

Report Issued:

December 26, 1990

TES

12/90

**Preliminary Soil
Investigation Report
for the PG&E
Oakland Power Plant
Diesel Oil Tanks**

Prepared by
Water Resources Unit

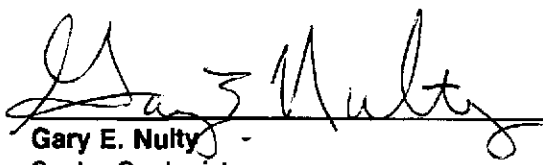
Prepared for
**Environmental Coordinator
Oakland Power Plant**

December 1990

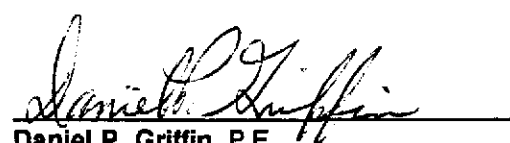
Report 402.331-90.55

**Pacific Gas and Electric Company
Technical and Ecological Services
3400 Crow Canyon Road, San Ramon, California 94583**

Prepared by:


Gary E. Nulty
Senior Geologist

Approved by:


Daniel P. Griffin, P.E.
Civil Engineer
Registration Number C034728

CONTENTS

	Page
INTRODUCTION	1
PURPOSE AND SCOPE	1
SITE DESCRIPTION	1
FIELD PROCEDURES	4
SOIL BORINGS AND SOIL SAMPLING	4
TANK #1	4
TANK #2	6
TANK #3	7
QUALITY CONTROL AND WASTE DISPOSAL	7
SITE GEOLOGY	8
TANK #1	8
TANK #2	8
TANK #3	8
SUMMARY OF RESULTS	9
Appendix A:	
SOIL BORING LOGS	
Appendix B:	
LABORATORY ANALYTICAL REPORT AND CHAIN-OF-CUSTODY RECORD	

FIGURES

Figure		Page
1	Site Location Map	2
2	Locations of Exploratory Soil Borings Near the Diesel Dump Tanks, PG&E's Oakland Power Plant	3

TABLES

Table		Page
1	Summary of Soil Sample Analytical Results Taken Near the Diesel Dump Tanks	5

INTRODUCTION

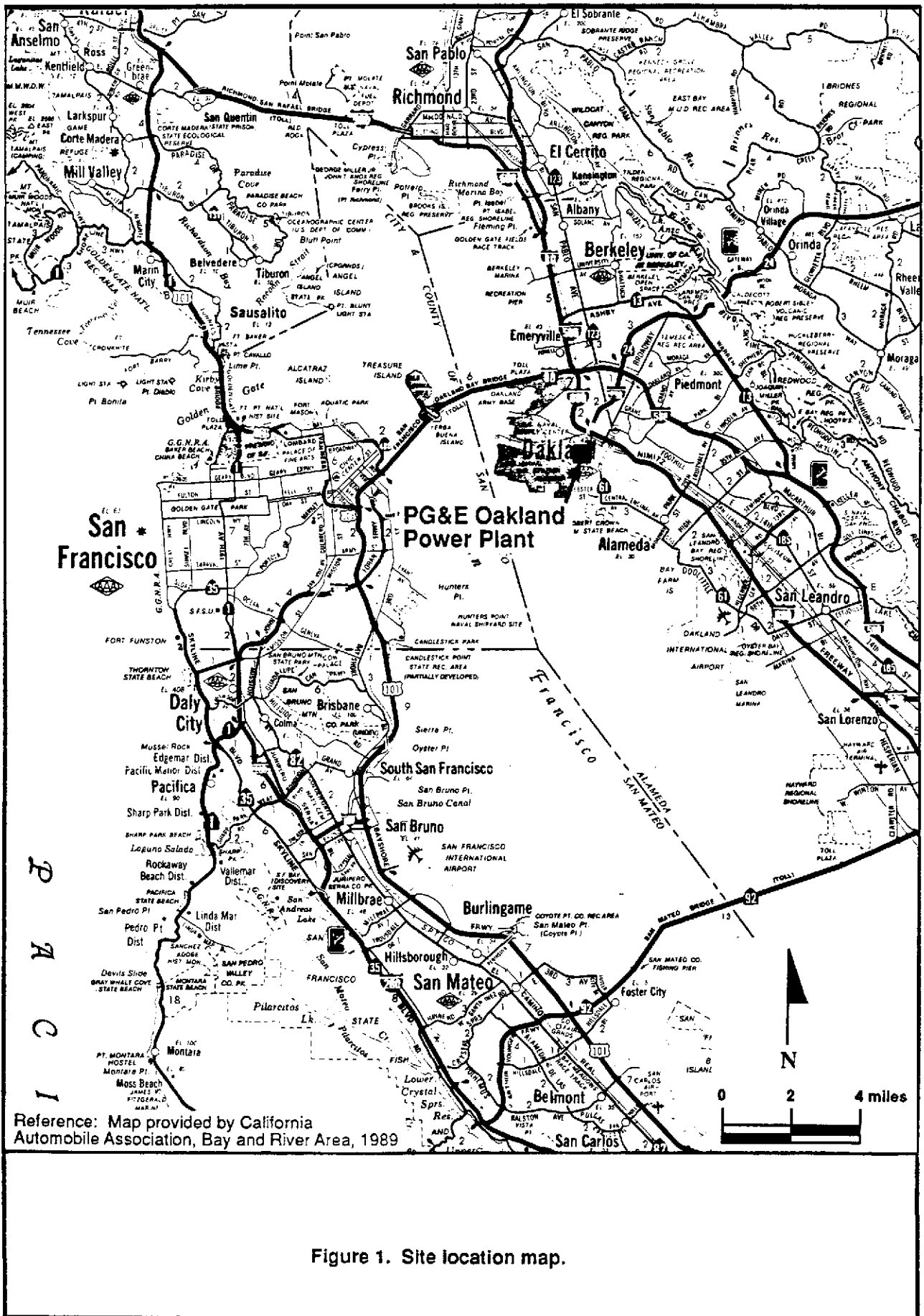
PURPOSE AND SCOPE

This report presents the results of field work conducted at Pacific Gas and Electric Company's (PG&E) Oakland Power Plant in September 1990. Field work included the collection and analysis of soil samples near three 75-gallon diesel dump tanks. This work was done to determine if tank overflow or leakage has occurred and whether the soil near the tanks was affected.

SITE DESCRIPTION

PG&E's Oakland Power Plant is located at 50 Martin Luther King Jr. Blvd., and lies at an elevation of less than 10 feet above mean sea level (Figure 1). The site is located in an industrial area adjacent to San Francisco Bay.

The facility is used to generate electricity by burning diesel oil, through jet turbine generators, during peak load periods only. Three turbines are located at the site, turbines #1, #2, and #3 (Figure 2). Each turbine has an underground 75-gallon diesel dump tank for temporary storage of diesel fuel associated with its operation. The tanks are cylindrical in shape and are located approximately 1-4.5 feet below the surface. The diesel fuel is intermittently drained into the tank from each turbine when the fuel lines are purged of unused diesel fuel.



