6920 Koll Center Parkway Suite 216 Pleasanton, CA 94566 925.426.2600 Fax 925.426.0106



October 8, 2003

Ke95

Ms. Betty Graham
REGIONAL WATER QUALITY CONTROL BOARD
1515 Clay Street, Suite 1400
Oakland, California 94612

Clayton Project No. 70-00509.01

Subject:

Third Quarter 2003 Groundwater Monitoring Report at 5050, 5051, and

5200 Coliseum Way and 750-50th Avenue, Oakland, California.

SLIC No. 01S0422 (BG)

Dear Ms. Graham:

Enclosed please find Clayton Group Services, Inc.'s (Clayton's) Third Quarter 2003 Groundwater Monitoring Report at 5050, 5051, and 5200 Coliseum Way and 750-50th Avenue, Oakland, California. This report presents the results of Clayton's quarterly monitoring conducted in August 2002 at the subject property.

Clayton, under penalty of perjury as an authorized representative of 5050 Coliseum, LLC, presents this report as true and correct to the best of our knowledge. If you have any questions or comments, please call me at (925) 426-2686.

Sincerely,

Dwight K. Hoenig

Vice President, Western Regional Director

Environmental Services

San Francisco Regional Office

DRH/daa

Attachment

cc: Matthew Robinson - Environmental Operations, Inc.

Tim Colvig - Wulfsberg Reese & Sykes

Barney Chan - Alameda County Health Care Services

William Wick - Wactor & Wick, LLP

6920 Koll Center Parkway Suite 216 Pleasanton, CA 94566 925.426.2600 Fax 925.426.0106



Third Quarter 2003 Groundwater Monitoring Report at 5050, 5051, and 5200 Coliseum Way, and 750-50th Street Oakland, California

For 5050 Coliseum, LLC, and Oakland 5051, LLC Clayton Project No. 70-00509.01.002

October 8, 2003



Sec	<u>Pa</u>	ige
1.0	INTRODUCTION	1
2.0	SITE SETTING	1
3.0	FIELD ACTIVITIES	2
3.1.	. DEPTH TO WATER MEASUREMENTS	2
3.2.	. MONITORING WELL SAMPLES	2
4.0	LABORATORY ANALYSES	3
5.0	SITE HYDROLOGY	3
6.0	GROUNDWATER ANALYTICAL RESULTS	4
	PETROLEUM HYDROCARBONS	
6.2.	. METALS	4
6.3.	. WEEP-WATER SAMPLING	5
7.0	LIMITATIONS	6
<u>Tal</u>	<u>bles</u>	
1	Quarterly Monitoring/Sampling Schedule	
2	Groundwater Elevation Data	
3	Petroleum Hydrocarbons Detected in Groundwater	
4	Metals, Total Dissolved Solids, pH, and Chloride Detected in Groundwater	
5	Metals and pH in Weep-Water Samples	
Fig	<u>ures</u>	
1	Site Location Map	
2	Potentiometric Surface Map	
3	Concentrations of Arsenic in Groundwater	
4	Concentrations of Barium in Groundwater	
5	Concentrations of Cadmium in Groundwater	
6	Concentrations of Zinc in Groundwater	
7	Weep-Water Monitoring Sample Results	



1.0 <u>INTRODUCTION</u>

Clayton Group Services, Inc. (Clayton), performed quarterly groundwater monitoring activities at the Coliseum Way Properties located at 5050, 5051, and 5200 Coliseum Way and 750-50th Avenue in Oakland, California (Figure 1 and Figure 2). The California Regional Water Quality Control Board - San Francisco Bay region (RWQCB), has requested that groundwater monitoring be performed at the subject properties to monitor the fate of petroleum hydrocarbons and metal ions.

The quarterly monitoring and sampling schedule employed is presented in Table 1. The Third Quarter 2003 monitoring event included collecting depth to water measurements from 22 groundwater-monitoring wells and groundwater samples from 12 of the 22 wells. Field measurements and groundwater monitoring well sampling were carried out on August 12, 2003. This report presents groundwater measurements recorded in the field and the results of laboratory analyses performed on groundwater samples collected for the Third Quarter 2003 monitoring event.

