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Port of Oakland
530 Water Street, Oakland, California

Investigation of Diesel Spill at Keep on Trucking 370 8th Avenue, Oakland, California

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Investigation of Diesel Spill

at Keep on Trucking

370 8th Avenue, Oakland, California

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Executive Summary

This Report documents the investigation of a diesel spill at Keep on Trucking, 370 8th Avenue, and at the Ninth Avenue Terminal, Oakland, California. The investigation followed remediation activities for a diesel release at the site that originated from an underground diesel dispenser pipe associated with an aboveground diesel storage tank at Keep on Trucking. A workplan entitled *Source Investigation Summary and Workplan to Delineate Soil and Groundwater Contamination*, dated January 20, 1993 (Workplan) was prepared by Uribe & Associates and submitted to the Alameda County Health Care Services Agency (County). By letter dated March 4, 1993, the Port documented revisions to the Workplan in response to the County's February 18, 1993 letter to the Port. The workplan included a "primary source" investigation, including an excavation into the area immediately surrounding the leaking underground pipe. This excavation was conducted on February 12, 1993, and a report entitled Report of the Source Area Primary Pathway Investigation at Keep on Trucking was submitted to the County on March 31, 1993.

This report incorporates the remaining tasks outlined in the Workplan, including the cannery line investigation, the secondary pathway investigation, and soil borings. The cannery line investigation determined that the line was clogged with sediments and is not functional as a storm drain system or as a conduit for contamination. Samples collected from the sediments in the cannery line indicate weathered diesel exists; fresh diesel resembling the source was not found in the cannery line samples when compared by the Director of Clayton Laboratories. No further investigation is recommended in this area.

The secondary pathway investigation found no evidence of diesel migration in the backfill material along the cannery line or main storm drain. Trenches were dug over the lines in various locations and samples were collected and analyzed for diesel and BTEX. Some of the samples contained diesel-range hydrocarbons but did not resemble the diesel from the source when compared by the Director of Clayton Laboratories. The source of these hydrocarbons is unknown but appears not to be associated with the release at Keep on Trucking.

Two soil borings completed in the source area found diesel-range hydrocarbons in the soil and water which resembled the source area diesel. Borings completed in areas upgradient from the source found diesel-range hydrocarbons which did not resemble the source diesel. The source of this diesel upgradient from the source area is unknown.

Future activites at the site will include the removal of an underground storage tank found in the source area during the primary pathway investigation. During this tank removal,

contaminated soils will be excavated. In addition, the discovery of hydrocarbon contamination in the soils and water upgradient from the Keep on Trucking source requires additional investigation into its origin and impact on groundwater.

Investigation of Diesel Spill

at Keep on Trucking

370 8th Avenue, Oakland, CA

1 Introduction

This report documents the results of Uribe & Associates (U&A) investigation of the diesel spill at Keep on Trucking (KOT), 370 8th Avenue, Oakland, California (Figure 1). The site is leased to KOT by the Port of Oakland (Port) and is used as a distribution yard for transporting steel. KOT owned and operated a diesel dispenser attached to an aboveground storage tank (AST). This fuel dispenser system and the associated underground piping has been identified as the source of a diesel release into the adjacent storm drains and ultimately Clinton Basin and the San Francisco Bay. The system has been removed from service. U&A was contracted by the Port to perform investigations into the source and extent of contamination resulting from the diesel release.

U&A prepared a workplan dated January 20, 1993, for site investigations to delineate soil and groundwater contamination resulting from the release. By letter dated March 4, 1993, the Port documented revisions to the Workplan in response to the County's February 18, 1993 letter to the Port. The Workplan included investigations into the extent of contamination in the source area, the active and inactive storm drain systems, and in upgradient areas. U&A prepared the *Report of the Source Area Primary Pathway Investigation at Keep on Trucking*, dated March 30, 1993 and the Port submitted the report to the County on March 31, 1993.

This Phase II report describes the additional investigations performed by U&A to delineate contamination in the vicinity of the cannery line, main storm drain lines, and areas upgradient of the source. The Phase II investigation included the following tasks:

- Cannery line investigation
  - track line with cable probe and surface detector
  - excavate line in three places
  - collect soil and water samples

- Secondary pathway investigations
  - excavate four trenches over storm drain
  - collect soil and water samples
- Soil borings at source and upgradient areas
  - install borings
  - collect samples

The investigations began on March 1 and continued through March 15, 1993. Soil excavations and site management was performed by Riedel Environmental Services. Soil borings were drilled by Great Sierra Exploration. Vickers Concrete Sawing cored through concrete. Subtronic Corporation conducted storm drain surveys. Clayton Laboratories conducted sample analysis. U&A directed and documented all activities, collected samples, and maintained communications with KOT, Ninth Avenue Terminal personnel, and the Port.

2 Project History

Diesel contamination was first noticed in Clinton Basin by the United States Coast Guard (USCG) in late October, 1992. The Port soon discovered that the diesel was present in the storm drains at the Ninth Avenue Terminal. The remediation of the storm drains began immediately. Subsequent investigations by the Port identified the source of the diesel to be underground piping associated with aboveground diesel storage tanks fuel dispenser system located at KOT at 370 8th Avenue.

The fuel dispenser system identified as being the source of the release was removed from service on December 30, 1992. A detailed chronology of the storm drain clean-up and of events leading to the contamination source discovery is provided in the *Source Investigation Summary and Workplan to Delineate Soil and Groundwater Contamination,* prepared by U&A on January 20, 1993. A brief synopsis of events is provided here:

10/21/92	USCG notifies Port of a diesel spill into Clinton Basin.
11/2/92	Port discovers diesel in storm drains at the Ninth Avenue Terminal.
11/6/92	The Port begins removing diesel from storm drains into vacuum trucks, and on 11/19/92 into on-site storage tanks.
11/20/92	Testing and Technology conducted a precision tightness test on the KOT fuel line. The test indicated that the system was not leaking. Inventory reconciliation conducted by KOT also indicated no leakage.
12/16/92	Investigations into the source discover diesel accumulation in an isolated portion of the storm drain near a fuel dispensing system in the KOT yard.
12/29/92	Red dye is introduced into the fuel dispensing system and appears in the storm drain the following day.
12/30/92	The fuel dispensing system is removed from service.
1/20/93	U&A submits Workplan to the Port to verify the source and delineate the extent of contamination.
2/12/93	Excavation of the underground piping and source area is conducted. A previously unknown underground storage tank is discovered in the source area but is not suspected to be a source of contamination.

3/4/93	Addendum to Workplan submitted to County.
3/1-3/93	Soil borings are drilled.
3/2-5/93	Cannery line investigation conducted to determine possible secondary diesel migration routes.
3/11-15/93	Storm drain investigation conducted to determine possible secondary diesel migration routes.
3/31/93	The Port submitted to the County the *Report of the Source Area Primary Pathway Investigation,* dated March 30, 1993, documenting the initial excavation of the leaking underground piping.

3 Site Activities

3.1 Cannery Line Investigation

The cannery line refers to a section of storm drain pipe on the KOT site running westward an undetermined distance from the lateral loop (see Figure 2). U&A personnel conducted the cannery line investigation from March 2 through 5 to determine how far the line travels, whether it outfalls to the Bay, and whether it could have served as a conduit for diesel contamination. The investigation included the following tasks:

- excavating three trenches along the cannery line,
- tracking the course of the cannery line with a cable probe and surface detector,
- examining and describing existing soil conditions,
- collecting soil and water samples, and
- conducting sample analysis.

The Port provided U&A with storm drain maps of the area that showed the cannery line travelling an undetermined distance onto the Ninth Avenue Terminal yard with only one manhole located at the lateral loop juncture. In order to ascertain the length and direction of the cannery line, Subtronic Corporation personnel inserted a cable probe on March 2, as far as possible westward into the cannery line from the only manhole on the line. The probe would go no further than 35 feet due to obstruction in the pipe.

Riedel personnel dug a trench (trench 1) with a backhoe 100 feet west of the manhole unearthing and deliberately rupturing the cannery line. Soil samples 9AV-X1-1 and 9AV-X1-2 were collected from the sediments found in the ruptured line. The cable probe was inserted into the pipe westward and only reached six feet due to the sediments obstructing the line. Twelve-inch packers were inserted into the line on either end of the breakage to prevent possible contamination to the surrounding soils. U&A personnel collected water samples 9AV-W-1 and 9AV-W-2 from recharging groundwater in the trench on March 3, 1993. Shoring was used to brace the walls of the excavation before anyone was allowed to work in the trench. Riedel personnel covered the trench with trench plates.

Two additional trenches were excavated at the Ninth Avenue Terminal yard in an attempt to locate the cannery line. One of them (trench 4), approximately 750 feet west of the cannery manhole, struck concrete at three feet deep and was discontinued. U&A

personnel collected one soil sample (9AV-X-9) and then backfilled the trench with the excavated soil.

The other (trench 5) was excavated next to the retaining wall at the edge of the pier approximately 1,200 feet from the manhole. The cannery line was not located. U&A personnel collected sample 9AV-X-10 from a depth of six feet in this trench. Figure 2 shows the locations of trenches dug for this investigation. Table 1 identifies the sample locations. U&A personnel inspected the area under the dock at low tide to locate the cannery line outfall; no outfall was located.

3.2 Secondary Pathway Investigation

U&A investigated soils near the lateral loop and main storm drain to determine whether diesel could have preferentially migrated outside the ceramic pipes through trenches created during installation of the storm drain system.

3.2.1 Lateral Loop Trench Investigation

The lateral loop refers to the portion of storm drain line that runs beneath the KOT warehouse, passes five feet from the former diesel dispenser location, and leads to the main storm drain line (see Figure 3). As part of the secondary pathway investigation, two trenches (trenches 2 and 3) were excavated over the lateral loop line near the source area on March 3. The backhoe operators carefully avoided rupturing the line which was uncovered approximately 3.5 feet below the surface. U&A personnel collected samples 9AV-X-3, 9AV-X-6, and 9AV-X-7 from trench 2 and samples 9AV-X-4, 9AV-X-5, and 9AV-X-8 from trench 3. Figure 3 and Table 1 summarize the sample locations.

3.2.2 Main Storm Drain Trench Investigation

Riedel personnel used a backhoe to dig two trenches over the main storm drain line to determine whether the soils outside the piping could have acted as a secondary pathway for diesel migration. One trench was located adjacent to the retaining wall in the Ninth Avenue Terminal yard. On March 11, Riedel personnel extended the trench already existing in this location (trench 5) to reach the projected pathway of the main storm drain (Figure 2). The storm drain was found approximately nine feet below the surface. The tide was high and water filled the bottom of the excavation at approximately eight feet below the surface. U&A personnel observed holes in the bottom of the trench beneath the retaining wall allowing direct communication with the Bay. Wave action was detectable in the water at the bottom of the trench due to the proximity of the

shoreline and the high tide. U&A personnel collected soil samples 9AV-X5-1, 9AV-X5-2 and 9AV-X5-6 from the bottom of the excavation. Water samples 9AV-X5-3, 9AV-X5-4, and 9AV-X5-5 were also collected from the trench. The trench was backfilled with clean, off-site material on March 12, 1993.

The second trench (trench 6) was excavated over the main storm drain line near the source area in the KOT yard on March 12 (see Figure 3). The storm drain was uncovered approximately four feet below the surface. Diesel and water recharged the trench immediately. U&A personnel collected soil samples 9AV-X6-1, 9AV-X6-2, and 9AV-X6-3. The trench was covered with trench plates.

3.3 Soil Borings

On March 1 through 3, U&A personnel supervised the drilling of nine boreholes by Great Sierra Exploration. Figure 4 shows the boring locations. Five of these borings were drilled in the proximity of the source area. One was drilled near the suspected location of a former underground storage tank on the Ninth Avenue Terminal yard, and three borings were located near storm drain manholes upgradient form the source area. The borings were each drilled to a depth of 10.5 to 11 feet deep.

Great Sierra personnel used a 6.5-inch diameter hollow stem auger to drill the boreholes. Vickers Concrete Sawing cored through the six to nine inches of concrete on the surface for boreholes B-16, B-17, and B-18. Three core samples were collected from each boring at approximately three foot intervals. U&A personnel collected water samples from each boring that yielded water (B13, B14, B15, B16, B17, B18). The borings were filled with cement. Boring logs are included in Appendix A.

Table 1
Cannery Line and Secondary Pathway Investigation
Soil Sample Locations

Sample ID	Date	Depth	Location
9AV-X1-1	3/2/93	5 feet	from sediments extracted from ruptured cannery line in trench 1
9AV-X1-2	3/2/93	5 feet	from sediments extracted from ruptured cannery line in trench 1
9AV-X-3	3/3/93	4 feet	from beneath ceramic pipe in trench 2
9AV-X-4	3/3/93	3.5 feet	from above ceramic pipe in trench 3
9AV-X-5	3/3/93	4 feet	from next to ceramic pipe in trench 3
9AV-X-6	3/3/93	3.5 feet	from next to ceramic pipe in trench 2
9AV-X-7	3/3/93	3.5 feet	from above ceramic pipe in trench 2
9AV-X-8	3/5/93	3.5 feet	from west excavation wall in trench 3
9AV-X-9	3/5/93	2.5 feet	from excavated soils pile from trench 4
9AV-X-10	3/5/93	6 feet	from excavation wall in trench 5
9AV-X5-1	3/11/93	7 feet	from bay mud near main storm drain in trench 5
9AV-X5-2	3/11/93	8 feet	from fill soil near main storm drain in trench 5
9AV-X5-6	3/12/93	9 feet	from fill soil near main storm drain in trench 5
9AV-X6-1	3/12/93	2 feet	from greenish sand next to ceramic pipe in trench 6
9AV-X6-3	3/12/93	3 feet	from green sandy clay next to ceramic pipe in trench 6

4 Results

4.1 Cannery Line Investigation

The cable probe inserted into the cannery line at its juncture with the lateral loop extended only 35 feet west. Obstruction in the line prevented it from going further. The probe reached only six feet westward when reinserted in the line from the trench 100 feet west of the manhole (trench 1). The obstruction appears to be tightly packed clay. The cannery line, where ruptured, was completely filled with sediments. These sediments appeared to be slightly oily with a sulfur smell characteristic of decomposing biological matter. No fresh diesel was observed. U&A personnel sampled the sediments and the groundwater which quickly recharged into the trench. A maximum of 1,000 mg/kg diesel from sample 9AV-X1-1 was found in the sediment. BTEX levels in the soil were below the detection limit. The water samples (9AV-W-1 and 9AV-W-2) from trench 1 contained a maximum of 1.8 ug/L benzene, 14.8 ug/L total BTEX, and 2.2 mg/L diesel (see Tables 2 and 4).

The two trenches dug in the Ninth Avenue Terminal yard did not locate the cannery line. The trench closest to the source area (trench 4) hit concrete at a depth of three feet and was discontinued. The cannery line could still exist in that location below the concrete. The retaining wall trench (trench 5) also did not locate the line. U&A personnel inspected the area under the dock at low tide to locate the cannery line outfall, but no outfall was located.

The soil sample collected from the trench closest to the source area in the Ninth Avenue Terminal yard (sample number 9AV-X-9 from trench 4) contained 18 mg/kg diesel and 0.007 mg/kg total BTEX. The retaining wall trench sample collected at a depth of six feet (sample number 9AV-X-10 from trench 5) contained a maximum 0.033 mg/kg benzene, 0.050 mg/kg total BTEX, and was below the detection limit for diesel. Table 2 contains the sample results. Appendix B includes the original laboratory data sheets.

4.2 Secondary Pathway Investigation

The secondary pathway investigation discovered no distinct or continuous diesel migration routes from the source area to the storm drain. A layer of brown gravelly fill was observed beneath the concrete apron to approximately 2 to 2.5 feet deep. This layer was underlain by a greenish-gray clay continuing to the base of the excavation. The ceramic storm drain pipes were placed on and backfilled with the same clay soils found throughout the area.

In the southern trench (trench 3), red dye stained diesel and water recharged from the surrounding soils. (The red dye was used during the search for the diesel source.) In the northern trench (trench 2), diesel and water recharged but was not red dye stained. Neither trench discovered sand surrounding the piping or obvious migration pathways created during the storm drain installation.

The soil from trenches 2 and 3 contained high levels of diesel and BTEX. Maximum contamination levels found in the source area included 100,000 mg/kg diesel and 130.8 mg/kg total BTEX in sample 9AV-X-8 from trench 3.

The retaining wall trench in the Ninth Avenue Terminal yard (trench 5) found that no diesel was pooling behind the retaining wall as would be expected if the surrounding soils were acting as a conduit. The soils consisted of a heterogeneous mixture of brown gravelly fill material and greenish clayey sands. The sample collected from a depth of seven feet (9AV-X5-1) contained of 0.006 mg/kg benzene, 0.031 mg/kg total BTEX, and 1,800 mg/kg diesel. At a depth of eight feet (samples 9AV-X5-2 and 9AV-X5-6), a maximum of 0.018 mg/kg benzene, 0.024 mg/kg total BTEX, and 440 mg/kg diesel were detected. Groundwater was encountered at a depth of approximately seven to eight feet. Wave action was detected in the water indicating close communication with the Bay. All three soil samples were taken in soils deep enough to have contact during higher tides with the groundwater. Liquid samples collected in the same location (9AV-X5-3, 9AV-X5-4, and 9AV-X5-5) were below the detection limit for BTEX and contained 57 mg/L diesel. Tables 2 and 4 contain the sample results. Appendix B includes the original laboratory data sheets.

TABLE 2
Summary of Soil Sample Analysis for Cannery Line and Secondary Pathway Investigations (Concentration in mg/kg)

Sample Id.	Diesel	Benzene	Toluene	Ethylbenzene	o-Xylene	p,m-Xylene	Total BTEX
Cannery Line Investigation							
9AV-X1-1	1,000*	ND	ND	ND	ND	ND	ND
9AV-X1-2	890*	ND	ND	ND	ND	ND	ND
9AV-X-9	18	ND	0.007	ND	ND	ND	0.007
9AV-X-10	ND	0.033	0.010	ND	ND	0.007	0.050
Secondary Pathway Investigation							
9AV-X-3	7,100	0.063	0.36	0.30	0.43	0.81	1.963
9AV-X-4	9,500	0.49	4.50	2.20	3.50	6.10	16.79
9AV-X-5	3,800	0.15	0.66	0.45	0.78	0.92	2.96
9AV-X-6	7,600	0.10	0.69	0.42	0.68	1.30	3.19
9AV-X-7	26,000	0.33	1.60	1.10	1.80	2.80	7.63
9AV-X-8	100,000	4.80	42.00	16.00	23.00	45.00	130.8
9AV-X5-1	1,800	0.006	ND	0.007	0.006	0.012	0.031
9AV-X5-2	280*	0.018	0.006	ND	ND	ND	0.024
9AV-X5-6	440*	0.010	0.006	ND	ND	ND	0.016
9AV-X6-1	50,000	2.0	9.6	4.2	0.84	12	28.64
9AV-X6-3	22,000	0.43	1.5	0.83	0.19	2.0	4.95

ND = none detected

* Total hydrocarbons reported includes hydrocarbons within diesel range and other unresolved heavier hydrocarbons.

4.3 Soil Borings

Boring logs are included in Appendix A. Figure 4 shows the boring locations. Generally, a brown gravelly sand layer of fill material was observed from the surface to one to five feet deep, underlain by Bay mud. Boring B15 contained gravelly fill beneath Bay muds. Groundwater was encountered at depths ranging from 3 to 5 feet.

4.3.1 Source Area

The maximum diesel level found in the boring soil samples in the source area was 260 mg/kg from boring B16. The only detected benzene level was 0.006 mg/kg from boring B13. The maximum total BTEX was 0.06 mg/kg from boring B16. Table 3 summarizes the soil sample results for the borings.

Water samples collected from the five source area borings (B13, B14, B15, B16, and B17) contained diesel. A maximum of 2,000 mg/L diesel was found in the water sample from boring B13 north of the leak location. BTEX levels were also found in the same sample at 300 ug/L benzene and 1,100 ug/L total BTEX. Table 4 summarizes the results of the water sample analyses.

4.3.2 Upgradient Area

The highest diesel level found in the upgradient borings (B18, B19, and B20) was 350 mg/kg in boring B19 at a depth of four feet. Each upgradient boring contained some diesel contamination. One soil sample in boring B19 contained 0.006 mg/kg total BTEX. Only one upgradient boring (B18) yielded water. The sample from this water contained 0.59 mg/L diesel and was below the detection limit for BTEX. Table 3 summarizes the soil sample results; Table 4 summarizes the water sample results.

4.3.3 Down-Gradient Area

The boring at the pier on the Ninth Avenue Terminal yard (B21) did not yield water. Soil samples taken from this boring were below the detection limit for both BTEX and diesel.

