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Clayton
ENVIRONMENTAL
CONSULTANTS

March 30, 1999

Derek Lee
California Regional Water Quality Control Board
1515 Clay Street, Suite 1400
Oakland, California 94612

Clayton Project No.70-97203.00.201

Subject: Status of Additional Remedial Investigation
Coliseum Way Properties, Oakland, California

Dear Mr. Lee:

This letter is to advise you of the progress that Clayton has made in conducting the additional remedial investigation at the Coliseum Way Properties. The original schedule was outlined in our "Schedule of Proposed Investigation Activities" sent to the San Francisco Regional Water Quality Control Board (RWQCB), dated January 11, 1999. The status of the activities outlined is as follows:

- Clayton evaluated the site for the placement of an additional monitoring well upgradient of existing well CW-13. Due to subsurface utilities, Clayton does not believe that an additional well upgradient of monitoring well CW-13 is practical and no additional well is proposed.

- Ratech Resources submitted its draft Health Risk Assessment Report, dated February 22, 1999, for Board review.

- Clayton has initiated the tracer study to evaluate the hydrologic conditions between monitoring well CW-13 and the downgradient wells CW-10 and CW-12. Clayton selected Ozark Underground Laboratory of Protem, Missouri to provide fluorescent dyes and conduct laboratory fluorometric analysis of carbon samplers and water samples to verify the presence of dyes in the various sampled wells and surface waters. Clayton began background testing of groundwater in five wells (CW-10, CW-12, CW-13, LF-5, and LF-12) and surface water in the Second Line G Culvert and the Courtland Creek Culvert on March 12, 1999. Analyzed background samples were found to be free of fluorescent dyes.

  The dyes were injected into the wells on March 16, 1999. Clayton modified its proposed dye test procedure somewhat by injecting different dyes into two upgradient

wells CW-13 and LF-12, (both wells are adjacent to the Second Line G Culvert and upgradient to wells CW-10 and CW-12). Three pounds of a Rhodamine WT dye (a red dye solution) was injected into well CW-13 and an additional 23 gallons of tap water was injected into the well to provide an hydraulic head to move the dye into the aquifer. One pound of Fluorescein dye (a yellow/green dye) was mixed with one gallon of tap water and injected into well LF-12. An additional 5 gallons of tap water was injected into the well, filling the well. Well LF-12, even though it appears to be within about 3 to 4 feet of the Second Line G Culvert, was observed to be in a fairly tight aquifer, as the additional head in the well did not readily dissipate.

Clayton selected the use of these distinctively colored dyes because they can be readily observed if "breakout" occurs and the dyes migrate to the nearby surface waters. The dyes can also be detected at low concentrations by laboratory fluorometric analysis due to unique spectral emissions. Laboratory analysis can detect the presence of these dyes, potentially as low as 0.5 parts per billion in water for Fluorescein. The detection of these dyes in any of the downgradient wells or surface waters will provide an indication of the hydraulic conductivity of the native soils and backfill material around the subsurface culverts. The purpose of the dye tests is to determine if groundwater from the subject property is readily migrating along the adjacent subsurface culverts.

Clayton initially collected samples twice a week for the first two weeks after the inject of the dyes. Clayton will continue to monitor the five wells and the surface waters in the culverts on a weekly basis to determine if the dyes are migrating. Dye sampling is currently being conducted by placing activated carbon filled samplers into wells CW-10, CW-12, LF-5, the Second Line G Culvert, and the Courtland Creek Culvert. The samplers are collected and replaced during each sampling event and select backup groundwater samples are also being collected. During each sampling event, Clayton is injecting from 5 to 10 gallons of tap water into wells CW-13 and LF-12 until the dyes dissipate into the aquifer. Once the dyes are flushed from the injection wells, Clayton will begin collecting samples in these wells to determine if any cross migration of the dyes occurs during the remainder of the sampling period. The water sampling will continue until early May 1999 or until the dye is detected in the downgradient wells within the area of investigation. Clayton will notify the RWQCB once migration of a dye is confirmed to a downgradient well or to the adjacent culverts.

- Clayton collected additional surface water samples at low tide from the Second Line G Culvert on March 19, 1999 during a period of precipitation and elevated runoff. Sample locations were selected both up- and downgradient of the subject property. The metal concentrations from these samples will be compared with metal concentrations from the previous minimal flow conditions. Previous surface-water

and weep-water analytical results were presented by Clayton in our February 15, 1999 Status Report letter.

