04/16/92
Client ID No.: MS-17

Project No.: 91287.23
Contact: Long Ching
Phone: (415) 391-2510

AELC Contact: Mark Smith
Job No.: 798646
COC Log No.: NO NUMBER
AELC ID No.: L8646-7A
Batch No.: 9080
Matrix: SOIL

Sample: MS-17(cont.)

Analyte	CAS No.	Results (ug/kg)	Rep. Limit (ug/kg)
Toluene	108-88-3	ND	500
1,1,1-Trichloroethane	71-55-6	ND	500
1,1,2-Trichloroethane	79-00-5	ND	500
Trichloroethene	79-01-6	ND	500
Trichlorofluoromethane	75-69-4	ND	500
1,1,2-Trichlorotrifluoroethane	79-13-1	ND	500
Vinyl acetate	108-05-4	ND	5000
Vinyl chloride	75-01-4	ND	1000
Xylenes, total	1330-20-7	8400	1000

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Client: AllWest Environmental
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Project: Mariner Square

Date Sampled: 04/08/92
Date Received: 04/08/92
Date Extracted: 04/10/92
Date Analyzed: 04/10/92
Date Reported: 04/16/92
Client ID No.: MS-18

Project No.: 91287.23
Contact: Long Ching
Phone: (415) 391-2510

AELC Contact: Mark Smith
Job No.: 798646
COC Log No.: NO NUMBER
AELC ID No.: L8646-8A
Batch No.: 9080
Matrix: SOIL

SURROGATE

Analyte	CAS No.	Surr Conc. (ug/kg)	Surrogate Recovery (percent)
1,2-Dichloroethane-d4	N/A	4000	94
Toluene-d8	N/A	4000	98
p-Bromofluorobenzene	460-00-4	4000	98

Sample: MS-18

Analyte	CAS No.	Results (ug/kg)	Rep. Limit (ug/kg)
Acetone	67-64-1	ND	4000
Benzene	71-43-2	ND	200
Bromodichloromethane	75-27-4	ND	200
Bromoform	75-25-2	ND	200
Bromomethane	74-83-9	ND	400
2-Butanone	78-93-3	ND	4000
Carbon disulfide	75-15-0	ND	200
Carbon tetrachloride	56-23-5	ND	200
Chlorobenzene	108-90-7	ND	200
Chloroethane	75-00-3	ND	400
2-Chloroethyl vinyl ether	110-75-8	ND	2000
Chloroform	67-66-3	ND	200
Chloromethane	74-87-3	ND	400
Dibromochloromethane	124-48-1	ND	200
Dibromomethane	74-95-3	ND	200
1,2-Dichlorobenzene	95-50-1	ND	200
1,3-Dichlorobenzene	541-73-1	ND	200
1,4-Dichlorobenzene	106-46-7	ND	200
Dichlorodifluoromethane	75-71-8	ND	400
1,1-Dichloroethane	75-34-3	ND	200
1,2-Dichloroethane	107-06-2	ND	200
1,1-Dichloroethene	75-35-4	ND	200
1,2-Dichloroethene, total	540-59-0	ND	200
1,2-Dichloropropane	78-87-5	ND	200
cis-1,3-Dichloropropene	10061-01-5	ND	200
trans-1,3-Dichloropropene	10061-02-6	ND	200
Ethylbenzene	100-41-4	ND	200
2-Hexanone	591-78-6	ND	2000
Methylene chloride	75-09-2	ND	200
4-Methyl-2-pentanone	108-10-1	ND	2000
Styrene	100-42-5	ND	200
1,1,2,2-Tetrachloroethane	79-34-5	ND	200
Tetrachloroethene	127-18-4	ND	200

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Date Sampled: 04/08/92
Date Received: 04/08/92
Date Extracted: 04/10/92
Date Analyzed: 04/10/92
Date Reported: 04/16/92
Client ID No.: MS-18

Project No.: 91287.23
Contact: Long Ching
Phone: (415) 391-2510

AELC Contact: Mark Smith
Job No.: 798646
COC Log No.: NO NUMBER
AELC ID No.: L8646-8A
Batch No.: 9080
Matrix: SOIL

Sample: MS-18(cont.)

Analyte	CAS No.	Results (ug/kg)	Rep. Limit (ug/kg)
Toluene	108-88-3	ND	200
1,1,1-Trichloroethane	71-55-6	ND	200
1,1,2-Trichloroethane	79-00-5	ND	200
Trichloroethene	79-01-6	ND	200
Trichlorofluoromethane	75-69-4	ND	200
1,1,2-Trichlorotrifluoroethane	79-13-1	ND	200
Vinyl acetate	108-05-4	ND	2000
Vinyl chloride	75-01-4	ND	400
Xylenes, total	1330-20-7	ND	400

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Project: Mariner Square

Date Sampled: 04/08/92
Date Received: 04/08/92
Date Extracted: 04/10/92
Date Analyzed: 04/10/92
Date Reported: 04/16/92
Client ID No.: MS-19

Project No.: 91287.23
Contact: Long Ching
Phone: (415) 391-2510

AELC Contact: Mark Smith
Job No.: 798646
COC Log No.: NO NUMBER
AELC ID No.: L8646-9A
Batch No.: 9080
Matrix: SOIL

SURROGATE

Analyte	CAS No.	Surr Conc. (ug/kg)	Surrogate Recovery (percent)
1,2-Dichloroethane-d4	N/A	2000	94
Toluene-d8	N/A	2000	102
p-Bromofluorobenzene	460-00-4	2000	99

Sample: MS-19

Analyte	CAS No.	Results (ug/kg)	Rep. Limit (ug/kg)
Acetone	67-64-1	ND	2000
Benzene	71-43-2	ND	100
Bromodichloromethane	75-27-4	ND	100
Bromoform	75-25-2	ND	100
Bromomethane	74-83-9	ND	200
2-Butanone	78-93-3	ND	2000
Carbon disulfide	75-15-0	ND	100
Carbon tetrachloride	56-23-5	ND	100
Chlorobenzene	108-90-7	ND	100
Chloroethane	75-00-3	ND	200
2-Chloroethyl vinyl ether	110-75-8	ND	1000
Chloroform	67-66-3	ND	100
Chloromethane	74-87-3	ND	200
Dibromochloromethane	124-48-1	ND	100
Dibromomethane	74-95-3	ND	100
1,2-Dichlorobenzene	95-50-1	ND	100
1,3-Dichlorobenzene	541-73-1	ND	100
1,4-Dichlorobenzene	106-46-7	ND	100
Dichlorodifluoromethane	75-71-8	ND	200
1,1-Dichloroethane	75-34-3	ND	100
1,2-Dichloroethane	107-06-2	ND	100
1,1-Dichloroethene	75-35-4	ND	100
1,2-Dichloroethene, total	540-59-0	ND	100
1,2-Dichloropropane	78-87-5	ND	100
cis-1,3-Dichloropropene	10061-01-5	ND	100
trans-1,3-Dichloropropene	10061-02-6	ND	100
Ethylbenzene	100-41-4	ND	100
2-Hexanone	591-78-6	ND	1000
Methylene chloride	75-09-2	ND	100
4-Methyl-2-pentanone	108-10-1	ND	1000
Styrene	100-42-5	ND	100
1,1,2,2-Tetrachloroethane	79-34-5	ND	100
Tetrachloroethene	127-18-4	ND	100

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Project: Mariner Square

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Date Extracted: 04/10/92
Date Analyzed: 04/10/92
Date Reported: 04/16/92
Client ID No.: MS-19

Project No.: 91287.23
Contact: Long Ching
Phone: (415) 391-2510

AELC Contact: Mark Smith
Job No.: 798646
COC Log No.: NO NUMBER
AELC ID No.: L8646-9A
Batch No.: 9080
Matrix: SOIL

Sample: MS-19(cont.)

