



MEMORANDUM

To: Mr. Robert Wyatt -Allen Matkins Leck Gamble & Mallory, LLP

Cc: Ms. Denise Pinkston - TMG Partners

From: Will Mast and Peter Gorman - PES Environmental, Inc.

Project No.: 241.062.01.002

Date: January 21, 2005

Subject: Phase II Environmental Subsurface Investigation Results
Gold and Wolfman Properties, Emeryville, California

On December 15, 2004, PES conducted a subsurface investigation of the commercial properties located at 6340 and 6390 Christie Avenue in Emeryville, California (the Gold and Wolfman properties, respectively). This memorandum provides a brief description of the work performed, and presents the analytical results of the investigation. These data were previously discussed with Allen Matkins and TMG on January 7 and 11, 2005. We understand that further discussions with and review by the City of Emeryville will likely result in determining the final reporting format for these data.

Prior to the fieldwork, PES examined pre-existing environmental information, developed a sampling strategy, prepared a health and safety plan, obtained drilling permits from Alameda County, contacted Underground Service Alert, and performed utility clearance at sampling locations. Our drilling subcontractor advanced 7 borings to collect 7 groundwater samples and 12 depth-discrete soil samples. Additionally, soil gas samples were collected at 12 locations. These sampling locations are presented on Plate 1. The results of the laboratory analyses are summarized on Tables 1 through 6.

Please call (415) 899-1600 if you have any questions.

Attachments: Plate 1 – Phase II Site Investigation Sampling Locations
Table 1 – Summary of Analytical Results for Soil, 6340 Christie Avenue
Table 2 – Summary of Analytical Results for Groundwater, 6340 Christie Avenue
Table 3 – Summary of Analytical Results for Soil Vapor, 6340 Christie Avenue
Table 4 – Summary of Analytical Results for Soil, 6390 Christie Avenue
Table 5 – Summary of Analytical Results for Groundwater Vapor, 6390 Christie Avenue
Table 6 – Summary of Analytical Results for Soil Vapor, 6390 Christie Avenue

ATTACHMENTS

**Table 1. Summary of Analytical Results for Soil
Gold Property
6340 Christie Avenue
Emeryville, California**

Sample ID	Sample Depth (ft)	Sample Location	Date Collected	TPHd (mg/kg)	TPHmo (mg/kg)	TPHg (mg/kg)	VOCs (mg/kg)	PCBs (mg/kg)	Chromium (mg/kg)	Lead (mg/kg)	Nickel (mg/kg)	Zinc (mg/kg)
SB-4-2	2	4	12/15/04	<6.3	3,600	<53	ND	--	--	--	--	--
SB-4-7	7	4	12/15/04	<2.5	22	<54	ND	--	--	--	--	--
SB-5-2	2	5	12/15/04	<2.5	<10	<39	ND	--	--	--	--	--
SB-5-7	7	5	12/15/04	<2.5	<10	<41	ND	--	--	--	--	--
SB-6-2	2	6	12/15/04	<2.5	13	<42	ND	--	--	--	--	--
SB-6-7	7	6	12/15/04	<2.5	2,600	0.077	ND	--	--	--	--	--
6340 Shallow Comp	Composite	4,5,6	12/15/04	--	--	--	--	<0.1	--	--	--	--
(SB-4-2)(SB-4-7)Comp	Composite	4	12/15/04	--	--	--	--	--	41	6.1	41	62
(SB-5-2)(SB-5-7)Comp	Composite	5	12/15/04	--	--	--	--	--	38	<5	40	30
(SB-6-2)(SB-6-7)Comp	Composite	6	12/15/04	--	--	--	--	--	2.6	55	760	1,800
ESLs for Residential Land Use ⁽¹⁾				500	500	100	var	0.22	58 - total	200	150	600
ESLs for Commercial Land Use ⁽¹⁾				500	1,000	400	var	0.74	58 - total	750	150	600
PRG for Residential Land Use ⁽²⁾				--	--	--	var	0.22	30 - Cr ⁶⁺	150	1,600	23,000
PRG for Commercial Land Use ⁽²⁾				--	--	--	var	0.74	64 - Cr ⁶⁺	800	20,000	100,000

