ORO LOMA SANITARY DISTRICT

March 30, 2007

Mr. Steven Plunkett
Alameda County Health Care Services
Environmental Protection Division
1131 Harbor Bay Parkway, Suite 250
Alameda, CA, 94502-6577

Transmittal of Initial Response: Request for Interim Remedial Action Plan
Fuel Leak Case RO0000288: 2600 Grant Avenue, San Lorenzo, CA

Dear Mr. Plunkett:

We attach herewith our initial response to the requests in your letter dated February 21, 2007, which has been prepared by our engineering consultants, The Sutton Group. The attached letter presents details about the proposed remedial program, supported by test data obtained in the field investigation program performed in 2004. It also responds to questions you raised in your letter.

The consultants reviewed several alternative procedures for remediating the area of the former 500-gallon gasoline tank. They concluded that the most effective program will be a combination of bulk excavation of soil in the area of the former tank, and collection of gasoline tainted groundwater for treatment in the District's POTW. The District has reviewed the capability of it's POTW to handle the recovered, gasoline-tainted ground water. Based on Sutton's initial estimate of water recovery at the rate of 5 to 20 gallons/minute, the tainted water, containing gasoline at historical concentrations as high as 150 parts per million, including benzene at up to 23 ppm, this will still not have a measurable effect on the 20 million gallons/day (14,000 gpm) treatment plant's recently-restored throughput.

We ask that you provide us feedback on the plan outlined in the attached letter, and then provide us a time extension of 45 days in which to prepare a formal work plan.

In regard to Geotracker EDF submittals, our consultant has surveyed the well locations, and the field and laboratory data have been loaded onto the SWRCB website in the appropriate formats. We understand, however, that the data can only be uploaded onto the publicly accessible area of the website by SWRCB staff, and that there is a backlog.

As the authorized representative of the Oro Loma Sanitary District I declare, under penalty of perjury, that the information and recommendations contained in this and the attached document are true and correct to the best of my knowledge.

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www.oroloma.org

Please continue to directly contact our consultant, John Sutton, PE, in regard to technical aspects of this closure process. However, do not hesitate to contact me or my administrative assistant Ken Ross with regard to any administrative issues.

Respectfully submitted,

Michael C. Cortez
District Engineer

THE SUTTON GROUP

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March 31, 2007

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Environmental Protection Division
1131 Harbor Bay Parkway, Suite 250
Alameda, CA, 94502-6577

Subject: Response to Request for Interim Corrective Action Work Plan
Site of Former Gasoline Tank at Oro Loma Sanitary District,
2600 Grant Avenue, San Lorenzo, CA
Fuel Leak Case RO0000288

Dear Mr. Plunkett:

We present our response to the Alameda County Environmental Health Services Agency's (Agency) letter to the Oro Loma Sanitary District (District) dated February 21, 2007. Herein we provide a brief discussion of the remedial alternatives evaluated, details of the proposed remedial program, and the status of the Geotracker data uploading. This letter has been reviewed by the District and is presented under its March 30th 2007 cover letter.

We present an efficient and cost effective clean-up procedure for the gasoline tank site. Presuming that the agency will concur with our recommended interim corrective action procedure, the next step will be to implement the clean-up on a staged basis. The first stage would be to submit a formal interim corrective action work plan for Agency review/approval. Following plan approval, we will then prepare construction plans and specifications, presuming that District will require public bidding of the clean-up work. When the bids are received, they would be forwarded to the State Tank Fund , so pre-approval of the clean-up reimbursement can be obtained. The contractor would then perform the cleanup work under our oversight. The final phase will be post-construction monitoring to verify and quantify the success of the remediation.

Recent History

Subsequent to Agency's letter dated January 2, 2004 and authorization of this firm's work plan dated April 5, 2004, a boring program was conducted in spring 2004 to delineate the vertical limits of contamination, as well as to collect geochemical data about the site for remedial design. The borings confirmed that no significant soil contamination by gasoline constituents extends deeper than 9 feet below the ground surface. Further, as had been indicated from past explorations, and confirmed by the three borings drilled in 2004, the majority of contamination passes through the site via relatively few and thin sand layers (½ to 3-foot thick) that are sandwiched between fat clay (Younger Bay Mud) layers, and in "smear zones" above and below the sands. Figure 1 shows the site location and the regional geology. As noted in that figure, the site is approximately a quarter mile from residential development.

The asphalt paved site is also well buffered from public access. It was proposed that remediation would be by in-situ bioremediation and so the testing was directed toward quantifying key parameters. Using an interface probe, the investigations confirmed the absence of free product. A double-walled push sampler was used for collecting continuous soil cores. Slotted plastic pipe was temporarily installed in the holes to facilitate ground water sampling.

Field tests on grab ground water samples in 2004 quantified dissolved oxygen, salinity (conductivity), temperature, pH and Oxidation Reduction Potential (ORP), summarized in the appendix Field geochemical data and laboratory testing also quantified the presence of dissolved metals (iron and manganese), chemical oxygen demand (COD) and biological oxygen demand (BOD), as well as gasoline/BTEX/MTBE in soil and groundwater. Laboratory test results on soil samples are included on the borings. Groundwater test results are provided in the Appendix.

Figure 2 shows the locations of the 2004 soil borings and as well as those of all previous borings and test pits, and the five existing groundwater monitoring wells. Appendix B--1, 2 and 3 are the logs of 2004 borings EP-16, -17 and -18. Appendix B4 and 5 are logs of the two geotechnical borings GB-1 and -2 drilled near the engineering building in 1995. Boring locations are shown on Figures 2 and 3.

From previous data and the three 2004 borings, it was concluded that the most significant zone of ground contamination lies within an approximate 180 square foot area, extending southwest from the former tank site. Historical gasoline constituent levels in soil have shown benzene to be as high as 23 parts per million (ppm). Beyond the approximate 180 square foot area, benzene contamination in soil was typically less than 5 ppm.