Due to the installation of a groundwater barrier wall on the 5051 property in November 2001, weep-water monitoring is being conducted on a quarterly basis. Weep hole sampling was conducted on August 12, 2003.

2.0 SITE SETTING

The 5050 and 5200 properties are located about 600 feet east of Interstate 880 and the 5051 property is located about 75 feet east of Interstate 880, in Oakland, California. The properties are bordered by stormwater drainage channels that flow into San Leandro Bay, located approximately one-half mile to the west (Figure 1). Regionally, groundwater flows from the Oakland Hills west towards San Leandro Bay. The 5050 and 5200 properties encompass approximately 10 acres and the 5051 property is approximately 4.4 acres of relatively flat ground approximately 7 to 15 feet above mean sea level (msl).

The subject properties and surrounding area have a long history of industrial usage. The 5050 property (which also includes the 750-50th Avenue property) is the location of former lead smelting operations (1879-1903), acids manufacturing (1903-1917), various chemical operations (1917-1926), lithopone manufacturing (1926-1963), vacant or razed property (1963-1974), and truck maintenance operations (1974 to the present). The 5051 property and the mini-storage facility at 5200 property were also part of the former lithopone manufacturing facility.

Tidally influenced stormwater drainage channels border each of the subject properties (Figure 2). An open and unlined channel parallels the southeast property boundary of the 5051 and 5200 properties. Two subsurface culverts, the Courtland Creek Culvert and the Second Line G Culvert, parallel the northwest property boundaries of the 5050 property and the 750-50th Avenue property. The two culverts merge into an open concrete-lined channel south of the intersection of Coliseum Way and 50th Avenue. The drainage channel is open and concrete-lined along the northwestern perimeter of the 5051



property, and is open and unlined along the southwestern perimeter of the property, prior to flowing under Interstate 880.

Construction of the groundwater diversion barrier, or groundwater barrier wall, was completed between October 30 and November 1, 2001, as a remedial action for the 5051 property as outlined in the site cleanup requirements (Task 4 of Board Order No. 01-032, March 21, 2001). The groundwater barrier wall (approximately 350 feet in length) was constructed of interlocking sheetpiles along the west property boundary (Figure 2) to a total depth of between 15 and 20 feet below ground surface (bgs) to provide a barrier for groundwater that contains elevated concentrations of soluble metals from flowing into the surface water channel that borders this portion of the subject property. During the utility survey of the property, an underground optical cable was identified near the bend in the wall. It was necessary to leave a gap in the wall of approximately 10 feet to clear the utility. On June 17, 2002 Clayton supervised the installation of a neat cement (grout) curtain to close the utility gap and to extend the sheet pile wall approximately 10 feet on the northern end.

The 5051 property was recently paved for use as a parking lot. The new pavement covers virtually the entire property. The paving reportedly occurred in August 2002 to enhance the adjacent Flea Market business. Clayton believes that the paving activity will also assist the remedial efforts that have been put in place for this property by limiting water percolation into the subsurface during the wet months, further limiting the potential migration of soluble metals in groundwater to the adjacent surface water channels.

3.0 FIELD ACTIVITIES

The following discussion outlines field activities used to obtain depth to water measurements, monitoring-well and weep-water samples, and other field data.

3.1. DEPTH TO WATER MEASUREMENTS

Depth to water measurements were obtained from all 22 wells selected for monitoring of the Coliseum Way Properties on August 12, 2003 prior to well purging and sampling activities. The wells were opened and allowed to stabilize prior to measuring the depth to water. Measurements were obtained in a timely manner in order to minimize tidal effects. The depth to water in each monitoring well was measured with a water level indicator meter from the top of the monitoring well casing to the free water surface. The depth to water measurement was used to determine the groundwater elevation at each monitoring well location, and also to determine the groundwater purge volume for each monitoring well. The depth to water measurements and the calculated groundwater elevation for each monitoring well are presented in Table 2.