- Notes:**
mg/kg = Milligrams per kilogram.
TPHd = Total petroleum hydrocarbons as diesel (U.S. EPA Test Method 8015M).
TPHmo = Total petroleum hydrocarbons as motor oil (U.S. EPA Test Method 8015M).
TPHg = Total petroleum hydrocarbons as gasoline (U.S. EPA Test Method 8260).
VOCs = Volatile organic compounds (U.S. EPA Test Method 8260).
PCBs = Poly-chlorinated biphenyls (U.S. EPA Test Method 8082).
LUFT metals (cadmium, chromium, lead, nickel, and zinc) analyzed using U.S. EPA Test Method 6010B. Only detected metals are listed.
<2.5 = Not detected at or above the indicated laboratory reporting limit.
ND = No analytes detected at or above their respective laboratory reporting limits for the indicated analytical method.
-- = Not analyzed or not applicable.
var = Varies for compounds in indicated analytical method.
(1) California Regional Water Quality Control Board, San Francisco Region Environmental Screening Level (ESL) for soil where groundwater is not a potential drinking water resource (February 2004).
(2) U.S. EPA Region 9 Preliminary Remediation Goal (PRG) for soil (October 2004).

**Table 2. Summary of Analytical Results for Groundwater
Gold Property
6340 Christie Avenue
Emeryville, California**

Sample ID	Sample Depth (ft)	Sample Location	Date Collected	TPHd (µg/L)	TPHmo (µg/L)	TPHg (µg/L)	VOCs	
							Benzene (µg/L)	Xylenes, Total (µg/L)
GW-4-11	11	4	12/15/04	22,000	<10,000	<250	<5	<5
GW-5-12	12	5	12/15/04	9,700	<5,000	110	2.8	1.5
GW-6-8	8	6	12/15/04	4,200	<1,300	<25	<0.5	<0.5
GW-7-12	12	7	12/15/04	49,000	<13,000	<500	<10	<10
ESL for groundwater ⁽¹⁾				640	640	500	46	13
ESL Ceiling level for groundwater ⁽²⁾				2,500	2,500	5,000	20,000	150,000
PRG for tap water ⁽³⁾				--	--	--	0.35	210

Notes:

µg/L = Micrograms per liter.

TPHd = Total petroleum hydrocarbons as diesel (U.S. EPA Test Method 8015M).

TPHmo = Total petroleum hydrocarbons as motor oil (U.S. EPA Test Method 8015M).

TPHg = Total petroleum hydrocarbons as gasoline (U.S. EPA Test Method 8260).

VOCs = Volatile organic compounds (U.S. EPA Test Method 8260). Only detected VOCs are listed.

All other VOCs not detected at or above their respective laboratory reporting limits.

<5 = Not detected at or above the indicated laboratory reporting limit.

(1) California Regional Water Quality Control Board, San Francisco Region Environmental Screening Level (ESL) for groundwater that is not a potential drinking water resource (February 2004).

(2) Table F-1b, RWQCB ESL (February 2004).

(3) U.S. EPA Region 9 Preliminary Remediation Goal (PRG) for tap water (October 2004).

**Table 3. Summary of Analytical Results for Soil Vapor
Gold Property
6340 Christie Avenue
Emeryville, California**

Sample ID	Sample Depth (ft)	Sample Location	Date Collected	VOCs				TPH (µg/L)	Methane (% Gas)
				cis-1,2-DCE (µg/L)	Benzene (µg/L)	Toluene (µg/L)	m,p-Xylenes (µg/L)		
SG-4-3	3	SG-4	12/15/04	<0.10	5.5	1.1	1.4	830	85
SG-5-3	3	SG-5	12/15/04	<0.10	<0.10	<0.10	<0.10	8.8	83
SG-6-2	2	SG-6	12/15/04	0.15	<0.10	<0.10	0.10	8.3	7.8
SG-7-2	2	SG-7	12/15/04	<0.10	<0.10	<0.10	0.11	6.7	14
SG-8-3	3	SG-8	12/15/04	<0.10	0.20	0.11	0.11	76	64
SG-9-2	2	SG-9	12/15/04	<0.10	<0.10	0.10	0.12	2.2	9.0
SG-10-2	2	SG-10	12/15/04	<0.10	0.13	0.12	<0.10	31	56
SG-11-2	2	SG-11	12/15/04	<0.10	0.34	0.29	0.11	380	16
SG-12-2	2	SG-12	12/15/04	<0.10	0.13	1.4	0.11	5.6	0.2
ESL for Residential Land Use ⁽¹⁾				7.3	0.084	83	21	10	--
ESL for Commercial Land Use ⁽¹⁾				20	0.28	230	58	29	--
PRG for Ambient Air ⁽²⁾				0.037	0.00025	0.40	0.11	--	--