Analyte	CAS No.	Results (ug/kg)	Rep. Limit (ug/kg)
Toluene	108-88-3	ND	100
1,1,1-Trichloroethane	71-55-6	ND	100
1,1,2-Trichloroethane	79-00-5	ND	100
Trichloroethene	79-01-6	ND	100
Trichlorofluoromethane	75-69-4	ND	100
1,1,2-Trichlorotrifluoroethane	79-13-1	ND	100
Vinyl acetate	108-05-4	ND	1000
Vinyl chloride	75-01-4	ND	200
Xylenes, total	1330-20-7	ND	200

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One Sutter Street
San Francisco, CA 94104

Project: Mariner Square

Date Sampled: 04/08/92
Date Received: 04/08/92
Date Extracted: 04/10/92
Date Analyzed: 04/10/92
Date Reported: 04/16/92
Client ID No.: MS-20

Project No.: 91287.23
Contact: Long Ching
Phone: (415) 391-2510

AELC Contact: Mark Smith
Job No.: 798646
COC Log No.: NO NUMBER
AELC ID No.: L8646-10A
Batch No.: 9080
Matrix: SOIL

SURROGATE

Analyte	CAS No.	Surr Conc. (ug/kg)	Surrogate Recovery (percent)
1,2-Dichloroethane-d4	N/A	100	105
Toluene-d8	N/A	100	96
p-Bromofluorobenzene	460-00-4	100	NR

Sample: MS-20

Analyte	CAS No.	Results (ug/kg)	Rep. Limit (ug/kg)
Acetone	67-64-1	ND	100
Benzene	71-43-2	ND	5
Bromodichloromethane	75-27-4	ND	5
Bromoform	75-25-2	ND	5
Bromomethane	74-83-9	ND	10
2-Butanone	78-93-3	ND	100
Carbon disulfide	75-15-0	ND	5
Carbon tetrachloride	56-23-5	ND	5
Chlorobenzene	108-90-7	ND	5
Chloroethane	75-00-3	ND	10
2-Chloroethyl vinyl ether	110-75-8	ND	50
Chloroform	67-66-3	ND	5
Chloromethane	74-87-3	ND	10
Dibromochloromethane	124-48-1	ND	5
Dibromomethane	74-95-3	ND	5
1,2-Dichlorobenzene	95-50-1	ND	5
1,3-Dichlorobenzene	541-73-1	ND	5
1,4-Dichlorobenzene	106-46-7	ND	5
Dichlorodifluoromethane	75-71-8	ND	10
1,1-Dichloroethane	75-34-3	ND	5
1,2-Dichloroethane	107-06-2	ND	5
1,1-Dichloroethene	75-35-4	ND	5
1,2-Dichloroethene, total	540-59-0	ND	5
1,2-Dichloropropane	78-87-5	ND	5
cis-1,3-Dichloropropene	10061-01-5	ND	5
trans-1,3-Dichloropropene	10061-02-6	ND	5
Ethylbenzene	100-41-4	ND	5
2-Hexanone	591-78-6	ND	50
Methylene chloride	75-09-2	ND	5
4-Methyl-2-pentanone	108-10-1	ND	50
Styrene	100-42-5	ND	5
1,1,2,2-Tetrachloroethane	79-34-5	ND	5
Tetrachloroethene	127-18-4	ND	5

ND = Not detected at or above indicated Reporting Limit
Rep. Limit = Reporting Limit unless otherwise indicated in parentheses.

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.

CA DOHS ELAP Accreditation/Registration Number 1233

Analysis Report: Volatile Organic Compounds by GC/MS, EPA Method 8240

Client: AllWest Environmental
One Sutter Street
San Francisco, CA 94104

Project: Mariner Square

Date Sampled: 04/08/92
Date Received: 04/08/92
Date Extracted: 04/10/92
Date Analyzed: 04/10/92
Date Reported: 04/16/92
Client ID No.: MS-20

Project No.: 91287.23
Contact: Long Ching
Phone: (415) 391-2510

AELC Contact: Mark Smith
Job No.: 798646
COC Log No.: NO NUMBER
AELC ID No.: L8646-10A
Batch No.: 9080
Matrix: SOIL

Sample: MS-20(cont.)

Analyte	CAS No.	Results (ug/kg)	Rep. Limit (ug/kg)
Toluene	108-88-3	ND	5
1,1,1-Trichloroethane	71-55-6	ND	5
1,1,2-Trichloroethane	79-00-5	ND	5
Trichloroethene	79-01-6	ND	5
Trichlorofluoromethane	75-69-4	ND	5
1,1,2-Trichlorotrifluoroethane	79-13-1	ND	5
Vinyl acetate	108-05-4	ND	50
Vinyl chloride	75-01-4	ND	10
Xylenes, total	1330-20-7	ND	10

ND = Not detected at or above indicated Reporting Limit
Rep. Limit = Reporting Limit unless otherwise indicated in parentheses.

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.

CA DOHS ELAP Accreditation/Registration Number 1233

Analysis Report: Volatile Organic Compounds by GC/MS, EPA Method 8240

Client: AllWest Environmental
One Sutter Street
San Francisco, CA 94104

Project: Mariner Square

Date Extracted: 04/10/92
Date Analyzed: 04/10/92
Date Reported: 04/16/92

Project No.: 91287.23
Contact: Long Ching
Phone: (415) 391-2510

AELC Contact: Mark Smith
Job No.: 798646
COC Log No.: NO NUMBER
AELC ID No.: L8646
Batch No.: 9080
Matrix: SOIL

MB SURROGATE

Analyte	CAS No.	Surr Conc. (ug/kg)	MB Surrogate Recovery (percent)
1,2-Dichloroethane-d4	N/A	100	96
Toluene-d8	N/A	100	100
p-Bromofluorobenzene	460-00-4	100	97

METHOD BLANK

Analyte	CAS No.	Results (ug/kg)	Rep. Limit (ug/kg)
Acetone	67-64-1	ND	100
Benzene	71-43-2	ND	5
Bromodichloromethane	75-27-4	ND	5
Bromoform	75-25-2	ND	5
Bromomethane	74-83-9	ND	10
2-Butanone	78-93-3	ND	100
Carbon disulfide	75-15-0	ND	5
Carbon tetrachloride	56-23-5	ND	5
Chlorobenzene	108-90-7	ND	5
Chloroethane	75-00-3	ND	10
2-Chloroethyl vinyl ether	110-75-8	ND	50
Chloroform	67-66-3	ND	5
Chloromethane	74-87-3	ND	10
Dibromochloromethane	124-48-1	ND	5
Dibromomethane	74-95-3	ND	5
1,2-Dichlorobenzene	95-50-1	ND	5
1,3-Dichlorobenzene	541-73-1	ND	5
1,4-Dichlorobenzene	106-46-7	ND	5
Dichlorodifluoromethane	75-71-8	ND	10
1,1-Dichloroethane	75-34-3	ND	5
1,2-Dichloroethane	107-06-2	ND	5
1,1-Dichloroethene	75-35-4	ND	5
1,2-Dichloroethene, total	540-59-0	ND	5
1,2-Dichloropropane	78-87-5	ND	5
cis-1,3-Dichloropropene	10061-01-5	ND	5
trans-1,3-Dichloropropene	10061-02-6	ND	5
Ethylbenzene	100-41-4	ND	5
2-Hexanone	591-78-6	ND	50
Methylene chloride	75-09-2	ND	5
4-Methyl-2-pentanone	108-10-1	ND	50
Styrene	100-42-5	ND	5
1,1,2,2-Tetrachloroethane	79-34-5	ND	5
Tetrachloroethene	127-18-4	ND	5
Toluene	108-88-3	ND	5

ND = Not detected at or above indicated Reporting Limit
Rep. Limit = Reporting Limit unless otherwise indicated in parentheses.

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.

CA DOHS ELAP Accreditation/Registration Number 1233

Analysis Report: Volatile Organic Compounds by GC/MS, EPA Method 8240

Client: AllWest Environmental
One Sutter Street
San Francisco, CA 94104

Project: Mariner Square

Date Extracted: 04/10/92
Date Analyzed: 04/10/92
Date Reported: 04/16/92

Project No.: 91287.23
Contact: Long Ching
Phone: (415) 391-2510

AELC Contact: Mark Smith
Job No.: 798646
COC Log No.: NO NUMBER
AELC ID No.: L8646
Batch No.: 9080
Matrix: SOIL

METHOD BLANK(cont.)

Analyte	CAS No.	Results (ug/kg)	Rep. Limit (ug/kg)
1,1,1-Trichloroethane	71-55-6	ND	5
1,1,2-Trichloroethane	79-00-5	ND	5
Trichloroethene	79-01-6	ND	5
Trichlorofluoromethane	75-69-4	ND	5
1,1,2-Trichlorotrifluoroethane	79-13-1	ND	5
Vinyl acetate	108-05-4	ND	50
Vinyl chloride	75-01-4	ND	10
Xylenes, total	1330-20-7	ND	10

ND = Not detected at or above indicated Reporting Limit
Rep. Limit = Reporting Limit unless otherwise indicated in parentheses.