TABLE 3
Summary of Soil Sample Analysis from Soil Borings
(Concentration in mg/kg)

Sample Id.	Diesel	Benzene	Toluene	Ethylbenzene	o-Xylene	p,m-Xylene	Total BTEX
Source Area							
9AV-B13-1-4.0	2	0.006	0.009	ND	ND	0.006	0.021
9AV-B13-2-7.5	81	ND	0.008	0.006	0.014	0.023	0.051
9AV-B14-1-3.5	ND	ND	ND	ND	ND	ND	ND
9AV-B14-2-6.5	ND	ND	ND	ND	ND	ND	ND
9AV-B14-3-9.5	ND	ND	ND	ND	ND	ND	ND
9AV-B15-1-2.5	ND	ND	ND	ND	ND	ND	ND
9AV-B15-2-5.0	ND	ND	ND	ND	ND	ND	ND
9AV-B15-3-9.5	39*	ND	ND	ND	ND	ND	ND
9AV-B16-1-3.5	ND	ND	ND	ND	ND	ND	ND
9AV-B16-2-7.0	92	ND	ND	ND	ND	ND	ND
9AV-B16-3-7.5	260	ND	ND	0.03	0.03	ND	0.06
9AV-B16-4-9.5	49*	ND	ND	ND	ND	ND	ND
9AV-B17-1-3.5	ND	ND	ND	ND	ND	ND	ND
9AV-B17-2-7.0	20*	ND	ND	ND	ND	ND	ND
9AV-B17-3-9.5	35*	ND	ND	ND	ND	ND	ND
Upgradient							
9AV-B18-1-6.5	ND	ND	ND	ND	ND	ND	ND
9AV-B18-2-9.5	34*	ND	ND	ND	ND	ND	ND
9AV-B19-1-4.0	350*	ND	ND	0.006	ND	ND	0.006
9AV-B19-2-7.0	19	ND	ND	ND	ND	ND	ND
9AV-B19-3-9.5	60	ND	ND	ND	ND	ND	ND
9AV-B20-1-3.5	28*	ND	ND	ND	ND	ND	ND
9AV-B20-2-6.5	55*	ND	ND	ND	ND	ND	ND
9AV-B20-3-9.5	41*	ND	ND	ND	ND	ND	ND
Down-Gradient							
9AV-B21-1-3.5	ND	ND	ND	ND	ND	ND	ND
9AV-B21-2-6.5	ND	ND	ND	ND	ND	ND	ND
9AV-B21-3-9.5	ND	ND	ND	ND	ND	ND	ND

ND = none detected

NA = not analyzed

* Total hydrocarbons reported includes hydrocarbons within diesel range and other unresolved heavier hydrocarbons.

TABLE 4
Summary of Water Sample Analyses
from Cannery Line Investigation, Secondary Pathway Investigation, and Soil Borings

Sample Id.	Diesel (mg/L)	Benzene	Toluene	Ethylbenzene	o-Xylene	p,m-Xylene	Total BTEX
		(BTEX concentrations in ug/L)					
Cannery Line Investigation							
9AV-W-1	2.20	1.2	1.9	1.1	2.3	2.6	9.1
9AV-W-2	NA	1.80	2.50	1.70	4.00	4.80	14.8
Secondary Pathway Investigation							
9AV-X5-3	NA	ND	ND	ND	ND	ND	ND
9AV-X5-4	NA	ND	ND	ND	ND	ND	ND
9AV-X5-5	57	NA	NA	NA	NA	NA	ND
Soil Borings							
9AV-B13	2,000	300	400	ND	ND	400	1,100
9AV-B14	0.94	ND	0.40	ND	ND	ND	0.40
9AV-B15	2.90	ND	ND	ND	ND	ND	ND
9AV-B16	310	ND	ND	ND	ND	ND	ND
9AV-B17	59	2.00	ND	ND	ND	ND	2.00
9AV-B18	0.59	ND	ND	ND	ND	ND	ND

ND = none detected

NA = not analyzed

5 Discussion

5.1 Cannery Line Investigation

The cannery line investigation was designed to track the cannery line and determine whether the pipeline or backfill material around the line could have acted as a conduit for diesel contamination. Tracking the pipe with a cable probe and surface detector was not successful due to the amount of sediments clogging the pipe. (Plugs of clayey soil completely blocked the line in at least two locations within 100 feet of the leak location.) The first attempt to insert the probe from the manhole at the juncture with the lateral loop reached only 35 feet. The second attempt from the ruptured section 100 feet west of the manhole reached only six feet. It appeared to be completely clogged at the ruptured area as well. No attempt was made to clean out the line due to the amount of waste the process would produce. The fill material around the pipeline was found to be low permeability clay and did not appear to be acting as a conduit for contamination.

Analyses run on the sediments extracted from the line 100 feet west of the manhole (9AV-X-1 and 9AV-X1-2 from trench 1) found hydrocarbons in the diesel-range. Further analysis conducted by Clayton Laboratory Director showded that these diesel-range hydrocarbons do not match the fresh diesel extracted from the source area soils. Appendix C contains chromatograms prepared by Clayton Laboratory overlaying the diesel standard (collected from the KOT dispenser system) and the sample found in the cannery line. The sample found in the cannery line contains heavier hydrocarbons and appears to lack the distinct peaks of the fresh diesel standard indicating significant weathering. This finding agrees with field observations that no fresh diesel was apparent in the cannery line. In addition, these findings indicate that the cannery line has not acted as a conduit for diesel released from the KOT dispenser system. The hydrocarbons present may be the result of past storm water run-off.

The outfall of the cannery line is still unknown. It is possible that the line was abandoned in place during the construction of the Ninth Avenue Terminal and made obsolete by the new storm drain system installed at that time (running parallel to 8th Avenue). It is also possible that the cannery line joins the main storm drain at some undetermined place, but there is no evidence for this. In any case, the cannery line does not appear to be operable as a storm run-off system or as a conduit for contamination.

5.2 Secondary Pathway Investigation

The secondary pathway investigation determined that the ceramic storm drain pipes were not installed in sand filled trenches. The fill material around the storm drain lines was found to be a low permeability clay and did not appear to be acting as a conduit for contamination. In addition, soil borings conducted in November of 1992 (see Workplan, U&A; January, 1993) found no contamination adjacent to the storm drain on the Ninth Avenue Terminal. If diesel had been flowing through the installation trenches, these borings would most likely have contained fresh diesel.

If small cracks or holes are present in the storm drain line, it is likely that the diesel would preferentially stay within the storm drain line since that would offer the path of least resistance. To leave the pipe and flow into the low permeability clay would require greater energy.

Additionally, the excavation across the storm drain line against the retaining wall determined that no "pooling" of diesel was occurring behind the retaining wall. However, soil samples collected outside the main storm drain pipe at the retaining wall trench (trench 5) did contain detectable levels of diesel. These samples were collected from soils which have direct communication with the adjacent Bay water and are under water during high tide. The diesel contamination probably originated from the main storm drain outfall and was washed back into the soils behind the retaining wall by the Bay water.

Soil samples from trenches 2, 3, and 6 in the source area contained high levels of diesel. Soil excavation is recommended during the removal of the underground storage tank located during the source area primary pathway investigation.

5.3 Soil Borings

Small quantities of diesel-range hydrocarbons were discovered in many of the soil boring samples. Clayton Laboratories compared each sample against the source of the contamination. Samples from borings B13 and B16 most closely resembled the diesel found at the leak source. Appendix C contains chromatograms prepared by Clayton Laboratories which graphically display the diesel standard prepared from a diesel sample from the KOT dispenser system versus the samples from borings B13 and B16.

The upgradient borings B18, B19, and B20 contained a maximum diesel level of 350 mg/kg, and 0.006 mg/kg total BTEX. Only one upgradient sample (B19-1-4.0) exceeded 100 mg/kg diesel. However, none of the upgradient samples appeared to match the diesel found at the leak source. Appendix C contains chromatograms for borings B18,

B19, and B20 showing patterns which differ significantly from the diesel standard. The source of this upgradient contamination is unknown. The catchbasin located beneath the freeway adjacent to Embarcadero Street likely contains diesel and heavier hydrocarbons from storm water run-off from the freeway and street. This may be a possible source of the diesel found in the upgradient boring samples. A monitoring well in this location may be necessary to determine the impact this contamination has had on groundwater.

6 Conclusions

6.1 Cannery Line Investigation

The exact location of the cannery line outfall (if one exists) was not determined. Diesel contamination found in sediments collected from within the cannery line appear to be weathered diesel and is most likely from an older source. Obstructions in the line have effectively plugged the drain and evidently have prevented diesel migration. The low permeability clay backfill around the pipe is not acting as a conduit for diesel migration. No additional investigation of the cannery line is recommended.

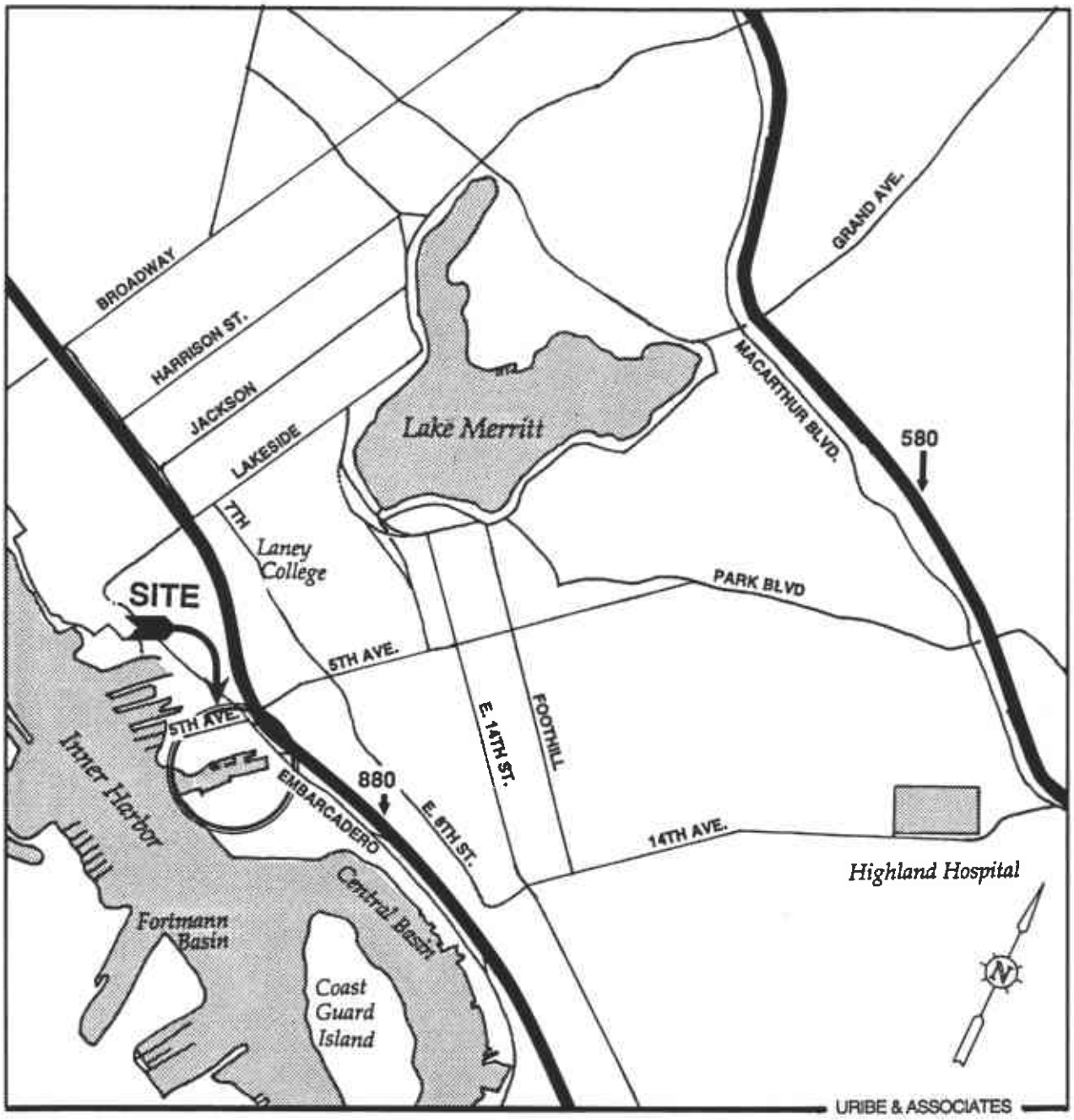
6.2 Secondary Pathway Investigation

The secondary pathway investigation found no evidence of diesel migration along the cannery line or main storm drain pathways outside the piping in installation trenches. Diesel found in the soils outside the pipe in the retaining wall trench (trench 5) probably originated from the storm drain outfall and washed into the soils under the retaining wall on the rising tide, as witnessed in the field. No further investigation is planned concerning secondary pathway migration routes.

Soil samples collected from the lateral loop (trenches 2 and 3) and main storm drain trenches (trench 6) in the source area contained high levels of diesel. Further excavation of these soils is recommended and will be conducted as part of the removal of the abandoned underground storage tank found near the leak location.

6.3 Soil Borings

Only two boring soil samples exceeded 100 mg/kg diesel. One of them (B16-3-7.5) appeared to resemble the diesel from the leak source (analysis by Clayton Laboratory Director). The other (B19-1-4.0) is upgradient and did not appear to resemble the leak source diesel. The source of this upgradient contamination is unknown. The catchbasin located beneath the freeway adjacent to Embarcadero Street likely contains diesel and heavier hydrocarbons from storm water run-off from the freeway and street. This may be a possible source of the diesel found in the upgradient boring samples. A monitoring well in this location may be necessary to determine the impact the contamination has had on groundwater.