Clayton has calculated surface water loading by zinc (the primary metal detected) based on concentrations detected in weep water samples collected on January 13, 1999. The weep-water samples were collected from the weep holes at low tide at the base of the open concrete lined storm water channel southwest of the 5051 Coliseum Way Property. The highest zinc concentration detected was 9.4 milligrams per liter (mg/L) in sample WW-1. The average zinc concentration from the six weep-water samples was 3.23 mg/L. Clayton estimates that the average weep water flow from all holes in the area sampled during a negative low tide (presumably the period of highest groundwater flow to the storm channel) was approximately one-gallon (or less) per minute. If the average zinc concentration from the six sample points is used and it is assumed that the groundwater flows to surface waters during low tide events (approximately one half of the time), Clayton calculates that the zinc loading to surface waters is approximately 7.1 pounds per year along this portion of the storm channel.

Standard MCL 5000 ppb

Clayton will present the results of the additional surface water samples after they have been received and reviewed.

- Clayton collected additional groundwater samples southeast of the 54th Avenue Creek, southeast of the 5200 Coliseum Way property, on February 16, 1999. Four borings (borings CSB-10 through CSB-13) were advance by Geoprobe direct penetration technology, temporary well casings were installed, and grab-groundwater samples were collected from each boring. The groundwater samples were analyzed for metals and total dissolved solids. Field measurements for pH were logged. The data for the four-groundwater samples is summarized in the attached Table 1. A site plan is also attached that shows the sample locations.

  Clayton is currently evaluating the metals results of the grab-groundwater samples in conjunction with the first quarter 1999 quarterly groundwater results. Clayton will incorporate this data in the pending additional remedial investigation report due to the RWQCB on or by May 17, 1999.

- Clayton's additional remedial investigation report due to the Board by May 17, 1999, will include a recommendation for a seasonal monitoring program and an historical trend analysis of key data sets that establish the trend of the contaminants at the subject property.

Clayton will continue to advise you of our findings as the investigation proceeds. If you have any questions, please contact either Donald Ashton at (925) 426-2679, or Dwight Hoenig at (925) 426-2686.

Sincerely,

Donald A. Ashton
Senior Geologist

Dwight R. Hoenig
Vice President, Western Regional Director
Environmental Risk Management and Remediation
San Francisco Regional Office

DAA/daa

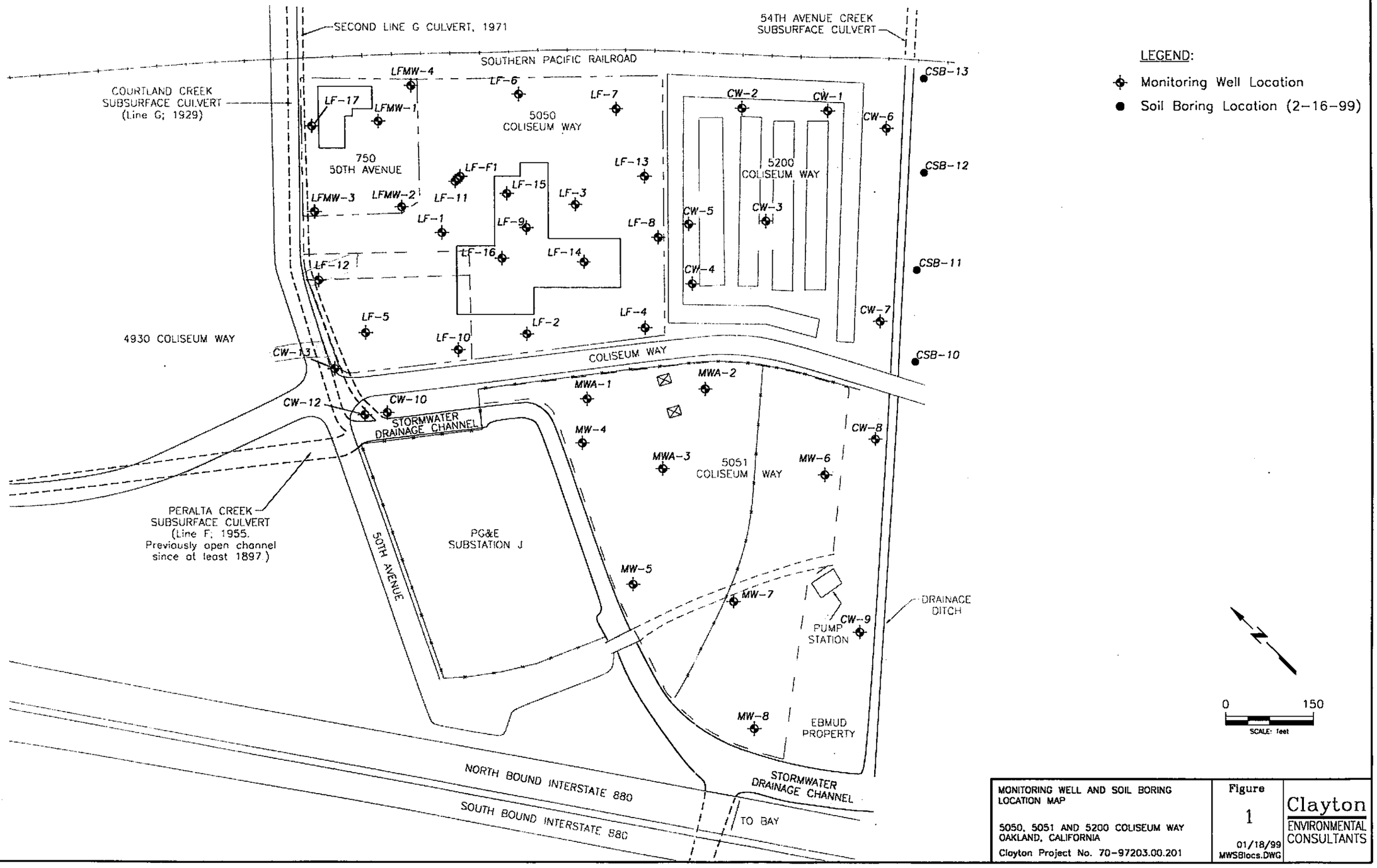
Attachments:

cc: Barney Chan
Tim Colvig
Samuel Friedman
Linda Pressler

Table 1
Grab-Groundwater Analtyical Results
54th Avenue Creek
Coliseum Way Properties
Oakland, California
All data reported in milligrams per kilogram (mg/kg)

SAMPLE Discrete Depth (feet, bgs) Where Applicable	CSB-10	CSB-11	CSB-12	CSB-13	MCL	RWQCB - SF Bay Region Basin Plan 1	 Basin Plan 2
Total Metals							
Antimony (Sb)	<0.03	< 0.03	< 0.03	< 0.03	0.006	NE	NE
Arsenic (As)	<0.05	0.23	0.07	0.19	0.05	0.02	0.036*
Barium (Ba)	2.7	[illegible]	16	[illegible]	1	NE	NE
Beryllium (Be)	<0.005	< 0.005	< 0.005	< 0.005	0.004	NE	NE
Cadmium (Cd)	0.015	0.025	0.015	0.030	0.005	0.01	0.0093*
Chromium (Cr)	<0.01	0.58	0.16	0.47	0.05	0.011	0.05*
Cobalt (Co)	<0.01	0.08	0.02	0.09	NE	NE	NE
Copper (Cu)	0.02	1.8	0.67	1.7	1.3*	0.02	NE
Lead (Pb)	[illegible]	[illegible]	[illegible]	[illegible]	0.00025**	0.0056	0.0056*
Mercury (Hg)	0.0016	0.0007	0.0041	0.0017	0.002	0.001	0.000025*
Molybdenum (Mo)	3.2	0.02	< 0.01	0.01	NE	NE	NE
Nickel (Ni)	0.36	0.29	0.09	0.33	0.1**	0.0071	0.0071**
Selenium (Se)	<0.07	< 0.07	< 0.07	< 0.07	0.05	NE	NE
Silver (Ag)	<0.01	< 0.01	< 0.01	< 0.01	0.1	0.0023	NE
Thallium (Tl)	<0.05	< 0.05	<0.05	< 0.05	0.002	NE	NE
Vanadium (V)	<0.01	0.21	0.05	0.23	NE	NE	NE
Zinc (Zn)	0.39	4.7	4.5	8.30	5	0.058	0.058**
Total Dissolved Solids	2,400	4,100	2,500	3,700			
pH (Standard Units)	8.7	9.4	8.3	6.9			

Abbreviations and Modifiers:
MCL = Maximum Contaminant Levels for Drinking Water from California Code of Regulations (CCR) Title 22, Section 64431 through 64444
(* Copper = federal action level; ** Lead = Calif. Proposition 65 level; * Silver = Secondary MCL)
Basin Plan # = San Francisco Bay Region Water Quality Control Plan issued by California Regional Water Quality Control Board
Basin Plan 1 - Effluent Limitations for Selected Toxic Pollutants Discharged to Surface Waters - Shallow Water Limits given
Basin Plan 2 - Water quality Objectives for Selected Toxic Pollutants for Surface Waters with Salinities Greater than 5 parts per thousand
(* 4-day average, ** 24-hour average)
- = Not Analysed
NE = Not Established
<0.03 = The analyte was not detected at or above the laboratory reporting limit concentration listed



MONITORING WELL AND SOIL BORING LOCATION MAP

5050, 5051 AND 5200 COLISEUM WAY
OAKLAND, CALIFORNIA

Clayton Project No. 70-97203.00.201

Figure 1

01/18/99
MWSBlocs.DWG

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