

Submitted by electronic
mail on 2/2/07

Email
dated
2/2/07

February 2, 2007

Mr. Jerry Wickham, PG
Hazardous Materials Specialist
Alameda County Health Care Services
Environmental Health Services
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577

Subject: Fuel Leak Case No. RO0000212,
Holland Oil, 16301 East 14th Street, San Leandro, CA

Dear Mr. Wickham;

Please find attached Clearwater Group's (Clearwater) proposed soil and groundwater sample analytical plan, which has been prepared according to Clearwater's June 5, 2006, Workplan Addendum and December 5, 2006, Proposed Workplan Modification for the above site.

We are submitting two versions of this plan:

- The first version follows the scope of the Workplan Addendum and the Proposed Workplan Modification, which you have approved. It includes eighteen (18) soil sample locations. Each location will be sampled at 2.0 feet below ground surface (ft bgs), 5.0 ft bgs, the capillary fringe and the bottom of the borehole. Each of these samples will be analyzed by EPA Method 8015M for TPH as stoddard solvent, diesel and kerosene; by EPA Method 8260B for TPH-g, BTEX and MTBE; by EPA Method 1664 for TOG; by EPA Method 8270 for SVOCs and by EPA Method 8082 for PCBs. The sample from each borehole with the highest TPH-g concentration will be analyzed by EPA Method 6010 for Lead and by EPA 8260B for 1,2 DCE and EDB.
- The second version splits the same table into two phases. This proposed splitting of the work into phases follows from two issues: the prospective future uses of the site and the cost of the sample analyses (estimated to be around \$67,000 for the suite of samples requested in the first version).

Both the School District (adjacent down-gradient property) and the Hayward Area Recreation District (adjacent cross-gradient property) have approached the owner/trustees of the property regarding the future recreational and educational uses of the property. This would involve potential daily exposures of the highest risk segment of the population.

Clearwater is concerned that the financial resources required to remediate this site are limited and should be taken into consideration in planning this event. The interior of the property has been identified as substantially impacted. Spending limited resources on further characterization of the close subsurface would not be cost effective. Clearwater recommends spending the limited resources on defining the vertical and lateral extent of contamination in need of remediation. The first phase of investigation would be comprised of perimeter sampling to determine the extent of contamination.

In the event that the future use of the property includes recreational use by children, the second phase of investigation should reflect the probable need to excavate the source areas. For purposes of economy, the sampling plan should be modified to pre-profile the known contaminated soil for disposal at a permitted landfill. The sample collection frequency and analyses of the disposal characterization samples will be determined by the accepting landfill.

We think this would be a good juncture at which to initiate this discussion and we look forward to your response.

Sincerely,

Robert L. Nelson, PG, CEG
Senior Geologist

Cc: Ms. Ann Marie Holland
Mr. Edward Martins, Attorney

Attached: Table 1; Version 1, Soil and Groundwater Sample Plan
Table 2; Version 2, Phased Soil and Groundwater Sample Plan

Table 1; Version 1, Soil and Groundwater Sampling Plan

Boring #	Reason	Media	Sample Depth, bgs	Analytical Method											
				6010	EPA 8015M			EPA 8260B				1664	8270	8082	
				Lead	TPH -SS	TPH-d	TPH-k	1,2 DCE	EDB	TPH-g	BTEX	MTBE	TOG	SVOCs	PCBs
SC45	Find ND line to east near tanks T7 and T8	S	2.0		x	x	x			x	x	x	x	x	x
		S	5.0		x	x	x			x	x	x	x	x	x
		S	Capillary Fringe		x	x	x			x	x	x			
		GW	WaterTable		x	x	x			x	x	x	x	x	
		S	TPH-g Highest Value	x				x	x						
		S	End (12 ft)		x	x	x			x	x	x	x	x	x
SC46	Find ND line to east of Bldg. C	S	2.0		x	x	x			x	x	x	x	x	x
		S	5.0		x	x	x			x	x	x	x	x	x
		S	Capillary Fringe		x	x	x			x	x	x			
		GW	WaterTable		x	x	x			x	x	x	x	x	
		S	TPH-g Highest Value	x				x	x						
		S	End (12 ft)		x	x	x			x	x	x	x	x	x
SC47	Find ND line southeast of monitoring well MW3	S	2.0		x	x	x			x	x	x	x	x	x
		S	5.0		x	x	x			x	x	x	x	x	x
		S	Capillary Fringe		x	x	x			x	x	x			
		GW	WaterTable		x	x	x			x	x	x	x	x	
		S	TPH-g Highest Value	x				x	x						
		S	End (12 ft)		x	x	x			x	x	x	x	x	x
SC48	Find ND line southeast of MW2	S	2.0		x	x	x			x	x	x	x	x	x
		S	5.0		x	x	x			x	x	x	x	x	x
		S	Capillary Fringe		x	x	x			x	x	x			
		GW	WaterTable		x	x	x			x	x	x	x	x	
		S	TPH-g Highest Value	x				x	x						
		S	End (12 ft)		x	x	x			x	x	x	x	x	x
		S	2.0		x	x	x			x	x	x	x	x	