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.

CA DOHS ELAP Accreditation/Registration Number 1233

Analysis Report: Volatile Organic Compounds by GC/MS, EPA Method 8240

Client: AllWest Environmental
One Sutter Street
San Francisco, CA 94104

Project: Mariner Square

Date Extracted: 04/10/92
Date Analyzed: 04/10/92
Date Reported: 04/16/92

Project No.: 91287.23
Contact: Long Ching
Phone: (415) 391-2510

AELC Contact: Mark Smith
Job No.: 798646
COC Log No.: NO NUMBER
AELC ID No.: L8646
Batch No.: 9080
Matrix: SOIL

MB SPIKE SURROGATE

Analyte	CAS No.	MBS Surr. Conc. (ug/kg)	Surrogate Recovery (percent)
1,2-Dichloroethane-d4	N/A	100	101
Toluene-d8	N/A	100	102
p-Bromofluorobenzene	460-00-4	100	96

MB SPIKE

Analyte	CAS No.	MBS Conc. (ug/kg)	MBS Recovery (percent)
Benzene	71-43-2	50	119
Chlorobenzene	108-90-7	50	102
1,1-Dichloroethene	75-35-4	50	127
Toluene	108-88-3	50	123
Trichloroethene	79-01-6	50	118

MB SPIKE DUPLICATE SURR.

Analyte	CAS No.	MBSD Surr. Conc. (ug/kg)	MBSD Surrogate Recovery (percent)
1,2-Dichloroethane-d4	N/A	100	110
Toluene-d8	N/A	100	103
p-Bromofluorobenzene	460-00-4	100	96

MB SPIKE DUPLICATE

Analyte	CAS No.	MBSD Conc. (ug/kg)	MBSD Recovery (percent)
Benzene	71-43-2	50	111
Chlorobenzene	108-90-7	50	93
1,1-Dichloroethene	75-35-4	50	115
Toluene	108-88-3	50	115
Trichloroethene	79-01-6	50	107

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.

CA DOHS ELAP Accreditation/Registration Number 1233

Analysis Report: Volatile Organic Compounds by GC/MS, EPA Method 8240

Client: AllWest Environmental
One Sutter Street
San Francisco, CA 94104

Project: Mariner Square

Date Extracted: 04/10/92
Date Analyzed: 04/10/92
Date Reported: 04/16/92

Project No.: 91287.23
Contact: Long Ching
Phone: (415) 391-2510

AELC Contact: Mark Smith
Job No.: 798646
COC Log No.: NO NUMBER
AELC ID No.: L8646
Batch No.: 9080
Matrix: SOIL

MB SPIKE RPD

Analyte	CAS No.	MBS Relative Percent Difference (percent)
Benzene	71-43-2	7
Chlorobenzene	108-90-7	9
1,1-Dichloroethene	75-35-4	10
Toluene	108-88-3	7
Trichloroethene	79-01-6	10

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.

CA DOHS ELAP Accreditation/Registration Number 1233

Analysis Report: Volatile Organic Compounds by GC/MS, EPA Method 8240

Client: AllWest Environmental
One Sutter Street
San Francisco, CA 94104

Project: Mariner Square

Date Reported: 04/16/92

Project No.: 91287.23
Contact: Long Ching
Phone: (415) 391-2510

AELC Contact: Mark Smith
Job No.: 798646
COC Log No.: NO NUMBER
AELC ID No.: L8646
Batch No.: 9080
Matrix: SOIL

LAB CONTROL STANDARD

Analyte	CAS No.	LCS Conc. (ug/L)	LCS Recovery (percent)
Benzene	71-43-2	50	111
Chlorobenzene	108-90-7	50	94
1,1-Dichloroethene	75-35-4	50	102
Toluene	108-88-3	50	106
Trichloroethene	79-01-6	50	108

L8661

Chain of Custody Form

AllWest

AllWest Environmental, Inc.
Consultants in Real Estate Finance

303 Second Street Suite 680
San Francisco, CA 94107-1317

Job Description 17-KINE SQUARE
Job Number 71287.23
Client Contact LONG CHING

Samplers LONG CHING
Recorder LONG CHING

Matrix						# Containers	Method Preserved					Sample Number	Sampling Date					SAMPLE NOTES
Water	Soil	Waste	Oil				H_2SO_4	HNO_3	Ice	None	Other		Yr	Mo	Dy	Time		
	X					1			X			MS-21	92	04	08	1615		3'-4'
	X					1			X			MS-22	92	04	08	1635		3'-4'
	X					1			X			MS-23	92	04	08	1805		2'-3'
X						2			X			WS-18 VOC	92	04	08	1810		40ml
X						1			X			WS-13 TRH	92	04	09	1055		1-liter
X						2			X			WS-13 VOC	92	04	09	1115		40ml
X						1			X			WS-18 TRH	92	04	09	1230		1-liter

ANALYSIS REQUESTED																		
TRPH (418.1) SOIL																		
VOCs (8240) SOIL																		
TRPH (418.1) WATER																		
VOCs (624) WATER																		
X	X	X																
X	X	X																
X	X																	
			WW	X														
			X															
				X														
			X															

Laboratory Notes:

ONE WEEK TURNAROUND
PLEASE FAX COC TO ALLWEST OFFICE

Chain of Custody Record

Relinquished by: (signature) Date/Hr	Received by (signature)
Long Ching 4/9/92 13:10	
Relinquished by: (signature) Date/Hr	Received by (signature)
4-9-92 1510	JOHN ARNDT
Relinquished by: (signature) Date/Hr	Received by (signature)
Relinquished by: (signature) Date/Hr	Received by (signature)
Dispatched by: (signature) Date/Hr	Received for Lab by (signature)

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.

AllWest Environmental
One Sutter Street
Suite 600
San Francisco, CA 94104

04/22/92

Attention: Long Ching

Reference: Analytical Results

Project Name: Mariner Square
Project No.: 91287.23
Date Received: 04/09/92
Chain Of Custody: NO NUMBER

AELC ID No.: L8661
AELC Job No.: 798661

The following analyses were performed on the above referenced project:

No. of Samples	*Turnaround Time*	*Analysis Description*
5	7 Days	Total Recoverable Petroleum Hydrocarbons
2	7 Days	Volatile Organics by EPA Method 624
3	7 Days	Volatile Organic Compounds by GC/MS

The initial Method 8240 analysis of sample "MS-23" produced surrogate standard recovery data that did not satisfy laboratory QA/QC criteria. Re-analysis of the sample produced similar results, thereby substantiating a "matrix effect" per EPA Contract Lab protocol.

Elevated Method 624 reporting limits for "WS-18VOC" are due to the presence of hydrocarbons in this sample.

These samples were received by American Environmental Laboratories in a chilled, intact state and accompanied by a valid chain of custody document.

Analytical results are attached to this letter. Please call if we can provide additional assistance.

Sincerely,

George Hampton
Laboratory Director

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.

CA DOHS ELAP Accreditation/Registration Number 1233

Analysis Report: Total Recoverable Petroleum Hydrocarbons, EPA Method 418.1 Shaker, DOHS LUFT Method

Client: AllWest Environmental
One Sutter Street
San Francisco, CA 94104

Project: Mariner Square

Date Sampled: 04/08/92
Date Received: 04/09/92
Date Extracted: 04/09/92
Date Analyzed: 04/15/92
Date Reported: 04/16/92

Project No.: 91287.23
Contact: Long Ching
Phone: (415) 391-2510

AELC Contact: Mike Jaeger
Job No.: 798661
COC Log No.: NO NUMBER
AELC ID No.: L8661
Batch No.: 9075
Matrix: SOIL

ANALYTE

Sample I.D. Client	AELC	Total Recoverable Hydrocarbons (mg/kg)
MS-21	1A	39
MS-22	2A	ND
MS-23	3A	6200
Rep. Limit		10

ND = Not detected at or above indicated Reporting Limit
Rep. Limit = Reporting Limit unless otherwise indicated in parentheses.

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.

