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ENVIRONMENTAL  
**Clayton**  
PROTECTORS  
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98 JUN 10 9 16 AM '98

May 29, 1998

Derek Lee  
CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
SAN FRANCISCO BAY REGION  
2101 Webster Street, Suite 500  
Oakland, California 94612

Clayton Project No. 70.97203.00.600

**Subject:** Agency Review of the Workplan to Perform Additional Remedial Investigation and Prepare Risk Assessment for the Coliseum Way Properties, Oakland, California

Dear Mr. Lee:

This letter is in response to your April 14, 1998 letter to Millennium Holdings, Inc., regarding your review of Clayton's Workplan to perform additional remedial investigations and prepare a risk assessment for the Coliseum Way Properties, in Oakland, California, dated March 27, 1998. We are pleased that you have approved the proposed scope of work and would like to provide clarification relative to the five questions and issues raised in your letter.

In response to your first request that TDS results be representative of background conditions, also for deep monitoring wells, Clayton has already incorporated TDS analysis for all existing monitoring well samples for the first quarter monitoring event for 1998. TDS measurements will also be conducted on all groundwater samples collected from the proposed new wells.

Your second request regards the investigation to further define the vertical extent of groundwater impacts. Previous investigations have gathered data from a total depth of 51.5 feet below ground surface (bgs). Clayton is proposing to advance two borings to approximately 60 feet bgs, using Cone-Penetrometer Testing (CPT); one boring on the 5050 Coliseum Way property and one boring on the 5051 Coliseum Way property (map attached). The CPT borings will incorporate resistivity measurements and the collection of discrete soil samples at or below significant lithologic changes in the deeper zone. Soil samples will be collected at 5-foot intervals and analyzed for metals and pH. Clayton will attempt to collect grab-groundwater samples at lithologic zones that are indicative of high pore pressures and/or sand beds, as identified from CPT data. If the data does not indicate any favorable zones for sampling, Clayton will attempt to collect a grab-groundwater sample from each boring below 40 feet bgs.

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You also requested information on proposed groundwater modelling approaches to predict the ultimate extent of metals migration. Clayton is currently evaluating the published models which have been proposed for predicting metals migration in groundwater environments. The model which may be appropriate for this application is the MINTEQ model which was developed specifically to predict metals migration, in groundwater, in porous media.

In addition to evaluating the existing models, Clayton will be gathering additional soil and groundwater samples which will be used to determine the actual attenuation capacity of the fill materials and the native materials which are known to surround this property.

As you know, the scientific literature on metal solubility is in agreement with the site data regarding occurrence and potential for migration of these metals. To further quantify the attenuation capacity of the soils at this site we will be gathering a series of cores from on-site and off-site locations. We will use these samples to conduct column studies using the actual metal and pH impacted groundwater from this site. With careful laboratory analysis of the soils, and the influent/effluent analysis from the core samples, we will be able to calculate the actual adsorptive capacity of these soils and thereby predict the ultimate fate of the metals which are in solution on this site. We anticipate that our quarterly monitoring program will add empirical data to further verify the natural attenuation at this site.

You requested that well screens should be no longer than 10 feet. All new wells will have screened intervals of 10 feet or less.

Your final concern related to the risk assessment. You requested that the exposure scenarios which we will consider include construction workers and commercial building occupants, in addition to maintenance personnel that may occupy the site in the future. Clayton will incorporate these exposure scenarios in our risk assessment calculations. Secondly, if the groundwater in the deeper zone is shown to be a potential source of drinking water, and the sampling indicates that this groundwater has been impacted by contaminants migrating from this site, then the potential impacts on future users of this groundwater will be evaluated during the risk assessment.

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We are currently securing the final drilling and access permits which will allow us to begin field work within 30 days. Please contact me at (510) 426-2679 or Dwight Hoenig at (510) 426-2686.