Table 1; Version 1, Soil and Groundwater Sampling Plan

Boring #	Reason	Media	Sample Depth, bgs	Analytical Method											
				6010	EPA 8015M			EPA 8260B				1664	8270	8082	
				Lead	TPH -SS	TPH-d	TPH-k	1,2 DCE	EDB	TPH-g	BTEX	MTBE	TOG	SVOCs	PCBs
SC49	Find ND line north of SC14; Dan's Auto Repair Bldg.	S	5.0		x	x	x			x	x	x	x	x	x
		S	Capillary Fringe		x	x	x			x	x	x			
		GW	WaterTable		x	x	x			x	x	x	x	x	
		S	TPH-g Highest Value	x				x	x						
		S	End (12 ft)		x	x	x			x	x	x	x	x	x
SC50	Find ND line along property boundary; 15ft. West of MW1; 35ft north of MW4	S	2.0		x	x	x			x	x	x	x	x	x
		S	5.0		x	x	x			x	x	x	x	x	x
		S	Capillary Fringe		x	x	x			x	x	x			
		GW	WaterTable		x	x	x			x	x	x	x	x	
		S	TPH-g Highest Value	x				x	x						
SC51	Characterize contained soil north of Bldg. A (warehouse), southeast of MW4	S	2.0		x	x	x			x	x	x	x	x	x
		S	5.0		x	x	x			x	x	x	x	x	x
		GW	WaterTable		x	x	x			x	x	x	x	x	
		S	TPH-g Highest Value	x				x	x						
		S	End (6-8 ft)		x	x	x			x	x	x	x	x	x
SC52	Characterize contained soil north of Bldg. A (warehouse), southeast of MW4	S	2.0		x	x	x			x	x	x	x	x	x
		S	5.0		x	x	x			x	x	x	x	x	x
		S	Capillary Fringe		x	x	x			x	x	x			
		GW	WaterTable		x	x	x			x	x	x	x	x	
		S	Other		x	x	x			x	x	x	x	x	x
		S	TPH-g Highest Value	x				x	x						
		S	2.0		x	x	x			x	x	x	x	x	x
		S	5.0		x	x	x			x	x	x	x	x	x

Table 1; Version 1, Soil and Groundwater Sampling Plan

Boring #	Reason	Media	Sample Depth, bgs	Analytical Method												
				6010	EPA 8015M			EPA 8260B			1664	8270	8082			
				Lead	TPH -SS	TPH-d	TPH-k	1,2 DCE	EDB	TPH-g	BTEX	MTBE	TOG	SVOCs	PCBs	
SC53	Characterize the soil and groundwater in the corner, north of MW5	S	Capillary Fringe		x	x	x			x	x	x				
		GW	WaterTable		x	x	x			x	x	x	x	x		
		S	TPH-g Highest Value	x				x	x							
		S	End (12 ft)		x	x	x			x	x	x	x	x	x	
SC54	Find ND line northwest of MW4	S	2.0		x	x	x			x	x	x	x	x	x	
		S	5.0		x	x	x			x	x	x	x	x	x	
		S	Capillary Fringe		x	x	x			x	x	x				
		GW	WaterTable		x	x	x			x	x	x	x	x		
		S	TPH-g Highest Value	x				x	x							
		S	End (12 ft)		x	x	x			x	x	x	x	x	x	
SC55	Find ND line northwest of MW5	S	2.0		x	x	x			x	x	x	x	x	x	
		S	5.0		x	x	x			x	x	x	x	x	x	
		S	Capillary Fringe		x	x	x			x	x	x				
		GW	WaterTable		x	x	x			x	x	x	x	x		
		S	TPH-g Highest Value	x				x	x							
		S	End (12 ft)		x	x	x			x	x	x	x	x	x	
SC56	Characterize contaminant concentration in middle of plume	S	2.0		x	x	x			x	x	x	x	x	x	
		S	5.0		x	x	x			x	x	x	x	x	x	
		S	Capillary Fringe		x	x	x			x	x	x				
		GW	WaterTable		x	x	x			x	x	x	x	x		
		S	Other		x	x	x			x	x	x	x	x	x	
		S	TPH-g Highest Value	x				x	x							
		S	End (15 ft)		x	x	x			x	x	x	x	x	x	
		S	2.0		x	x	x			x	x	x	x	x		
		S	5.0		x	x	x			x	x	x	x	x		