SCALE

FEET 0 1000 2000 3000 4000 5280 FEET

MILES 0 0.2 0.4 0.6 0.8 1.0 MILES

Figure 1: Location Map

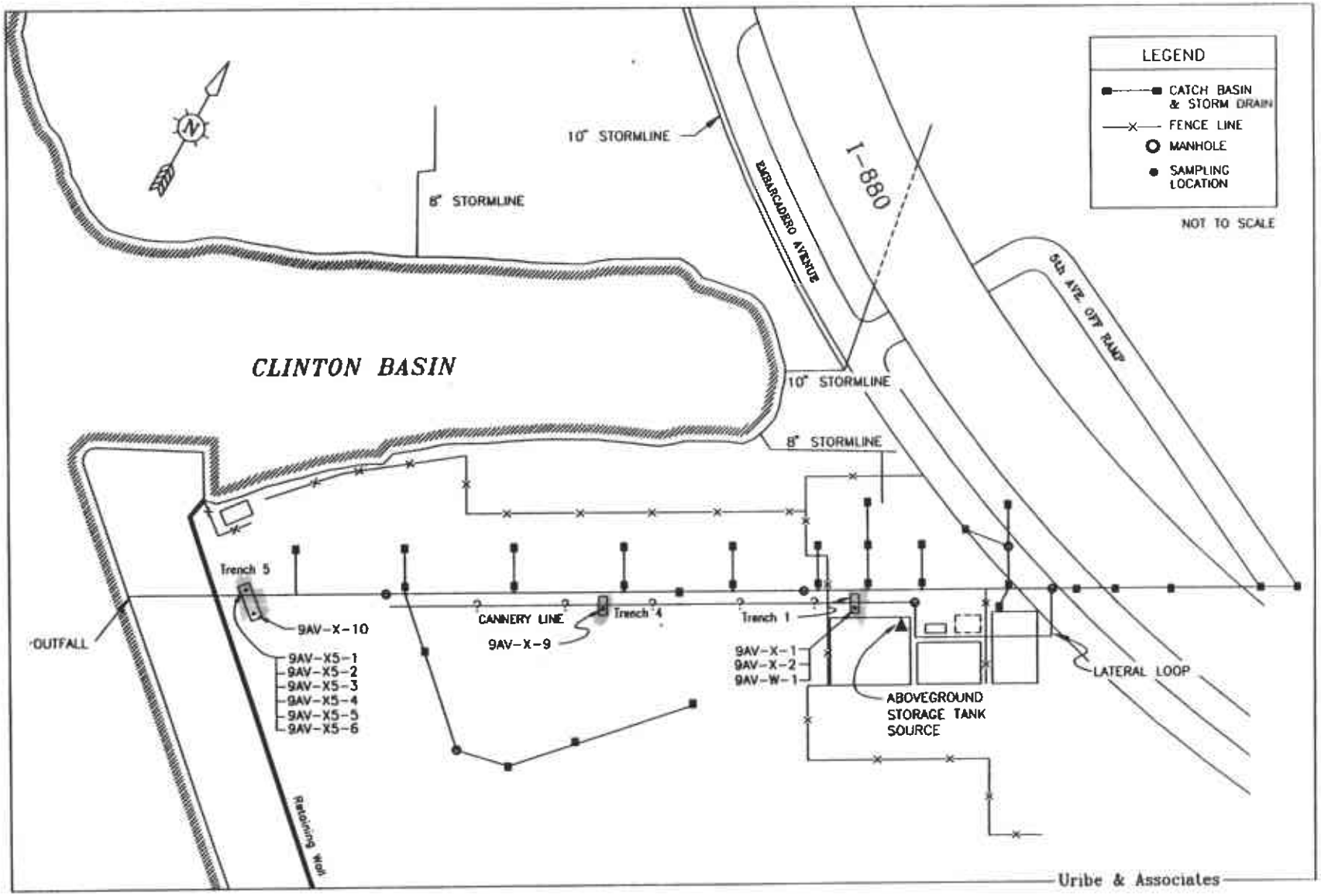


Figure 2: Cannery Line Investigation Trenches and Sample Locations

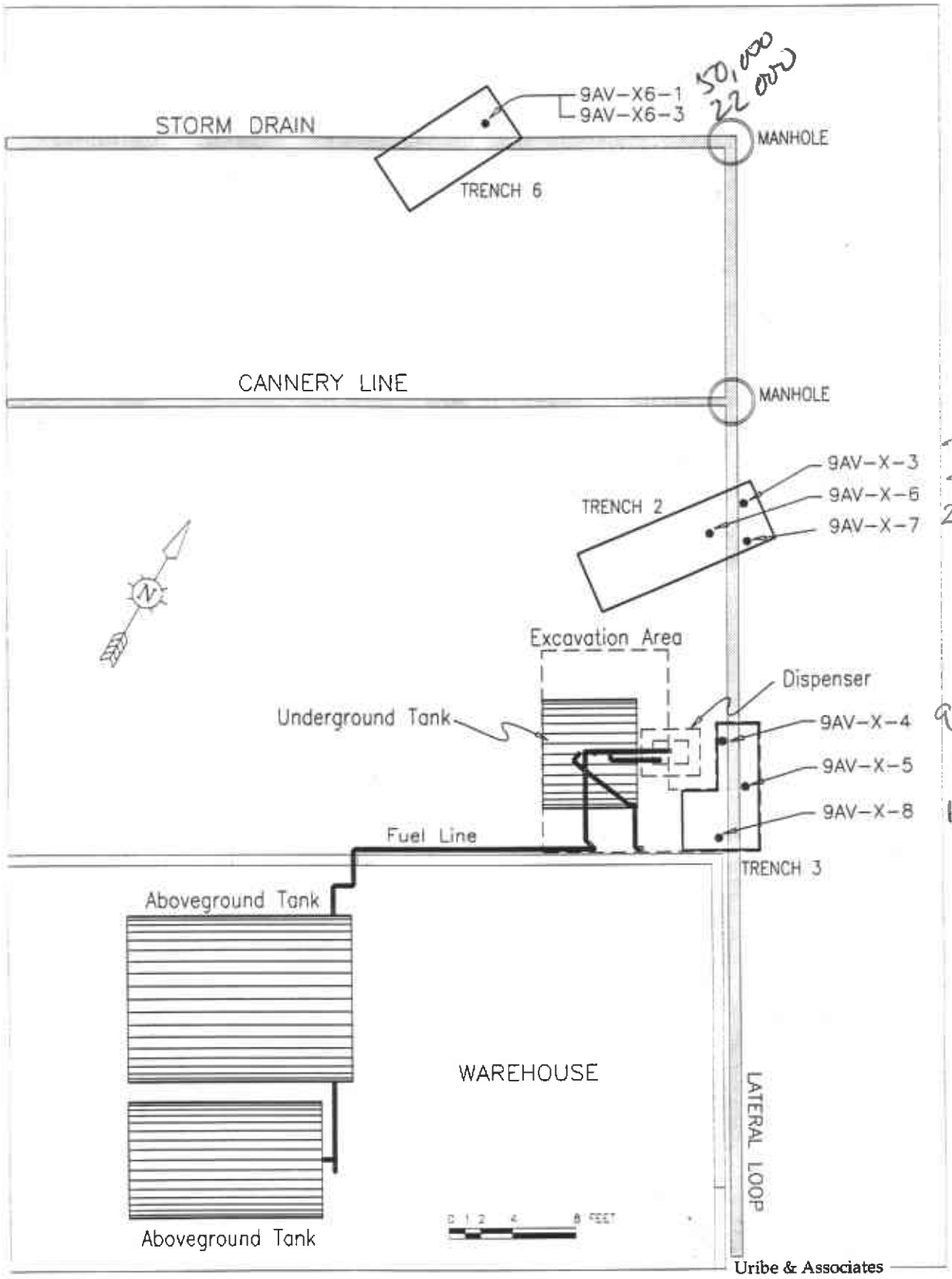


Figure 3: Source Area Trenches and Sample Locations

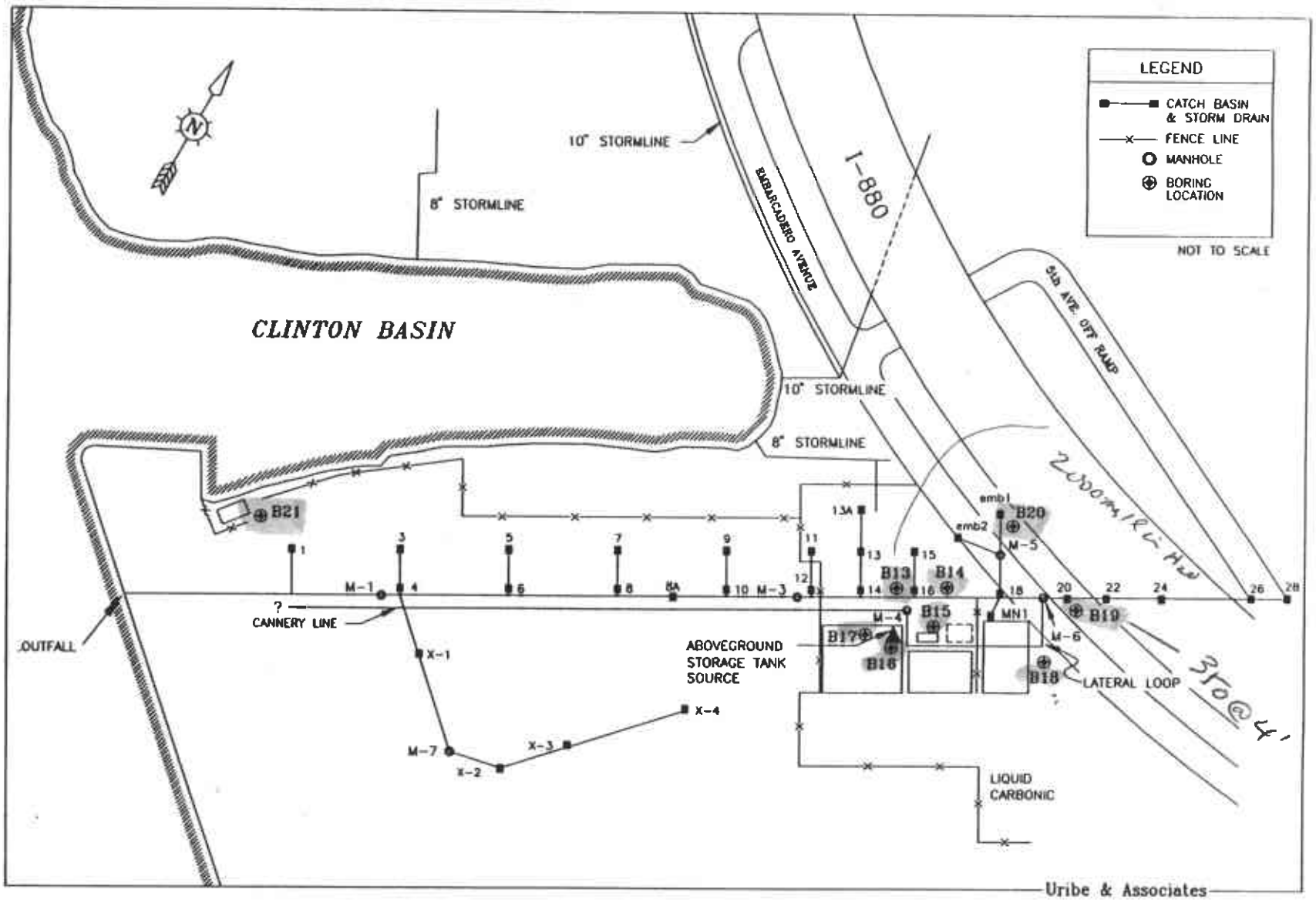


Figure 4: Boring Locations for Source Area & Upgrandient Area

APPENDIX A

BORING LOGS

U&A URIBE & ASSOCIATES - ENVIRONMENTAL CONSULTING SERVICES BOREHOLE LOG

CLIENT: Port of Oakland	JOB NO. 96-203.3	BOREHOLE NUMBER: B13	
PROJECT: 9th Ave.		LOCATION: 8th-9th St. Oakland	
DRILLING CO.: Great Sierra Exploration		HOLE DIAMETER: 6.5"	ELEVATION:
DRILLING METHOD: Hollow Stem Auger		DATE: 3/1/93	
SAMPLING METHOD: push 6" brass liners		RECORDED BY: Ken Koford	
		REGISTERED GEOLOGIST: Ken Koford RGe 1664	

DEPTH (FEET)	MOISTURE CONTENT	LITHOLOGIC DESCRIPTIONS / REMARKS	SAMPLE I.D.s	SAMPLE TIME
0				
1	Dry	Concrete -0-4" Concrete		
2		Sand -4"-6' Sand Green, fine grained, Dry		
3		Hydrocarbon odor		
4	Wet	wet at 3.5'	B-13-1-4.0	11:18
5				
6		PID 60		
7		Gravel - 6.5'-7.0'		
8		Clay - Clay on lead auguer (Bay Mud)		
9				
10		PID 0	B-13-2-9.5	11:40
11		TD 10.5		
12				
13				
14				
15				
16				
17				
18				
19				
20				

U&A | URIBE & ASSOCIATES - ENVIRONMENTAL CONSULTING SERVICES | BOREHOLE LOG

CLIENT: Port of Oakland	JOB NO. 96-203.3	BOREHOLE NUMBER: B13	
PROJECT: 9th Ave.		LOCATION: 8th-9th St. Oakland	
DRILLING CO.: Great Sierra Exploration		HOLE DIAMETER: 6.5"	ELEVATION:
DRILLING METHOD: Hollow Stem Auger		DATE: 3/1/93	
SAMPLING METHOD: push 6" brass liners		RECORDED BY: Ken Koford	
		REGISTERED GEOLOGIST: Ken Koford RG# 1664	

DEPTH (FEET)	MOISTURE CONTENT	LITHOLOGIC DESCRIPTIONS / REMARKS	SAMPLE I.D.#	SAMPLE TIME
0		Concrete -0-4" Concrete		
1	Dry	Sand -4"-6' Sand Green, fine grained, Dry		
2				
3		Hydrocarbon odor		
4	Wet	wet at 3.5'	B-13-1-4.0	11:18
5				
6		PID 60		
7		Gravel - 6.5'-7.0'		
8		Clay - Clay on lead auguer (Bay Mud)		
9				
10		PID 0	B-13-2-9.5	11:40
11		TD 10.5		
12				
13				
14				
15				
16				
17				
18				
19				
20				

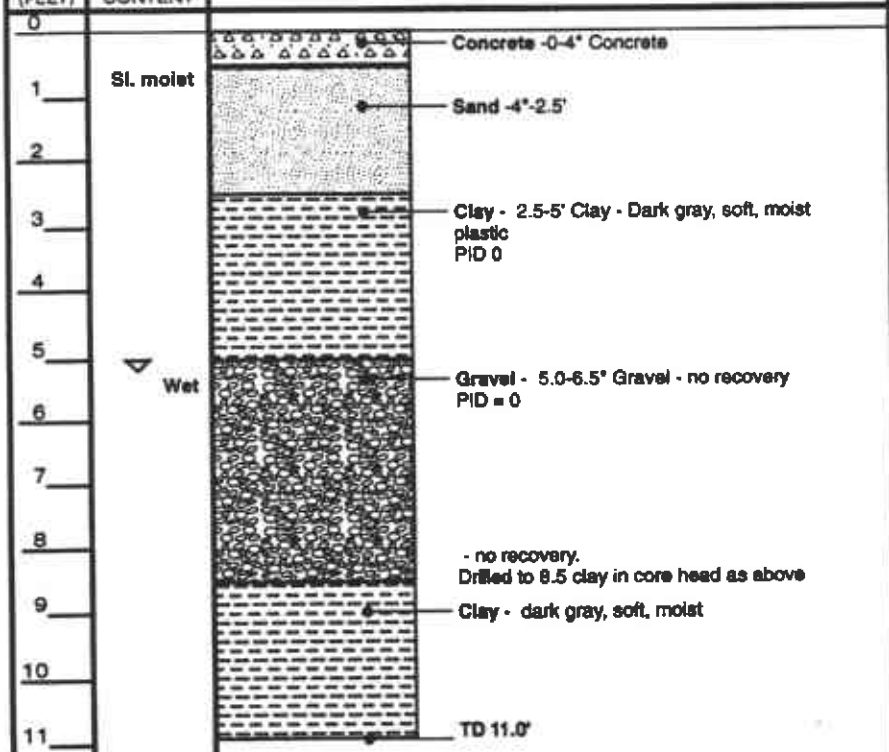
U&A URIBE & ASSOCIATES - ENVIRONMENTAL CONSULTING SERVICES — BOREHOLE LOG

CLIENT: Port of Oakland	JOB NO. 96-203.3	BOREHOLE NUMBER: B14	
PROJECT: 9th Ave.		LOCATION: 9th Ave. Oakland	
DRILLING CO.: Great Sierra Exploration		HOLE DIAMETER: 6.5"	ELEVATION:
DRILLING METHOD: Hollow Stem Auger		DATE: 3/1/93	
SAMPLING METHOD: push 6" brass liners		RECORDED BY: Ken Koford	
		REGISTERED GEOLOGIST: Ken Koford RG# 1664	

DEPTH (FEET)	MOISTURE CONTENT	LITHOLOGIC DESCRIPTIONS / REMARKS	SAMPLE I.D.#	SAMPLE TIME
0				
1	Sl. moist	Concrete -0-4" Concrete		
2		Sand -4"-2.5' Sand moist, medium brown OVM 3,320		
3		Clay - 2.5-10.5' (Bay Mud) dark, weeds, soft, moist		
4			B14-1-3.5	1:25
5				
6				
7		PID-225	B14-2-6.5	1:42
8	Sl. moist			
9				
10			B14-3-9.5	1:50
11		TD 10.5		
12		Note: Augered between push samples		
13				
14				
15				
16				
17				
18				
19				
20				

U&A | URIBE & ASSOCIATES - ENVIRONMENTAL CONSULTING SERVICES | BOREHOLE LOG

CLIENT: Port of Oakland	JOB NO. 96-203.3	BOREHOLE NUMBER: B15	
PROJECT: 9th Ave.		LOCATION: 9th Ave. Oakland	
DRILLING CO.: Great Sierra Expl.		HOLE DIAMETER: 6.5"	ELEVATION:
DRILLING METHOD: Auger/Continous core		DATE: 3/1/93	
SAMPLING METHOD:		RECORDED BY: Ken Koford	
		REGISTERED GEOLOGIST: Ken Koford RG# 1664	



DEPTH (FEET)	MOISTURE CONTENT	LITHOLOGIC DESCRIPTIONS / REMARKS	SAMPLE I.D.#	SAMPLE TIME
0				
1	Sl. moist			
2				
3			B15-1-2.5	9:25
4				
5				
6	Wet		B15-2-5.0	9:32
7				
8				
9				9:55
10			B15-3-9.5	10:35
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				

U&A URIBE & ASSOCIATES - ENVIRONMENTAL CONSULTING SERVICES — BOREHOLE LOG

CLIENT: Port of Oakland	JOB NO. 96-203.3	BOREHOLE NUMBER: 9AVB16	
PROJECT: 9th Ave.		LOCATION: 9th Ave. Oakland	
DRILLING CO.: Great Sierra Exploration		HOLE DIAMETER: 6.5"	ELEVATION:
DRILLING METHOD: Hollow stem auger		DATE: 3/2/93	
SAMPLING METHOD: 18" Drive Sampler		RECORDED BY: Ken Koford	
		REGISTERED GEOLOGIST: Ken Koford RG# 1664	

DEPTH (FEET)	MOISTURE CONTENT	LITHOLOGIC DESCRIPTIONS / REMARKS	SAMPLE I.D.#	SAMPLE TIME
0				
1	Sl. Moist	Asphalt -2" Asphalt		
2		Sand -2"-6.5'- brown, clean , loose, no odor, slightly moist PID = 0		
3				
4			9AVB16-1-3.5	4:50
5				
6		Hydrocarbon odor PID 34		
7		Clay - 6.5-10.5' (Bay Mud) - dark gray, soft, plastic, No odor. PID 0	9AVB16-2-7.0 9AVB16-3-7.5	5:07 5:07
8				
9				
10		OMV 0	9AVB16-4-9.5	5:25
11		TD 10.5		
12				
13				
14				
15				
16				
17				
18				
19				
20				

U&A | URIBE & ASSOCIATES - ENVIRONMENTAL CONSULTING SERVICES | BOREHOLE LOG

CLIENT: Port of Oakland	JOB NO. 96-203.3	BOREHOLE NUMBER: B17	
PROJECT: 9th Ave.		LOCATION: 8th-9th St. Oakland	
DRILLING CO.: Great Sierra Exploration		HOLE DIAMETER: 6.5"	ELEVATION:
DRILLING METHOD: Hollow Stem Auger		DATE: 3/1/93	
SAMPLING METHOD: push 6" brass liners		RECORDED BY: Ken Koford	
		REGISTERED GEOLOGIST: Ken Koford RG# 1664	

DEPTH (FEET)	MOISTURE CONTENT	LITHOLOGIC DESCRIPTIONS / REMARKS	SAMPLE I.D.#	SAMPLE TIME
0				
1	Wet	Gravel -0-1' Concrete & 8" +/- gravel		
2		Sandy clay 2.0' - 10.5' Medium brown, soft, wet, no odor		
3				
4	Wet	PID 0	9AVB17-1-3.5	2:26
5				
6				
7		PID 0	9AVB17-2-7.0	2:35
8				
9				
10		PID 0	9AVB17-3-9.5	2:55
11		TD 10.5		
12				
13				
14				
15				
16				
17				
18				
19				
20				

U&A URIBE & ASSOCIATES - ENVIRONMENTAL CONSULTING SERVICES BOREHOLE LOG

CLIENT: Port of Oakland	JOB NO. 96-203.3	BOREHOLE NUMBER: 9AV-B18	
PROJECT: 9th Ave.		LOCATION: 9th Ave. Oakland	
DRILLING CO.: Great Sierra Exploration		HOLE DIAMETER: 6.5"	ELEVATION:
DRILLING METHOD: Hollow stem auger		DATE: 3/2/93	
SAMPLING METHOD: 18" drive sampler		RECORDED BY: Ken Koford	
		REGISTERED GEOLOGIST: Ken Koford RG# 1664	

DEPTH (FEET)	MOISTURE CONTENT	LITHOLOGIC DESCRIPTIONS / REMARKS	SAMPLE I.D.#	SAMPLE TIME
0				
1	Dry	Asphalt -0-5 Upper 2+/- inches apshalt, crushed rock (gravel) below - open (no fines) wet, no odor		
2				
3	▽	Gravel -3.0-4.5 angular crushed rock 1-1/2"		
4		Augered to 4.5 no odor		
5	Wet	4.5-6.0 No recovery		
6		Clay -5.5 - dark brown, clay, soft (Bay Mud)	9AVB18-2-6.5	12:52
7				
8				
9			9AVB18-2-9.5	1:05
10				
11		TD 10.5 -not enough water for water sample		
12				
13				
14				
15				
16				
17				
18				
19				
20				

U&A | URIBE & ASSOCIATES - ENVIRONMENTAL CONSULTING SERVICES | BOREHOLE LOG

CLIENT: Port of Oakland	JOB NO. 96-203.3	BOREHOLE NUMBER: 9AV-B19	
PROJECT: 9th Ave.		LOCATION: 9th Ave. Oakland	
DRILLING CO.: Great Sierra Exploration		HOLE DIAMETER: 6.5"	ELEVATION:
DRILLING METHOD: Hollow stem auger		DATE: 3/2/93	
SAMPLING METHOD: 6" brass sleeves		RECORDED BY: Ken Koford	
		REGISTERED GEOLOGIST: Ken Koford RG# 1664	

DEPTH (FEET)	MOISTURE CONTENT	LITHOLOGIC DESCRIPTIONS / REMARKS	SAMPLE I.D.#	SAMPLE TIME
0				
1	Dry	Gravel -0-3.5 up to 2" size, brown, dry		
2		Hydrocarbon odor		
3	▽			
4		Clay - 3.5 - Clay (Bay mud?) Gray, weeds, Hydrogen sulfide odor, soft, moist	9AV-B19-1-04	8:45
5	Moist			
6			9AV-B19-2-7.0	9:02
7				
8				
9		Sl. moist. As above, strong Hydrogen sulfide odor	9AV-B-19-3-9.5	9:13
10				
11		TD 10.5		
12				
13				
14				
15				
16				
17				
18				
19				
20				

U&A | URIBE & ASSOCIATES - ENVIRONMENTAL CONSULTING SERVICES | BOREHOLE LOG

CLIENT: Port of Oakland	JOB NO. 96-203.3	BOREHOLE NUMBER: B20	
PROJECT: 9th Ave.		LOCATION: Embarcadero & 9th Ave.	
DRILLING CO.: Great Sierra Exploration		HOLE DIAMETER: 6.5"	ELEVATION:
DRILLING METHOD: Hollow stem auger		DATE: 3/1/93	
SAMPLING METHOD:		RECORDED BY: Ken Koford	
		REGISTERED GEOLOGIST: Ken Koford RG# 1664	

DEPTH (FEET)	MOISTURE CONTENT	LITHOLOGIC DESCRIPTIONS / REMARKS	SAMPLE I.D.#	SAMPLE TIME
0				
1	Dry	Gravel -0-2' brown, dry, compact		
2				
3	Wet	Clay - 2' - 10.5' - dark gray, wet, soft (Bay Mud)		
4		PID = 88	B20-1-3.5	3:10
5				
6				
7			B20-2-6.5	3:20
8				
9				
10		OVM 91	B20-3-9.5	3:25
11		TD 10.5'		
12				
13				
14				
15				
16				
17				
18				
19				
20				

U&A | URIBE & ASSOCIATES - ENVIRONMENTAL CONSULTING SERVICES | BOREHOLE LOG

CLIENT: Port of Oakland	JOB NO. 96-203.3	BOREHOLE NUMBER: B21	
PROJECT: 9th Ave.		LOCATION: 9th Ave. Pier	
DRILLING CO.: Great Sierra Exploration		HOLE DIAMETER: 6.5"	ELEVATION:
DRILLING METHOD: Hollow stem auger		DATE: 3/3/93	
SAMPLING METHOD: 6" brass liners		RECORDED BY: Ken Koford	
		REGISTERED GEOLOGIST: Ken Koford RG# 1564	

DEPTH (FEET)	MOISTURE CONTENT	LITHOLOGIC DESCRIPTIONS / REMARKS	SAMPLE I.D.#	SAMPLE TIME
0				
1	Moist	**Asphalt** - 2" Asphalt		
2		**Sand** -0-6.0 ' Fill, Clean sand mod. compact, sl. moist, medium brown		
3				
4			9thAveB21-1-3.5	8:35
5				
6				
7		**Clay** - 6.0-10.5' Bay Mud - Dark gray, moist, soft plastic organic odor OMV-7.0AoM	9AVB21-2-6.5	8:56
8				
9				
10		OMV 0	9AVB21-3-9.5	9:05
11		TD 10.5		
12		Few inches water in bottom hole Water samples taken		
13				
14				
15				
16				
17				
18				
19				
20				

APPENDIX B

LABORATORY DATA SHEETS

Western Operations

1252 Quarry Lane
P.O. Box 9019
Pleasanton, CA 94566
(510) 426-2600
Fax (510) 426-0106

Clayton
ENVIRONMENTAL
CONSULTANTS

March 17, 1993

Mr. Alan White
URIBE & ASSOCIATES
2930 Lakeshore Ave, Ste. 200
Oakland, CA 94610

Client Ref. 96-203
Clayton Project No. 93030.47

Dear Mr. White:

Attached is our analytical laboratory report for the samples received on March 3, 1993. A copy of the Chain-of-Custody form acknowledging receipt of these samples is attached.

Please note that any unused portion of the samples will be disposed of 30 days after the date of this report, unless you have requested otherwise.

We appreciate the opportunity to be of assistance to you. If you have any questions, please contact Suzanne Silvera, Client Services Supervisor, at (510) 426-2657.

Sincerely,

Ronald H. Peters, CIH
Director, Laboratory Services
Western Operations

RHP/tb
Attachments

Results of Analysis
for
Uribe & Associates/ Port of Oakland

Client Reference: 96-203
Clayton Project No. 93030.47

Sample Matrix/Media: WATER
Preparation Method: EPA 3510
Analysis Method: EPA 8015

Date Received: 03/03/93
Date Prepared: 03/05/93
Date Analyzed: 03/09/93

Lab Number	Sample Identification	Date Sampled	Diesel (ug/L)	Detection Limit (ug/L)
01A	9AV-B13-W1	03/01/93	2,000,000	50
02A	9AV-B14-W1	03/01/93	940[a]	50
03A	9AV-B15-W1	03/01/93	2,900[a]	50
07A	9AV-B16-W1	03/02/92	310,000	50
08A	9AV-B17-W1	03/02/92	59,000	50
09A	9AV-B18-W1	03/02/92	590[a]	50
13A	9AV-B00-W1	03/03/93	ND	50
16A	METHOD BLANK	--	ND	

ND Not detected at or above limit of detection
< Not detected at or above limit of detection
-- Information not available or not applicable

[a]Note: The hydrocarbons detected in these samples appear to be intermediate between diesel and motor oil: quantitation was based on diesel standards.

Results of Analysis
for
Uribe & Associates/ Port of Oakland

Client Reference: 96-203
Clayton Project No. 93030.47

Sample Identification:	9AV-B13-W2	Date Sampled:	03/01/93
Lab Number:	9303047-04A	Date Received:	03/03/93
Sample Matrix/Media:	WATER	Date Prepared:	03/12/93
Preparation Method:	EPA 5030	Date Analyzed:	03/12/93
Analytical Method:	EPA 8020		

Analyte	CAS #	Concentration (ug/L)	Limit of Detection (ug/L)
BTEX			
Benzene	71-43-2	300	200
Ethylbenzene	100-41-4	ND	200
Toluene	108-88-3	400	200
o-Xylene	95-47-6	ND	200
p,m-Xylenes	--	400	200
Surrogates		**Recovery (%)**	**QC Limits (%)**
a,a,a-Trifluorotoluene	98-08-8	95	50 - 150

ND: Not detected at or above limit of detection
--: Information not available or not applicable

Note: Detection limits increased due to presence of heavier hydrocarbons.