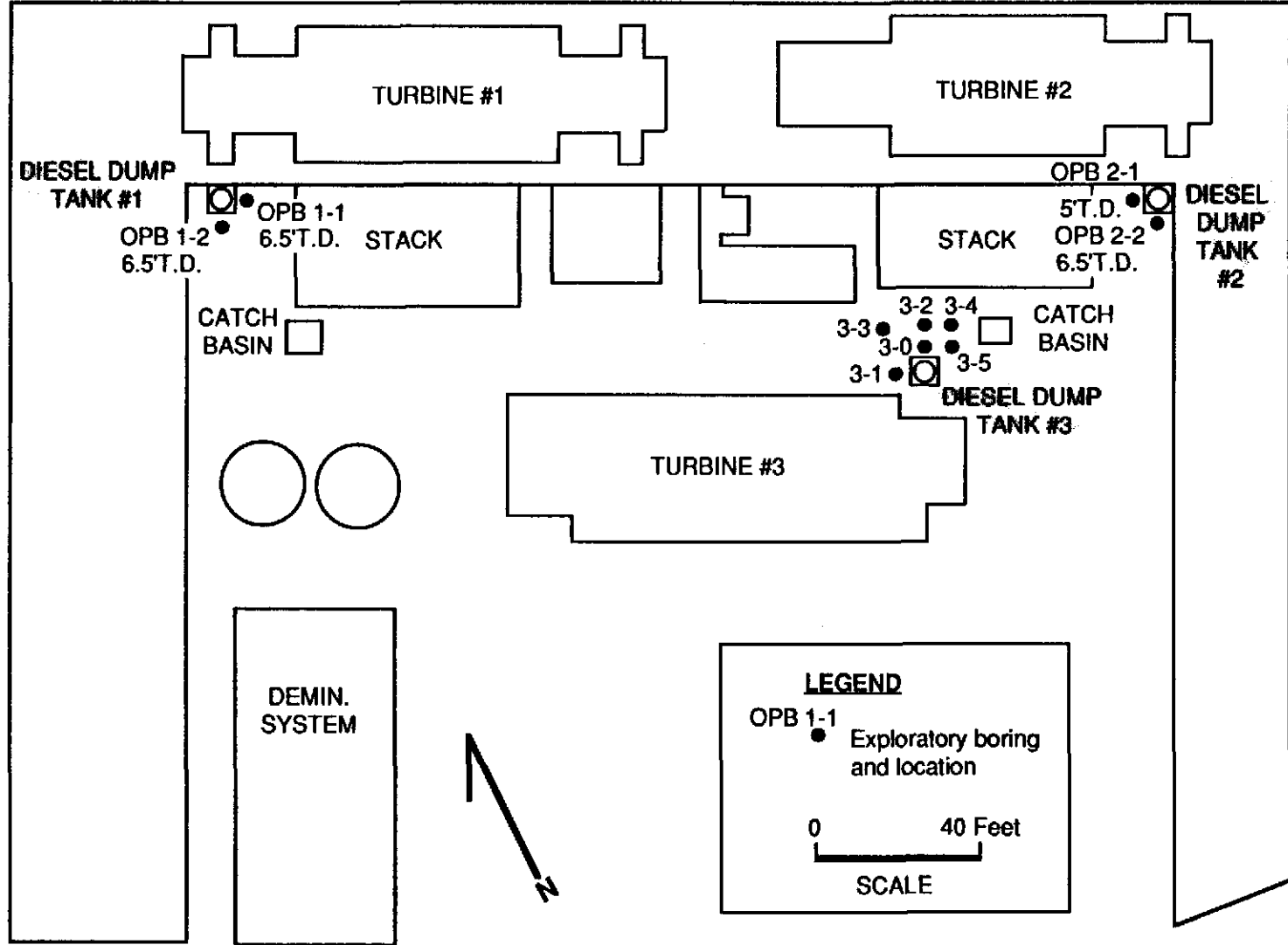


FIGURE 2. Locations of exploratory soil borings near the diesel dump tanks, PG&E's Oakland Power Plant.

FIELD PROCEDURES

SOIL BORINGS AND SOIL SAMPLING

Preliminary site characterization of the soil surrounding the 75-gallon underground diesel dump tanks included the drilling and soil sampling of exploratory borings near diesel tanks #1, #2, and #3 (Figure 2). The soil borings were drilled in late September 1990 to determine if any diesel fuel had been released into the soil surrounding the diesel tanks.

TANK #1

Two soil borings (OPB 1-1 and OPB 1-2) were drilled within 5 feet of diesel dump tank #1 (Figure 2). Boring OPB 1-1 was advanced to a total depth of 6.5 feet using an 8-inch outside diameter hollow-stem auger. Two soil samples were collected for hydrocarbon analysis at 2.5-3.0 feet (OPB 1-1A), and 5.5-6.0 feet (OPB 1-1B) using a 2.5-inch-diameter split spoon sampler containing three brass tubes. The sampler was driven approximately 18 inches beyond the tip of the augers by a 140-lb hammer dropping 30 inches. The number of blows required to advance each 6-inch interval was counted and recorded to help assess the surficial geology of the site. The sampler was retrieved from the boring, and the sample tubes were extracted from the sampler. The ends of the brass sample tubes selected for chemical analysis were examined by the field geologist. The samples from the other tubes were extruded and examined for comparison. The samples were logged according to the Unified Soil Classification System. One of the brass tubes (generally, the center tube) was retained for chemical analysis. The tube was quickly removed from the sampler, capped with aluminum foil and a plastic cap, sealed with tape, labeled, and placed in a cooler with frozen blue ice and maintained at 4 ° C until analyzed.

Soil boring OPB 1-2 was also advanced to a total depth of 6.5 feet, and soil samples were collected in the same manner as OPB 1-1. Soil samples were collected at 4.0-4.5 feet (OPB 1-2A) and 5.5-6.0 feet (OPB 1-2B) using a 2.5-inch diameter split spoon sampler containing three brass tubes. The two soil samples were sealed and preserved in the same manner as those obtained from boring OPB1-1. Soil samples were submitted to BCA Analytical Laboratories, a state-certified laboratory for analysis of total petroleum hydrocarbons-semivolatile hydrocarbons (TPH-D) (EPA method 3550/8015 modified) and aromatic hydrocarbons including benzene, toluene, ethylbenzene, and xylene (BTEX) (EPA method 5030/8020 modified). Copies of the boring logs and chain-of custody forms are included in Appendices A and B, respectively.

Table 1

Summary of Soil Sample Analytical Results Taken Near the Diesel Dump Tanks

(all concentrations in mg/kg)

Sample ID	Depth (feet)	Date Sampled	Tank #1				
			TPH-D	Aromatic Hydrocarbons			
				B	T	E	X
OPB 1-1A	2.5-3.0	9/26/90	26	<0.005	<0.005	<0.005	<0.005
OPB 1-1B	5.5-6.0	9/26/90	12	<0.005	<0.005	<0.005	<0.005
OPB 1-2A	4.0-4.5	9/26/90	60	<0.005	<0.005	<0.005	<0.005
OPB 1-2B	5.5-6.0	9/26/90	70	<0.005	<0.005	<0.005	<0.005
Tank #2							
OPB 2-1A	2.5-3.0	9/25/90	150	<0.005	<0.005	<0.005	<0.005
OPB 2-1B	4.0-4.5	9/25/90	1,000	<0.025	<0.025	<0.025	<0.025
OPB 2-2A	2.5-3.0	9/25/90	60	<0.005	<0.005	<0.005	<0.005
OPB 2-2B	5.0-5.5	9/25/90	10,000	<1	<1	<1	<1
Tank #3							
OPB 3-1A	3.0-3.5	9/24/90	1,300	<0.025	<0.025	<0.025	<0.025
OPB 3-2A	3.0-3.5	9/24/90	4,100	<0.4	<0.4	<0.4	<0.4
OPB 3-2B	4.5-5.0	9/24/90	12,000	1.7	0.2	0.4	1.5
OPB 3-3A	3.5-4.0	9/24/90	210	<0.005	<0.005	<0.005	<0.005

TPH-D = Total petroleum hydrocarbons as diesel

B = Benzene

T = Toluene

E = Ethylbenzene

X = Xylene

< = Concentrations of analyte were nondetectable at or above stated detection limit.

Soil Sample Analytical Results

The analytical results for all the soil samples are summarized in Table 1. Soil sample OPB 1-1A at 2.5-3.0 feet had concentrations of TPH-D at 26 mg/kg; while all aromatic hydrocarbons (BTEX) were nondetectable. Soil sample OPB 1-1B at 5.5-6.0 feet had concentrations of TPH-D at 12 mg/kg, while all aromatic hydrocarbons (BTEX) were nondetectable.