CA DOHS ELAP Accreditation/Registration Number 1233

Analysis Report: Total Recoverable Petroleum Hydrocarbons, EPA Method 418.1 Shaker, DOHS LUFT Method

Client: AllWest Environmental
One Sutter Street
San Francisco, CA 94104

Project: Mariner Square

Date Extracted: 04/09/92
Date Analyzed: 04/15/92
Date Reported: 04/16/92

Project No.: 91287.23
Contact: Long Ching
Phone: (415) 391-2510

AELC Contact: Mike Jaeger
Job No.: 798661
COC Log No.: NO NUMBER
AELC ID No.: L8661
Batch No.: 9075
Matrix: SOIL

METHOD BLANK

Analyte	CAS No.	Results (mg/kg)	Rep. Limit (mg/kg)
Total Recoverable Hydrocarbons	N/A	ND	10

ND = Not detected at or above indicated Reporting Limit
Rep. Limit = Reporting Limit unless otherwise indicated in parentheses.

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.

CA DOHS ELAP Accreditation/Registration Number 1233

Analysis Report: Total Recoverable Petroleum Hydrocarbons, EPA Method 418.1
Shaker, DOHS LUFT Method

Client: AllWest Environmental
One Sutter Street
San Francisco, CA 94104

Project: Mariner Square

Date Extracted: 04/09/92
Date Analyzed: 04/15/92
Date Reported: 04/21/92

Project No.: 91287.23
Contact: Long Ching
Phone: (415) 391-2510

AELC Contact: Mike Jaeger
Job No.: 798661
COC Log No.: NO NUMBER
AELC ID No.: L8661
Batch No.: 9075
Matrix: SOIL

MB SPIKE

Analyte	CAS No.	MBS Conc. (mg/kg)	MBS Recovery (percent)
Total Recoverable Hydrocarbons	N/A	60	102

MB SPIKE DUPLICATE

Analyte	CAS No.	MBSD Conc. (mg/kg)	MBSD Recovery (percent)
Total Recoverable Hydrocarbons	N/A	60	103

MB SPIKE RPD

Analyte	CAS No.	MBS Relative Percent Difference (percent)
Total Recoverable Hydrocarbons	N/A	1

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.

CA DOHS ELAP Accreditation/Registration Number 1233

Analysis Report: Total Recoverable Petroleum Hydrocarbons, EPA Method 418.1
Separatory Funnel, EPA Method 3510

Client: AllWest Environmental
One Sutter Street
San Francisco, CA 94104

Project: Mariner Square

Date Sampled: 04/09/92
Date Received: 04/09/92
Date Extracted: 04/11/92
Date Analyzed: 04/14/92
Date Reported: 04/15/92

Project No.: 91287.23
Contact: Long Ching
Phone: (415) 391-2510

AELC Contact: Mike Jaeger
Job No.: 798661
COC Log No.: NO NUMBER
AELC ID No.: L8661
Batch No.: 9079
Matrix: WATER

ANALYTE

Sample I.D. Client	AELC	Total Recoverable Hydrocarbons (mg/L)
WS-13TRH	5A	23
WS-18TRH	7A	1200
Rep. Limit		1

ND = Not detected at or above indicated Reporting Limit
Rep. Limit = Reporting Limit unless otherwise indicated in parentheses.

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.

CA DOHS ELAP Accreditation/Registration Number 1233

Analysis Report: Total Recoverable Petroleum Hydrocarbons, EPA Method 418.1
Separatory Funnel, EPA Method 3510

Client: AllWest Environmental
One Sutter Street
San Francisco, CA 94104

Project: Mariner Square

Date Extracted: 04/11/92
Date Analyzed: 04/14/92
Date Reported: 04/14/92

Project No.: 91287.23
Contact: Long Ching
Phone: (415) 391-2510

AELC Contact: Mike Jaeger
Job No.: 798661
COC Log No.: NO NUMBER
AELC ID No.: L8661
Batch No.: 9079
Matrix: WATER

METHOD BLANK

Analyte	CAS No.	Results (mg/L)	Rep. Limit (mg/L)
Total Recoverable Hydrocarbons	N/A	ND	1

ND = Not detected at or above indicated Reporting Limit
Rep. Limit = Reporting Limit unless otherwise indicated in parentheses.

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.

CA DOHS ELAP Accreditation/Registration Number 1233

Analysis Report: Total Recoverable Petroleum Hydrocarbons, EPA Method 418.1
Separatory Funnel, EPA Method 3510

Client: AllWest Environmental
One Sutter Street
San Francisco, CA 94104

Project: Mariner Square

Date Extracted: 04/11/92
Date Analyzed: 04/14/92
Date Reported: 04/14/92

Project No.: 91287.23
Contact: Long Ching
Phone: (415) 391-2510

AELC Contact: Mike Jaeger
Job No.: 798661
COC Log No.: NO NUMBER
AELC ID No.: L8661
Batch No.: 9079
Matrix: WATER

MB SPIKE

Analyte	CAS No.	MBS Conc. (mg/L)	MBS Recovery (percent)
Total Recoverable Hydrocarbons	N/A	60	88

MB SPIKE DUPLICATE

Analyte	CAS No.	MBSD Conc. (mg/L)	MBSD Recovery (percent)
Total Recoverable Hydrocarbons	N/A	60	92

MB SPIKE RPD

Analyte	CAS No.	MBS Relative Percent Difference (percent)
Total Recoverable Hydrocarbons	N/A	4

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.

CA DOHS ELAP Accreditation/Registration Number 1233

Analysis Report: Volatile Organic Compounds by GC/MS, EPA Method 8240

Client: AllWest Environmental
One Sutter Street
San Francisco, CA 94104

Project: Mariner Square

Date Sampled: 04/08/92
Date Received: 04/09/92
Date Extracted: 04/13/92
Date Analyzed: 04/13/92
Date Reported: 04/15/92
Client ID No.: MS-21

Project No.: 91287.23
Contact: Long Ching
Phone: (415) 391-2510

AELC Contact: Mike Jaeger
Job No.: 798661
COC Log No.: NO NUMBER
AELC ID No.: L8661-1A
Batch No.: 9091
Matrix: SOIL

SURROGATE

Analyte	CAS No.	Surr Conc. (ug/kg)	Surrogate Recovery (percent)
1,2-Dichloroethane-d4	N/A	100	106
Toluene-d8	N/A	100	103
p-Bromofluorobenzene	460-00-4	100	100

Sample: MS-21

Analyte	CAS No.	Results (ug/kg)	Rep. Limit (ug/kg)
Acetone	67-64-1	ND	100
Benzene	71-43-2	ND	5
Bromodichloromethane	75-27-4	ND	5
Bromoform	75-25-2	ND	5
Bromomethane	74-83-9	ND	10
2-Butanone	78-93-3	ND	100
Carbon disulfide	75-15-0	ND	5
Carbon tetrachloride	56-23-5	ND	5
Chlorobenzene	108-90-7	ND	5
Chloroethane	75-00-3	ND	10
2-Chloroethyl vinyl ether	110-75-8	ND	50
Chloroform	67-66-3	ND	5
Chloromethane	74-87-3	ND	10
Dibromochloromethane	124-48-1	ND	5
Dibromomethane	74-95-3	ND	5
1,2-Dichlorobenzene	95-50-1	ND	5
1,3-Dichlorobenzene	541-73-1	ND	5
1,4-Dichlorobenzene	106-46-7	ND	5
Dichlorodifluoromethane	75-71-8	ND	10
1,1-Dichloroethane	75-34-3	ND	5
1,2-Dichloroethane	107-06-2	ND	5
1,1-Dichloroethene	75-35-4	ND	5
1,2-Dichloroethene, total	540-59-0	ND	5
1,2-Dichloropropane	78-87-5	ND	5
cis-1,3-Dichloropropene	10061-01-5	ND	5
trans-1,3-Dichloropropene	10061-02-6	ND	5
Ethylbenzene	100-41-4	ND	5
2-Hexanone	591-78-6	ND	50
Methylene chloride	75-09-2	ND	5
4-Methyl-2-pentanone	108-10-1	ND	50
Styrene	100-42-5	ND	5
1,1,2,2-Tetrachloroethane	79-34-5	ND	5
Tetrachloroethene	127-18-4	ND	5

ND = Not detected at or above indicated Reporting Limit
Rep. Limit = Reporting Limit unless otherwise indicated in parentheses.