Notes:

µg/L = Micrograms per liter of air

TPH = Total petroleum hydrocarbons in C-5 to C-11 range (U.S. EPA Test Method 8260).

VOCs = Volatile organic compounds (U.S. EPA Test Method 8260). Only detected VOCs are listed.

All other VOCs not detected at or above their respective laboratory reporting limits.

cis-1,2-DCE = cis-1,2,-Dichloroethene.

Methane analyzed in the field using a GEM 500 Landfill Gas Meter.

<0.10 = Not detected at or above the indicated laboratory reporting limit

-- = Not applicable

(1) California Regional Water Quality Control Board, San Francisco Region Environmental Screening Level (ESL) for shallow soil gas (February 2004).

(2) U.S. EPA Region 9 Preliminary Remediation Goal (PRG) for ambient air (October 2004).

**Table 4. Summary of Analytical Results for Soil
Wolfman Property
6390 Christie Avenue
Emeryville, California**

Sample ID	Sample Depth (ft)	Sample Location	Date Collected	TPHd (mg/kg)	TPHmo (mg/kg)	TPHg (mg/kg)	VOCs (mg/kg)	PCBs (mg/kg)	Chromium (mg/kg)	Lead (mg/kg)	Nickel (mg/kg)	Zinc (mg/kg)
SB-1-2	2	1	12/15/04	<50	560	<40	ND	--	--	--	--	--
SB-1-7	7	1	12/15/04	<13	140	<42	ND	--	--	--	--	--
SB-2-2	2	2	12/15/04	<5	40	<41	ND	--	--	--	--	--
SB-2-7	7	2	12/15/04	<2.5	47	3.0	ND	--	--	--	--	--
SB-3-2	2	3	12/15/04	<13	150	<42	ND	--	--	--	--	--
SB-3-7	7	3	12/15/04	<25	360	110	ND	--	--	--	--	--
6390 Shallow Comp	Composite	1,2,3	12/15/04	--	--	--	--	<0.1	--	--	--	--
(SB-1-2)(SB-1-7)Comp	Composite	1	12/15/04	--	--	--	--	--	49	65	47	160
(SB-2-2)(SB-2-7)Comp	Composite	2	12/15/04	--	--	--	--	--	21	<5	23	59
(SB-3-2)(SB-3-7)Comp	Composite	3	12/15/04	--	--	--	--	--	46	<5	55	27
ESL for Residential Land Use ⁽¹⁾				500	500	100	var	0.22	58 - total	200	150	600
ESL for Commercial Land Use ⁽¹⁾				500	1,000	400	var	0.74	58 - total	750	150	600
PRG for Residential Land Use ⁽²⁾				--	--	--	var	0.22	30 - Cr ⁶⁺	150	1,600	23,000
PRG for Commercial Land Use ⁽²⁾				--	--	--	var	0.74	64 - Cr ⁶⁺	800	20,000	100,000

Notes:

mg/kg = Milligrams per kilogram.

TPHd = Total petroleum hydrocarbons as diesel (U.S. EPA Test Method 8015M).

TPHmo = Total petroleum hydrocarbons as motor oil (U.S. EPA Test Method 8015M).

TPHg = Total petroleum hydrocarbons as gasoline (U.S. EPA Test Method 8260).

VOCs = Volatile organic compounds (U.S. EPA Test Method 8260).

PCBs = Poly-chlorinated biphenyls (U.S. EPA Test Method 8082).