Soil sample OPB 1-2A at 4.0-4.5 feet had concentrations of TPH-D at 60 mg/kg, while all aromatic hydrocarbons (BTEX) were nondetectable. Soil sample OPB 1-2B at 5.5-6.0 feet had concentrations of TPH-D at 70 mg/kg, while the aromatic hydrocarbons (BTEX) were nondetectable.

TANK #2

Soil borings OPB 2-1 and OPB 2-2 were drilled within 5 feet of diesel dump tank #2 (Figure 2). OPB 2-1 was drilled to a total depth of 5 feet and two samples were collected for hydrocarbon analysis at 2.5-3.0 feet (OPB 2-1A) and 4.0-4.5 feet (OPB 2-1B) in the same manner as the samples collected for Tank #1. The samples were logged and preserved for laboratory analysis in the same manner as the samples for Tank #1.

Soil boring OPB 2-2 was drilled to a total depth of 6.5 feet and two soil samples were collected for hydrocarbon analysis at 2.5-3.0 feet (OPB 2-2A) and 5.0-5.5 feet (OPB 2-2B) in the same manner as the samples for Tank #1. The samples were logged and preserved for laboratory analysis in the same manner as the Tank #1 samples.

All of the soil samples were submitted to BCA Analytical Laboratories, a state-certified laboratory for analysis of TPH-D and aromatic hydrocarbons (BTEX) by the same methodology as the first samples (EPA method 3550/8015 modified and EPA method 5030/8020 modified).

Soil Sample Analytical Results

The analytical results for the soil samples taken near the diesel dump tanks are summarized in Table 1. Soil sample OPB 2-1A at 2.5-3.0 feet had concentrations of TPH-D at 150 mg/kg. The aromatic hydrocarbons (BTEX) were nondetectable. Soil sample OPB 2-1B at 4.0-4.5 feet had concentrations of TPH-D at 1000 mg/kg while all aromatic hydrocarbons (BTEX) were nondetectable.

Soil sample OPB 2-2A at 2.5-3.0 feet had concentrations of TPH-D at 60 mg/kg. The aromatic hydrocarbons (BTEX) were nondetectable. Soil sample OPB 2-2B at 5.0-5.5 feet had concentrations of TPH-D at 10,000 mg/kg while all aromatic hydrocarbons (BTEX) were nondetectable.

TANK #3

Six soil borings were drilled within 10 feet of diesel dump tank # 3 (Figure 2). All the soil borings were drilled, sampled, preserved, and analyzed in the same manner as the borings for tanks #1 and #2 except soil borings OPB 3-0, OPB 3-4, and OPB 3-5. These latter soil borings were not able to penetrate the subsurface below 2 feet, therefore, no soil samples were collected.

Soil boring OPB 3-1 was drilled to a total depth of 4 feet and one soil sample (OPB 3-1A) was collected for hydrocarbon analysis at 3.0-3.5 feet. Soil boring OPB 3-2 was drilled to a total depth of 5 feet and two soil samples (OPB 3-2A and OPB 3-2B) were collected for hydrocarbon analysis at 3.0-3.5 feet and 4.5-5.0 feet. Soil boring OPB 3-3 was drilled to a total depth of 4.5 feet and one soil sample (OPB 3-3A) was collected for hydrocarbon analysis at 3.5-4.0 feet.

All of the soil samples were submitted to BCA Analytical Laboratories, a state-certified laboratory for analysis of TPH-D and aromatic hydrocarbons (BTEX) by EPA methods 3550/8015 modified and 5030/8020 modified, respectively.

Soil Sample Analytical Results

The analytical results for the soil samples are summarized in Table 1. Soil sample OPB 3-1A at 3.0-3.5 feet had concentrations of TPH-D at 1300 mg/kg. Aromatic hydrocarbons (BTEX) were nondetectable. Soil sample OPB 3-2A at 3.0-3.5 feet had concentrations of TPH-D at 4100 mg/kg, while all aromatic hydrocarbons (BTEX) were nondetectable. Soil sample OPB 3-2B at 4.5-5.0 feet had concentrations of TPH-D at 12,000 mg/kg and aromatic hydrocarbons including benzene at 1.7 mg/kg, toluene at 0.2 mg/kg, ethylbenzene at 0.4 mg/kg, and xylene at 1.5 mg/kg. Soil sample OPB 3-3A at 3.5-4.0 feet had concentrations of TPH-D at 210 mg/kg and all aromatic hydrocarbons (BTEX) were nondetectable. Copies of the boring logs, and analytical results, (including the chain-of-custody record) are in Appendices A and B, respectively.

QUALITY CONTROL AND WASTE DISPOSAL

To avoid cross-contamination, drilling augers were steam-cleaned before drilling each borehole. Soil sampling equipment was cleaned with potable water and trisodium phosphate prior to collecting a sample. Water used to clean the augers and sampler was collected in the oily water collection pond for treatment and disposal. Soil cuttings from each borehole were collected and stored on-site in 55-gallon drums approved for hazardous waste storage pending laboratory analysis.

SITE GEOLOGY

TANK #1

Based on the logs from borings near tank #1, the area surrounding tank #1 is underlain by light brown clay from 4 inches to 2 feet below the surface. The surface area of the site is overlain by a 4-inch-thick layer of asphalt. From 2 to 6.5 feet below the surface, the lithology is primarily a well graded sand with some clay. The sand may be imported because of the uniformity of the grains, coloration, and iron oxide staining not found elsewhere on the site. Groundwater was not located near tank #1, although the boring was terminated at 6.5 feet below the surface. Groundwater has been located at approximately 5 feet below the surface (assuming the same surface elevation) at other locations at the site. A possible explanation for lower groundwater levels near tank #1 is the use of a sump pump near tank #1 to prevent water from infiltrating the turbine basement (boring logs OPB 1-1 and OPB 1-2).

TANK #2

The two soil borings near tank #2 encountered approximately 4 inches of asphalt before penetrating a silty, gravelly sand from the surface to 5 feet below the surface. Soil boring OPB 2-2 was drilled 1.5 feet deeper than soil boring OPB 2-1 and located a silt-sand, gravel sequence from 5 to 6.5 feet below the surface. Groundwater levels were found at 5 feet below the surface (boring logs OPB 2-1 and OPB 2-2).

TANK #3

The soil borings surrounding tank #3 encountered 4 inches of asphalt before drilling a clayey-gravel sequence from 4 inches to approximately 3.5-4.0 feet below the surface. Soil borings OPB 3-1 and OPB 3-2 drilled a sand with gravel sequence from approximately 3 to 5 feet. Three soil borings (OPB 3-0, OPB 3-4, and OPB 3-5) were terminated at a shallow depth (2 feet) because of impenetrable material in the subsurface. This material appeared to be old concrete and fire brick that may have been left from an old foundation or boiler (OPB 3-0, OPB 3-4, and OPB 3-5). Groundwater was located at 5 feet below the surface in soil boring OPB 3-2.

SUMMARY OF RESULTS

The following is a summary of the exploratory soil boring activities and results of the soil investigation near the three diesel dump tanks.