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.

CA DOHS ELAP Accreditation/Registration Number 1233

Analysis Report: Volatile Organic Compounds by GC/MS, EPA Method 8240

Client: AllWest Environmental
One Sutter Street
San Francisco, CA 94104

Project: Mariner Square

Date Sampled: 04/08/92
Date Received: 04/09/92
Date Extracted: 04/13/92
Date Analyzed: 04/13/92
Date Reported: 04/15/92
Client ID No.: MS-21

Project No.: 91287.23
Contact: Long Ching
Phone: (415) 391-2510

AELC Contact: Mike Jaeger
Job No.: 798661
COC Log No.: NO NUMBER
AELC ID No.: L8661-1A
Batch No.: 9091
Matrix: SOIL

Sample: MS-21(cont.)

Analyte	CAS No.	Results (ug/kg)	Rep. Limit (ug/kg)
Toluene	108-88-3	ND	5
1,1,1-Trichloroethane	71-55-6	ND	5
1,1,2-Trichloroethane	79-00-5	ND	5
Trichloroethene	79-01-6	ND	5
Trichlorofluoromethane	75-69-4	ND	5
1,1,2-Trichlorotrifluoroethane	79-13-1	ND	5
Vinyl acetate	108-05-4	ND	50
Vinyl chloride	75-01-4	ND	10
Xylenes, total	1330-20-7	ND	10

ND = Not detected at or above indicated Reporting Limit
Rep. Limit = Reporting Limit unless otherwise indicated in parentheses.

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.

CA DOHS ELAP Accreditation/Registration Number 1233

Analysis Report: Volatile Organic Compounds by GC/MS, EPA Method 8240

Client: AllWest Environmental
One Sutter Street
San Francisco, CA 94104

Project: Mariner Square

Date Sampled: 04/08/92
Date Received: 04/09/92
Date Extracted: 04/13/92
Date Analyzed: 04/13/92
Date Reported: 04/15/92
Client ID No.: MS-22

Project No.: 91287.23
Contact: Long Ching
Phone: (415) 391-2510

AELC Contact: Mike Jaeger
Job No.: 798661
COC Log No.: NO NUMBER
AELC ID No.: L8661-2A
Batch No.: 9091
Matrix: SOIL

SURROGATE

Analyte	CAS No.	Surr Conc. (ug/kg)	Surrogate Recovery (percent)
1,2-Dichloroethane-d4	N/A	100	100
Toluene-d8	N/A	100	104
p-Bromofluorobenzene	460-00-4	100	97

Sample: MS-22

Analyte	CAS No.	Results (ug/kg)	Rep. Limit (ug/kg)
Acetone	67-64-1	ND	100
Benzene	71-43-2	ND	5
Bromodichloromethane	75-27-4	ND	5
Bromoform	75-25-2	ND	5
Bromomethane	74-83-9	ND	10
2-Butanone	78-93-3	ND	100
Carbon disulfide	75-15-0	ND	5
Carbon tetrachloride	56-23-5	ND	5
Chlorobenzene	108-90-7	ND	5
Chloroethane	75-00-3	ND	10
2-Chloroethyl vinyl ether	110-75-8	ND	50
Chloroform	67-66-3	ND	5
Chloromethane	74-87-3	ND	10
Dibromochloromethane	124-48-1	ND	5
Dibromomethane	74-95-3	ND	5
1,2-Dichlorobenzene	95-50-1	ND	5
1,3-Dichlorobenzene	541-73-1	ND	5
1,4-Dichlorobenzene	106-46-7	ND	5
Dichlorodifluoromethane	75-71-8	ND	10
1,1-Dichloroethane	75-34-3	ND	5
1,2-Dichloroethane	107-06-2	ND	5
1,1-Dichloroethene	75-35-4	ND	5
1,2-Dichloroethene, total	540-59-0	ND	5
1,2-Dichloropropane	78-87-5	ND	5
cis-1,3-Dichloropropene	10061-01-5	ND	5
trans-1,3-Dichloropropene	10061-02-6	ND	5
Ethylbenzene	100-41-4	ND	5
2-Hexanone	591-78-6	ND	50
Methylene chloride	75-09-2	ND	5
4-Methyl-2-pentanone	108-10-1	ND	50
Styrene	100-42-5	ND	5
1,1,2,2-Tetrachloroethane	79-34-5	ND	5
Tetrachloroethene	127-18-4	ND	5

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AMERICAN
ENVIRONMENTAL LABORATORIES CORP.

CA DOHS ELAP Accreditation/Registration Number 1233

Analysis Report: Volatile Organic Compounds by GC/MS, EPA Method 8240

Client: AllWest Environmental
One Sutter Street
San Francisco, CA 94104

Project: Mariner Square

Date Sampled: 04/08/92
Date Received: 04/09/92
Date Extracted: 04/13/92
Date Analyzed: 04/13/92
Date Reported: 04/15/92
Client ID No.: MS-22

Project No.: 91287.23
Contact: Long Ching
Phone: (415) 391-2510

AELC Contact: Mike Jaeger
Job No.: 798661
COC Log No.: NO NUMBER
AELC ID No.: L8661-2A
Batch No.: 9091
Matrix: SOIL

Sample: MS-22(cont.)

Analyte	CAS No.	Results (ug/kg)	Rep. Limit (ug/kg)
Toluene	108-88-3	ND	5
1,1,1-Trichloroethane	71-55-6	ND	5
1,1,2-Trichloroethane	79-00-5	ND	5
Trichloroethene	79-01-6	ND	5
Trichlorofluoromethane	75-69-4	ND	5
1,1,2-Trichlorotrifluoroethane	79-13-1	ND	5
Vinyl acetate	108-05-4	ND	50
Vinyl chloride	75-01-4	ND	10
Xylenes, total	1330-20-7	ND	10

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Analysis Report: Volatile Organic Compounds by GC/MS, EPA Method 8240

Client: AllWest Environmental
One Sutter Street
San Francisco, CA 94104

Project: Mariner Square

Date Sampled: 04/08/92
Date Received: 04/09/92
Date Extracted: 04/13/92
Date Analyzed: 04/13/92
Date Reported: 04/15/92
Client ID No.: MS-23

Project No.: 91287.23
Contact: Long Ching
Phone: (415) 391-2510

AELC Contact: Mike Jaeger
Job No.: 798661
COC Log No.: NO NUMBER
AELC ID No.: L8661-3A
Batch No.: 9091
Matrix: SOIL

SURROGATE

Analyte	CAS No.	Surr Conc. (ug/kg)	Surrogate Recovery (percent)
1,2-Dichloroethane-d4	N/A	100	NR
Toluene-d8	N/A	100	92
p-Bromofluorobenzene	460-00-4	100	NR

Sample: MS-23

Analyte	CAS No.	Results (ug/kg)	Rep. Limit (ug/kg)
Acetone	67-64-1	ND	100
Benzene	71-43-2	ND	5
Bromodichloromethane	75-27-4	ND	5
Bromoform	75-25-2	ND	5
Bromomethane	74-83-9	ND	10
2-Butanone	78-93-3	ND	100
Carbon disulfide	75-15-0	ND	5
Carbon tetrachloride	56-23-5	ND	5
Chlorobenzene	108-90-7	ND	5
Chloroethane	75-00-3	ND	10
2-Chloroethyl vinyl ether	110-75-8	ND	50
Chloroform	67-66-3	ND	5
Chloromethane	74-87-3	ND	10
Dibromochloromethane	124-48-1	ND	5
Dibromomethane	74-95-3	ND	5
1,2-Dichlorobenzene	95-50-1	ND	5
1,3-Dichlorobenzene	541-73-1	ND	5
1,4-Dichlorobenzene	106-46-7	ND	5
Dichlorodifluoromethane	75-71-8	ND	10
1,1-Dichloroethane	75-34-3	ND	5
1,2-Dichloroethane	107-06-2	ND	5
1,1-Dichloroethene	75-35-4	ND	5
1,2-Dichloroethene, total	540-59-0	ND	5
1,2-Dichloropropane	78-87-5	ND	5
cis-1,3-Dichloropropene	10061-01-5	ND	5
trans-1,3-Dichloropropene	10061-02-6	ND	5
Ethylbenzene	100-41-4	ND	5
2-Hexanone	591-78-6	ND	50
Methylene chloride	75-09-2	ND	5
4-Methyl-2-pentanone	108-10-1	ND	50
Styrene	100-42-5	ND	5
1,1,2,2-Tetrachloroethane	79-34-5	ND	5
Tetrachloroethene	127-18-4	ND	5

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Analysis Report: Volatile Organic Compounds by GC/MS, EPA Method 8240

Client: AllWest Environmental
One Sutter Street
San Francisco, CA 94104

Project: Mariner Square

Date Sampled: 04/08/92
Date Received: 04/09/92
Date Extracted: 04/13/92
Date Analyzed: 04/13/92
Date Reported: 04/15/92
Client ID No.: MS-23

Project No.: 91287.23
Contact: Long Ching
Phone: (415) 391-2510

AELC Contact: Mike Jaeger
Job No.: 798661
COC Log No.: NO NUMBER
AELC ID No.: L8661-3A
Batch No.: 9091
Matrix: SOIL

Sample: MS-23(cont.)