3.2. MONITORING WELL SAMPLES

Groundwater samples were collected from 12 monitoring wells (CW-1, CW-2, CW-6, CW-7, CW-12, CW-13, LF-5, LF-11, LF-12, MWA-1, MW-4 and MW-5) on August 12,



2003. The monitoring wells selected for sampling were purged of approximately three well casing volumes of groundwater until the water quality parameters had stabilized or until the well dewatered. A submersible pump was used to purge groundwater from each well. During purging, the groundwater quality was monitored in the field for the following parameters: temperature, pH, specific conductance, and turbidity. The water quality parameters were recorded on groundwater sampling data sheets. After purging, a new disposable bailer was used to collect a groundwater sample from each select monitoring well. Groundwater samples were collected in appropriate laboratory-supplied containers. The containers were sealed, labeled with identifying information, entered onto a formal chain-of-custody document, and placed in a chilled ice-chest for transportation to the laboratory.

4.0 <u>LABORATORY ANALYSES</u>

The groundwater samples collected from 12 monitoring wells were submitted to Curtis & Tompkins, Ltd. Analytical Laboratory located in Berkeley, California, a State of California certified laboratory, for analyses. The groundwater samples were analyzed by one or more of the following United States Environmental Protection Agency (USEPA) methods:

- EPA Methods 6010 and 7470 for California Assessment Manual (CAM-17) Total Metals, Laboratory Filtered and Preserved
- EPA Methods 160.1 for Total Dissolved Solids (TDS)
- EPA Method 8015 modified for Total Petroleum Hydrocarbons as Gasoline (TPH-G) MWA-1, MW-4, CW-2, CW-6, and CW-7 only.
- EPA Method 8015 modified for Total Petroleum Hydrocarbons as Diesel (TPH-D) and Motor Oil (TPH-O) for LF-11, MWA-1, CW-2, CW-6, and CW-7 only.
- Method 8020 for Benzene, Toluene, Ethylbenzene, and Xylenes (BTEX) for MWA-1, MW-4, CW-2, CW-6, and CW-7 only.

5.0 SITE HYDROLOGY

The groundwater elevation at each monitoring well location was determined by subtracting the depth to water measured in each monitoring well from its surveyed top of casing elevation. The groundwater elevations in the 5050, 5051 and 5200 Coliseum Way monitoring well network ranged from a low of 1.73 feet below msl in monitoring well MW-4 to a high of 6.67 feet above msl in monitoring well CW-4.

The general property groundwater flow direction is to the west at a hydraulic gradient of 0.020 feet per foot (ft/ft) as measured between wells LF-11 and LF-12. The average groundwater elevation during the Third Quarter 2003 (2.86 feet) was approximately 0.53 feet lower than the average elevation recorded during the Second Quarter 2003 monitoring event (3.40). The subject property groundwater flow direction has flow components to the southwest and south at the 5051 and 5200 properties, which are apparently a result of the drainage to the surrounding ditches.



A summary of current groundwater depths and groundwater elevation data for the monitoring well network at the subject properties are presented in Table 2. A potentiometric surface map was prepared from the August 12, 2003 groundwater elevation data and is presented as Figure 2.

6.0 GROUNDWATER ANALYTICAL RESULTS

The sampling schedule and analytical program for this monitoring event is presented in Table 1. The following discussion presents a summary of the laboratory analytical results.

6.1. PETROLEUM HYDROCARBONS

Six groundwater samples were submitted for petroleum hydrocarbon analyses (CW-2, CW-6, CW-7, LF-11, MWA-1, and MW-4). Detectable TPH-G was only reported in MWA-1 at 0.31 mg/L, one of the six wells sampled and analyzed for gasoline. BTEX compounds were not present at or above the method detection limits in any of the five samples analyzed, except MWA-1 reported benzene at 0.00081 mg/L and ethyl-benzene at 0.0012. TPH-O compounds were not present at or above the method detection limits in any of the five samples analyzed. TPH-D compounds were not present at or above the method detection limits in any of the five samples analyzed. A summary of petroleum hydrocarbons detected in groundwater is presented in Table 3.