Remedial Alternatives Evaluation

We reviewed several alternative procedures for remediating the area of the former 500-gallon gasoline tank, including (a) no-action, (b) in-situ bio-remediation, (c) bulk soil removal, (d) ground water pump-and-treat, and (e) combinations of these processes.

The "no action" alternative had been tested over a period of several years' groundwater sampling with little, if any, natural bio-degradation observed over the period. While the effectiveness of the gravel-filled sewer trench beneath the Grant Avenue sidewalk as an interceptor trench was demonstrated by the continuous absence of any gasoline-related contamination in monitoring wells MW-1 and -2 since 1999, the occurrence of low, but increasing concentrations in MW-3 over recent time suggests that groundwater contamination may be migrating.

Following discussions with Regenesis, the bioremediation-with-ORC vendor, the presence of the groundwater contaminants within thin sand zones separated by relatively impervious clay layers beneath the site would limit the effectiveness of the process. This in combination with the relatively high benzene concentrations would further limit the effectiveness of the bioremediation-with-ORC process. Even with several reagent re-injections the effectiveness of the process would be limited.

Due to the confinement of groundwater within thin sand zones separated by relatively impervious clay layers beneath the site, it was believed that the site area could not be effectively cleanedup by well array "pump-and-treat" on a finite time schedule. While surging could be used to stimulate flushing of the smear zones, the slow well recovery rate would result in a relatively long remediation period.

It is believed that the most effective program would be a combination of source area excavation of soil in the 180 square foot vicinity of the former tank, supplemented by collection and treatment of gasoline contaminated groundwater from recovery trenches Figure 3 is a schematic layout of this plan. The recovered groundwater would be treated in the District's Publicly Owned Treatment Works (POTW). The District has confirmed (see cover letter to this document) that its POTW has the capability to effectively treat the recovered, contaminated ground water at minimal direct cost to the project. Based on our initial estimate of groundwater recovery at the rate of 5 to 20 gallons/minute (gpm), which we believe to be conservatively high, the groundwater containing gasoline at historical concentrations as high as 150,000 ppb, including benzene at up to 23,000 ppb, would still not have a measurable effect on the treatment plant's 20 million gallons/day (14,000 gpm) throughput.

Geotracker Database

At this time, sampling data sheets, analytical laboratory results and recent investigative data have been uploaded to both the SWRCB's Geotracker database and the Agency's FTP site. This effort included a new well survey performed to the Geotracker system's precise specifications. Subsequent sampling data will also be uploaded to the two sites.

Certification and Closure

This letter has been prepared by the undersigned, a currently California-licensed Civil Engineer. Please do not hesitate to contact me directly with any questions you may have or with additional requests for information regarding technical aspects of this project.

Respectfully submitted

THE SUTTON GROUP

John R. Sutton, PE
Principal Engineer

Attachments:

Figure 1: Regional Geologic Map

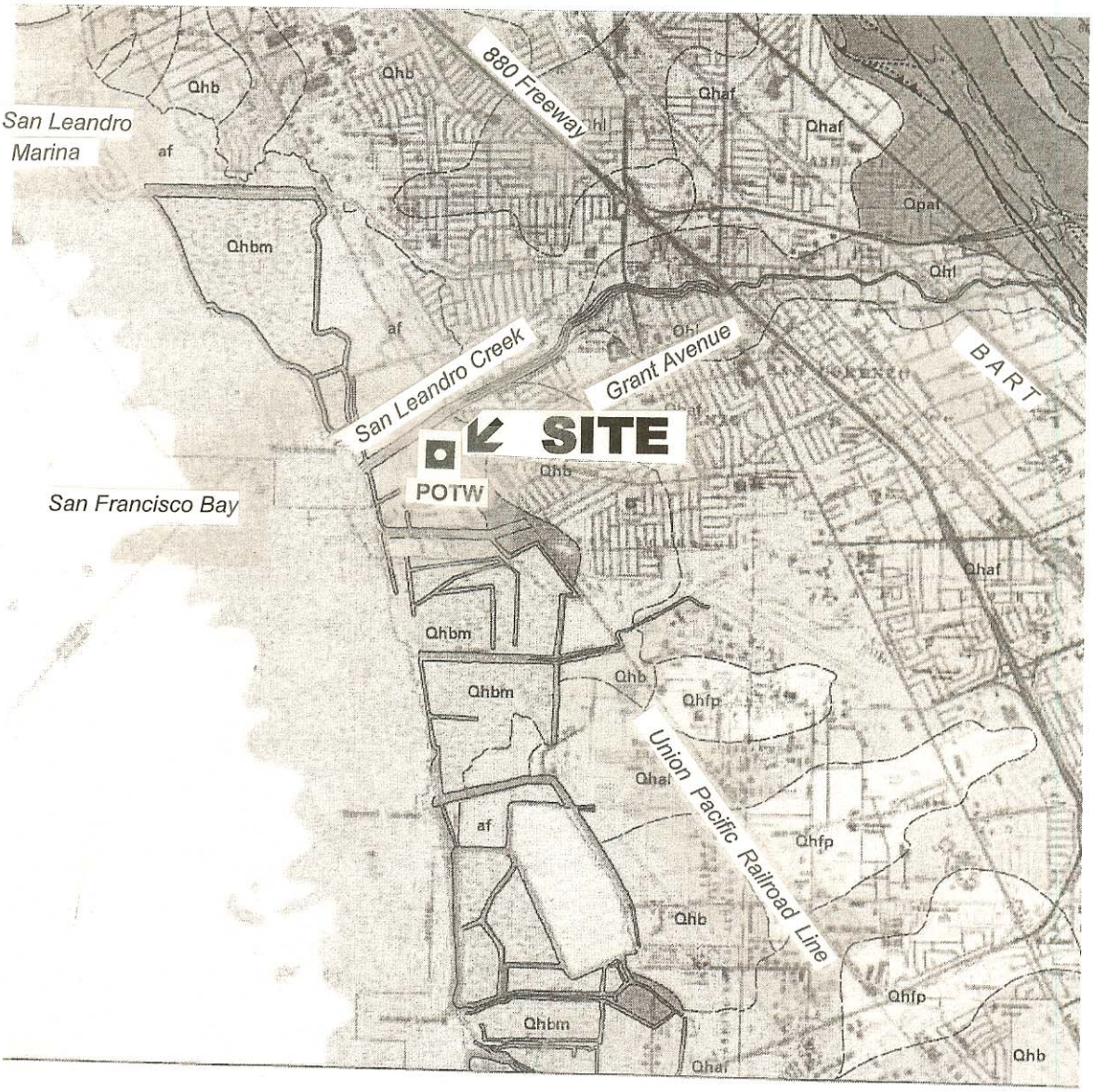
Figure 2: Site plan with boring and test pit locations and historic benzene in soil concentrations