Results of Analysis
for
Uribe & Associates/ Port of Oakland

Client Reference: 96-203
Clayton Project No. 93030.47

Sample Identification:	9AV-B14-W2	Date Sampled:	03/01/93
Lab Number:	9303047-05A	Date Received:	03/03/93
Sample Matrix/Media:	WATER	Date Prepared:	03/12/93
Preparation Method:	EPA 5030	Date Analyzed:	03/12/93
Analytical Method:	EPA 8020		

Analyte	CAS #	Concentration (ug/L)	Limit of Detection (ug/L)
BTEX			
Benzene	71-43-2	ND	0.4
Ethylbenzene	100-41-4	ND	0.3
Toluene	108-88-3	0.4	0.3
o-Xylene	95-47-6	ND	0.4
p,m-Xylenes	--	ND	0.4
Surrogates		**Recovery (%)**	**QC Limits (%)**
a,a,a-Trifluorotoluene	98-08-8	99	50 - 150

ND: Not detected at or above limit of detection
--: Information not available or not applicable

Results of Analysis
for
Uribe & Associates/ Port of Oakland

Client Reference: 96-203
Clayton Project No. 93030.47

Sample Identification:	9AV-B15-W2	Date Sampled:	03/01/93
Lab Number:	9303047-06A	Date Received:	03/03/93
Sample Matrix/Media:	WATER	Date Prepared:	03/12/93
Preparation Method:	EPA 5030	Date Analyzed:	03/12/93
Analytical Method:	EPA 8020		

Analyte	CAS #	Concentration (ug/L)	Limit of Detection (ug/L)
BTEX			
Benzene	71-43-2	ND	0.4
Ethylbenzene	100-41-4	ND	0.3
Toluene	108-88-3	ND	0.3
o-Xylene	95-47-6	ND	0.4
p,m-Xylenes	--	ND	0.4
Surrogates		**Recovery (%)**	**QC Limits (%)**
a,a,a-Trifluorotoluene	98-08-8	100	50 - 150

ND: Not detected at or above limit of detection
--: Information not available or not applicable

Results of Analysis
for
Uribe & Associates/ Port of Oakland

Client Reference: 96-203
Clayton Project No. 93030.47

Sample Identification:	9AV-B16-W2	Date Sampled:	03/02/93
Lab Number:	9303047-10A	Date Received:	03/03/93
Sample Matrix/Media:	WATER	Date Prepared:	03/12/93
Preparation Method:	EPA 5030	Date Analyzed:	03/12/93
Analytical Method:	EPA 8020		

Analyte	CAS #	Concentration (ug/L)	Limit of Detection (ug/L)
BTEX			
Benzene	71-43-2	ND	40
Ethylbenzene	100-41-4	ND	30
Toluene	108-88-3	ND	30
o-Xylene	95-47-6	ND	40
p,m-Xylenes	--	ND	40
Surrogates		**Recovery (%)**	**QC Limits (%)**
a,a,a-Trifluorotoluene	98-08-8	97	50 - 150

ND: Not detected at or above limit of detection
--: Information not available or not applicable

Note: Detection limits increased due to presence of heavier hydrocarbons.

Results of Analysis
for
Uribe & Associates/ Port of Oakland

Client Reference: 96-203
Clayton Project No. 93030.47

Sample Identification:	9AV-B17-W2	Date Sampled:	03/02/93
Lab Number:	9303047-11A	Date Received:	03/03/93
Sample Matrix/Media:	WATER	Date Prepared:	03/12/93
Preparation Method:	EPA 5030	Date Analyzed:	03/12/93
Analytical Method:	EPA 8020		

Analyte	CAS #	Concentration (ug/L)	Limit of Detection (ug/L)
BTEX			
Benzene	71-43-2	2	2
Ethylbenzene	100-41-4	ND	2
Toluene	108-88-3	ND	2
o-Xylene	95-47-6	ND	2
p,m-Xylenes	--	ND	2
Surrogates		**Recovery (%)**	**QC Limits (%)**
a,a,a-Trifluorotoluene	98-08-8	98	50 - 150

ND: Not detected at or above limit of detection
--: Information not available or not applicable

Note: Detection limits increased due to presence of heavier hydrocarbons.

Results of Analysis
for
Uribe & Associates/ Port of Oakland

Client Reference: 96-203
Clayton Project No. 93030.47

Sample Identification:	9AV-B18-W2	Date Sampled:	03/02/93
Lab Number:	9303047-12A	Date Received:	03/03/93
Sample Matrix/Media:	WATER	Date Prepared:	03/12/93
Preparation Method:	EPA 5030	Date Analyzed:	03/12/93
Analytical Method:	EPA 8020		

Analyte	CAS #	Concentration (ug/L)	Limit of Detection (ug/L)
BTEX			
Benzene	71-43-2	ND	0.4
Ethylbenzene	100-41-4	ND	0.3
Toluene	108-88-3	ND	0.3
o-Xylene	95-47-6	ND	0.4
p,m-Xylenes	--	ND	0.4
Surrogates		**Recovery (%)**	**QC Limits (%)**
a,a,a-Trifluorotoluene	98-08-8	99	50 - 150

ND: Not detected at or above limit of detection
--: Information not available or not applicable

Results of Analysis
for
Uribe & Associates/ Port of Oakland

Client Reference: 96-203
Clayton Project No. 93030.47

Sample Identification:	9AV-B00-W2	Date Sampled:	03/03/93
Lab Number:	9303047-14A	Date Received:	03/03/93
Sample Matrix/Media:	WATER	Date Prepared:	03/12/93
Preparation Method:	EPA 5030	Date Analyzed:	03/12/93
Analytical Method:	EPA 8020		

Analyte	CAS #	Concentration (ug/L)	Limit of Detection (ug/L)
BTEX			
Benzene	71-43-2	ND	0.4
Ethylbenzene	100-41-4	ND	0.3
Toluene	108-88-3	ND	0.3
o-Xylene	95-47-6	ND	0.4
p,m-Xylenes	--	ND	0.4
Surrogates		**Recovery (%)**	**QC Limits (%)**
a,a,a-Trifluorotoluene	98-08-8	97	50 - 150

ND: Not detected at or above limit of detection
--: Information not available or not applicable

Results of Analysis
for
Uribe & Associates/ Port of Oakland

Client Reference: 96-203
Clayton Project No. 93030.47

Sample Identification:	9AV-W-1	Date Sampled:	03/03/93
Lab Number:	9303047-15A	Date Received:	03/03/93
Sample Matrix/Media:	WATER	Date Prepared:	03/12/93
Preparation Method:	EPA 5030	Date Analyzed:	03/12/93
Analytical Method:	EPA 8020		

Analyte	CAS #	Concentration (ug/L)	Limit of Detection (ug/L)
BTEX			
Benzene	71-43-2	1.2	0.4
Ethylbenzene	100-41-4	1.1	0.3
Toluene	108-88-3	1.9	0.3
o-Xylene	95-47-6	2.3	0.4
p,m-Xylenes	--	2.6	0.4
Surrogates		**Recovery (%)**	**QC Limits (%)**
a,a,a-Trifluorotoluene	98-08-8	108	50 - 150

ND: Not detected at or above limit of detection
--: Information not available or not applicable

Results of Analysis
for
Uribe & Associates/ Port of Oakland

Client Reference: 96-203
Clayton Project No. 93030.47

Sample Identification:	9AV-W-1	Date Sampled:	03/03/93
Lab Number:	9303047-15B	Date Received:	03/03/93
Sample Matrix/Media:	WATER	Date Prepared:	03/12/93
Preparation Method:	EPA 5030	Date Analyzed:	03/12/93
Analytical Method:	EPA 8020		

Analyte	CAS #	Concentration (ug/L)	Limit of Detection (ug/L)
BTEX			
Benzene	71-43-2	ND	0.4
Ethylbenzene	100-41-4	ND	0.3
Toluene	108-88-3	2.8	0.3
o-Xylene	95-47-6	ND	0.4
p,m-Xylenes	--	0.6	0.4
Surrogates		Recovery (%)	QC Limits (%)
a,a,a-Trifluorotoluene	98-08-8	105	50 - 150

ND: Not detected at or above limit of detection
--: Information not available or not applicable

Results of Analysis
for
Uribe & Associates/ Port of Oakland

Client Reference: 96-203
Clayton Project No. 93030.47

Sample Identification:	METHOD BLANK	Date Sampled:	--
Lab Number:	9303047-16A	Date Received:	--
Sample Matrix/Media:	WATER	Date Prepared:	03/12/93
Preparation Method:	EPA 5030	Date Analyzed:	03/12/93
Analytical Method:	EPA 8020		

Analyte	CAS #	Concentration (ug/L)	Limit of Detection (ug/L)
BTEX			
Benzene	71-43-2	ND	0.4
Ethylbenzene	100-41-4	ND	0.3
Toluene	108-88-3	ND	0.3
o-Xylene	95-47-6	ND	0.4
p,m-Xylenes	--	ND	0.4
Surrogates		**Recovery (%)**	**QC Limits (%)**
a,a,a-Trifluorotoluene	98-08-8	98	50 - 150

ND: Not detected at or above limit of detection
--: Information not available or not applicable

SUITE TWO HUNDRED
OAKLAND, CALIFORNIA 94610
Site 415 - 832 - 7233
FAX 415 - 832 - 2237
Site

STANDARD

96-203

CHAIN OF CUSTODY RECORD

PROJ. NO. 26815 | PROJECT NAME 9th Ave Terminal

SAMPLERS: (Signature)

NO	DATE	TIME	COMP	GRAB	SAMPLE I.D.	NO. OF CONTAINERS	ANALYSIS TPH-D	BTEX	REMARKS
1	3/1/93	11:30			9AV-B13-W1	1	X		water samples
2	3/1/93	5:30			9AV-B14-W1	1	X		"
3	3/1/93	11:30			9AV-B15-W1	1	X		"
4	3/1/93	11:20			9AV-B13-W2	2		X	"
5	3/1/93	2:00			9AV-B14-W2	2		X	"
6	3/1/93	11:30			9AV-B15-W2	2		X	"
7	3/2/93	5:10			9AV-B16-W1	1	X		"
8	3/2/93	3:45			9AV-B17-W1	1	X		"
9	3/2/93	12:45			9AV-B18-W1	1	X		"
10	3/2/93	5:30			9AV-B16-W2	2		X	"
11	3/2/93	3:45			9AV-B17-W2	2		X	"
12	3/2/93	12:45			9AV-B18-W2	2		X	"
13	3/3/93	12:30			9AV-B00-W1	1	X		4 ID SAMPLING SITE: TAP
14	3/3/93	12:30			9AV-B00-W2	2		X	" ID SAMPLING SITE: TAP
15	3/3/93				9AV-W-1 MS MSD	2		X	water samples ← ALAMEDA

Relinquished by: (Signature) — Date/Time 3/3/93 12:55 — Received by: (Signature)

Relinquished by: (Signature) — Date/Time 3/3/93 15:30 — Received by: (Signature)

Relinquished by: (Signature) — Date/Time 3/3/93 1615 — Received by: (Laboratory) — Date/Time 3/3/93 415

Relinquished by: (Signature) — Date/Time — Received by: (Signature)

Relinquished by: (Signature) — Date/Time — Received by: (Signature)

NAME URS/E BASC.

ADDRESS SEE TOP OF FORM

* Client requested both samples be analyzed 3/[illegible]

PHONE NO.

Western Operations

1252 Quarry Lane
P.O. Box 9019
Pleasanton, CA 94566
(510) 426-2600
Fax (510) 426-0106

Clayton
ENVIRONMENTAL
CONSULTANTS

March 25, 1993

Mr. Alan White
URIBE & ASSOCIATES
2930 Lakeshore Ave, Ste. 200
Oakland, CA 94610

Client Ref. 96-203
Clayton Project No. 93031.51

Dear Mr. White:

Attached is our analytical laboratory report for the samples received on March 15, 1993. A copy of the Chain-of-Custody form acknowledging receipt of these samples is attached.

Please note that any unused portion of the samples will be disposed of 30 days after the date of this report, unless you have requested otherwise.

We appreciate the opportunity to be of assistance to you. If you have any questions, please contact Suzanne Silvera, Client Services Supervisor, at (510) 426-2657.

Sincerely,

Ronald H. Peters, CIH
Director, Laboratory Services
Western Operations

RHP/tb
Attachments

Results of Analysis
for
Uribe & Associates/ Port of Oakland

Client Reference: 96-203
Clayton Project No. 93031.51

Sample Identification: 9AV-X5-1
Lab Number: 9303151-01A
Sample Matrix/Media: SOIL
Extraction Method: EPA 5030
Analytical Method: EPA 8020

Date Sampled: 03/11/93
Date Received: 03/15/93
Date Extracted: 03/17/93
Date Analyzed: 03/18/93

Analyte	CAS #	Concentration (mg/kg)	Limit of Detection (mg/kg)
BTEX			
Benzene	71-43-2	0.006	0.005
Ethylbenzene	100-41-4	0.007	0.005
Toluene	108-88-3	ND	0.005
o-Xylene	95-47-6	0.006	0.005
p,m-Xylenes	--	0.012	0.005
Surrogates		**Recovery (%)**	**QC Limits (%)**
a,a,a-Trifluorotoluene	98-08-8	108	50 - 150

ND: Not detected at or above limit of detection
--: Information not available or not applicable
Results are reported on a wet weight basis, as received

Results of Analysis
for
Uribe & Associates/ Port of Oakland

Client Reference: 96-203
Clayton Project No. 93031.51

Sample Identification:	9AV-X5-2	Date Sampled:	03/11/93
Lab Number:	9303151-02A	Date Received:	03/15/93
Sample Matrix/Media:	SOIL	Date Extracted:	03/17/93
Extraction Method:	EPA 5030	Date Analyzed:	03/18/93
Analytical Method:	EPA 8020		

Analyte	CAS #	Concentration (mg/kg)	Limit of Detection (mg/kg)
BTEX			
Benzene	71-43-2	0.018	0.005
Ethylbenzene	100-41-4	ND	0.005
Toluene	108-88-3	0.006	0.005
o-Xylene	95-47-6	ND	0.005
p,m-Xylenes	--	ND	0.005
Surrogates		**Recovery (%)**	**QC Limits (%)**
a,a,a-Trifluorotoluene	98-08-8	113	50 - 150

ND: Not detected at or above limit of detection
--: Information not available or not applicable
Results are reported on a wet weight basis, as received

Results of Analysis
for
Uribe & Associates/ Port of Oakland

Client Reference: 96-203
Clayton Project No. 93031.51

Sample Identification:	9AV-X5-6	Date Sampled:	03/12/93
Lab Number:	9303151-06A	Date Received:	03/15/93
Sample Matrix/Media:	SOIL	Date Extracted:	03/17/93
Extraction Method:	EPA 5030	Date Analyzed:	03/18/93
Analytical Method:	EPA 8020		

Analyte	CAS #	Concentration (mg/kg)	Limit of Detection (mg/kg)
BTEX			
Benzene	71-43-2	0.010	0.005
Ethylbenzene	100-41-4	ND	0.005
Toluene	108-88-3	0.006	0.005
o-Xylene	95-47-6	ND	0.005
p,m-Xylenes	--	ND	0.005
Surrogates		Recovery (%)	QC Limits (%)
a,a,a-Trifluorotoluene	98-08-8	104	50 - 150

ND: Not detected at or above limit of detection
--: Information not available or not applicable
Results are reported on a wet weight basis, as received

Results of Analysis
for
Uribe & Associates/ Port of Oakland

Client Reference: 96-203
Clayton Project No. 93031.51

Sample Identification:	9AV-X6-1	Date Sampled:	03/12/93
Lab Number:	9303151-07A	Date Received:	03/15/93
Sample Matrix/Media:	SOIL	Date Extracted:	03/17/93
Extraction Method:	EPA 5030	Date Analyzed:	03/19/93
Analytical Method:	EPA 8020		

Analyte	CAS #	Concentration (mg/kg)	Limit of Detection (mg/kg)
BTEX			
Benzene	71-43-2	2.0	0.005
Ethylbenzene	100-41-4	4.2	0.005
Toluene	108-88-3	9.6	0.005
o-Xylene	95-47-6	0.84	0.005
p,m-Xylenes	--	12	0.005
Surrogates		**Recovery (%)**	**QC Limits (%)**
a,a,a-Trifluorotoluene	98-08-8	112	50 - 150

ND: Not detected at or above limit of detection
--: Information not available or not applicable
Results are reported on a wet weight basis, as received

Results of Analysis
for
Uribe & Associates/ Port of Oakland

Client Reference: 96-203
Clayton Project No. 93031.51

Sample Identification:	9AV-X6-3	Date Sampled:	03/12/93
Lab Number:	9303151-09A	Date Received:	03/15/93
Sample Matrix/Media:	SOIL	Date Extracted:	03/17/93
Extraction Method:	EPA 5030	Date Analyzed:	03/19/93
Analytical Method:	EPA 8020		

Analyte	CAS #	Concentration (mg/kg)	Limit of Detection (mg/kg)
BTEX			
Benzene	71-43-2	0.43	0.005
Ethylbenzene	100-41-4	0.83	0.005
Toluene	108-88-3	1.5	0.005
o-Xylene	95-47-6	0.19	0.005
p,m-Xylenes	--	2.0	0.005
Surrogates		**Recovery (%)**	**QC Limits (%)**
a,a,a-Trifluorotoluene	98-08-8	128	50 - 150

ND: Not detected at or above limit of detection
--: Information not available or not applicable
Results are reported on a wet weight basis, as received

Results of Analysis
for
Uribe & Associates/ Port of Oakland

Client Reference: 96-203
Clayton Project No. 03031.21

Sample Identification: METHOD BLANK
Lab Number: 9303151-10A
Sample Matrix/Media: SOIL
Extraction Method: EPA 5030
Analytical Method: EPA 8020

Date Sampled: --
Date Received: --
Date Extracted: 03/17/93
Date Analyzed: 03/19/93

Analyte	CAS #	Concentration (mg/kg)	Limit of Detection (mg/kg)
BTEX			
Benzene	71-43-2	ND	0.005
Ethylbenzene	100-41-4	ND	0.005
Toluene	108-88-3	ND	0.005
o-Xylene	95-47-6	ND	0.005
p,m-Xylenes	--	ND	0.005
Surrogates		**Recovery (%)**	**QC Limits (%)**
a,a,a-Trifluorotoluene	98-08-8	97	50 - 150

ND: Not detected at or above limit of detection
--: Information not available or not applicable
Results are reported on a wet weight basis, as received

Results of Analysis
for
Uribe & Associates/ Port of Oakland

Client Reference: 96-203
Clayton Project No. 93031.51

Sample Identification:	9AV-X5-3	Date Sampled:	03/11/93
Lab Number:	9303151-03A	Date Received:	03/15/93
Sample Matrix/Media:	LIQUID	Date Prepared:	03/19/93
Preparation Method:	EPA 5030	Date Analyzed:	03/19/93
Analytical Method:	EPA 8020		

Analyte	CAS #	Concentration (ug/L)	Limit of Detection (ug/L)
BTEX			
Benzene	71-43-2	ND	40
Ethylbenzene	100-41-4	ND	30
Toluene	108-88-3	ND	30
o-Xylene	95-47-6	ND	40
p,m-Xylenes	--	ND	40
Surrogates		**Recovery (%)**	**QC Limits (%)**
a,a,a-Trifluorotoluene	98-08-8	99	50 - 150

ND: Not detected at or above limit of detection
--: Information not available or not applicable

Note: Detection limits increased due to presence of heavier hydrocarbons.

Results of Analysis
for
Uribe & Associates/ Port of Oakland

Client Reference: 96-203
Clayton Project No. 93031.51

Sample Identification:	9AV-X5-4	Date Sampled:	03/11/93
Lab Number:	9303151-04A	Date Received:	03/15/93
Sample Matrix/Media:	LIQUID	Date Prepared:	03/19/93
Preparation Method:	EPA 5030	Date Analyzed:	03/19/93
Analytical Method:	EPA 8020		

Analyte	CAS #	Concentration (ug/L)	Limit of Detection (ug/L)
BTEX			
Benzene	71-43-2	ND	40
Ethylbenzene	100-41-4	ND	30
Toluene	108-88-3	ND	30
o-Xylene	95-47-6	ND	40
p,m-Xylenes	--	ND	40
Surrogates		**Recovery (%)**	**QC Limits (%)**
a,a,a-Trifluorotoluene	98-08-8	95	50 - 150

ND: Not detected at or above limit of detection
--: Information not available or not applicable

Note: Detection limits increased due to presence of heavier hydrocarbons.