Analyte	CAS No.	Results (ug/kg)	Rep. Limit (ug/kg)
Toluene	108-88-3	ND	5
1,1,1-Trichloroethane	71-55-6	ND	5
1,1,2-Trichloroethane	79-00-5	ND	5
Trichloroethene	79-01-6	ND	5
Trichlorofluoromethane	75-69-4	ND	5
1,1,2-Trichlorotrifluoroethane	79-13-1	ND	5
Vinyl acetate	108-05-4	ND	50
Vinyl chloride	75-01-4	ND	10
Xylenes, total	1330-20-7	ND	10

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Client: AllWest Environmental
One Sutter Street
San Francisco, CA 94104

Project: Mariner Square

Date Extracted: 04/13/92
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Date Reported: 04/15/92

Project No.: 91287.23
Contact: Long Ching
Phone: (415) 391-2510

AELC Contact: Mike Jaeger
Job No.: 798661
COC Log No.: NO NUMBER
AELC ID No.: L8661
Batch No.: 9091
Matrix: SOIL

MB SURROGATE

Analyte	CAS No.	Surr Conc. (ug/kg)	MB Surrogate Recovery (percent)
1,2-Dichloroethane-d4	N/A	100	95
Toluene-d8	N/A	100	99
p-Bromofluorobenzene	460-00-4	100	98

METHOD BLANK

Analyte	CAS No.	Results (ug/kg)	Rep. Limit (ug/kg)
Acetone	67-64-1	ND	100
Benzene	71-43-2	ND	5
Bromodichloromethane	75-27-4	ND	5
Bromoform	75-25-2	ND	5
Bromomethane	74-83-9	ND	10
2-Butanone	78-93-3	ND	100
Carbon disulfide	75-15-0	ND	5
Carbon tetrachloride	56-23-5	ND	5
Chlorobenzene	108-90-7	ND	5
Chloroethane	75-00-3	ND	10
2-Chloroethyl vinyl ether	110-75-8	ND	50
Chloroform	67-66-3	ND	5
Chloromethane	74-87-3	ND	10
Dibromochloromethane	124-48-1	ND	5
Dibromomethane	74-95-3	ND	5
1,2-Dichlorobenzene	95-50-1	ND	5
1,3-Dichlorobenzene	541-73-1	ND	5
1,4-Dichlorobenzene	106-46-7	ND	5
Dichlorodifluoromethane	75-71-8	ND	10
1,1-Dichloroethane	75-34-3	ND	5
1,2-Dichloroethane	107-06-2	ND	5
1,1-Dichloroethene	75-35-4	ND	5
1,2-Dichloroethene, total	540-59-0	ND	5
1,2-Dichloropropane	78-87-5	ND	5
cis-1,3-Dichloropropene	10061-01-5	ND	5
trans-1,3-Dichloropropene	10061-02-6	ND	5
Ethylbenzene	100-41-4	ND	5
2-Hexanone	591-78-6	ND	50
Methylene chloride	75-09-2	ND	5
4-Methyl-2-pentanone	108-10-1	ND	50
Styrene	100-42-5	ND	5
1,1,2,2-Tetrachloroethane	79-34-5	ND	5
Tetrachloroethene	127-18-4	ND	5
Toluene	108-88-3	ND	5

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Analysis Report: Volatile Organic Compounds by GC/MS, EPA Method 8240

Client: AllWest Environmental
One Sutter Street
San Francisco, CA 94104

Project: Mariner Square

Date Extracted: 04/13/92
Date Analyzed: 04/13/92
Date Reported: 04/15/92

Project No.: 91287.23
Contact: Long Ching
Phone: (415) 391-2510

AELC Contact: Mike Jaeger
Job No.: 798661
COC Log No.: NO NUMBER
AELC ID No.: L8661
Batch No.: 9091
Matrix: SOIL

METHOD BLANK(cont.)

Analyte	CAS No.	Results (ug/kg)	Rep. Limit (ug/kg)
1,1,1-Trichloroethane	71-55-6	ND	5
1,1,2-Trichloroethane	79-00-5	ND	5
Trichloroethene	79-01-6	ND	5
Trichlorofluoromethane	75-69-4	ND	5
1,1,2-Trichlorotrifluoroethane	79-13-1	ND	5
Vinyl acetate	108-05-4	ND	50
Vinyl chloride	75-01-4	ND	10
Xylenes, total	1330-20-7	ND	10

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Contact: Long Ching
Phone: (415) 391-2510

AELC Contact: Mike Jaeger
Job No.: 798661
COC Log No.: NO NUMBER
AELC ID No.: L8661
Batch No.: 9091
Matrix: SOIL

MS SURROGATE

Analyte	CAS No.	MS Surr. Conc. (ug/kg)	MS Surrogate Recovery (percent)
1,2-Dichloroethane-d4	N/A	100	110
Toluene-d8	N/A	100	104
p-Bromofluorobenzene	460-00-4	100	104

MATRIX SPIKE

Analyte	CAS No.	MS Conc. (ug/kg)	MS Recovery (percent)
Benzene	71-43-2	50	122
Chlorobenzene	108-90-7	50	110
1,1-Dichloroethene	75-35-4	50	125
Toluene	108-88-3	50	125
Trichloroethene	79-01-6	50	116

MSD SURROGATE

Analyte	CAS No.	Surr. Conc. (ug/kg)	MSD Surrogate Recovery (percent)
1,2-Dichloroethane-d4	N/A	100	106
Toluene-d8	N/A	100	101
p-Bromofluorobenzene	460-00-4	100	104

MATRIX SPIKE DUPLICATE

Analyte	CAS No.	MSD Conc. (ug/kg)	MSD Recovery (percent)
Benzene	71-43-2	50	112
Chlorobenzene	108-90-7	50	102
1,1-Dichloroethene	75-35-4	50	114
Toluene	108-88-3	50	116
Trichloroethene	79-01-6	50	106

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Project No.: 91287.23
Contact: Long Ching
Phone: (415) 391-2510

AELC Contact: Mike Jaeger
Job No.: 798661
COC Log No.: NO NUMBER
AELC ID No.: L8661
Batch No.: 9091
Matrix: SOIL

RELATIVE % DIFFERENCE

Analyte	CAS No.	Relative Percent Difference (percent)
Benzene	71-43-2	8
Chlorobenzene	108-90-7	8
1,1-Dichloroethene	75-35-4	9
Toluene	108-88-3	7
Trichloroethene	79-01-6	9

AMERICAN
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One Sutter Street
San Francisco, CA 94104

Project: Mariner Square

Date Reported: 04/15/92

Project No.: 91287.23
Contact: Long Ching
Phone: (415) 391-2510

AELC Contact: Mike Jaeger
Job No.: 798661
COC Log No.: NO NUMBER
AELC ID No.: L8661
Batch No.: 9091
Matrix: SOIL

LAB CONTROL STANDARD

Analyte	CAS No.	LCS Conc. (ug/L)	LCS Recovery (percent)
Benzene	71-43-2	50	111
Chlorobenzene	108-90-7	50	94
1,1-Dichloroethene	75-35-4	50	102
Toluene	108-88-3	50	106
Trichloroethene	79-01-6	50	98

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.