Figure 3: Site plan showing proposed excavation area and groundwater recovery trenches

Appendix A: Laboratory test reports for groundwater, 2004 (8 pages).

Appendix B: Pages 1, 2, 3: Logs of 2004 borings EP-16, -17, -18.

Pages 4, 5: Logs of geotechnical borings GB-1. -2.



Scale: 1in. to 5,000 ft.

Kilometers

Miles

Thousand Feet

LEGEND

af	Artificial Fill (Historic)
Qhaf	Alluvial fan and fluvial deposits (Holocene)
Qhb	Basin deposits (Holocene)
Qhbm	Bay Mud (Holocene)
Qhl	Natural levee deposits (Holocene)

Source:
Graymer, RC, 2000: "Geologic map and map and database of the Oakland metropolitan area, Alameda, Contra Costa and San Francisco Counties, California", US Geological Survey, MF2432, version 1.0.

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REGIONAL GEOLOGIC MAP

Oro Loma Sanitary District

San Lorenzo, CA

PROJECT No. **3022.12**

FIGURE

1

4/5/07

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Benzene Concentrations in Soil

Gasoline Tank Area

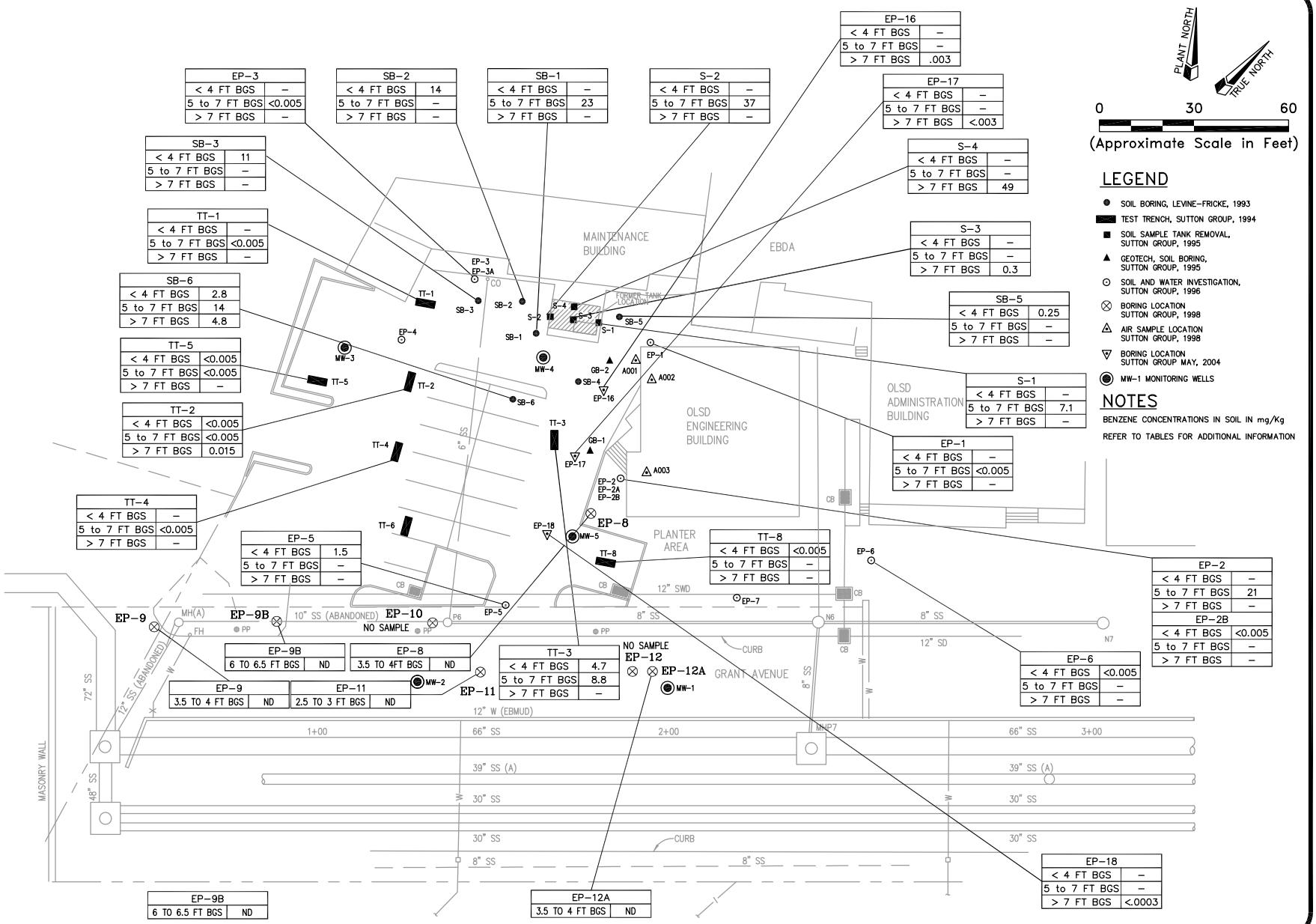
ORO LOMA SANITARY DISTRICT
SAN LORENZO, CALIFORNIA