Results of Analysis
for
Uribe & Associates/ Port of Oakland

Client Reference: 96-203
Clayton Project No. 93031.51

Sample Identification:	METHOD BLANK	Date Sampled:	--
Lab Number:	9303151-11A	Date Received:	--
Sample Matrix/Media:	LIQUID	Date Prepared:	03/19/93
Preparation Method:	EPA 5030	Date Analyzed:	03/19/93
Analytical Method:	EPA 8020		

Analyte	CAS #	Concentration (ug/L)	Limit of Detection (ug/L)
BTEX			
Benzene	71-43-2	ND	0.4
Ethylbenzene	100-41-4	ND	0.3
Toluene	108-88-3	ND	0.3
o-Xylene	95-47-6	ND	0.4
p,m-Xylenes	--	ND	0.4
Surrogates		**Recovery (%)**	**QC Limits (%)**
a,a,a-Trifluorotoluene	98-08-8	101	50 - 150

ND: Not detected at or above limit of detection
--: Information not available or not applicable

Results of Analysis
for
Uribe & Associates/ Port of Oakland

Client Reference: 96-203
Clayton Project No. 93031.51

Sample Matrix/Media: SOIL
Preparation Method: EPA 3550
Analysis Method: EPA 8015 (Modified)

Date Received: 03/15/93
Date Prepared: 03/16/93
Date Analyzed: 03/17/93

Lab Number	Sample Identification	Date Sampled	Diesel (mg/kg)	Detection Limit (mg/kg)
01A	9AV-X5-1	03/11/93	1,800	1
02A	9AV-X5-2	03/11/93	280 a,b	1
06A	9AV-X5-6	03/12/93	440 a,b	1
07A	9AV-X6-1	03/12/93	50,000 c	1
09A	9AV-X6-3	03/12/93	22,000 b	1
10A	METHOD BLANK	--	ND b	1

ND Not detected at or above limit of detection
< Not detected at or above limit of detection
-- Information not available or not applicable
Results are reported on a wet weight basis, as received

[a] Unidentified hydrocarbons present in diesel range; quantitation based on diesel

[b] Analyzed on 03/18/93

[c] Analyzed on 03/19/93

Results of Analysis
for
Uribe & Associates/ Port of Oakland

Client Reference: 96-203
Clayton Project No. 93031.51

Sample Matrix/Media: LIQUID
Preparation Method: EPA 3510
Analysis Method: EPA 8015 (Modified)

Date Received: 03/15/93
Date Prepared: 03/17/93
Date Analyzed: 03/18/93

Lab Number	Sample Identification	Date Sampled	Diesel (ug/L)	Detection Limit (ug/L)
05A	9AV-X5-5	03/11/93	57,000	50
11A	METHOD BLANK	--	ND	50

ND Not detected at or above limit of detection
< Not detected at or above limit of detection
-- Information not available or not applicable

URIBE & ASSOCIATES
2939 LAKESHORE AVENUE
SUITE TWO HUNDRED
OAKLAND, CALIFORNIA 94610
415-832-2233
FAX 415-832-2237

CHAIN OF CUSTODY RECORD

5307151

PROJ. NO. 96-203-205 | PROJECT NAME: 9th Avenue Terminal

SAMPLER(S) (Signature): Gary Goodemote

NO	DATE	TIME	GRAB	SAMPLE I.D.	NO. OF CONTAINERS	ANALYSIS: TPH as Diesel	BTEX
1	3/11/93	2:30	X	9AV-X5-1 -01	1 Soil	X	X
2	3/11/93	3:00	X	9AV-X5-2 -02	1 Soil	X	X
3	3/11/93	3:00	X	9AV-X5-3 -03	1 Liquid	X	X
4	3/11/93	3:00	X	9AV-X5-4 -04	1 Liquid	X	X
5	3/11/93	3:00	X	9AV-X5-5 -05	1 Liquid	X	X
6	3/12/93	9:30	X	9AV-X5-6 -06	1 Soil	X	X
7	3/12/93	3:30	X	9AV-X6-1 -07	1 Soil	X	X
8	3/12/93	3:35	X	9AV-X6-2 -08	1 Soil		
9	3/12/93	3:50	X	9AV-X6-3 -09	1 Soil	X	X

CHECK IF RUSH

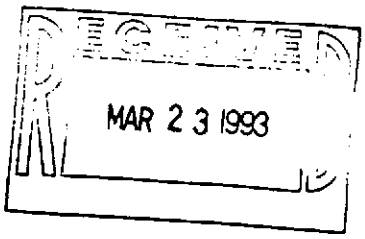
REMARKS:
HCL preservative 1x40mL
HCL preservative ↓
1 L L
Hold
3/16: Analyze Samples 9AV-X5-3 and -4 for BTEX only. Analyze Sample 9AV-X5-5 for diesel only. Limited sample volume. BS

Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Gary Goodemote	3/12/93 5:15			3/15/93 0935	Jim Mitchell
Jim Mitchell	3/15/93 11:35				
		Received for Laboratory by: (Signature)	Date/Time	NAME	
			3/16/93 11:35	ADDRESS	

Western Operations

1252 Quarry Lane
P.O. Box 9019
Pleasanton, CA 94566
(510) 426-2600
Fax (510) 426-0106

Clayton
ENVIRONMENTAL
CONSULTANTS



March 22, 1993

Mr. Alan White
URIBE & ASSOCIATES
2930 Lakeshore Avenue, Ste. 200
Oakland, CA 94610

Client Ref. 96-203
Clayton Project No. 93030.64

Dear Mr. White:

Attached is our analytical laboratory report for the samples received on March 5, 1993. Sample I.D. 9AV-W-1 was not analyzed for BTEX and sample I.D. 9AV-W-2 was not analyzed for Diesel due to insufficient sample. A copy of the Chain-of-Custody form acknowledging receipt of these samples is attached.

Please note that any unused portion of the samples will be disposed of 30 days after the date of this report, unless you have requested otherwise.

We appreciate the opportunity to be of assistance to you. If you have any questions, please contact Suzanne Silvera, Client Services Supervisor, at (510) 426-2657.

Sincerely,

Ronald H. Peters, CIH
Director, Laboratory Services
Western Operations

RHP/caa
Attachments

Results of Analysis
for
Uribe & Associates/ Port of Oakland

Client Reference: 96-203
Clayton Project No. 93030.64

Sample Identification: 9AV-X-3
Lab Number: 9303064-01A
Sample Matrix/Media: SOIL
Extraction Method: EPA 5030
Analytical Method: EPA 8020

Date Sampled: 03/03/93
Date Received: 03/05/93
Date Extracted: 03/10/93
Date Analyzed: 03/12/93

Analyte	CAS #	Concentration (mg/kg)	Limit of Detection (mg/kg)
BTEX			
Benzene	71-43-2	0.063	0.005
Ethylbenzene	100-41-4	0.30	0.005
Toluene	108-88-3	0.36	0.005
o-Xylene	95-47-6	0.43	0.005
p,m-Xylenes	--	0.81	0.005
Surrogates		**Recovery (%)**	**QC Limits (%)**
a,a,a-Trifluorotoluene	98-08-8	100	50 - 150

ND: Not detected at or above limit of detection
--: Information not available or not applicable
Results are reported on a wet weight basis, as received

Results of Analysis
for
Uribe & Associates/ Port of Oakland

Client Reference: 96-203
Clayton Project No. 93030.64

Sample Identification: 9AV-X-4
Lab Number: 9303064-02A
Sample Matrix/Media: SOIL
Extraction Method: EPA 5030
Analytical Method: EPA 8020

Date Sampled: 03/03/93
Date Received: 03/05/93
Date Extracted: 03/10/93
Date Analyzed: 03/12/93

Analyte	CAS #	Concentration (mg/kg)	Limit of Detection (mg/kg)
BTEX			
Benzene	71-43-2	0.49	0.005
Ethylbenzene	100-41-4	2.2	0.005
Toluene	108-88-3	4.5	0.005
o-Xylene	95-47-6	3.5	0.005
p,m-Xylenes	--	6.1	0.005
Surrogates		**Recovery (%)**	**QC Limits (%)**
a,a,a-Trifluorotoluene	98-08-8	112	50 - 150

ND: Not detected at or above limit of detection
--: Information not available or not applicable
Results are reported on a wet weight basis, as received

Results of Analysis
for
Uribe & Associates/ Port of Oakland

Client Reference: 96-203
Clayton Project No. 93030.64

Sample Identification: 9AV-X-5
Lab Number: 9303064-03A
Sample Matrix/Media: SOIL
Extraction Method: EPA 5030
Analytical Method: EPA 8020

Date Sampled: 03/03/93
Date Received: 03/05/93
Date Extracted: 03/10/93
Date Analyzed: 03/12/93

Analyte	CAS #	Concentration (mg/kg)	Limit of Detection (mg/kg)
BTEX			
Benzene	71-43-2	0.15	0.005
Ethylbenzene	100-41-4	0.45	0.005
Toluene	108-88-3	0.66	0.005
o-Xylene	95-47-6	0.78	0.005
p,m-Xylenes	--	0.92	0.005
Surrogates		Recovery (%)	QC Limits (%)
a,a,a-Trifluorotoluene	98-08-8	101	50 - 150

ND: Not detected at or above limit of detection
--: Information not available or not applicable
Results are reported on a wet weight basis, as received

Results of Analysis
for
Uribe & Associates/ Port of Oakland

Client Reference: 96-203
Clayton Project No. 93030.64

Sample Identification: 9AV-X-6
Lab Number: 9303064-04A
Sample Matrix/Media: SOIL
Extraction Method: EPA 5030
Analytical Method: EPA 8020

Date Sampled: 03/03/93
Date Received: 03/05/93
Date Extracted: 03/10/93
Date Analyzed: 03/12/93

Analyte	CAS #	Concentration (mg/kg)	Limit of Detection (mg/kg)
BTEX			
Benzene	71-43-2	0.10	0.005
Ethylbenzene	100-41-4	0.42	0.005
Toluene	108-88-3	0.69	0.005
o-Xylene	95-47-6	0.68	0.005
p,m-Xylenes	--	1.3	0.005
Surrogates		Recovery (%)	QC Limits (%)
a,a,a-Trifluorotoluene	98-08-8	98	50 - 150

ND: Not detected at or above limit of detection
--: Information not available or not applicable
Results are reported on a wet weight basis, as received

Results of Analysis
for
Uribe & Associates/ Port of Oakland

Client Reference: 96-203
Clayton Project No. 93030.64

Sample Identification: 9AV-X-7
Lab Number: 9303064-05A
Sample Matrix/Media: SOIL
Extraction Method: EPA 5030
Analytical Method: EPA 8020

Date Sampled: 03/03/93
Date Received: 03/05/93
Date Extracted: 03/10/93
Date Analyzed: 03/12/93

Analyte	CAS #	Concentration (mg/kg)	Limit of Detection (mg/kg)
BTEX			
Benzene	71-43-2	0.33	0.005
Ethylbenzene	100-41-4	1.1	0.005
Toluene	108-88-3	1.6	0.005
o-Xylene	95-47-6	1.8	0.005
p,m-Xylenes	--	2.8	0.005
Surrogates		**Recovery (%)**	**QC Limits (%)**
a,a,a-Trifluorotoluene	98-08-8	106	50 - 150

ND: Not detected at or above limit of detection
--: Information not available or not applicable
Results are reported on a wet weight basis, as received

Results of Analysis
for
Uribe & Associates/ Port of Oakland

Client Reference: 96-203
Clayton Project No. 93030.64

Sample Identification:	9AV-X-8	Date Sampled:	03/05/93
Lab Number:	9303064-08A	Date Received:	03/05/93
Sample Matrix/Media:	SOIL	Date Extracted:	03/10/93
Extraction Method:	EPA 5030	Date Analyzed:	03/12/93
Analytical Method:	EPA 8020		

Analyte	CAS #	Concentration (mg/kg)	Limit of Detection (mg/kg)
BTEX			
Benzene	71-43-2	4.8	0.005
Ethylbenzene	100-41-4	16	0.005
Toluene	108-88-3	42	0.005
o-Xylene	95-47-6	23	0.005
p,m-Xylenes	--	45	0.005
Surrogates		Recovery (%)	QC Limits (%)
a,a,a-Trifluorotoluene	98-08-8	109	50 - 150

ND: Not detected at or above limit of detection
--: Information not available or not applicable
Results are reported on a wet weight basis, as received

Results of Analysis
for
Uribe & Associates/ Port of Oakland

Client Reference: 96-203
Clayton Project No. 93030.64

Sample Identification:	9AV-X-9	Date Sampled:	03/05/93
Lab Number:	9303064-09A	Date Received:	03/05/93
Sample Matrix/Media:	SOIL	Date Extracted:	03/10/93
Extraction Method:	EPA 5030	Date Analyzed:	03/17/93
Analytical Method:	EPA 8020		

Analyte	CAS #	Concentration (mg/kg)	Limit of Detection (mg/kg)
BTEX			
Benzene	71-43-2	ND	0.005
Ethylbenzene	100-41-4	ND	0.005
Toluene	108-88-3	0.007	0.005
o-Xylene	95-47-6	ND	0.005
p,m-Xylenes	--	ND	0.005
Surrogates		Recovery (%)	QC Limits (%)
a,a,a-Trifluorotoluene	98-08-8	103	50 - 150

ND: Not detected at or above limit of detection
--: Information not available or not applicable
Results are reported on a wet weight basis, as received

Results of Analysis
for
Uribe & Associates/ Port of Oakland

Client Reference: 96-203
Clayton Project No. 93030.64

Sample Identification: 9AV-X-10
Lab Number: 9303064-10A
Sample Matrix/Media: SOIL
Extraction Method: EPA 5030
Analytical Method: EPA 8020

Date Sampled: 03/05/93
Date Received: 03/05/93
Date Extracted: 03/10/93
Date Analyzed: 03/17/93

Analyte	CAS #	Concentration (mg/kg)	Limit of Detection (mg/kg)
BTEX			
Benzene	71-43-2	0.033	0.005
Ethylbenzene	100-41-4	ND	0.005
Toluene	108-88-3	0.010	0.005
o-Xylene	95-47-6	ND	0.005
p,m-Xylenes	--	0.007	0.005
Surrogates		**Recovery (%)**	**QC Limits (%)**
a,a,a-Trifluorotoluene	98-08-8	92	50 - 150

ND: Not detected at or above limit of detection
--: Information not available or not applicable
Results are reported on a wet weight basis, as received

Results of Analysis
for
Uribe & Associates/ Port of Oakland

Client Reference: 96-203
Clayton Project No. 93030.64

Sample Identification: METHOD BLANK
Lab Number: 9303064-11A
Sample Matrix/Media: SOIL
Extraction Method: EPA 5030
Analytical Method: EPA 8020

Date Sampled: --
Date Received: --
Date Extracted: 03/10/93
Date Analyzed: 03/12/93

Analyte	CAS #	Concentration (mg/kg)	Limit of Detection (mg/kg)
BTEX			
Benzene	71-43-2	ND	0.005
Ethylbenzene	100-41-4	ND	0.005
Toluene	108-88-3	ND	0.005
o-Xylene	95-47-6	ND	0.005
p,m-Xylenes	--	ND	0.005
Surrogates		**Recovery (%)**	**QC Limits (%)**
a,a,a-Trifluorotoluene	98-08-8	84	50 - 150

ND: Not detected at or above limit of detection
--: Information not available or not applicable
Results are reported on a wet weight basis, as received

Results of Analysis
for
Uribe & Associates/ Port of Oakland

Client Reference: 96-203
Clayton Project No. 93030.64

Sample Identification: 9AV-W-2
Lab Number: 9303064-07A
Sample Matrix/Media: WATER
Preparation Method: EPA 5030
Analytical Method: EPA 8020

Date Sampled: 03/04/93
Date Received: 03/05/93
Date Prepared: 03/16/93
Date Analyzed: 03/16/93

Analyte	CAS #	Concentration (ug/L)	Limit of Detection (ug/L)
BTEX			
Benzene	71-43-2	1.8	0.4
Ethylbenzene	100-41-4	1.7	0.3
Toluene	108-88-3	2.5	0.3
o-Xylene	95-47-6	4.0	0.4
p,m-Xylenes	--	4.8	0.4
Surrogates		**Recovery (%)**	**QC Limits (%)**
a,a,a-Trifluorotoluene	98-08-8	105	50 - 150

ND: Not detected at or above limit of detection
--: Information not available or not applicable

Results of Analysis
for
Uribe & Associates/ Port of Oakland

Client Reference: 96-203
Clayton Project No. 93030.64

Sample Identification: METHOD BLANK
Lab Number: 9303064-12A
Sample Matrix/Media: WATER
Preparation Method: EPA 5030
Analytical Method: EPA 8020

Date Sampled: --
Date Received: --
Date Prepared: 03/16/93
Date Analyzed: 03/16/93

Analyte	CAS #	Concentration (ug/L)	Limit of Detection (ug/L)
BTEX			
Benzene	71-43-2	ND	0.4
Ethylbenzene	100-41-4	ND	0.3
Toluene	108-88-3	ND	0.3
o-Xylene	95-47-6	ND	0.4
p,m-Xylenes	--	ND	0.4
Surrogates		**Recovery (%)**	**QC Limits (%)**
a,a,a-Trifluorotoluene	98-08-8	100	50 - 150

ND: Not detected at or above limit of detection
--: Information not available or not applicable

Results of Analysis
for
Uribe & Associates/ Port of Oakland

Client Reference: 96-203
Clayton Project No. 93030.64

Sample Matrix/Media: SOIL
Preparation Method: EPA 3550
Analysis Method: EPA 8015 (Modified)

Date Received: 03/05/93
Date Prepared: 03/11/93
Date Analyzed: 03/19/93

Lab Number	Sample Identification	Date Sampled	Diesel (mg/kg)	Detection Limit (mg/kg)
01A	9AV-X-3	03/03/93	7,100	1
02A	9AV-X-4	03/03/93	9,500	1
03A	9AV-X-5	03/03/93	3,800	1
04A	9AV-X-6	03/03/93	7,600	1
05A	9AV-X-7	03/03/93	26,000	1
08A	9AV-X-8	03/05/93	100,000	1
09A	9AV-X-9	03/05/93	18	1
10A	9AV-X-10	03/05/93	ND	90a
11A	METHOD BLANK	--	ND	1

ND Not detected at or above limit of detection
< Not detected at or above limit of detection
-- Information not available or not applicable
Results are reported on a wet weight basis, as received
a Detection limit increased due to presence of heavier hydrocarbons

Results of Analysis
for
Uribe & Associates/ Port of Oakland

Client Reference: 96-203
Clayton Project No. 93030.64

Sample Matrix/Media: WATER
Preparation Method: EPA 3510
Analysis Method: EPA 8015 (Modified)

Date Received: 03/05/93
Date Prepared: 03/08/93
Date Analyzed: 03/18/93

Lab Number	Sample Identification	Date Sampled	Diesel (ug/L)	Detection Limit (ug/L)
06A	9AV-W-1	03/03/93	2,200	50
12A	METHOD BLANK	--	ND	50

ND Not detected at or above limit of detection
< Not detected at or above limit of detection
-- Information not available or not applicable

URIBE & ASSOCIATES
2930 LAKESHORE AVENUE
SUITE TWO HUNDRED
OAKLAND, CALIFORNIA 94610
510 · 832 · 2233
FAX 510 · 832 · 2237

CHAIN OF CUSTODY RECORD

PROJ. NO. 26815 96-203

PROJECT NAME: Ninth Ave Terminal

SAMPLERS: (Signature) CR

	NO	DATE	TIME	COMP	GRAB	SAMPLE I.D.	NO. OF CONTAINERS	ANALYSIS: TPH-Diesel	ANALYSIS: BTEX	REMARKS
C1A	1	3/3/93	10:00		-	9AV-X-3	1	X	X	2x6 BC SOIL
C2	2	3/3/93	10:45		-	9AV-X-4	1	X	X	
C3	3	3/3/93	11:00		-	9AV-X-5	1	X	X	
C4	4	3/3/93	11:20		-	9AV-X-6	1	X	X	
C5	5	3/3/93	11:25		-	9AV-X-7	1	X	X	
QCA	6	3/3/93	11:45		-	9AV-W-1	1	X	X	1x 1L-Hcl (water)
QTA/B	7	3/4/93	2:00		-	9AV-W-2	2	X	X	2x VOA-Hcl
C8A	8	3/5/93	9:00		-	9AV-X-8	1	X	X	2x 6BC SOIL
Q9A	9	3/5/93	10:00		-	9AV-X-9	1	X	X	
10A	10	3/5/93	1:25		-	9AV-X-10	1	X	X	

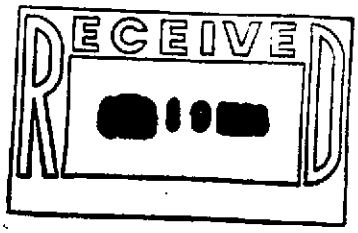
CHECK IF RUSH

Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Relinquished by: (Signature)	Date/Time	Received by: (Signature)
CR	3/5/93 2:20			3/5/93 1450	
Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Relinquished by: (Signature)	Date/Time	Received for Laboratory by: (Signature)	Date/Time	NAME	
	3/5/93 1545		3/5/93 345	ADDRESS	

Western Operations

1252 Quarry Lane
P.O. Box 9019
Pleasanton, CA 94566
(510) 426-2600
Fax (510) 426-0106

Clayton
ENVIRONMENTAL
CONSULTANTS



March 18, 1993

Mr. Alan White
URIBE & ASSOCIATES
2930 Lakeshore Avenue, Ste. 200
Oakland, CA 94610

Client Ref. 26815
Clayton Project No. 93030.48

Dear Mr. White:

Attached is our analytical laboratory report for the samples received on March 3, 1993. A copy of the Chain-of-Custody form acknowledging receipt of these samples is attached.

Please note that any unused portion of the samples will be disposed of 30 days after the date of this report, unless you have requested otherwise.

We appreciate the opportunity to be of assistance to you. If you have any questions, please contact Suzanne Silvera, Client Services Supervisor, at (510) 426-2657.