Table 1; Version 1, Soil and Groundwater Sampling Plan

Boring #	Reason	Media	Sample Depth, hgs	Analytical Method												
				6010	EPA 8015M			EPA 8260B				1664	8270	8082		
				Lead	TPH -SS	TPH-d	TPH-k	1,2 DCE	EDB	TPH-g	BTEX	MTBE	TOG	SVOCs	PCBs	
SC57	Characterize contaminant concentration in middle of plume	S	Capillary Fringe		x	x	x			x	x	x				
		GW	WaterTable		x	x	x			x	x	x	x	x		
		S	Other		x	x	x			x	x	x	x	x	x	
		S	TPH-g Highest Value	x				x	x							
		S	End (15 ft)		x	x	x			x	x	x	x	x	x	x
SC58	Find ND downgradient line; Characterize water concentration in downgradient direction	S	2.0		x	x	x			x	x	x	x	x	x	
		S	5.0		x	x	x			x	x	x	x	x	x	
		S	Capillary Fringe		x	x	x			x	x	x				
		GW	WaterTable		x	x	x			x	x	x	x	x		
		S	TPH-g Highest Value	x				x	x							
S	End (15 ft)		x	x	x			x	x	x	x	x	x	x		
SC59	Find ND downgradient line; Characterize contaminant concentration on western edge of property	S	2.0		x	x	x			x	x	x	x	x	x	
		S	5.0		x	x	x			x	x	x	x	x	x	
		S	Capillary Fringe		x	x	x			x	x	x				
		GW	WaterTable		x	x	x			x	x	x	x	x		
		S	TPH-g Highest Value	x				x	x							
S	End (15 ft)		x	x	x			x	x	x	x	x	x	x		
SC60	Find ND downgradient line; Characterize contaminant concentration south of SC 55	S	2.0		x	x	x			x	x	x	x	x	x	
		S	5.0		x	x	x			x	x	x	x	x	x	
		S	Capillary Fringe		x	x	x			x	x	x				
		GW	WaterTable		x	x	x			x	x	x	x	x		
		S	TPH-g Highest Value	x				x	x							
S	End (15 ft)		x	x	x			x	x	x	x	x	x	x		
		S	2.0		x	x	x			x	x	x	x	x	x	
		S	5.0		x	x	x			x	x	x	x	x	x	

Table 1; Version 1, Soil and Groundwater Sampling Plan

Boring #	Reason	Media	Sample Depth, bgs	Analytical Method												
				6010	EPA 8015M			EPA 8260B				1664	8270	8082		
				Lead	TPH -SS	TPH-d	TPH-k	1,2 DCE	EDB	TPH-g	BTEX	MTBE	TOG	SVOCs	PCBs	
SC61		S	Capillary Fringe		x	x	x			x	x	x				
		GW	WaterTable		x	x	x			x	x	x	x	x		
		S	Other		x	x	x			x	x	x	x	x	x	
		S	TPH-g Highest Value	x				x	x							
		S	End (40 ft)		x	x	x			x	x	x	x	x	x	
SC62		S	2.0		x	x	x			x	x	x	x	x	x	
		S	5.0		x	x	x			x	x	x	x	x	x	
		S	Capillary Fringe		x	x	x			x	x	x				
		GW	WaterTable		x	x	x			x	x	x	x	x		
		S	Other		x	x	x			x	x	x	x	x	x	
			TPH-g Highest Value	x				x	x							
		S	End (40 ft)		x	x	x			x	x	x	x		x	