PROJECT NO. 3022.12

FIGURE 2

03/23/07

FIGS.DWG PLOT 1/360



LEGEND

- SOIL BORING, LEVINE-FRICKE, 1993
- TEST TRENCH, SUTTON GROUP, 1994
- SOIL SAMPLE TANK REMOVAL, SUTTON GROUP, 1995
- GEOTECH, SOIL BORING, SUTTON GROUP, 1995
- SOIL AND WATER INVESTIGATION, SUTTON GROUP, 1996
- BORING LOCATION SUTTON GROUP, 1998
- AIR SAMPLE LOCATION SUTTON GROUP, 1998
- BORING LOCATION SUTTON GROUP MAY, 2004
- MW-1 MONITORING WELLS

NOTES

BENZENE CONCENTRATIONS IN SOIL IN mg/Kg

REFER TO TABLES FOR ADDITIONAL INFORMATION

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REMEDIATION MAP

SERVICE CENTER AREA

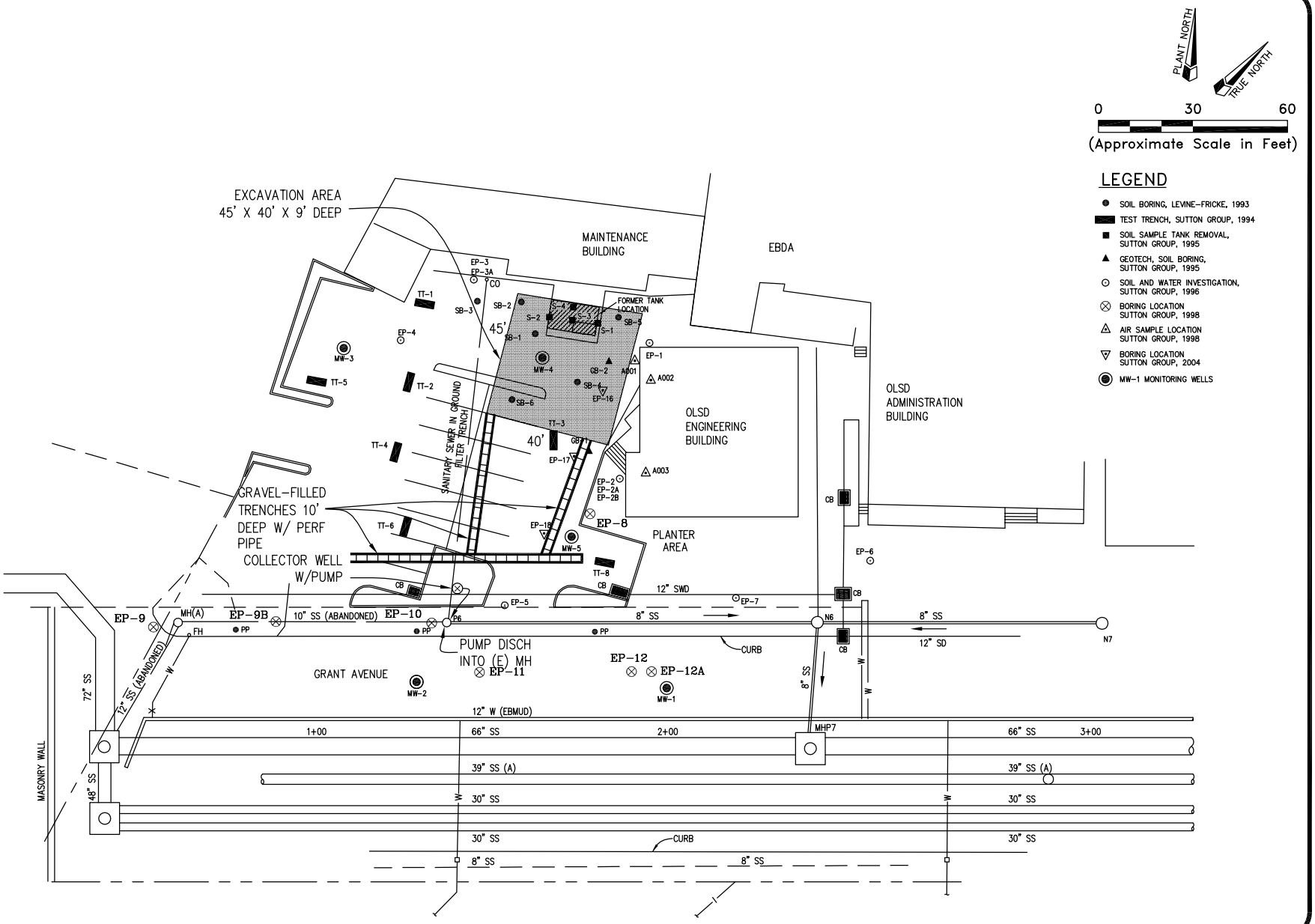
ORO LOMA SANITARY DISTRICT
2600 GRANT AVENUE
SAN LORENZO, CALIFORNIA

PROJECT NO. 3022.12

FIGURE 3

03/23/07

FIG3.DWG PLOT 1/360



BORING LOG

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BORING No. **EP-16**

Sheet 1 of 1

Project No.	3022.11	Drilling Company	Precision Sampling, Inc.
Date Drilled	5/21/2004	Driller	Marco Lic. No. C57: 636387
Client	Oro Loma Sanitary District	Drill Rig Model	Envirocore SD-1
Site address	2600 Grant Avenue San Lorenzo, CA, 94580	Drilling Method /Dia. Sampling Method	Push- dual wall continuous core 2½ in OD x 1⅝ in ID x 3.0 ft barrel
Boring Location	Engrg./Mntc. Bldg Pkg. lot, East side.	Ground Elevation	Datum: msl
Logged By	John R. Sutton, GE No. 812	Water depth	5.3'