6.2. METALS

Twelve groundwater samples were submitted for metals analyses. Fifteen of the seventeen CAM 17 metal analytes were detected above laboratory reporting limits during this monitoring event. Antimony, and vanadium were the only metals not detected in one or more samples. The highest concentration and corresponding monitoring well location for each detected metal ion are listed below:

Arsenic	to 3.1 mg/L	(CW-2)
Barium	to 400 mg/L	(CW-6)
Beryllium	to 0.036 mg/L	(LF-11)
Cadmium	to 58 mg/L	(LF-11)
Chromium	to 0.011 mg/L	(LF-11)
Cobalt	to 2.7 mg/L	(LF-11)
Copper	to 2.4 mg/L	(LF-11)
Lead	to 1.10 mg/L	(MWA-1)
Mercury	to 0.00058 mg/L	(MWA-1
Molybdenum	to 0.022 mg/L	(CW-7)
Nickel	to 10 mg/L	(LF-11)
Selenium	to 0.013 mg/L	(MW-5)
Silver	to 0.0063 mg/L	(CW-6)



Thallium to 0.23 mg/L (LF-11) Zinc to 23,000 mg/L (LF-11)

Total Dissolved Solids (TDS) ranged in concentration from 1,100 mg/L in monitoring well CW-2 to 40,000 mg/L in monitoring well LF-11. Field measurements of groundwater pH levels ranged from 3.80 standard units (SU) in monitoring wells LF-11 to 9.90 SU in monitoring well CW-7.

A summary of metals, total dissolved solids (TDS), and pH detected in groundwater is presented in Table 4. Isoconcentration maps for arsenic, barium, cadmium, and zinc in groundwater are presented in Figures 3, 4, 5, and 6, respectively.

6.3. WEEP-WATER SAMPLING

Weep-water monitoring was initiated during the Second Quarter 2002 quarterly monitoring event to determine the quality of the groundwater entering the adjacent surface water channel from the 5051 property following the installation of a groundwater barrier wall along the west boundary of the 5051 property. Weep-water monitoring was conducted during a low-tide event by collecting water samples from the exposed drain holes located at the base of the concrete-lined drainage channel wall that parallels a portion of the 5051 property. The sampling was conducted where weep-water flow was adequate to allow for the collection of grab-water samples. An effort was made to collect samples from the same weep holes during each sampling event; however, variations in the limited flow (Clayton estimated that the weeping from all of the drain holes along the channel wall at approximately one-gallon per minute during the first sampling event in 1999) does not always allow this and some adjustment in sample locations are periodically made. Weep-water sample locations are identified by sequential numbering of the weep holes counting south from the bend in the channel. The water samples were collected in an appropriate laboratory supplied container and submitted for total metal analyses for arsenic, barium, cadmium, and zinc. These metals were selected as the metals of concern from a previous baseline sampling conducted by Clayton (Additional Remedial Investigation 1999 at 5050, 5051, and 5200 Coliseum Way and 750-50th Avenue, Oakland, California, May 25, 1999, Clayton Project No. 70-99203.00.201). The historical analytical results are presented in Table 5 and the sample results and locations are shown on Figure 7.

Clayton conducted weep-hole sampling on August 12, 2003 during favorable tidal conditions. The metals concentrations in sample WH-4 (barium at 0.035 mg/L, cadmium at 0.19 mg/L, and zinc at 22 mg/L) are slightly lower than concentrations detected during the previous quarterly monitoring results, and it should be noted that no arsenic was detected during this event for the second consecutive quarter. Metal results for all other weep-hole samples did not indicate any significant changes in metal concentrations between sampling events; therefore, the site appears to be reasonably stable. Where comparable, all metal concentrations are still higher than the initial sampling conducted in 1999, except for zinc in WH-14, which is slightly lower than the results in 1999.