1. The presence of TPH-D was detected in the soils near all three diesel dump tanks, but the concentrations of TPH-D were highly variable from tank to tank. The highest concentration of TPH-D near tank #1 was 70 mg/kg from soil sample OPB 1-2B at a depth of 5.5-6.0 feet. The highest concentration of TPH-D near tank #2 was 10,000 mg/kg from soil sample OPB 2-2B at a depth of 5.0-5.5 feet. The highest concentration of TPH-D near tank #3 was 12,000 mg/kg from soil sample OPB 3-2B at 4.5-5.0 feet.
2. The presence of aromatic hydrocarbons including benzene, ethylbenzene, toluene, and xylene was nondetectable in all the soil samples except one for tank #3 (OPB 3-2B). For this tank soil sample OPB 3-2B had concentrations of benzene at 1.7 mg/kg, toluene at 0.2 mg/kg, ethylbenzene at 0.4 mg/kg, and xylene at 1.5 mg/kg at a depth of 4.5-5.0 feet.
3. Groundwater was encountered in three borings approximately 5 feet below the surface. Although the soil borings near diesel tank #1 were drilled to a total depth of 6.5 feet below the surface, groundwater was not encountered. A sump pump near turbine #1 is possibly responsible for lowering of groundwater near tank #1.
4. The lithology underlying the site to the top of the water table varies across the site from probable backfill sand surrounding tank #1, silty-gravelly sands and silty-sandy gravels near tank #2, and clayey-gravel with old concrete, brick, and rubble near tank #3.

Appendix A
SOIL BORING LOGS

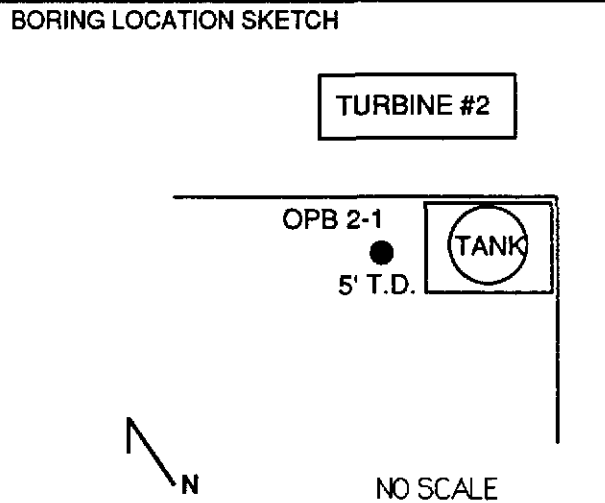
BORING LOCATION SKETCH 		JOB NAME: PG&E Oakland P/P		JOB ID: 8011		BORING NO.: OPB 1-1	
		JOB LOCATION: 50 Martin Luther King Jr. Boulevard, Oakland					
DRILLING CO. / DRILLERS NAME: PG&E, Glenn Lofing							
RIG TYPE / METHOD: B-40/Hydraulic							
SAMPLER TYPE: 2.5" Split Spoon				START		STOP	
GROUND SURFACE ELEV / COORDINATES: = 5 Feet				DATE: 9/26/90		DATE: 9/26/90	
TOTAL DEPTH: 6.5 Feet				DEPTH TO WATER: No Water		TIME:	
FIELD GEOLOGIST: G. Nulty				TIME: 9:20 AM			

NO SCALE

DEPTH (FEET)	P I D (PPM)	BLOW COUNTS	USCS CLASS.	DESCRIPTION	WELL DETAILS
0				SURFACE: 0-4": Asphalt	
				4"-2": Clays, light brown, 5% clasts 0.25", no petroleum odor.	
1			CL		
2	OPB 1-1A	2	SW	2'-3.5': Well graded sands, fine to very fine grain, appears to be imported, not native, iron oxide staining, no petroleum odor.	
3		2			
4		2	SC	3.5'-5': SC; Clayey sand, clay and sand is light brown, 5% pea gravel, no petroleum odor.	
5	OPB 1-1B	1			
6		2	SW	5'-6.5': (OPB 1-1B): SW, Well graded sands, fine to very fine, appears to be imported fill, iron oxide staining, no petroleum odor.	
7		5			
			6.5' T.D.		
				NOTE: Sump Pump in building results in lowering of ground water level near this boring.	

<p>BORING LOCATION SKETCH</p>	JOB NAME:	JOB ID:	BORING NO:	
	PG&E Oakland P/P	8011	OPB 1-2	
	JOB LOCATION:			
	50 Martin Luther King Jr. Boulevard, Oakland			
	DRILLING CO. / DRILLERS NAME:			
	PG&E, Glenn Lofing			
	RIG TYPE / METHOD:			
	B-40/Hydraulic			
	SAMPLER TYPE:		START	STOP
	2.5" Split Spoon			
GROUND SURFACE ELEV / COORDINATES:		DATE:	DATE:	
= 5 Feet		9/26/90	9/26/90	
TOTAL DEPTH:	DEPTH TO WATER:	TIME:	TIME:	
6.5 Feet	No Water			
FIELD GEOLOGIST:		10:45AM	11:15AM	
G. Nulty				

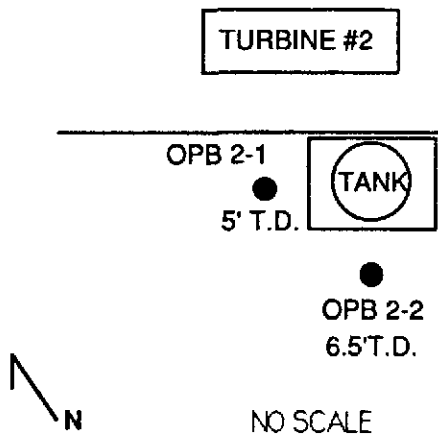
DEPTH (FEET)	P I D (PPM)	BLOW COUNTS	USCS CLASS.	DESCRIPTION	WELL DETAILS
0				SURFACE: 0-4": Asphalt	
1				4"-3.5': SW, Gravelly sands, sand is fine to very fine grain, moderate brown, gravel is 1/8" to 1" long, sand appears to be imported fill material. No petroleum odor.	
2			SW		
3					
4	OPB 1-2A	1		3.5'-5': (OPB 1-2A): Well graded sands, fine to very fine grain, appears to be imported fill sand, no petroleum odor.	
5		1	SW		
6	OPB 1-2B	7		5'-6.5': SW (OPB 1-2B): Well graded sand as above, fine to very fine grain, appears to be imported fill, bottom (6'-6.5') sample tube had concrete fragments in tube.	
		12		No petroleum odor.	
7			6.5'T.D.		
				T.D. 6.5' No water	
				NOTE: Sump Pump in building results in lowering of ground water level near this boring.	



JOB NAME:	JOB ID:	BORING NO.:	
PG&E Oakland P/P	8011	OPB 2-1	
JOB LOCATION:			
50 Martin Luther King Jr. Boulevard, Oakland			
DRILLING CO. / DRILLERS NAME:			
PG&E, Glenn Lofing			
RIG TYPE / METHOD:			
B-40/Hydraulic			
SAMPLER TYPE:			START
2.5" Split Spoon			STOP
GROUND SURFACE ELEV / COORDINATES:			DATE:
= 5 Feet			DATE:
TOTAL DEPTH:			DATE:
5 Feet			DATE:
DEPTH TO WATER:			DATE:
5 Feet			DATE:
FIELD GEOLOGIST:			TIME:
G. Nulty			TIME:
			2:15PM
			2:55PM

DEPTH (FEET)	P I D (PPM)	BLOW COUNTS	USCS CLASS.	DESCRIPTION	WELL DETAILS
0				SURFACE: 0-4": Asphalt	
1				4"-2': SM, silty, gravelly sands, gravel clasts range from 1/8" to 1" in length, clasts are sub-angular to sub-rounded. No petroleum odor.	
2		7		2'-3.5': (OPB 2-1A): silty, gravelly sands, clasts are 1/8" to 1" long, clasts are sub-rounded to sub-angular.	
3	OPB 2-1A	30	SM	No petroleum odor.	
4		15		3.5'-5': (OPB 2-1B): SM, silty, gravelly sands, gravels are 1/8" to 1/2" long, soil is coal black, approximately 100% saturated with petroleum hydrocarbons, strong petroleum odor. Oil staining on grains.	
5	OPB 2-1B	4		10	
		9	▽ 5T.D.	T.D. 5 Feet. Water 5' below grade.	