DEPTH FEET	SAMPLE #, TYPE	RECOVERY (INCHES)	SYMBOL	USCS CLASS	DESCRIPTION	DEPTH FEET
0				GP	Asphalt on aggregate base, olive color, dry, no odor	0
1	1	3/36			Poor recovery	
4				Pt	PEAT, brown/black, fibrous, with strong petroleum odor (Indistinct boundary)	
5	2	25/36		SP	@ 4.6': SAND, fine, green, moist, strong petroleum odor	5
7						▼
	3	14/36			Sheen on water surface at 7.3 ft depth	▽
		16-1		OH	@7.7': ORGANIC CLAY, very silty, stiff, black. Gas=97ppb, B=2.9ppb; T=2.2; EB=4.0; X=1.5, MTBE=ND<0.5	
10	4	34/36 16-2		CH	CLAY, stiff, highly plastic, wet, gray @10.5-10.8ft: Gas=4.4ppb, B=1.2ppb; T=0.07; EB=0.30; X=0.59, MTBE=ND<0.5 CLAY, medium stiff, green/black, strong sulfide odor	10
13		16-3			@ 12.6-12.8 ft: Gas=ND, B=ND; T=0.006; EB=ND; X=0.019, MTBE=ND<0.5	
15					Boring terminated at 13.0 ft depth	15
20						20

SAMPLER Type: S = 2" OD SPT; CA = 2" ID California, 25 = 2½ " ID California, ST = Shelby, P = Pitcher Sample

BORING LOG

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BORING No. EP-17

Sheet 1 of 1

Project No.	3022.11	Drilling Company	Precision Sampling, Inc.
Date Drilled	5/21/2004	Driller	Marco Lic. No. C57: 636387
Client	Oro Loma Sanitary District	Drill Rig Model	Envirocore SD-1
Site address	2600 Grant Avenue	Drilling Method /Dia.	Push- dual wall continuous core 2½ in OD x 1⅝ in ID x 3.0 ft barrel
	San Lorenzo, CA, 94580	Sampling Method	
Boring Location	Engrg./Mntc. Bldg Pkg. lot, East side nr steps.	Ground Elevation	Datum: msl
Logged By	John R. Sutton, GE No. 812	Water depth	4.5

DEPTH FEET	SAMPLE #, TYPE	RECOVERY (INCHES)	SYMBOL	USCS CLASS	DESCRIPTION	DEPTH FEET
0				GP	Asphalt on aggregate base, Sandy gravel, silty, brown to rust colored. Man-made fill	0
1	1	6/36			Poor recovery	
					Indistinct change	
4				CH	CLAY, green, strong gasoline odor	
	2	13				▼
5		36		SP	@ 4.6': SAND, fine, green, moist, strong petroleum odor	5
7	3	21/36			Sheen on water surface at 7.3 ft depth	▽
				CH	@7.8' CLAY, very silty, stiff, black.	
		17-1			@8.6-8.9ft: Gas=21ppb, B=2.8ppb; T=0.13; EB=1.2; X=4.8, MTBE=ND<0.170	
10						10
	4	33/36			CLAY, medium stiff, green/black, strong sulfide odor	
		17-2				
13					@ 12.4-12.7 ft:: Gas=1.5, B=0.031; T=0.032; EB=0.019; X=0.010, MTBE=ND<0.5	CH
					Fine roots, sulfide odor below 14 ft	
		19/36 17-3			@14.3 ft: Gas=3.5, B=1.2; T=0.029; EB=0.17; X=0.80, MTBE=ND<0.5	
15						15
16					Boring terminated at 16.0 ft depth	
20						20

SAMPLER Type: S = 2" OD SPT; CA = 2" ID California, 25 = 2½ " ID California, ST = Shelby, P = Pitcher Sample

BORING LOG

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BORING No. **EP-18**

Sheet 1 of 1

Project No.	3022.11	Drilling Company	Precision Sampling, Inc.
Date Drilled	5/21/2004	Driller	Marco Lic. No. C57: 636387
Client	Oro Loma Sanitary District	Drill Rig Model	Envirocore SD-1
Site address	2600 Grant Avenue	Drilling Method /Dia.	Push- dual wall continuous core 2½ in OD x 1⅝ in ID x 3.0 ft barrel
	San Lorenzo, CA, 94580	Sampling Method	
Boring Location	Engrg./Mntc. Bldg Pkg. lot, East side.	Ground Elevation	Datum: msl
Logged By	John R. Sutton, GE No. 812	Water depth	4.4' 4.3

DEPTH FEET	SAMPLE #, TYPE	RECOVERY (INCHES)	100998.1 1	USCS CLASS	DESCRIPTION	DEPTH FEET
0				GP	Asphalt on aggregate base, tan, lt. Brown and blue, very moist, no odor	0
1	1	24/36				
4						
5	2	20/36		CH	CLAY, medium stiff, very moist, high plastic, black	▼ 5
				SP-SM	@ 5.0': SAND, fine, slightly silty, gray and green, moist	
7				CL-OL	@5.5': Organic CLAY, stiff, sulfide odor, black/green	
	3	30/36		CH	@7.3': CLAY, medium stiff, highly plastic, olive green and black.	
10		18-1			@9.0-9.5 ft Gas=ND, B=0.032ppb; T=0.22; EB=0.009; X=0.039, MTBE=ND<0.05	10
	4	34/36		CH	CLAY, medium stiff, very silty, very moist, gray-green	
13		18-2			@ 12.6-12.8 ft: Gas=ND<1.0, B=ND<.005; T=ND; EB=ND; X=ND, MTBE=ND<0.05	
15					Boring terminated at 13.0 ft depth	15
20						20

SAMPLER Type: S = 2" OD SPT; CA = 2" ID California, 25 = 2½ " ID California, ST = Shelby, P = Pitcher Sample