CA DOHS ELAP Accreditation/Registration Number 1233

Analysis Report: Volatile Organic Compounds by GC/MS - EPA Method 624

Client: AllWest Environmental
One Sutter Street
San Francisco, CA 94104

Project: Mariner Square

Date Sampled: 04/08/92
Date Received: 04/09/92
Date Extracted: 04/13/92
Date Analyzed: 04/13/92
Date Reported: 04/16/92
Client ID No.: WS-18VOC

Project No.: 91287.23
Contact: Long Ching
Phone: (415) 391-2510

AELC Contact: Mike Jaeger
Job No.: 798661
COC Log No.: NO NUMBER
AELC ID No.: L8661-4A
Batch No.: 9092
Matrix: WATER

SURROGATE

Analyte	CAS No.	Surr Conc. (ug/L)	Surrogate Recovery (percent)
1,2-Dichloroethane-d4	N/A	1000	97
Toluene-d8	N/A	1000	102
p-Bromofluorobenzene	460-00-4	1000	103

Sample: WS-18VOC

Analyte	CAS No.	Results (ug/L)	Rep. Limit (ug/L)
Acetone	67-64-1	ND	1000
Benzene	71-43-2	ND	50
Bromodichloromethane	75-27-4	ND	50
Bromoform	75-25-2	ND	50
Bromomethane	74-83-9	ND	100
2-Butanone	78-93-3	ND	1000
Carbon disulfide	75-15-0	ND	50
Carbon tetrachloride	56-23-5	ND	50
Chlorobenzene	108-90-7	ND	50
Chloroethane	75-00-3	ND	100
2-Chloroethyl vinyl ether	110-75-8	ND	500
Chloroform	67-66-3	ND	50
Chloromethane	74-87-3	ND	100
Dibromochloromethane	124-48-1	ND	50
Dibromomethane	74-95-3	ND	50
1,2-Dichlorobenzene	95-50-1	ND	50
1,3-Dichlorobenzene	541-73-1	ND	50
1,4-Dichlorobenzene	106-46-7	ND	50
Dichlorodifluoromethane	75-71-8	ND	100
1,1-Dichloroethane	75-34-3	ND	50
1,2-Dichloroethane	107-06-2	ND	50
1,1-Dichloroethene	75-35-4	ND	50
1,2-Dichloroethene, total	540-59-0	ND	50
1,2-Dichloropropane	78-87-5	ND	50
cis-1,3-Dichloropropene	10061-01-5	ND	50
trans-1,3-Dichloropropene	10061-02-6	ND	50
Ethylbenzene	100-41-4	ND	50
2-Hexanone	591-78-6	ND	500
Methylene chloride	75-09-2	ND	50
4-Methyl-2-pentanone	108-10-1	ND	500
Styrene	100-42-5	ND	50
1,1,2,2-Tetrachloroethane	79-34-5	ND	50
Tetrachloroethene	127-18-4	ND	50

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AMERICAN
ENVIRONMENTAL LABORATORIES CORP.

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Analysis Report: Volatile Organic Compounds by GC/MS - EPA Method 624

Client: AllWest Environmental
One Sutter Street
San Francisco, CA 94104

Project: Mariner Square

Date Sampled: 04/08/92
Date Received: 04/09/92
Date Extracted: 04/13/92
Date Analyzed: 04/13/92
Date Reported: 04/16/92
Client ID No.: WS-18VOC

Project No.: 91287.23
Contact: Long Ching
Phone: (415) 391-2510

AELC Contact: Mike Jaeger
Job No.: 798661
COC Log No.: NO NUMBER
AELC ID No.: L8661-4A
Batch No.: 9092
Matrix: WATER

Sample: WS-18VOC(cont.)

Analyte	CAS No.	Results (ug/L)	Rep. Limit (ug/L)
Toluene	108-88-3	ND	50
1,1,1-Trichloroethane	71-55-6	ND	50
1,1,2-Trichloroethane	79-00-5	ND	50
Trichloroethene	79-01-6	ND	50
Trichlorofluoromethane	75-69-4	ND	50
1,1,2-Trichlorotrifluoroethane	79-13-1	ND	50
Vinyl acetate	108-05-4	ND	500
Vinyl chloride	75-01-4	ND	100
Xylenes, total	1330-20-7	ND	100

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Client: AllWest Environmental
One Sutter Street
San Francisco, CA 94104

Project: Mariner Square

Date Sampled: 04/09/92
Date Received: 04/09/92
Date Extracted: 04/13/92
Date Analyzed: 04/13/92
Date Reported: 04/16/92
Client ID No.: WS-13VOC

Project No.: 91287.23
Contact: Long Ching
Phone: (415) 391-2510

AELC Contact: Mike Jaeger
Job No.: 798661
COC Log No.: NO NUMBER
AELC ID No.: L8661-6A
Batch No.: 9092
Matrix: WATER

SURROGATE

Analyte	CAS No.	Surr Conc. (ug/L)	Surrogate Recovery (percent)
1,2-Dichloroethane-d4	N/A	100	104
Toluene-d8	N/A	100	104
p-Bromofluorobenzene	460-00-4	100	114

Sample: WS-13VOC

Analyte	CAS No.	Results (ug/L)	Rep. Limit (ug/L)
Acetone	67-64-1	ND	100
Benzene	71-43-2	ND	5
Bromodichloromethane	75-27-4	ND	5
Bromoform	75-25-2	ND	5
Bromomethane	74-83-9	ND	10
2-Butanone	78-93-3	ND	100
Carbon disulfide	75-15-0	ND	5
Carbon tetrachloride	56-23-5	ND	5
Chlorobenzene	108-90-7	ND	5
Chloroethane	75-00-3	ND	10
2-Chloroethyl vinyl ether	110-75-8	ND	50
Chloroform	67-66-3	ND	5
Chloromethane	74-87-3	ND	10
Dibromochloromethane	124-48-1	ND	5
Dibromomethane	74-95-3	ND	5
1,2-Dichlorobenzene	95-50-1	ND	5
1,3-Dichlorobenzene	541-73-1	ND	5
1,4-Dichlorobenzene	106-46-7	ND	5
Dichlorodifluoromethane	75-71-8	ND	10
1,1-Dichloroethane	75-34-3	ND	5
1,2-Dichloroethane	107-06-2	ND	5
1,1-Dichloroethene	75-35-4	ND	5
1,2-Dichloroethene, total	540-59-0	ND	5
1,2-Dichloropropane	78-87-5	ND	5
cis-1,3-Dichloropropene	10061-01-5	ND	5
trans-1,3-Dichloropropene	10061-02-6	ND	5
Ethylbenzene	100-41-4	ND	5
2-Hexanone	591-78-6	ND	50
Methylene chloride	75-09-2	ND	5
4-Methyl-2-pentanone	108-10-1	ND	50
Styrene	100-42-5	ND	5
1,1,2,2-Tetrachloroethane	79-34-5	ND	5
Tetrachloroethene	127-18-4	ND	5

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Analysis Report: Volatile Organic Compounds by GC/MS - EPA Method 624

Client: AllWest Environmental
One Sutter Street
San Francisco, CA 94104

Project: Mariner Square

Date Sampled: 04/09/92
Date Received: 04/09/92
Date Extracted: 04/13/92
Date Analyzed: 04/13/92
Date Reported: 04/16/92
Client ID No.: WS-13VOC

Project No.: 91287.23
Contact: Long Ching
Phone: (415) 391-2510

AELC Contact: Mike Jaeger
Job No.: 798661
COC Log No.: NO NUMBER
AELC ID No.: L8661-6A
Batch No.: 9092
Matrix: WATER

Sample: WS-13VOC(cont.)