7.0 <u>LIMITATIONS</u>

The information and opinions rendered in this report was prepared on behalf of 5050 Coliseum LLC. The information and opinions included in this report were given in response to a specific scope of work and should be considered and implemented only in light of that particular scope of work. The services provided by Clayton in completing this project have been provided in a manner consistent with the normal standards of the profession. No other warranty, expressed or implied, is made.

This report prepared by:

Erick Leif

Staff Environmental Consultant

This report reviewed by:

Donald A. Ashton, R.G., REA

Senior Geologist

This report reviewed by:

Dwight R. Hoenig

Vice President, Western Regional Director Environmental Management and Remediation

San Francisco Regional Office

October 8, 2003



TABLE 1
Quarterly Monitoring/Sampling Schedule
Coliseum Way Properties, Oakland, CA
Clayton Project No. 70-00509.01.002

SITE	WELL	TPH-g/BTEX	TPH-d/o	CAM-17	TDS	GW Elevation
5050	LF-2					1"
	LF-5			1	1	1
	LF-6					1
	LF-11		1	1	1	1
	LF-12			1	1	1
	LF-13					1
•	LF-17					1
	CW-13			1	_ 1	1
5051	MWA-1	1	1	1	1	1 .
	MWA-2	•				. 1
	MWA-3					1
	MW-4	-1	•	1	1	, 1
	MW-5			1	1	1
	CW-8					1
	CW-9					1
ACPWA-W	CW-10					1
	CW-12			1	1	1
5200	CW-1			1	1	1
	CW-2	1	1	1	1	1
	CW-4 _					1
ACPWA-E	CW-6	1	1	1	1	1
	CW-7	1	11	1	1	1
TOTALS	22	5	5	12	12	22

 $TPH-g/BTEX = Total\ Petroleum\ Hydrocarbons\ as\ Gasoline\ /\ Benzene,\ Toluene,\ Ethylbenzene,\ \&\ Xylenes\ TPH-d/o=Total\ Petroleum\ Hydrocarbons\ as\ Diesel\ and\ Motor\ Oil$

CAM-17 = California Assessment Manual 17 Metals (Samples filtered and preserved in the laboratory)

TDS = Total Dissolved Solids

GW Elevation = Groundwater Elevation in Feet Above Mean Sea Level



TABLE 2 Groundwater Elevation Data 5050, 5051 & 5200 Coliseum Way

Site	Monitoring Well	Measurement Date	Top of Casing Elevation (ft, msl)	Depth to Groundwater (ft)	Groundwater Elevation (ft, msl)	Change from Previous Measurement (ft)
5050	LF-2	12-Aug-03	9.84	5.21	4.63	4.63
5050	LF-5	12-Aug-03	8.03	5.72	2.31	-2.32
5050	LF-6	12-Aug-03	11.59	6.12	5.47	3.16
5050	LF-11	12-Aug-03	9.07	3.48	5.48	0.01
5050	LF-12	12-Aug-03	8.70	6.72	1.98	-3.50
5050	LF-13	12-Aug-03	9.75	4.00	5.75	3.77
5050	LF-17	12-Aug-03	9.71	6.32	3.39	-2.36
5051	MWA-1	12-Aug-03	9.27	9.21	0.06	-3.33
5051	MWA-2	12-Aug-03	7.79	6.82	0.97	0.91
5051	MWA-3	12-Aug-03	10.50	8.77	1.73	0.76
5051	MW-4	12-Aug-03	10.27	12.00	-1.73	-3.46
5051	MW-5	12-Aug-03	9.45	9.15	0.30	-1.43
5200	CW-1	12-Aug-03	14.11	9.26	4.85	4.55
5200	CW-2	12-Aug-03	14.88	9.60	5.28	0.43
5200	CW-4	12-Aug-03	14.76	8.09	6.67	1.39
ACPWA	CW-6	12-Aug-03	13.20	9.37	3.83	-2.84
ACPWA	CW-7	12-Aug-03	11.86	8.07	3.79	-0.04
5051	CW-8	12-Aug-03	9.24	4.75	4.49	0.70
5051	CW-9	12-Aug-03	10.35	10.83	-0.48	-4.97
ACPWA	CW-10	12-Aug-03	8.33	7.20	1.13	1.61
ACPWA	CW-12	12-Aug-03	7.84	6.41	1.43	0.30
5050	CW-13	12-Aug-03	7.47	5.67	1.80	0.37