BORING LOCATION SKETCH



JOB NAME:

PG&E Oakland P/P

JOB ID:

8011

BORING NO.:

OPB 2-2

JOB LOCATION:

50 Martin Luther King Jr. Boulevard, Oakland

DRILLING CO. / DRILLERS NAME:

PG&E, Glenn Lofing

RIG TYPE / METHOD:

B-40/Hydraulic

SAMPLER TYPE:

2.5" Split Spoon

START

STOP

GROUND SURFACE ELEV / COORDINATES:

≈ 5 Feet

DATE:

DATE:

9/25/90

9/25/90

TOTAL DEPTH:

6.5 Feet

DEPTH TO WATER:

≈ 5-5.5 Feet

TIME:

TIME:

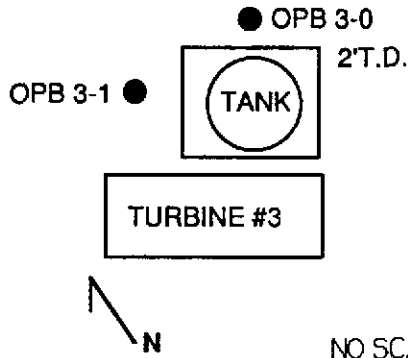
FIELD GEOLOGIST:

G. Nulty

3:10PM

DEPTH (FEET)	P I D (PPM)	BLOW COUNTS	USCS CLASS.	DESCRIPTION	WELL DETAILS
0				SURFACE: 0-4": Asphalt	
1			SM	4"-2": SM, silty gravelly sands, sand is moderate brown to dark brown, gravel is 1/8" to 1/2" long, soil is poorly sorted, gravel is sub-rounded to sub-angular, no petroleum odor.	
2	OPB 2-2A	4		2'-3.5': (OPB 2-2A): SM, silty gravelly sands, as above	
3		5		except 10% concrete chunks 2" long; soil is moist, friable, no petroleum odor.	
4		6		3.5'-5': SM, same as above, no petroleum odor. No sample due to concrete.	
5	OPB 2-2B	3	GM	5'-6.5': (OPB 2-2B): GM, silty sandy gravels, gravels are sub-angular to sub-rounded, 1/8" to 3/4" long, soil is 100% saturated with petroleum hydrocarbon, oil staining sheen on surfaces, coal black color on soil. Strong petroleum odor.	
6		2			
7		2			
			6.5' T.D.	T.D. 6.5 Feet. Water ≈ 5'-5.5'	

BORING LOCATION SKETCH



JOB NAME:

PG&E Oakland P/P

JOB ID:

8011

BORING NO:

OPB 3-0

JOB LOCATION:

50 Martin Luther King Jr. Boulevard, Oakland

DRILLING CO. / DRILLERS NAME:

PG&E, Glenn Lofing

RIG TYPE / METHOD:

B-40/Hydraulic

SAMPLER TYPE:

2.5" Split Spoon

START

STOP

GROUND SURFACE ELEV / COORDINATES:

DATE:

DATE:

≈ 5 Feet

9/24/90

9/24/90

TOTAL DEPTH:

DEPTH TO WATER:

2 Feet

No Water

TIME:

TIME:

FIELD GEOLOGIST:

G. Nulty

NO SCALE

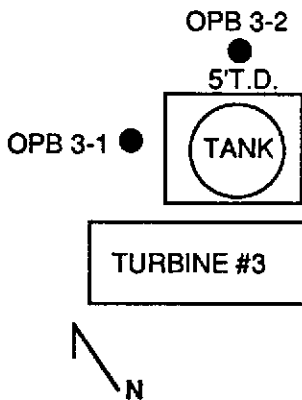
DEPTH (FEET)	P I D (PPM)	BLOW COUNTS	USCS CLASS.	DESCRIPTION	WELL DETAILS
0				SURFACE: 0-4": Asphalt	
1			GC	4"-2': Clay, grey with gravel. Could not drill deeper due to concrete.	
2			2'T.D.	2' T.D.	

BORING LOCATION SKETCH 	JOB NAME: PG&E Oakland P/P		JOB ID: 8011		BORING NO: OPB 3-1	
	JOB LOCATION: 50 Martin Luther King Jr. Boulevard, Oakland					
	DRILLING CO. / DRILLERS NAME: PG&E, Glenn Lofing					
	RIG TYPE / METHOD: B-40/Hydraulic					
	SAMPLER TYPE: 2.5" Split Spoon				START	STOP
	GROUND SURFACE ELEV / COORDINATES: = 5 Feet				DATE: 9/24/90	DATE: 9/24/90
	TOTAL DEPTH: 4 Feet		DEPTH TO WATER: No Water		TIME:	TIME:
	FIELD GEOLOGIST: G. Nulty					

NO SCALE

DEPTH (FEET)	P I D (PPM)	BLOW COUNTS	USCS CLASS.	DESCRIPTION	WELL DETAILS
0				SURFACE: 0-4": Asphalt	
			SM	4"-1": Brown silty sand.	
1				1'-3': Clay, grey with gravel, gravel clasts are sub-rounded.	
2			GC		
3	OPB 3-1A	50+	GM	3'-4' (3-1A): Brown sand with gravel, sand is fine to medium grain, poorly sorted, gravel is rounded to sub-rounded;	
4			4 T.D.	gravel clasts are 1/8" to 4"; Weak petroleum odor. Parts of red brick, metal boiler tubing 4" long. Boiler fire brick;	
5				double headed nails. Could not drill deeper because of concrete.	
				4' T.D.	

BORING LOCATION SKETCH



NO SCALE

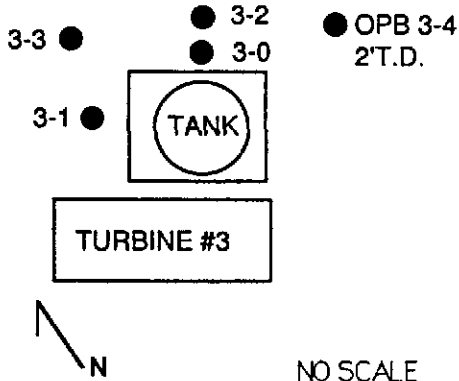
JOB NAME: PG&E Oakland P/P	JOB ID: 8011	BORING NO.: OPB 3-2
JOB LOCATION: 50 Martin Luther King Jr. Boulevard, Oakland		
DRILLING CO. / DRILLERS NAME: PG&E, Glenn Lofing		
RIG TYPE / METHOD: B-40/Hydraulic		
SAMPLER TYPE: 2.5" Split Spoon		START
GROUND SURFACE ELEV / COORDINATES: ≈ 5 Feet		STOP
TOTAL DEPTH: 5 Feet	DEPTH TO WATER: 5 Feet	DATE: 9/24/90
FIELD GEOLOGIST: G. Nulty		DATE: 9/24/90
		TIME:

DEPTH (FEET)	P I D (PPM)	BLOW COUNTS	USCS CLASS.	DESCRIPTION	WELL DETAILS
0				SURFACE: 0-4": Asphalt	
1			GC	4"-3": Clayey-sandy gravels, gravel clasts 1/8" to 3", slight petroleum odor.	
2					
3	OPB 3-2A	15	GC	3'-3.5' (OPB 3-2A): Clayey sands, gravelly sands, sand is brown to dark brown, gravel is fire brick, gravel, pieces of concrete, faint petroleum odor. Piece of rubber gasket	
4		50+	GM	2" diameter.	
5	OPB 3-2B	25	▽	3.5'-5': Silty sandy gravels; sediment is very dark brown to black; gravel is pea size; minor organic material i.e. roots, plant material. Weak petroleum odor.	
6		50	5'T.D.	T.D. 5 Feet. Water in boring at 5' below grade.	
7					
8					