Analyte	CAS No.	Results (ug/L)	Rep. Limit (ug/L)
Toluene	108-88-3	ND	5
1,1,1-Trichloroethane	71-55-6	ND	5
1,1,2-Trichloroethane	79-00-5	ND	5
Trichloroethene	79-01-6	ND	5
Trichlorofluoromethane	75-69-4	ND	5
1,1,2-Trichlorotrifluoroethane	79-13-1	ND	5
Vinyl acetate	108-05-4	ND	50
Vinyl chloride	75-01-4	ND	10
Xylenes, total	1330-20-7	ND	10

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San Francisco, CA 94104

Project: Mariner Square

Date Extracted: 04/13/92
Date Analyzed: 04/13/92
Date Reported: 04/16/92

Project No.: 91287.23
Contact: Long Ching
Phone: (415) 391-2510

AELC Contact: Mike Jaeger
Job No.: 798661
COC Log No.: NO NUMBER
AELC ID No.: L8661
Batch No.: 9092
Matrix: WATER

MB SURROGATE

Analyte	CAS No.	Surr Conc. (ug/L)	MB Surrogate Recovery (percent)
1,2-Dichloroethane-d4	N/A	100	95
Toluene-d8	N/A	100	99
p-Bromofluorobenzene	460-00-4	100	98

METHOD BLANK

Analyte	CAS No.	Results (ug/L)	Rep. Limit (ug/L)
Acetone	67-64-1	ND	100
Benzene	71-43-2	ND	5
Bromodichloromethane	75-27-4	ND	5
Bromoform	75-25-2	ND	5
Bromomethane	74-83-9	ND	10
2-Butanone	78-93-3	ND	100
Carbon disulfide	75-15-0	ND	5
Carbon tetrachloride	56-23-5	ND	5
Chlorobenzene	108-90-7	ND	5
Chloroethane	75-00-3	ND	10
2-Chloroethyl vinyl ether	110-75-8	ND	50
Chloroform	67-66-3	ND	5
Chloromethane	74-87-3	ND	10
Dibromochloromethane	124-48-1	ND	5
Dibromomethane	74-95-3	ND	5
1,2-Dichlorobenzene	95-50-1	ND	5
1,3-Dichlorobenzene	541-73-1	ND	5
1,4-Dichlorobenzene	106-46-7	ND	5
Dichlorodifluoromethane	75-71-8	ND	10
1,1-Dichloroethane	75-34-3	ND	5
1,2-Dichloroethane	107-06-2	ND	5
1,1-Dichloroethene	75-35-4	ND	5
1,2-Dichloroethene, total	540-59-0	ND	5
1,2-Dichloropropane	78-87-5	ND	5
cis-1,3-Dichloropropene	10061-01-5	ND	5
trans-1,3-Dichloropropene	10061-02-6	ND	5
Ethylbenzene	100-41-4	ND	5
2-Hexanone	591-78-6	ND	50
Methylene chloride	75-09-2	ND	5
4-Methyl-2-pentanone	108-10-1	ND	50
Styrene	100-42-5	ND	5
1,1,2,2-Tetrachloroethane	79-34-5	ND	5
Tetrachloroethene	127-18-4	ND	5
Toluene	108-88-3	ND	5

ND = Not detected at or above indicated Reporting Limit
Rep. Limit = Reporting Limit unless otherwise indicated in parentheses.

AMERICAN
ENVIRONMENTAL LABORATORIES CORP.

CA DOHS ELAP Accreditation/Registration Number 1233

Analysis Report: Volatile Organic Compounds by GC/MS - EPA Method 624

Client: AllWest Environmental
One Sutter Street
San Francisco, CA 94104

Project: Mariner Square

Date Extracted: 04/13/92
Date Analyzed: 04/13/92
Date Reported: 04/16/92

Project No.: 91287.23
Contact: Long Ching
Phone: (415) 391-2510

AELC Contact: Mike Jaeger
Job No.: 798661
COC Log No.: NO NUMBER
AELC ID No.: L8661
Batch No.: 9092
Matrix: WATER

METHOD BLANK(cont.)

Analyte	CAS No.	Results (ug/L)	Rep. Limit (ug/L)
1,1,1-Trichloroethane	71-55-6	ND	5
1,1,2-Trichloroethane	79-00-5	ND	5
Trichloroethene	79-01-6	ND	5
Trichlorofluoromethane	75-69-4	ND	5
1,1,2-Trichlorotrifluoroethane	79-13-1	ND	5
Vinyl acetate	108-05-4	ND	50
Vinyl chloride	75-01-4	ND	10
Xylenes, total	1330-20-7	ND	10

ND = Not detected at or above indicated Reporting Limit
Rep. Limit = Reporting Limit unless otherwise indicated in parentheses.

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Matrix: WATER

MB SPIKE SURROGATE

Analyte	CAS No.	MBS Surr. Conc. (ug/L)	Surrogate Recovery (percent)
1,2-Dichloroethane	107-06-2	100	93
Toluene-d8	N/A	100	99
p-Bromofluorobenzene	460-00-4	100	101

MB SPIKE

Analyte	CAS No.	MBS Conc. (ug/L)	MBS Recovery (percent)
Benzene	71-43-2	50	113
Chlorobenzene	108-90-7	50	103
1,1-Dichloroethene	75-35-4	50	105
Toluene	108-88-3	50	112
Trichloroethene	79-01-6	50	98

MB SPIKE DUPLICATE SURR.

Analyte	CAS No.	MBSD Surr. Conc. (ug/L)	MBSD Surrogate Recovery (percent)
1,2-Dichloroethane	107-06-2	100	95
Toluene-d8	N/A	100	99
p-Bromofluorobenzene	460-00-4	100	99

MB SPIKE DUPLICATE

Analyte	CAS No.	MBSD Conc. (ug/L)	MBSD Recovery (percent)
Benzene	71-43-2	50	112
Chlorobenzene	108-90-7	50	100
1,1-Dichloroethene	75-35-4	50	104
Toluene	108-88-3	50	110
Trichloroethene	79-01-6	50	96

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San Francisco, CA 94104

Project: Mariner Square

Date Extracted: 04/13/92
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Project No.: 91287.23
Contact: Long Ching
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AELC Contact: Mike Jaeger
Job No.: 798661
COC Log No.: NO NUMBER
AELC ID No.: L8661
Batch No.: 9092
Matrix: WATER

MB SPIKE RPD

Analyte	CAS No.	MBS Relative Percent Difference (percent)
Benzene	71-43-2	1
Chlorobenzene	108-90-7	3
1,1-Dichloroethene	75-35-4	1
Toluene	108-88-3	2
Trichloroethene	79-01-6	2

AMERICAN
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Analysis Report: Volatile Organic Compounds by GC/MS - EPA Method 624

Client: AllWest Environmental
One Sutter Street
San Francisco, CA 94104

Project: Mariner Square

Date Reported: 04/16/92

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Job No.: 798661
COC Log No.: NO NUMBER
AELC ID No.: L8661
Batch No.: 9092
Matrix: WATER

LAB CONTROL STANDARD

Analyte	CAS No.	LCS Conc. (ug/L)	LCS Recovery (percent)
Benzene	71-43-2	50	111
Chlorobenzene	108-90-7	50	94
1,1-Dichloroethene	75-35-4	50	102
Toluene	108-88-3	50	106
Trichloroethene	79-01-6	50	98

WATER RESOURCES CONTROL BOARD
DIVISION OF WATER QUALITY - UST CLEANUP PROGRAM
SITE SPECIFIC QUARTERLY REPORT
01/01/92 THROUGH 03/31/92

AGENCY # : 10000 SOURCE OF FUNDS: F SUBSTANCE: 12034
StID : 2945
SITE NAME: Mariner Boat Yard DATE REPORTED : 12/17/90
ADDRESS : 2415 Mariner Square Dr DATE CONFIRMED: 12/17/90
CITY/ZIP : Alameda 94501 MULTIPLE RPs : N

SITE STATUS

CASE TYPE: CONTRACT STATUS: 2 EMERGENCY RESP:
RP SEARCH: S DATE COMPLETED:
PRELIMINARY ASMNT: DATE UNDERWAY: DATE COMPLETED:
REM INVESTIGATION: DATE UNDERWAY: DATE COMPLETED:
REMEDIAL ACTION: DATE UNDERWAY: DATE COMPLETED:
POST REMED ACT MON: DATE UNDERWAY: DATE COMPLETED:

ENFORCEMENT ACTION TYPE: DATE ENFORCEMENT ACTION TAKEN:
LUFT FIELD MANUAL CONSID: 2,H,S,C,A
CASE CLOSED: DATE CASE CLOSED:
DATE EXCAVATION STARTED : REMEDIAL ACTIONS TAKEN: NT

RESPONSIBLE PARTY INFORMATION

RP#1-CONTACT NAME: John Berry
COMPANY NAME: Mariner Development
ADDRESS: 2236 Mariner Sq. Dr.
CITY/STATE: Alameda, C A 94501

APPENDIX C

REFERENCES

Alameda Public Works, Sanitary Sewer Plans
Reference F.B. 1-62 p.p. 44-45

Alameda Public Works, Storm Sewer Plans

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Western Construction, April 1960
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