TABLE 3

Petroleum Hydrocarbons Detected in Groundwater 5050, 5051 & 5200 Coliseum Way

(Concentrations Reported in Milligrams per Liter [mg/L])

Date						Ethyl-		Total
Sampled	TEPH	TPH-D	TPH-O	TPH-G	Benzene	Benzene	Toluene	Xylenes
MCL					0.001	0.7	1	10
12-Aug-03	_	< 0.05	< 0.3	-	-	-	-	-
12-Aug-03	-	< 0.05	< 0.3	0.31	0.00081	0.0012	< 0.0005	< 0.0005
12-Aug-03	-	-	-	< 0.05	< 0.0005	< 0.0005	< 0.0005	< 0.0005
12-Aug-03	-	< 0.05	< 0.3	< 0.05	< 0.0005	<0.0005	< 0.0005	< 0.0005
12-Aug-03	-	< 0.05	< 0.3	< 0.05	< 0.0005	<0.0005	< 0.0005	< 0.0005
12-Aug-03	· -	< 0.05	< 0.3	< 0.05	< 0.0005	< 0.0005	< 0.0005	< 0.0005
	Sampled MCL 12-Aug-03 12-Aug-03 12-Aug-03 12-Aug-03 12-Aug-03	Sampled TEPH MCL 12-Aug-03 - 12-Aug-03 - 12-Aug-03 - 12-Aug-03 - 12-Aug-03 - 12-Aug-03 -	Sampled TEPH TPH-D MCL 12-Aug-03 - <0.05	Sampled TEPH TPH-D TPH-O MCL 12-Aug-03 - <0.05	Sampled TEPH TPH-D TPH-O TPH-G MCL 12-Aug-03 - <0.05	Sampled TEPH TPH-D TPH-O TPH-G Benzene MCL 0.001 12-Aug-03 - <0.05	Sampled TEPH TPH-D TPH-O TPH-G Benzene Benzene MCL 0.001 0.7 12-Aug-03 - <0.05	Sampled TEPH TPH-D TPH-O TPH-G Benzene Benzene Toluene MCL 0.001 0.7 1 12-Aug-03 - - 12-Aug-03 - - - 0.05 0.005 0.0005 0

Notes:

All results reported in milligrams per liter (mg/L)

TEPH = Total Extractable Petroleum Hydrocarbons

TPH-D = Total Petroleum Hydrocarbons as Diesel

TPH-O = Total Petroleum Hydrocarbons as Motor Oil

TPH-G = Total Petroleum Hydrocarbons as Gasoline

MCL = Maximum Contaminant Levels for Drinking Water (CCR Title 22, Sections 64431 and 64444)



[&]quot;--" = Not established

[&]quot;<" = Analytes not detected at reporting limit

[&]quot;-" = Not analyzed

TABLE 4
Metals, Total Dissolved Solids, pH and Chloride Detected in Groundwater
5050, 5051 5200 Coliseum Way

Concentrations in Milligrams per Liter (mg/L)