<p>BORING LOCATION SKETCH</p>	JOB NAME: PG&E Oakland P/P		JOB ID: 8011		BORING NO.: OPB 3-3	
	JOB LOCATION: 50 Martin Luther King Jr. Boulevard, Oakland					
	DRILLING CO. / DRILLERS NAME: PG&E, Glenn Lofing					
	RIG TYPE / METHOD: B-40/Hydraulic					
	SAMPLER TYPE: 2.5" Split Spoon				START	STOP
	GROUND SURFACE ELEV / COORDINATES: ≈ 5 Feet				DATE: 9/24/90	DATE: 9/24/90
	TOTAL DEPTH: 5 Feet		DEPTH TO WATER: No Water		TIME: 2:45PM	TIME: 3:10PM
	FIELD GEOLOGIST: G. Nulty					
	NO SCALE					

DEPTH (FEET)	P I D (PPM)	BLOW COUNTS	USCS CLASS.	DESCRIPTION	WELL DETAILS
0				SURFACE: 0-4": Asphalt	
1			GC	4"-3': GC; clayey gravel, clay is light brown, friable, gravel clasts are sub-rounded to sub-angular, clasts are 1/8" to 1/2"; no petroleum odor.	
2					
3		26	GC	3'-4.5' (Sample 3-3A; 3.5'-4'): Clayey gravel, clay is dark grey	
4	OPB 3-3A	36		friable, clasts of gravel 1/8" to 2.5"; small (5%) amount of fire brick and concrete (5%). Clasts are sub-rounded to	
5		38		sub-angular, no petroleum odor. Could not drill deeper due to concrete.	
				4.5' T.D.	

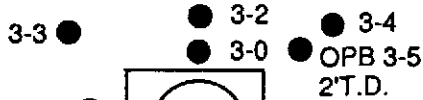
BORING LOCATION SKETCH



JOB NAME: PG&E Oakland P/P		JOB ID: 8011	BORING NO.: OPB 3-4	
JOB LOCATION: 50 Martin Luther King Jr. Boulevard, Oakland				
DRILLING CO. / DRILLERS NAME: PG&E, Glenn Lofing				
RIG TYPE / METHOD: B-40/Hydraulic				
SAMPLER TYPE: 2.5" Split Spoon			START	STOP
GROUND SURFACE ELEV / COORDINATES: ≈ 5 Feet			DATE: 9/24/90	DATE:
TOTAL DEPTH: 2 Feet		DEPTH TO WATER: No Water		
FIELD GEOLOGIST: G. Nulty			TIME: 3:25PM	TIME:

DEPTH (FEET)	P I D (PPM)	BLOW COUNTS	USCS CLASS.	DESCRIPTION	WELL DETAILS
0				SURFACE: 0-4": Asphalt	
1			GC	4"-2': GC, clayey gravels; clayey sandy gravels; sand is dark brown; poorly sorted; gravels are 1/8" to 0.25"; moderate petroleum odor. Hit hard streak could not drill deeper.	
2			2'T.D.	No samples.	
				2' T.D.	

BORING LOCATION SKETCH



TURBINE #3



NO SCALE

JOB NAME:

PG&E Oakland P/P

JOB ID:

8011

BORING NO:

OPB 3-5

JOB LOCATION:

50 Martin Luther King Jr. Boulevard, Oakland

DRILLING CO. / DRILLERS NAME:

PG&E, Glenn Lofing

RIG TYPE / METHOD:

B-40/Hydraulic

SAMPLER TYPE:

2.5" Split Spoon

START

STOP

GROUND SURFACE ELEV / COORDINATES:

= 5 Feet

DATE:

DATE:

9/24/90

9/24/90

TOTAL DEPTH:

2 Feet

DEPTH TO WATER:

No Water

TIME:

TIME:

3:40PM

3:55PM

FIELD GEOLOGIST:

G. Nulty

DEPTH (FEET)	P I D (PPM)	BLOW COUNTS	USCS CLASS.	DESCRIPTION	WELL DETAILS
0				SURFACE: 0-4": Asphalt	
1			GC	4"-2": Clayey gravels, clayey sandy gravels, clay is dark brown; gravel clasts are 1/8" to 0.5". Weak petroleum odor; Could not drill deeper due to hard streak.	
2			2'T.D	T.D. 2'	
3					
4					

Appendix B

**LABORATORY ANALYTICAL REPORT AND
CHAIN-OF-CUSTODY RECORD**

Analytical Report

LOG NO: E90-09-536

Received: 26 SEP 90
Reported: 10 OCT 90

Mr. Gary Nulty
PG&E Technical & Eco. Services
3400 Crow Canyon Road
San Ramon, California 94583

Purchase Order: Z-19-0-128-89

Project: 8011

REPORT OF ANALYTICAL RESULTS

Page 1

LOG NO	SAMPLE DESCRIPTION, SOIL SAMPLES	DATE SAMPLED				
09-536-1	OPB-1-1A	26 SEP 90				
09-536-2	OPB-1-1B	26 SEP 90				
09-536-3	OPB-1-2A	26 SEP 90				
09-536-4	OPB-1-2B	26 SEP 90				
09-536-5	OPB-2-1A	26 SEP 90				
PARAMETER	09-536-1	09-536-2	09-536-3	09-536-4	09-536-5	
TPH - Semivolatile Hydrocarbons						
Date Analyzed	10.05.90	10.05.90	10.04.90	10.04.90	10.05.90	
Dilution Factor, Times	10	1	10	10	10	
C12 to C25 Hydrocarbons, mg/kg	26	12	60	70	150	
C12-C25 Fuel characterization, .	DIESEL	DIESEL	DIESEL	DIESEL	DIESEL	
Aromatic Hydrocarbons						
Date Analyzed	10.04.90	10.04.90	10.04.90	10.04.90	10.04.90	
Dilution Factor, Times	1	1	1	1	1	
Benzene, mg/kg	<0.005	<0.005	<0.005	<0.005	<0.005	
Ethylbenzene, mg/kg	<0.005	<0.005	<0.005	<0.005	<0.005	
Toluene, mg/kg	<0.005	<0.005	<0.005	<0.005	<0.005	
Total Xylene Isomers, mg/kg	<0.005	<0.005	<0.005	<0.005	<0.005	

This Fuel Characterization is a qualitative identification based upon a visual comparison of sample chromatograms with those from authentic standards.



Analytical Report

LOG NO: E90-09-536

Received: 26 SEP 90
Reported: 10 OCT 90

Mr. Gary Nulty
PG&E Technical & Eco. Services
3400 Crow Canyon Road
San Ramon, California 94583

Purchase Order: Z-19-0-128-89

Project: 8011

REPORT OF ANALYTICAL RESULTS

Page 2

LOG NO	SAMPLE DESCRIPTION, SOIL SAMPLES	DATE SAMPLED				
09-536-6	OPB-2-1B	26 SEP 90				
09-536-7	OPB-2-2A	26 SEP 90				
09-536-8	OPB-2-2B	26 SEP 90				
09-536-9	OPB-3-1A	26 SEP 90				
09-536-10	OPB-3-2A	26 SEP 90				
PARAMETER	09-536-6	09-536-7	09-536-8	09-536-9	09-536-10	
TPH - Semivolatile Hydrocarbons						
Date Analyzed	10.04.90	10.08.90	10.05.90	10.04.90	10.04.90	
Dilution Factor, Times	100	10	1000	1000	1000	
C12 to C25 Hydrocarbons, mg/kg	1000	60	10000	1300	4100	
C12-C25 Fuel characterization, .	DIESEL	DIESEL	DIESEL	DIESEL	DIESEL	
Other TPH - Semivolatile Hydrocarbons	---	---	---	---	---	
Aromatic Hydrocarbons						
Date Analyzed	10.05.90	10.04.90	10.04.90	10.05.90	10.05.90	
Dilution Factor, Times	5	1	1000	5	400	
Benzene, mg/kg	<0.025	<0.005	<1	<0.025	<0.4	
Ethylbenzene, mg/kg	<0.025	<0.005	<1	<0.025	<0.4	
Toluene, mg/kg	<0.025	<0.005	<1	<0.025	<0.4	
Total Xylene Isomers, mg/kg	<0.025	<0.005	<1	<0.025	<0.4	

This Fuel Characterization is a qualitative identification based upon a visual comparison of sample chromatograms with those from authentic standards.