Sincerely,

Jeanette A. Hurl for

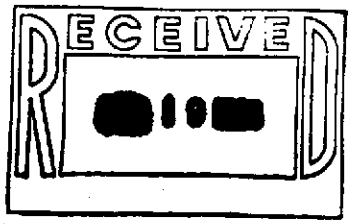
Ronald H. Peters, CIH
Director, Laboratory Services
Western Operations

RHP/caa
Attachments

Western Operations

1252 Quarry Lane
P.O. Box 9019
Pleasanton, CA 94566
(510) 426-2600
Fax (510) 426-0106

Clayton
ENVIRONMENTAL
CONSULTANTS



March 18, 1993

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Oakland, CA 94610

Client Ref. 26815
Clayton Project No. 93030.48

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Sincerely,

Jeanette A. Hurl for

Ronald H. Peters, CIH
Director, Laboratory Services
Western Operations

RHP/caa
Attachments

Results of Analysis
for
Uribe & Associates/ Port of Oakland

Client Reference: 26815
Clayton Project No. 93030.48

Sample Identification:	9AV-B13-1-4.0	Date Sampled:	03/01/93
Lab Number:	9303048-01A	Date Received:	03/03/93
Sample Matrix/Media:	SOIL	Date Extracted:	03/05/93
Extraction Method:	EPA 5030	Date Analyzed:	03/08/93
Analytical Method:	EPA 8020		

Analyte	CAS #	Concentration (mg/kg)	Limit of Detection (mg/kg)
BTEX			
Benzene	71-43-2	0.006	0.005
Ethylbenzene	100-41-4	ND	0.005
Toluene	108-88-3	0.009	0.005
o-Xylene	95-47-6	ND	0.005
p,m-Xylenes	--	0.006	0.005
Surrogates		**Recovery (%)**	**QC Limits (%)**
a,a,a-Trifluorotoluene	98-08-8	96	50 - 150

ND: Not detected at or above limit of detection
--: Information not available or not applicable
Results are reported on a wet weight basis, as received

Results of Analysis
for
Uribe & Associates/ Port of Oakland

Client Reference: 26815
Clayton Project No. 93030.48

Sample Identification:	9AV-B13-2-7.5	Date Sampled:	03/01/93
Lab Number:	9303048-02A	Date Received:	03/03/93
Sample Matrix/Media:	SOIL	Date Extracted:	03/05/93
Extraction Method:	EPA 5030	Date Analyzed:	03/08/93
Analytical Method:	EPA 8020		

Analyte	CAS #	Concentration (mg/kg)	Limit of Detection (mg/kg)
BTEX			
Benzene	71-43-2	ND	0.005
Ethylbenzene	100-41-4	0.006	0.005
Toluene	108-88-3	0.008	0.005
o-Xylene	95-47-6	0.014	0.005
p,m-Xylenes	--	0.023	0.005
Surrogates		**Recovery (%)**	**QC Limits (%)**
a,a,a-Trifluorotoluene	98-08-8	91	50 - 150

ND: Not detected at or above limit of detection
--: Information not available or not applicable
Results are reported on a wet weight basis, as received

Results of Analysis
for
Uribe & Associates/ Port of Oakland

Client Reference: 26815
Clayton Project No. 93030.48

Sample Identification:	9AV-B14-1-3.5	Date Sampled:	03/01/93
Lab Number:	9303048-03A	Date Received:	03/03/93
Sample Matrix/Media:	SOIL	Date Extracted:	03/05/93
Extraction Method:	EPA 5030	Date Analyzed:	03/08/93
Analytical Method:	EPA 8020		

Analyte	CAS #	Concentration (mg/kg)	Limit of Detection (mg/kg)
BTEX			
Benzene	71-43-2	ND	0.005
Ethylbenzene	100-41-4	ND	0.005
Toluene	108-88-3	ND	0.005
o-Xylene	95-47-6	ND	0.005
p,m-Xylenes	--	ND	0.005
Surrogates		Recovery (%)	QC Limits (%)
a,a,a-Trifluorotoluene	98-08-8	97	50 - 150

ND: Not detected at or above limit of detection
--: Information not available or not applicable
Results are reported on a wet weight basis, as received

Results of Analysis
for
Uribe & Associates/ Port of Oakland

Client Reference: 26815
Clayton Project No. 93030.48

Sample Identification:	9AV-B14-2-6.5	Date Sampled:	03/01/93
Lab Number:	9303048-04A	Date Received:	03/03/93
Sample Matrix/Media:	SOIL	Date Extracted:	03/05/93
Extraction Method:	EPA 5030	Date Analyzed:	03/08/93
Analytical Method:	EPA 8020		

Analyte	CAS #	Concentration (mg/kg)	Limit of Detection (mg/kg)
BTEX			
Benzene	71-43-2	ND	0.005
Ethylbenzene	100-41-4	ND	0.005
Toluene	108-88-3	ND	0.005
o-Xylene	95-47-6	ND	0.005
p,m-Xylenes	--	ND	0.005
Surrogates		Recovery (%)	QC Limits (%)
a,a,a-Trifluorotoluene	98-08-8	99	50 - 150

ND: Not detected at or above limit of detection
--: Information not available or not applicable
Results are reported on a wet weight basis, as received

Results of Analysis
for
Uribe & Associates/ Port of Oakland

Client Reference: 26815
Clayton Project No. 93030.48

Sample Identification:	9AV-B14-3-9.5	Date Sampled:	03/01/93
Lab Number:	9303048-05A	Date Received:	03/03/93
Sample Matrix/Media:	SOIL	Date Extracted:	03/05/93
Extraction Method:	EPA 5030	Date Analyzed:	03/08/93
Analytical Method:	EPA 8020		

Analyte	CAS #	Concentration (mg/kg)	Limit of Detection (mg/kg)
BTEX			
Benzene	71-43-2	ND	0.005
Ethylbenzene	100-41-4	ND	0.005
Toluene	108-88-3	ND	0.005
o-Xylene	95-47-6	ND	0.005
p,m-Xylenes	--	ND	0.005
Surrogates		**Recovery (%)**	**QC Limits (%)**
a,a,a-Trifluorotoluene	98-08-8	103	50 - 150

ND: Not detected at or above limit of detection
--: Information not available or not applicable
Results are reported on a wet weight basis, as received

Results of Analysis
for
Uribe & Associates/ Port of Oakland

Client Reference: 26815
Clayton Project No. 93030.48

Sample Identification: 9AV-B15-1-2.5
Lab Number: 9303048-06A
Sample Matrix/Media: SOIL
Extraction Method: EPA 5030
Analytical Method: EPA 8020

Date Sampled: 03/01/93
Date Received: 03/03/93
Date Extracted: 03/05/93
Date Analyzed: 03/10/93

Analyte	CAS #	Concentration (mg/kg)	Limit of Detection (mg/kg)
BTEX			
Benzene	71-43-2	ND	0.005
Ethylbenzene	100-41-4	ND	0.005
Toluene	108-88-3	ND	0.005
o-Xylene	95-47-6	ND	0.005
p,m-Xylenes	--	ND	0.005
Surrogates		**Recovery (%)**	**QC Limits (%)**
a,a,a-Trifluorotoluene	98-08-8	93	50 - 150

ND: Not detected at or above limit of detection
--: Information not available or not applicable
Results are reported on a wet weight basis, as received

Results of Analysis
for
Uribe & Associates/ Port of Oakland

Client Reference: 26815
Clayton Project No. 93030.48

Sample Identification:	9AV-B15-2-5.0	Date Sampled:	03/01/93
Lab Number:	9303048-07A	Date Received:	03/03/93
Sample Matrix/Media:	SOIL	Date Extracted:	03/05/93
Extraction Method:	EPA 5030	Date Analyzed:	03/10/93
Analytical Method:	EPA 8020		

Analyte	CAS #	Concentration (mg/kg)	Limit of Detection (mg/kg)
BTEX			
Benzene	71-43-2	ND	0.005
Ethylbenzene	100-41-4	ND	0.005
Toluene	108-88-3	ND	0.005
o-Xylene	95-47-6	ND	0.005
p,m-Xylenes	--	ND	0.005
Surrogates		Recovery (%)	QC Limits (%)
a,a,a-Trifluorotoluene	98-08-8	94	50 - 150

ND: Not detected at or above limit of detection
--: Information not available or not applicable
Results are reported on a wet weight basis, as received

Results of Analysis
for
Uribe & Associates/ Port of Oakland

Client Reference: 26815
Clayton Project No. 93030.48

Sample Identification:	9AV-B15-3-9.5	Date Sampled:	03/01/93
Lab Number:	9303048-08A	Date Received:	03/03/93
Sample Matrix/Media:	SOIL	Date Extracted:	03/05/93
Extraction Method:	EPA 5030	Date Analyzed:	03/10/93
Analytical Method:	EPA 8020		

Analyte	CAS #	Concentration (mg/kg)	Limit of Detection (mg/kg)
BTEX			
Benzene	71-43-2	ND	0.005
Ethylbenzene	100-41-4	ND	0.005
Toluene	108-88-3	ND	0.005
o-Xylene	95-47-6	ND	0.005
p,m-Xylenes	--	ND	0.005
Surrogates		**Recovery (%)**	**QC Limits (%)**
a,a,a-Trifluorotoluene	98-08-8	87	50 - 150

ND: Not detected at or above limit of detection
--: Information not available or not applicable
Results are reported on a wet weight basis, as received

Results of Analysis
for
Uribe & Associates/ Port of Oakland

Client Reference: 26815
Clayton Project No. 93030.48

Sample Identification:	9AV-B20-1-3.5	Date Sampled:	03/01/93
Lab Number:	9303048-09A	Date Received:	03/03/93
Sample Matrix/Media:	SOIL	Date Extracted:	03/05/93
Extraction Method:	EPA 5030	Date Analyzed:	03/10/93
Analytical Method:	EPA 8020		

Analyte	CAS #	Concentration (mg/kg)	Limit of Detection (mg/kg)
BTEX			
Benzene	71-43-2	ND	0.005
Ethylbenzene	100-41-4	ND	0.005
Toluene	108-88-3	ND	0.005
o-Xylene	95-47-6	ND	0.005
p,m-Xylenes	--	ND	0.005
Surrogates		**Recovery (%)**	**QC Limits (%)**
a,a,a-Trifluorotoluene	98-08-8	76	50 - 150

ND: Not detected at or above limit of detection
--: Information not available or not applicable
Results are reported on a wet weight basis, as received

Results of Analysis
for
Uribe & Associates/ Port of Oakland

Client Reference: 26815
Clayton Project No. 93030.48

Sample Identification:	9AV-B20-2-6.5	Date Sampled:	03/01/93
Lab Number:	9303048-10A	Date Received:	03/03/93
Sample Matrix/Media:	SOIL	Date Extracted:	03/05/93
Extraction Method:	EPA 5030	Date Analyzed:	03/10/93
Analytical Method:	EPA 8020		

Analyte	CAS #	Concentration (mg/kg)	Limit of Detection (mg/kg)
BTEX			
Benzene	71-43-2	ND	0.005
Ethylbenzene	100-41-4	ND	0.005
Toluene	108-88-3	ND	0.005
o-Xylene	95-47-6	ND	0.005
p,m-Xylenes	--	ND	0.005
Surrogates		**Recovery (%)**	**QC Limits (%)**
a,a,a-Trifluorotoluene	98-08-8	90	50 - 150

ND: Not detected at or above limit of detection
--: Information not available or not applicable
Results are reported on a wet weight basis, as received

Results of Analysis
for
Uribe & Associates/ Port of Oakland

Client Reference: 26815
Clayton Project No. 93030.48

Sample Identification:	9AV-B20-3-9.5	Date Sampled:	03/01/93
Lab Number:	9303048-11A	Date Received:	03/03/93
Sample Matrix/Media:	SOIL	Date Extracted:	03/05/93
Extraction Method:	EPA 5030	Date Analyzed:	03/08/93
Analytical Method:	EPA 8020		

Analyte	CAS #	Concentration (mg/kg)	Limit of Detection (mg/kg)
BTEX			
Benzene	71-43-2	ND	0.005
Ethylbenzene	100-41-4	ND	0.005
Toluene	108-88-3	ND	0.005
o-Xylene	95-47-6	ND	0.005
p,m-Xylenes	--	ND	0.005
Surrogates		**Recovery (%)**	**QC Limits (%)**
a,a,a-Trifluorotoluene	98-08-8	97	50 - 150

ND: Not detected at or above limit of detection
--: Information not available or not applicable
Results are reported on a wet weight basis, as received

Results of Analysis
for
Uribe & Associates/ Port of Oakland

Client Reference: 26815
Clayton Project No. 93030.48

Sample Identification:	9AV-B16-1-3.5	Date Sampled:	03/01/93
Lab Number:	9303048-12A	Date Received:	03/03/93
Sample Matrix/Media:	SOIL	Date Extracted:	03/05/93
Extraction Method:	EPA 5030	Date Analyzed:	03/10/93
Analytical Method:	EPA 8020		

Analyte	CAS #	Concentration (mg/kg)	Limit of Detection (mg/kg)
BTEX			
Benzene	71-43-2	ND	0.005
Ethylbenzene	100-41-4	ND	0.005
Toluene	108-88-3	ND	0.005
o-Xylene	95-47-6	ND	0.005
p,m-Xylenes	--	ND	0.005
Surrogates		Recovery (%)	QC Limits (%)
a,a,a-Trifluorotoluene	98-08-8	95	50 - 150

ND: Not detected at or above limit of detection
--: Information not available or not applicable
Results are reported on a wet weight basis, as received

Results of Analysis
for
Uribe & Associates/ Port of Oakland

Client Reference: 26815
Clayton Project No. 93030.48

Sample Identification:	9AV-B16-2-7.0	Date Sampled:	03/01/93
Lab Number:	9303048-13A	Date Received:	03/03/93
Sample Matrix/Media:	SOIL	Date Extracted:	03/05/93
Extraction Method:	EPA 5030	Date Analyzed:	03/10/93
Analytical Method:	EPA 8020		

Analyte	CAS #	Concentration (mg/kg)	Limit of Detection (mg/kg)
BTEX			
Benzene	71-43-2	ND	0.03
Ethylbenzene	100-41-4	ND	0.03
Toluene	108-88-3	ND	0.03
o-Xylene	95-47-6	ND	0.03
p,m-Xylenes	--	ND	0.03
Surrogates		Recovery (%)	QC Limits (%)
a,a,a-Trifluorotoluene	98-08-8	104	50 - 150

ND: Not detected at or above limit of detection
--: Information not available or not applicable
Results are reported on a wet weight basis, as received

Note: Detection limits increased due to presence of heavier hydrocarbons.

Results of Analysis
for
Uribe & Associates/ Port of Oakland

Client Reference: 26815
Clayton Project No. 93030.48

Sample Identification:	9AV-B16-3-7.5	Date Sampled:	03/01/93
Lab Number:	9303048-14A	Date Received:	03/03/93
Sample Matrix/Media:	SOIL	Date Extracted:	03/05/93
Extraction Method:	EPA 5030	Date Analyzed:	03/10/93
Analytical Method:	EPA 8020		

Analyte	CAS #	Concentration (mg/kg)	Limit of Detection (mg/kg)
BTEX			
Benzene	71-43-2	ND	0.03
Ethylbenzene	100-41-4	0.03	0.03
Toluene	108-88-3	ND	0.03
o-Xylene	95-47-6	0.03	0.03
p,m-Xylenes	--	ND	0.03
Surrogates		Recovery (%)	QC Limits (%)
a,a,a-Trifluorotoluene	98-08-8	105	50 - 150

ND: Not detected at or above limit of detection
--: Information not available or not applicable
Results are reported on a wet weight basis, as received

Note: Detection limits increased due to presence of heavier hydrocarbons.

Results of Analysis
for
Uribe & Associates/ Port of Oakland

Client Reference: 26815
Clayton Project No. 93030.48

Sample Identification:	9AV-B16-4-9.5	Date Sampled:	03/01/93
Lab Number:	9303048-15A	Date Received:	03/03/93
Sample Matrix/Media:	SOIL	Date Extracted:	03/05/93
Extraction Method:	EPA 5030	Date Analyzed:	03/10/93
Analytical Method:	EPA 8020		

Analyte	CAS #	Concentration (mg/kg)	Limit of Detection (mg/kg)
BTEX			
Benzene	71-43-2	ND	0.005
Ethylbenzene	100-41-4	ND	0.005
Toluene	108-88-3	ND	0.005
o-Xylene	95-47-6	ND	0.005
p,m-Xylenes	--	ND	0.005
Surrogates		Recovery (%)	QC Limits (%)
a,a,a-Trifluorotoluene	98-08-8	98	50 - 150

ND: Not detected at or above limit of detection
--: Information not available or not applicable
Results are reported on a wet weight basis, as received

Results of Analysis
for
Uribe & Associates/ Port of Oakland

Client Reference: 26815
Clayton Project No. 93030.48

Sample Identification:	9AV-B17-1-3.5	Date Sampled:	03/02/93
Lab Number:	9303048-16A	Date Received:	03/03/93
Sample Matrix/Media:	SOIL	Date Extracted:	03/05/93
Extraction Method:	EPA 5030	Date Analyzed:	03/10/93
Analytical Method:	EPA 8020		

Analyte	CAS #	Concentration (mg/kg)	Limit of Detection (mg/kg)
BTEX			
Benzene	71-43-2	ND	0.005
Ethylbenzene	100-41-4	ND	0.005
Toluene	108-88-3	ND	0.005
o-Xylene	95-47-6	ND	0.005
p,m-Xylenes	--	ND	0.005
Surrogates		Recovery (%)	QC Limits (%)
a,a,a-Trifluorotoluene	98-08-8	92	50 - 150

ND: Not detected at or above limit of detection
--: Information not available or not applicable
Results are reported on a wet weight basis, as received

Results of Analysis
for
Uribe & Associates/ Port of Oakland

Client Reference: 26815
Clayton Project No. 93030.48

Sample Identification:	9AV-B17-2-7.0	Date Sampled:	03/02/93
Lab Number:	9303048-17A	Date Received:	03/03/93
Sample Matrix/Media:	SOIL	Date Extracted:	03/05/93
Extraction Method:	EPA 5030	Date Analyzed:	03/10/93
Analytical Method:	EPA 8020		

Analyte	CAS #	Concentration (mg/kg)	Limit of Detection (mg/kg)
BTEX			
Benzene	71-43-2	ND	0.005
Ethylbenzene	100-41-4	ND	0.005
Toluene	108-88-3	ND	0.005
o-Xylene	95-47-6	ND	0.005
p,m-Xylenes	--	ND	0.005
Surrogates		Recovery (%)	QC Limits (%)
a,a,a-Trifluorotoluene	98-08-8	98	50 - 150

ND: Not detected at or above limit of detection
--: Information not available or not applicable
Results are reported on a wet weight basis, as received

Results of Analysis
for
Uribe & Associates/ Port of Oakland

Client Reference: 26815
Clayton Project No. 93030.48

Sample Identification: 9AV-B18-1-6.5
Lab Number: 9303048-19A
Sample Matrix/Media: SOIL
Extraction Method: EPA 5030
Analytical Method: EPA 8020

Date Sampled: 03/02/93
Date Received: 03/03/93
Date Extracted: 03/05/93
Date Analyzed: 03/10/93

Analyte	CAS #	Concentration (mg/kg)	Limit of Detection (mg/kg)
BTEX			
Benzene	71-43-2	ND	0.005
Ethylbenzene	100-41-4	ND	0.005
Toluene	108-88-3	ND	0.005
o-Xylene	95-47-6	ND	0.005
p,m-Xylenes	--	ND	0.005
Surrogates		**Recovery (%)**	**QC Limits (%)**
a,a,a-Trifluorotoluene	98-08-8	105	50 - 150

ND: Not detected at or above limit of detection
--: Information not available or not applicable
Results are reported on a wet weight basis, as received

Results of Analysis
for
Uribe & Associates/ Port of Oakland

Client Reference: 26815
Clayton Project No. 93030.48

Sample Identification:	9AV-B18-1-6.5	Date Sampled:	03/02/93
Lab Number:	9303048-19A	Date Received:	03/03/93
Sample Matrix/Media:	SOIL	Date Extracted:	03/05/93
Extraction Method:	EPA 5030	Date Analyzed:	03/10/93
Analytical Method:	EPA 8020		

Analyte	CAS #	Concentration (mg/kg)	Limit of Detection (mg/kg)
BTEX			
Benzene	71-43-2	ND	0.005
Ethylbenzene	100-41-4	ND	0.005
Toluene	108-88-3	ND	0.005
o-Xylene	95-47-6	ND	0.005
p,m-Xylenes	--	ND	0.005
Surrogates		**Recovery (%)**	**QC Limits (%)**
a,a,a-Trifluorotoluene	98-08-8	105	50 - 150

ND: Not detected at or above limit of detection
--: Information not available or not applicable
Results are reported on a wet weight basis, as received

Results of Analysis
for
Uribe & Associates/ Port of Oakland

Client Reference: 26815
Clayton Project No. 93030.48

Sample Identification:	9AV-B18-2-9.5	Date Sampled:	03/02/93
Lab Number:	9303048-20A	Date Received:	03/03/93
Sample Matrix/Media:	SOIL	Date Extracted:	03/05/93
Extraction Method:	EPA 5030	Date Analyzed:	03/10/93
Analytical Method:	EPA 8020		