Site	Monitoring Well	Sample Date	Antimony (Sb)	Arsenic (As)	Barium (Ba)	Beryllium (Be)	Cadmium (Cd)	Chromium (Cr)	Cobalt (Co)	Copper (Cu)	Lead (Pb)	Mercury (Hg)
	1	MCL	0.006	0.05	1	0.004	0.005	0.05		1.3 ⁺	0.015++	0.002
5050	LF-5	12-Aug-03	<0.06	< 0.005	< 0.01	< 0.002	0.260	< 0.010	0.97	<0.010	0.0085	0.00021
5050	LF-11	12-Aug-03	<0.06	0.034	0.011	0.036	58	0.011	2.7	2.4	0.35	< 0.0002
5050	LF-12	12-Aug-03	< 0.06	< 0.005	0.014	0.01	1.3	< 0.01	1.0	1.1	0.011	0.00028
5051	MWA-1	12-Aug-03	< 0.06	0.0075	< 0.010	< 0.002	4.1	< 0.01	< 0.02	0.98	1.10	0.00058
5051	MW-4	12-Aug-03	< 0.06	< 0.005	0.012	< 0.002	0.36	< 0.01	0.072	0.020	0.013	< 0.0002
5051	MW-5	12-Aug-03	< 0.06	< 0.005	1.00	< 0.002	< 0.005	< 0.01	< 0.02	< 0.01	< 0.003	< 0.0002
5200	CW-1	12-Aug-03	< 0.06	0.20	0.11	< 0.002	< 0.005	<0.01	< 0.02	< 0.01	0.003	< 0.0002
5200	CW-2	12-Aug-03	< 0.06	3.1	150	< 0.002	< 0.005	< 0.01	< 0.02	< 0.01	< 0.003	< 0.0002
ACPWA-E	CW-6	12-Aug-03	< 0.06	0.38	400	< 0.002	0.013	< 0.01	< 0.02	< 0.01	< 0.003	< 0.0002
ACPWA-E	CW-7	12-Aug-03	< 0.06	0.044	150	< 0.002	< 0.005	< 0.01	< 0.02	< 0.01	< 0.003	< 0.0002
ACPWAW	CW-12	12-Aug-03	< 0.06	< 0.005	0.064	< 0.002	< 0.005	< 0.01	< 0.02	< 0.01	< 0.003	< 0.0002
5050	CW-13	12-Aug-03	< 0.06	<0.005	<0.010	0.0024	0.80	<0.01	0.76	0.02	0.011	< 0.0002

TABLE 4

Metals, Total Dissolved Solids, pH and Chloride Detected in Groundwater
5050, 5051 5200 Coliseum Way

Concentrations in Milligrams per Liter (mg/L)

Site	Monitoring Well	Sample Date	Molybdenum (Mo)	Nickel (Ni)	Selenium (Se)	Silver (Ag)	Thallium (Tl)	Vanadium (V)	Zinc (Zn)	TDS	pH (SU)_
	M	CL		0.10	0.05	0.1	0.002	in 48	5		
5050	LF-5	12-Aug-03	<0.02	2.7	< 0.005	< 0.005	0.057	<0.01	62	7,360	5.60
5050	LF-11	12-Aug-03	< 0.02	10	< 0.005	< 0.005	0.23	< 0.01	23,000	40,000	3.80
5050	LF-12	12-Aug-03	< 0.02	2.9	0.008	< 0.005	0.052	<0.01	1,700	8,450	3.90
5051	MWA-1	12-Aug-03	< 0.02	0.57	< 0.005	< 0.005	0.059	< 0.01	1,100	4,990	5.60
5051	MW-4	12-Aug-03	< 0.02	0.93	< 0.005	< 0.005	0.19	< 0.01	640	5,280	5.40
5051	MW-5	12-Aug-03	< 0.02	< 0.02	0.013	< 0.005	< 0.005	< 0.01	< 0.02	2,730	7.10
5200	CW-1	12-Aug-03	<0.02	< 0.02	0.0059	< 0.005	< 0.005	< 0.01	14	1,770	7.10
5200	CW-2	12-Aug-03	< 0.02	< 0.02	< 0.005	< 0.005	< 0.005	< 0.01	< 0.02	1,100	7.60
ACPWA-E	CW-6	12-Aug-03	< 0.02	0.11	< 0.005	0.0063	< 0.005	< 0.01	5.9	2,270	7.00
ACPWA-E	CW-7	12-Aug-03	0.022	< 0.02	< 0.005	< 0.005	< 0.005	< 0.01	< 0.02	1,330	9.90
ACPWAW	CW-12	12-Aug-03	< 0.02	< 0.02	< 0.005	< 0.005	< 0.005	< 0.01	0.037	16,200	7.40
5050	CW-13	12-Aug-03	<0.02	2.0	< 0.005	< 0.005	0.055	<0.01	1,100	6,270	5.40