Analytical Report

LOG NO: E90-09-536

Received: 26 SEP 90
Reported: 10 OCT 90

Mr. Gary Nulty
PG&E Technical & Eco. Services
3400 Crow Canyon Road
San Ramon, California 94583

Purchase Order: Z-19-0-128-89

Project: 8011

REPORT OF ANALYTICAL RESULTS

Page 3

LOG NO	SAMPLE DESCRIPTION, SOIL SAMPLES	DATE SAMPLED	
09-536-11	OPB-3-2B	26 SEP 90	
09-536-12	OPB-3-3A	26 SEP 90	
PARAMETER		09-536-11	09-536-12
TPH - Semivolatile Hydrocarbons			
Date Analyzed		10.04.90	10.05.90
Dilution Factor, Times		1000	100
C12 to C25 Hydrocarbons, mg/kg		12000	210
C12-C25 Fuel characterization, .		DIESEL	DIESEL
Other TPH - Semivolatile Hydrocarbons		---	---
Aromatic Hydrocarbons			
Date Analyzed		10.09.90	10.05.90
Dilution Factor, Times		100	1
Benzene, mg/kg		1.7	<0.005
Ethylbenzene, mg/kg		0.4	<0.005
Toluene, mg/kg		0.2	<0.005
Total Xylene Isomers, mg/kg		1.5	<0.005

This Fuel Characterization is a qualitative identification based upon a visual comparison of sample chromatograms with those from authentic standards.

Andy J. Ficklin for
Sim D. Lessley, Ph.D., Laboratory Director

ORDER PLACED FOR CLIENT: PG&E Technical & Eco. Services 9009536 :
ANALYTICAL : EMVL LAB : 11:22:33 11 DEC 1990 - P. 1 :

SAMPLES...	SAMPLE DESCRIPTION..	DETERM.....	DATE....	METHOD.....	EQUIP.	BATCH	ID.NO
			ANALYZED				
9009536*1	OPB-1-1A	3550.FUEL 5030.BTEX	10.05.90 10.04.90	3550/Mod 8015 5030/8020	516-08 556-07	230 A616	7754
9009536*2	OPB-1-1B	3550.FUEL 5030.BTEX	10.05.90 10.04.90	3550/Mod 8015 5030/8020	516-08 556-07	230 A616	7754
9009536*3	OPB-1-2A	3550.FUEL 5030.BTEX	10.04.90 10.04.90	3550/Mod 8015 5030/8020	516-08 556-07	230 A616	7754
9009536*4	OPB-1-2B	3550.FUEL 5030.BTEX	10.04.90 10.04.90	3550/Mod 8015 5030/8020	516-08 556-07	230 A616	7754
9009536*5	OPB-2-1A	3550.FUEL 5030.BTEX	10.05.90 10.04.90	3550/Mod 8015 5030/8020	516-08 556-07	230 A616	7754
9009536*6	OPB-2-1B	3550.FUEL 5030.BTEX	10.04.90 10.05.90	3550/Mod 8015 5030/8020	516-08 556-07	230 A616	7754
9009536*7	OPB-2-2A	3550.FUEL 5030.BTEX	10.08.90 10.04.90	3550/Mod 8015 5030/8020	516-08 556-07	230 A616	7754
9009536*8	OPB-2-2B	3550.FUEL 5030.BTEX	10.05.90 10.04.90	3550/Mod 8015 5030/8020	516-08 556-07	230 A616	7754
9009536*9	OPB-3-1A	3550.FUEL 5030.BTEX	10.04.90 10.05.90	3550/Mod 8015 5030/8020	516-08 556-07	230 A616	7754
9009536*10	OPB-3-2A	3550.FUEL 5030.BTEX	10.04.90 10.05.90	3550/Mod 8015 5030/8020	516-08 556-07	230 A616	7754
9009536*11	OPB-3-2B	3550.FUEL 5030.BTEX	10.04.90 10.09.90	3550/Mod 8015 5030/8020	516-08 556-07	230 A616	7754
9009536*12	OPB-3-3A	3550.FUEL 5030.BTEX	10.05.90 10.05.90	3550/Mod 8015 5030/8020	516-08 556-07	230 A616	7754

**

Notes: Equipment = BC Analytical identification number for a particular piece of analytical equipment.

ID.NO = BC Analytical employee identification number of analyst.

BC ANALYTICAL

BATCH QC REPORT
 ORDER: E9009536

DATE REPORTED : 11/28/90

LABORATORY CONTROL STANDARDS

PARAMETER	DATE ANALYZED	BATCH NUMBER	LC RESULT	LT RESULT	UNIT	PERCENT RECOVERY
TSP - Semivolatile Hydrocarbons						
Dilution Factor	10.04.90	230	1	1	Times	100
C12 to C25 Hydrocarbons	10.04.90	230	29	20	mg/kg	145
EPA Modified 8015/8020						
Dilution Factor	10.05.90	615	1	1	Times	100
Fuel Hydrocarbons	10.05.90	615	1140	1000	ug/L	114
EPA Modified 8015/8020						
Dilution Factor	10.04.90	615	1	1	Times	100
Fuel Hydrocarbons	10.04.90	615	1010	1000	ug/L	101
EPA Modified 8015/8020						
Dilution Factor	10.04.90	614	1	1	Times	100
Fuel Hydrocarbons	10.04.90	614	1010	1000	ug/L	101
EPA Modified 8015/8020						
Dilution Factor	10.05.90	614	1	1	Times	100
Fuel Hydrocarbons	10.05.90	614	1140	1000	ug/L	114
EPA Modified 8015/8020						
Dilution Factor	10.05.90	616	1	1	Times	100
Fuel Hydrocarbons	10.05.90	616	1140	1000	ug/L	114
EPA Modified 8015/8020						
Dilution Factor	10.09.90	623	1	1	Times	100
Fuel Hydrocarbons	10.09.90	623	1050	1000	ug/L	105

BC ANALYTICAL

BATCH QC REPORT
 ORDER: E9009536

DATE REPORTED : 11/28/90

MATRIX QC PRECISION (DUPLICATE SPIKES)

PARAMETER	DATE ANALYZED	BATCH NUMBER	S1 RESULT	S2 RESULT	UNIT	RELATIVE %DIFF
TTH - Semivolatile Hydrocarbons						
Dilution Factor	10.05.90	230	1	1	Times	0
C12 to C25 Hydrocarbons	10.05.90	230	43	45	mg/kg	5
EPA Modified 8015/8020						
Dilution Factor	10.05.90	615	1	1	Times	0
Fuel Hydrocarbons	10.05.90	615	1200	1100	ug/L	9
EPA Modified 8015/8020						
Dilution Factor	10.04.90	615	1	1	Times	0
Fuel Hydrocarbons	10.04.90	615	4450	1290	ug/kg	110
EPA Modified 8015/8020						
Dilution Factor	10.03.90	614	1000	1000	Times	0
Fuel Hydrocarbons	10.03.90	614	3000	3200	mg/kg	6
EPA Modified 8015/8020						
Dilution Factor	10.04.90	614	1	1	Times	0
Fuel Hydrocarbons	10.04.90	614	900	870	ug/kg	3
EPA Modified 8015/8020						
Dilution Factor	10.05.90	616	400	400	Times	0
Fuel Hydrocarbons	10.05.90	616	2300	2400	mg/kg	4
EPA Modified 8015/8020						
Dilution Factor	10.09.90	623	100	100	Times	0
Fuel Hydrocarbons	10.09.90	623	260	240	mg/kg	8

BC ANALYTICAL

BATCH QC REPORT
 ORDER: E9009536

DATE REPORTED : 11/28/90

MATRIX QC ACCURACY (SPIKES)