Analyte	CAS #	Concentration (mg/kg)	Limit of Detection (mg/kg)
BTEX			
Benzene	71-43-2	ND	0.005
Ethylbenzene	100-41-4	ND	0.005
Toluene	108-88-3	ND	0.005
o-Xylene	95-47-6	ND	0.005
p,m-Xylenes	--	ND	0.005
Surrogates		**Recovery (%)**	**QC Limits (%)**
a,a,a-Trifluorotoluene	98-08-8	89	50 - 150

ND: Not detected at or above limit of detection
--: Information not available or not applicable
Results are reported on a wet weight basis, as received

Results of Analysis
for
Uribe & Associates/ Port of Oakland

Client Reference: 26815
Clayton Project No. 93030.48

Sample Identification:	9AV-B19-1-0.4	Date Sampled:	03/02/93
Lab Number:	9303048-21A	Date Received:	03/03/93
Sample Matrix/Media:	SOIL	Date Extracted:	03/05/93
Extraction Method:	EPA 5030	Date Analyzed:	03/10/93
Analytical Method:	EPA 8020		

Analyte	CAS #	Concentration (mg/kg)	Limit of Detection (mg/kg)
BTEX			
Benzene	71-43-2	ND	0.005
Ethylbenzene	100-41-4	0.006	0.005
Toluene	108-88-3	ND	0.005
o-Xylene	95-47-6	ND	0.005
p,m-Xylenes	--	ND	0.005
Surrogates		Recovery (%)	QC Limits (%)
a,a,a-Trifluorotoluene	98-08-8	92	50 - 150

ND: Not detected at or above limit of detection
--: Information not available or not applicable
Results are reported on a wet weight basis, as received

Results of Analysis
for
Uribe & Associates/ Port of Oakland

Client Reference: 26815
Clayton Project No. 93030.48

Sample Identification:	9AV-B19-2-7.0	Date Sampled:	03/02/93
Lab Number:	9303048-22A	Date Received:	03/03/93
Sample Matrix/Media:	SOIL	Date Extracted:	03/05/93
Extraction Method:	EPA 5030	Date Analyzed:	03/10/93
Analytical Method:	EPA 8020		

Analyte	CAS #	Concentration (mg/kg)	Limit of Detection (mg/kg)
BTEX			
Benzene	71-43-2	ND	0.005
Ethylbenzene	100-41-4	ND	0.005
Toluene	108-88-3	ND	0.005
o-Xylene	95-47-6	ND	0.005
p,m-Xylenes	--	ND	0.005
Surrogates		**Recovery (%)**	**QC Limits (%)**
a,a,a-Trifluorotoluene	98-08-8	97	50 - 150

ND: Not detected at or above limit of detection
--: Information not available or not applicable
Results are reported on a wet weight basis, as received

Results of Analysis
for
Uribe & Associates/ Port of Oakland

Client Reference: 26815
Clayton Project No. 93030.48

Sample Identification:	9AV-B19-3-9.5	Date Sampled:	03/02/93
Lab Number:	9303048-23A	Date Received:	03/03/93
Sample Matrix/Media:	SOIL	Date Extracted:	03/05/93
Extraction Method:	EPA 5030	Date Analyzed:	03/10/93
Analytical Method:	EPA 8020		

Analyte	CAS #	Concentration (mg/kg)	Limit of Detection (mg/kg)
BTEX			
Benzene	71-43-2	ND	0.005
Ethylbenzene	100-41-4	ND	0.005
Toluene	108-88-3	ND	0.005
o-Xylene	95-47-6	ND	0.005
p,m-Xylenes	--	ND	0.005
Surrogates		**Recovery (%)**	**QC Limits (%)**
a,a,a-Trifluorotoluene	98-08-8	100	50 - 150

ND: Not detected at or above limit of detection
--: Information not available or not applicable
Results are reported on a wet weight basis, as received

Results of Analysis
for
Uribe & Associates/ Port of Oakland

Client Reference: 26815
Clayton Project No. 93030.48

Sample Identification:	9AV-B21-1-3.5	Date Sampled:	03/03/93
Lab Number:	9303048-24A	Date Received:	03/03/93
Sample Matrix/Media:	SOIL	Date Extracted:	03/05/93
Extraction Method:	EPA 5030	Date Analyzed:	03/10/93
Analytical Method:	EPA 8020		

Analyte	CAS #	Concentration (mg/kg)	Limit of Detection (mg/kg)
BTEX			
Benzene	71-43-2	ND	0.005
Ethylbenzene	100-41-4	ND	0.005
Toluene	108-88-3	ND	0.005
o-Xylene	95-47-6	ND	0.005
p,m-Xylenes	--	ND	0.005
Surrogates		**Recovery (%)**	**QC Limits (%)**
a,a,a-Trifluorotoluene	98-08-8	101	50 - 150

ND: Not detected at or above limit of detection
--: Information not available or not applicable
Results are reported on a wet weight basis, as received

Results of Analysis
for
Uribe & Associates/ Port of Oakland

Client Reference: 26815
Clayton Project No. 93030.48

Sample Identification:	9AV-B21-2-6.5	Date Sampled:	03/03/93
Lab Number:	9303048-25A	Date Received:	03/03/93
Sample Matrix/Media:	SOIL	Date Extracted:	03/05/93
Extraction Method:	EPA 5030	Date Analyzed:	03/10/93
Analytical Method:	EPA 8020		

Analyte	CAS #	Concentration (mg/kg)	Limit of Detection (mg/kg)
BTEX			
Benzene	71-43-2	ND	0.005
Ethylbenzene	100-41-4	ND	0.005
Toluene	108-88-3	ND	0.005
o-Xylene	95-47-6	ND	0.005
p,m-Xylenes	--	ND	0.005
Surrogates		**Recovery (%)**	**QC Limits (%)**
a,a,a-Trifluorotoluene	98-08-8	99	50 - 150

ND: Not detected at or above limit of detection
--: Information not available or not applicable
Results are reported on a wet weight basis, as received

Results of Analysis
for
Uribe & Associates/ Port of Oakland

Client Reference: 26815
Clayton Project No. 93030.48

Sample Identification:	9AV-B21-3-9.5	Date Sampled:	03/03/93
Lab Number:	9303048-26A	Date Received:	03/03/93
Sample Matrix/Media:	SOIL	Date Extracted:	03/05/93
Extraction Method:	EPA 5030	Date Analyzed:	03/10/93
Analytical Method:	EPA 8020		

Analyte	CAS #	Concentration (mg/kg)	Limit of Detection (mg/kg)
BTEX			
Benzene	71-43-2	ND	0.005
Ethylbenzene	100-41-4	ND	0.005
Toluene	108-88-3	ND	0.005
o-Xylene	95-47-6	ND	0.005
p,m-Xylenes	--	ND	0.005
Surrogates		Recovery (%)	QC Limits (%)
a,a,a-Trifluorotoluene	98-08-8	92	50 - 150

ND: Not detected at or above limit of detection
--: Information not available or not applicable
Results are reported on a wet weight basis, as received

Results of Analysis
for
Uribe & Associates/ Port of Oakland

Client Reference: 26815
Clayton Project No. 93030.48

Sample Identification:	9AV-B00-1	Date Sampled:	03/03/93
Lab Number:	9303048-27A	Date Received:	03/03/93
Sample Matrix/Media:	SOIL	Date Extracted:	03/05/93
Extraction Method:	EPA 5030	Date Analyzed:	03/10/93
Analytical Method:	EPA 8020		

Analyte	CAS #	Concentration (mg/kg)	Limit of Detection (mg/kg)
BTEX			
Benzene	71-43-2	ND	0.01
Ethylbenzene	100-41-4	ND	0.01
Toluene	108-88-3	ND	0.01
o-Xylene	95-47-6	ND	0.01
p,m-Xylenes	--	ND	0.01
Surrogates		**Recovery (%)**	**QC Limits (%)**
a,a,a-Trifluorotoluene	98-08-8	93	50 - 150

ND: Not detected at or above limit of detection
--: Information not available or not applicable
Results are reported on a wet weight basis, as received

Note: Detection limits increased due to matrix interferences

Results of Analysis
for
Uribe & Associates/ Port of Oakland

Client Reference: 26815
Clayton Project No. 93030.48

Sample Identification:	9AV-B00-2	Date Sampled:	03/03/93
Lab Number:	9303048-28A	Date Received:	03/03/93
Sample Matrix/Media:	SOIL	Date Extracted:	03/05/93
Extraction Method:	EPA 5030	Date Analyzed:	03/10/93
Analytical Method:	EPA 8020		

Analyte	CAS #	Concentration (mg/kg)	Limit of Detection (mg/kg)
BTEX			
Benzene	71-43-2	ND	0.01
Ethylbenzene	100-41-4	ND	0.01
Toluene	108-88-3	ND	0.01
o-Xylene	95-47-6	ND	0.01
p,m-Xylenes	--	ND	0.01
Surrogates		**Recovery (%)**	**QC Limits (%)**
a,a,a-Trifluorotoluene	98-08-8	89	50 - 150

ND: Not detected at or above limit of detection
--: Information not available or not applicable
Results are reported on a wet weight basis, as received

Note: Detection limits increased due to matrix interferences

Results of Analysis
for
Uribe & Associates/ Port of Oakland

Client Reference: 26815
Clayton Project No. 93030.48

Sample Identification: 9AV-B00-3
Lab Number: 9303048-29A
Sample Matrix/Media: SOIL
Extraction Method: EPA 5030
Analytical Method: EPA 8020

Date Sampled: 03/03/93
Date Received: 03/03/93
Date Extracted: 03/05/93
Date Analyzed: 03/10/93

Analyte	CAS #	Concentration (mg/kg)	Limit of Detection (mg/kg)
BTEX			
Benzene	71-43-2	ND	0.01
Ethylbenzene	100-41-4	ND	0.01
Toluene	108-88-3	ND	0.01
o-Xylene	95-47-6	ND	0.01
p,m-Xylenes	--	ND	0.01
Surrogates		**Recovery (%)**	**QC Limits (%)**
a,a,a-Trifluorotoluene	98-08-8	101	50 - 150

ND: Not detected at or above limit of detection
--: Information not available or not applicable
Results are reported on a wet weight basis, as received

Note: Detection limits increased due to matrix interferences

Results of Analysis
for
Uribe & Associates/ Port of Oakland

Client Reference: 26815
Clayton Project No. 93030.48

Sample Identification: 9AV-X1-1
Lab Number: 9303048-30A
Sample Matrix/Media: SOIL
Extraction Method: EPA 5030
Analytical Method: EPA 8020

Date Sampled: 03/02/93
Date Received: 03/03/93
Date Extracted: 03/05/93
Date Analyzed: 03/11/93

Analyte	CAS #	Concentration (mg/kg)	Limit of Detection (mg/kg)
BTEX			
Benzene	71-43-2	ND	0.03
Ethylbenzene	100-41-4	ND	0.03
Toluene	108-88-3	ND	0.03
o-Xylene	95-47-6	ND	0.03
p,m-Xylenes	--	ND	0.03
Surrogates		**Recovery (%)**	**QC Limits (%)**
a,a,a-Trifluorotoluene	98-08-8	94	50 - 150

ND: Not detected at or above limit of detection
--: Information not available or not applicable
Results are reported on a wet weight basis, as received

Note: Detection limits increased due to presence of heavier hydrocarbons.

Results of Analysis
for
Uribe & Associates/ Port of Oakland

Client Reference: 26815
Clayton Project No. 93030.48

Sample Identification: 9AV-X1-2
Lab Number: 9303048-31A
Sample Matrix/Media: SOIL
Extraction Method: EPA 5030
Analytical Method: EPA 8020

Date Sampled: 03/02/93
Date Received: 03/03/93
Date Extracted: 03/05/93
Date Analyzed: 03/11/93

Analyte	CAS #	Concentration (mg/kg)	Limit of Detection (mg/kg)
BTEX			
Benzene	71-43-2	ND	0.005
Ethylbenzene	100-41-4	ND	0.005
Toluene	108-88-3	ND	0.005
o-Xylene	95-47-6	ND	0.005
p,m-Xylenes	--	ND	0.005
Surrogates		**Recovery (%)**	**QC Limits (%)**
a,a,a-Trifluorotoluene	98-08-8	95	50 - 150

ND: Not detected at or above limit of detection
--: Information not available or not applicable
Results are reported on a wet weight basis, as received

Results of Analysis
for
Uribe & Associates/ Port of Oakland

Client Reference: 26815
Clayton Project No. 93030.48

Sample Identification: METHOD BLANK
Lab Number: 9303048-32A
Sample Matrix/Media: SOIL
Extraction Method: EPA 5030
Analytical Method: EPA 8020

Date Sampled: --
Date Received: --
Date Extracted: 03/05/93
Date Analyzed: 03/11/93

Analyte	CAS #	Concentration (mg/kg)	Limit of Detection (mg/kg)
BTEX			
Benzene	71-43-2	ND	0.005
Ethylbenzene	100-41-4	ND	0.005
Toluene	108-88-3	ND	0.005
o-Xylene	95-47-6	ND	0.005
p,m-Xylenes	--	ND	0.005
Surrogates		**Recovery (%)**	**QC Limits (%)**
a,a,a-Trifluorotoluene	98-08-8	92	50 - 150

ND: Not detected at or above limit of detection
--: Information not available or not applicable
Results are reported on a wet weight basis, as received

Results of Analysis
for
Uribe & Associates/ Port of Oakland

Client Reference: 026815
Clayton Project No. 93030.48

Sample Matrix/Media: SOIL
Preparation Method: EPA 3550
Analysis Method: EPA 8015 (Modified)

Date Received: 03/03/93
Date Prepared: 03/05/93
Date Analyzed: 03/10/93

Lab Number	Sample Identification	Date Sampled	Diesel (mg/kg)	Detection Limit (mg/kg)
01A	9AV-B13-1-4.0	03/01/93	2	1
02A	9AV-B13-2-7.5	03/01/93	81	1
03A	9AV-B14-1-3.5	03/01/93	ND	1
04A	9AV-B14-2-6.5	03/01/93	ND	10b
05A	9AV-B14-3-9.5	03/01/93	ND	6b
06A	9AV-B15-1-2.5	03/01/93	ND	3b
07A	9AV-B15-2-5.0	03/01/93	ND	20b
08A	9AV-B15-3-9.5	03/01/93	39a	1
09A	9AV-B20-1-3.5	03/01/93	28a	1
10A	9AV-B20-2-6.5	03/01/93	55a	1
11A	9AV-B20-3-9.5	03/01/93	41a	1
12A	9AV-B16-1-3.5	03/01/93	ND	1
13A	9AV-B16-2-7.0	03/01/93	92	1
14A	9AV-B16-3-7.5	03/01/93	260	1
15A	9AV-B16-4-9.5	03/01/93	49a	1
16A	9AV-B17-1-3.5	03/02/93	ND	1
17A	9AV-B17-2-7.0	03/02/93	20a	1
18A	9AV-B17-3-9.5	03/02/93	35a	1
19A	9AV-B18-1-6.5	03/02/93	ND	1
20A	9AV-B18-2-9.5	03/02/93	34a	1
21A	9AV-B19-1-0.4	03/02/93	350a	1
22A	9AV-B19-2-7.0	03/02/93	19	1
23A	9AV-B19-3-9.5	03/02/93	60	1
24A	9AV-B21-1-3.5	03/03/93	ND	3b
25A	9AV-B21-2-6.5	03/03/93	ND	20b

ND Not detected at or above limit of detection
< Not detected at or above limit of detection
-- Information not available or not applicable

a Total hydrocarbons reported includes hydrocarbons within diesel range and other unresolved heavier hydrocarbons
b Detection limit increased due to presence of heavier hydrocarbons

Results of Analysis
for
Uribe & Associates/ Port of Oakland

Client Reference: 26815
Clayton Project No. 93030.48

Sample Matrix/Media: SOIL
Preparation Method: EPA 3550
Analysis Method: EPA 8015 (Modified)

Date Received: 03/03/93
Date Prepared: 03/05/93
Date Analyzed: 03/13/93

Lab Number	Sample Identification	Date Sampled	Diesel (mg/kg)	Detection Limit (mg/kg)
26A	9AV-B21-3-9.5	03/03/93	ND	40b
27A	9AV-B00-1	03/03/93	ND	80b
28A	9AV-B00-2	03/03/93	ND	100b
29A	9AV-B00-3	03/03/93	ND	100b
30A	9AV-X1-1	03/02/93	1,000a	1
31A	9AV-X1-2	03/02/93	890a	1
32A	METHOD BLANK	--	ND	1

ND Not detected at or above limit of detection
< Not detected at or above limit of detection
-- Information not available or not applicable

a Total hydrocarbons reported includes hydrocarbons within diesel range and other unresolved heavier hydrocarbons
b Detection limit increased due to presence of heavier hydrocarbons

U&A
URIBE & ASSOCIATES
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FAX 446 - 832 - 2237
510

Alan White UtA
Jan Ander (Port Contact)

CHAIN OF CUSTODY RECORD 930304B

PROJ. NO. 26815 | PROJECT NAME 9th Ave Terminal

SAMPLERS: (Signature) Kenneth W Rexford

	NO	DATE	TIME	COMP	GRAB	SAMPLE I.D.	NO. OF CONTAINERS	ANALYSIS TPH-D	BTEX	REMARKS
01A	1	3/1/93	11:18			9AV-B13-1-9.0	1	X	X	soil 2x6BC ok
02	2	3/1/93	11:40			9AV-B13-2-~~8.5~~-7.5	1	X	X	9AV B13-2-7.5 ok
03	3	3/1/93	1:25			9AV-B14-1-3.5	1	X	X	
04	4	3/1/93	1:42			9AV-B14-2-6.5	1	X	X	
05	5	3/1/93	1:50			9AV-B14-3-9.5	1	X	X	
06	6	3/1/93	9:25			9AV-B15-1-2.5	1	X	X	2x4BC
07	7	3/1/93	9:32			9AV-B15-2-5.0	1	X	X	2x6BC
08	8	3/1/93	9.55			9AV-B15-3-9.5	1	X	X	
09	9	3/1/93	3:10			9AV-B20-1-3.5	1	X	X	
10	10	3/1/93	3:20			9AV-B20-2-6.5	1	X	X	
11	11	3/1/93	3:25			9AV-B20-3-9.5	1	X	X	
12	12	3/1/93	4:50			9AV-B16-1-3.5	1	X	X	
13	13	3/1/93	5:07			9AV-B16-2-7.0	1	X	X	
14	14	3/1/93	5:07			9AV-B16-3-7.5	1	X	X	
15	15	3/1/93	5:25			9AV-B16 4-9.5	1	X	X	

CHECK IF RUSH

Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Kenneth W. Rexford	3/3/93 12:35	Ed Kolodzy
Ed Kolodzy	3/3/93 15:30	Jan Mitchell
Jan Mitchell	3/3/93 1615	Received for Laboratory by: (Signature) Tracy Bullock 3/3/93 1715

Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Relinquished by: (Signature)	Date/Time	Received by: (Signature)

NAME URIBE & Assoc.
ADDRESS SEE TOP OF FORM

APPENDIX C

CHROMATOGRAMS OF DIESEL STANDARD VERSUS SAMPLES FROM TRENCH X1, AND BORINGS B13, B16, B18, B19, AND B20

URIBE & ASSOCIATES
2930 LAKESHORE AVENUE
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OAKLAND, CALIFORNIA 94610
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FAX 446 - 832 - 2237
Gio

CHAIN OF CUSTODY RECORD

96-203

PROJ. NO. 26015

PROJECT NAME: 9th Ave Terminal

SAMPLERS: (Signature) Kenneth R Ryford

	NO	DATE	TIME	COMP	GRAB	SAMPLE I.D.	NO. OF CONTAINERS	ANALYSIS TPH-D	BTEX
16A	1	3/2/93	2:26			9AV-B17-1-3.5	1	X	X
17A	2	3/2/93	2:35			9AV-B17-2-7.0	1	X	X
18	3	3/2/93	2:55			9AV-B17-3-9.5	1	X	X
19	4	3/2/93	12:52			9AV-B18-1-6.5	1	X	X
20	5	3/2/93	1:05			9AV-B18-2-9.5	1	X	X
21	6	3/2/93	8:45			9AV-B19-1-04	1	X	X
22	7	3/2/93	9:02			9AV-B19-2-7.0	1	X	X
23	8	3/2/93	9:18			9AV-B19-3-9.5	1	X	X
24	9	3/3/93	8:35			9AV-B21-1-3.5	1	X	X
25	10	3/3/93	8:56			9AV-B21-2-6.5	1	X	X
26	11	3/3/93	9:05			9AV-B21-3-9.5	1	X	X
27	12	3/3/93	1:15			9AV-B00-1	1	X	X
28	13	3/3/93	1:15			9AV-B00-2	1	X	X
29	14	3/3/93	1:15			9AV-B00-3	1	X	X

CHECK IF RUSH

REMARKS: soil 2x6 BC Bk

Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Kenneth R Ryford	3/3/93 12:35	
Relinquished by: (Signature)	Date/Time	Received by: (Signature)
	3/3/93 15:30	
Relinquished by: (Signature)	Date/Time	Received for Laboratory by: (Signature)
	3/3/93 1615	