FOOTNOTES:

(Sb) = Chemical Symbol for Metal (eg. Antimony)

TDS = Total dissolved solids

MCL = Maximum Contaminant Levels for Drinking Water (CCR Title 22, Sections 64431 and 64444)

^{- =} Not established

^{* =} Secondary Drinking Water Standard

^{** =} Lead level established by the Federal Copper and Lead Rule for public drinking water suppliers

⁽SU) = Standard Units for pH, typically reported from field data, some are laboratory analysis



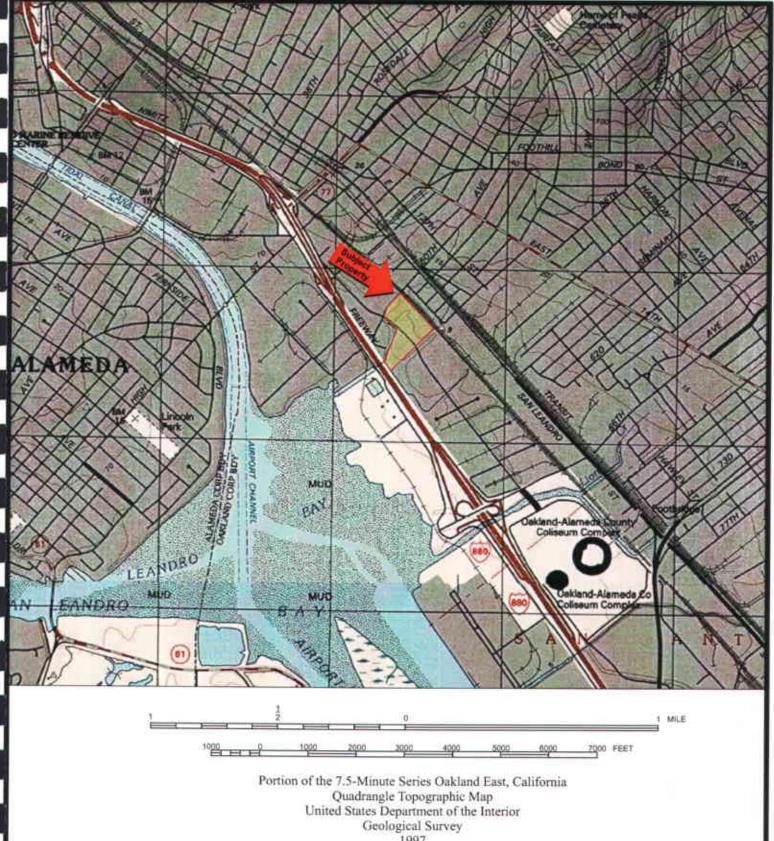
TABLE 5
Weep Water Sampling Results
5051 Coliseum Way, Oakland, CA

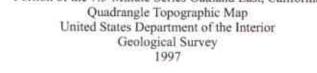
Concentrations in milligrams per liter (mg/L)

SAMPLE NO.	Weep Hole #	Sample Date	Arsenic	Barium	Cadmium	Zinc	pН
WH-4	4	12-Aug-03	0.0066	0.035	0.19	22	8.51
WH-8	8	12-Aug-03	<0.005	0.038	< 0.005	1.0	8.39
WH-9	9	12-Aug-03	<0.005	0.042	0.017	6.5	8.28
WH-12	12	12-Aug-03	<0.005	0.042	< 0.005	1.3	8.22
WH-14	14	12-Aug-03	<0.005	0.048	< 0.005	0.94	8.20
WH-17	17	12-Aug-03	<0.005	0.045	< 0.005	0.74	8.17

Notes:

pH results reported in Standard Units (SU).









PROPERTY LOCATION MAP Coliseum Way Properties Oakland, California

Clayton Project No. 70-00509.01.002

Figure