BORING LOG

Date Drilled	7/12/1995	Drilling Company	Soils Exploration Services
Client	Oro Loma Sanitary District	Driller	Morris
Site Name	1,000 gal Gas. Tank	Rig Model	CME-55
City/Town	San Lorenzo, CA	Drilling Method	Hollow Stemmed Auger
		Sampling Method	Calif, Shelby tube
Logged By	J.R.S.	Surface Elevation	9.5 ±
		Borehole Diameter	9"

Depth (ft)	Graphic Symbol	USCS Symbol	Soil Description	Sample Type/ BlowCounts/ N-Value			Remarks
			ASPHALT, 2" thick				
		GP/GM	FILL:Base Course Gravel, well graded, dry,brown				
		CL/CH	CLAY stiff, gravelly, moist..Bay Mud/Fill interface	C	2,3,4	7	
5							
			BAY MUD, soft to medium stiff	S			Push 7-9,
							2"/24 recovery
		CL	BAY MUD, soft, very moist, gray				
10		CH/CL	BAY MUD, soft, very moist, gray				ST,10-12',.
			DD=89.5, w=50%, , -200=95%,				24/24 recov
				S			
15		MH/CH	BAY MUD, soft, SILT/CLAY, mod.plasticity,very	C	1,1,1	2	
			moist, olive green, strong organic.decomp.odor				
			DD=78, w=42%, LL=45, PI=21				
20			easy push then sand at 21.5'				ST 20-22 lost
		CH	CLAY,high plastic, w/#8 sized cem, shell nodules	S			in hole
			lt. green/gray DD=103.9,w=20.9,LL=53.p=PI=31				due to sand
		SC	SAND Lens, Clayey, green				layer @ 21.5
25		CL	CLAY, very stiff, sandy, brown	C	3,7,9	16	
		SC	....@ 26.3 becomes SAND, clayey, brown				
			DD=111.6 pcf, w=18.7 %, -#200=81%				
30							

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Project No. 3022.6

Boring No. SB-1

Sheet 1 of 2

Renumbered GB-1

BORING LOG

Depth (ft)	Graphic Symbol	USCS Symbol	Soil Description	Sample Type/ BlowCounts/ N-Value			Remarks
		CL/ML	CLAY,very silty, sandy (fine) olive brown,	C	2,2,3	5	No recov.
			moist, to wet				went back,
		CL	CLAY, sandy ,silty to SAND, clayey, olive brown				pushed to 32'
35							
							thin slurry of
							gray water
							being
							returned from
40		CL	CLAY,very silty, very sandy (fine), ,				auger at > 30
			wet/flowing, brown	C	2,3,4	7	
			DD=103.9 pcf, w=23.9% -#200=73%				
45							
50		CL/CH	CLAY, stiff, silty, moist, brown	C	3,4,6	10	
			TERMINATED @ 51.5 ft.				
			Caved to 5.8 feet in 2hrs. Redrilled,				
			shaft grouted w/ neat cement slurry, topped off.				

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Project No. 3022.6

Boring No. SB-1

Renumbered GB-1

Sheet 2 of 2.

BORING LOG

Date Drilled	7/12/1995	Drilling Company	Soils Exploration Services
Client	Oro Loma Sanitary District	Driller	Morris
Site Name	1,000 gal Gas. Tank	Rig Model	CME-55
City/Town	San Lorenzo, CA	Drilling Method	Hollow Stemmed Auger
		Sampling Method	Calif, Shelby tube
Logged By	J.R.S.	Surface Elevation	[illegible]
		Borehole Diameter	9"

Depth (ft)	Graphic Symbol	USCS Symbol	Soil Description	Sample Type/ BlowCounts/ N-Value			Remarks
			ASPHALT, 2" thick over roadbase:Gravelly SAND,				
			dry, blue green, odorless				
			MIXED FILL including Bay Mud and peat with				
5			sand and gravel				
			6' Black fine sand with strong odor of gasoline	C	2,3,3	6	
		CH/CL	CLAY, moderate to high plasticity, organic, soft to	S			ST 7.0-9.0,
			medium stiff, gray, green, black..LL=48, PI=23				100% recovery
10							
			CLAY, gray-green as above	C			advanced
							under rod wt.
15		CL	CLAY, siltv, soft gray-green	S			ST 15.0-16.6'
			LL=39, PI=15, -#200=99.4				(20") 100% recov.
20				C	5,9,10	19	
		CL/CH	CLAY with cementation, shell (gravel size),				
			nodules, stiff, wet, light gray				
			DD=105 pcf, w=23.4%				
25							
		CL	@25.2 CLAY,silty, very stiff, moist, olive brown	C	4,7,12	19	
			DD=106pcf, w=23.0%				
30							

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Project No. 3022.6

Boring No. SB-2
Renumbered GB-2

BORING LOG

~~BOREHOLE LITHOLOGIC LOG~~

Depth (ft)	Graphic Smbol	USCS Symbol	Soil Description	Sample Type/ BlowCounts/ N-Value			Remarks
		CL	CLAY, as above, less stiff, moist, olive brown	C	3,5,6	11	
			DD=101.7, w=23.8%				
35		CL	CLAY, stiff, slightly sandy, moist, olive brown				
			DD=104.8 pcf, w=22.0%	C	4,8,9	17	
			TERMINATED at 36.5 feet				
			shaft grouted w/ neat cement slurry, topped off.				
40							
			Catcher used with California samples				

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Project No. 3022.6

Boring No. SB-2

Renumbered GB-2

Sheet 2 of 2

APPENDIX A

Geochemistry field results
Groundwater, OLSD

	MW-2	MW-4	MW-5	EP-16	EP-17	EP-18
Date	4/27/04	4/27/04	4/27/04	5/21/04	5/21/04	5/21/04
Water depth, ft	5.2	4.6	4.0	4.8	4.5	4.3
Boring TD, ft				13.0	16.0	13.0
TEMP, °C	19.9	20.4	21.9	21.1	21.3	21.1
Specific Conduct., $\mu S/cm^2$	7653	6882	19904	5381	6506	5507
DO, %	4.9	6.4	15.4	35.5	66.7	65.8
DO, mg/l	0.43	0.56	1.27	2.90	4.37	4.7
pH	7.21	7.02	7.08	6.66	6.71	6.85
ORP	-192	-170	-144	-75	-73.2	-85