PARAMETER	DATE ANALYZED	BATCH NUMBER	SBAR RESULT	TRUE RESULT	RBAR RESULT	UNIT	PERCENT RECOVERY
TP - Semivolatile Hydrocarbons C12 to C25 Hydrocarbons	10.05.90	230	44	32	12	mg/kg	160
EP Modified 8015/8020 Fuel Hydrocarbons	10.05.90	615	1150	1000	<100	ug/L	115
EPA Modified 8015/8020 Fuel Hydrocarbons	10.04.90	615	2870	1900	900	ug/kg	197
EP Modified 8015/8020 Fuel Hydrocarbons	10.03.90	614	3100	3400	2400	mg/kg	SOR
EPA Modified 8015/8020 Fuel Hydrocarbons	10.04.90	614	885	1000	<100	ug/kg	89
EP Modified 8015/8020 Fuel Hydrocarbons	10.05.90	616	2350	2200	1800	mg/kg	SOR
EP Modified 8015/8020 Fuel Hydrocarbons	10.09.90	623	250	260	160	mg/kg	90

SOR = Spike Out of Range
 (relative to high sample concentration)

BC ANALYTICAL

BATCH QC REPORT
ORDER: E9009536

DATE REPORTED : 11/28/90

METHOD BLANKS AND REPORTING DETECTION LIMIT (RDL)

PARAMETER	DATE ANALYZED	BATCH NUMBER	BLANK RESULT	RDL	UNIT
TH - Semivolatile Hydrocarbons					
Date Analyzed	10.04.90	230	10.04.90	NA	Date
Dilution Factor	10.04.90	230	1	NA	Times
C12 to C25 Hydrocarbons	10.04.90	230	0.70	1	mg/kg
EPA Modified 8015/8020					
Date Analyzed	10.04.90	615	10/04/90	NA	Date
Date Extracted	10.04.90	615	10/04/90	NA	Date
Dilution Factor	10.04.90	615	1	NA	Times
Benzene	10.04.90	615	0	5	ug/L
Ethylbenzene	10.04.90	615	0	5	ug/L
Toluene	10.04.90	615	0	5	ug/L
Total Xylene Isomers	10.04.90	615	0	5	ug/L
Fuel Hydrocarbons	10.04.90	615	0	100	ug/L
EPA Modified 8015/8020					
Date Analyzed	10.03.90	615	10/03/90	NA	Date
Date Extracted	10.03.90	615	10/03/90	NA	Date
Dilution Factor	10.03.90	615	1	NA	Times
Benzene	10.03.90	615	0	5	ug/kg
Ethylbenzene	10.03.90	615	0	5	ug/kg
Toluene	10.03.90	615	0	5	ug/kg
Total Xylene Isomers	10.03.90	615	0	5	ug/kg
Fuel Hydrocarbons	10.03.90	615	0	100	ug/kg
EPA Modified 8015/8020					
Date Analyzed	10.03.90	614	10/03/90	NA	Date
Date Extracted	10.03.90	614	10/02/90	NA	Date
Dilution Factor	10.03.90	614	100	NA	Times
Benzene	10.03.90	614	0	0.1	mg/kg
Ethylbenzene	10.03.90	614	0	0.1	mg/kg
Toluene	10.03.90	614	0	0.1	mg/kg
Total Xylene Isomers	10.03.90	614	0	0.1	mg/kg
Fuel Hydrocarbons	10.03.90	614	0	10	mg/kg
EPA Modified 8015/8020					
Date Analyzed	10.04.90	614	10/04/90	NA	Date
Date Extracted	10.04.90	614	10/04/90	NA	Date
Dilution Factor	10.04.90	614	1	NA	Times
Benzene	10.04.90	614	0	5	ug/kg
Ethylbenzene	10.04.90	614	0	5	ug/kg
Toluene	10.04.90	614	0	5	ug/kg
Total Xylene Isomers	10.04.90	614	0	5	ug/kg
Fuel Hydrocarbons	10.04.90	614	0	100	ug/kg
EPA Modified 8015/8020					
Date Analyzed	10.05.90	616	10/05/90	NA	Date
Date Extracted	10.05.90	616	10/05/90	NA	Date
Dilution Factor	10.05.90	616	100	NA	Times
Benzene	10.05.90	616	0	0.1	mg/kg
Ethylbenzene	10.05.90	616	0	0.1	mg/kg

BC ANALYTICAL

BATCH QC REPORT
 ORDER: A9010010/E9009536

DATE REPORTED : 11/29/90

Page 2

METHOD BLANKS AND REPORTING DETECTION LIMIT (RDL)

PARAMETER	DATE ANALYZED	BATCH NUMBER	BLANK RESULT	RDL	UNIT
Toluene	10.05.90	616	0	0.1	mg/kg
Total Xylene Isomers	10.05.90	616	0	0.1	mg/kg
Fuel Hydrocarbons	10.05.90	616	0	10	mg/kg
EPA Modified 8015/8020					
Date Analyzed	10.09.90	623	10/09/90	NA	Date
Date Extracted	10.09.90	623	10/08/90	NA	Date
Dilution Factor	10.09.90	623	100	NA	Times
Benzene	10.09.90	623	0	0.1	mg/kg
Ethylbenzene	10.09.90	623	0	0.1	mg/kg
Toluene	10.09.90	623	0	0.1	mg/kg
Total Xylene Isomers	10.09.90	623	0	0.1	mg/kg
Fuel Hydrocarbons	10.09.90	623	0	10	mg/kg

CHAIN OF CUSTODY RECORD

BC Log Number

009-336

Client name MILKIE BASE ELECTRIC COMPANY			Project or PO# FARREN D. JONES/EXHIBIT 11			Analyses required					
Address 2500 CUCUMBER CANYON RD.			Phone # 660-5512			<div style="transform: rotate(-45deg); display: inline-block;"> TPH-D 2500/9015 BTEX 5020/9020 </div>					
City, State, Zip SAN RAMON, CA 94583		Report attention GARY NULTY									
Lab Sample number	Date sampled	Time sampled	Type* See key below	Sampled by G. NULTY	Number of containers	Remarks					
	9/26/90	0940	So	OPB 1-1A	1	X	X				
	9/26/90	1030	So	OPB 1-1B	1	X	X				Use Lowest Detection Limits
	9/26/90	1045	So	OPB 1-2A	1	X	X				
	9/26/90	1110	So	OPB 1-2B	1	X	X				
	9/25/90	1445	So	OPB 2-1A	1	X	X				
	9/25/90	1455	So	OPB 2-1B	1	X	X				
	9/25/90	1520	So	OPB 2-2A	1	X	X				
	9/25/90	1545	So	OPB 2-2B	1	X	X				
	9/24/90	1145	So	OPB 3-1A	1	X	X				
	9/24/90	1415	So	OPB 3-2A	1	X	X				
	9/24/90	1445	So	OPB 3-2B	1	X	X				
	9/24/90	1505	So	OPB 3-3A	1	X	X				

Signature	Print Name	Company	Date	Time
<i>Gary Nulty</i>	GARY E. NULTY	PG&E	9/26/90	16:40
Received by				
Relinquished by				
Received by				
Relinquished by				
Received by Laboratory <i>Monika Scott</i>	Monika Scott	PCA	9-26-90	4:40

BROWN AND CALDWELL LABORATORIES

- 1255 Powell Street, Emeryville, CA 94608 (415) 428-2300
- 373 South Fair Oaks Avenue, Pasadena, CA 91105 (818) 795-7553
- 1200 Pacific Avenue, Anaheim, CA 92805

Note:
 Samples are discarded 30 days after results are reported unless other arrangements are made.
 Hazardous samples will be returned to client or disposed of at client expense.
 *KEY: AQ—Aqueous NA—Nonaqueous SL—Sludge GW—Groundwater SO—Soil OT—Other PE—Petroleum