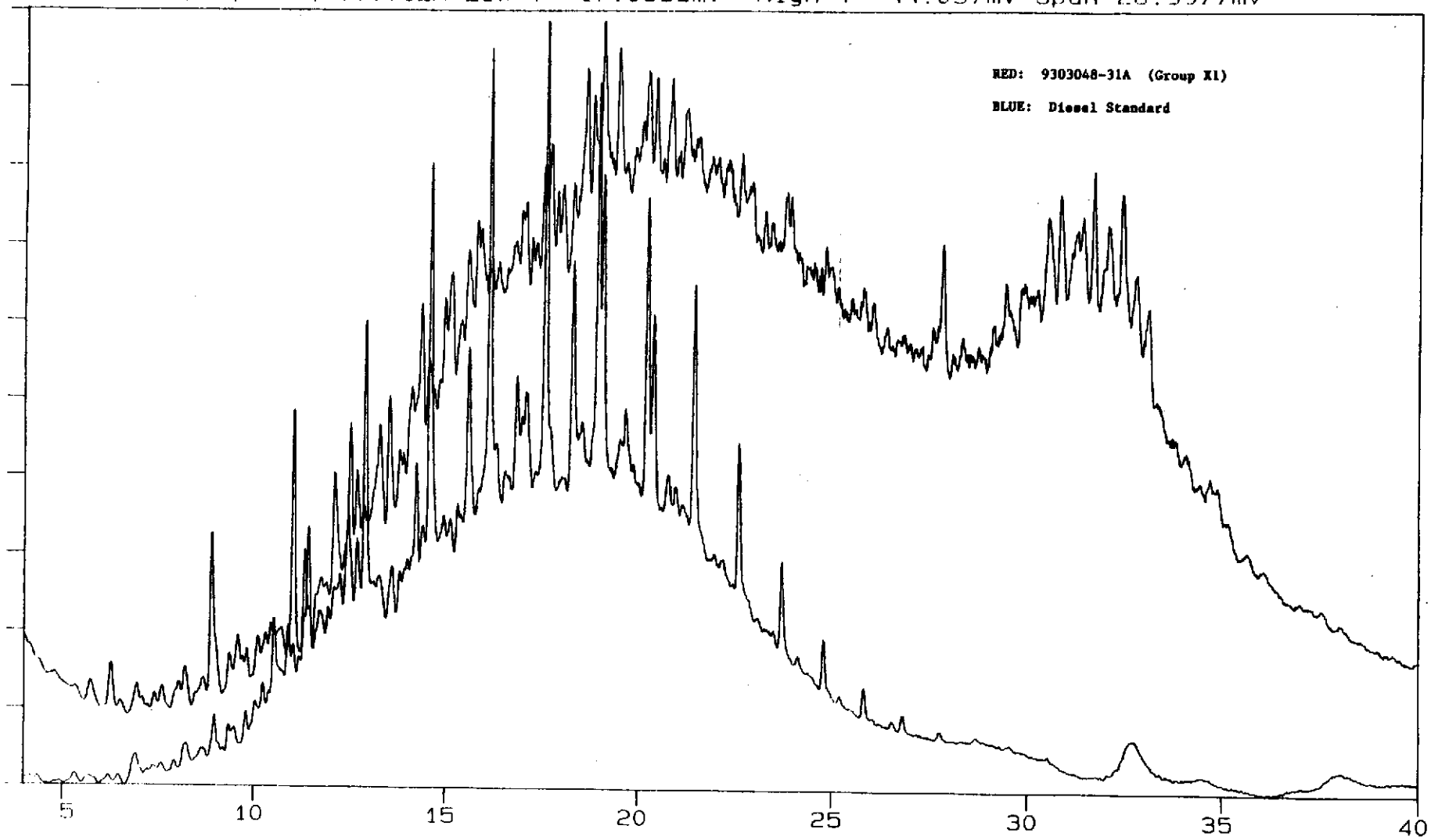
Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Relinquished by: (Signature)	Date/Time	Received by: (Signature)
	3/3/93 4:25	

NAME URIBE & Assoc

ADDRESS SEE TOP OF FORM

File= M: \CP\GC-B\X13C.45R Low Y =25.3066mv High Y =297.1972mv Span=271.8906mv

File= M: \CP\GC-B\X13C.12R Low Y =17.0993mv High Y =44.097mv Span=26.9977mv



[redacted] SHORELINE AVENUE
SUITE TWO HUNDRED
OAKLAND, CALIFORNIA 94610
510 446 · 832 · 2233
FAX 446 · 832 · 2237
510

CHAIN OF CUSTODY RECORD 930304B

PROJ. NO: 26815

PROJECT NAME: 9th Ave Terminal

SAMPLERS: (Signature) CR

NO	DATE	TIME	COMP	GRAB	SAMPLE I.D.	NO. OF CONTAINERS	ANALYSIS: TPH-D	BTEX					REMARKS	CHECK IF RUSH
30A	3/2/93				9AV-X1-1	1	X	X					soil 2x6 lx 86	
31A	3/2/93				9AV-X1-2	1	X	X					"	

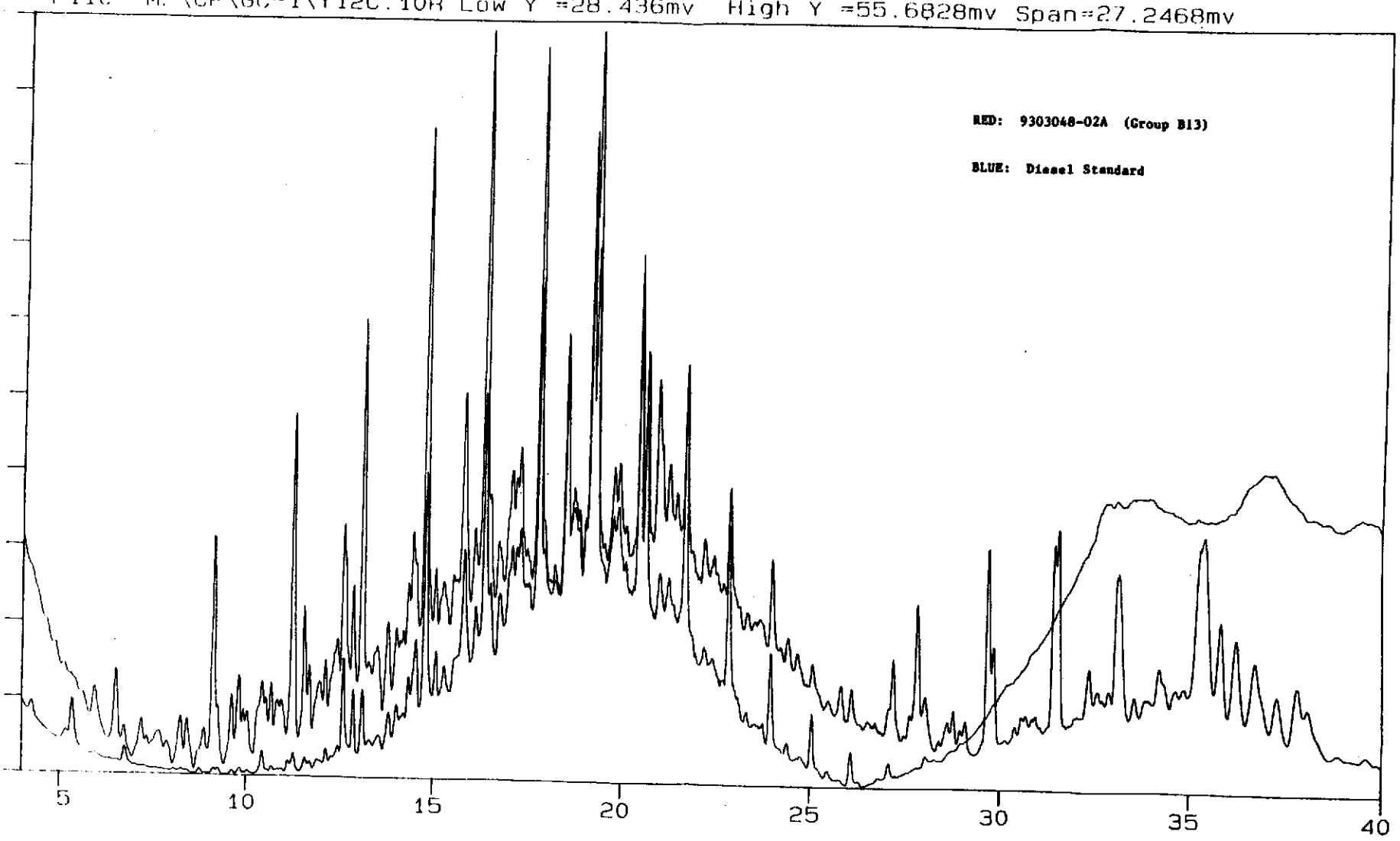
Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Relinquished by: (Signature)	Date/Time	Received by: (Signature)
CR	3/3/93 12:35	Ed Kolodoff			
Ed Kolodoff	3/3/93 15:30	Jim Mitchell			
Jim Mitchell	3/3/93 1615	Received for Laboratory by: (Signature)	Date/Time		
			3/3/93	415	

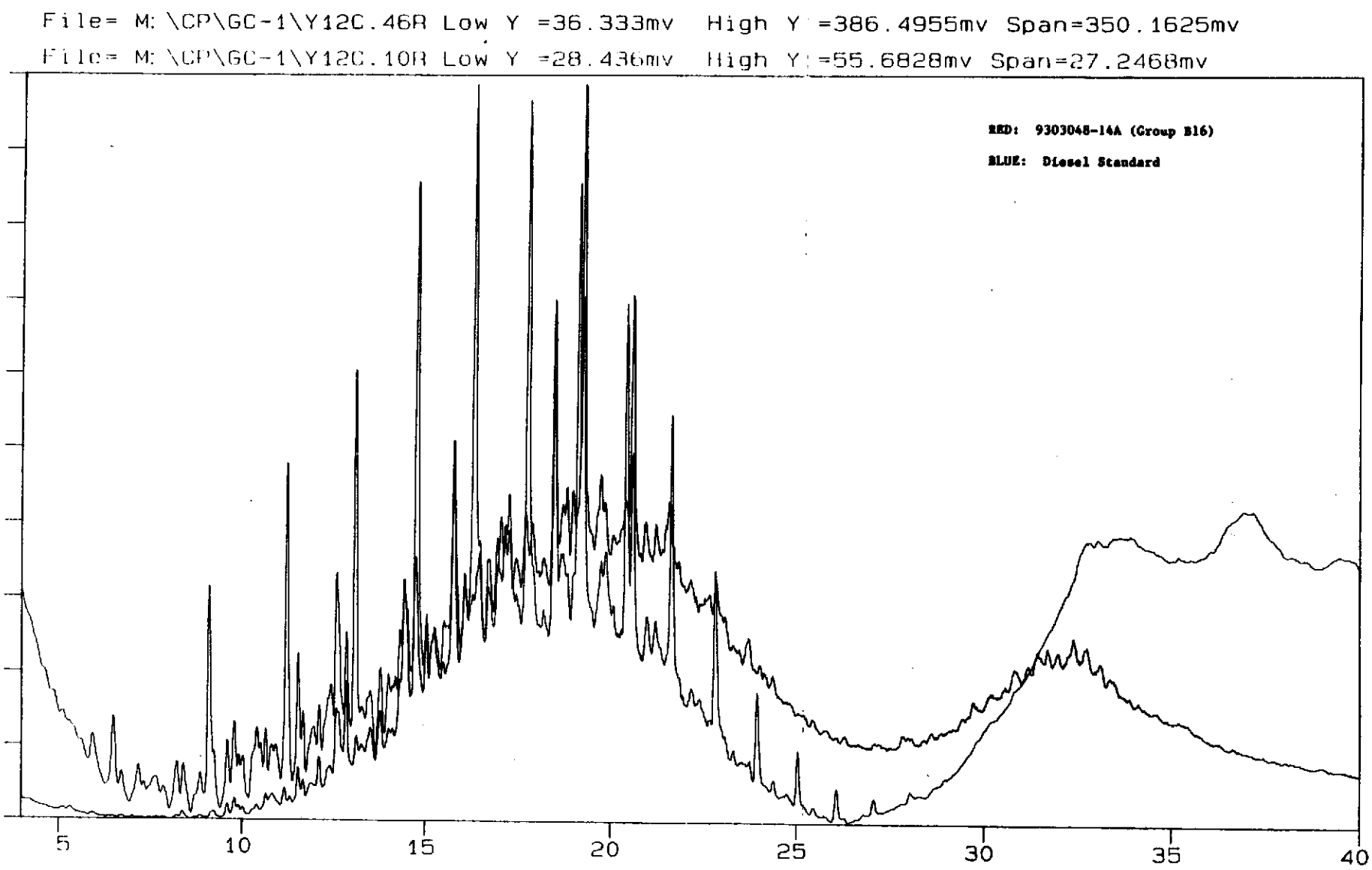
NAME: URIOS & ASSOC

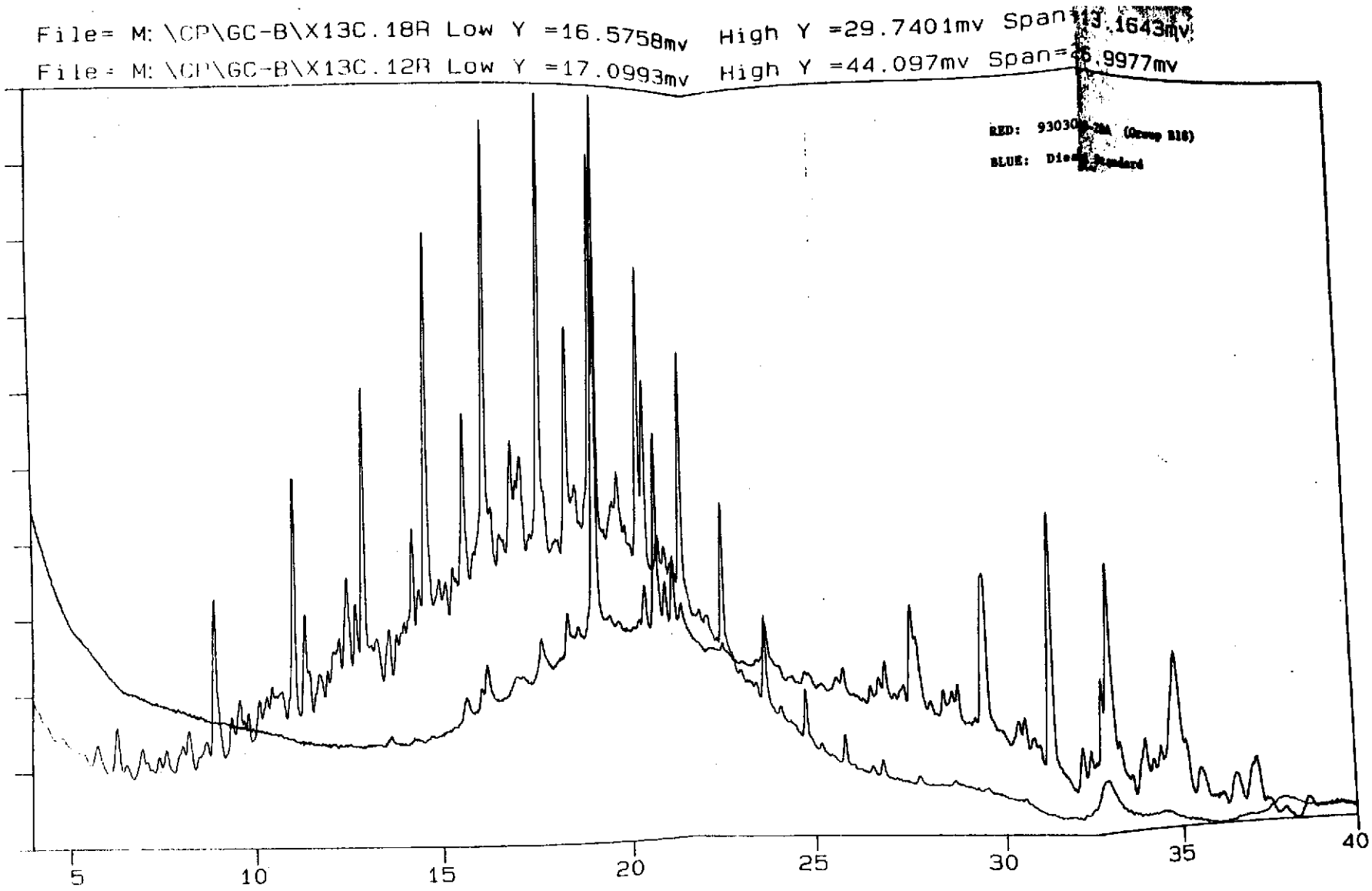
ADDRESS: See TOP of FORM

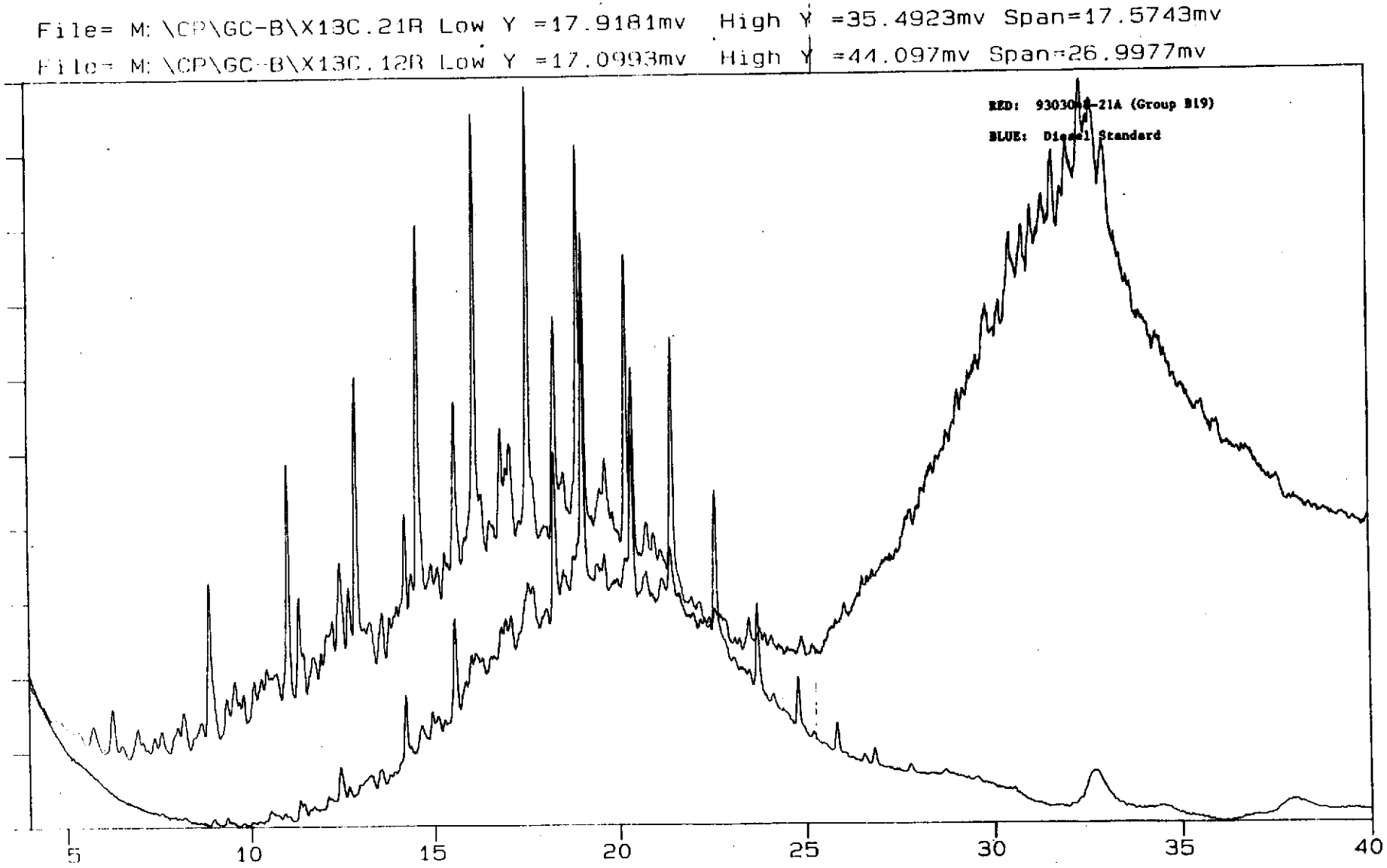
PHONE NO

File= M:\CP\GC-1\Y12C.15R Low Y =31.4352mv High Y =181.7909mv Span=150.3557mv
File= M:\CP\GC-1\Y12C.10R Low Y =28.436mv High Y =55.6828mv Span=27.2468mv




File= M:\CP\GC-1\Y12C.46R Low Y =36.333mv High Y =386.4955mv Span=350.1625mv
File= M:\CP\GC-1\Y12C.10R Low Y =28.436mv High Y =55.6828mv Span=27.2468mv
RED: 9303048-14A (Group B16)
BLUE: Diesel Standard
5
10
15
20
25
30
35
40


File= M:\CP\GC-B\X13C.18R Low Y =16.5758mv High Y =29.7401mv Span=13.1643mv
File= M:\CP\GC-B\X13C.12R Low Y =17.0993mv High Y =44.097mv Span=26.9977mv
RED:
BLUE:
5
10
15
20
25
30
35
40


File= M:\CP\GC-B\X13C.21R Low Y =17.9181mv High Y =35.4923mv Span=17.5743mv
File= M:\CP\GC-B\X13C.12R Low Y =17.0993mv High Y =44.097mv Span=26.9977mv
RED: 930304-21A (Group B19)
BLUE: Diesel Standard
5
10
15
20
25
30
35
40

File= M:\CP\GC-1\Y12C.28R Low Y =37.567mv High Y =221.1556mv Span=183.5886mv

File= M:\CP\GC-1\Y12C.10R Low Y =28.436mv High Y =55.6828mv Span=27.2468mv