Table 2; Version 2, Phased Soil and Groundwater Sample Plan

Boring #	Reason	Media	Sample Depth, bgs	Analytical Method													
				6010	EPA 8015M			EPA 8260B				1664	8270	8082			
				Lead	TPH -SS	TPH-d	TPH-k	1,2 DCE	EDB	TPH-g	BTEX	MTBE	TOG	SVOCs	PCBs		
Perimeter	Samples Phase 1																
SC45	Find ND line to east near tanks T7 and T8	S	2.0		x	x	x				x	x	x	x	x	x	
		S	5.0		x	x	x				x	x	x	x	x	x	
		S	Capillary Fringe		x	x	x					x	x	x			
		GW	WaterTable		x	x	x					x	x	x	x	x	
		S	TPH-g Highest Value	x					x	x							
		S	End (12 ft)		x	x	x					x	x	x	x	x	x
SC46	Find ND line to east of Bldg. C	S	2.0		x	x	x				x	x	x	x	x	x	
		S	5.0		x	x	x				x	x	x	x	x	x	
		S	Capillary Fringe		x	x	x					x	x	x			
		GW	WaterTable		x	x	x					x	x	x	x	x	
		S	TPH-g Highest Value	x					x	x							
		S	End (12 ft)		x	x	x					x	x	x	x	x	x
SC47	Find ND line southeast of monitoring well MW3	S	2.0		x	x	x				x	x	x	x	x	x	
		S	5.0		x	x	x				x	x	x	x	x	x	
		S	Capillary Fringe		x	x	x					x	x	x			
		GW	WaterTable		x	x	x					x	x	x	x	x	
		S	TPH-g Highest Value	x					x	x							
		S	End (12 ft)		x	x	x					x	x	x	x	x	x
SC48	Find ND line southeast of MW2	S	2.0		x	x	x				x	x	x	x	x	x	
		S	5.0		x	x	x				x	x	x	x	x	x	
		S	Capillary Fringe		x	x	x					x	x	x			
		GW	WaterTable		x	x	x					x	x	x	x	x	
		S	TPH-g Highest Value	x					x	x							
		S	End (12 ft)		x	x	x					x	x	x	x	x	x

Table 2; Version 2, Phased Soil and Groundwater Sample Plan

Boring #	Reason	Media	Sample Depth, bgs	Analytical Method											
				6010	EPA 8015M			EPA 8260B			1664	8270	8082		
				Lead	TPH -SS	TPH-d	TPH-k	1,2 DCE	EDB	TPH-g	BTEX	MTBE	TOG	SVOCs	PCBs
SC49	Find ND line north of SC14; Dan's Auto Repair Bldg.	S	2.0		x	x	x			x	x	x	x	x	x
		S	5.0		x	x	x			x	x	x	x	x	x
		S	Capillary Fringe		x	x	x			x	x	x			
		GW	WaterTable		x	x	x			x	x	x	x	x	
		S	TPH-g Highest Value	x				x	x						
		S	End (12 ft)		x	x	x			x	x	x	x	x	x
SC53	Characterize the soil and groundwater in the corner, north of MW5	S	2.0		x	x	x			x	x	x	x	x	x
		S	5.0		x	x	x			x	x	x	x	x	x
		S	Capillary Fringe		x	x	x			x	x	x			
		GW	WaterTable		x	x	x			x	x	x	x	x	
		S	TPH-g Highest Value	x				x	x						
		S	End (12 ft)		x	x	x			x	x	x	x	x	x
SC54	Find ND line northwest of MW4	S	2.0		x	x	x			x	x	x	x	x	x
		S	5.0		x	x	x			x	x	x	x	x	x
		S	Capillary Fringe		x	x	x			x	x	x			
		GW	WaterTable		x	x	x			x	x	x	x	x	
		S	TPH-g Highest Value	x				x	x						
		S	End (12 ft)		x	x	x			x	x	x	x	x	x
SC55	Find ND line northwest of MW5	S	2.0		x	x	x			x	x	x	x	x	x
		S	5.0		x	x	x			x	x	x	x	x	x
		S	Capillary Fringe		x	x	x			x	x	x			
		GW	WaterTable		x	x	x			x	x	x	x	x	
		S	TPH-g Highest Value	x				x	x						
		S	End (12 ft)		x	x	x			x	x	x	x	x	x

Table 2; Version 2, Phased Soil and Groundwater Sample Plan

Boring #	Reason	Media	Sample Depth, bgs	Analytical Method											
				6010	EPA 8015M			EPA 8260B			1664	8270	8082		
				Lead	TPH -SS	TPH-d	TPH-k	1,2 DCE	EDB	TPH-g	BTEX	MTBE	TOG	SVOCs	PCBs
SC59	Find ND downgradient line; Characterize contaminant concentration on western edge of property	S	2.0		x	x	x			x	x	x	x	x	x
		S	5.0		x	x	x			x	x	x	x	x	x
		S	Capillary Fringe		x	x	x			x	x	x			
		GW	WaterTable		x	x	x			x	x	x	x	x	
		S	TPH-g Highest Value	x				x	x						
		S	End (15 ft)		x	x	x			x	x	x	x	x	x
SC60	Find ND downgradient line; Characterize contaminant concentration south of SC 55	S	2.0		x	x	x			x	x	x	x	x	x
		S	5.0		x	x	x			x	x	x	x	x	x
		S	Capillary Fringe		x	x	x			x	x	x			
		GW	WaterTable		x	x	x			x	x	x	x	x	
		S	TPH-g Highest Value	x				x	x						
		S	End (15 ft)		x	x	x			x	x	x	x	x	x