Sincerely,



Donald A. Ashton, R.G., REA  
Senior Geologist

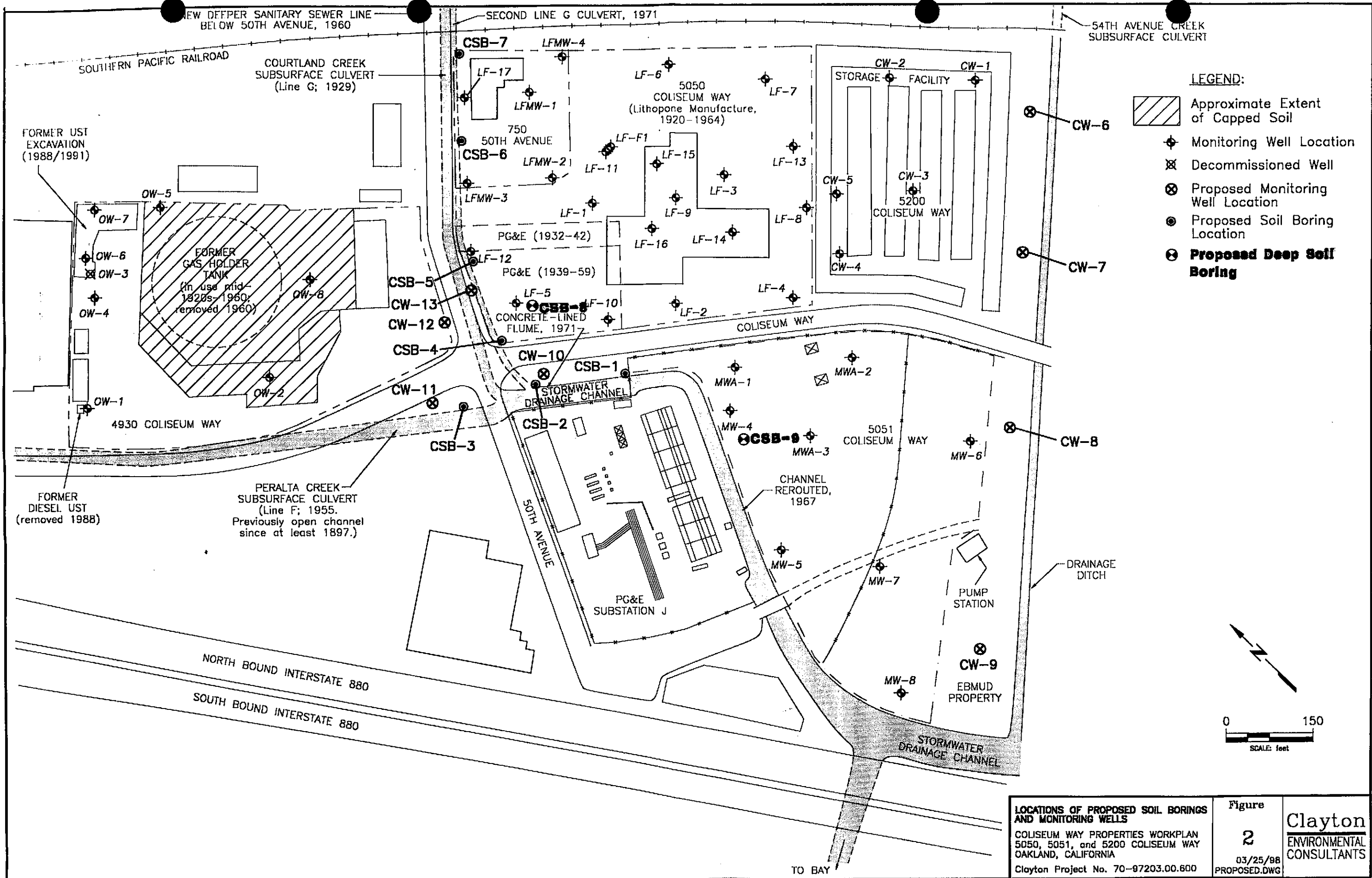


Dwight H. Hoenig  
Vice President, Western Regional Director  
Environmental Risk Management and  
Remediation  
San Francisco Regional Office

DAA/

Attachment

cc: Barney Chan  
Tim Colvig  
Linda J. Pressler



**LOCATIONS OF PROPOSED SOIL BORINGS AND MONITORING WELLS**

COLISEUM WAY PROPERTIES WORKPLAN  
5050, 5051, and 5200 COLISEUM WAY  
OAKLAND, CALIFORNIA

Clayton  
ENVIRONMENTAL  
CONSULTANTS

Figure  
**2**  
03/25/98  
PROPOSED.DWG

Clayton Project No. 70-97203.00.600