CHAIN OF CUSTODY FORM

APPENDIX A

C&T 040404

Curtis & Tompkins, Ltd.
Analytical Laboratory Since 1878
2323 Fifth Street
Berkeley, CA 94710
(510)486-0900 Phone
(510)486-0532 Fax

Project Name: Oro Loma San. Dist

Report To: John Sutton

Company: The Sutton Group

4 420

4159

1 L poly

Normal

Analyses

Laboratory Number	Sample ID.	Sampling Date Time	Matrix: Soil	Matrix: Water	Matrix: Waste	# of Containers	Preservative: HCL	Preservative: H2SO	Preservative: HNO3	Preservative: ICE	Field Notes	TEH (Diesel)	BTEX + MTBE	TVH/BTEX/MTBE	Dissolved Fe + Dissolved Mn	COD	TOC
For Laboratory Use Only	MW1-042704	4/27/04 1650		X		1-1L amber				X		X					
	↓	↓ 1650		X		3,40ml VOA	X			X			X				
	MW2-042704	1555		X		~~3,40ml~~	X			X				X			
		1558		X		500ml poly				X						X	
		1555		X		250ml poly		X		X					X		
	MW4-042704	1435		X		1L poly				X				X			
		1435		X		500ml poly				X						X	
		1435		X		250ml poly		X		X					X		
		1435		X		3,40ml	X			X			X				
	MW5-042704	1455		X		1L poly				X				X			
		1455		X		500ml poly				X						X	
		1455		X		250ml poly		X		X					X		
	↓	1455		X		3,40ml	X			X			X				

RELINQUISHED BY:

4/27/04 1820 hrs DATE/TIME

DATE/TIME

DATE/TIME

RECEIVED BY:

4/27 6:18PM DATE/TIME

DATE/TIME

DATE/TIME

ICE ✓
GOOD CONDITION ✓
HEAD SPACE ABSENT
DECHLORINATED IN LAB
APPROPRIATE CONTAINERS ✓
PRESERVED IN LAB
METALS

preserve ASAP

McCampbell Analytical, Inc.
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(925) 798-1620

APPENDIX A

CHAIN-OF-CUSTODY RECORD

WorkOrder: 0404404 **ClientID: TSG**

Report to:
John Sutton
The Sutton Group
3708 Mt. Diablo Blvd, Ste. 215
Lafayette, CA 94549
TEL: 925-284-4208
FAX: 925-284-4189
ProjectNo: #3022.11; Oro Loma San. Dist.
PO:

Bill to
Accounts Payable
The Sutton Group
3708 Mt. Diablo Blvd, Ste. 215
Lafayette, CA 94549

Requested TAT: 5 days

Date Received: **04/27/04**
Date Printed: **05/05/04**

Sample ID	ClientSampID	Matrix	Collection Date	Hold	Requested Tests (See legend below)														
					1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
0404404-001	MWD1	Water	04/27/04 4:50:00	☐			A		B										
0404404-002	MW2	Water	04/27/04 3:55:00	☐	C	B		A											
0404404-003	MW4	Water	04/27/04 2:35:00	☐	C	B	D	A											
0404404-004	MW5	Water	04/27/04 2:55:00	☐	C	B	D	A											

Test Legend:

1	BOD_W	2	CODF_W	3	G-MBTEX_W	4	METALS_DISS	5	TPH(D)_W
6		7		8		9		10	
11		12		13		14		15	

Prepared by: Melissa Valles

Comments:

NOTE: Samples are discarded 60 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense.

McCampbell Analytical, Inc.
1534 2nd Avenue South, #D7, Pacheco, CA 94553-5560
Telephone : 925-798-1620 Fax : 925-798-1622
Website: www.mccampbell.com E-mail: main@mccampbell.com

The Sutton Group 3708 Mt. Diablo Blvd, Ste. 215 Lafayette, CA 94549	Client Project ID: #3022.11; Oro Loma San. Dist.	Date Sampled: 04/27/04
		Date Received: 04/27/04
	Client Contact: John Sutton	Date Extracted: 04/27/04
	Client P.O.:	Date Analyzed: 05/04/04

Biochemical Oxygen Demand*

Analytical Method: SM5210B Work Order: 0404404

Lab ID	Client ID	Matrix	BOD	DF
0404404-002C	MW2	W	26	5
0404404-003C	MW4	W	52	5
0404404-004C	MW5	W	49	5

Reporting Limit for DF = 1; ND means not detected at or above the reporting limit	W	4.0 mg/L	
	S	NA	

* water samples are reported in mg/L.

i) liquid sample that contains greater than ~2 vol. % sediment.

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The Sutton Group 3708 Mt. Diablo Blvd, Ste. 215 Lafayette, CA 94549	Client Project ID: #3022.11; Oro Loma San. Dist.	Date Sampled: 04/27/04
		Date Received: 04/27/04
	Client Contact: John Sutton	Date Extracted: 04/27/04
	Client P.O.:	Date Analyzed: 04/29/04

CODF*

Analytical Method: SM5220D — Work Order: 0404404

Lab ID	Client ID	Matrix	CODF	DF
0404404-002B	MW2	W	120	1
0404404-003B	MW4	W	190	1
0404404-004B	MW5	W	220	1

Reporting Limit for DF = 1; ND means not detected at or above the reporting limit	W	10 mg/L	
	S	NA	

* water sample is filtered by 0.7 Glass Microfiber Filter and reported in mg/L.