LUFT metals (cadmium, chromium, lead, nickel, and zinc) analyzed using U.S. EPA Test Method 6010B. Only detected metals are listed.

<50 = Not detected at or above the indicated laboratory reporting limit

ND = No analytes detected at or above their respective laboratory reporting limits for the indicated analytical method.

-- = Not analyzed or not applicable

var = Varies for compounds in indicated analytical method

(1) California Regional Water Quality Control Board, San Francisco Region Environmental Screening Level (ESL) for soil where groundwater is not a potential drinking water resource (February 2004).

(2) U.S. EPA Region 9 Preliminary Remediation Goal (PRG) for soil (October 2004).

**Table 5. Summary of Analytical Results for Groundwater
Wolfman Property
6390 Christie Avenue
Emeryville, California**

Sample ID	Sample Depth (ft)	Sample Location	Date Collected	TPHd (µg/L)	TPHmo (µg/L)	TPHg (µg/L)	VOCs			
							Benzene (µg/L)	Toluene (µg/L)	Carbon Disulfide (µg/L)	Methyl t-Butyl Ether (µg/L)
GW-1-12	12	1	12/15/04	7,000	<1,300	<25	0.81	0.68	<0.5	<1
GW-2-8	8	2	12/15/04	<250	3,300	37	<0.5	<0.5	0.74	21
GW-3-8	8	3	12/15/04	<250	7,400	<25	<0.5	<0.5	<0.5	<1
ESL for groundwater ⁽¹⁾				640	640	500	46	130	--	1,800
ESL Ceiling level for groundwater ⁽²⁾				2,500	2,500	5,000	20,000	400	--	1,800
PRG for tap water ⁽³⁾				--	--	--	0.35	720	--	6.2

Notes:

µg/L = Micrograms per liter.

TPHd = Total petroleum hydrocarbons as diesel (U.S. EPA Test Method 8015M).

TPHmo = Total petroleum hydrocarbons as motor oil (U.S. EPA Test Method 8015M).

TPHg = Total petroleum hydrocarbons as gasoline (U.S. EPA Test Method 8260).

VOCs = Volatile organic compounds (U.S. EPA Test Method 8260). Only detected VOCs are listed.

All other VOCs not detected at or above their respective laboratory reporting limits.

<25 = Not detected at or above the indicated laboratory reporting limit.

-- = Not applicable.

(1) California Regional Water Quality Control Board, San Francisco Region Environmental Screening Level (ESL) for groundwater that is not a potential drinking water resource (February 2004).

(2) Table F-1b, RWQCB ESL (February 2004).

(3) U.S. EPA Region 9 Preliminary Remediation Goal (PRG) for tap water (October 2004).

**Table 6. Summary of Analytical Results for Soil Vapor
Wolfman Property
6390 Christie Avenue
Emeryville, California**

Sample ID	Sample Depth (ft)	Sample Location	Date Collected	VOCs (µg/L)	TPH (µg/L)	Methane (% Gas)
SG-1-2	2	SG-1	12/15/04	ND	6.8	--
SG-2-1	1	SG-2	12/15/04	ND	2.6	ND
SG-3-3	3	SG-3	12/15/04	ND	9.3	14
ESL for Residential Land Use ⁽¹⁾				var	10	--
ESL for Commercial Land Use ⁽¹⁾				var	29	--
PRG for Ambient Air ⁽²⁾				var	--	--

Notes:

µg/L = Micrograms per liter of air

TPH = Total petroleum hydrocarbons in C-5 to C-11 range (U.S. EPA Test Method 8260).

VOCs = Volatile organic compounds (U.S. EPA Test Method 8260).

Methane analyzed in the field using a GEM 500 Landfill Gas Meter.

ND = No analytes detected at or above their respective laboratory reporting limits for the indicated analytical method.

-- = Not applicable or not sampled

var = Varies for compounds in indicated analytical method

(1) California Regional Water Quality Control Board, San Francisco Region

Environmental Screening Level (ESL) for shallow soil gas (February 2004).

(2) U.S. EPA Region 9 Preliminary Remediation Goal (PRG) for ambient air (October 2004).