DHS Certification No. 1644

_____Angela Rydelius, Lab Manager

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The Sutton Group 3708 Mt. Diablo Blvd, Ste. 215 Lafayette, CA 94549	Client Project ID: #3022.11; Oro Loma San. Dist.	Date Sampled: 04/27/04
		Date Received: 04/27/04
	Client Contact: John Sutton	Date Extracted: 05/02/04-05/04/04
	Client P.O.:	Date Analyzed: 05/02/04-05/04/04

Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline with BTEX and MTBE*

Extraction method: SW5030B Analytical methods: SW8021B/8015Cm Work Order: 0404404

Lab ID	Client ID	Matrix	TPH(g)	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes	DF	% SS
001A	MWD1	W	---	ND	0.59	0.91	ND	0.52	1	99.5
003D	MW4	W	78,000,a	ND<1000	13,000	7800	3200	17,000	200	105
004D	MW5	W	39,000,a	ND<1000	12,000	11,000	920	4300	200	102

Reporting Limit for DF =1; ND means not detected at or above the reporting limit	W	50	5.0	0.5	0.5	0.5	0.5	1	µg/L
	S	NA	NA	NA	NA	NA	NA	1	mg/Kg

* water and vapor samples and all TCLP & SPLP extracts are reported in ug/L, soil/sludge/solid samples in mg/kg, wipe samples in µg/wipe, product/oil/non-aqueous liquid samples in mg/L.

cluttered chromatogram; sample peak coelutes with surrogate peak.

+The following descriptions of the TPH chromatogram are cursory in nature and McCampbell Analytical is not responsible for their interpretation: a) unmodified or weakly modified gasoline is significant; b) heavier gasoline range compounds are significant(aged gasoline?); c) lighter gasoline range compounds (the most mobile fraction) are significant; d) gasoline range compounds having broad chromatographic peaks are significant; biologically altered gasoline?; e) TPH pattern that does not appear to be derived from gasoline (stoddard solvent / mineral spirit?); f) one to a few isolated non-target peaks present; g) strongly aged gasoline or diesel range compounds are significant; h) lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than ~2 vol. % sediment; j) reporting limit raised due to high MTBE content; k) TPH pattern that does not appear to be derived from gasoline (aviation gas). m) no recognizable pattern.

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The Sutton Group 3708 Mt. Diablo Blvd, Ste. 215 Lafayette, CA 94549	Client Project ID: #3022.11; Oro Loma San. Dist.	Date Sampled: 04/27/04
		Date Received: 04/27/04
	Client Contact: John Sutton	Date Extracted: 04/27/04
	Client P.O.:	Date Analyzed: 04/28/04

Metals*

Extraction method: E200.7 Analytical methods: E200.7 Work Order: 0404404

Lab ID	Client ID	Matrix	Extraction	Iron	Manganese	DF	% SS
002A	MW2	W	DISS.	0.15	4.2	1	N/A
003A	MW4	W	DISS.	2.3	7.0	1	N/A
004A	MW5	W	DISS.	0.21	1.6	1	N/A

Reporting Limit for DF =1; ND means not detected at or above the reporting limit	W	DISS.	0.05	0.05	mg/L
	S	TTLC	NA	NA	NA

*water/product/oil/non-aqueous liquid samples and all TCLP / STLC / DISTLC / SPLP extracts are reported in mg/L, soil/sludge/solid samples in mg/kg, wipe samples in µg/wipe, filter samples in µg/filter.

means surrogate recovery outside of acceptance range due to matrix interference; & means surrogate diluted out of acceptance range; ND means not detected above the reporting limit; N/A means not applicable to this sample or instrument.

Analytical Methods: EPA 6010C/200.7 for all elements except: 200.9 (water/liquid- Sb, As, Pb, Se, Tl); 245.1 (Hg); 7010 (sludge/soil/solid/oil/product/wipe/filter - As, Se, Tl); 7471B (Hg).

i) liquid sample that contains greater than ~2 vol. % sediment; this sediment is extracted with the liquid, in accordance with EPA methodologies and can significantly effect reported metal concentrations; j) reporting limit raised due to insufficient sample amount; k) results are reported by dry weight; y) estimated values due to low surrogate recovery; z) reporting limit raised due to matrix interference.

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The Sutton Group 3708 Mt. Diablo Blvd, Ste. 215 Lafayette, CA 94549	Client Project ID: #3022.11; Oro Loma San. Dist.	Date Sampled: 04/27/04
		Date Received: 04/27/04
	Client Contact: John Sutton	Date Extracted: 04/27/04
	Client P.O.:	Date Analyzed: 05/02/04

Diesel Range (C10-C23) Extractable Hydrocarbons as Diesel*

Extraction method: SW3510C Analytical methods: SW8015C Work Order: 0404404

Lab ID	Client ID	Matrix	TPH(d)	DF	% SS
0404404-001B	MWD1	W	110,b	1	108

Reporting Limit for DF =1; ND means not detected at or above the reporting limit	W	50	µg/L
	S	NA	NA

* water samples are reported in µg/L, wipe samples in µg/wipe, soil/solid/sludge samples in mg/kg, product/oil/non-aqueous liquid samples in mg/L, and all DISTLC / STLC / SPLP / TCLP extracts are reported in µg/L.

cluttered chromatogram resulting in coeluted surrogate and sample peaks, or; surrogate peak is on elevated baseline, or; surrogate has been diminished by dilution of original extract.

+The following descriptions of the TPH chromatogram are cursory in nature and McCampbell Analytical is not responsible for their interpretation: a) unmodified or weakly modified diesel is significant; b) diesel range compounds are significant; no recognizable pattern; c) aged diesel? is significant); d) gasoline range compounds are significant; e) unknown medium boiling point pattern that does not appear to be derived from diesel; f) one to a few isolated peaks present; g) oil range compounds are significant; h) lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than ~2 vol. % sediment; k) kerosene/kerosene range/jet fuel range; l) bunker oil; m) fuel oil; n) stoddard solvent/mineral spirit.

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